



South Ayrshire Council
Biodiversity Duty Report
2020 - 2023

Introduction

Under the Nature Conservation (Scotland) Act 2004, all public bodies in Scotland are required to further the conservation of biodiversity when carrying out their responsibilities.

As outlined in the Wildlife and Natural Environment (Scotland) Act 2011 (commonly known as the WANE Act), every public body in Scotland is required to produce a publicly available report, on compliance with the Biodiversity Duty.

This report must be completed once every three years. Biodiversity duty reports for the current cycle, 2021 - 2023 are due by the end of December 2023.

Fulfilling our Biodiversity Duty can help address wider outcomes such as:

- Ensuring compliance with the 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.
- Improving our image and demonstrating we are all working in a socially responsible and ethical way by, safeguarding biodiversity and environmental assets for future generations.
- Contributing to sustainable development and the quality of life in Scotland.

This report is based on the Biodiversity Duty Reporting Template as recommended by the Scottish Government and includes the following sections:

- Section 1: South Ayrshire Council - our role and purpose, including our environmental responsibilities.
- Section 2: Actions our organisation has undertaken alone or as part of partnerships to benefit biodiversity directly or achieve wider outcomes for nature and people.
- Section 3: Mainstreaming Biodiversity - the steps our organisation has taken to incorporate biodiversity measures into our wider policies.
- Section 4: Nature based solutions and climate change – steps taken to support the contribution biodiversity can make to build resilience and mitigate & adapt to climate change.
- Section 5: Public Engagement and workforce development – including education and engaging with communities, young people and the public.
- Section 6: Research and monitoring – actions we have taken to increase understanding of nature and biodiversity, both internally and externally.
- Section 7: Biodiversity Highlights and challenges

Why biodiversity is important to public bodies in Scotland

Biodiversity is fundamental to the living networks (the ecosystems) that provide us all with a healthy environment and a regulated climate. Biodiversity provides many vital services that enrich our lives and that we depend on. Biodiversity underpins much of our food and drink production through maintaining healthy soils and pollination, it captures carbon and helps to clean and cool the air, it protects us against flooding, and it regulates our supply of fresh water.

Human activity is causing biodiversity to be lost at a greatly accelerated rate and these losses can be irreversible, impoverish us all and damage the life systems we all rely on.

Biodiversity loss and the climate emergency are intimately linked. Climate change increases the pressure on biodiversity while the living world provides us with nature-based solutions to climate change and to a wide range of associated socio-economic outcomes in rural and urban areas alike.

Many organisations, even those that don't manage or regulate the use of land, rely on healthy biodiversity to provide them with goods and services that are essential to their operations and to the wellbeing of their staff, customers, and users.

The public sector can play a key role in leading by example and it can make a real contribution to Scotland's efforts to halt the loss of biodiversity and implement our international obligations such as the Convention on Biological Diversity (CBD).

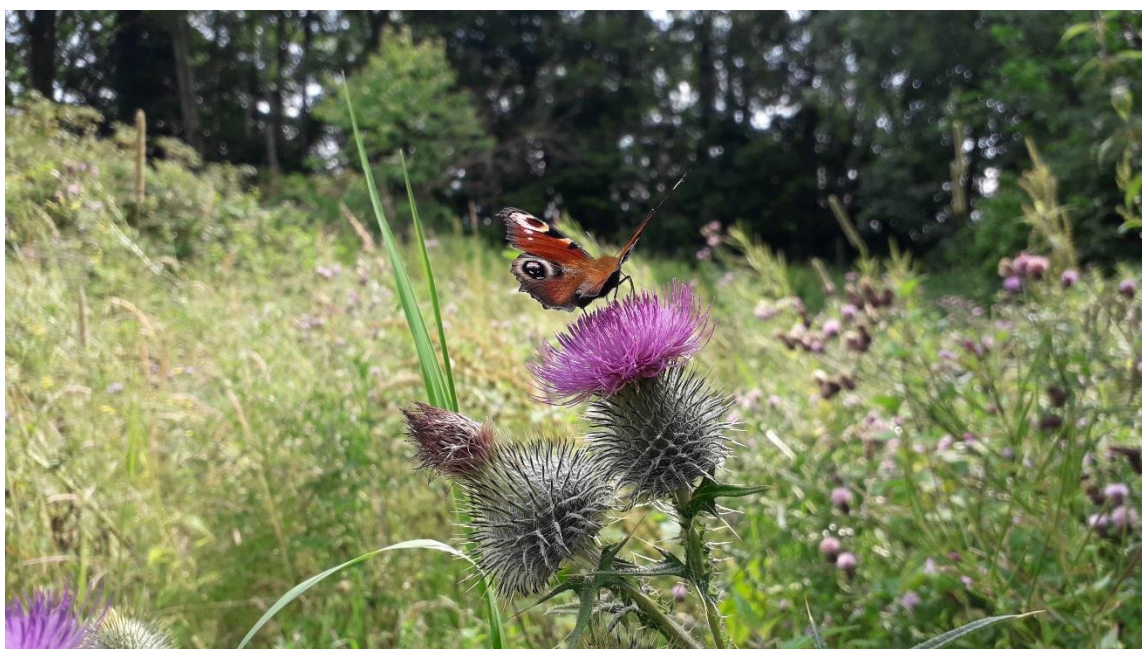


Image 1 Peacock butterfly

Section 1 – South Ayrshire Council

South Ayrshire is located on the south west coast of Scotland and is bordered by the council areas of North Ayrshire, East Ayrshire and Dumfries and Galloway. It spans approximately 422 square miles (1,222 square kilometres) and contains a population of 112,610 (National Records of Scotland 2019 mid-year estimate). Much of the population reside in our larger towns Ayr, Girvan, Maybole, Prestwick, and Troon.

South Ayrshire is home to a rich network of habitats which includes freshwater, coastal, woodlands, grasslands, as well as our urban and rural areas.

International Designations

Natura sites are the European network of protected sites, representing the highest value of rare, endangered or vulnerable natural habitats and species of plants and animals identified under the EC Habitats Directive (92/43/EEC). Natura sites include Special Areas of Conservation (SACs), designated under the EC Habitats Directive for habitats and non-bird species, and Special Protection Areas (SPAs), which are designated under the EC Directive on the Conservation of Wild Birds (2009/147/EC).

There are currently 4 Natura sites in South Ayrshire.

SACs:

- Lendalfoot Hills Complex SAC
- Merrick Kells SAC

SPAs:

- Ailsa Craig SPA
- Glen App – Galloway Moors SPA



Image 2 Ailsa Craig SPA

National designation

Sites of Special Scientific Interest (SSSI) are a statutory designation made by NatureScot under The Nature Conservation (Scotland) Act 2004. There are currently 13 biological, 15 geological and 3 mixed (biological and geological) SSSI's within South Ayrshire, and these vary in size from very small (Blair Farm) to very large (Glen App and Galloway Moors).



Figure 1 Map of SSSIs in South Ayrshire

Non-Statutory Locally Designated Sites

South Ayrshire contains some 170 sites deemed to be of local importance for nature conservation. They are designated for their wildlife interest (Wildlife Sites) or ornithological interest (Ornithological Sites) by the Scottish Wildlife Trust (SWT) and the Royal Society for the Protection of Birds (RSPB) respectively and shown collectively as 'Wildlife Sites' on the South Ayrshire Local Development Plan. These sites are considered to be the next highest in value for nature conservation after statutorily designated sites.

There are approximately 105 Wildlife Sites, including provisional Wildlife Sites, within South Ayrshire and 56 Ornithological Sites. In addition, SWT manages the following 4 Reserves within South Ayrshire for the benefit of both people and wildlife:

Wildlife Sites

Local Wildlife Sites are areas of land that are especially important for their wildlife. They are some of our most valuable wildlife areas. Local Wildlife Sites are identified and selected locally using scientifically determined criteria and surveys. They are corridors for wildlife, forming key components of ecological networks. The Wildlife Trusts have worked with local authorities, statutory agencies, landowners and other local partners to establish effective systems for identifying, managing and monitoring Local Wildlife Sites.

These special and often secret spaces have a huge part to play in the natural green fabric of our towns and countryside. They make up a web of stepping stones and corridors for wildlife, forming key components of ecological networks.



Figure 2 Map of Wildlife Sites in South Ayrshire

Section 2 - Actions to protect and enhance biodiversity

South Ayrshire Council has delivered a number of projects to directly benefit biodiversity both working in-house and with partners.

Sand Dune Restoration Project

Phase 1 was reported in the previous Biodiversity Duty Report 2018-2020, in the past three years we have continued to build on this project annually.

The aim of the project is to allow natural processes to provide coastal defences in the form of sand dunes. Along with the benefits to biodiversity, creating embryo and yellow dune habitats, the project also provides coastal defences from storm surges and coastal flooding and protects infrastructure while providing attractive space for amenity and wildlife.

Phase 2 – 2021

Phase 2 used the same technique as phase 1 in 2020, placing Christmas trees within an area fenced off. We increased the length of the sand dunes further by 60 metres, increasing the length of the esplanade protected from the windblown sand. During this period, we were following Covid restrictions and government advice. The modest increase in length for this phase is a reflection from the fact that donations had to come from within the council area due to Covid travel restrictions. We were unable to organise large volunteer event in this year for the same reasons. Sand has completely covered the trees from this phase and dune vegetation is establishing on the section.



Image 3 Placement of Christmas trees - Phase 2, Jan 2021

Phase 3 – 2022

For this phase we used a different methodology and used Christmas trees to create sand fences. For this we dug diagonal trenches that we placed Christmas trees and backfilled to secure, these were positioned to capture sand from the prevailing wind direction (south-westerlies). This method captured sand quickly and as less trees were used. They were covered before the summer season, mimicked the natural processes better, trapping seaweed and strandline debris where the embryo dune vegetation colonised.



Image 4 Creating sand fences - Phase 3, Jan 2022

Phase 4 – 2023

This phase used similar methods to phase 3 but instead of extending southwards we placed the Christmas tree sand fences in front of the dunes created by previous phases to establish more embryo dune vegetation in front of the new dunes.



Image 5 Sand fences in front of dunes - Phase 4, Jan 2023

Nectar Network

South Ayrshire Council continues as a steering group member working with and supporting the Scottish Wildlife Trust Nectar Network Project. The Nectar Network is a landscape-scale conservation project on the Ayrshire coast, from Girvan to Irvine, creating a nature network for pollinators. The project works with Local Authorities, local landowners and businesses, including golf courses and factories who wish to improve their land for wildlife and has scope to create habitat for pollinators on privately owned land. They also provide South Ayrshire Council with support and expertise for our own wildflower projects.

South Ayrshire Council Ranger Service has helped the Nectar Network create small meadows at areas identified by local community at Prestwick Railway Station and Symington village.

Prestwick site was adopted by the local Rotary Club, this previously biodiversity poor site next to the station has been sown with wildflowers and now provides food for pollinators.



Image 6 Meadow making at Prestwick

Symington sites include a roadside verge that's been adopted by locals to maintain and improve for pollinators. Regular surveys by the community, help monitor site to determine what management is required. Mini wildflower area was created in the school grounds of Symington Primary School and the children, with help from South Ayrshire Ranger Service, maintain it.



Image 7 Wildflower meadow creation & maintenance – Symington

Pollinator Friendly Symington (PFS)

Symington Community Council have formed a Pollinator Friendly Symington group to encourage residents to make their gardens pollinator friendly, to create a network of pollinator sites throughout the village. By September 2023, 18 gardens had signed up as friends and received seed packets, leaflets and information and have taken part in activities to record wildlife found.

Lynne Bates, Nectar Network co-ordinator, gave a short talk on PFS at a Scottish Wildlife Trust staff meeting. A new Scottish Wildlife Trust project, Nextdoor Nature, is looking for several community led conservation projects in Scotland to be showcased on its website and has chosen PFS for its first project.

South Ayrshire Council (SAC) will continue to support this project and working with Symington Council and the Nectar Network hope to inspire other community to create Pollinator Friendly Communities. We have identified further areas of SAC land to plant trees for pollinators and create more wildflower meadows in Symington.

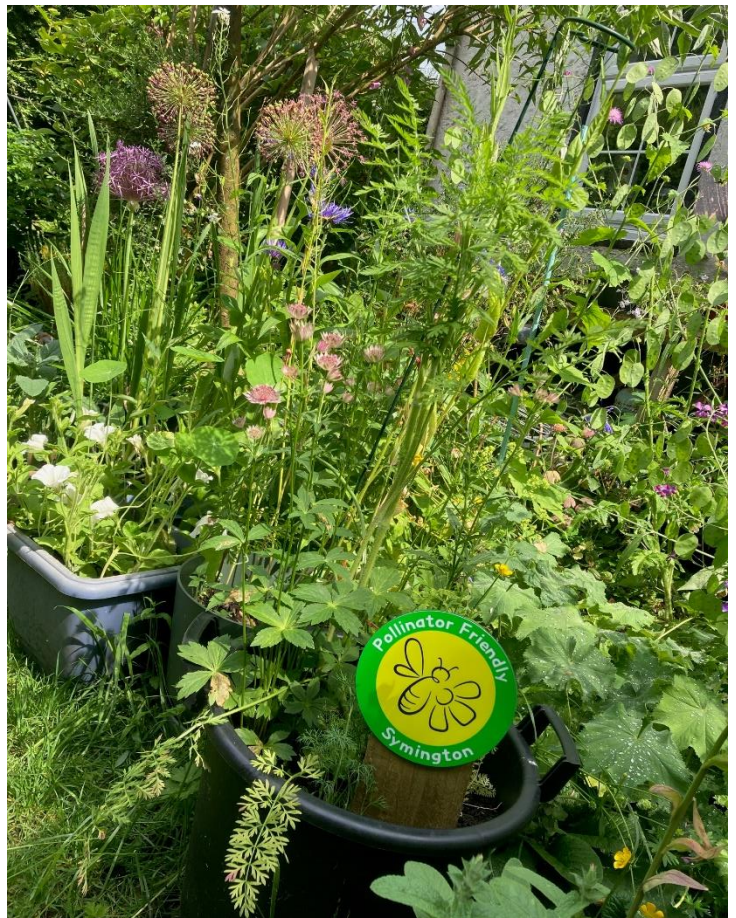


Image 8 Pollinator Friendly Symington

Belleisle Wetland Project

The Belleisle Wetland Project created lakes and streams on Belleisle Golf Course. Working in redesign with golf to make best use of the opportunities available, approximately 0.5 hectare of open water with wetland edges and 0.75km of streams were created. These wetland areas were enhanced by sowing wildflower/fescue meadows. The project contributes to our pollinator nature network and creates habitat for amphibians and aquatic invertebrates. More information on this project is given in Section 7.



Image 9 New lake at Belleisle Golf Course

Wildflower Meadows – Ground Maintenance

In 2021 nine trial amenity grassland areas within Ayr and Prestwick were selected by South Ayrshire Council (SAC) Grounds Maintenance Team to develop as either a perennial meadow, an annual meadow or altered maintenance with a feature cut. The purpose of this scheme is to improve local biodiversity (particularly pollinators) and to create a more visually appealing and diverse range of open spaces for members of the public to enjoy.

All nine of these trial sites were monitored for their ecological value via biodiversity surveys during August 2021 and for its visitor impact via a public feedback survey in November 2021. The information received through the public feedback surveys suggest that the 2021 SAC Meadow/Altered Maintenance Pilot Scheme was generally well received by members of the public.

The project was extended in 2022 & 2023 and there are now wildflower areas in most of towns and villages in South Ayrshire. This has created approximately 1.8 ha of habitat for pollinators, creating a network of stepping stones of pollinator friendly sites contributing to the Nectar Network.



Image 10 Survey of pilot plot



Image 12 Perennial mix - Greenan Ayr



Image 11 Annual mix Whitletts Ayr

Rozelle Wetland Scrape

The project created wetland scrapes and small ponds in the north-eastern section of Rozelle close to the Slaphouse Burn. The area sits at the bottom of a slope and due to run-off is generally boggy in winter conditions or after heavy rainfall.

By digging out ponds and scrapes will have created areas that retain water throughout the summer period which area surrounded by wetland vegetation. The deeper ponds and scrapes will retain more water in winter, reducing overland flow to the Slaphouse Burn. By creating areas that retain water during the summer provides suitable habitat for amphibians and aquatic invertebrates. The project area is close to the Belleisle wetland project and connected to that site and other wetland areas via the nearby Slaphouse and Annfield Burns, contributing to a corridor of freshwater habitats.



Image 13 Creation of wetland scrapes - Rozelle

Urban Woodland Creation

Planted new small urban woodland in Hayhill, North Ayr, in an area that was previously amenity grassland, site is close to the River Ayr riparian woodland.

Mostly native tree species planted with some specimen species that will be suited to a changing climate. Mixture of whips and standard trees were planted, the standard trees provided some instant landscape value and offer some age diversity to woodland while it establishes.

A wildlife hedgerow was planted in same area to screen new athletics arena from the site.



Image 14 Tree planting Hayhill, Ayr

Section 3 - Mainstreaming biodiversity

Integrated Impact Assessment

Background

The Public Sector Equality Duty (PSED) (or general duty) in the Equality Act 2010 came into force in April 2011. This requires that public sector bodies, in the exercise of their functions, have 'due regard' to the need to:

1. Eliminate unlawful discrimination, harassment and victimisation and other prohibited conduct.
2. Advance equality of opportunity between those who share a protected characteristic and those who do not; and
3. Foster good relations between those who share a protected characteristic and those who do not.

Under the Fairer Scotland Duty, we must also give due regard to reducing socioeconomic disadvantage such as low/ no wealth, low income, area deprivation and material deprivation. Equalities Impact Assessments (or scoping papers) that incorporate the Fairer Scotland Duty are the Council's current method of meeting these duties and are required to be carried out at the beginning of any new policy or strategy development or decision-making process that may negatively impact on protected groups.

The Council Plan 2023-28 recognises that local authorities operate in a complex legislative and policy environment that can unintentionally lead to silo working and inefficient use of resources.

The plan proposes development of a new IIA to increase opportunities for effective collaboration and ensure key strategic priorities are always part of our decision-making process. The additional areas to be assessed are:

- Our ageing population;
- Children's rights;
- Sustainability, climate change and biodiversity;
- Trauma;
- The Promise;
- Rurality; and
- Human Rights.

Alongside meeting our statutory obligations, assessing our strategic decisions in this way will allow us to critically assess whether a 'policy' has wider impacts beyond its intended outcomes and if it impacts differentially on different groups in our communities. It also ensures that decision makers are supported to consider the strategic context in which we operate at an early stage of a proposal, avoiding wasted effort and increasing opportunities for collaboration and efficient service delivery.

Proposals

Much like the existing EQIA, the proposed IIA will ask decision makers assess for positive and negative impacts providing justification for the impact rating and providing information on any mitigations required for negative impacts.

Information is gathered using a drop-down menu style excel spreadsheet with guidance notes built in to support completion.

As the IIA is completed, a summary document (see figure 3 below) is generated, offering a clear visual overview of the positive and negative impacts of the assessed policy and any mitigations required. Impacts are displayed using a RAG status. It is proposed that the IIA Summary documents are attached to Council decision making reports as an appendix, replacing the existing Equalities Impact Assessment.

The new IIA is being rolled out to a small group of Service Leads within the Strategic Change and Communities Directorate for testing and evaluation before being rolled out to the wider Council by the end of 2024.

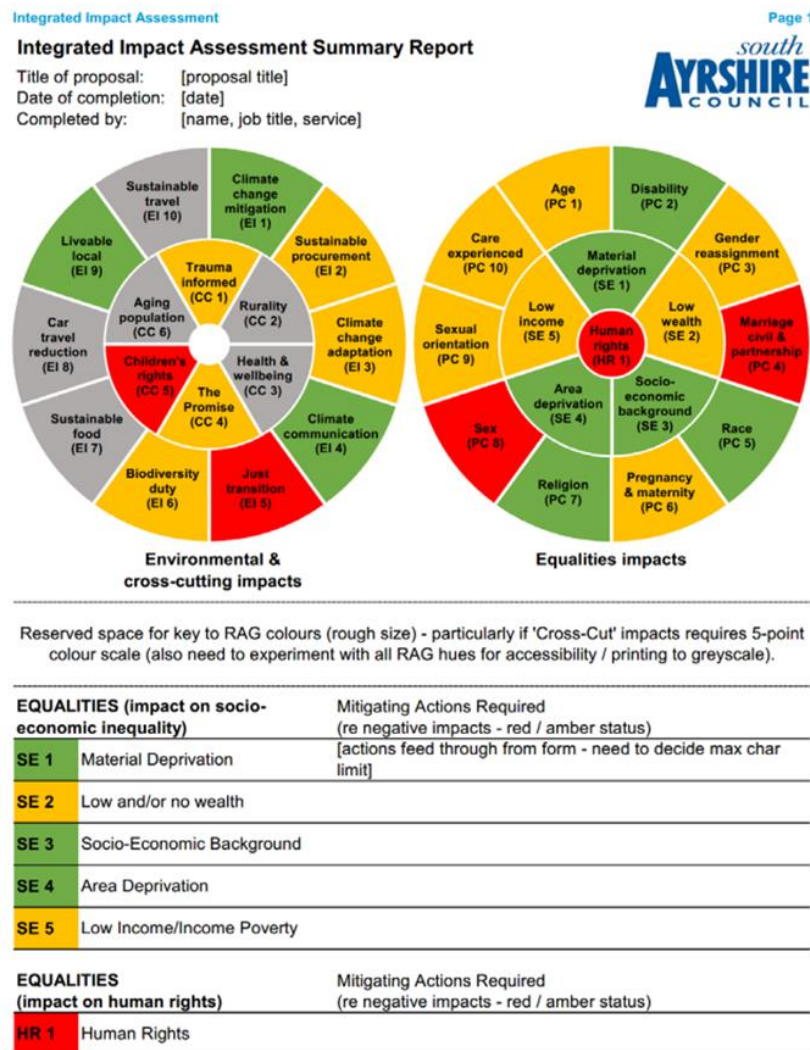


Figure 3 IIA example summary document

South Ayrshire Council Planning and Biodiversity

It is a statutory duty for all local planning authorities to have regard for biodiversity conservation. The planning system offers an opportunity to reverse biodiversity loss through promoting wildlife conservation and habitat restoration. Planning plays an important role in protecting, enhancing and promoting access to our key environmental resources, whilst supporting their sustainable use’.

Local Authority Planners can protect and enhance biodiversity in a number of ways, such as:

- Promoting biodiversity in new developments using planning conditions and developer responsibilities;
- Adopting a strategic integrated planning approach to biodiversity in local plans;
- Collaborative working with local stakeholders and other public bodies such as NatureScot (formerly Scottish Natural Heritage), the Scottish Environmental Protection Agency (SEPA) and Historic Environment Scotland;
- Managing our public assets to enhance biodiversity;
- Embedding biodiversity into monitoring and evaluation systems;

The UK Government and devolved administrations have placed regulations on local planning authorities to take a lead in responding to biodiversity losses through the adoption of clear environmental and planning policy requirements which encourage developers to take account of biodiversity impacts.

South Ayrshire Council’s Local Development Plan 2 was adopted on 31 August 2022. [Environment and Climate Change Chapter](#) of the LDP seeks to ensure that we are able to make the most of South Ayrshire’s wealth of environmental, historic and cultural resources, whilst being mindful of our responsibilities for their protection.

With the publication and adoption of National Planning Framework 4 (NPF4), the Scottish Government clarified that in the event of any incompatibility between a provision of NPF4 and a provision of a LDP, whichever of them is the later in date of adoption is to prevail. NPF4 was adopted less than 6-months after the South Ayrshire local Development Plan, but nonetheless those provisions are still applicable.

Potential compatibility issues between NPF4 and the South Ayrshire local Development Plan were identified by the Planning Strategy Team, and a working document representing the practical implications of any incompatibility issues was provided for Development Management Staff.

The collaborative approach and engagement across the service ensured that issues were properly debated, agreed and understood, and this has helped to accelerate the implementation of the updated development plan position. The resulting guidance document and spreadsheet is a useful and accessible guide to flag up areas of change to policies and decision making.

South Ayrshire Council Planning Officers regularly consult with Council Sustainability Officers on matters relating to biodiversity and landscape use.

South Ayrshire Council Sustainable Development and Climate Change Strategy

South Ayrshire Council launched our first Sustainable Development and Climate Change Strategy in 2019. This is currently undergoing a refresh to address development both locally and nationally in the sustainable development and climate change landscape.

The refreshed strategy will continue to set out a framework for Council projects, policies and initiatives which promote sustainable development, mitigate climate changing emissions, and adapts to the impacts of climate change, delivering on the commitments within the council plan which states: “Sustainability, climate change and biodiversity The council aims to both fulfil and show leadership in relation to our statutory climate change, sustainability, and biodiversity duties across all our services, decision making and work with partners. We have committed to be net zero by 2045 and to adapt to the already locked in impacts of a changing climate. In doing so we aim to ensure a just transition for people and nature, supporting ecological recovery and wellbeing, reducing inequalities and creating sustainable, liveable places where people are connected to nature, climate literate and understand the natural systems we rely on, are supported to develop green skills and can work in a fast-evolving local green jobs market, travel less overall and make active and sustainable travel choices first.”

Public consultation was undertaken in 2023 as part of the refresh process, as was a Place and Wellbeing Assessment supported by the Improvement Service, both of which emphasised the support for joined up partnership working to deliver against a range of areas including biodiversity. As part of the refresh strategy the development of a Biodiversity Strategy for South Ayrshire Council and the role of the new integrated impact assessment process in mainstreaming actions to protect and enhance biodiversity will both be emphasised.

Golf Services

The Council manages eight golf courses, and Golf South Ayrshire is currently working on an action plan to achieve GEO Certification for its operations. This is a recognised voluntary sustainability standard and certification for golf facilities, developments and tournaments. To date this work includes:

- Working with Ayrshire Rivers Trust to assist in the control areas of Japanese Knotweed, Himalayan Balsam, Ragwort and Giant Hogweed.
- Working with Grounds Maintenance and Forestry Services on woodland management in our courses to ensure that standing wood is left to create habitats for bats, birds and other wildlife.
- Creating wood piles throughout the wooded areas on courses to create habitats for insects and invertebrates.
- Throughout the eight courses have reduced the amount of managed areas (reduced mowing) to encourage wildlife. By reducing the maintained areas of the courses this has created areas for ground nesting birds as well as creating cover for small mammals. This has delivered savings in both labour and maintenance.
- Our work here has produced more than 200 tonnes of green waste for recycling. This includes old turf, bunker sand and grass clippings for recycling. Approximately 90 tonnes of the finished recycled waste product has been used on courses for tee rebuilding, bunker repair, and general ongoing renovations. This has reduced the number of transportation miles and subsequent carbon emissions by negating the need to order in similar materials from commercial suppliers and has reduced fuel usage by a considerable amount per annum.
- Reduced the amount of maintenance on the banks of watercourses throughout Troon Links, Belleisle, Seafield and Girvan Golf Courses. This has encouraged the natural regeneration of wild flora and subsequently increased diversity.
- Worked in partnership with the Irvine to Girvan Nectar Network and RSPB 1800m² of greenspace was prepared and sown on Belleisle and Seafield Golf Courses to create pockets of wild flowers for migrating insects, in particular the Small Blue butterfly.
- Increased responsible public access by creating a path network around and through Darley golf course. Sand scrapes have been created to provide habitat for solitary bees and areas sown with native wildflower mix.

Section 4 - Nature-based solutions, climate change and biodiversity

Earth Hour

Each year SAC participates in Earth Hour engaging with and encouraging schools, Council staff and the wider community to get involved in a switch off (electricity) and participate in a variety of other activities providing information and action that promote biodiversity and combat the climate crisis.

In 2021, the campaign took place virtually due to the global pandemic. The Climate Change Officer organised an online showing of the film 2040, giving an account of the effects of climate change in the next 20 years. The film looks at solutions that highlight the importance of our natural world and biodiversity. The film was followed by an online panel discussion, including representatives from a local organic farm, local paths network etc.

In 2022, the campaign was led by South Ayrshire Ranger Service and had both an online and in person presence. The film “Scotland: Our Climate Journey” was shown online. The film was followed by a live panel discussion including representative from SRUC linking the biodiversity and climate change crises and providing information on what is happening locally in South Ayrshire.

The Rangers also organised an environmental fair on Newton Primary School grounds with stalls promoting sustainability and nature themed activities through partner organisations and the Ranger Service reaching 200 participants.



Image 15 Earth Hour Environment Fair 2022

In 2023, South Ayrshire Ranger Service led on the campaign again with nature walks organised for the community in Dailly, beach school and explore the strandline activities organised as part of a Green Health fair in Girvan and activities in Belleisle, Ayr from South Ayrshire Ranger Service making seed bombs, hoverfly lagoons, pinecone feeders and seed sowing. In the evening, South Ayrshire Ranger Service partnered up with the Ayr Film Society to show the film “Riverwoods”. This film focussed on biodiversity in Scotland and was followed by an in person discussion with a panel of experts. The panel included representatives from the Ayrshire Rivers trust, the Galloway and Southern Ayrshire UNESCO Biosphere, the Energy Agency and South Ayrshire Council.



Image 16 Earth Hour - Green Health event 2023

Provost's School Footprint Challenge

South Ayrshire Council created the Provost's School Footprint Challenge, a competition between all secondary schools in South Ayrshire, to encourage young people to look after the environment and empower them to reduce the ecological footprint of their school. Many of the activities that schools have implemented as part of the Provost School Footprint Challenge have had direct and indirect benefits on biodiversity.

Over the last 3 years all secondary have been involved in growing projects in school grounds to boost biodiversity, and in some cases to produce healthy and organic fruit and veg for use in the schools. They all have done switch off campaigns, usually linked to earth hour, and regular litter picks within and sometimes outwith the school grounds. Other initiatives include looking at fast fashion, upcycling, and recycling.

-Ayr Academy have grown a variety of vegetables which were used in the school canteen. They made leaflets/posters for earth hour and have printed 'stickers' to put on screens and laptops that have been left on. Their bottle collection project is going well, and the money made with this has been used for equipment and donations (e.g., foodbank). They are now looking into doing the same with cardboard. They make a school newsletter which includes a part on the eco group. They also promote themselves and what they do on social media (e.g., twitter).

- Queen Margaret Academy have carried out several projects to promote a circular economy as well as biodiversity in their local area. They do a poster campaigns across the school bulletin boards for COP and earth hour. They are also an eco-school, work towards John Muir awards and the saltire award. They have (small) recycle bins in most classrooms.

- Southcraig School: After securing funding from National Lottery Awards for All Scotland in 2020, Southcraig School started a garden project. Since then, they continued working in their garden and are now working towards the eco school award. They worked with the rangers on biodiversity and getting the children outside. They received trees from the woodland trust, which the rangers helped planting.

- Kyle Academy are an Eco School. They always have a strong focus on Fair Trade and take part in Fairtrade Fortnight each year. They have been looking at climate justice in class. They have also started Eco Bulletins e.g., less plastic, reusable bottles and a school magazine, including eco articles. They have wildflowers and an apple tree. They are working on a community -pick your own- garden near the entrance.

- Belmont Academy have planted over 450 trees around South Ayrshire boosting biodiversity and sequestering carbon. They are working on promoting use of the recycle bins.

- Marr College are in the final stages of submitting their application for a Green Flag award. They have a focus on recycling and the eco group have placed bins around the school. They're also looking into recycling or refilling board pens. They are in the process to add food waste to recycling. They are looking into a reverse vending machine, like the bottle

scheme from Ayr Academy. They participate in Communities Day and some other volunteering opportunities.

-Prestwick Academy replaced single use plastics from their canteen with real plates, wooden cutlery and packed lunch is in paper bags. They created bug hotels with natural materials. The sustainable Christmas scheme of making recycled gift tags and cards was a success. Their clothes bin is a success, and the money they make with the clothes go to a children project. They survey insect on campus and keep records.

-Carrick Academy continued with their clothing charity shop idea (now includes toys and small electronics), they keep looking at improving the canteen packaging, and they want to promote that all the school coffee and tea is fairtrade. Following feedback from the PSFC climate festival that they didn't do any/much work in the community yet, they got involved with ice-cream architecture and Carrick community group. They also want to design posters and send them to local businesses, to encourage businesses to be sustainable. They moved to a new school in 2023 and won the 2022-2023 Challenge.

-Girvan Academy took part in second hand September and have set up a clothes swap for Christmas, prom, etc. They're working on the outdoor classroom and a poly tunnel. Although they have worked with the rangers on a wildflower meadow this did not work. They are involved with the Galloway and Southern Ayrshire Biosphere, as well as the Girvan tattie festival. They also do a seed and seedling swap.

After lockdown the PSFC awards continued to be an on-line event (2021 and 2022) until in 2023, when it was in person again. Normally run by the climate change officer, in 2023 it was taken over by the ranger service. Videos from 2023 and previous years can be found on YouTube by searching for Provost School Footprint Challenge.



Image 17 Provost's School Footprint Challenge 2023

Climate Week

South Ayrshire Council's sustainability team have organised various online events and activities to mark Climate Week over the years.

The activities on offer involved an online webinar on nature-based coastal protection solutions. We heard from experts from NatureScot, Seawilding and a local Marine Biologist. We looked at changes that have been witnessed by local marine ecologists and nature-based projects that have been carried out in other parts of the country.

South Ayrshire Ranger Service have also offered in-person rockpool sessions and bat walks with a view to help people connect with nature and to explore the wildlife living on our doorsteps.

Nethermills Hydro Project – Energy Agency

Nethermills Hydro Scheme has been designed as a low impact, ecologically friendly scheme generating green electricity, which is carbon free, for Ayrshire Community College.

Construction work on site began in March 2021 and completed in March 2022. Ecological surveys were carried out pre works starting. As a result of evidence of otters near the site the Energy Agency applied for and was given an Otter Licence enabling site work to continue in daylight hours only to protect the otter habitat.

At the completion of works the post Ecological Survey reported the otter population appeared to remain unaffected, the goldfinch population was also unaffected. Both remained vibrant.

The new eel tiles and lamprey tiles installed on the weir are expected to have a very positive influence on population numbers.

All fish travelling along the fish pass are photographed with Ayr Rivers Trust holding very detailed records of river fish activity.

More information about the Nethermills Hydro Project can be found on Annex 1.

Section 5 - Public engagement and workforce development

South Ayrshire Council Ranger Service

Volunteering

The Ranger Service has run a fortnightly practical conservation group has run since November 2015. Volunteer opportunity is open to all adults and advertised through Volunteer Scotland and Voluntary Action South Ayrshire (VASA). Group assist in a variety of tasks helping us remove Invasive Non-Native Species(INNS) i.e. *Rhododendron ponticum*, Himalayan balsam and Rosa rugosa, tree planting, creating and managing wildflower meadows and making homes for wildlife.



Image 18 Conservation volunteers managing wildflower meadows

Friends of Fullarton Woods(FoFW) run a regular monthly volunteer session that is supported by the Ranger Service. FoFW help SAC to manage the estate for biodiversity and have helped us remove invasive non-native species i.e. *Rhododendron ponticum* & Himalayan balsam from the woodland, and have applied for tree packs that they have planted and maintain in Fullarton Woods.



Image 19 Dead hedging with Friends of Fullarton Woods, Troon

South Ayrshire Ranger Service have also provided ad hoc volunteering opportunities for groups as requested. We have worked with local scout groups planting trees and removing INNSs, supported groups of young people working to attain a Duke of Edinburgh award and school groups that want to volunteer in their local community.

The Ranger Service works with community groups that want to improve their local environment supporting volunteer opportunities. For example, Lochside Garden Group and Pollinator Friendly Symington.

In January 2022 the ranger service started a Junior Volunteers Group for young people between 13 and 18 years old to get involved in conservation volunteering. The sessions have been running fortnightly on a Saturday morning since. The sessions take place mostly at Rozelle or Belleisle Park in Ayr, with occasional activities on the beach. The young volunteers mostly undertake practical habitat management i.e. removal of INNSs, tree planting, wildflower meadow creation, building of bird and bat boxes but also learn identification and survey techniques and take part in citizen science activities i.e. Big Butterfly Count, Big Garden Birdwatch, OPAL surveys, Marine Conservation Society beach cleans.



Image 20 Junior Environmental Volunteers removing Spanish bluebells

Schools & outdoor learning

The SAC Ranger service works with early years, primary, secondary and ASN schools to deliver environmental education. The service has also worked with home education groups, led Forest School sessions and during Covid restrictions period supported outdoor learning for key worker pupils.

SAC Rangers provide led activities during educational visits from local schools and worked with local teachers to provide activities that tie in to the lifelong learning Curriculum for Excellence. Since January 2021, the Ranger Service has worked with almost 3000 children and adults from 25 different local schools.



Image 21 Coastal habitat session

The environmental education activities take place throughout South Ayrshire in our Parks & Open Spaces, Beaches and in school grounds if habitat is suitable. The ranger service has been supporting schools with improving their grounds for biodiversity, planting trees, wildflower areas and building bug hotels. In addition to schools work informal learning was delivered to local scout, guides and youth groups.

Events

Ranger team organise events to promote biodiversity, sustainability, and access to greenspaces. During the 2021-2023 reporting period the service organised 69 events and assisted at community fetes and fun days.

The events focus on engaging people with nature and offer opportunities to the general public to discover nature on their doorstep. Some of the activities offered include:

- Guided walks: bat walks, bird walks, flora walks, coastal walks & general nature walks;
- Family activities: rockpooling, mini-beast hunts, nature trails & crafts;
- Citizen Science: big butterfly count, big garden birdwatch, pollinator surveys, beach cleans;
- Practical Conservation: building bat boxes, tree planting, litter picks, INNS removal



Justice Services Team

The Justice Services Unpaid Work team aim to ensure that our Service Users are engaged in activities that are a clear Payback to the Communities harmed by their offending. The activities are focused on Community based projects and where possible we will support environmental and biodiversity activities. The work listed below and the ongoing partnerships with Grounds Maintenance and our Ranger Service, have given our Service Users the opportunity to carry out meaningful tasks. As well as contributing positively to Biodiversity, these worthwhile projects have given many of the Service Users a sense of pride and job satisfaction. The Unpaid Work section of Justice Services will continue to work with our internal and external partners to support biodiversity while Service Users payback to the Community.

Habitat improvement:

- In partnership with Ranger Services and Grounds Maintenance, the Service Users cut back and removed a substantial area of invasive Rhododendrons from a public woodland. This improved the natural habitat encouraging the reintroduction of native plants and animals.

Allotments:

- We have worked with Grounds Maintenance and a number of local Charities and schools to bring disused allotment areas back into use. This has supported biodiversity education, the growing of pollinator friendly species, and introduced marginalised communities to food growing and plant care.

Kincaidston Primary School:

- Bug Hotel – Our service users bug out a small section of south-west facing hillside and built into it a bug hotel. This was made from recycled materials. They then prepared a small sitting area next to it to allow observation and teach of the primary pupils.

- Preparing and improving existing outdoor teaching areas – Our service users stripped back a waterlogged area of ground and inserted a “French Drain” made of recycled materials.

This allowed preparation for an “outdoor classroom” bounded by 4 raised beds. This area is used for outdoor environmental and biodiversity education.

- Outdoor furniture – The service users and Supervisors constructed timber outdoor seating to support the above education.

- Service Users shifted several tonnes of topsoil to fill the raised beds and allow the school pupils to grow vegetables and insect friendly flowering plants.

- Service users also built an outdoor activity wall from recycled timber, which encourages outdoor learning and activities.



Image 23 Bug hotel Kincaidston PS

Muirhead Primary School:

- Develop outdoor teaching areas – Service Users cleared an area which had fallen into disuse, and repaired a number of outdoor buildings and stores. They also helped design and build a number of outdoor activity items from recycled wood. This area was designed to encourage and support outdoor learning and activity. They also built a number of raised beds and filled them with topsoil. These are now used to grow flowering plants and vegetables in line with the outdoor environmental teaching syllabus.

- Work with Primary classes to build “bug houses” – Primary 1 to 7 classes designed over 30 bug houses. These designs were translated and built using mostly recycled / reclaimed materials.

Kingcase Primary School:

- Assist Primary School and Ranger Services to design, build and install several raised beds to support biodiversity education and outdoor activities. The primary school and Ranger Services had identified an area within the school grounds and sourced timber and materials. Along with them the Unpaid Work Team agreed a design for the raised beds, and our service users constructed them within our workshop. The beds were then transported to the school, positioned and filled with topsoil by the Service Users. These raised beds allow outdoor education in environmental studies and biodiversity.



Image 24 New raised beds Kingcase PS

Habitat boxes:

- With direction and support from Ranger Services, our Service User cut and prepare 25 flat pack Bat Boxes for distribution to the public. These boxes have since been constructed and placed in various locations to support local species and biodiversity.
- Similarly with support from Ranger Services our Service Users constructed and painted a Tawny Owl box and a number of Kestrel boxes. These have been passed to Ranger Services for siting in appropriate locations.



Image 25 Bat boxes

Community Learning Development (CLD)

Alongside the South Ayrshire Ranger Service created a community garden at Lochside Community Centre in Ayr, turning a grassy area around the centre into an area for growing food while also providing an attractive greenspace that welcomed people to the community centre. The project started in 2019/2020 but due to restrictions most of the work in the garden has been completed in 2021-2023 reporting period.

The garden has two functions a more productive garden towards the rear with raised beds and allotment style beds, areas for growing herbs, small fruit trees and wildflowers. The front of the garden near entrance provides a reflective space with small trees, grasses and flowers for pollinators as well as a seating area for people visiting the garden and community centre.

Gardening group is a small but very enthusiastic group of volunteers, that meets weekly for most of the year (stopping between Dec-Feb). Community centre also runs youth groups that help out in the garden during the lighter evenings. During indoor restrictions the garden was used to allow people to meet safely, reducing social isolation, groups from the community centre continue to use the outdoor space.



Image 26 Lochside Community Garden

Galloway & Southern Ayrshire Biosphere

Galloway and Southern Ayrshire was the first UNESCO Biosphere to be designated in Scotland and since 2012 has been working with a wide range of partners to support the development and delivery of a programme that encompasses conservation, education and building a sustainable economy.

The biosphere runs a variety of events and activities that safeguard the local natural and cultural heritage and encourage locals and visitors to experience the landscape as a tool for learning and sustainable development.

Date	Adult	Child	Event
10 June 2023	10	0	Carrick World Ocean Day Festival
27 April 2023	3	0	Biosphere Footsteps, Colmonell Food Matters
20 April 2023	2	16	Biosphere Footsteps, Colmonell Biodiversity
19 April 2023 Primary School	4	24	Learning for Sustainability toolkit delivery, Barrhill
15 April 2023	8	0	Biosphere's Most Wanted, Colmonell
22 March 2023	4	22	Learning for Sustainability toolkit delivery, Barr Primary School
09 December 2022 bulbs (BLines)	10	40	Biosphere Day, Colmonell Primary including planting
08 December 2022 bulbs (BLines)	10	45	Biosphere Day, Ballantrae Primary including planting
07 December 2022 (BLines)	10	55	Biosphere Day, Girvan Primary including planting bulbs

Table 1 Biosphere events in South Ayrshire

Green Health

NatureScot, SAC sustainability team and the NHS Ayrshire and Arran have created a partnership in 2021 to promote and develop the provision of green health opportunities across South Ayrshire.

At the heart of this project was a recognition that empowering people to connect with nature would yield multiple benefits in terms of health, biodiversity conservation, behaviour change and educating people on both the climate and biodiversity crises.

The Green Health project has gathered information about local groups taking people outdoors for gentle activities such as gardening, conservation, walks or bird watching. The information has been published on an app accessible by the general public.

The steering group comprises members from the Galloway and Southern Ayrshire Biosphere, the NHS, South Ayrshire Council, NatureScot and VASA. In the near future, the Green Health project is looking at ways of expanding its reach through advertising within surgeries, offering a monthly calendar suggesting seasonal and local activities and the provision of in-person workshops to help direct people to suitable activities.



Figure 1 Green Health Day Girvan - 2023

Section 6 - Research and monitoring

Wildflower Meadows

We are surveying several of the wildflower meadow sites as part of a monitoring program with Nectar Network and SAC Consulting. The survey methodology was designed by SAC Consulting and is investigating whether the new wildflower areas increase the number of pollinating insects in the area or whether they create sink patches and attract invertebrates from flower poor areas.

The Ranger Service undertook biological and visitor surveys for the Wildflower Pilot Project in 2021, that helped inform future roll-out of the project.



Image 27 South Ayrshire Ranger Service monitoring Pilot areas

South West Scotland Environmental Information Centre (SWSEIC)

South Ayrshire Council Continues to support our local records centre and the 2022-23 update for the South Ayrshire area is below.

South West Scotland Environmental Information Centre is the local environmental records centre (LERC) covering the whole of Dumfries and Galloway and Ayrshire. As well as funding from Nature we also receive some financial support from local authorities in the area, including South Ayrshire Council, which enables us to carry out our core objective – to further the appreciation, understanding and protection of the natural environment of SW Scotland by collating, managing and sharing high quality information about the natural environment and supporting the volunteer wildlife recording community who contribute to the collection of this information.

The Centre currently employs a full-time manager, a part-time project officer and from summer 2023 we have a full-time intern position.

A core part of the Centre's work is collating biological records to act as an evidence base for local decision-making. During 2022-23 SWSEIC has collated approximately 740,000 records for SW Scotland. Approximately 15% of these records were for South Ayrshire, and include both recently collected records and some historical records. The vast majority of these records are collated at a resolution of 1km square or better, meaning the information can be used for site assessment and local decision making.

A key function for the local environmental records centre is to make data easily available to those who need to use it. This might include consultants carrying out environmental assessments on behalf of developers, planners assessing the impact of developments, researchers carrying out scientific studies or local recorders wishing to carry out further studies. In supporting the operation of this key function our public sector partners contribute to their biodiversity duty by helping to ensure environmental data are utilised in the decision-making process.

For consultants carrying out ecological appraisals of development work, the information provided gives context as well as factual data about the species present in a particular area. This highlights designated species (e.g. those species which are covered by legislation protecting them or their habitats), rare or scarce species, species of conservation concern and species of local importance (priority species highlighted in Local Biodiversity Action Plans). Information may also be provided on statutory and non-statutory designated sites.

Throughout the period SWSEIC continued to supply information for proposed developments in all parts of the SWSEIC area, and also with local recorders, partner organisations and a range of national schemes and societies. In the past three months these have included responding with detailed biodiversity information on four South Ayrshire sites relating to utilities, renewables and housing developments.

Training events and talks about local biodiversity and wildlife were run by SWSEIC at various venues across SW Scotland. Some of these took place in person and some were held virtually. Topics include fungi identification for beginners, dragonfly identification, wildlife recording and the use of online biological recording software. These included presentations to SRUC students on biological recording and amphibian and reptile identification.

SWSEIC works with partner organisations to promote wildlife and wildlife recording and foster greater involvement in citizen science. In addition to activities run by SWSEIC, the Centre actively promotes wildlife and wildlife recording events being run by local and national organisations through our monthly newsletter and social media channels.

We publish monthly email newsletters which are distributed to over 650 people in SW Scotland. <https://swseic.org.uk/news-events/newsletters/>

A region-wide conference for all those involved and interest in local wildlife and wildlife recording was held in Castle Douglas. The event included talks and presentations about wildlife and conservation projects throughout SW Scotland, with topics including Golden Eagles, Glow worms, Willow Tits, the Species on the Edge project and the Wood of Cree, along with updates by SWSEIC on our recent work. For the first time the event was held in hybrid format, both in person and also streamed live online. Approximately 120 people attended. A recording of all the presentations is now available on the SWSEIC YouTube channel.

Section 7 - Biodiversity highlights and challenges

Belleisle Wetland Project

Belleisle wetland Project, South Ayrshire Golf worked alongside the Ranger Service and appointed golf course architects to redesign areas of the golf courses to create wildlife habitats both in the rough and areas of play. The project has implemented multi land use system on the golf course, while still functioning as popular golf course it now also delivers biodiversity value and connectivity for nature, as well as climate change solutions as the lakes are designed to collect & hold excess water during periods of heavy rainfall.

The project created new lakes with marginal shelving and interconnecting streams creating wetland habitats at Belleisle Golf Course in Ayr, the areas surrounding these new features have been sown with a Scotia seeds meadow and wetland mix to create wildflower meadows. The funding enabled us to engage Kimber Glen who redesigned areas of golf course to fit in the new habitat features, carried out full topographic surveys and soil cores to ensure new lakes would gather and retain enough water and project managed the full construction of the project.

The project was allocated funds from the competitive strand of the NRF and additional monies from the fixed strand and from South Ayrshire Council Golf were used to fund project to completion. The aim was to create as much wetland and pollinator habitat as possible working in redesign with golf to make best use of the opportunities available. The small lakes will retain run off from the golf course and reduce amount of water entering Slaphouse Burn during periods of heavy rainfall, aiming to reduce the flashiness of the Slaphouse Burn preventing erosion of banks and reducing amount of sediment washed downstream. One of the lakes provides an overflow solution for the Slaphouse Burn, with extra capacity to take water from the Slaphouse Burn only when the Burn is in spate to reduce erosion and flood risk downstream. As Climate Change will increase the frequency of heavy rainfall incidents and the project will improve the resilience of the landscape to these events while providing valuable wetland habitat for biodiversity.

The wetland area will provide habitat for amphibians, birds and aquatic invertebrates, otters have been recorded nearby at Rozelle Park and River Doon and use the Slaphouse burn as connectivity to territories. The project contributes to connectivity of wetland/riparian habitat, the Slaphouse burn runs through Belleisle Golf Course and the project will link the new wetlands with existing watercourse. In addition, there are small wetland areas within 1km of site in Rozelle Park and at Doonfoot Rd Ayr, as well as the River Doon. The project has also created more wildflower meadow areas benefitting pollinators and contributing further to the nectar network. The ranger service will work with golf to create a habitat management plan for the wildflowers meadows and the areas of rough and carry out surveys to monitor the habitat created using Nectar Network Pollinator survey methodology and Froglife survey methodology for amphibians. Ranger service will also manage and monitor butterfly orchid areas, which were not part of the project but will be maintained in the project legacy.

Images below show the finished lakes in the landscape, the surrounding land that is still bare soil and been sown with the wildflower/fescue mix and will be managed as wildflower meadows.



Image 28 New lake 1- overflow from Slaphouse at culvert on far left



Image 29 Aerial view of new lake 1



Image 30 Lake 2 near completion



Image 31 Aerial view of lake 2

Green Recovery in South Ayrshire

Following the COVID pandemic, South Ayrshire Ranger Service has secured funding allowing for an increased Ranger presence during summer months.

In 2021, the Rangers received funding from NatureScot's Better Places Green Recovery Fund as well as additional funds from the Community Planning Partnership COVID Recovery Fund. The funding was used to employ 4 additional full time Rangers over the summer period as well as purchasing some legacy features for Fullarton Woods. The additional resources meant that the Ranger Service was able to offer the following from July until October 2021: 134 patrols in 16 hotspots, 13 events with 500 participants from the general public, 16 school visits with 577 participants. They also supported 27 volunteers who have given 82h of volunteering time enhancing our green and blue spaces and carrying out conservation tasks as well as supported 161 participants doing community work. Thanks to those two streams of funding, the Rangers were able to increase their offering and work to enhance biodiversity conservation across the county.

In 2022, the Rangers received funding from NatureScot's Better Places Green Recovery Fund. The funding provided resources to employ 1 FTE Ranger over the summer months and allowed for regular patrols of our award-winning beaches and biosphere hotspots in South Ayrshire, with a total of 62 patrols carried out. Patrols also helped identify any potential issues that visitors would encounter when accessing our green and blue spaces, thus minimising visitor impact as well as supporting inclusive access to our hotspots where possible. The additional staffing also allowed the core staff to further support biodiversity conservation work.



Image 32 Community litter pick

Local Biodiversity Action Plan (LBAP)

The context has changed since South Ayrshire's last LBAP and the Sustainable Development team has been consulting with internal council sections and partner organisations to produce an updated LBAP.

We aim to complete the new LBAP in 2024, reflecting the new Scottish Biodiversity Strategy to 2045- Tackling the Nature Emergency and targets from the proposed Natural Environment Bill.

In addition we are working towards strategic mapping of our Nature Networks in line with guidance from National Planning Framework 4.

Appendix 1 – Nethermills Hydro Project

Update at June 2022



Work continued onsite until May 2022 with very minor works still required. The civil construction contract was extended to 11th February 2022 to allow remaining works to complete following high water events throughout the autumn and winter months.

All works listed as being programmed for December and January in the previous Board report are now complete and the commissioning of the scheme was carried out before the 18th March 2022 – the critical deadline to ensure that feed in tariff subsidies will be paid for the next 20 years.

The scheme has been operating very well despite the surprisingly low water levels in the river. If the water level is too low for the fisheries demands the turbine automatically switches off.

Work which took place in February, March and April 2022:

- Installation of smolt chutes and remaining eel and lamprey ladders
- Testing and commissioning of the generation system – G99 test booked for 15th Feb.
- Final visit by Vandezande engineers.
- Extra section of security fence installed.
- CCTV security system installed on the powerhouse.
- The fish counter installation by Fishtek on behalf of Marine Scotland Science
- Display boards are being designed/prepared by Ayrshire College
- Official opening took place 28th February 2022 with our 60 partners involved.

After benefiting earlier in the project from an unusually dry summer, the contractors encountered significant difficulties caused by high water levels during Autumn and Winter 2021. This situation only occurred because of a delay of a month in the delivery of the turbine equipment from Belgium due to the steel supply chain problems linked to COVID-19-related fluctuations in global demand.

The contractors have worked tirelessly throughout to meet challenging demands and weekly progress meetings were held to ensure we remained on-track for our official 'opening' and electricity generation by March 2022. The civil contractors, Bailey Construction Ltd, have been worked their way through finishing touches and are progressing through a comprehensive 'snag-list'.

We were delighted and relieved that we achieved successful completion well in advance of the final commissioning deadline of 18th March 2022.

The College appears to be using over 85% of the power produced from the scheme.

We are issuing the College with their first bill for the power utilised in the first quarter.

A superb 50 minute long film has been produced showing the development of the project – work is continuing on a much shorter summary.





AMcG/JF 9th Feb 2022