

Statutory Biodiversity Duty

REPORT ON DELIVERY

1 January 2021 to 31 December 2023



Foreword

As we face the twin nature and climate crises, our understanding of the urgency to act has never been greater. It is critical that we not only halt biodiversity loss, but also restore it on a local and global scale. Alarming evidence brought to the fore in the State of Nature Scotland 2023 Report has highlighted the continued decline of Scotland's wildlife and the depth of the nature crisis. It is vital that we, as local authorities, do all we can to enable the shift towards a nature positive Scotland become reality.

Biodiversity is fundamental to our survival as human beings. It supplies the physical aspects we need to function such as water, clean air, food, and raw materials. It provides essential services such as pollinating our crops, flood management, and carbon storage; and importantly it enriches our lives and is part of our history. People of Angus have long held an intrinsic relationship with their environment; it has shaped their lives as it continues to do today.

It is widely recognised that people's connection with and value placed upon nature can have a big impact on biodiversity loss. The varied actions in this report enhance biodiversity across Angus and enrich people's experience by creating opportunities for meaningful engagement with nature. This helps to shape people's relationship with the natural world around them while improving health and wellbeing.

During the early stages of this three-year reporting cycle, we were still facing the unprecedented challenges of the Covid19 pandemic where we saw a change in the way people interact with nature. This had a lasting effect with many appreciating biodiversity in a way they had never done before. The pandemic also brought about practical and financial challenges which we continue to face, but the strong commitment of staff and elected members to their Biodiversity Duty is clear.

The many and varied actions in this report, which are carried out across a range of services within Angus Council, demonstrates that tackling the nature crisis and addressing biodiversity decline is becoming increasingly embedded in all we do. The scale of work achieved over this period is inspirational. We have embraced the exciting opportunities to work with partners on catchment scale initiatives to really drive forward impactful nature restoration work in Angus.

We have maximised opportunities to take advantage of the various funding streams available for environmental projects and evolved our Environment and Climate Change Team to support this work in collaboration with other services, external organisations, and community groups. It is clear that partnership working is essential to achieve the scale of work required to meet the recently published Scottish Biodiversity Strategy to 2045 ambition for Scotland to be Nature Positive by 2030, and to have restored and regenerated biodiversity across the country by 2045. In Angus, we have a successful reputation of partnership working to deliver multiple projects in particular through the Tayside Biodiversity Partnership and the River South Esk Partnership.

Despite the great achievements highlighted in this report, we cannot pause in the delivery of our duty to further the conservation of biodiversity in all we do. We embrace the challenge ahead to safeguard nature for future generations and look forward to the exciting opportunities to continue with our commitment in 2024 and beyond.



Signed by Margo Williamson
Chief Executive, Angus Council

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Introduction

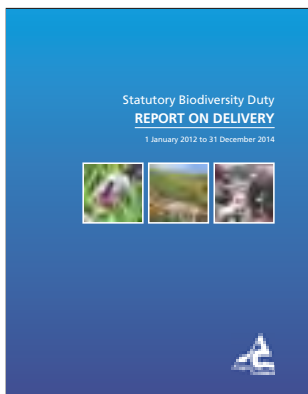
Biodiversity is simply the variety of all life on earth. It is vital to our survival and includes all living organisms, the variety of habitats and ecosystems, and their interactions.

Biodiversity is a part of all our lives, and we depend on it: socially and economically.

Now more than ever, we recognise the twin nature and climate crises we face. It is urgent that we act now to address the direct and indirect drivers for biodiversity loss and manage our land for nature and for people.

Our Duty to Report

Under the **Nature Conservation (Scotland) Act (2004)**, all public bodies in Scotland are required to further the conservation of biodiversity when carrying out their functions. The **Wildlife and Natural Environment (Scotland) Act (2011)** further requires all public bodies to report every three years on how they comply with this Duty.



The International and Scottish Context.

The work undertaken by Angus Council to further biodiversity conservation contributes to international targets to halt the loss of biodiversity and aligns with the new Scottish Biodiversity Strategy to 2045 published in September 2023.

Ambition:

- For Scotland to be Nature Positive by 2030, and to have restored and regenerated biodiversity across the country by 2045.

Vision:

- By 2045 Scotland will have restored and regenerated biodiversity across our land, freshwater and seas.
- Our natural environment, our habitats, ecosystems and species will be diverse, thriving, resilient and adapting to climate change.
- Regenerated biodiversity will drive sustainable economy and support thriving communities and people will play their part in the stewardship for future generations.

A consultation on Scotland's Strategic Framework for Biodiversity, including the first 5-year Delivery Plan for the Scottish Biodiversity Strategy, and elements of the proposed Natural Environment Bill is being consulted on in late 2023.

Fulfilling Our Duty to Report

By considering our Biodiversity Duty in our daily work we can address challenges locally and contribute to national and international outcomes. These include:

- Demonstrating we are working in a socially responsible and ethical way by, safeguarding biodiversity and environmental assets for future generations.
- Ensuring compliance with legislation and helping Scotland to meet its national and international biodiversity targets.
- Helping Scotland address biodiversity loss and the climate emergency and contributing to a Green Recovery and a Net Zero future.
- Contributing to sustainable development and the quality of life in Scotland.

The following report highlights the innovative work being delivered across Angus Council and in partnership with a range of stakeholders. The commitment to protecting and enhancing Angus and Scotland's Biodiversity is clear. Our Duty to Report is a welcome opportunity to share achievements and inspire action.

Guidance has been issued by the Scottish Government for the 2021-23 reporting period and this report follows the recommended format, reporting progress under the following headings: Introductory Information about your Public Body; Actions to Protect and Enhance Biodiversity; Mainstreaming Biodiversity; Nature-Based Solutions, Climate Change and Biodiversity; Public Engagement and Workforce Development; Research and Monitoring; and Biodiversity Highlights and Challenges.

Biodiversity Duty Delivery

1 Introductory information about your public body

Angus Council is a Local Authority providing services to the population of Angus which extends to approximately 116,000 residents.



Angus is located within 842 square miles on the East Coast of Scotland bordering Aberdeenshire, Dundee City, and Perth and Kinross. Angus boasts a varied landscape ranging from expansive mountains, valleys and glens, to prime agricultural land, historic towns and villages along a varied North Sea coastline. The seven main towns of Angus are – Arbroath, Brechin, Carnoustie, Forfar, Kirriemuir, Monifieth and Montrose.

Angus is predominantly a rural area with a rich natural environment and agricultural landscape. Angus' agricultural land covers approximately 190,000Ha, which constitutes 87% of the total land area in Angus and also contains 40% of Scotland's Class 1 agricultural land.

The rich natural environment includes designated sites of one National Nature Reserve, one Local Nature Reserve (LNR), three Country Parks, 36 Sites of Special Scientific Interest (SSSI), four Special Protection Areas (SPA), three Special Areas of Conservation (SAC), and three Ramsar sites. Part of the Cairngorms National Park lies within Angus and is under the remit of the Cairngorms National Park Authority (CNPA).



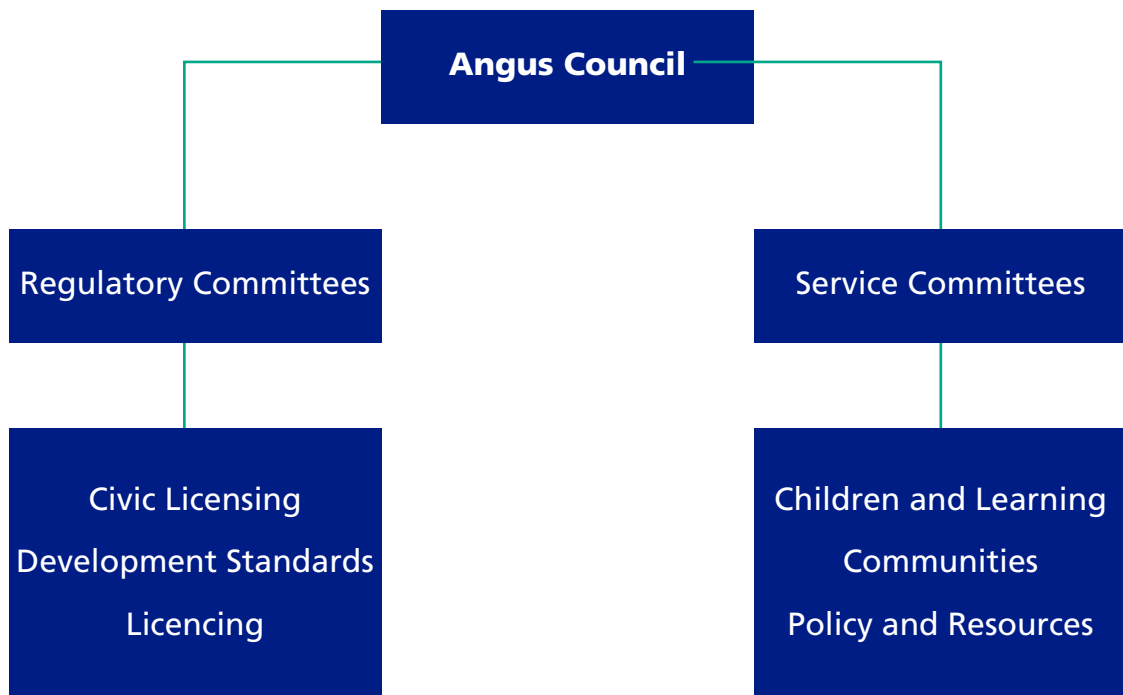
Governance and Structure

Governance:

Angus Council has 28 councillors representing eight wards who are responsible for deciding which policies the council should pursue and ensure that they are carried out in the most efficient and effective way.

A full meeting of Angus Council takes place every six weeks. It makes key decisions such as approving the annual council budget and other matters which are not delegated to the standing committees. All elected members sit on full council.

Most council business is carried out by a series of regulatory and service committees:



Structure:

The council is made up of a number of services and employs around 4,500 people to run these.

- Chief Executive
- Children, Families & Justice
- HR, Digital Enablement, IT & Business Support
- Legal & Democratic
- Infrastructure
- Vibrant Communities & Sustainable Growth
- Finance
- Education & Lifelong Learning
- Strategic Policy, Transformation & Public Sector Reform
- Angus Health & Social Care Partnership (AHSCP)

The Strategic Delivery of the Biodiversity Duty in Angus Council 2021-23

Local Authorities are well placed to deliver biodiversity conservation as they can have a significant impact on biodiversity through the protection and enhancement of the natural environment. There are opportunities for wide scale community engagement, sustainable resource management, and positive education. A range of projects and initiatives can also be undertaken to directly contribute to the conservation of local biodiversity.

Angus Council now has a dedicated Environment and Climate Change Team which evolved during the course of this reporting cycle. Many other teams within Angus Council lead on climate change, sustainability, waste, flood risk and planning work coordinating various policies, action plans and projects which have clear links to biodiversity conservation. Angus Council is a signatory to Scotland's Climate Change Declaration, and the Scotland Geodiversity Charter. Both contribute towards biodiversity conservation measures.

Although individual teams deliver a wide range of activities contributing to our biodiversity duty, it is important to note the corporate objectives and duties Angus Council work towards. These objectives are included in further sections of this report.

In Scotland, many Local Authorities support and act as key leaders for the Local Biodiversity Partnership in their area. These partnerships were created in response to the original Convention on Biological Diversity. The Tayside Biodiversity Partnership (TBP), was one of the first in Scotland, being set up in 1998.

Since its first publication in 2002, the Tayside Local Biodiversity Action Plan (TLBAP) has had two main aims, namely:

- To conserve and enhance the regions biodiversity, considering both local and national priorities.
- To co-ordinate existing actions, as well as initiating and coordinating new ones.

In the 2nd Edition TLBAP, published in 2016, a Tayside Vision was added:

“By 2030 Tayside will have a fully functioning ecosystem network “from summit to sand” – reaching from the Angus Glens and Highland Perthshire to the Tay Estuary, the Angus coast and beyond to the marine environment. Visitors and residents alike will be able to learn about the area’s rich biodiversity and will be keen to protect and enhance it. Both the rural and urban environment will be delivering benefits essential for everyone, from helping to reduce flooding, assisting species to adapt to climate change, and ensuring there is no further loss of biodiversity.”

The TBP is currently overseeing over 140 projects across Tayside via its themed Working Groups with Angus Council taking forward some of the projects. Progress on these projects to date has been reviewed and included in a further section of this report.

2 Actions to protect and enhance biodiversity

This section includes actions that are undertaken alone or as part of a partnership to benefit biodiversity directly, to tackle the main drivers of biodiversity loss, and to achieve wider outcomes for nature and people.

Partnership Working

Collaborative working is fundamental to achieving our goal to halt biodiversity loss. The following section details ways in which Angus Council works in partnership with other key organisations and initiatives.

Tayside Biodiversity Partnership

The Council is a joint lead partner for the Tayside Biodiversity Partnership. The Partnership comprises approximately 100 organisations and bodies, including government agencies, non-governmental bodies, local naturalists, community groups and volunteer conservation groups. The Partnership is responsible for the delivery and promotion of the Tayside Local Biodiversity Action Plan, together with reporting on actions and targets. Themed working groups deliver and monitor habitat and species focused projects which are covered in greater detail throughout this report. The Partnership celebrates its 25-year anniversary in 2024 and a month-long nature festival will be held across Tayside in celebration.

River South Esk Catchment Partnership

The River South Esk Catchment Partnership Project co-ordinator role is fulfilled by a member of Angus Council staff. Angus Council are one of the main founding funders of the partnership. Over the last three years a range of projects have been carried out with partners that contribute towards climate and nature resilience.

Tay Estuary Forum

Angus Council is a founding member of the Tay Estuary Forum. The Forum brings together organisations and individuals with a common interest in the welfare and sustainable use of the Tay Estuary and adjacent coastline. The Forum is a member of the Tayside Biodiversity Partnership's Coastal & Marine Working Group. The over-arching nature conservation aim of the Forum is to promote understanding and monitoring of species and habitats in order to make informed decisions relating to their management. Good practice on issues which impact upon coastal biodiversity such as flooding, diffuse pollution, coastal erosion and invasive species is shared by the group.

Tayside Recorders' Forum

The annual Tayside Recorder's Forum event brings together professionals and amateurs interested in both citizen science and species survey work. It acts as the focus to launch citizen science and research projects, most of which involve local people. The event is organized by the Tayside Biodiversity Partnership co-ordinator who in addition produces an annual Recorders' Bulletin and maintains the Tayside Wildlife Recorders Forum Facebook page.

Joint Catchments Initiative

The River South Esk Catchment Partnership, Spey Catchment Initiative, Dee Catchment Partnership and the Cairngorms National Park Authority (CNPA) continue to investigate landscape scale approaches to natural flood management, riparian tree planting schemes and peatland restoration on the rivers Dee, Spey and South Esk. During 2021/23 the CNPA has led on the development phase of the Heritage Horizons Heritage Lottery Fund 'Cairngorms 2030' and all three catchment partnerships have developed climate change adaptation and community resilience projects across the three catchments. Once or twice per year, good practice site visits are held where participants can learn first-hand of the challenges and opportunities of landscape scale nature restoration.

Turning the Plastic Tide

The East Grampian Coastal Partnership (EGCP) project - Turning the Plastic Tide initially was a three-year marine litter initiative for the EGCP delivering marine litter education and supporting volunteer beach cleaning in the North East of Scotland from Fraserburgh to East Haven in Angus. Angus Council provided match funding for phase one and engaged with local businesses to source phase two funding. The dedicated project officer facilitated beach cleans, exhibitions, and school outreach in Angus and promoted campaigns on social media such as the Great Angus Beach Clean. The project is a fantastic example of cross boundary working and funding opportunities are being investigated to embed the project fully into Angus once more. Angus Council's Environment & Climate Change Team Leader engages with the EGCP in an advisory role and continues to investigate further cross boundary work.

Small Blue Butterfly Interest Group

Angus Council, Tayside Biodiversity Partnership and a range of partners including Butterfly Conservation, community groups, local golf courses and landowners work together to survey, monitor and deliver habitat restoration work for the UK's smallest butterfly in Angus. The small working group coordinate action which has been delivered with more than 40 organisations and individuals.

Species on the Edge Partnership

Species on the Edge is a bold and ambitious partnership of eight of Scotland's nature conservation organisations striving to conserve Scotland's native wildlife. Rockin' the Blues Project, coordinated by Butterfly Conservation will implement conservation action to preserve populations of Small Blue and Northern Brown Argus butterflies on the coast of Angus, Caithness and around the Moray and Solway Firths. The Small Blue Butterfly Interest Group feed into this project work.

Creation, Enhancement, and Protection of Wildlife and Natural Habitat

Meadow and Wildflower Management

Angus Council manages a range of sites as wildflower meadows. Approximately 60,000 square meters of species rich wildflower meadow are managed and maintained with over, 20,000 square metres of this total forming part of the Strathmore B-Lines network. Areas are managed according to the requirements of the site with creation, enhancement, and restoration of wildflower areas taking place across Angus. The aim is to increase diversity through sympathetic management. To achieve this, Angus Council purchased cut and lift machinery through the Nature Restoration Fund grant.

The Montrose Space for Nature Pilot was developed by Angus Council staff and local wildflower seed producers Scotia Seeds in 2019. The trial areas underwent a change in the grass cutting regime with a reduction from 16 to two cuts per annum along a 2km stretch of cycle path in Montrose. This reduced the nutrient load and allowed wildflowers to thrive. The Space for Nature project also focused on wildflower management in disused kirkyards, and the project yielded positive results with dramatic increase in diversity of flora. This enhancement was further complimented by the Strathmore B-Lines project.



Photo: Space for Nature, Montrose © A Cowie

Case study

Strathmore B-Lines – People and Pollinators in Strathmore

Funded by the National Lottery Heritage Fund and Gannochy Trust, Strathmore B-Lines is a two-year project run by Buglife aiming to restore 20 Hectares of grassland and nectar rich habitats to increase both the area and quality of pollinator-friendly wildflower habitat between Dunkeld and Montrose. The B-Line crosses some of the most agriculturally intensive land in Scotland and will connect fragmented habitat. This network will support the recovery of threatened species and allow movement across the landscape increasing adaptability and resilience to the impacts of climate change.



Photo: Surveying Kirrie Hill © Claire Pumfrey

Angus Council have committed to actively manage 2.35Ha of land within the Strathmore B-Line project with enhancement works underway in 2023 including:

- Introducing yellow rattle and carefully selected locally sourced native seed mixes where appropriate.
- Introducing native plugs.
- Change to cutting regime to either a once annual cut and removal of cuttings in autumn or twice annual in identified areas with the addition of a spring cut and removal of cuttings.

Location	Area of enhancement
Montrose	11,752m ²
Edzel	6,000m ²
Kirriemuir	2,520m ²
Brechin	1,600m ²
Glen Lethnot	1,200m ²



Photo: Volunteers sowing Yellow Rattle in Montrose. © Claire Pumfrey

Angus Council has reduced the overall quantity of chemicals applied in parks and other open spaces. Highly trained operators have reduced Glyphosate use to the very minimum through low volume application. All chemicals are correctly and professionally applied and their impact on pollinators is considered e.g. time of day and spray drift. These initiatives help deliver the objectives listed in the Scottish Pollinators Strategy.

Brechin Flood Prevention Scheme provides integrated flood protection and drainage solutions on the banks of the River South Esk. Management continues on the environmental improvements incorporated into the local park including:

- the three different kinds of wildflower meadows
- the nectar-rich shrubs and trees selected to support birds, vertebrates and insects.
- annual Invasive-Non-Native Species treatment

Country Parks Meadow and Wildflower Management

Crombie and Monikie Country Parks



Photo: © Graeme Gorrie

In 2023 Crombie and Monikie Country Parks have undergone a change in cutting regime of open areas for the benefit of biodiversity. Previously, main grass areas were cut every four to six weeks. Identified areas are now cut twice annually, in spring and autumn. Pockets around the reservoir banks are also now cut twice annually, though the requirements of the reservoir mean not all banks are able to be managed in this way. Where possible, cuttings are removed though equipment limits cutting removal in some areas due to terrain. All cuttings that are removed are used for compost. Other areas have benefited from the introduction of yellow rattle to reduce dominant grasses.

Previously established wildflower areas continue to be managed such as the meadow at Hairy Nicholls Bothy at Crombie Country Park.

In addition to the change in cutting regime, wildflower boxes have been located in developed areas near the Visitor Centres to provide connections to wider habitat for pollinators.



Photo: Monikie Country Park © Graeme Gorrie

Areas of heathland at Crombie have been encroached by self-seeded birch and Rhododendron. Volunteer groups and Junior Rangers led by ANGUSalive have been treating Rhododendron and pulling birch saplings to maintain the heathland areas.

Glen Doll

Rangers oversee the management of the green areas surrounding the ranger centre. This has been managed for wildlife predominately found within Glen Doll area. Identified areas are dedicated for wild growth with management including dock weeding to reduce dominance and enable wildflowers to thrive including knapweed, yellow rattle, cowslip, sweet woodruff, ox-eyed daisy, red campion, and other species.

Forfar Loch

Focus has been on the wildlife garden around the visitor centre; creating a miniature Forfar Loch habitat by introducing all the species found in the larger loch area into the wildlife garden and pond. Previously established wildflower areas continue to be appropriately managed.

Urban Ponds Habitat Enhancements

The enhancement of two urban man-made ponds has been a great achievement made possible through the Nature Restoration Fund direct allocation. Two ponds in the town of Montrose have undergone a series of improvements:

- Access ramps built at intervals along the hard edge to allow movement for a variety of species. The ramps have also been planted with suitable wetland and pond edge species to provide habitat for invertebrates and cover for amphibians. The ramps also provide safe access to drinking water for mammals and other birdlife.



Photo: Curlie Pond habitat enhancement © A Cowie

- Areas of vegetation surrounding the ponds have been left uncut to provide cover for amphibians as they migrate to the wider countryside. These areas have linked in with the access ramps to provide continuous cover. Longer vegetation will be cut once annually in autumn with cuttings removed. This has increased the diversity of wildflowers.
- An island has been introduced at Borrowfield Pond and planted with wetland and pond edge species. This provides a refuge for birds and other wildlife.
- The wetland planting at Borrowfield Pond has been expanded. This planting has been introduced into an area where the ground was regularly waterlogged. The area was fenced off while the plants established.

- Amphibian ladders have been installed at both sites to compliment the access works to support frogs and toads.
- Six bird nesting boxes and four bat boxes were also installed at suitable locations around the two ponds.
- Interpretation panels have been erected at both sites. People are encouraged to enjoy the wildlife at the ponds and the areas of longer vegetation are interspersed with short mown areas to encourage access and engagement.



Tree planting and hedgerow creation

Angus Council has undertaken enhancement to nature network connectivity in tree lined corridors across Angus settlements through the Space for Nature Urban Trees Project funded by the Nature Restoration Fund. Gaps were identified across the seven towns and selected villages. Since 2021, 298 standard trees have been planted with a further 192 planned for 2023/24. Native species were selected for their benefit to wildlife by providing berries, nectar, pollen, shelter and nesting opportunities. Planted species include silver birch, hawthorn, holly, crab apple, Scots pine, rowan, and willow species.

In total during this time period, 154m of hedgerow have been planted, again funded by the Nature Restoration Fund. Sites with enough available width were carefully selected to enable hedges to grow 'wilder' to benefit wildlife and undergo minimal ongoing maintenance.

Roads Maintenance and Verge habitat enhancement

Angus Council Roads Service liaise with local communities, environmental organisations and botanists about the maintenance of species- rich verges in parts of Angus. The rural grass cutting regime in Angus is two cuts on A, B and C class roads per year, a 1 metre swathe generally with extra sight lines and inside of bends, plus only one cut on U class roads in midsummer.

There is ongoing maintenance of good practice sites including a one-cut local agreement with the Scottish Wildlife Trust on the A92 outside the Montrose Basin Visitor Centre and collaboration with BEAR Scotland to preserve Northern marsh orchid and cowslip on slip ways off the A90.

A pilot has been carried out near Kinnettles over 2022/23 where a change to cutting regimes on a C class road was trailed. One cut was carried out in 2022 in late Autumn and in 2023 further passing place cuts occurred midsummer on less botanically rich verge areas. An initial survey in summer 2022 showed that some uncut areas housed 30 plus species, particularly in close proximity to woodland and wall features.

Active travel routes provide important opportunities for people to have regular, meaningful engagement with nature. Where routes re maintained or upgraded, particular consideration is given to enhance biodiversity.

Where Angus Council carries out maintenance of grass surfaces or verges on core paths, the cutting regime is one or two cuts per year, over the minimum width necessary to maintain clear passage.

Good practice examples of active travel route enhancements for biodiversity include upgrades along the National Cycle Network Route 1 (NCN 1) at Elliot Links and upgrades planned by end of 2023 at Carnoustie.

NCN1 Elliot Links:

- Exposed earthworks were allowed to naturalise from the adjacent SSSI.
- Embankments were held together with biodegradable coir matting until flora took hold.



Photo: NCN1Elliot Links path upgrade © Russell Cramb

NCN1 Carnoustie:

- Gently sloping sides created when excavating ditches to enable access for species in and out of the water.
- Planting Kidney Vetch to support local populations of Small Blue butterflies and provide opportunities for their range to expand.
- Planting locally sourced coastal meadow mix along exposed earthworks to compliment local flora. Local school children are contributing to sowing 300sq.m of wildflower seed.
- Any trees removed in the formation of the new path are replaced and habitat piles created from felled trees.

Staff are encouraged to take into consideration the guidance given in the Plantlife 'Good Verge Guide: a different approach to managing our waysides and verges'.

Angus Council continue to engage with local communities to identify their favourite local wildflower rich verges through the use of innovative tools such as 'Shaping Angus'. Management programmes consider these community observations which assist in the identification and protection of valuable sites.

Development Management

The Council's Development Management function continues to implement the requirements of the Habitats Directive and Regulations in its decision making, working closely with Nature Scot (formerly SNH) in carrying out Appropriate Assessments and securing appropriate mitigation where development proposals are capable of significant effects on our SPAs and SACs.

Ecological surveys are required where developments have the potential to affect protected species or their habitats, including (but not limited to) bats, birds, red squirrels and badgers. These surveys allow for the design of proposal to avoid adverse impacts on protected species or provide suitable mitigation where an impact cannot be avoided. This has included development buffer zones where it is close to badger setts or the provision of bird boxes or bat slates in new development.

The opportunity is taken when considering proposals for new development to secure biodiversity improvement in accordance with NPF4 and informed by Nature Scot developing with nature guidance. We have also secured improvements to the design of new sustainable drainage systems (SuDS) to improve the opportunities they offer for habitat creation.

The Council has secured the removal of invasive species (e.g. Giant Hogweed) in adding value to planning permissions which are issued. Tree Preservation Orders have been introduced where development threatens the amenity value of important trees and woodland, which consequently also safeguards the habitat they provide.

Montrose Basin Local Nature Reserve Habitat Management

Examples of habitat creation and management at Montrose Basin Local Nature Reserve in partnership with Scottish Wildlife Trust include the management of invasive non-native species, reedbed management, maintenance of artificial tern nesting habitat, sand martin bank creation, creation and maintenance of wildflower meadows, and saltmarsh habitat restoration. All contribute to the health and diversity of reserve species and habitats.

Case study

Montrose Basin Local Nature Reserve

Saltmarsh Enhancement

The Montrose Basin saltpans known locally as Sa'ty Dyke has a rich history dating back to the 12th Century where saltworks were in place to support the local, thriving salmon industry. The transition saltmarsh area floods at high tide and salt would have been extracted from a series of pools by a process of evaporation.

Transition saltmarsh is an important habitat and forms part of a saltmarsh network across the Local Nature Reserve with the pools providing unique habitat as a feeding site and refuge for multiple wader species including but not exclusive to lapwing, redshank, greenshank, oystercatcher, grey heron, little egret. Duck species also benefit including wigeon who will graze the site if there are open areas and teal who frequent the pools. Swallows, sand martins and house martins feed on the many invertebrates that thrive in the wet conditions.



Photo: July 2022 Montrose Basin LNR Saltpans © A Cowie

In recent years, the traditional saltpan pools had become choked with rush and reed species which had closed off the areas of open water. As the pools had filled in, the areas of saltmarsh around them had begun to change and allowed for the rush and reed species to encroach on the saltmarsh to the extent they were outcompeting the specialist salt tolerant flora that had previously thrived there.

The Nature Restoration Fund financed the re-excavation of the saltpan pools in December 2022 with support of Scottish Wildlife Trust. The impact has been instant and dramatic. The areas of open water have returned and are already attracting wader and duck species to this part of the reserve. The impact will be long lasting, and changes will be monitored over the coming years and months as the habitat reaches its full potential.



Photo: July 2023 Montrose Basin LNR Saltpans © Ron Mitchell

Urban Wetland re-naturalisation

The 'Daylighting' of Caldhame Burn has created a more natural wetland in Brechin town centre by bringing the bed of the stream back to the surface and restoring it to a more natural form.

The de-culvert of a section of the Caldhame Burn took place in 2021. The new section of the waterbody has been designed to weave its way through the open space. To protect the adjacent embankments from erosion in the future a 22m long willow-spiling wall was installed at the burn edge. The willow rods were harvested from local willow coppices in Brechin parks.

Within the Brechin Den a 600sqm area has been redeveloped as a wildflower meadow to provide for a wide range of pollinators. The meadow runs on the lowest part of the Den and has been seeded with a locally sourced wetland wildflower seed mix including species such as Water Avens, Meadowsweet, Ragged Robin, Marsh Thistle, and Meadow Cranesbill. Additional wildflower areas have been created and form part of the Strathmore B-Lines project.

Enhancing Biodiversity at Angus Council Sites

Biodiversity Landscaping

When designing landscape projects, staff continue to incorporate the following principles:

- Identify species & habitats of interest on existing site and ensure their protection during site works.
- Incorporate existing habitats such as scrub and woodland, grassland, ponds, burns, etc. into the new green space where appropriate.
- Retain mature and veteran trees for their high biodiversity value.
- Check timing/ effect of works on species and habitats to ensure lowest possible impact.
- Create new planting communities to enhance biodiversity such as wildflower meadows, mixed hedgerows, woodlands, ponds.
- Include plant species that will provide nectar, food, shelter and nesting opportunities for a variety of invertebrates, birds and mammals.
- Use native species of shrubs, trees and other plants and where possible, plants of local provenance. SuDS features such as retention basins and swales to be landscaped with shallow gradients, wildflower meadows and appropriate shrub and tree planting.
- Where possible, utilise walls and fences for growing a wide variety of climbing plants which will provide shelter and a food source for invertebrates, birds and bats.

The above objectives are considered in all development.

Biodiversity landscaping and enhancement has been carried out at Angus Schools including:

- Birkhill primary school planted 6 small native trees as part of the Queen's Jubilee canopy in January 2021 and they added a hedge and willow feature to their wildlife garden in 2022.



Photo: Birkhill Primary School Jubilee tree planting and willow feature © Sheena Hardie

- Many schools, including Eassie, Glamis, Northmuir, Seaview, Whitehills and Strathmore primary schools, have developed their school grounds to include areas for growing flowers, fruit and vegetables.
- Southmuir Primary School was supported by Sustainable Kirriemuir to create an 'urban farm'. This consists of large potato boxes which have been made into raised beds and planted with fruit trees, flowers and a variety of fruit/veg. All classes, including the nursery, are now fully responsible for their own boxes.
- In 2021-2022, Montrose Academy planted six new fruit trees and planted a wildflower meadow in the millennium garden, Arbroath Academy planted 420 trees along it's boundary in 2022.
- Strathmore Primary School in Forfar has planted trees in their school grounds and in Reid Park. They also have garden planters for each cohort.
- Since 2021, several more schools in the authority have created ponds to increase biodiversity and enhance pupils' learning experiences with nature. Such schools include Birkhill, Woodlands, Northmuir, Southmuir and Hayshead Primary Schools.



Photo: Hayshead Primary School pond © Sheena Hardie

Biodiversity and Buildings

The Council building programme of new schools and affordable housing has incorporated measures to improve biodiversity.

A recently completed project at Cliffburn created 14 new affordable flats grouped around a central landscaped courtyard. The development included the preservation of key existing trees including a mature Sorbus (Rowan) Tree which is a species of high biodiversity value. Other trees planted across the development are similarly productive native species.



Photo: Cliffburn Housing Project © Euan McCallum

At a project at Coronation Gardens in Montrose which delivered 10 new affordable Housing units, there are two areas of wildflower planting that are protected by fencing. This development also features native tree species planted next to a bench which produce flowers and berries to attract pollinators and birds.

Several sites that have been allocated for future Housing developments are to be sown with wildflower meadow planting. This has already happened at the site at Fraser Path Arbroath in 2023, where species were chosen specifically to attract pollinators. This approach will be rolled-out in other areas including Newton Crescent and Inglis Court in Edzell where wildflowers have already flourished this year.

Other developments that have considered biodiversity include:

- Inclusion of existing woodland as part of external forest play area at Carnoustie Early Learning and Childcare Centre.
- Various enhancement works commenced in 2023 at Monifieth Learning Campus with planned development works due to be completed in 2026. The planned enhancement works include the installation of bat and bird boxes, planting of wildflower areas including a native woodland meadow, swales, and an allotment.

Protection of Wildlife and Natural Habitat

Local Nature Conservation Sites

As we further understand the twin biodiversity and climate crises, the protection of sites of nature conservation value has increased importance and this is reflected in National Planning Framework 4 (NPF4). Identifying and designating Angus Local Nature Conservation Sites (LNCS) is a priority action for Angus Council. LNCS have either Biodiversity or Geodiversity significance and Angus Council has undertaken a study to identify sites which meet the criteria for biodiversity. These are sites which are species or habitat rich and warrant recognition. Many contain remnants of complex habitats that have survived in some form since the last ice age.

The first phase of identifying and assessing sites is complete and a second is underway. Sites were selected from the collection of Wildlife Sites previously identified by Scottish Wildlife Trust between 1993 and 2002. Of the collection, 28 candidate sites were chosen upon merit based on the criteria set out by NatureScot for the assessment process. Additional sites were also selected on this basis using knowledge of an assessment panel formed of locally based nature experts who volunteered their time since 2021.

The sites were re-surveyed in 2021 to ascertain whether habitat and other features of interest remained some 20-30 years after the initial Scottish Wildlife Trust survey work. The assessment panel analysed the reports of each site in detail to determine a score based on species diversity, species rarity, habitat rarity, habitat naturalness, habitat extent, and connectivity. All 28 sites assessed during the first phase scored above the threshold and are considered suitable to designate as Local Nature Conservation Sites.

The sites range from 3 -163 ha in size with most located in the Strathmore North wards area of Angus. Many contain locally and nationally rare species and feature multiple habitat types. The most botanically diverse site contained 184 plant species. The sites provide important nature-rich pockets in a predominantly agricultural landscape and will form assets within nature networks.



Photo: Local Nature Conservation Site © Theo Loizou

Addressing the Key Drivers for Biodiversity Loss

Underpinning all sections of this report is action to mitigate the direct drivers of biodiversity loss including changing use of sea and land, direct exploitation of organisms, climate change, pollution, and invasive non-native species. This section focuses on Invasive Non-Native Species.

Invasive Non-Native Species

There has been continued treatment of Invasive Non-Native Species (INNS), particularly along river corridors in Angus. The Scottish Invasive Species Initiative (SISI) coordinates the pool of volunteers who are trained to manually remove Himalayan balsam and chemically treat giant hogweed and Japanese knotweed. The initiative has also carried out American mink monitoring and trapping via a skilled volunteer network.

The River South Esk "Riverwatch" scheme for reporting INNS shares reports with SISI and reports of Giant hogweed are passed to the Roads Maintenance Team who, in accordance with their established procedure, aid in treating INNS along roadside areas.

The River South Esk Catchment Partnership are a Great British Non - Native Species Secretariat Local Action Group sharing good practice and participating in National INNS week annually.

Angus Council have carried out extensive Rhododendron clearance at Rosemount Estate in Hillside. Control was carried out mechanically by a flail over an area of 5523square metres and a further 7443square metres was treated by manual cutting. More control is planned during winter 2023/24.

The lockdown era of the Covid19 pandemic resulted in a reduction in control of INNS at the Country Parks as much of the impact is due to volunteer input. As a result, Himalayan Balsam spread expanded at Forfar Loch. Since lockdown was lifted, there has been an increase in volunteer opportunity with fortnightly drop-in sessions for pulling parties during the main flowering season. A methodical approach is being adopted to reduce further spread.



Photo: Forfar Loch Himalayan Balsam © A Cowie

In 2021, ANGUSalive Ranger Service worked in partnership with Scottish Wildlife Trust to manage INNS at Montrose Basin Local Nature Reserve. This included extensive control of Himalayan Balsam using a hand pulling method with volunteers also contributing to this effort. Areas of Giant Hogweed were treated with spot spraying glyphosate which enabled control of Himalayan Balsam to take place in the surrounding areas. Due to the location of the reserve at the end of the River South Esk, management of Himalayan Balsam and Giant Hogweed will be ongoing. In addition, ANGUSalive collaborated with Scottish Wildlife Trust on control of American Mink, with regular tracking and trapping taking place. In subsequent years, Scottish Wildlife Trust have continued the management of INNS on the Local Nature Reserve.

Angus Council support the Saving Scotland's Red Squirrels project. The dedicated Red Squirrel Species Champion and staff raise awareness of campaigns, sightings, and reporting. Some staff also volunteer for annual surveys. The Environment and Climate Change Team provides support and advice for staff with regards to planning, forestry, and squirrel ecology.

3 Mainstreaming biodiversity

This section outlines steps taken to incorporate biodiversity measures into wider policies, plans or strategies.

The conservation of biodiversity is embedded in the delivery of Council services.

Policies, Plans, and Strategies

Tayside Local Biodiversity Action Plan 2016-26

The Tayside Local Biodiversity Action Plan (2016-26) leads the way in protecting the multitude of flora and fauna and habitats across Angus. It brings together organisations, communities and individuals and there are more than 140 projects aimed at protecting, enhancing and enjoying biodiversity. The plan focusses and directs staff efforts to deliver the Biodiversity Duty

Angus Local Development Plan

Planning, placemaking and design has an important contribution to make towards addressing the biodiversity crisis. The Local Development Plan (2016) facilitates the delivery of biodiversity conservation through land management policies, supplementary planning guidance and the protection and designation of local sites. This ensures that land use planning and the management of Council-owned land delivers protection and enhancements for biodiversity.

The Council is currently in the preparatory stages of its next Local Development Plan 2 (LDP2), which is required to be consistent with National Planning Framework 4 (NPF 4). NPF 4 sets out new requirements for development to deliver positive effects for biodiversity. As a result, all development will contribute to the enhancement of biodiversity, including where relevant restoring degraded habitats. Development proposals will include measures to conserve, restore, and enhance biodiversity. The next Local Development Plan for Angus is required to reflect these priorities and address the nature crisis. The Development Plan Scheme and Participation Statement for the new Local Development Plan will be presented to Council in December 2024 for approval. This sets out the timeframe for the preparation and production of the next Local Development Plan and will be annually updated.

Angus Community Plan 2017-30

Published in October 2017, the Angus Community Plan (2017-30) and four area Locality Plans are requirements of the Community Empowerment (Scotland) Act 2015. The plans aim to deliver strategic outcomes that contribute to Angus Council's Vision for the future that 'Angus is a great place to live, work and visit'. It is based on three local priorities and three local, cross-cutting themes of economy, people and place.

Angus Council Plan 2023-28

The Plan sets out the council's vision, priorities and overarching strategic policy framework for the next five years. Positive action to protect and enhance our natural environment contributes to the aims of the Council Plan (2023-2028) to ensure that Angus is a great place to live, work and visit. A Council priority is to Care for our Place by 'Enhancing and restoring Angus Biodiversity, corporately and with a range of stakeholders'.

Greenspace Policy

Angus Council's Local Development Plan recognises the contribution green networks make to quality of life, health and well-being and the opportunities offered for biodiversity and habitat enhancement. Policy aims to protect and enhance the ecological functionality and connectivity of existing green networks. In addition, new development is designed to enhance green networks. The work being undertaken across services will help identify strategic county wide ecological networks, informing planning guidance and policy requirements.

Angus Forestry & Woodland Strategy

Angus Council has begun the in-house preparation of the strategy which is a requirement of the Planning (Scotland) Act 2019. The strategy will include the identification of woodland of high nature conservation value as well as policies and proposals for their protection and enhancement. The strategy which will be completed during 2024 following public consultation, is an opportunity to increase biodiversity and improve degraded landscapes. It will also contribute towards the delivery of national timber production targets and will aid in mitigating the impacts of climate change.

Angus Local Landscape Areas

Following an assessment of special qualities, and public engagement, the study supports the designation of local landscape areas through the forthcoming local development plan.

Consultation draft of study report will go to communities committee in November 2023. The report proposes the designation of four Local Landscape Areas in Angus. Thereafter there will be a period of public consultation prior to the study being further reported to committee for designation during 2024. The study identifies special qualities for each area and biodiversity is important in all four areas.

Angus Local Nature Conservation Sites

Angus Council has worked with a panel of local experts to assess 28 sites for designation as Local Nature Conservation Sites. A report will go to communities committee November 2023 for approval these sites which are the first phase of designations. All are sites of local biodiversity interest. A second phase is underway with survey work undertaken in 2023. Assessment of the second phase will commence late in 2023.

Angus Shoreline Management Plan 2

The Shoreline Management Plan (SMP) provides a large-scale assessment of the risks associated with erosion and flooding at the coast. It also presents policies to help manage these risks to people and to the developed, historic and natural environment in a sustainable manner.

Natural Flood Management

Angus Council has implemented several actions from 2016-22 that have had a positive impact on biodiversity, as part of the duties on responsible authorities under the Flood Risk Management (Scotland) Act 2009. These are published in the Tay Estuary and Montrose Basin and Tay Local Flood Risk Management Plans. An assessment of the potential for natural flood management (NFM) was used to help identify opportunities for using the land and coast to slow down and store water. NFM actions have been recommended in areas where they could contribute to the management of flood risk. In such instances these actions are described as part of flood protection or NFM studies.

Angus Food Growing Strategy 2020 - 2025

The Scottish Government has set out a vision that by 2025 Scotland will be “a Good Food Nation, as part of this vision a duty was placed on Local Authorities to develop a food-growing strategy. This includes the identification of land for allotments and other community growing and describing how the authority will meet demand for such land. Angus Council and its partners consulted local growers and citizens in the development of the strategy which identifies a clear goal of ‘Improving the Natural Environment – Delivering a resource for improved biodiversity. The supporting action plan links the food growing strategy to the Tayside Local Biodiversity Action Plan and Sustainable Energy & Climate Action Plan to ensure environmentally sound projects are championed and promotes ecological sustainability by encouraging the use of plant-based fertilisers and pest repellents and by supporting natural predator control e.g. bird and bat boxes, bug hotels and undeveloped areas in allotments for hedgehogs and amphibians.

Roadside Verge Management

In Angus it is recognised that roadside verges play a role in providing a valuable habitat for wildlife and in pollinators. Staff have worked with local communities, environmental organisations and botanists in order to maintain a range of species-rich verges in parts of Angus. Part of the Strathmore B-Lines project includes sections of road verge that were previously regularly cut.

Currently Angus Council adopts a rural grass cutting regime which delivers two cuts on A, B and C class roads per year. Usually this is a one-metre swathe with extra cutting at sightlines and inside of bends. A second cut occurs in mid to late August giving wildflowers a chance to flower and set seed. On unclassified roads there is only one cut made in mid-summer. Changing weather patterns, a trend being warmer wetter summer months,

will at times, influence cut timings.

The pilot of the verge cutting regime at Kinnettles is an example of good practice where one cut was carried out in autumn 2022 and again in 2023 but with the addition of passing places in suitable locations in 2023.



Photo: Roadside verge management Kinnettles pilot study © Kelly Ann Dempsey.

Hedgerow Management

Angus Council owns very few hedgerows but does engage with private landowners where there is a requirement for hedges to be cut back to boundary lines for safety reasons. The authority can serve notices under the Roads (Scotland) Act 1984. Management of hedges, at appropriate times of year (not during bird breeding season) by farmers, is often required to maintain hedge structure that allows drainage to flow. In some cases, verges can benefit increasing flora diversity.

4 Nature-based solutions, climate change and biodiversity

This section demonstrates how Angus Council works with a wide range of partners to deliver nature-based solutions.

Climate change is a direct driver of biodiversity loss and Angus Council recognise the positive contribution biodiversity can make to building resilience and help nature to mitigate and adapt to climate change.

Nature-based solutions, addressing both the climate and biodiversity crises, continue to be developed and delivered at all scales across Angus. In both rural and urban areas, Angus Council has continued to work with communities and wider stakeholders to deliver woodland expansion, natural flood management, grassland regeneration, wetland creation and green network connectivity projects. Engagement with land managers including estates and farmers continues to become more common practice across Angus and Sharing Good Practice opportunities continue to grow as increased funding streams provide new opportunities for partnership working.

Action in this reporting cycle is linked to ongoing policy delivery, such as the Local Development Plan's policies on managing flood risk, water quality and greenspace enhancement and the Tayside Local Biodiversity Action Plan 2016-26. Partnership work to mitigate against urban, coastal, river and estuary flood management continues via the Tay Estuary and Montrose Basin Local Flood Risk Management Plan and at Montrose Bay, in the Scottish Government's Dynamic Coast project. Work is underway to incorporate National Planning Framework 4 and the Scottish Biodiversity Strategy into future policy development and project delivery.

Delivering Nature-based Solutions

Catchment Scale Solutions

River South Esk Catchment Partnership

The River South Esk catchment area is managed by a voluntary catchment partnership. The Partnership continues to work with the Cairngorms National Park Authority and partners on a Heritage Lottery Fund project to deliver the £50 million project 'People and Nature Thriving Together' in three river catchments focussing on Potentially Vulnerable Areas identified in the Tay Estuary and Montrose Basin Local Flood Risk Management Plan.

Priorities over the next decade will include improving ecological connectivity; riparian woodland expansion; invasive non-native species control; climate change adaptation; peatland restoration and; natural flood management.

River South Esk 2020 Source to Sea Challenge

The River South Esk Catchment Partnership was awarded £130k from NatureScot in the first round of the Biodiversity Challenge Fund in 2019. Project partners included the River South Esk Catchment Partnership, Esk Rivers & Fisheries Trust, Forestry & Land Scotland, Abertay University and Angus Council. The project's aim was to enable riverbank restoration and wetland habitat creation at five sites in Glen Clova and native broadleaf expansion in riparian and montane zones in Glen Doll.

- Large woody structures were incorporated into five riverbank sites in Glen Clova: the structures collect sediment, slow water down and reduce erosion. They provide shelter for adult and juvenile fish, reducing predation pressure. New habitat also benefits mammals, birds, plants and invertebrates.
- Riparian planting of native broadleaved species was carried out. All trees were sourced from as local seed zone as possible or as is the case with the Hazel, grown in a seed nursery planted from seed of Scottish origin. Forestry & Land Scotland also delivered baseline habitat survey and set up fixed point photography for future monitoring within the montane tree enclosures.

In addition to the habitat creation, the project will provide seed sources for future natural regeneration during forest restructuring and has increased the locally rare Aspen tree within Glen Doll Forest by approximately 490%. The additional small fencing enclosures have also protected well over 100 rowan seedling/saplings and native ground flora that have previously been subject to heavy deer browsing pressure, allowing them to fully establish and improving habitats for pollinators.

Over the last three years, the River South Esk Catchment Partnership has delivered a range of projects carried out with partners that contribute towards climate and nature resilience. These include:

Cairngorms 2030 – a development phase was completed in spring 2023 after an 18-month scoping period. Studies and restoration plans have been developed for three Angus rivers with 'Potentially Vulnerable Areas' designated in the Tay Estuary and Montrose Basin Flood Risk Management Plan. These are on the Rivers South Esk, North Esk and Kinnordy Loch Catchments.

Nature Restoration Fund – The launch of the Scottish Government's Nature Restoration Fund (NRF) in Spring 2021 has provided an opportunity for the Partnership to use experience gained in its development to work with partners on a successful £140k NRF development phase bid in 2022/23.

The project 'Restoring the River South Esk: a Nature Rich and Climate Resilient Catchment' aims to deliver woodland expansion, wetland creation, river restoration and riparian planting in three Angus Glens. A funding decision on the delivery phase outputs is expected by October 2023.

The 'Restoring the Rottal Burn' project was awarded the UK River Prize in April 2023 by the River Restoration Centre. The project is an example of what can be achieved when local partners, experts, academics and landowners combine their strengths for the benefit of the local environment, biodiversity, and community. More so than ever, 10 years post restoration the project continues to inspire new restoration projects across the River South Esk catchment and Angus.



Photo: Restoring the Rottal Burn sharing good practice event © Kelly Ann Dempsey

Woodland Expansion

Previously, a large-scale forestry project the 'Glen Clova Contour Planting Project' aimed at reducing peak flows in the upper South Esk catchment saw contour tree planting take place in two areas of Glen Clova and Doll. Funding for further large-scale planting (£3.2million) is in place and the planting of 165 Ha (246,000 trees) began in spring 2019. Further phases continue to be planned and will be delivered. Since 2021, planting schemes have increasingly become part of landscape scale partner projects funded by public monies, however the need to scale up initiatives and access alternate private funding streams is becoming a priority area.

An annual Standard Tree Planting Scheme run by Angus Council contributes to carbon capture and provides a biodiversity benefit. The scheme replaces trees that have been lost or had to be felled due to age or health issues.

Between 2021 and 2023, 490 trees have been planted throughout Angus. In addition, tree donations have been received from individuals to offset their carbon footprint and planted in Angus open spaces and burial grounds.

Natural Flood Management

Natural riverbank protection can provide biodiversity benefits and is being investigated through Nature Restoration Fund monies in urban areas of Angus. Multi-department teams within Angus Council are scoping natural solutions with contractors in Kirriemuir and Arbroath.

Arbroath (Brothock Water) Flood Protection Scheme is ranked nationally as a priority project and is an action in the Tay Estuary and Montrose Basin Local Flood Risk Management Plan. The scheme is designed to control the volume of water entering the Brothock during extreme weather. Its purpose is to hold flows back in the catchment above Arbroath to protect parts of the town that have suffered from flooding in the past and would have been at risk from flooding in the future.

Three flood storage areas built at Brothock Meadows, St Vigeans and Hercules Den manage this – using raised embankments and flow controls to retain flood water above the natural ground level during flood events. This allows the water flow and volume entering the Brothock to be controlled, limiting onward flows and avoiding the watercourse bursting its banks.

Culverts have been specifically designed to restrict flows and retain the water within the storage areas. That retained water is then gradually released in a controlled way through the culvert into the Brothock Water as the flood levels decrease.

Existing defence structures in Arbroath Town have also been enhanced, raised and reinforced and new flood walls constructed.

Construction of the flood scheme started in September 2021 and was completed in December 2023.

Grassland restoration

Amenity spaces and wider nature networks are being enhanced in partnership with Buglife Scotland as we expand our Space for Nature grassland and pollinator projects and continue to be a key partner on the B-Lines project 'Strathmore People and Pollinators'.

Incorporating Biodiversity into Climate Change Strategies and Partnership Initiatives

Angus Council has a long history of considering the impacts of climate change on people and nature. Governance, strategies, action plans and projects are in place to mitigate and adapt to the impacts of climate change.

Sustainable Energy and Climate Action Plan

The Sustainable Energy and Climate Action Plan (SECAP) was published in October 2021. The plan considers greenhouse gas reduction, adaptation, and wider sustainability issues. A SECAP steering group has been set up including key partners involved with action delivery in the plan. Project 11 in the initial SECAP work programme outlines the ambition to 'Implement Biodiversity and Green Infrastructure for Climate Change Mitigation and Adaptation'. An update from Angus Council Environment and Climate Change team within the SECAP progress report states that Climate Change mitigation and adaptation action continues to be developed and delivered across Angus. Nature based Solutions are being employed in urban and rural areas via changes to the water environment and terrestrial habitats. Funding opportunities, in particular the various Nature Restoration Fund streams, are facilitating on the ground action and feasibility studies.

The SECAP steering group will contribute to region-wide Climate Change and Biodiversity actions across Angus through key partners including Forestry Scotland, Scottish Invasive Species Initiative and NatureScot

A SECAP progress report has been draft and will be going through committee in November 2023. The purpose of the report is to update the progress of the SECAP since publication in 2021. A full review of the actions will be undertaken and delivered in a further progress report in 2024.

Transition to Net Zero Action Plan: 2022-2030

Published in September 2022, the Action Plan identifies the key areas within Angus Council's operations that will be prioritised up to 2030, within available resources, to reduce its impact on Climate Change by transitioning to Net Zero by 2045. The plan supports Angus Council's strategic aim of reducing the impact of Climate Change by being a major contributor to achieving Scotland's National Climate Change goals, and leaders in clean growth, environmental stewardship, and sustainability.

Land Use Adaptation is one of five key themes identified in the plan to meet the 2030 Scottish Government interim emissions reduction target and ultimately the Net Zero target.

The Transition to Net Zero Working Group champion climate change action and aim to embed it within Angus Council. The day-to-day management of climate change action lies with the Environment & Climate Change Team.

Actions carried out or underway during the period of this report include:

- Restore and expand grassland habitats via the 'Angus Space for Nature' scheme supporting habitat and species resilience and carbon sequestration.
- Support the restoration of habitats, including wetlands at Montrose Basin Local Nature Reserve.
- Enhance school grounds through habitat creation, improving biodiversity and contributing to carbon sequestration where possible.
- Ensure that new development, or adaptation of existing sites, includes SuDS, landscaping and active travel networks that are nature rich and contribute towards carbon sequestration and resilience.
- Develop Strategic Nature Networks that link settlements and the wider countryside contributing to ecological connectivity, ecosystem health, carbon sequestration and climate change adaptation.

Flood Risk and Biodiversity

A Flood Risk Management Member Officer Group continues to meet, and adaptation delivered through flood risk management is regularly monitored.

Case study

Montrose Bay – Dynamic Coast

Montrose Bay is one of seven Super Sites under the Scottish Government's Dynamic Coast project. The project uses innovative mapping and modelling tools to establish the effects of climate change on our coastline.

Angus Council and Dynamic Coast have been collaborating for a solution to the erosion of the coastal frontage of Montrose Bay. The dunes act as natural flood protection for parts of Montrose, but erosion is opening up flood corridors through the dunes. The current rate of erosion poses a high risk of reduction in the protection against coastal flooding to the town of Montrose within the next few years. The aim of the works is to target the weaknesses in the dunes and provide an infill that will initially give a short-term protection, whilst building up the dunes and beach with each delivery of dredge material to give long term protection.

The methods recommended for combatting the erosion can be summarised as:

- Dune and beach recharge – sand material to be imported back into the bay to replenish the depleted dunes and beach levels
- Long-term dune and beach nourishment – continuing to import sand to nourish the dunes and the beach

- Sediment management – employing methods to retain the beach and dune sand and protect it against further losses.

Options are currently being assessed to source sediment material and the consents needed to carry out the works under the Environmental Impact Regulations and with stakeholders such as SEPA.



Photo: Montrose Bay © A Cowie

Climate Change Related Challenges for Biodiversity

Measuring the effects of climate change on the natural environment is a huge task. Angus Council are guided by our partners through collaborative project work and strategy development. The Tayside Local Biodiversity Action Plan 2016-26 considers the effects of climate change on a variety of species and habitats.

It is vital to identify changes in trends, and long-term monitoring is crucial for this. Further sections of this report outline the biodiversity research and monitoring taking place in Angus. This monitoring goes towards our understanding of Climate Change related challenges by highlighting changes in trends particularly over long-term monitoring.

- Surveys are undertaken on invasive species movement in riverine and estuarine areas.
- Citizen science projects are developed and supported by the Tayside Biodiversity Partnership allowing us to better understand species migration, abundance, and decline

The forming of Nature Networks is critical to enable species to move and adapt to climate change. In order to create meaningful habitat networks, Angus Council are embarking on an ambitious project to map habitat across the Local Authority area. This baseline data will enable effective connectivity maps to be produced and help to focus future restoration works to connect fragmented habitats.

5 Public engagement and workforce development

Public Engagement

This section details communication and education activities undertaken to inform or engage with communities. Public Bodies are in a position to facilitate an understanding of, and connection with, biodiversity and nature in both formal and informal settings.

Biodiversity Communication

Awareness-raising, communication and engagement are key elements of the biodiversity work undertaken by Angus Council. Promotion of biodiversity includes:

Websites and Social Media

The Angus Council website is regularly updated to include local, regional and national biodiversity policy news and three twitter accounts highlight sustainability, landscape and the River South Esk catchment. In addition, there is an Instagram account @Wildsouthesk. The original River South Esk catchment partnership website was built in 2011. A new site is in development and will be launched in late 2023.

The Tayside Biodiversity Partnership administers four Facebook pages - Tayside Biodiversity, Tayside Swifts, Tayside Amphibians & Reptiles, and Tayside Wildlife Recorders' Forum. All feature news, events and engagement opportunities.

Media Coverage

Biodiversity project work is shared via e-news, blogs and press releases. The Tayside Biodiversity Partnership, University of Edinburgh, East Haven Together, Marine Conservation Society, Cairngorms National Park Authority and Greenspace Scotland are only a few of the external agencies who've shared news, blogs etc. The Montrose Basin Saltmarsh Restoration Project gained media attention and featured on STV News and in other news outlets.

Community Consultation

Angus Council has moved from the online engagement tool Social Pinpoint to Engagement HQ. The online consultation tool allows the public to spatially convey their suggestions, ideas, and concerns on a project defined map base.

Angus Species and Habitats Champions

Following in the footsteps of MSP Species Champions, Angus has its own “Species and Habitat Champions” with the programme launched on 27 February 2018. There was a hiatus on development of this programme during the Covid19 pandemic, but in 2022 this was revisited with 18 councillors and five schools pledging their support for a range of 24 species and 11 habitats which are significant in Angus.

To date the champions have been involved in a wide range of activities focusing on topics such as: marine litter, coastal erosion, farmland management, invasive non-native species, meadow creation, pollinators, natural flood management, woodland creation, and climate change adaptation.

Many local and national priority species have been a focus of action including: badger, hare, swifts, otter, hedgehog, small blue butterfly, bumblebees, wildflowers, bottlenose dolphin, pine marten, red squirrel and wildcat.

Species and habitat briefing plans are being developed for elected members champions linked to training programmes and communications opportunities.

Community Groups and Partnership Working

Council services work closely with communities to improve biodiversity, particularly in urban settings across all Angus towns. Depending on the needs of the project or community group, Parks Services provide support through design advice and assistance with the selection of sites the Service also help with site clearance, tree pruning works, and provision of tools and materials. Projects in this reporting cycle have included:

- **Gallowshade Community Links Group** have been developing allotments and pick-your-own fruit trees in the Steele Park in Forfar. To support this, Angus Council have supplied bark, council compost, and assisted with initial maintenance of the site.
- **Sustainable Kirriemuir** have developed wildflower areas and worked closely with Angus Council and BugLife to develop areas for pollinators including building a bug hotel at Kirrie Hill. A Pollinators Picnic event was also held in 2023.
- **A community group at Westmuir** are developing an outdoor meeting area with wildflower planters and a seating area.
- **Arbroath Pippins Community Orchard** has been developed at Springfield Park
- **Friends of Keptie Pond** group have carried out various biodiversity enhancements to Keptie Pond in Arbroath including the installation of duck nesting tubes, planting of wildflower meadow, nesting rafts for waterfowl, willow spiling, and aeration equipment to reduce algal blooms.



Photo: Keptie Pond © A Cowie

- **East Haven Together** have carried out extensive biodiversity enhancement works in their local area and are hailed as exemplary. Their ongoing horticultural works include many biodiversity benefits where many native species are selected. The group have worked with Ladyloan Primary School to encourage children to engage in the natural environment on multiple projects such as sand dune restoration by planting Lyme and Marram grass. The group also collaborate on the Species on the Edge Project through survey work and removal of invasive *Rosa rugosa* to encourage Kidney Vetch.

School Outreach and Outdoor Learning

During this reporting cycle, there has been a notable increase in biodiversity activity in schools due to the creation of a secondment opportunity for a Learning for Sustainability (Lfs) Officer. This position was created with Covid recovery funding in 2021 and an appointment was made in Jan 2022. The Lfs Officer is working with schools to develop a better understanding of Lfs and train staff to deliver the three key themes of Lfs:

- Global Citizenship
- Education for Sustainable Development
- Outdoor Learning.

The Lfs Officer supported 26/59 schools on a requested basis in 22/23. This secondment has been extended until June 2024.

Liff Primary School is currently taking part in a whole school biodiversity topic, working with Angus's Lfs Officer and Learning through Landscapes. They are also working towards the LEAF (Learning about Forests) award from Keep Scotland Beautiful.

Four schools in Angus were successful in applying for and receiving the Food for Thought Education Fund in 2022/2023 and a further two schools have been awarded the full £3000 to develop food and health as a context for learning in 2023/2024.

Fourteen schools have achieved their Green Flag as part of their Eco Schools work since 2021. Fourteen schools took part in the LEAF (Learning about Forests) Award pilot between January 2023 and June 2023. The programme advocates outdoor learning and hands on experiences in nature. Twenty-five primary schools engaged remotely with live lessons from Keep Scotland Beautiful on topics such as biodiversity and plastic pollution in session 2022/2023.

Several schools are using the John Muir Award – an environmental award scheme that focus on exploring and conserving wild spaces – as a framework for learning about and taking action to protect nature. This includes pupils at Montrose Academy, Stracathro, Woodlands, Seaview, Edzell, Whitehills and Southmuir Primary Schools.

Alba Explores, educators for outdoor learning and environmental education, have supported many of the schools mentioned to create their ponds, install polytunnels, vegetable gardens and to complete the John Muir Award.

Brechin High School is developing its rural skills course by securing a lease of land (three acres) from Scotia Homes to develop an allotment and food forest for the school and local community to improve wellbeing and sustainability opportunities.

Groups of pupils from both Carlogie and Burnside Primary Schools in Carnoustie were invited to Carnoustie golf links to help plant 1000 trees in May 2023.

Woodlands Primary School in Carnoustie are about to work with Carnoustie Golf Links, Easthaven, Buglife Scotland and Species on the Edge to plant kidney fetch to support conservation of the small blue butterfly, sowing wildflower seeds to encourage bees and looking at biodiversity in coastal areas.

Provision of Ranger Service and Public Education Programmes

Activities led by Rangers Services in Angus are included in may sections of this report. The following is an example of key work:

Forfar Loch, Crombie Country Park, and Monikie Country Park

- **Junior Rangers** are hosted at Forfar Loch, Crombie Country Park and Monikie Country Park. These events are focused on habitat management, learning about the environment, surveys, and the day to day running of the parks.
- **Adult Volunteers** were encouraged to take part in a variety of citizen science projects with our ranger service including the Big Butterfly Count, RSPB Big Garden Bird Watch, Plant Life Diversity, and Saving Scottish Red Squirrel Counts.
- **Wildlife Detective Series** is an interactive and educational programme to unravel the mysteries of the natural environment and discover what lies in and around the park and ponds in Angus.
- **Nocturnal Series** is being introduced during October holidays 2023 diving into bats, owls, and badgers for late night events.

- **Roam with the rangers** is an ad hoc event run on busy days in the parks. The ranger sets up a stall focusing on an aspect of environmental education from a range of topics including bird identification and seed collection.
- **Spring Clean meet up** was hosted at Forfar Loch - a litter pick event around the spring change of season, inviting the public to come and learn about the danger litter poses to wildlife and ways to make a difference in their own back yard.
- **Toad Patrol** is a yearly event open to the public and local groups. During the migration of breeding amphibians our volunteers head out to the road to count, identify and safely relocate amphibians to identified ponds. This also provides the educational opportunity for attendees to learn how they can help amphibians in their gardens throughout the seasons.
- **Outside groups** are also supported to run identification workshops on ANGUSalve sites, including National Bee day, and Dragonfly / Damselfly Identification workshops.

Due to staff changeovers, data on event attendance has been collected since March 2023 when a new recording system was implemented. Due to the nature of many volunteer events being self-led, recorded attendance is likely to be low. At the time of writing this report, there have been 27 public events with 352 attendees and 96 volunteer events with 212 attendees. There are a further planned 35 events in 2023.

Montrose Basin Local Nature Reserve

During 2021 and 2022, an ANGUSalve ranger based at Montrose Basin LNR worked in partnership with Scottish Wildlife Trust to run a series of events. Activities include educational group visits including University and higher education groups, joint guided walks, and site-specific events allowing interpretation of the key species and habitats within the reserve.



Photo: Aberdeen University visit Montrose Basin LNR (c) Joanna Peaker

In subsequent years Scottish Wildlife Trust (SWT) has continued to run public events on the Local Nature Reserve led by the SWT Ranger and team of expert Teacher Naturalists and other staff and volunteers.

The Scottish Wildlife Trust Teacher Naturalist Team engage with hundreds of Angus pupils each year who visit the site to learn about its habitats and species. The Team also outreach to schools and other groups to carry out education programmes where appropriate.

In addition, the Environment and Climate Change Team led World Wetlands Day – Saltmarsh Restoration event in 2023. This was a free drop-in session to engage with the public on the works undertaken to restore the saltmarsh habitat and also discuss other wildlife on the reserve and elsewhere in Angus. This was also supported by Angus Council Environment Spokesperson.

Exhibitions and Events

The River South Esk Catchment Partnership continues to exhibit at catchment-based events and has worked closely with the Scottish Government funded Brechin Community Led Tourism Project since 2021. The group have paid for new display banners and interpretation on site at Brechin as part of the 'Wild South Esk' project.

Angus Climate Week in September 2022 held a programme of free events with many relating to biodiversity including:

- Climate Change and Marine Life
- Kirrie, Climate and Community – a story on 1000 acts
- Climate, Wildflowers & Pollinators – local solutions to a global challenge
- Climate adaptation in Practice: The Rottal Burn Restoration 10 years on
- Climate adaptation in practice: Murton Trust – Quarry to Nature Reserve, 20 years on
- Clean up for climate change: Tayock beach clean.

The annual Tayside Recorders' Day was held in Angus in 2023. The event was free to attend and open to all. In total, 51 attendees were present on the day to listen to a range of talks from 10 speakers from varying organisations as well as individuals on topics including:

- Better Biodiversity Data
- West Angus Wader Project
- Species on the Edge
- Local Nature Conservation Sites
- Bringing Beavers back to the CNP
- Improving Biodiversity in Graveyards
- Field vole and bank vole identification
- Scottish National Adder Survey and Amphibian Ladders
- Moths in Tayside
- Easthaven Together – community projects



Photo: a selection of speakers from the Tayside Recorders' Forum 2023 held at Montrose Museum and Art Gallery

Citizen Science Initiatives

Citizen Science initiatives continue to be very popular in Angus communities. Groups in Kirriemuir and East Haven in particular are positive role models, keen to share their enthusiasm and expertise across Angus. Individuals and organisations participate in the recording on many taxa for organisations including Butterfly Conservation, Buglife, Saving Scotland's Red Squirrels, Scottish Badgers, Scottish Wildcat Action, RSPB, Plantlife and Marine Conservation Society. Examples are included in many sections of this report.

A local initiative run by Marine Life Angus and the Tayside Biodiversity Partnership continues to embrace technology as means of recording data and promoting Angus as land-based whale and dolphin watching destination. The award-winning innovative use of WhatsApp in Shetland to report orca sightings has been used as model and a similar group continues to operate in Angus. The initiative continues to work with the Angus Tourism Cooperative, promoting the links between species data collection and local tourism opportunities.

Community Litter and Pollution Prevention

Angus Council Waste Services team actively engages with our communities to enhance biodiversity and nature. Litter-picking equipment is loaned to groups who carry out clean-ups and the resultant waste is collected.

Adopt-a-Street campaign was launched in November 2017 at the community-led Litter Summit. The scheme provides litter-picking equipment to residents who want to clean somewhere special to them. Between 1 January 2021 and the time of writing this report, an additional 88 individuals or families signed up to the scheme, taking the total to 172 since the launch in November 2017.

Upstream Battle on the Tay is an ongoing project launched by Keeping Scotland Beautiful in August 2021 to work across the local authority areas the River Tay runs through, seeking to reduce litter and recognising that 80% of marine litter comes from the land. Monifieth Eco Force are an anchor group, removing litter and engaging with their local community, and gathering evidence on types and levels of litter along the Tay and its tributaries.

The Great Angus Beach Clean was held twice annually until April 2023 when it evolved into the Great East Coast Beach Clean. Angus Council have supported the removal of waste collected from this fantastic effort.

Workforce Development

This section details activities that have been undertaken to support workforce development in relation to skills relevant to biodiversity, nature, outdoor learning and community engagement in the natural environment.

Angus Council continues to embed biodiversity protection and enhancement into the work of the Council and its partners as part of the implementation of the Tayside Local Biodiversity Action Plan (2016-26) and the Angus Local Development Plan (2016). Council services now consider their biodiversity duty and alter operational practices to benefit nature where possible. To support this Council staff are regularly upskilled through various initiatives and programmes. In the early stages of this reporting cycle, Covid19 pandemic and associated restrictions slowed this progress, however the significance of continued training and development is recognised in order to embed biodiversity further into everyday practice.

Staff Training and Sharing Good Practice:

Work has begun on developing themes for a programme of Building Better Biodiversity training sessions. This will give staff confidence to identify opportunities to enhance biodiversity.

The Angus Climate Week events detailed in this report were open to all with staff encouraged to attend. These events were a combination of online and in-person activity and developed knowledge of climate change impacts on biodiversity as well as nature-based solutions.

A training session in partnership with local seed producers Scotia Seeds and BugLife is planned, aimed at the Parks Service staff 'Making Space for Nature: Managing Our Greenspace for People and Pollinators'. This is tailored to assist in the management of our open spaces for biodiversity benefit.

A practical INNS control event was organised by the Environment and Climate Change Team where staff participated in half day pulling Himalayan Balsam at Forfar Loch. Many staff also volunteer their time on similar projects such as beach cleans and survey work.



Photo: Forfar Loch Himalayan Balsam Control 2022 © A Cowie

Staff also attend training provided by other organisations such as Nature Scot and RSPB and also through institutions including Chartered Institute of Ecology and Environmental Management, Royal Town Planning Institute, Institute of Civil Engineers, Arboricultural Association, Tayside Biodiversity Partnership, Association of Local Government Ecologists and The Royal Highland Education Trust.

The Scottish Biodiversity Officers Network meets regularly, providing an opportunity to share best practice.

The Climate and Environment Team also develop and host training, CPD and awareness raising events in partnership with other organisations across Angus and input into National events. The Team Leader, a member of the Chartered Institute of Ecology and Environmental Management worked on the development of the CIEEM 2023 Scottish Conference: The Role of Trees in a Sustainable Future as part of a volunteer subcommittee.

Good Practice is shared by working in partnership with other organisations on biodiversity projects including BugLife on the Strathmore B-lines project where staff have been keen to learn on best operational practices from the project officer.

6: Research and monitoring

This section details research and monitoring activities undertaken to raise awareness and understanding of nature and biodiversity amongst Angus Council staff and in the wider community.

The status of biodiversity and activity on biodiversity conservation is monitored through:

- Extensive internal monitoring by the Tayside Biodiversity Partnership's Working Groups and regular reports on overall delivery of actions and targets.
- A programme of species monitoring, and survey work carried out by Council staff, volunteers and partners to provide the baseline data for indicators.
- Annual Reporting by the Parks and Burial Grounds Service. Angus Council Climate Change Public Bodies Duty reporting.
- Angus Council's Angus Community Plan 2022-30.
- Angus Council's Transition to Net Zero 2022-2030 Action Plan annual reporting.

Tayside Local Biodiversity Action Plan Angus Progress Review 2023

A review of progress to date, ahead of the 2026 completion date of the Tayside Local Biodiversity Action Plan 2016-26, has been carried out to prioritise areas where there is greatest need to meet action delivery targets. At this time, Angus actions have been assessed and a report has been produced outlining progress against each section. This is based on indicative progress to date. A full review, mapping of projects, and full quantitative assessment will be produced in 2026. Headline figures are that of 155 overarching actions, 116 (75%) are in progress. Additionally, of 573 Sub actions, 341 are in progress which is 60% of these finer scale actions. A full report will be presented at Angus Council Communities Committee in November 2023.

Citizen Science initiatives contribute to research and monitoring of species in Angus. Individuals, organisations, and the Tayside Recorders Forum participate in the recording of many taxa for organisations including Butterfly Conservation, Buglife, Saving Scotland's Red Squirrels, Scottish Badgers, Scottish Wildcat Action, RSPB, Plantlife, and Marine Conservation Society.

ANGUSalve rangers carry out regular research and monitoring at ANGUSalve sites including Montrose Basin Local Nature Reserve, Country Parks, and the Angus Glens. The data gathered is submitted to the relevant organisations. Examples include:

Montrose Basin Local Nature Reserve

Key site features are regularly monitored in addition to the status of the designated features for the SSSI. These features enable the site to be designated as a Local Nature Reserve. During 2021 and 2022 ANGUSalive worked in partnership with Scottish Wildlife Trust to carry out survey work, often with the support of dedicated volunteers. Examples of survey work undertaken during this time period include:

- **Wetland Bird Surveys (WeBS)** – are carried out on a monthly basis. All data is submitted to the British Trust for Ornithology (BTO) to monitor long term trends. This is of particular importance to compare local results with national trends to indicate whether species decline is a wider problem or limited to local impacts. There was a brief period where no surveys were undertaken due to Covid lockdown restrictions meaning it was not possible to gather the team required to undertake survey work across the 750ha estuary.
- **Breeding Eider Surveys**– were previously carried out over alternate years. This was to reduce risk of disturbance to nesting birds as the breeding population was stable. However, surveys carried out after the Covid lockdown restrictions revealed alarming results:

2018	545 nests (386 hatched)
Covid	No counts
2022	24 nests (2 hatched)
2023	24 nests (0 hatched)



Photo: Female Eider on nest © Richard Averiss

There has been a rapid decrease in the mussel beds available across the basin with many beds having died off. It is believed this is behind the sudden decline in breeding Eiders. Theories of the reason behind this include the impacts of climate change.

- **National Icelandic-breeding Goose Surveys (IGC)** – Originally co-ordinated by Wildfowl and Wetland Trust, this survey monitors national trends in populations of Icelandic-breeding geese. All sites survey goose numbers on the same date to ascertain populations. At Montrose Basin this survey is carried out at dawn in October and November on pre-determined dates by rangers and volunteers to divide the 750ha estuary into counting zones. During this reporting cycle, the survey coordination has been taken on by BTO.
- **Regular Goose surveys**– are undertaken to supplement data gathered for the IGC. This survey work is again undertaken with rangers supported by a team of volunteers and monitors trends in goose numbers on the reserve across the season as well as identifying peak numbers of geese using the reserve. All data is also now submitted to BTO. Peak numbers of pink-footed geese during this reporting cycle are:

2020 / 21	84400
2021 / 22	72350
2022 / 23	42479

- **Rare Bird Sightings** – are regularly observed and generate great interest within the birding community. Rare sightings during this reporting period include Hoopoe, Glossy Ibis, Sharp-tailed Sandpiper, and Bar-headed Goose. There has also been a general increase in the observations of Little Egret and Great White Egret, both are now regularly observed on the reserve with Little Egret numbers up to 13 and Great White Egret numbers up to 2.
- **Breeding Tern Surveys**– common and arctic terns are monitored annually using the artificial nesting platform. Results are submitted to RSPB and BTO. During recent years there has been a noted decline in uptake of breeding terns in the area of Montrose. It is believed this is related to climate change affecting the availability of sand eels.
- **General wildlife observations** and anecdotal observations of saltmarsh habitat are also helpful in understanding the ecology of and changing trends on the reserve. Fixed point photography is taking place on the recently restored saltmarsh to monitor progress over the coming years and inform best management of the area going forward.
- **National Vegetation Classification Survey** – During 2023 an NVC survey was undertaken on the reserve, commissioned by Scottish Wildlife Trust.
- **Moths** – Moth surveys are regularly carried out by a dedicated volunteer and moth recorder with rare sighting submitted. This evidence helps to build up a picture of species movement as a result of climate change.
- **Future Surveys**– it has long been ambitioned to carry out other surveys on the reserve though this is limited by capacity. This includes but is not limited to survey of: Brown hare, small mammals, mud flat invertebrates, bats.

Glen Doll

ANGUS alive capacity for survey and monitoring at Glen Doll was reduced during this reporting cycle due to the staffing impacts of Covid19 and the access issues resulting from extensive windblow from Storm Arwen. The following are examples of survey work that was undertaken:

- **Montane Willow** – As part of the long-term strategy for the safeguard and enhancement of the rare native fauna in Corrie Fee, all Red Data Book higher plant species and habitats are monitored to ensure the health of the populations and appropriate grazing pressures are maintained. This resulted in an intervention to increase the abundance of Montane willow scrub. This monitoring has continued during this reporting cycle, though efforts were disrupted due to access.
- **Water Vole Volunteer** – monitoring takes place to monitor populations of water vole which returned to Corrie Fee. Control of American Mink continues to ensure populations of water vole are able to thrive.
- **Raptors** – Monitoring of Golden Eagles and Peregrine Falcons continues.
- **Butterflies** – Due to involvement in the National Butterfly Monitoring Scheme, Glen Clova and Glen Doll have proved to be an ideal place to see many of Scotland's species of butterfly including the rare Mountain Ringlet and other notable species such as Northern Brown Argus, Speckled Wood, Scotch Argus, Green hairstreak, Dark Green Fritillary and Small Pearl-bordered Fritillary. Big Butterfly Counts take place and results are submitted.
- **Citizen Science Projects** – Rangers at Glen Doll, Forfar Loch, Crombie Country Park, and Monikie Country Park all work with volunteer groups for a variety of survey work including butterflies, red squirrels and wildflowers.

Angus has no Local Records Centre so biological records are submitted to local County Recorders and national organisations including the National Biodiversity Network. Biological records in the Cairngorms National Park Area of Angus and in the north on the Aberdeen-shire border are held by the North East Scotland Biological Records Centre. To address this Angus Council Planning and GIS team and partner organisations have created restricted view GIS layers for protected species including badgers and pine marten. Blue and Green network and potential Local Nature Conservation Sites are also included. Angus Council is working with the National Biodiversity Network and other Local Authorities in Tayside on the Better Biodiversity Data Project to develop a local records centre.

Angus Council work with universities and colleges on survey and monitoring projects. The University of Abertay was involved in the River South Esk Catchment Partnership Biodiversity Challenge Fund project and the Rottal Burn site has been monitored by Abertay since 2012. Other Angus rivers have been studied by students and opportunities are being explored for other landscape scale projects in development or delivery.

7 Biodiversity highlights and challenges

Highlights:

There have been many actions in this report which demonstrate real achievement towards benefitting biodiversity in Angus. The actions and projects cover a range of improvements to habitats and species which all contribute towards tackling the nature crisis. Angus Council staff and elected members demonstrate a clear enthusiasm towards their Biodiversity Duty, and this has been reflected in the positive partnership working taking place across services and organisations towards a shared goal to deliver improvements for biodiversity. This has been particularly demonstrated in:

- **Strathmore B-Lines – People and Pollinators in Strathmore**

Collaborative work with the BugLife project officer and Angus Council Staff across services has demonstrated what can be achieved with shared vision. Angus Council have committed to manage 2.3ha of land within the nature network area for enhancement for pollinators. Staff embraced the opportunity to upskill by learning from the dedicated BugLife Project Officer about best practice for grassland and wildflower management taking into account specific site conditions. The project also provided the opportunity for public participation in events from wildflower sowing and planting to bug hunts. The partnership working has been hugely successful.

- **Local Nature Conservation Site – assessment process**

Angus Council Staff collaborated with a panel of local experts who volunteered their time towards assessing 28 biodiversity sites in Angus for designation as Local Nature Conservation Sites. The sites were surveyed to gather information on their current condition after they were originally assessed by Scottish Wildlife Trust 20-30 years ago. The panel consisted of a range of experts who met fortnightly with Angus Council Staff to analyse each site in detail. The outcome has been a suite of sites that are robustly assessed and will stand up to scrutiny. These sites will form part of Nature Networks across Angus. It has also been an opportunity for Angus Council staff to expand their knowledge through the site discussions with volunteers who are expert in their particular field.

- **Nature Restoration Fund**

The launch of the Nature Restoration Fund in 2021 provided Local Authorities the opportunity to carry out projects that would deliver on biodiversity. This has been another example of excellent cross service work within Angus Council to achieve real progress towards biodiversity goals. The purchase of specialist cut and lift machinery has enabled the management of over 6ha of council land for the benefit of pollinators through an improved cutting regime. The enhancement of urban ponds in Montrose has made vast improvements for amphibians, invertebrates, mammals, and birds. The scale of tree planting across Angus and increase in hedgerow planting has been of great benefit to wildlife by connecting habitats. The control of invasive Rhododendron has provided the opportunity for habitat improvements through the restoration of native flora. Saltmarsh has also been restored on the Local Nature Reserve.

Case study

Restoring the Rottal Burn – UK River Prize.

The Rottal Burn is a tributary of the River South Esk Special Area of Conservation in Glen Clova, Angus, with headwaters in Cairngorms National Park. The lower burn was straightened around the 1830s for agricultural reasons and was subjected to regular dredging. While salmon, a species for which the river is classed an SAC, continued to spawn in the straightened section of river, survival of juvenile fish was poor.

Restoration works in 2012 consisted of replacing the straightened channel through the creation of an open and meandering channel which was reconnected to the floodplain. The new channel almost doubled in length, extending the restored section to 1200m.

A decade later, the multiple benefits of the inspirational project are apparent including:

- Habitat restoration, enhancing connectivity and ecological coherence;
- Freshwater & species restoration, including significant hydrological change;
- Natural flood management benefits by connecting rivers with floodplains and by reducing flow variability;
- Enhanced local nature networks through multihabitat restoration;
- Increased carbon storage through flood plan restoration and riparian woodland expansion.

The 'Restoring the Rottal Burn' project was awarded the UK River Prize at a River Restoration Centre event in Birmingham in April 2023 by the River Restoration Centre. The project is an example of what can be achieved when local partners, experts, academics and landowners combine their strengths for the benefit of the local environment, biodiversity, and community. It continues to inspire new restoration projects across the River South Esk catchment and Angus.

Challenges:

While there have been many highlights over the three-year reporting cycle, there are challenges identified that Angus Council may face over the coming three-year period.

- **The CoViD19 pandemic** and associated restrictions slowed progress on delivery of improvements for biodiversity in the initial years of this reporting cycle. We are still feeling the effects of this era and over the next three years need to continue with the momentum we have gained.
- **The outcome of Brexit.** It is vital, over the next three years, to keep abreast of any announcements to changes in agricultural legislation in relation to subsidies. Angus is a primarily agricultural area and the disruption from lack of guidance on farm payments will have a negative impact on the environment.
- **Climate Change** and the impacts on biodiversity will certainly continue to be a challenge over the next three years. It is vital to find a solution to effectively measure and mitigate the negative effects on biodiversity.
- **Invasive Non-Native Species**– the control of INNS continues to be a priority in Angus. This can only be achieved through collaboration with Scottish Invasive Species Initiative (SISI) and their work to gain the commitment from land managers and proprietors to, either independently or with support from SISI, control INNS on their land.
- **Maximising funding opportunities.** While it is welcome that there are multiple funding streams to deliver environmental projects, it is vital that Angus Council maintain capacity to maximise these opportunities whilst they are available. The pace of delivering projects is often very tight and it is a challenge to ensure funding is spent in the most efficient way to deliver the greatest biodiversity benefits.

Future Biodiversity Action

The key work areas for the next three years (2024 - 2027) will be:

- Angus Council staff will lead on the monitoring of the actions listed in the 2nd Edition of the Tayside Local Biodiversity Action Plan 2016-26 for the remainder of its life. Investigations into the production of a third Plan will begin prior to 2026.
- The mainstreaming of the biodiversity process across Angus Council departments will continue with a targeted focus on currently underrepresented services. A Biodiversity e-learning unit is in production via the Scottish Biodiversity Officers Network, and this will hopefully be available to all Angus Council staff.
- Supporting Species and Habitat Champions to encourage communities and businesses to focus on action for our priority species and priority projects.
- Designate and promote Local Nature Conservation and Geology sites.
- Identifying and designate nature networks in Angus towns and across the county that contribute to ecological resilience.
- Continue to develop and implement nature-based solutions projects at geographical and temporal scales that address the twin ecological and climate crises.
- Encourage people to embrace biodiversity, be healthier and more active and 'Greener' by being involved with the natural world.

Conclusion

Angus Council is proud to publish this report which highlights multiple achievements over the past three years which benefit biodiversity and work towards tackling the nature crisis. Over the past three years the council has demonstrated real commitment to its biodiversity duty across all staff and elected members. Collating information for this report has highlighted the wide range of work undertaken across all sectors to make improvements for biodiversity.

Further progress has been made to mainstream the biodiversity process and embed it in all our activities and it is clear that this has evolved over the duration of reporting.

The scale of projects carried out during this three-year cycle has had a real impact on shaping our landscape and we have set the bar high for future work.

Our achievements have only been possible through partnership working and this is an area where Angus Council will continue to thrive to deliver impactful nature restoration work and address the drivers of biodiversity loss.



Tayside Biodiversity Partnership



Images by Anna Cowie, Graeme Gorrie, Richard Averiss, Kelly Ann Dempsey, Russell Cramb, Sheena Hardie, Theo Loizou, Euan McCallum, Ron Mitchell, Claire Pumfrey and Joanna Peaker

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Compiled by Project Officer Environment
Produced October 2023