



Glasgow City Council

Biodiversity Duty Report

(2020/2021, 2021/2022 and 2022/2023)



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1. Introduction

- 1.1. The Council declared a Climate and Ecological Emergency in May 2019. A short-life Ecological Working Group, consisting of elected members, council officers and experts from environmental groups, agreed 25 recommendations which were incorporated into the Glasgow Climate Plan.
- 1.2. The key actions within the Climate Plan for biodiversity are Action 38 “Support new and further extensions to Local Nature Reserves in the city, protecting and enhancing biodiversity and habitat connectivity” and Action 48 “The Council works with partner organisations, adjacent local authorities, the city’s academic institutions to fund accelerated implementation of the Glasgow LBAP, Open Space Strategy Delivery Plan and Pollinator Plan”.
- 1.3. The LBAP Delivery Plan addresses both these actions. Action 38 is addressed in Urban: Parks and Open Spaces Action 3 “Designate a further 10 LNRs” and Action 7 “Create and enhance Green Connector sites city-wide”. These actions are supported by further actions on conservation volunteering, biological recording and habitat management many of which take place on Local Nature Reserves in the city.
- 1.4. For Climate Plan Action 48, the LBAP Partnership continues to collaborate to implement the LBAP and the Pollinator Plan, working with others, including adjacent local authorities, on projects to enhance biodiversity habitats and species including seeking wider funding and undertaking habitat management through the Nature Restoration Fund.
- 1.5. Glasgow City Council delivers its key biodiversity responsibilities and project implementation through a range of staff including Natural Environmental Officers, Countryside Rangers, and Project Coordinators.
- 1.6. The Council is the lead organisation, and chair of, the Glasgow Local Biodiversity Action Plan which involves 16 partner organisations in carrying out projects and actions to conserve and enhance the City’s biodiversity. www.glasgow.gov.uk/biodiversity
- 1.7. The Nature Conservation (Scotland) Act (2004) created a duty on public bodies, including Glasgow City Council, to “further the conservation of biodiversity as far as is consistent with the proper exercise of those functions.” In so doing, public bodies must take regard of the Scottish Biodiversity Strategy.
- 1.8. The Wildlife and Natural Environment (Scotland) Act 2011 (WANE Act) amends the Nature Conservation (Scotland) Act (2004) and places an additional obligation on public bodies to report on compliance with the Biodiversity Duty every three years. The first report was submitted in January 2015. This is the fourth report.
- 1.9. The Scottish Government has set out an ambitious new strategy to halt biodiversity loss by 2030 and reverse it with large-scale restoration by 2045. The new Scottish Biodiversity Strategy, published as a draft, aims to deliver the transformational changes needed to protect and restore terrestrial, freshwater and marine biodiversity in Scotland.
- 1.10. Glasgow City Council (GCC) carries out its Biodiversity Duty primarily through the implementation of the ‘Glasgow’s Local Biodiversity Action Plan’ and by helping achieve

the national objectives and outcomes of the Scottish Biodiversity Strategy through local action.

- 1.11. As required by the legislation, this report covers the three years April 2020- March 2021, April 2021- March 2022 and April 2022- March 2023 (see Appendices).
- 1.12. Glasgow City Council has signed a concordat with the Central Scotland Green Network. The Council is a signatory to the Climate Change Declaration and the 2012 Scotland Geodiversity Charter.

2. Actions to enhance and protect biodiversity

- 2.1. This is a summary of key practical actions carried out for biodiversity. For more detail and a comprehensive list of actions, please see Appendices.

City-wide

- 238,100 new records were added to the Biological Audit Database with 170 new species for the city recorded and currently 972,490 records held in the Glasgow Museums Biological Records Centre
- LBAP and Pollinator Plan Delivery Plan (2024-2029) produced in collaboration with Glasgow's LBAP partners
- Nature Network key habitats and linkages mapped in collaboration with GCVGN
- Green Connector project creating wildflowers, hedgerows and woodland to link LNRs, SINCs, Buglife B-Lines and other sites and enhance the city's Nature Network
- Glasgow Tree Plan produced
- 22 new LNRs approved
- SINC review carried out city-wide
- Hamiltonhill Claypits Local Nature Reserve opened to the public on 31st July 2021 - A greenspace in the heart of local communities with wooded walks and paths alongside the Forth & Clyde Canal between Firhill and Applecross. <https://claypitslnr.co.uk/>
- NPF4 and Developing with Nature Guidance used to secure biodiversity enhancements in new developments
- The Magnificent 11 circular walking route was launched on 30th June. Its waymarking and promotion will assist with public perception of connectivity of these sites

Grasslands

- 28 meadow sites across the city managed by contract or volunteers
- Collaboration with Glasgow and Clyde Valley Green Network to map species-rich grassland
- Wildflower nursery at Pollok Country Park maintained by the Council and volunteer groups
- Pictorial meadow strips (a metre wide) were created at the front of uncut grass areas

using Cornfield Annuals covering 7500m² over 23 sites

- BCS Helping Hands, collaborative three-year project creating, enhancing and managing diverse grasslands at Elder Park, Springburn Park and Elder Park involving citizen science and volunteers
- Two Venezia 140s (tractor towed cut and collect units) purchased

Wetlands

- The Seven Lochs Wetland Park continues, with projects being implemented, including wetland and grassland management; and species management for water voles <http://www.sevenlochs.org/>
- Seven Lochs volunteers carried out bog restoration work (scrub clearance) at Commonhead Moss LNR on an ongoing basis
- Water vole conservation action plan produced
- A feasibility study has been carried out, in partnership with SEPA and East Renfrewshire Council, to identify opportunities for river restoration on the Capelrig/Auldhouse Burn

Woodlands

- 15 ha of oak woodland mix (minus ash) planted to support biodiversity and climate mitigation as well as creating valuable foundation for future physical and access links from Cart and Kittoch SSSI to Cathkin Braes LNR for wildlife and people. <https://greenactiontrust.org/new-woodland-takes-root-in-glasgow/>
- Lost Woods along with 1,200 children, representing 148 schools from all across the city, planted thousands of oak saplings grown by pupils on a 13ha site at Cart & Kittoch in the run up to COP26 to create the Glasgow Children's Woodland. <https://www.thelostwoods.earth/>
- Cadder Woods SINC project is developing access to the native woodland for local community groups and enhancing the management of this habitat
- Wildlife habitat protected and enhanced through the implementation of management plans at Drumchapel and Easterhouse woodlands
- The first Tiny Forest for Scotland planted at Avenue End Road, Easterhouse and 6 other Tiny Forests across the city including at Glasgow Green and Maxwell Park Glasgow Wee Forests

Farmland

- Over 80 hectares of farmland at Carmunnock, Pedmyre and Windlaw are managed positively for biodiversity. This includes wildflower meadows, sensitive hedgerow management, trees and pond creation
- Cattle grazed at Dawsholm Park and PCP as a positive management tool for grasslands

3. Mainstreaming

- 3.1. The Glasgow Climate Plan incorporates actions for biodiversity and to address the declared Ecological Emergency.
- 3.2. The Glasgow Open Space Strategy recognises the importance of biodiversity and includes sections on 'enhancing biodiversity' and 'connecting habitats'.
- 3.3. Glasgow's current Glasgow City Development Plan Policy 7 and Supplementary Guidance 7 Natural Environment provide detail on biodiversity, details protected sites and conserving and enhancing biodiversity within developments. Positive effects for biodiversity are required for new developments through National Planning Framework 4.
- 3.4. Biodiversity is considered carefully in the management of all Glasgow Parks and where appropriate, habitats and species are protected and enhanced as part of overall park management
- 3.5. The quality standard 'Green Flag' award-winning parks (Keep Scotland Beautiful and other partners) in Glasgow all include some biodiversity elements.
- 3.6. Biodiversity benefits are integrated into the Metropolitan Glasgow Strategic Drainage Plan through the delivery of Sustainable Urban Drainage Systems (SUDS), green infrastructure and blue-green networks. <http://www.mgsdp.org/>
- 3.7. Climate Ready Clyde, a City Region partnership programme includes biodiversity as a key part of its vision for a climate ready future <https://climatereadyclyde.org.uk/>

4. Nature-Based Solutions, Climate Change and Biodiversity

- 4.1. The Glasgow Climate Plan and Climate Change Adaptation Plan incorporate actions for biodiversity and nature-based solutions.
- 4.2. Just over 16% of Glasgow's 17,730 hectares is covered by an estimated 2 million trees with plans in place to expand the city's tree canopy cover by at least 1% in time for 2030. The Glasgow Tree Plan, which has been approved by the council's City Administration Committee, could see tree planting on a further 189.4 hectares of land trees over the next seven years, potentially introducing over hundreds of thousands of new trees to the city.

With 58,000 new trees already planted in the city over the past three years, further planting will enhance work to sequester carbon emissions as part of the city's effort to tackle the climate emergency. Tree planting will also contribute to urban cooling and flood alleviation as well as biodiversity enhancement and people's health and wellbeing.

- 4.3. Grassland management and pond naturalisation contribute to alleviating flooding in the city. Across the city's parks and greenspaces, large areas of grassland are left to grow long or receive an end of year cut and lift to maintain them as diverse grasslands with benefits to pollinators and other wildlife as well as contributing to reducing flooding risk. The pond naturalisation programme over the last 15 years has created

soft vegetated edges to park ponds allowing excess water to store during periods of heavy rainfall as well as providing key habitats for waterfowl, amphibians and aquatic invertebrates.

5. Public Engagement and Workforce Development

- 5.1. The Local Biodiversity Action Plan involves the Council working with 15 other organisations to implement the aims and objectives of the Plan. Partners include Scottish Natural Heritage, Forestry Commission (Scotland) and the Royal Society for the Protection of Birds (RSPB) Scotland. <https://www.glasgow.gov.uk/index.aspx?articleid=18407>
- 5.2. The Council's Biodiversity Officers attend National Biodiversity Network meetings in spring and autumn.
- 5.3. The Seven Lochs Wetland Park project is Scotland's largest urban nature park for people, nature and heritage. This ambitious project brings together 20 square metres of lochs, parks, nature reserves and woodlands. It is a partnership between the Glasgow and Clyde Valley Green Network Partnership, Glasgow City Council, North Lanarkshire Council, Forestry Commission Scotland, Scottish Natural Heritage, The Conservation Volunteers and others. <http://www.sevenlochs.org/>
- 5.4. The RSPB 'Giving Nature A Home' project continued in collaboration with the Council's Neighbourhood, Regeneration and Sustainability Services and Glasgow Life <https://www.rspb.org.uk/about-the-rspb/at-home-and-abroad/scotland/glasgow/>
- 5.5. In 22/23 GCC Countryside Rangers made 48 visits to 19 schools, engaging with 1483 pupils about biodiversity, including visits to 9 parks, and co-ordinated 155 Forest School bookings.
- 5.6. In 22/23 Countryside Rangers worked with 727 volunteers, a total of 306 volunteer days, enhancing 6857m² across 16 sites; held c34 ranger-led events with 695 participants and imparted biodiversity message to 3524 people at guided walks and practical conservation tasks.
- 5.7. The Council's Greenspace & Biodiversity Team supported volunteers from over 70 Friends of Parks community groups to enhance parks and greenspaces with 23,648 volunteer hours carried out.

6. Research and Monitoring

- 6.1. Biological records are maintained and enhanced by Glasgow Life through the Glasgow Museums Biological Records Centre. Data gathered from monitoring and surveys is regularly entered into the database and records are collated and sent to the National Biodiversity Network (NBN).

- Waterfowl monitoring (of over 30 species) is carried out annually at 15 water bodies as part of the national Wetland Birds Survey by the British Trust for Ornithology (BTO)
- Blue-green Algae monitoring is carried out annually at 43 water bodies city-wide
- Annual monitoring of key LBAP species is carried out – Bog Rosemary, Green Hairstreak, Small Pearl-bordered Fritillary
- Butterfly Transects are carried out annually at a variety of sites
- The survey of the Council’s trees continues, with 60,652 trees now captured in the database

6.2. Council officers contributed to research papers on Water Voles.

University of Glasgow scientific research paper on Spatial Habitat Mapping for water voles published in the Journal of Applied Ecology. This created positive publicity for Glasgow’s water voles on social media including articles on the websites of STV news, British Ecological Society and The National. Paper published in the Journal of Applied Ecology (Feb 2022) - Predicting habitat suitability and connectivity for management and conservation of urban wildlife: A real-time web application for grassland water voles - <https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2664.14118>

University of Glasgow produced a short communication ‘Potential importance of urban areas for water voles: *Arvicola amphibius*’ which was published in the European Journal of Wildlife Research <https://link.springer.com/article/10.1007/s10344-021-01467-5>

7. Biodiversity highlights and challenges

- 7.1. Helping Hands for Butterflies was a three-year project in collaboration with Butterfly Conservation (Scotland) which delivered positive meadow management and wildflower enhancement at Springburn Park, Elder Park and Ruchill Park, engaging with volunteers to carry out practical conservation tasks and providing identification workshops with the aim of encouraging long-term participation in butterfly and moth conservation and monitoring. <https://butterfly-conservation.org/our-work/conservation-projects/scotland/helping-hands-for-butterflies>
- 7.2. GCC, in collaboration with RSPB Scotland, delivered the Green Connectors project across 53 sites in south-west of the city. The Biodiversity Challenge Fund funded project involved improving key green spaces for biodiversity and enhancing habitat connections between them. Part of the project involved creation of new meadows through sowing wildflower seed mixes, but mainly managed by change of mowing regime to cut and lift. As part of the project over 1ha of meadow at Crookston Castle was cut & lifted, then sown with yellow rattle.
- 7.3. The main challenge ahead, over the next few years, continues to be finding new ways to deliver biodiversity benefits for Glasgow within the current financial climate. This, to date, has been best achieved through fully engaging with all services and partner organisations to maximise the efficiency of project delivery, and this approach will continue.

8. Acronyms

BCS	Butterfly Conservation (Scotland)
BTO	British Trust for Ornithology
GCC	Glasgow City Council
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
NBN	National Biodiversity Network
NPF4	National Planning Framework 4
RSPB	Royal Society for the Protection of Birds
SEPA	Scottish Environment Protection Agency
SINC	Site of Importance for Nature Conservation
SSSI	Site of Special Scientific Importance
SUDS	Sustainable Urban Drainage System

9. Appendices



Glasgow City Council

Biodiversity Monitoring Report

April 2022 to March 2023



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1. Background and Context

- 1.1. This annual monitoring report has been compiled with the support of the Council's partners in the Glasgow Biodiversity Partnership. The purpose of the partnership is to bring a broad range of expertise to the development of Glasgow's Local Biodiversity Action Plan (LBAP). The Council established a Glasgow Biodiversity Partnership consisting of representatives from 18 different environmental organisations. Key partners include NatureScot, Scottish Environment Protection Agency (SEPA) and the Royal Society for the Protection of Birds (Scotland) (RSPB) along with other environmental interest groups.
- 1.2. The Council announced a Climate and Ecological Emergency in May 2019. The implementation of the Local Biodiversity Action Plan and Pollinator Plan (PP) play a vital role in addressing these emergencies through protecting, enhancing and creating biodiverse habitats, protecting and enhancing a diversity of species; and providing nature-based solutions to support climate mitigation and adaptation.
- 1.3. Over the past year, officers have been working with partner organisations to deliver the implementation of key actions as detailed within Glasgow's LBAP and PP.
- 1.4. Projects and actions reported on are related back to the relevant actions from the LBAP and PP to ensure that monitoring tracks the Implementation Plans for both documents. Other projects and activities help achieve the general aims and objectives of the LBAP by improving biodiversity in the city.
- 1.5. Projects and actions continue to link to, support and benefit from a range of other workstreams including:
 - Climate change adaptation
 - Volunteering and employability opportunities
 - Curriculum for Excellence
 - Health and wellbeing
 - The Glasgow Open Space Strategy
 - Parks and Greenspaces Vision
 - Metropolitan Glasgow Strategic Drainage Partnership (MGSDP)
- 1.6. Under the Nature Conservation (Scotland) Act (2004), all public bodies in Scotland are required to further the conservation of biodiversity when carrying out their responsibilities. The Council fulfils this primarily through the implementation of the Glasgow LBAP.
- 1.7. The Wildlife and Natural Environment (Scotland) Act (2011), further requires public bodies in Scotland to provide a publicly available report, every three years, on the actions they have carried out to meet the biodiversity duty.

- 1.8. The content of this annual biodiversity report will contribute towards the statutory Biodiversity Duty Report due for publication in January 2024.
- 1.9. There are implications for future resourcing and management of greenspaces as we aim to address the ecological emergency and continue to engage with communities and encourage people to enjoy and interact with nature.
- 1.10. Glasgow hosted COP26 Climate Conference in November 2021 which raised awareness of the climate & ecological emergencies and the value of nature-based solutions and the conservation of biodiversity.
- 1.11. The Glasgow Naturalist 27 (4) included the final tranche of papers in the Glasgow Botanic Gardens 'Wildside revisited' project; also short notes on individual insect species that had been found in Glasgow over recent years.
- The arachnids of Glasgow Botanic Gardens
C. Cathrine, K. Godsman, J. Ahmed & N. Currie
<https://doi.org/10.37208/tgn27413>
 - The bryophytes of Glasgow Botanic Gardens
K.J. Watson
<https://doi.org/10.37208/tgn27415>
 - The Cockroaches (Dictyoptera) of Glasgow Botanic Gardens with a summary of the known distribution of *Periplaneta americana* (Linnaeus, 1758) and *P. australasiae* (Fabricius, 1775) in Scotland
C. Cathrine
<https://doi.org/10.37208/tgn27414>
 - The Turtles (Testudines) of Glasgow Botanic Gardens including the first record of *Mauremys reevesii* (Gray, 1831) for the U.K. outwith captivity
C. Cathrine & T. Monir
<https://doi.org/10.37208/tgn27420>
 - *Donacaula forficella* (Lepidoptera: Crambidae): a moth new to Scotland
R.B. Weddle
<https://doi.org/10.37208/tgn27407>
 - Slender burnished brass moth *Thysanoplusia orichalcea* (Lepidoptera: Noctuidae) in Glasgow, Scotland
M.M. Butowska & R.B. Weddle
<https://doi.org/10.37208/tgn27410>
 - The leaf-beetle *Bruchidius villosus* (Coleoptera: Chrysomelidae): occurrences in Glasgow, Scotland
R.B. Weddle
<https://doi.org/10.37208/tgn27411>
 - *Liposcelis pubescens* (Psocoptera: Liposcelididae): an under-recorded British booklouse in Glasgow, Scotland
R.B. Weddle
<https://doi.org/10.37208/tgn27412>

1.12. Avian Flu has impacted parks and greenspaces with 216 fatalities from 11 species recorded by the Countryside Ranger Service from 13 sites across the city. Mute Swan accounted for 90% of affected birds (193 individuals).

2. Monitoring Report

2.1. The year to end March 2023 saw further progress on the main Ecosystems. Many initiatives are on-going; however, each year there are new projects and activities.

2.1.1. Urban: Parks and Open Spaces

Action	Date	Lead	Progress
1. Maintain and update the Biological Audit	2018-2023	GL	Over the year 2023 88,063 records were added to the biological audit database managed by Glasgow Museums Biological Records Centre, covering Glasgow and the Clyde River Catchment
			At the end of March 2023 there was a total of 972,490 records in Glasgow Museums Biological Records Centre's database
			There were 59 new species added to the Glasgow Species Audit including: Yellow Bird's-nest (parasitic plant), Haw Goblet (fungus), Oedemera lurida (a false blister-beetle), Hydropsyche contubernalis (caddisfly), Horse-Chestnut Leaf-miner (moth), Orache moth, Cryptachaea blattea (spider)
			SOC collect bird records from all over the Clyde area and upload to BirdTrack monthly
			SOC share notable bird sightings via a daily Grapevine to SOC members
			SOC encourage observers to submit bird records
			Yorkhill Green Spaces (YGS) Biodiversity List was updated on a monthly basis with new finds, and information about new species posted on their Facebook page. Current species list (July 2022) has 1,309 species. Pollinators recorded in Yorkhill include: 30 species of bees, 22 species of wasps, 216 species of moths, 12 butterflies, 129 flies (includes 52 species of hoverflies) and 9 sawflies

Action	Date	Lead	Progress
2. Designate additional Local Nature Reserves (LNRs) to reach target of 1 Ha per 1000 population	2023	GCC-NRS	The Conservation Volunteers (TCV) started work on maintenance and enhancement of the proposed new LNRs at Dawsholm Park (extension), Festival Park and Hurlethill
			Friends of Castlemilk Park alongside the Ranger for the site continued to work to bring the Park up to a standard ready for designation as an LNR
			Claypits LNR Management Group continued to promote the LNR in the local community and manage its biodiversity as part of a programme of regular events
3. Continue to co-ordinate butterfly transects at a minimum of 4 sites	2018-2023	GCC-NRS/BCS	See Pollinator Plan
4. Deliver Community Rewilding project across Yoker area, engaging with local communities to plant wildflowers, trees and wilding of sites	2018-2019	TCV	See monitoring report 2018- 2019. Project concluded in March 2019. Final evaluation report available on request
5. Develop Citizen Science and Environmental Monitoring projects for key habitats and species	2018-2023	TCV/ GCC-NRS	TCV carried out invertebrate identification with women from the charity Amina; Citizen Science training session with community members at Ruchill Golf Pavilion and Friends of Victoria Park group; Bug hunt session at Provanhall with participants from Interfaith Glasgow
			TCV carried out Yoker halo garden baseline biological survey; Invertebrate survey at Provanhall; Biodiversity survey at Festival Park
			SOC carry out winter gull monitoring in Glasgow parks
			Glasgow Natural History Society (GNHS) members have signed up as 'citizen science' volunteers in various aspects of the GALLANT project
			GNHS awarded 4 bursaries for attendance at FSC taxonomy courses during 2023

Action	Date	Lead	Progress
			Big Garden Birdwatch held on the last weekend of every January with approximately 36,500 taking part in Scotland in 2023. Top 10 birds recorded in Glasgow were: House Sparrow, Feral Pigeon, Blue Tit, Magpie, Woodpigeon, Blackbird, Starling, Goldfinch, Robin, Great Tit
			Royal Society for the Protection of Birds (RSPB) led Bioblitz event held as part of City Nature Challenge 2022 (29th April – 2nd May 2021) - a global citizen science competition to record wildlife in cities. 106 people took part in the City Nature Challenge event in 2022 with 1,895 records of 535 species across Greater Glasgow. A small event was held in Kelvingrove park to engage the public
			RSPB, in partnership with the Natural history museum, carried out schools work and also biological monitoring of Urban Nature as part of the Natural History Museum's Urban nature project. Soil and water samples were taken over sites in Glasgow in August 2022 to sequence the environmental DNA (eDNA) and compare the species found to other sites or to these sites once habitat work was completed -Glasgow Botanic Gardens, North Kelvin Meadow, Springburn Allotments, Eastfield Park, outside Kelvingrove museums in cut grass and meadow, and pond samples, and several sites in the 7 Lochs area including Avenue End Road and Hogganfield.
6. Ensure Sustainable Drainage Systems (SuDS) designs incorporate biodiversity	2018-2023	GCC-NRS	Comments on individual planning applications provided to support biodiversity-rich SuDS where appropriate
			NRS Flood Risk Management continues to collaborate with planning colleagues for above-ground blue-green SuDS for new development and redevelopment, which will benefit biodiversity
			Retrofit blue-green SuDS are being delivered by the Avenues Project
			Retrofit blue-green SuDS are core elements of the surface water management plans that have and are being delivered by NRS Flood Risk Management, including basins, ponds, swales, trees and highway raingardens

Action	Date	Lead	Progress
7. Seek to assess and update the list of derelict sites of particular importance for biodiversity and outline management needs	2023	Buglife	Buglife assessed and updated the VDL register for Open Mosaic Habitats on Previously Developed Land (OMHPDL)
			Of the initial 927 sites on the vacant and derelict land register in Glasgow in 2011, 346 have now been removed.
			Of the 63 sites added to the register 12 were identified as potentially supporting OMH
8. Aim to ensure connectivity of integrated habitat networks throughout the city through the planning process	2018-2023	GCC-NRS	Planning policy incorporated into the City Development Plan 2017 (policy CDP7), associated Supplementary Guidance (SG7) and National Planning Framework (NPF) 4 policies 3 and 4
			Advice provided on planning applications to implement policy/SG as appropriate.
			Adoption of Open Space Strategy (Feb 2020) and preparation of Opens Space Strategy (OSS) Delivery Plan, will provide an opportunity to pro-actively promote habitat connectivity at an early stage
			A first version of the delivery plan will focus on community spaces and further iterations will identify opportunities for better habitat connectivity and management for enhanced biodiversity. In doing so, it will need to take account of the identification and creation of nature networks to improve ecological connectivity in the city, as required by NPF4, which now forms part of the statutory development plan
			The GCC open space and Connecting Nature team continue to work closely with NRS Biodiversity to ensure we can more proactively plan for habitat connectivity via the open space delivery plan
			The Magnificent 11 circular walking route was launched on 30th June. Its waymarking and promotion will assist with public perception of connectivity of these sites
			Scottish Canals extensive linear towpath grasslands provide habitat connectivity between adjacent sites

Action	Date	Lead	Progress
9. Maintain swift trigger map showing locations city-wide of flocking/breeding swifts	2019	GCC-NRS/RSPB	Swift Mapper recording app launched in 2020. Between 1st April 2022 and 31st March 2023: 22 records of swift screaming parties (indicating possible nests nearby) and 7 Swift nest sites were recorded in Glasgow
			Swift records put into wildlife records by Countryside Rangers
10. Align LBAP to emerging Parks and Greenspaces Vision	2020	GCC-NRS	Implementation of the LBAP is a key action within the Parks Vision
11. Ensure biodiversity is considered within the Glasgow Open Space Strategy	2018-2019	GCC-NRS	The OSS identifies the need to enhance biodiversity (OSS section 12) and connect habitats as being two of the key uses to which Glasgow's Open Spaces can be put
			Data is being gathered to identify those open spaces that can do either or both with a view to identifying them for this purpose (and, where appropriate, other complementary purposes) through the preparation of an Open Space Strategy Delivery Plan, on which work is currently underway
12. Ensure that biodiversity is considered in the Stalled Spaces planning process	2018-2023	GCC-NRS	See pollinator plan actions
13. Encourage the development of Green Roofs through the planning process	2018-2023	GCC-NRS	The City Development Plan (CDP) (and associated Supplementary Guidance) is supportive of the provision of green roofs for a variety of purposes, but principally for biodiversity and as part of the SUDS trail
			NPF4 policy 3: Biodiversity requires new development to deliver positive effects for biodiversity and the associated Developing with Nature Guidance highlights the opportunities provided by green roofs. The next iteration of the CDP will further consider the role of green roofs in enhancing biodiversity, particularly in the City Centre
14. Ensure new developments enhance biodiversity wherever possible	2018-2023	GCC-NRS	NRS Natural Environment Officers (Biodiversity) provided advice to colleagues across NRS to promote biodiversity enhancement opportunities incorporation into development
			NRS Flood Risk Management continues to promote above-ground blue-green SUDS for new development and redevelopment, which will benefit biodiversity

Action	Date	Lead	Progress
15. Encourage incorporation of spaces for building dwelling species such as swift in new buildings where appropriate	2018-2023	GCC-NRS/RSPB	Swift advisory information provided to NRS planners for appropriate development proposals
			The Developing with Nature Guidance accompanying NPF4 policy 3 highlights that nests and nest boxes can be fixed to buildings, structures and trees, or incorporated in the wall of the building itself. The next iteration of the CDP may give further consideration to the role of bird boxes in new development
			Planning application lists monitored by RSPB Scotland staff and team of RSPB volunteers for opportunities to recommend installation of swift bricks or nest boxes. Comments were submitted on 25 developments during the 22/23 period resulting in swift bricks being incorporated into designs for some developments
16. Create and maintain House Sparrow Plots as funding allows	2018-2023	RSPB/GCC-NRS	RSPB house sparrow project completed
17. Erect a minimum of 30 House Sparrow boxes at targeted sites across the city	2018-2023	RSPB	RSPB house sparrow project delivered house sparrow boxes across Glasgow
			RSPB Scotland has installed at least 30 house sparrow boxes across Glasgow
18. Undertake Phase 1 Habitat Survey of Pollok Country Park (PCP)	2018-2019	GCC-NRS	This action was reviewed as part of wider investment in Pollok Country Park and was no longer considered likely to generate useful data
19. Undertake a review of Sites of Importance for Nature Conservation (SINCs)	2018-2023	GCC-NRS	Contractors completed review on most SINCs in early 2023

2.1.2. Grassland

Action	Date	Lead	Progress
1. Update grassland map on GIS	2018	GCC-NRS	Grassland sites mapped on GIS showing year and area of cuts-

Action	Date	Lead	Progress
2. Manage 30 key grassland sites as traditional meadows in a sustainable manner, on GCC land	2018-2023	GCC-NRS	6 meadow sites across the city managed by contractor covering nearly 17 hectares
			TCV managed a further 5 meadow sites including meadows at Cart and Kittoch Valley Site of Special Scientifics Interest (SSSI), Cathkin Braes LNR and Springburn Park
			RSPB Scotland staff and volunteers cut and lifted existing wildflower meadow behind Kelvingrove Art Gallery to reduce dominance of grasses and enhance floral diversity
			RSPB Scotland staff worked with school pupils and the local community to design and create a new urban meadow at Craigend in Glasgow. Wildflower plugs and spring bulbs were planted and Yellow Rattle seed was sown to help reduce the dominance of grass, and a wildflower strip was sown along the footpath
			Meadow areas created as part of the Green Connectors project in 2021 were managed with spring and summer perimeter cuts, and autumn cut and lift regimes in 2022 by RSPB
			RSPB carried out networking and working with groups to identify new meadow sites in the North of Glasgow in Springburn, Maryhill and Possil
			Approximately 0.07ha of grassland in Overnewton Park managed as wildflower meadow with cut and lift, including 2 new areas of amenity grassland and 2 wildflower pollinator strips
			Approximately 1ha of grassland in Yorkhill Park managed as a wildflower meadow
			Two scythes purchased to help manage meadow areas and free training workshop delivered for 6 volunteers in Yorkhill Park in October 2020. Free scything workshop advertised to other community groups too
3. Enhance areas of unmown grassland by introducing local provenance wildflowers. Enhance 1 Ha annually	2018-2023	GCC-NRS	This action has been achieved annually over the last 5 years. This year over 1 Ha was enhanced, see below
			22260 small bulbs and 16500 wildflower plugs were planted across 5500m2

Action	Date	Lead	Progress
			250,000 Daffodils were planted city-wide across 10,000m ²
			Froglife planted 750 pollinator friendly bulbs in Shettleston with FUSE youth group.
			Froglife planted 400 pollinator friendly bulbs at Miltonbank Primary School
			RSPB Scotland enhanced the new wildflower strips behind the Kelvingrove Art Gallery by sowing more native annuals and perennial wildflower seed to counter the trampling over the winter
			Original meadow at Kelvingrove was enhanced with further wildflower plug plants
			Heart of Scotstoun Community Garden volunteers planted perennial wildflowers and pollinator-friendly plants including particularly wild primroses, wood anemone, cornflower, borage, and 'mixed meadow' seed mixtures
			Friends of Newlands Park planted 3,450 wildflower plug plants and bulbs
			Over 2,300 native wildflower plug plants (25+ species), and larger pots of Cowslips, Primroses, Sweet Woodruff, Meadow Cranesbill and Honeysuckle planted at Yorkhill Park
			Over 1,300 pollinator-friendly spring bulbs & corms including 290 Snowdrops, 250 winter aconites, 250 native Bluebells, 220 Grape Hyacinths, 120 crocuses, 60 alliums, 50 Snake's-head Fritillaries, 40 Anemones, 20 Tulips and 20 Hyacinths planted at Yorkhill Park, Overnewton Park and Cherry Park into grassy meadow areas, flower borders and naturalised under trees
			Native woodland and grassland plants included in new Stockingfield Bridge, Forth & Clyde Canal opened in December 2022
4. Create or extend 5 new meadows city-wide	By 2023	GCC-NRS	This action has been achieved over the last 5 years with 11 meadows created from 2018 to 2022 (see previous reports) and at least 7 new meadows created this year, see details below:
			Froglife created wildflower meadows at Cadder Primary School (10m ²), Milton Community Garden (6m ²), Woodside Community Garden (20m ²) and Glasgow Kelvin College (6m ²)
			Wyndford Residents' Group created two wildflower meadows by the Kelvin Walkway

Action	Date	Lead	Progress
			SACRO Garden Project Volunteers planted Urban Pollinator Mix and Yellow Rattle seed to the orchard area in Tollcross Park
5. Enhance existing meadows by wildflower planting at 8 sites	2018-2023	GCC-NRS	This action is on target with 8 existing meadows enhanced along with additional areas within LNRs over the 5 year period
			Scottish Canals carried out low intensity mowing regime for canal towpath and Claypits Nature Reserve grasslands which supported wildflowers and pollinators
			RSPB Scotland enhanced the new wildflower strips behind the Kelvingrove Museum and Art Gallery by sowing more native annuals and perennial wildflower seed to counter the trampling over the winter
			Original wildflower meadow at Kelvingrove Museum and Art Gallery was enhanced with further native wildflower plug plants
			Yellow Rattle seed was collected from the Crookston Castle meadow in summer of 2022 and sown on other parts of the site to help reduce the dominance of grass and improve floral diversity
			Langside Sports Club Biodiversity Group continued to develop and maintain 100m wildflower bank around cricket pitch by planting additional yellow rattle plants grown from own harvested seed; and maintaining a conservation cutting regime
6. Establish and identify mechanism to maintain GCC wildflower nursery at Pollok Country Park	2018-2023	GCC-NRS	Flower Power nursery at PCP maintained with volunteer support
			28 Hub training participants carried out 42 volunteer hours seeding and caring for nursery
7. Encourage sowing and growing of Scottish provenance wildflowers	2018-2023	GCC-NRS	Countryside Rangers encourage this with many different groups. Seeds gathered in PCP and Scotia seed stock are grown
			Wildflower seed collected in Overnewton Park & Yorkhill Park during 2022 sown in new areas

Action	Date	Lead	Progress
8. Trial new council cut and collect equipment for meadow management	2018-2019	GCC-NRS	Completed. Meadow management using Venezia cut and lift machinery has now been rolled out city-wide
9. Implement dwarf shrub heath annual management at 1 site	2018-2023	GCC-NRS	Interventions unnecessary this year as growth of dwarf shrub heath adequate. Further management will take place in 2024-25
10. Carry out survey of rare plants (Burnet-saxifrage) annually	2018-2023	GCC-NRS	Not carried out. Going forward, looking to LBAP partners to carry out surveys
11. Carry out annual management of Glasgow Museums Resource Centre meadow	2018-2023	GL	Not carried out
12. Enhance water vole meadow at The Bridge, Easterhouse	2018-2023	GL/SLWP	Annual low intensity management for water voles

2.1.3. Woodland

Action	Date	Lead	Progress
1. National Vegetation Classification (NVC) survey of Pollok Country Park Wood Pasture and Parkland Habitat to identify exact species compositions and conditions as base point for future management planning and assessments	2018-2023	GCC-NRS	Veteran tree survey carried out by Woodland Trust volunteers
2. Individual management plans for Ancient and Veteran trees within Wood Pasture and Parkland Habitat in Pollok Country Park	2018-2023	GCC-NRS	Available NRS resources have focused on woodland habitat creation (in the context of Glasgow's declaration of a climate and ecological emergency in May 2019). This action was reviewed as part of wider investment in Pollok Country Park and was no longer considered likely to generate useful data

Action	Date	Lead	Progress
3. Improve condition of Upland Mixed Ashwoods and Upland Oakwoods woodlands at Cart & Kitchie SSSI	2018	GCC-NRS	No work carried out this year
4. Assess all UK BAP Woodland Priority Habitat types (excluding Lowland Mixed Deciduous Woodland), to confirm council ownership and establish woodland condition and management requirements	2018-2023	GCC-NRS	Available NRS resources have focussed on woodland habitat creation (in the context of Glasgow's declaration of a climate and ecological emergency in May 2019). This action has been reviewed as part of the engagement with stakeholders to support preparation of the next LBAP Implementation Plan
5. Commence city wide NVC survey of woodlands (not already surveyed) to ascertain UK BAP Priority Habitats extent in Glasgow	2018-2023	GCC-NRS	Available NRS resources have focussed on woodland habitat creation (in the context of Glasgow's declaration of a climate and ecological emergency in May 2019). This action has been reviewed as part of the engagement with stakeholders to support preparation of the next LBAP Implementation Plan
6. Develop 8 Urban Woodland Management Plans for larger woodlands city-wide (over 400 Ha in total)	2018-2023	GCC-NRS	Available NRS resources have focussed on woodland habitat creation (in the context of Glasgow's declaration of a climate and ecological emergency in May 2019). This action has been reviewed as part of the engagement with stakeholders to support preparation of the next LBAP Implementation Plan
7. Deliver a woodland management strategy for the Greater Easterhouse area	2018-2023	GCC-NRS	Woodland management plans for Cardowan, Todds Well, Bishop Loch and Lochend Burn are in place
8. Promote woodland as a temporary greening and bioremediation on vacant and derelict land	Ongoing	GCC-NRS	Cadder Woods SINC project is developing access to the native woodland for local community groups and enhancing the management of this habitat

Action	Date	Lead	Progress
9. Create 3 new woodlands within city boundary (or expansion of existing woodlands) totalling 10ha or more	2018-2023	GCC-NRS	This action was achieved by the development of the Cart & Kittoch Woodland and Lost Woods project which created 15 hectares of oak woodland, see 21/22 report. The following have added to this total:
			1000 trees planted at Tollcross Park
			2200 trees planted at Cathkin Braes
			1000 trees planted at Trinley Braes
			1200 trees planted at various sites including King's Park and King George V Park
			Heart of Scotstoun Community Garden planted hawthorn and conifer hedges in their biodiversity garden
			Dead wood log piles created at Yorkhill Park after unstable trees were required to be felled following storms
			Hawthorn Housing Co-Operative planted 105 woodland fruit trees and planted wildflower seeds at the Glasgrov site on Fruin Street
			Friends of King's Park planted 30 specimen trees in the park and planted whips near SuDS ponds
			The Children's Wood group planted oak, birch, rowan, aspen, holly
10. Protect and enhance habitats for wildlife as part of continued management at Drumchapel and Easterhouse Woods	2018-2023	FLS, now GCC	Ongoing
11. Remove invasive species where appropriate and manage sites to encourage a varied tree age, species and structure at Drumchapel and Easterhouse Woodlands	2018-2021	FLS	Completed 2021
12. Carry out annual monitoring of rare woodland plants	2018-2023	GCC-NRS	Toothwort, Bluebell, Twayblade surveys carried out
13. Undertake strategic tree planting programme annually	2018-2023	GCC-NRS	6388 trees planted city-wide

Action	Date	Lead	Progress
			This included Penilee Park 9 trees; King's Park 100 trees planted and 300 hedgerow/ woodland understorey species planted; Botanic Gardens/River Kelvin 15 trees and 300 hedgerow/ woodland understorey species planted; Auldhouse Park 30 trees and 200 hedgerow/ woodland understorey species planted

2.1.4. Wetland

Action	Date	Lead	Progress
1. Carry out annual blue green algal monitoring at 43 sites city-wide	2018-2023	GCC-NRS	Countryside Rangers issued instruction for warning signage to be erected in early June at all water bodies with history of >100,000ppm readings.
2. Carry out annual WeBS counts at 15 key sites	2018-2023	GCC-NRS	Countryside Rangers continue to monitor key sites for wetland birds
3. Carry out water quality tests at key sites- Hogganfield Loch, Queen's Park, Richmond Park and Knightswood Park ponds	2018-2023	GCC-NRS	Water testing carried out at sites as required
4. Naturalise 50% of Queen's Park boating pond	2018-2019	GCC-NRS	See monitoring report 2018-2019
5. Carry out riparian water vole surveys at 2 sites per year	2018-2023	GCC-NRS	Survey of Garscadden Burn at Knightswood Park Golf Course carried out
6. Identify Bog Rosemary populations and monitor health and spread	2018-2023	GCC-NRS	No monitoring. Going forward, looking towards LBAP partners to carry out surveys
7. Carry out wetland management at 5 Local Nature Reserves, including water level control at Robroyston Park for wading birds	2018-2023	GCC-NRS	Froglife created new ponds at Blackfriars Primary School (minipond 1m ² plus bog garden), Braeside Community Garden (10m ²), Glasgow Kelvin College (6m ²), Anderston Primary School (8m ²), Knightswood Primary School (1m ² lined pond)

Action	Date	Lead	Progress
			Froglife carried out pond restorations at Milton Community Garden (20m ²), and Mansewood Allotments (10m ²) and Newlands Park pond
			Two small bog garden ponds installed in Yorkhill Park and planted with native aquatic and marginal plants to provide additional habitat and a source of freshwater for wildlife
			Rain garden bed installed at Cherry Park to reduce footpath flooding after heavy rain. Planted with pollinator-friendly herbaceous perennials and spring bulbs
			Friends of King's Park undertook assessment of existing pond and drained it to establish new habitat, relocating frogs into SUDS pond
			Langside Sports Club Biodiversity Group created a wetland area, including some small ponds, in a triangle of ground and planted pond and marginal plants
8. Monitor frog populations at Robroyston Park and Cathkin Braes, to assess health of population in north and south of city	2018-2023	GCC-NRS	Common Frog spawn monitoring carried out at Robroyston Park LNR and Millerston Wetland
9. Continue to restore 3 raised bogs and monitor results for water levels and biodiversity	2018-2023	SLWP/ GCC-NRS	Raised bogs monitored for biodiversity
10. Promote river restoration and deculverting projects	2018-2023	GCC-NRS	GCC have completed a feasibility study, in partnership with Scottish Environment Protection Agency (SEPA) and East Renfrewshire Council, to identify opportunities for river restoration on the Capelrig/Auldhouse Burn. The project was delivered around the Royal Institute of British Architects (RIBA) plan of work, and funded by the Water Environment Fund
11. Monitor Invasive Non Native Species (INNS) and protected freshwater fish species	2018-2023	CRF	Scottish Canals carried out active management of Japanese Knotweed, Giant Hogweed and Himalayan Balsam along the Forth & Clyde Canal in Glasgow in 22/23
12. Monitor snipe species at key wetland sites	2018-2023	GCC-NRS	Monitoring of Jacksnipe carried out by SOC at Windlaw Marsh: 22.10.22 (7) and 19.02.23 (15)

Action	Date	Lead	Progress
13. Implement Integrated Green Network proposals as part of the Cardowan Surface Water Management Plan and Blairtummock	2019	GCC-NRS	Completed
14. Implement wetland management for biodiversity as part of 7 Lochs Wetland Project	2018-2023	SLWP	Wetland habitat creation and management carried out at sites within Seven Lochs Wetland Park

2.1.5. Farmland

Action	Date	Lead	Progress
1. Manage 50 hectares as traditional meadow on GCC owned farmland at Carmunnock	2018-2023	GCC-NRS	All meadows at Cathkin and Windlaw continue to be managed by either local farmer or contractor
2. Use cattle grazing as a management tool at Dawsholm Park, Carnbooth and Pollok Country Park	2018-2023	GCC-NRS	Cattle grazed at Dawsholm Park and PCP
3. Continue hedgerow management by creating new hedges and enhancing existing hedges	2018-2023	GCC-NRS	Flowering hedge (Blackthorn, Hawthorn, Cherry Plum and Bird Cherry) planted in Cherry Park along boundaries of the park to create linear habitat for wildlife, sequester carbon and capture particulates and pollution from vehicles passing the play park
			The Friends of Bellahouston Park together with the local Beaver scouts planted a wildlife hedge along the side of the orchard in Bellahouston Park
4. Maintain and enhance wild bird plot at Carmunnock	2018-2023	GCC-NRS	See monitoring report 2018-2019
5. Monitor breeding tree sparrow populations at Millichen farms	2018-2023	RSPB	Completed

Action	Date	Lead	Progress
6. Develop and deliver the 7 Lochs Co-operative Habitat Restoration project in partnership with landowners and land managers	2018-2021	SLWP	Species Rich Networks Team (SpRiNT) project has delivered habitat creation, enhancement and management at 6 sites for woodland and grassland

2.1.6. Water Vole

Action	Date	Lead	Progress
1. Develop and produce water vole Plan	2018-2019	GCC-NRS/ Nature Scot/U of G	Completed
2. Seek funding to extend the fossorial water vole project. The water vole project is required for scientific monitoring of habitat creation, management and development of guidelines as well as assessing the wider water population dynamics	2018	GCC-NRS/ Nature Scot/U of G	Funding sourced for specific projects
3. Host the East End Water Vole Project meetings	2018-2023	GCC-NRS	Water Vole Knowledge Exchange held in September 2022 and Water Vole Conservation Plan Implementation Group established
4. Carry out scientific assessment of disturbance caused by grass cutting, under licence	2018-2021	GCC-NRS/ Nature Scot	Three year Grassland water vole habitat management project developed and final actions implemented by University of Glasgow, GCC, NatureScot and Seven Lochs Wetland Park (SLWP)
5. Develop, review and update guidance on habitat management	2018-2023	GCC-NRS/ Nature Scot	Interim guidelines reviewed
6. Update water vole distribution map and annually update trigger map for development planning	2018-2023	GCC-NRS	Water vole records being sent to Local Biological Records Centre (Glasgow Life)

Action	Date	Lead	Progress
7. Create fossorial water vole habitat at key sites as part of the Water Voles in the City project (including Blairtummock Park, Cranhill Park, Hogganfield Park and Auchinlea Park)	2018-2021	SLWP	Transforming Avenue End Project - Completed
			Baldragon Prjject in development phase
			Tree/wildflower planting carried out at Sandaig Park (SLWP and Friends of Barlanark and Springboig), providing extended habitat for water voles
8. Trial habitat management at key sites as part of Water Voles in the City project	2018-2021	SLWP	Final year of partnership Water Vole Grassland Management Trial- practical work and surveys completed
9. Implement Integrated Green Network proposals as part of the Cardowan Surface Water Management Plan and Blairtummock	2018-2019	GCC-NRS	Integrated Green Network projects completed. Wider Blairtummock Park proposals in development by SLWP, NatureScot(NS) and GCC
10. Carry out riparian water vole surveys at 2 sites per year	2018-2023	GCC-NRS	See Wetland
11. Monitor and assess success of habitat creation and management projects	2018-2023	GCC-Nature Scot/U of G	Monitoring and assessment ongoing
12. Develop a project protocol for assessing the population dynamics of water voles in Glasgow	2018-2019	GCC-NRS/ Nature Scot/U of G	Further updates planned as part of the Conservation Action Plan
13. Survey 20km squares annually as part of fossorial water vole landscape scale monitoring	2018-2023	GCC-NRS	On hold for reporting period 2022-2023 awaiting new protocol from Conservation Action Plan

Action	Date	Lead	Progress
14. Develop training programme of specialist groups including operations staff, ecological consultants and pest control operatives	2018-2021	GCC-NRS/ Nature Scot/U of G	Water Vole Knowledge Exchange event delivered for ecological consultants and GCC staff

Other actions for water voles:

- GCC webpage www.glasgow.gov.uk/watervoles, Glasgow Water Vole Project (GWVP) facebook page and SLWP facebook page regularly updated
- Continued promotion of water voles through filming opportunities. Glasgow's water voles featured in CBeebies Teeny Tiny Creatures aired in November 2022. See episode here: <https://www.bbc.co.uk/programmes/m001fpwg>
- Continued promotion of projects via articles online with partner organisations. See feature about Transforming Avenue End Road on Central Scotland Green Network website: <https://centralscotlandgreennetwork.org/two-major-vacant-derelict-sites-transformed/>
- The Countryside Rangers and Biodiversity Team led a grassland water vole field excursion for Glasgow Natural History Society in July 2022

2.1.7. Urban Awareness Raising

Action	Date	Lead	Progress
1. Produce LBAP Communication Plan	2018-2019	GCC-NRS	Monthly biodiversity tweets put out by Countryside Rangers (CR)
2. Produce Pollinator Plan for the city	2018	GCC-NRS	See monitoring report 2018-2019
3. Produce Water Vole Plan for the city	2018-2019	GCC-NRS	See Water Vole
4. Raise awareness of biodiversity value of habitats and species within Glasgow through monthly articles for the Evening Times advice column on Gardens and Wildlife	2018-2023	GCC-NRS	Biodiversity highlighted through GCC twitter feed, rather than articles
			Biodiversity articles feature in the new ParkLife newsletter circulated to community groups, interest organisations, elected members, council staff
			CR put out Weekly Ranger Corner tweets, different species every week according to season and national days with 54 tweets put out

Action	Date	Lead	Progress
			YGS raised awareness of the importance of deadwood with social media updates about saproxylic species and species using deadwood as a nesting habitat. Including solitary bees (2 species) and solitary wasps (7 species) nesting in a standing dead tree in Yorkhill Park and fungi and invertebrates using fallen deadwood
			YGS put out regular social media posts about wildflowers/ weeds growing in pavements and verges to highlight biodiversity, and generally raise awareness of native plants
5. Raise awareness of biodiversity value through delivering Outdoor Learning sessions for Glasgow Schools (Curriculum for Excellence)	2018-2023	GCC-NRS	CR delivered 48 visits to 19 schools and 1483 pupils including visits to 9 parks
			Over 90 pupils and staff from the Glasgow Gaelic High School helped plant wildflowers at Yorkhill Park
			CR co-ordinated 155 Forest Schools site bookings
			RSPB deliver primary and secondary schools' sessions to students who want to know more about wildlife in the city. These sessions included: Minibeast Safari, Explore Urban Nature and Aquatic Adventures. These sessions are part of the Kelvingrove Museums Schools Programme and contents supported by the Urban Nature Project from The Natural History Museum London. In the period April 2022-March 2023 RSPB worked with 473 children over 26 school sessions
			TCV carried out HogWatch Scotland hedgehog sessions with Sunnyside Primary School, Govan Gaelic Primary School and Miltonbank Primary School; Bug hunt with nursery class at Saheliya; Carbon storage surveys at Castlebay; Wee Forest with Miltonbank Primary School; STEM session with classes at Merrylee Primary School
			The Children's Wood group held climate related school outdoor learning sessions- Dunard Primary, St Charles, North Kelvinside Primary; LEAF (Learning About Forests) session, along with Froglife, on 'habitat' with Hillhead High School eco group

Action	Date	Lead	Progress
6. Promote LNRs by holding celebration events	2018-2023	GCC-NRS	Events held by the Claypits Nature Reserve management group, including tours, litter picks and Himalayan Balsam bashing
7. Organise annual Wild About Glasgow countryside events for the public	2018-2023	GCC-NRS	34 Countryside Ranger-led events held across the city - 695 face to face contacts made
8. Promote Glasgow biodiversity and engagement through teacher training events and Eco Schools days	2018-2023	GCC-NRS	Countryside Rangers carried out 2 CPD sessions with 15 teachers
			Countryside Rangers attended Eco School days with 144 pupils
9. Produce Biodiversity Duty Report for Scottish Government	2018-2023	GCC-NRS	This biodiversity annual monitoring report with contribute to the Biodiversity Duty Report for Scottish Government due in Jan 2024
10. Continue to promote biodiversity projects within the 7 Lochs wetland park	2018-2023	GCC-NRS/SLWP	Biodiversity projects promoted through Seven Lochs events website and social media
11. Continue to engage with communities in practical activities within 7 Lochs area	2018-2023	SLWP / TCV	August to October SLWP delivered the Seven Lochs Explore More project, supported by the Better Places Green Recovery Fund. Two seasonal Visitor Services Officers delivered visitor engagement activities including family events, nature-play, guided walks, and clean ups to enable more people to 'explore more' of the Seven Lochs
			SLWP delivered almost 300 outdoor learning sessions to over 400 pupils in 6 primary and 2 high schools. This has included outdoor activities for over 50 pupils with Additional Support Needs in both mainstream and specialist schools
			SLWP delivered 30 out-of-school nature play sessions to 70 young people and 22 parents / carers
			Seven Lochs Employability Project uses outdoor conservation projects to deliver training and skills development to volunteer trainees. 10 trainees delivered 85 sessions - achieving over 230 volunteer days, and gaining 17 accredited qualifications

Action	Date	Lead	Progress
			The Seven Lochs Volunteers have continued to deliver nature conservation and park improvement projects at Seven Lochs. 25 volunteers delivered 40 projects at 13 sites - achieving a total of 215 volunteer days
			Wildlife Counts volunteers carried out nature surveys across the park area, gathering biological records and submitting these to the Glasgow Records Centre at Kelvingrove Museum. Volunteers completed 27 surveys - achieving 40 volunteer days in total
12. Continue to promote and implement 'Giving Nature a Home' project city-wide	2018-2020	RSPB/ GCC-NRS	The project continues with development of the North Glasgow Green Futures Project
13. Continue Ambassador Schools project	2018-2020	RSPB/ GCC-NRS	In the period April 2022-March 2023 RSPB had three ambassador schools in the east of Glasgow who all worked together to be ambassadors for the Water Vole. Sunnyside Primary School, St Benedict's Primary School, and St Timothy's Primary School
14. Hold annual Glasgow Wildfest	2018-2020	RSPB/ GCC-NRS	RSPB are no longer holding Wildfest but ran a summer programme of events between Kelvingrove and the Glasgow Botanic gardens and supported smaller communities with some events
			Bioblitz event held by RSPB as part of City Nature Challenge 2022 (29th April - 2nd May 2021) - a global citizen science competition to record wildlife in cities. 106 people took part in the City Nature Challenge event in 2022 with 1,895 records of 535 species across Greater Glasgow
15. Continue Young Roots project	2018-2020	RSPB	This project has now been completed
16. Continue to encourage conservation volunteering through undertaking projects and holding events at LNRs and other wildlife sites	2018-2023	GCC-NRS/ TCV/ FoGLNRs	Countryside Rangers worked with 727 volunteers, a total of 306 volunteer days, enhancing 6857m2 across 16 sites
			Countryside Rangers held 34 ranger-led events with 695 participants
			Countryside Rangers imparted biodiversity message to 3524 people at guided walks and practical conservation tasks

Action	Date	Lead	Progress
			TCV held guided walks for women's enterprise charity Gilded Lily, Queens Park with women from Amina, BAME network of Glasgow Disability Alliance
			GNHS held 7 field excursions in Glasgow in Summer 2022, and members participated in the City Nature Challenge at The Hidden Gardens and Dawsholm Park
			The Glasgow Naturalist 27 (4) included the final tranche of papers in the Glasgow Botanic Gardens 'Wildside revisited' project; also short notes on individual insect species that had been found in Glasgow over recent years
			GNHS hosted a successful conference on Brownfield Biodiversity, which featured two Glasgow LNRs: Hamiltonhill Claypits and Malls Mire and their proposed extensions; the proceedings are to be published in The Glasgow Naturalist 28 (1) in 2023
			Friends of Glasgow's LNRs participated in the City Nature Challenge by organising an event at Dawsholm Park LNR on Monday 2 May 2022
			Friends of Glasgow's LNRs maintained planters at Hogganfield Park LNR, undertook litter picks and monitored the usage of five Biohavens at Hogganfield Park/Loch
			Friends of Glasgow's LNRs hosted a session courtesy of the Clyde Ringing Group at Hogganfield Park LNR
			Friends of Glasgow's LNRs organised two walks, at Dawsholm Park LNR and Robroyston Park LNR
			The Glasgow Peregrine Project (part-funded by GNHS) organised watches conducted at Glasgow University saw around 150 visitors per hour
			The Glasgow Peregrine Project added raptor species such as Kestrel, Sparrowhawk and Buzzard to produce a city raptor trail
			YGS submitted poster to the 'Kelvin and the Kibble' exhibition at Glasgow Botanic Gardens in 2022, which had a biodiversity theme
			YGS spoke about their work at NatureScot's Pollinator Conference in 2022 and the Keep Scotland Beautiful annual conference in 2022

Action	Date	Lead	Progress
			Sacro's The Garden Project volunteers made three bird boxes in Feb 2023 which were put up in the trees at Tollcross Park
			Friends of King's Park held Birds, Bees and Bugs event for environmental awareness for local children
			The Children's Wood group provided, cleaned and repaired bird feeders, bird & bat boxes; planted wild garlic bulbs & alpine strawberry plants in woodland area; monitored nocturnal wildlife presence with wildlife camera- foxes/hedgehogs; erected educational signage re deadwood in woods; and held conservation days out for businesses and colleges- community work: fixing boundaries to protect ground growth in the Children's Wood, watering, litter picking
17. Organise biodiversity-themed activities at park venues	2018-2023	GCC-NRS	Friends of Glasgow's LNRs monitored the usage of their bird boxes: Dawsholm Park (19 boxes used) Hogganfield Park (at least 4 boxes used) Cardowan Moss (2 or possibly 3 boxes used) Bingham's Pond (all 3 boxes used)
			Friends of King's Park purchased and sited 10 bird boxes in King's Park
			Yorkhill Green Spaces won the NatureScot & Keep Scotland Beautiful Pollinator-Friendly Award for 2022 (second year in a row)
			YGS were awarded a Green Flag Award and a level 5-Outstanding and Certificate of Distinction for management of Yorkhill's green spaces and improving them for the local community and wildlife
			Alexandra Park Wildlife Group held a wildlife treasure hunt for children in the park looking for different birds, flowers; and a day with Haghill Park Primary school pupils talking to them about the park's wildlife

2.1.8. Pollinator Plan

Action	Date	Lead	Progress
1. Monitor the Pollinator Plan through annual LBAP Monitoring Report and Biodiversity Duty Reports	Annually	GCC-NRS	The Pollinator Plan actions are included in the Biodiversity Annual Monitoring Report and in the Biodiversity Duty Report
2. Continue to protect habitat and species value through the designation and maintenance of SSSIs, LNRs and SINCS	Ongoing	GCC-NRS/ Nature Scot	SSSIs and LNRs are statutory designations that are designated via separate legislation to the development planning process but the Council has a duty to protect them. SINCS are non-statutory designations identified through the development planning process and have recently been reviewed
3. Aim to ensure connectivity of integrated habitat networks throughout the city through the planning process (LBAP Action)	2017-2022	GCC-NRS	Planning policy incorporated into the City Development Plan 2017 (policy CDP7) and associated Supplementary Guidance (SG7) and advice provided on planning applications to implement policy/SG as appropriate
			NPF4 requires the identification, delivery and enhancement of nature networks in the city. These will be identified in the next iteration of the CDP
4. Manage 30 key grassland sites as traditional meadows in a sustainable manner, on GCC land (LBAP Action)	2017-2022	GCC-NRS	See Grassland
5. Enhance areas of unmown grassland by introducing local provenance wildflowers. Enhance 1 Ha annually (LBAP Action)	2017-2022	GCC-NRS	See Grassland
6. Grow pollinator-friendly plants in the Pollok Wildflower Nursery	2017 onwards	GCC-NRS	See Grassland
7. Plant pollinator-friendly wildflowers city-wide at SINCS, LNRs and Parks	2017-2022	GCC-NRS	Friends of King's Park extended the planting of SE beds for pollinators in the walled garden: Achillea, Nepeta, Echinacea, Eryngium, Buddleia, Sedum Autumn joy and Verbena

Action	Date	Lead	Progress
			Friends of King's Park extended the planting of SW beds for pollinators in the walled garden to replace monoculture grass
8. Incorporate nectar-rich plants into formal planting schemes in parks and open spaces	2017-2022	GCC-NRS	Ongoing as part of parks and open spaces management plans
9. Assess nectar-rich plants for use in Parks bedding schemes/planters	2018	GCC-NRS	See monitoring report 2018-2019
10. Aim to ensure early and late nectar sources in plantings	2017-2022	GCC-NRS	A variety of wildflower species incorporated into Green Connector plantings city-wide
11. Create a butterfly garden within a Glasgow park	2017-2018	BC/GCC-NRS	See monitoring report 2018-2019
12. Identify a park and/or LNR to promote as a pollinator demonstration site	2018	GCC-NRS	Hogganfield Park LNR and Queen's Park are designated Pollinator Parks with wildflower meadows managed for pollinators
13. Carry out events for Urban Butterfly Project (LBAP Action)	2017-2018	BC/GCC-NRS	See monitoring report 2018-2019
14. Work with Buglife, Butterfly Conservation, Friends of the Earth Scotland and others to ensure best practice for pollinator action in Glasgow	2017 onwards	GCC-NRS/BL/FoES(GG)/SLWP	Butterfly Conservation (BCS) ran a 'meadow creation and maintenance for butterflies and moths' best practice workshop at Kelvingrove in September 2022
			A large south facing bee bank (sand and aggregate) was created at Yorkhill Park for solitary ground nesting bees and resting butterflies.
15. Raise awareness of the importance of pollinators through website information, leaflets, events	2017-2022	GCC-CRS//BL/BC/FoES/(GG)/SLWP	Progress on the Pollinator Plan and case studies provided to NS for the national strategy progress report and NS pollinator blog
			New pollinator signage at green connector parks and other sites raise awareness of pollinators, biodiversity, carbon storage and the climate & ecological emergencies

Action	Date	Lead	Progress
			BCS ran 'meadow discovery days' at Ruchill Park, Springburn Park and Elder Park in summer 2022, showing people the plants and insects in the urban meadows
			<ul style="list-style-type: none"> YGS promoted and took part in a number of national biodiversity surveys including City Nature Challenge 2022 (April 2022), FIT counts for UK Pollinator Monitoring scheme; National Moth Night (May 2022), National Bee week daily social media posts about bees found in Yorkhill (June 2022); Insect Week (June 2022); Big Butterfly Count (July 2022), the Big Garden Bird Watch (January 2023)
16. Carry out surveys and monitoring of butterflies, bees and hoverflies at key sites	2017-2022	GCC-CR/BC/SLWP	See butterfly transects
17. Continue to co-ordinate butterfly transects at a minimum of 4 sites	2017-2022	GCC-NRS/BCS	There are 8 active transects in Glasgow
			Friends of Newlands Park set up a new transect in the park
18. Encourage Stalled Spaces projects to include pollinator friendly practices	2017-2022	GCC-NRS	Stalled Spaces Programme has been completed
19. Provide information to support creation of additional nectar-rich plantings to compensate for new honeybee hive locations	2017-2022	GCC-NRS	Bee keeping and Biodiversity Factsheet includes advice to help reduce competition with native pollinators
20. Provide information to support creation of additional nectar-rich plantings at allotments and community growing spaces	2017-2022	GCC-NRS	Leaflets provided to community groups and interested individuals as required
21. Seek funding opportunities for Pollinator Projects	2017-2022	GCC-NRS/TCV	Weekly funding information provided to parks & greenspaces community groups with some successful projects likely to benefit pollinators

Action	Date	Lead	Progress
22. Investigate the potential for a B-Line within the city to connect to the wider countryside	2018	GCC-NRS/BL/SLWP	Glasgow B-Lines in place and Green Connector project seeks to expand on these connections
23. Seek volunteers to set up Beewalk transects at key sites	2018	GCC-CRS/BBCT	Bumblebee Conservation Trust (BBCT) co-ordinated 9 Beewalk transects
			BBCT supported 1 new Beewalk transect at Hamiltonhill Claypits LNR
24. Carry out a survey of Marsh Violet at Commonhead Moss and adjacent sites (food plant for Small Pearl-bordered Fritillary)	2018	GCC-CR/SLWP	See monitoring report 2018-2019
25. Investigate propagation of local provenance Marsh Violet for planting at appropriate sites to aid Small Pearl-bordered Fritillary populations	2018	GCC-NRS/SLWP	See monitoring report 2018-2019

3. Acronyms

BBCT	Bumblebee Conservation Trust
BCS	Butterfly Conservation (Scotland)
BL	Buglife
BTO	British Trust for Ornithology
CDP	City Development Plan
CP	Country Park
CPD	Continued Professional Development
CR	Countryside Rangers
CRF	Clyde River Foundation
FLS	Forestry & Land Scotland
FoES (GG)	Friends of the Earth Scotland (Glasgow Group)
FoGLNRs	Friends of Glasgow's Local Nature Reserves
GCC	Glasgow City Council
GIS	Geographic Information System
GL	Glasgow Life
GNAH	Giving Nature a Home
GNHS	Glasgow Natural History Society
Ha	Hectare
ID	Identification
INNS	Invasive Non-Native Species
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
NLC	North Lanarkshire Council

NRS	Neighbourhoods, Regeneration & Sustainability
OMHPDL	Open Mosaic Habitats on Previously Developed Land
OSS	Open Space Strategy
PCP	Pollok Country Park
PP	Pollinator Plan
PTES	People's Trust for Endangered Species
PTU	Permission to Use
RSPB	Royal Society for the Protection of Birds
SEPA	Scottish Environment Protection Agency
SG	Supplementary Guidance
SIMD	Scottish Index of Multiple Deprivation
SINC	Site of Importance for Nature Conservation
SLWP	Seven Lochs Wetland Park
SOC	Scottish Ornithologists' Club
SpRiNT	Species Rich Networks Team
SSSI	Site of Special Scientific Interest
SUDS	Sustainable Drainage System
SWT	Scottish Wildlife Trust
TCV	The Conservation Volunteers
U of G	University of Glasgow
UKBMS	United Kingdom Butterfly Monitoring Scheme
YGS	Yorkhill Green Spaces

4. LBAP Partners

Butterfly Conservation (Scotland)
 Clyde River Foundation
 Forestry & Land Scotland
 Friends of Glasgow's Local Nature Reserves
 Froglife
 Glasgow City Council
 Glasgow Life
 Glasgow Museums Resource Centre
 Glasgow Natural History Society
 NatureScot
 Royal Society for the Protection of Birds (Scotland)
 Scottish Canals
 Scottish Environment Protection Agency
 Scottish Ornithologists' Club
 Scottish Wildlife Trust
 Seven Lochs Wetland Park
 The Conservation Volunteers
 Urban Roots
 Woodland Trust



Glasgow City Council

Biodiversity Monitoring Report

April 2021 to March 2022



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1. Background and Context

- 1.1. This annual monitoring report has been compiled with the support of the Council's partners in the Glasgow Biodiversity Partnership. The purpose of the partnership is to bring a broad range of expertise to the development of Glasgow's Local Biodiversity Action Plan (LBAP). The Council established a Glasgow Biodiversity Partnership consisting of representatives from 18 different environmental organisations. Key partners include NatureScot, Forestry and Land Scotland (FLS), Scottish Environment Protection Agency (SEPA) and the Royal Society for the Protection of Birds (Scotland) (RSPB) along with other environmental interest groups.
- 1.2. The Council announced a Climate and Ecological Emergency in May 2019. The implementation of the Local Biodiversity Action Plan and Pollinator Plan (PP) play a vital role in addressing these emergencies through protecting, enhancing and creating biodiverse habitats, protecting and enhancing a diversity of species; and providing nature-based solutions to support climate mitigation and adaptation.
- 1.3. Over the past year, officers have been working with partner organisations to deliver the implementation of key actions as detailed within Glasgow's LBAP and PP.
- 1.4. Projects and actions reported on are related back to the relevant actions from the LBAP and PP to ensure that monitoring tracks the Implementation Plans for both documents. Other projects and activities help achieve the general aims and objectives of the LBAP by improving biodiversity in the city.
- 1.5. Projects and actions continue to link to, support and benefit from a range of other workstreams including:
 - Climate change adaptation,
 - Volunteering and employability opportunities,
 - Curriculum for Excellence,
 - Health and wellbeing,
 - The Glasgow Open Space Strategy
 - Parks and Greenspaces Vision
 - Metropolitan Glasgow Strategic Drainage Partnership (MGSDP)
- 1.6. Under the Nature Conservation (Scotland) Act (2004), all public bodies in Scotland are required to further the conservation of biodiversity when carrying out their responsibilities. The Council fulfils this primarily through the implementation of the Glasgow LBAP.
- 1.7. The Wildlife and Natural Environment (Scotland) Act (2011), further requires public bodies in Scotland to provide a publicly available report, every three years, on the actions they have carried out to meet the biodiversity duty.
- 1.8. The content of this annual biodiversity report will contribute towards the statutory Biodiversity Duty Report due for publication in January 2024.

- 1.9. There are implications for future resourcing and management of greenspaces as we aim to address the ecological emergency and continue to engage with communities and encourage people to enjoy and interact with nature.
- 1.10. Glasgow hosted COP26 Climate Conference in November 2021 which raised awareness of the climate & ecological emergencies and the value of nature-based solutions and the conservation of biodiversity.
- 1.11. The Seven Lochs and NE Glasgow Water Vole Conservation Action Plan 2022-2026 has been produced by LUC, funded by NatureScot, GCC and Seven Lochs Wetland Park. The Plan will set out the revised actions which will be incorporated into the LBAP implementation actions when renewed in 2023
- 1.12. Biological recording is essential to valuing our greenspaces for biodiversity and for providing baseline data to help address the ecological emergency and allow management plans to be drawn up for individual sites, taking cognisance of LBAP habitats and key species. New recording started in 2017 to celebrate the Botanic Gardens Bi-centenary and is ongoing, with scientific papers being produced from 2018 onwards.

In 1998 and 1999, The Glasgow Naturalist published a set of papers under the heading “On the Wildside: The Natural History of the Glasgow Botanic Gardens”, which reported the results of wildlife surveys carried out over the previous four years in the Glasgow Botanic Gardens. As the year of the Botanic Gardens’ bicentenary (2017) approached, Glasgow Natural History Society (GNHS) members felt that this could provide a good motivation for a new look at the biodiversity (in the wild state) of the Gardens. After discussion, it was decided that the new survey would be in two parts. First, a collation of new records made since the last surveys, a period of about 20 years. Second, the results of a BioBlitz in the Gardens, which would launch the RSPB’s Giving Nature A Home.

As part of the Glasgow Natural History Society, and others’ work, over ten papers were published in The Glasgow Naturalist Vol 27 for On the Wildside Revisited including individual papers on the Botanic Gardens fungi, birds, lichens, bryophytes, moths, non-avian vertebrates, arachnids, molluscs, crustaceans and flowering plants.

In 2021/2022 the following papers were produced:

- On the Wildside 2: what the Glasgow Botanic Gardens Wildside project has achieved and what remains to be done
R.B. Weddle and J.R. Downie
- The birds of Glasgow Botanic Gardens
C.J. McInerny
- The lichens of Glasgow Botanic Gardens
I.C. Wilkie
- Further insect and other invertebrate records from Glasgow Botanic Gardens, Scotland ,
R.B. Weddle
- *Edwardsiana alnicola* (Hemiptera: Cicadellidae): a leaf-hopper new to Scotland, in
Glasgow Botanic Gardens
R.B. Weddle
- The landhopper *Arcitalitrus dorrieni* (Crustacea: Amphipoda) in Glasgow Botanic

Gardens, Scotland
R.B. Weddle

- The molluscs and crustaceans of Glasgow Botanic Gardens, Scotland
R.B. Weddle
- Increased observations of comma butterflies in Glasgow Botanic Gardens and south-west Scotland
C.J. McInerny
- The arachnids of Glasgow Botanic Gardens
C. Cathrine, K. Godsman, J. Ahmed & N. Currie
- The bryophytes of Glasgow Botanic Gardens
K.J. Watson

2. Monitoring Report

2.1. The year to end March 2023 saw further progress on the main Ecosystems. Many initiatives are on-going; however, each year there are new projects and activities.

2.1.1. Urban: Parks and Open Spaces

Action	Date	Lead	Progress
1. Maintain and update the Biological Audit	2018-2023	GL	Over the year 75,404 records were added to the biological audit database managed by Glasgow Museums Biological Records Centre, covering Glasgow and the Clyde River Catchment
			30 new species were added to the database including Spoonbill, Green Shieldbug and Pale Water-veneer (moth)
			At the end of March 2022 there was a total of 884,500 records in Glasgow Museums Biological Records Centre's database
			SOC collect bird records from all over the Clyde area and upload to BirdTrack monthly
			SOC share notable bird sightings via a daily Grapevine to SOC members
			SOC encourage observers to submit bird records
			As part of the Glasgow Natural History Society and others' work, over ten papers were published in The Glasgow Naturalist Vol 27 for On the Wildside Revisited including individual papers on the Botanic Gardens fungi, birds, lichens, bryophytes, moths, non-avian vertebrates, arachnids, molluscs, crustaceans and flowering plants

Action	Date	Lead	Progress
			GNHS members made significant contributions to the Glasgow Museums BRC database from sightings made on their own personal excursions, and from butterfly transects and moth-trapping
			Yorkhill Green Spaces Biodiversity list updated on monthly basis with new finds, and information about new species posted on YGS Facebook page. Current species list has 1159 species. Pollinators recorded in Yorkhill's parks and green spaces include: 29 species of bees, 21 species of wasps, 209 species of moths, 12 butterflies, 118 flies (includes 38 species of hoverflies)
2. Designate additional LNRs to reach target of 1 Ha per 1000 population	2023	GCC-NRS	22 new LNRs approved at City Administration Committee
			NRS have now moved to the next stage of pre-designation planning and preparation for declaration of the following sites as LNRs within 2023: Bingham's Pond, Bishop Loch LNR extensions, Cardowan Moss (W extension), Castlemilk Park, Cleddans Burn, Commonhead Moss LNR extension, Dawsholm Park extension, Hurlethill, Todd's Well
			Hamiltonhill Claypits Local Nature Reserve opened to the public on 31st July 2021. A greenspace in the heart of local communities with wooded walks and paths alongside the Forth & Clyde Canal between Firhill and Applecross. https://claypitslnr.co.uk/
3. Continue to co-ordinate butterfly transects at a minimum of 4 sites	2018-2023	GCC-NRS/BCS	See Pollinator Plan
4. Deliver Community Rewilding project across Yoker area, engaging with local communities to plant wildflowers, trees and wilding of sites	2018-2019	TCV	See monitoring report 2018- 2019. Project concluded in March 2019. Final evaluation report available on request

Action	Date	Lead	Progress
5. Develop Citizen Science and Environmental Monitoring projects for key habitats and species	2018-2023	TCV/ GCC-NRS	SOC carry out winter gull monitoring in Glasgow parks
			TCV taught volunteers how to carry out an air quality survey using the lichen growing on trees at Glasgow Green as a pollution indicator
			RSPB Staff and volunteers assisted with the Urban Gull Census (part of the JNCC Seabirds Count)- recording nesting gulls in Glasgow
			70+ nest boxes in Linn Park LNR monitored by FoLP with volunteers regularly checking and monitoring via selfie stick and micro camera next to boxes as part of a breeding survey
			FoGLNRS undertook monitoring of bird nest boxes by observing the boxes at a distance and/or by using an endoscope: Dawsholm Park LNR - 12 prs Blue Tits, 5 prs Great Tits & 1 pr of Nuthatch Hogganfield Park LNR - 4 prs Blue Tits & 4 prs Great Tits Cardowan Moss LNR - 3 prs Great Tits & 1 pr Blue Tits Bishop Loch LNR - 2 prs Great Tits Bingham's Pond pLNR - 1 pr Great Tits & 2 prs Blue Tits
			FoGLNRS erected 10 additional bird nest boxes - 6 at Dams to Darnley LNR and 4 at Gartloch Woods SINC
			Yorkhill Greenspaces installed nine new bird nest boxes at Yorkhill Park and Overnewton Park
			Yorkhill Greenspace installed bird feeders in all green spaces (Overnewton, Cherry Park & Yorkhill Park), and YGS members have installed more feeders in their own gardens around Yorkhill
			Hamiltonhill Claypits LNR group conducted two surveys of plants at the Claypits in collaboration with BSBI Lanarkshire

Action	Date	Lead	Progress
			YGS promoted & took part in a number of national biodiversity surveys including City Nature Challenge 2021 (April 2021), FIT counts for UK Pollinator Monitoring scheme; National Bee week daily social media posts about bees found in Yorkhill (June 2021); Big Butterfly Count (July 2021) & Big Garden Bird Watch (January 2021)
6. Ensure SUDS designs incorporate biodiversity			Comments on individual planning applications provided to support biodiversity-rich SuDS where appropriate
			Comments on individual planning applications provided to support biodiversity-rich SUDs where appropriate
			NRS Flood Risk Management continues to collaborate with planning colleagues for above-ground blue-green SuDS for new development and redevelopment, which will benefit biodiversity
			Retrofit blue-green SuDS are being delivered by the Avenues Project
			Retrofit blue-green SuDS are core elements of the surface water management plans that have and are being delivered by NRS Flood Risk Management, including basins, ponds, swales, trees and highway raingardens
7. Seek to assess and update the list of derelict sites of particular importance for biodiversity and outline management needs	2023	Buglife	Buglife assessed and updated the VDL register for Open Mosaic Habitats on Previously Developed Land (OMHPDL)
			Of the initial 927 sites on the vacant and derelict land register in Glasgow in 2011, 346 have now been removed. Of the sites removed, 45 had the potential to support OMHPDL, these sites could have been lost to development or other reasons
			Of the 63 sites added to the register 12 were identified as potentially supporting OMH

Action	Date	Lead	Progress
8. Aim to ensure connectivity of integrated habitat networks throughout the city through the planning process	2018-2023	GCC-NRS	The Glasgow Green Urban Connectors project received £88,419.65 from the Biodiversity Challenge Fund (BCF) Round 3 with the project completed in March 2022. The project involved Glasgow City Council working in collaboration with the Royal Society for the Protection of Birds Scotland (RSPB Scotland) and involved other volunteers and community groups, including Friends of Rosshall Park, in practical conservation/biodiversity enhancement tasks thus providing green skills and training (a future report will be brought to this committee)
			Malls Mire Green Infrastructure Project works now complete – an additional 16ha greenspace enhanced. Biodiversity improvements included planting of trees, bulbs and wildflower seeds. Maintenance agreement between Clyde Gateway, Glasgow City Council and Urban Roots now in place. Official opening took place in June
			Planning policy incorporated into the City Development Plan 2017 (policy CDP7) and associated Supplementary Guidance (SG7)
			Advice provided on planning applications to implement policy/SG as appropriate.
			Adoption of Open Space Strategy (Feb 2020) and preparation of OSS Delivery Plan, will provide an opportunity to pro-actively promote habitat connectivity at an early stage
			The GCC open space and Connecting Nature team continue to work closely with NRS Biodiversity to ensure we can more proactively plan for habitat connectivity via the open space delivery plan
			A first version of the delivery plan will focus on community spaces and further iterations will identify opportunities for better habitat connectivity and management for enhanced biodiversity. In doing so, it will need to take account of the identification and creation of nature networks to improve ecological connectivity in the city, as required by the draft NPF4. On adoption, NPF4 will become part of the statutory development plan
			Magnificent 11 path route waymarking and promotion will assist with public perception of connectivity of these sites
			Active Travel Route planting for pollinators, new planting at the riverside field and behind the Burrell at Pollok Country Park

Action	Date	Lead	Progress
9. Maintain swift trigger map showing locations city-wide of flocking/breeding swifts	2019	GCC-NRS/RSPB	Swift Mapper recording app launched in 2020. Between 1st April 2021 and 31st March 2022: 21 records of swift screaming parties (indicating possible nests nearby) and 4 different swift nest sites were recorded in Glasgow
			Swift records put into wildlife records by CRS
10. Align LBAP to emerging Parks and Greenspaces Vision	2020	GCC-NRS	Biodiversity information provided for annual GCC climate change update report
			Implementation of the LBAP is a key action within the Parks Vision
11. Ensure biodiversity is considered within the Glasgow Open Space Strategy	2018-2019	GCC-NRS	The OSS identifies the need to enhance biodiversity (OSS section 12) and connect habitats as being two of the key uses to which Glasgow's Open Spaces can be put
			Data is being gathered to identify those open spaces that can do either or both with a view to identifying them for this purpose (and, where appropriate, other complementary purposes) through the preparation of an Open Space Strategy Delivery Plan, on which work is currently underway
12. Ensure that biodiversity is considered in the Stalled Spaces planning process	2018-2023	GCC-NRS	See pollinator plan actions
13. Encourage the development of Green Roofs through the planning process	2018-2023	GCC-NRS	The CDP (and associated Supplementary Guidance) is supportive of the provision of green roofs for a variety of purposes, but principally for biodiversity and as part of the SUDS trail
			It is anticipated that the Positive Effects for Biodiversity (net gain) approach being developed in the next iteration of the CDP will put a much greater emphasis on the use of green roofs in new development
14. Ensure new developments enhance biodiversity wherever possible	2018-2023	GCC-NRS	NRS Natural Environment Officers (biodiversity) worked with planning colleagues to ensure biodiversity enhancement incorporated into developments
			NRS Flood Risk Management continues to push through the Planning system above-ground blue-green SUDS for new development and redevelopment, which will benefit biodiversity

Action	Date	Lead	Progress
			Active Travel route to Burrell Collection includes habitat creation and wildflower planting
15. Encourage incorporation of spaces for building dwelling species such as swift in new buildings where appropriate	2018-2023	GCC-NRS/RSPB	Swift advisory information provided to NRR planners for appropriate development proposals
			The Biodiversity Positive Effects (net gain) approach being developed will emphasise the importance of delivering easy wins, such as bat and bird boxes, in new development
			Weekly planning lists in Glasgow monitored by RSPB Scotland staff for opportunities to install swift bricks or nest boxes. RSPB swift casework volunteer role developed, focused on Glasgow. Seven volunteers recruited to identify opportunities for installation of swift bricks or boxes
16. Create and maintain House Sparrow Plots as funding allows	2018-2023	RSPB/GCC-NRS	RSPB house sparrow project completed
			Glasgow Botanic Gardens has interpretation funded by Glasgow University about the management of an area for house sparrows, working with RSPB. This includes meadow and hedgerow to benefit this species
17. Erect a minimum of 30 House Sparrow boxes at targeted sites across the city	2018-2023	RSPB	RSPB house sparrow project delivered house sparrow boxes across Glasgow
			RSPB Scotland has installed at least 30 house sparrow boxes across Glasgow
18. Undertake Phase 1 Habitat Survey of Pollok Country Park (PCP)	2018-2019	GCC-NRS	Woodland flora has declined during Covid, currently no vegetation to survey. Woodland requires restoration through Flower Power project and other positive interventions
			Invasive Species have been recorded by CRS
19. Undertake a review of SINCS	2018-2023	GCC-NRS	In progress with brief and assessment criteria produced and contractors JBA Consulting appointed in March 2022

2.1.2. Grassland

Action	Date	Lead	Progress
1. Update grassland map on GIS	2018	GCC-NRS	Grassland sites mapped on GIS showing year and area of cuts
2. Manage 30 key grassland sites as traditional meadows in a sustainable manner, on GCC land	2018-2023	GCC-NRS	13 meadow sites across city managed by contractor along with one site meadow cut and lift for Green Connectors project
			TCV managed a further 8 meadow sites including meadows at Bellahouston Park, King's Park, Linn Park and Cart and Kittoch Valley SSSI
			Three meadows managed and maintained By Countryside Rangers at PCP. Self- seeding birch removal ongoing at Glade Meadow, along with spirea. Brambles and dock removed at the Ash path meadow and Woodland slope meadow. Himalayan balsam removed and cut and lifted every September. New plants added regularly from polytunnel stock
			RSPB Scotland staff and volunteers cut and lifted existing wildflower meadow behind Kelvingrove Art Gallery to reduce dominance of grasses and enhance floral diversity
			New wildflower strips behind Kelvingrove Art Gallery created by turf removal and sown in Spring 2021 with Scotia Seeds 'Urban Pollinator' & 'Get Nectar-rich Quick' wildflower seed mixes containing native annuals, biennials and perennial wildflowers and grasses. Due to trampling additional wildflower seed sown in early 2022
			RSPB Scotland and GCC delivered the 'Glasgow Urban Green Connectors Project across 53 sites in south-west of the city. The BCF-funded project involved improving key green spaces for biodiversity and enhancing habitat connections between them. Part of the project involved creation of new meadows through sowing wildflower seed mixes, but mainly managed by change of mowing regime to cut and lift. As part of the project over 1ha of meadow at Crookston Castle was cut & lifted, then sown with yellow rattle
			Two wildflower strips at Overnewton Park cut & arisings lifted by volunteers in Autumn 2021

Action	Date	Lead	Progress
			Approximately 0.6 ha of meadow areas at Yorkhill Park cut by GCC team, then arisings raked and lifted by YGS volunteers. Arisings moved to shrubby areas on site and under trees to reduce nutrients in meadow areas
			750g Yellow rattle seed sown on cut meadow areas of Yorkhill Park
			Tollcross Park Orchard- Enhancement of meadow, through strimming/raking, scraping and sowing wildflower seed by SACRO community payback
3. Enhance areas of unmown grassland by introducing local provenance wildflowers. Enhance 1 Ha annually	2018-2023	GCC-NRS	This action has been achieved annually over the last 4 years. This year over 14,900 m2 was enhanced, see below
			Pictorial meadow strips (1m wide) maintained with perennial wildflowers at the front of uncut grass totalling 7500m sq over 23 sites
			Green Connectors project (Rosshall/Nitshill area): wildflower plugs (total planted no. 14,725)
			Spring bulbs 0.6ha (5,840m2)
			Queens Park Pollinator Park - 1400m2 of Perennial Wildflower and approx. 5000m2 of grass being left uncut
			Pollinator-friendly bulbs planted at Ruchill Park by CR with local school children
			Countryside Rangers planted out wildflowers into the meadows and wildlife garden with Flower Power Project, The Scouts, FoPCP, School groups, 50+ groups, Milldale and Kelvin College
			Pollinator-friendly bulbs planted at PCP lime avenue by Countryside Rangers with local school children and Woodland Kindergarten groups
			An area near Aikenhead House in Kings Park was planted with pollinator-friendly wildflower plugs and bulbs and seeded with yellow rattle

Action	Date	Lead	Progress
			Yorkhill Greenspaces planted over 2,000 spring bulbs & corms including 240 crocuses, 377 winter aconites, 534 native bluebells, 180 grape hyacinths, 350 snowdrops, 130 blue (blanda) anemones, 100 wood anemones, and 100 snake's head fritillaries at Yorkhill Park and Overnewton Park into grassy meadow areas, flower borders and naturalised under trees
4. Create or extend 5 new meadows city-wide	By 2023	GCC-NRS	This action has been achieved over the last 4 years with new meadows at Springburn Park, Keal Avenue, Bellahouston Park, GG, Ruchill Park, King's Park, Castlemilk Park, Claypits, Kelvin College, 7 Lochs, Green Connectors Rosshall/Nitshill
			Green Connectors project (Rosshall/Nitshill area): meadow created through maintenance change 16.5ha (165,405m ²)
			Green Connectors project (Rosshall/Nitshill area): meadow created through cultivation 2.3ha (23,612m ²)
			Seven Lochs Wetland Project SpRiNT project planted 22,815 wildflower plugs, 3600 bulbs and seeded wildflower areas totalling 1160m ²
			Froglife sowed wildflower seeds at Glasgow Kelvin College Haghill campus, Glasgrov Community Garden, Woodside Community Garden
			Froglife planted Pollinator friendly bulbs (~1000 bulbs total) at Glasgrov Community Garden, Glasgow Kelvin College Haghill campus, Miltonbank Primary School
			Wildflowers planted in the PCP Glade meadow, Ash Path Meadow, Woodland Slope Meadow and the Wildlife Garden Meadow
5. Enhance existing meadows by wildflower planting at 8 sites	2018-2023	GCC-NRS	This action is on target with 7 existing meadows enhanced along with additional areas within LNRs
			Green Connectors project: yellow rattle sown 1.0ha (10,000m ²)
			Butterfly Conservation Scotland carried out work parties at 3 urban meadows at Springburn, Elder and Ruchill Parks, to enhance plant diversity and improve them for butterflies

Action	Date	Lead	Progress
6. Establish and identify mechanism to maintain GCC wildflower nursery at Pollok Country Park	2018-2023	GCC-NRS	Flower Power nursery at PCP maintained with volunteer support
			A variety of groups helped Countryside Rangers with seed collection, sowing, pricking out, repotting,
			Watering and planting out into the meadows. These included: Flower Power, Friends of Pollok Country Park (FoPCP), Milldale, Kelvin College, school groups
			New polytunnel cover has been secured by FoPCP. Countryside Ranger staff attended a training day to learn how to attach new polytunnel cover
7. Encourage sowing and growing of Scottish provenance wildflowers	2018-2023	GCC-NRS	Countryside Rangers encourage this with many different groups. Seeds gathered in PCP and Scotia seed stock are grown
			Wildflower seed collected in Overnewton Park and Yorkhill Park by YGS during 2021 to be sown in new areas to help with sustainability
8. Trial new council cut and collect equipment for meadow management	2018-2019	GCC-NRS	Two Venezia 140s (tractor towed cut and collect units) purchased https://campeyturfcare.com/portfolio-items/omarv-venezia-2/
			Used to prepare a grass area for wildflower/bulb planting in Greenbank Park, Auldhouse
			Scheduled for managing the pollinator areas in Queens Park
9. Implement dwarf shrub heath annual management at 1 site	2018-2023	GCC-NRS	Annual monitoring completed, no further management action was required. Will be further assessed in 2023
10. Carry out survey of rare plants (Burnet-saxifrage) annually	2018-2023	GCC-NRS	Location and improved population of Burnet Saxifrage at Cathkin Braes LNR Grasslands recorded
			Butterfly Orchid populations at Hogganfield Park LNR and Bishop Loch surveyed
11. Carry out annual management of Glasgow Museums Resource Centre meadow	2018-2023	GL	Not carried out due to lack of resources

Action	Date	Lead	Progress
12. Enhance water vole meadow at The Bridge, Easterhouse	2018-2023	GL/SLWP	Annual low intensity management for water voles

2.1.3. Woodland

Action	Date	Lead	Progress
1. National Vegetation Classification (NVC) survey of Pollok Country Park Wood Pasture and Parkland Habitat to identify exact species compositions and conditions as base point for future management planning and assessments	2018-2023	GCC-NRS	Project Coordinator Community Woodlands to review this target in light of Glasgow Tree Plan
			CR have created a plan to implement with Kelvin College as a training opportunity
2. Individual management plans for Ancient and Veteran trees within Wood Pasture and Parkland Habitat in Pollok Country Park	2018-2023	GCC-NRS	Project Coordinator Community Woodlands officer to review this target in light of Glasgow Tree Plan
3. Improve condition of Upland Mixed Ashwoods and Upland Oakwoods woodlands at Cart & Kittoch SSSI	2018	GCC-NRS	TCV undertook Himalayan Balsam removal
4. Assess all UK BAP Woodland Priority Habitat types (excluding Lowland Mixed Deciduous Woodland), to confirm council ownership and establish woodland condition and management requirements	2018-2023	GCC-NRS	Project Coordinator Community Woodlands officer to review this target in light of Glasgow Tree Plan

Action	Date	Lead	Progress
5. Commence city wide NVC survey of woodlands (not already surveyed) to ascertain UK BAP Priority Habitats extent in Glasgow	2018-2023	GCC-NRS	Project Coordinator Community Woodlands officer to review this target in light of Glasgow Tree Plan
6. Develop 8 Urban Woodland Management Plans for larger woodlands city-wide (over 400 Ha in total)	2018-2023	GCC-NRS	Project Coordinator Community Woodlands officer to review this target in light of Glasgow Tree Plan
7. Deliver a woodland management strategy for the Greater Easterhouse area	2018-2023	GCC-NRS	Forestry and Land Scotland have carried out woodland management plans for Cardowan, Todds Well, Bishop Loch and Lochend Burn
			Greater Easterhouse is included within the scope of citywide Glasgow Tree Plan
8. Promote woodland as a temporary greening and bioremediation on vacant and derelict land	Ongoing	GCC-NRS	Cadder Woods SINC project is developing access to the native woodland for local community groups. Woodland management is currently being planned
9. Create 3 new woodlands within city boundary (or expansion of existing woodlands) totalling 10ha or more	2018-2023	GCC-NRS	This action has been achieved by the development of the Cart & Kintoch Woodland and Lost Woods project
			15 ha of oak woodland mix (minus ash) planted to support biodiversity and climate mitigation as well as creating valuable foundation for future physical and access links from Cart and Kintoch SSSI to Cathkin Braes LNR for wildlife and people. https://greenactiontrust.org/new-woodland-takes-root-in-glasgow/
			Lost Woods along with 1,200 children, representing 148 schools from all across the city, planted thousands of oak saplings grown by pupils on a 13ha site at Cart & Kintoch in the run up to COP26 to create the Glasgow Children's Woodland. https://www.thelostwoods.earth/

Action	Date	Lead	Progress
			Green Connectors Project (Rosshall/Nitshill area) created hedgerow linear 1,425m, woodland edge whips 1.1ha (11,440m ² , total planted no. 13,730), hedgerow/ woodland seeding, linear 4,765m
			400+ native mix whips planted in Kings Park
			Hamiltonhill Claypits LNR group undertook a number of tree planting events with local residents, school children and community groups in the autumn and spring. These included planting a mix of native species, including hawthorn, pine, oak, and rowan, received from the Woodland Trust, as well as local donations
			The first Tiny Forest for Scotland planted at Avenue End Road, Easterhouse and 6 other Tiny Forests across the city including at Glasgow Green and Maxwell Park. https://www.glasgow.gov.uk/index.aspx?articleid=27626
			Seven Lochs Wetland Park SpRiNT project planted 600 trees and 80m ² of hedgerow
10. Protect and enhance habitats for wildlife as part of continued management at Drumchapel and Easterhouse Woods	2018-2023	FLS, now GCC	Wildlife habitats protected and enhanced through the implementation of management plans at Drumchapel and Easterhouse woodlands. Lease ended January 2022
11. Remove invasive species where appropriate and manage sites to encourage a varied tree age, species and structure at Drumchapel and Easterhouse Woodlands	2018-2021	FLS	CRS and FOPCP removed Himalayan balsam, yellow archangel, spirea and dock at PCP. Dock behind the Burrell was sprayed and dug out to make way for wildflowers
			TCV removed 530m ² of invasive species at Linn Park LNR and 2,480m ² of invasive species at Dawsholm Park LNR and Kelvin Walkway
			At Cathkin Braes, TCV volunteers worked to remove beech saplings from the woodland
12. Carry out annual monitoring of rare woodland plants	2018-2023	GCC-NRS	Sanicle, Lords and Ladies, Enchanter's Nightshade and Giant Bellflower monitored in Linn Park LNR by Countryside Rangers

Action	Date	Lead	Progress
13. Undertake strategic tree planting programme annually	2018-2023	GCC-NRS	507 trees planted in parks, open spaces, road verges to ensure the tree cover of the city is maintained and enhanced whilst supporting historical and aesthetic landscape settings, climate change mitigation and biodiversity
			35,000 native species sapling/ whips have been planted to create new woodlands of various sizes at Cathkin (Carmunnock), Kings Park, Glenora Drive, Heathcote Avenue and other sites
			500 trees donated by the FoPCP were planted into PCP by The Green Team, FoPCP, The Scouts, several school groups

Other action for Woodlands:

- Sakura cherry tree planting was carried out at Queen's Park, Bellahouston Park, attended by the Lord Provost and involved council officers, TCV and other volunteers in the planting
- Friends of Linn Park installed 20 bat boxes within Linn Park
- Friends of Linn Park nest box project started with 13 boxes in 2018 and has grown to over 60 with a team of volunteers monitoring the boxes through the nesting season. The results go to BTO
- Urban Roots delivered traditional hedge laying workshop in March – participants helped to lay 100m of hedge at Polmadie Plots Community Garden. The hedge consists of hawthorn, blackthorn and hazel and stakes cut from the hazel coppice in Malls Mire Community Woodland were also used

2.1.4. Wetland

Action	Date	Lead	Progress
1. Carry out annual blue green algal monitoring at 43 sites city-wide	2018-2023	GCC-NRS	Countryside Rangers issued instruction for warning signage to be erected in early June at all water bodies with history of >100,000ppm readings.
2. Carry out annual WeBS counts at 15 key sites	2018-2023	GCC-NRS	Countryside Rangers continue to monitor key sites for wetland birds
			Webs undertaken from Aug 2020 - March 2021 and data inputted online
3. Carry out water quality tests at key sites- Hogganfield Loch, Queen's Park, Richmond Park and Knightswood Park ponds	2018-2023	GCC-NRS	Hogganfield Loch water testing for floating island installation completed. Water testing at other sites as required
4. Naturalise 50% of Queen's Park boating pond	2018-2019	GCC-NRS	See monitoring report 2018-2019
5. Carry out riparian water vole surveys at 2 sites per year	2018-2023	GCC-NRS	Survey of Cleddans Burn carried out
6. Identify Bog Rosemary populations and monitor health and spread	2018-2023	GCC-NRS	Bog Rosemary population Commonhead Moss - 200 spikes counted
			Bog Rosemary population at Commonhead Moss has spread to the west of the raised bog
7. Carry out wetland management at 5 Local Nature Reserves, including water level control at Robroyston Park for wading birds	2018-2023	GCC-NRS	Habitat improvements were carried out to the man-made pond in Malls Mire community woodland - overhanging vegetation has been removed, a hedge has been created and the pond has been lined
			TCV cleared a pond at Linn Park LNR

Action	Date	Lead	Progress
8. Monitor frog populations at Robroyston Park and Cathkin Braes, to assess health of population in north and south of city	2018-2023	GCC-NRS	Common Frog spawn monitoring carried out at Robroyston Park LNR and Millerston Wetland
9. Continue to restore 3 raised bogs and monitor results for water levels and biodiversity	2018-2023	SLWP/ GCC-NRS	Commonhead Moss monitored for birch regrowth, water levels and bog rosemary
10. Promote river restoration and deculverting projects	2018-2023	GCC-NRS	<ul style="list-style-type: none"> Water Environment Fund grant secured by NRS for Capelrig-Auldhouse Burn River Restoration Project - a blue-green urban regeneration project along the Capelrig-Auldhouse Burn on the southside of Glasgow, undertaken in partnership with East Renfrewshire Council. The scope has set the following objectives: Environmental improvements Access improvements Amenity improvements
11. Monitor Invasive Non Native Species (INNS) and protected freshwater fish species	2018-2023	CRF	No update
12. Monitor snipe species at key wetland sites	2018-2023	GCC-NRS	Snipe monitored at Cathkin Marsh, Windlaw Marsh and Hogganfield Loch
13. Implement Integrated Green Network proposals as part of the Cardowan Surface Water Management Plan and Blairtummock	2019	GCC-NRS	The Cardowan surface water management plan has delivered green network improvements through Blairtummock Park in Easterhouse, as well as at Croftcroighn Road and Cranhill Park
14. Implement wetland management for biodiversity as part of 7 Lochs Wetland Project	2018-2023	SLWP	Wetland habitat creation and management carried out at sites within Seven Lochs Wetland Park

Other actions for Wetland:

- Froglife carried out pond restoration at NGCFI Milton Community Garden and Springburn Allotments.

- Froglife created new ponds at Glasgow Community Garden, Glasgow Kelvin College Haghill campus, a bog garden at Miltonbank Primary School, NGCFI Milton Community Garden and a mini-pond at NGCFI Milton Community Garden + TASK Afterschool Care, Gorbals.
- Froglife created hibernacula at Miltonbank Primary School and Lambhill Stables
- CR created a new pond at Pollok Country Park riverside field and plan to naturalise the PCP Fish Pond to link amphibian habitat
- Invasive Weed removal from PCP Wildlife Garden pond which was planted up along with the PCP Riverside Field pond
- Friends of Glasgow's LNRs Bird Ringing Project, with a grant from the Alpkite Foundation, organised two bird ringing sessions in conjunction with the Clyde Ringing Group. These were held at Hogganfield Park LNR on 19 September 2021 and 30 October 2021. 62 birds were caught consisting of 13 different species – from Goldcrest to Sparrowhawk. Over 100 people participated and learned about the lives of various species of birds, the importance of bird ringing and bird migration
- FoGLNRs monitored the usage of Biohavens at Hogganfield Loch - successfully used by a breeding pair of Great Crested Grebes and a pair of Coot. They were also used by a variety of species for preening and resting

2.1.5. Farmland

Action	Date	Lead	Progress
1. Manage 50 hectares as traditional meadow on GCC owned farmland at Carmunnock	2018-2023	GCC-NRS	All meadows at Cathkin and Windlaw continue to be managed by either local farmer or contractor
2. Use cattle grazing as a management tool at Dawsholm Park, Carnbooth and Pollok Country Park	2018-2023	GCC-NRS	Cattle grazed at Dawsholm Park and PCP
3. Continue hedgerow management by creating new hedges and enhancing existing hedges	2018-2023	GCC-NRS	New hedges created in the woods behind the Burrell at PCP.
			Hedges planted at the PCP bluebell slope to protect the native bluebell population
			Kelvin College and CR planted hedging to protect the bluebell plots in front of The Burrell

Action	Date	Lead	Progress
			150 Native flowering hedging and trees (Blackthorn & Hawthorn, Sallows) planted in Yorkhill Park along fence line at rear of park and along 'Roman Road' footpath
			Wildflower hedgerow seed mix sown with TCV & YGS volunteers along Yorkhill Park footpath in October 2021
			TCV planted 31m of hedgerow at Kelvin Walkway/Dawsholm Park
4. Maintain and enhance wild bird plot at Carmunnock	2018-2023	GCC-NRS	See monitoring report 2018-2019
5. Monitor breeding tree sparrow populations at Millichen farms	2018-2023	RSPB	RSPB discussed monitoring with Clyde Ringing Group and offered continued support
6. Develop and deliver the 7 Lochs Co-operative Habitat Restoration project in partnership with landowners and land managers	2018-2021	SLWP	Species Rich Networks Team (SpRiNT) project has delivered habitat creation, enhancement and management at 6 sites for woodland and grassland

2.1.6. Water Vole

Action	Date	Lead	Progress
1. Develop and produce water vole Plan	2018-2019	GCC-NRS/ Nature Scot/U of G	The Seven Lochs and NE Glasgow Water Vole Conservation Action Plan 2022-2026 has been produced by LUC. Funded by NatureScot, GCC and SLWP
			This was developed by a Steering Group of GCC (Planning and Biodiversity), NatureScot, SLWP, NLC and UofG and involved stakeholder consultation

Action	Date	Lead	Progress
2. Seek funding to extend the fossorial water vole project. The water vole project is required for scientific monitoring of habitat creation, management and development of guidelines as well as assessing the wider water population dynamics	2018	GCC-NRS/ Nature Scot/U of G	Funding sourced for specific projects
3. Host the East End Water Vole Project meetings	2018-2023	GCC-NRS	Water Vole Conservation Action Plan workshop (aimed at steering group organisations) organised by LUC and delivered by LUC, NatureScot, GCC and SLWP
4. Carry out scientific assessment of disturbance caused by grass cutting, under licence	2018-2021	GCC-NRS/ Nature Scot	3 year Grassland water vole habitat management project developed and Year 2 actions implemented by University of Glasgow, GCC, NatureScot and SLWP
5. Develop, review and update guidance on habitat management	2018-2023	GCC-NRS/ Nature Scot	Interim report of grassland management trial produced by University of Glasgow, and awaiting further surveys/analysis for final report and incorporation into guidelines
			Review of Interim Guidelines started
6. Update water vole distribution map and annually update trigger map for development planning	2018-2023	GCC-NRS	Water vole records being sent to Local Biological Records Centre (Glasgow Life)
			Update of trigger map delayed due to GIS issues
7. Create fossorial water vole habitat at key sites as part of the Water Voles in the City project (including Blairtummock Park, Cranhill Park, Hogganfield Park and Auchinlea Park)	2018-2021	SLWP	Transforming Avenue End Greenspace project progressed and works started. Partnership project run by SLWP with GAT, GCC and NatureScot, with Heritage Lottery and GCC funding
			Baldragon project in development phase

Action	Date	Lead	Progress
8. Trial habitat management at key sites as part of Water Voles in the City project	2018-2021	SLWP	Year 3 actions of the 3 year Grassland Management Trial (GCC, NatureScot, SLWP, University of Glasgow) completed. Work completed included perimeter/assess cuts (delayed), pre and post plot cut surveys, spring surveys, grassland management, planting wildflowers, licence return and application for amendment to licence to include soil sampling which was also completed. Final surveys still to be carried out later in 2022 to complete this project
9. Implement Integrated Green Network proposals as part of the Cardowan Surface Water Management Plan and Blairtummock	2018-2019	GCC-NRS	First phase complete. Wider Blairtummock Park proposals in development by SLWP, NS and GCC
10. Carry out riparian water vole surveys at 2 sites per year	2018-2023	GCC-NRS	See Wetland
11. Monitor and assess success of habitat creation and management projects	2018-2023	GCC-NRS Nature Scot/U of G	Monitoring and assessment ongoing
12. Develop a project protocol for assessing the population dynamics of water voles in Glasgow	2018-2019	GCC-NRS/ Nature Scot/U of G	Further updates planned as part of the Conservation Action Plan
13. Survey 20km squares annually as part of fossorial water vole landscape scale monitoring	2018-2023	GCC-NRS	On hold for reporting period 2021-2022
			University of Glasgow are currently producing a methodology to monitor water vole population (funded by NatureScot, GCC and SLWP), and the aim will be to seek funding to resource delivery of this action
14. Develop training programme of specialist groups including operations staff, ecological consultants and pest control operatives	2018-2021	GCC-NRS/ Nature Scot/U of G	Toolbox talk delivered by GCC Operations staff

Other actions for water voles:

- GCC webpage www.glasgow.gov.uk/watervoles, Glasgow Water Vole Project (GWVP) facebook page and SLWP facebook page regularly updated
- University of Glasgow scientific research paper on Spatial Habitat Mapping for water voles published in the Journal of Applied Ecology. This created positive publicity for Glasgow’s water voles on social media including articles on the websites of STV news, British Ecological Society and The National. Paper published in the Journal of Applied Ecology (Feb 2022) - Predicting habitat suitability and connectivity for management and conservation of urban wildlife: A real-time web application for grassland water voles - <https://besjournals.onlinelibrary.wiley.com/doi/10.1111/1365-2664.14118>
- Glasgow’s water voles featured in two books on wildlife (A Scottish Wildlife Odyssey and Wild City), after input from GCC and University of Glasgow
- Glasgow’s water voles appeared on BBC Springwatch, in a short feature, as well as previous footage of Glasgow’s water voles appearing in general BBC Springwatch promotion
- University of Glasgow hosted a knowledge sharing site visit with the Northumberland Wildlife Trust water vole project Restoring Ratty
- Glasgow’s water voles were promoted in the Parklife Newsletter in June 2021

2.1.7. Urban Awareness Raising

Action	Date	Lead	Progress
1. Produce LBAP Communication Plan	2018-2019	GCC-NRS	54 biodiversity tweets were put out on GCC Twitter Feed. These were well received with lots of interactions and reach (people viewing the post)
2. Produce Pollinator Plan for the city	2018	GCC-NRS	See monitoring report 2018-2019
3. Produce Water Vole Plan for the city	2018-2019	GCC-NRS	See Water Vole
4. Raise awareness of biodiversity value of habitats and species within Glasgow through monthly articles for the Evening Times advice column on Gardens and Wildlife	2018-2023	GCC-NRS	Biodiversity highlighted through GCC twitter feed, rather than articles
			Biodiversity articles feature in the new ParkLife newsletter circulated to community groups, interest organisations, elected members, council staff
			CR put out Weekly Ranger Corner tweets, different species every week according to season and national days with 54 tweets put out

Action	Date	Lead	Progress
			Posters erected throughout PCP informing public of the native bluebells and asking them to stick to the paths. Posters out also to highlight the problem with dogs and deer
			YGS raised awareness of the importance of deadwood with social media updates about saproxylic species and species using deadwood as a nesting habitat. Including solitary bees (2 species) and solitary wasps (7 species) nesting in a standing dead tree in Yorkhill Park and fungi and invertebrates using fallen deadwood
			YGS regular social media posts about wildflowers/ weeds growing in pavements and verges to highlight biodiversity, and generally raise awareness of native plants
5. Raise awareness of biodiversity value through delivering Outdoor Learning sessions for Glasgow Schools (Curriculum for Excellence)	2018-2023	GCC-NRS	Total of 12 Curriculum sessions delivered to 7 schools and 220 pupils in 5 Glasgow parks by CR. This was 10% of the target of 126 CFE sessions due to covid restrictions
			CR continue to advise and liaise on establishment of new Forest School hub sites, considering the impact of increased site usage on local biodiversity
			CR monitor the conservation status of existing Forest School hub sites
			GCC staff assisted in the creation of new woodland at the Lost Woods site created in Cathkin Braes LNR along with volunteers and school groups
			Friends of Linn Park contributed to a project between Netherlee Primary School and Linn Park adventure playground to increase the knowledge of the local wildlife through developing games and a trail within the adventure playground site, and also contributing to a sensory garden there
6. Promote LNRs by holding celebration events	2018-2023	GCC-NRS	Friends of Glasgow's LNRs participated in a 'Kelvin in the Kibble Exhibition' facilitated by the Kelvin Biodiversity Network
			FoGLNRs purchased a display board and used it at events to help illustrate the birds and animals to be seen in LNRs and continued to distribute copies of leaflets on Pink Feather, the LNRs, Hogganfield Park LNR, and The Birds of Hogganfield Park LNR

Action	Date	Lead	Progress
			FoGLNRs regularly updated the Group's website and Facebook page, including sharing details of events and projects being undertaken by other groups within the City's LNRs
			FoGLNRs bird ringing project - over 100 people participated and learned about the lives of various species of birds, the importance of bird ringing and bird migration
			FoGLNRs held five Wildfowl Feeding and Bird ID advice events at Hogganfield Park LNR
			Hamiltonhill Claypits LNR group organised a photographic competition with the local community, which involved exploring and photographing the site's habitats
			Hamiltonhill Claypits LNR group invited two guest speakers to lead a walk around the Claypits, introducing those who attended to local plants and the post-industrial ecology of the site
7. Organise annual Wild About Glasgow countryside events for the public	2018-2023	GCC-NRS	During 20/21 there were no ranger led walks or events due to covid restrictions and three 50+ club events held in 21/22
8. Promote Glasgow biodiversity and engagement through teacher training events and Eco Schools days	2018-2023	GCC-NRS	5 Forest School CPD sessions were run for 41 nursery school teachers in the North and East of the city to support sustainable use of parks & new PTU applications
			No Eco Schools days attended due to covid restrictions
9. Produce Biodiversity Duty Report for Scottish Government	2018-2023	GCC-NRS	This biodiversity annual monitoring report will contribute to the Biodiversity Duty Report for Scottish Government due in Jan 2024
10. Continue to promote biodiversity projects within the 7 Lochs wetland park	2018-2023	GCC-NRS/SLWP	Biodiversity projects promoted through Seven Lochs events website and social media
11. Continue to engage with communities in practical activities within 7 Lochs area	2018-2023	SLWP /TCV	Seven Lochs Wetland Park staff delivered 5 heritage and nature events to 65 participants

Action	Date	Lead	Progress
			Seven Lochs Wetland Park staff delivered 112 outdoor learning sessions to children and young people using nature-based activities
			Seven Lochs Wetland Park volunteers delivered 31 days of volunteer time on biological survey and recording
			Seven Lochs Wetland Park volunteers delivered 520 days of volunteer time on practical conservation tasks, management and maintenance of sites
12. Continue to promote and implement 'Giving Nature a Home' project city-wide	2018-2020	RSPB/ GCC-NRS	Through the Urban Green Connectors project, 576 attendees including community groups and school children helped with 25 RSPB habitat creation and skills training events across the south-west of Glasgow
13. Continue Ambassador Schools project	2018-2020	RSPB/ GCC-NRS	Due to the ongoing Covid-19 pandemic face to face Ambassador Schools activities were paused
			During this phase of the project RSPB Scotland have been reflecting on the work done from COP 26 with schools in the Seven Lochs area and have been trialling new ways of working with other projects across the city that can be used to enhance work in Seven Lochs Wetland Park area
14. Hold annual Glasgow Wildfest	2018-2020	RSPB/ GCC-NRS	Bioblitz event held as part of City Nature Challenge 2021 (30th April – 3rd May 2021) - a global citizen science competition to record wildlife in cities. Seventy-two people took part in the City Nature Challenge event in 2021 with 1,307 records of 378 species across Greater Glasgow
15. Continue Young Roots project	2018-2020	RSPB	This project has now been completed
16. Continue to encourage conservation volunteering through undertaking projects and holding events at LNRs and other wildlife sites	2018-2023	GCC- NRS/TCV/ FoGLNRs	Green Connectors project (Rosshall/Nitshill area) involved RSPB working with the community: 250 volunteers participated in workshops, 30 days of volunteer habitat creation were carried out, 1 ha of wildflower meadow created by volunteers, 100m of hedging created by volunteers
			Across the city, TCV carried out 938 volunteer days (3752 volunteer hours) of conservation volunteering on practical biodiversity tasks

Action	Date	Lead	Progress
			Total of 2622 individual volunteers were engaged with CR in biodiversity enhancement tasks, accounting for 6,400 volunteer hours and added value of £58,320
			Flower Power programme of events to encourage wildflower planting. Fortnightly visits from Milldale and Kelvin College, both Conservation volunteer groups
			CR worked with a variety of groups including the Scouts, FOPCP, corporate days, schools, Out Of School, 50+ group, Flower Power
			Brockburn Family event held
			Urban Roots ran Malls Mire Woodland volunteer sessions every Thursday
			Urban Roots delivered a new youth programme called Get Outdoors for the Towards Better Futures programme. 8 recent school leavers not in work or ongoing education gained John Muir Awards for conservation work across Malls Mire, including making bird boxes, a hibernaculum and bulb planting
			'Hello Spring' public event in Yorkhill park in March 2022 attracted over 100 people who helped plant 1,400 wildflower plugs and made seed bombs using native cornfield annual seed mix
			Yorkhill Green Spaces sites hosted a number of COP26-related events during October and November 2021 including a virtual walking trail with videos about each park, and podcasts made in the park about urban biodiversity
			Yorkhill Park, Overnewton Park and Cherry Park were part of a Keep Scotland Beautiful 'Doors Open Day' walking trail that launched in September 2021, that had virtual tour of each park and interview videos about the work of YGS
17. Organise biodiversity-themed activities at park venues	2018-2023	GCC-NRS	Countryside Rangers produced the biodiversity-themed 50+ programme for 2021-2022 and delivered several of these walks and talks as part of the citywide activities
			Countryside Rangers ran the Flower Power programme of events, FOPCP programme of CR guided walks

Other actions for Urban: Awareness Raising:

- Biodiversity Officer attended URBACT Local Group – Global Goals for Cities workshops

identifying Sustainable Development Goals for Glasgow including goals for biodiversity on land and sea

- Biodiversity Officers attended national Biodiversity Network meetings
- Glasgow LBAP Partnership meeting held
- A lecture by Scott Shanks to Glasgow Natural History Society on the topic of Brownfield Biodiversity highlighted Glasgow sites and acted as a stimulus for a Brownfield Biodiversity conference which took place subsequently
- Urban Roots hosted a site visit and gave a talk about Malls Mire for the Brownfield Biodiversity Conference (organised by GNHS as part of Glasgow Science Festival)
- 4 bursaries were awarded by GNHS for attendance at FSC taxonomy courses during 2022.
- GNHS held 4 field excursions in Glasgow in Summer 2021 and members participated in the City Nature Challenge in their own neighbourhood.
- Further GNHS surveys at Glasgow Botanic Gardens were carried out as part of the 'Wildside revisited' project.

2.1.8. Pollinator Plan

Action	Date	Lead	Progress
1. Monitor the Pollinator Plan through annual LBAP Monitoring Report and Biodiversity Duty Reports	Annually	GCC-NRS	The Pollinator Plan actions are included in the Biodiversity Annual Monitoring Report and in the Biodiversity Duty Report
2. Continue to protect habitat and species value through the designation and maintenance of SSSIs, LNRs and SINCs	Ongoing	GCC-NRS/ Nature Scot	SSSIs and LNRs are statutory designations that are designated via separate legislation to the development planning process but the Council has a duty to protect them. SINCs are non-statutory designations identified through the development planning process and are currently being reviewed
3. Aim to ensure connectivity of integrated habitat networks throughout the city through the planning process (LBAP Action)	2017-2022	GCC-NRS	Planning policy incorporated into the City Development Plan 2017 (policy CDP7) and associated Supplementary Guidance (SG7) and advice provided on planning applications to implement policy/SG as appropriate
			Adoption of Open Space Strategy (Feb 2020) and preparation of OSS Delivery Plan, will provide an opportunity to pro-actively promote habitat connectivity at an early stage

Action	Date	Lead	Progress
4. Manage 30 key grassland sites as traditional meadows in a sustainable manner, on GCC land (LBAP Action)	2017-2022	GCC-NRS	See Grassland
5. Enhance areas of unmown grassland by introducing local provenance wildflowers. Enhance 1 Ha annually (LBAP Action)	2017-2022	GCC-NRS	See Grassland
6. Grow pollinator-friendly plants in the Pollok Wildflower Nursery	2017 onwards	GCC-NRS	See Grassland
7. Plant pollinator-friendly wildflowers city-wide at SINCS, LNRs and Parks	2017-2022	GCC-NRS	Heart of Scotstoun Community Garden created 3 specific areas with wildflower planting across the area of the garden and 'wild' areas under tree mounds
8. Incorporate nectar-rich plants into formal planting schemes in parks and open spaces	2017-2022	GCC-NRS	Ongoing as part of parks and open spaces management plans
			Heart of Scotstoun Community Garden have moved to perennial plants only being planted in the formal flower borders, particularly pollinator friendly plants
			Tollcross Park Orchard- orchard trees mulched and nectar rich crocus planted by SACRO community payback
9. Assess nectar-rich plants for use in Parks bedding schemes/planters	2018	GCC-NRS	See monitoring report 2018-2019
			Pollinator-friendly plants – Ajuga, heathers and Bergenia used in city centre planters
			Three wildflower planters in crane-yard kept weeded and monitored for plant suitability by CR
10. Aim to ensure early and late nectar sources in plantings	2017-2022	GCC-NRS	Pollinator-friendly bulbs planted at PCP Lime avenue and ash path meadow with local school children. Early pollen sources such as lesser celandine, early crocus etc planted and late sources, such as Devil's Bit Scabious

Action	Date	Lead	Progress
			Encouraged reduced ivy cutting by gardeners and no mow areas around cuckoo flower at PCP. Rich nectar sources such as Bird Cherry and other flowering trees planted
11. Create a butterfly garden within a Glasgow park	2017-2018	BC/GCC-NRS	See monitoring report 2018-2019
			Bee wall built in PCP Wildlife garden and butterfly garden created around it
12. Identify a park and/or LNR to promote as a pollinator demonstration site	2018	GCC-NRS	Hogganfield Park LNR and Queen's Park are designated Pollinator Parks with wildflower meadows managed for pollinators
13. Carry out events for Urban Butterfly Project (LBAP Action)	2017-2018	BC/GCC-NRS	See monitoring report 2018-2019
14. Work with Buglife, Butterfly Conservation, Friends of the Earth Scotland and others to ensure best practice for pollinator action in Glasgow	2017 onwards	GCC-NRS/BL/FoES(GG)/SLWP	BCS ran a workshop at PCP on practices for planting and maintaining plugs which are now followed by CR. BCS given plants from polytunnel to augment Helping Hands project meadows at Ruchill Park, Springburn Park and Elder Park
			Heart of Scotstoun Community Garden - education for biodiversity integrated into all aspects of garden management and development
			Yorkhill Greenspaces installed five new solitary bee hotels (for mason bees and leaf-cutter bees) at Overnewton Park, Cherry Park and Yorkhill Park
			Yorkhill Green Spaces won the NatureScot & Keep Scotland Beautiful Pollinator-Friendly Award in 2021, and were awarded a Green Flag Award for management of Overnewton Park (second year running) for work improving the park for the local community and wildlife
15. Raise awareness of the importance of pollinators through website information, leaflets, events	2017-2022	GCC-CRS//BL/BC/FoES/(GG)/SLWP	Progress on the Pollinator Plan and case studies provided to SNH for the national strategy progress report and SNH pollinator blog

Action	Date	Lead	Progress
			Biodiversity Officer gave presentation on Glasgow pollinator action to the NatureScot Pollinator Conference
			New pollinator signage at the Pollinator Parks raises awareness of pollinators, biodiversity, carbon storage and the climate & ecological emergencies
			Heart of Scotstoun Community Garden has installed an informative display board and small posters illustrating types of bees and butterflies observed in the garden with pollinator friendly plants growing within planters
16. Carry out surveys and monitoring of butterflies, bees and hoverflies at key sites	2017-2022	GCC-CR/BC/ SLWP	See butterfly transects
17. Continue to co-ordinate butterfly transects at a minimum of 4 sites	2017-2022	GCC-NRS/BCS	New butterfly transects established at Ruchill Park, Malls Mire, Hamiltonhill Claypits and Greenoakhill
			Butterfly transects carried out at 11 sites throughout the city: Hurlethill, Mall's Mire (new 2022), Commonhead Moss, Ruchill Park (established 2021 but first walked 2022), Hamiltonhills Claypits (new 2022), Linn Park, Castlemilk park, Cathkin Braes, Greenoakhill (new 2022), Cardowan Moss, Hogganfield Park, Robroyston Park
			CRS are currently designing transects at 4 sites with Kelvin College as part of their conservation training
18. Encourage Stalled Spaces projects to include pollinator friendly practices	2017-2022	GCC-NRS	Stalled Spaces Programme has been completed
19. Provide information to support creation of additional nectar-rich plantings to compensate for new honeybee hive locations	2017-2022	GCC-NRS	Bee keeping and Biodiversity Factsheet includes advice to help reduce competition with native pollinators

Action	Date	Lead	Progress
20. Provide information to support creation of additional nectar-rich plantings at allotments and community growing spaces	2017-2022	GCC-NRS	Heart of Scotstoun Community Garden dedicated 'biodiversity garden' has native species flourishing including willow, buddleia, birch, alder, holly, hazel, dog rose (mostly transplanted from wild growth on original garden site or procured through tree planting schemes) and planting of perennial native species wildflowers & pollinator friendly plants – particularly wild primroses, wood anemone, cornflower, borage, and from 'mixed meadow' seed mixtures
			Six Sensory Garden planters at Overnewton Park topped-up with peat-free compost and additional pollinator-friendly herbaceous perennials planted by YGS
21. Seek funding opportunities for Pollinator Projects	2017-2022	GCC-NRS/TCV	Weekly funding information provided to parks & greenspaces community groups with some successful projects likely to benefit pollinators
			The Glasgow Green Urban Connectors project received £88,419.65 from the Biodiversity Challenge Fund (BCF) Round 3 with the project completed in March 2022
22. Investigate the potential for a B-Line within the city to connect to the wider countryside	2018	GCC-NRS/BL/SLWP	Glasgow B-Lines in place and Green Connector project seeks to expand on these connections
23. Seek volunteers to set up Beewalk transects at key sites	2018	GCC-CRS/BBCT	BBCT co-ordinated 8 Beewalk transects
			BBCT set up 2 new Beewalk transects
24. Carry out a survey of Marsh Violet at Commonhead Moss and adjacent sites (food plant for Small Pearl-bordered Fritillary)	2018	GCC-CR/SLWP	See monitoring report 2018-2019
25. Investigate propagation of local provenance Marsh Violet for planting at appropriate sites to aid Small Pearl-bordered Fritillary populations	2018	GCC-NRS/SLWP	See monitoring report 2018-2019

3. Acronyms

BBCT	Bumblebee Conservation Trust
BCS	Butterfly Conservation (Scotland)
BL	Buglife
BTO	British Trust for Ornithology
CDP	City Development Plan
CP	Country Park
CRF	Clyde River Foundation
FLS	Forestry & Land Scotland
FoES (GG)	Friends of the Earth Scotland (Glasgow Group)
FoGLNRs	Friends of Glasgow's Local Nature Reserves
GCC	Glasgow City Council
GIS	Geographic Information System
GL	Glasgow Life
GNAH	Giving Nature a Home
GNHS	Glasgow Natural History Society
Ha	Hectare
ID	Identification
INNS	Invasive Non-Native Species
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
NLC	North Lanarkshire Council
NRS	Neighbourhoods, Regeneration & Sustainability
OMHPDL	Open Mosaic Habitats on Previously Developed Land
OSS	Open Space Strategy
PCP	Pollok Country Park
PP	Pollinator Plan
PTES	People's Trust for Endangered Species
PTU	Permission to Use
RSPB	Royal Society for the Protection of Birds
SEPA	Scottish Environment Protection Agency
SG	Supplementary Guidance
SIMD	Scottish Index of Multiple Deprivation
SINC	Site of Importance for Nature Conservation
SLWP	Seven Lochs Wetland Park
SOC	Scottish Ornithologists' Club
SpRiNT	Species Rich Networks Team
SSSI	Site of Special Scientific Interest
SUDS	Sustainable Drainage System
SWT	Scottish Wildlife Trust
TCV	The Conservation Volunteers
U of G	University of Glasgow
UKBMS	United Kingdom Butterfly Monitoring Scheme
YGS	Yorkhill Green Spaces
NLC	North Lanarkshire Council
NRS	Neighbourhoods, Regeneration & Sustainability
OMHPDL	Open Mosaic Habitats on Previously Developed Land
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YGS	Yorkhill Green Spaces

4. LBAP Partners

Buglife
 Butterfly Conservation (Scotland)
 Clyde River Foundation
 Forestry & Land Scotland
 Friends of Glasgow's Local Nature Reserves
 Froglife
 Glasgow City Council
 Glasgow Life
 Glasgow Museums Resource Centre
 Glasgow Natural History Society
 NatureScot
 Royal Society for the Protection of Birds (Scotland)
 Scottish Canals
 Scottish Environment Protection Agency
 Scottish Ornithologists' Club
 Scottish Wildlife Trust
 Seven Lochs Wetland Park
 The Conservation Volunteers
 Urban Roots
 Woodland Trust



Glasgow City Council

Biodiversity Monitoring Report

April 2020 to March 2021



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1. Background and Context

- 1.1. This annual monitoring report has been compiled with the support of the Council's partners in the Glasgow Biodiversity Partnership. The purpose of the partnership is to bring a broad range of expertise to the development of Glasgow's Local Biodiversity Action Plan (LBAP). The Council established a Glasgow Biodiversity Partnership consisting of representatives from 18 different environmental organisations. Key partners include NatureScot, Forestry and Land Scotland (FLS), Scottish Environment Protection Agency (SEPA) and the Royal Society for the Protection of Birds (Scotland) (RSPB) along with other environmental interest groups.
- 1.2. The refreshed LBAP (2018-2028) and a Glasgow Pollinator Plan (PP) (2017- 2027) have been produced.
- 1.3. The Council announced a Climate and Ecological Emergency in May 2019. A working group was set up and has had several meetings to discuss and identify key recommendations to halt and reverse the declines in biodiversity in Glasgow. The implementation of the LBAP and PP will play a vital role in contributing to this.
- 1.4. Over the past year, officers have been working with partner organisations to deliver the implementation of a number of key actions as detailed within Glasgow's LBAP and PP.
- 1.5. Projects and actions reported on are related back to the relevant actions from the new LBAP and PP to ensure that monitoring tracks the Implementation Plans for both documents. Other projects and activities help achieve the general aims and objectives of the LBAP by improving biodiversity in the city.
- 1.6. Projects and actions continue to link to, support and benefit from a range of other workstreams including
 - Climate change adaptation,
 - Volunteering and employability opportunities,
 - Curriculum for Excellence,
 - Health and wellbeing,
 - The Glasgow Open Space Strategy
 - Parks and Greenspaces Vision
 - Metropolitan Glasgow Strategic Drainage Partnership (MGSDP)
- 1.7. Under the Nature Conservation (Scotland) Act (2004), all public bodies in Scotland are required to further the conservation of biodiversity when carrying out their responsibilities. The Council fulfils this primarily through the implementation of the Glasgow LBAP.
- 1.8. The Wildlife and Natural Environment (Scotland) Act (2011), further requires public bodies in Scotland to provide a publicly available report, every three years, on the actions they have carried out to meet the biodiversity duty.
- 1.9. The content of this annual biodiversity report will contribute towards the statutory

Biodiversity Duty Report due for publication in January 2021.

- 1.10. It is noted that due to the Coronavirus Pandemic and subsequent lockdowns and with staff in organisations working from home, there may be data which has been unobtainable due to the current circumstances.
- 1.11. Demand for parks and other greenspaces has massively increased during the Covid Pandemic as people seek places for exercise, recreation and the health and wellbeing benefits of natural places. While this has been very positive for people it has led to increased impacts on biodiversity such as trampling of plants, erosion of ground vegetation and disturbance of breeding birds, deer, badger and other wildlife with attendant problems of dogs chasing animals. This was addressed with temporary signage and monitoring of sites where possible. There are implications for future resourcing and management of greenspaces as we aim to address the ecological emergency and continue to engage with communities and encourage people to enjoy and interact with nature.

2. Monitoring Report

- 2.1. The year to end March 2021 saw further progress on the main Ecosystems although it is acknowledged that due to the Covid Pandemic it has not been possible for many projects and activities to take place. Many initiatives are on-going; however, each year there are new projects and activities.

2.1.1. Urban: Parks and Open Spaces

Action	Date	Lead	Progress
1. Maintain and update the Biological Audit	2018-2023	GL	Over the year 74,633 records were added to the biological audit database
			81 new species were added to the database
			At the end of March 2021 there was a total of 805971 records in the biological audit database
			SOC collect bird records from all over the Clyde area and upload to BirdTrack monthly
			SOC share notable bird sightings via a daily Grapevine to SOC members
			SOC encourage observers to submit bird records
			TCV Glasgow Hogwatch produced further 70+ records across Glasgow

Action	Date	Lead	Progress
			Yorkhill Green Spaces Biodiversity list updated on monthly basis with new finds, and information about new species posted on YGS Facebook page. Current species list has 805 species. Pollinators recorded in Yorkhill's parks and green spaces include: 29 species of bees, 13 species of wasps, 178 species of moths, 11 butterflies, 71 flies (includes 38 species of hoverflies)
2. Designate additional LNRs to reach target of 1 Ha per 1000 population	2023	GCC-NRS	Officers have reviewed opportunities for additional designations for inclusion within future monitoring
3. Continue to co-ordinate butterfly transects at a minimum of 4 sites	2018-2023	GCC-NRS/BCS	Two new transects established in Linn Park LNR by Countryside Rangers and run via Friends of and other volunteers.
			See Pollinator Plan
4. Deliver Community Rewilding project across Yoker area, engaging with local communities to plant wildflowers, trees and wilding of sites	2018-2019	TCV	See monitoring report 2018- 2019. Project concluded in March 2019. Final evaluation report available on request
5. Develop Citizen Science and Environmental Monitoring projects for key habitats and species	2018-2023	TCV/ GCC-NRS	Working with Scottish Forestry, TCV has developed and produced 'The Deadgood Deadwood Survey' for groups and individuals to use to record details of deadwood and its associated wildlife. Survey has been live since March 2020. Trialled with 10 community groups in Glasgow during 2019/20. 2 further sessions 2021 /21. Deadwood Educational Trail proposed to be installed in Glasgow Botanic Gardens in partnership with RSPB as a teaching resource
			TCV worked with Glasgow community group near Newlands to improve their site and release juvenile hedgehogs
			TCV Citizen Science project in development with Buglife 'HoverSpotters' hoverfly monitoring trialled with 2 community groups
			TCV Citizen Science project 'Glasgow HogWatch' launched in April 2019 was set up to monitor hedgehog populations and create habitat. Further funding and rebranded as HogWatch Scotland, expanded areas and continuing all work

Action	Date	Lead	Progress
			TCV Glasgow Hogwatch – 4 nocturnal hedgehog surveys under license carried out Glasgow Botanic Gardens, Seven Lochs, Pollok Park postponed due to Covid
			TCV HogWatch Scotland, small mammal tunnel loan scheme successful in surveying for hedgehog footprints by individuals and community groups across the city
			TCV HogWatch Scotland -700 hedgerow plants planted at Pollok Country Park, 100 Knightswood Primary School
			SOC carry out winter gull monitoring in Glasgow parks
			Friends of Linn Park have over 60 nest boxes in the park. These are monitored during nesting season and the information reported to the BTO
			Linn park LNR Bird Box Project – Spotted Flycatcher brood this year
			University of Glasgow are carrying out ongoing research into the breeding success of Blue Tits along an urban gradient in and around Glasgow. Tawny Owl nest boxes have also now been installed for additional research
			GNHS carried out further surveys at Glasgow Botanic Gardens as part of the 'Wildside Revisited' project
			Urban Roots carried out various surveys in the woodland and surrounding greenspaces as part of ongoing monitoring for the Malls Mire project, including breeding bird surveys and amphibian surveys
6. Ensure SUDS designs incorporate biodiversity	2018-2023	GCC-NRS	Comments on individual planning applications provided to support biodiversity-rich SuDS where appropriate
			NRS Flood Risk Management continues to push through the Planning system for above-ground blue-green SuDS for new development and redevelopment, which will benefit biodiversity
			Retrofit blue-green SuDS are being delivered by the Avenues Project

Action	Date	Lead	Progress
			Retrofit blue-green SuDS are core elements of the surface water management plans that have and are being delivered by NRS Flood Risk Management, including basins, ponds, swales, trees and highway raingardens
			New SUDS in Kings Park with wet meadows creation
7. Seek to assess and update the list of derelict sites of particular importance for biodiversity and outline management needs	2023	Buglife	Ongoing
8. Aim to ensure connectivity of integrated habitat networks throughout the city through the planning process	2018-2023	GCC-NRS	Green Connectors project aims to link greenspaces through tree planting, hedgerows and wildflower strips
			Planning policy incorporated into the City Development Plan 2017 (policy CDP7) and associated Supplementary Guidance (SG7)
			Advice provided on planning applications to implement policy/SG as appropriate.
			Adoption of Open Space Strategy (Feb 2020) and preparation of OSS Delivery Plan, will provide an opportunity to pro-actively promote habitat connectivity at an early stage
			The GCC open space and Connecting Nature team continue to work closely with NRS Biodiversity to ensure we can more proactively plan for habitat connectivity via the open space delivery plan. A first version of the delivery plan will focus on community spaces and is expected to be available for consultation Autumn 2021. Further iterations will identify opportunities for better habitat connectivity and management for enhanced biodiversity
			Magnificent 11 path route waymarking and promotion will assist with public perception of connectivity of these sites

Action	Date	Lead	Progress
9. Maintain swift trigger map showing locations city-wide of flocking/breeding swifts	2019	GCC-NRS/RSPB	RSPB launched Swift Mapper website and smart phone app in Spring of 2020 to encourage recording of swift nesting sites and scream parties near nesting sites across the UK.
			Swift Mapper displays historic data and up to the minute records.
10. Align LBAP to emerging Parks and Greenspaces Vision	2020	GCC-NRS	Biodiversity information provided for annual GCC climate change update report
			Implementation of the LBAP is a key action within the new Parks Vision document
11. Ensure biodiversity is considered within the Glasgow Open Space Strategy	2018-2019	GCC-NRS	The OSS identifies the need to enhance biodiversity (OSS section 12) and connect habitats as being two of the key uses to which Glasgow's Open Spaces can be put
			Data is being gathered to identify those open spaces that can do either or both with a view to identifying them for this purpose (and, where appropriate, other complementary purposes) through the preparation of an Open Space Strategy Delivery Plan, expected to be available in 2022
12. Ensure that biodiversity is considered in the Stalled Spaces planning process	2018-2023	GCC-NRS	See pollinator plan actions
			As part of the Connecting Nature project the Stalled Spaces programme has been reviewed with a greater focus on the environment and biodiversity
13. Encourage the development of Green Roofs through the planning process	2018-2023	GCC-NRS	The CDP (and associated Supplementary Guidance) is supportive of the provision of green roofs for a variety of purposes, but principally for biodiversity and as part of the SUDS trail
			It is anticipated that the Biodiversity Net Gain (Positive Effects for Biodiversity) approach being developed in the next iteration of the CDP will put a much greater emphasis on the use of green roofs in new development
14. Ensure new developments enhance biodiversity wherever possible	2018-2023	GCC-NRS	Weekly planning lists monitored by Natural Environment Officer (Biodiversity) for potential biodiversity impacts and enhancement opportunities

Action	Date	Lead	Progress
			NRS are developing a Biodiversity Net Gain (Positive Effects) approach that will help implement the CDP7/SG7 requirement to enhance biodiversity in new development
			NRS Flood Risk Management continues to push through the Planning system above-ground blue-green SuDS for new development and redevelopment, which will benefit biodiversity
15. Encourage incorporation of spaces for building dwelling species such as swift in new buildings where appropriate	2018-2023	GCC-NRS/RSPB	Swift advisory note provided to NRS planners for appropriate development proposals
			The Biodiversity Positive Effects (net gain) approach being developed will emphasise the importance of delivering easy wins, such as bat and bird boxes, in new development
			Weekly planning lists monitored by RSPB Conservation Officer for opportunities to install swift bricks or nest boxes. Swift casework training workshop and support delivered by RSPB Scotland staff to volunteers looking at weekly planning lists
16. Create and maintain House Sparrow Plots as funding allows	2018-2023	RSPB/GCC-NRS	RSPB house sparrow project completed.
			Glasgow Botanic Gardens has interpretation funded by Glasgow University about the management of an area for house sparrows, working with RSPB. This includes meadow and hedgerow to benefit this species
17. Erect a minimum of 30 House Sparrow boxes at targeted sites across the city	2018-2023	RSPB	RSPB house sparrow project delivered house sparrow boxes across Glasgow
			RSPB Scotland has installed at least 30 house sparrow boxes across Glasgow
18. Undertake Phase 1 Habitat Survey of Pollok Country Park (PCP)	2018-2019	GCC-NRS	Ongoing and forms part of the Pollok Country Park Working Group actions
19. Undertake a review of SINCS	2018-2023	GCC-NRS	This process has been delayed due to the pandemic

Other actions for Urban: Parks and Open Spaces

- Overnewton Park received a Green Flag Award in 2020 for work improving the park for the local community and wildlife.

2.1.2. Grassland

Action	Date	Lead	Progress
1. Update grassland map on GIS	2018	GCC-NRS	Grassland sites mapped on GIS showing year and area of cuts
2. Manage 30 key grassland sites as traditional meadows in a sustainable manner, on GCC land	2018-2023	GCC-NRS	13 large meadow sites across the city managed by contract farmer
			15 smaller sites managed by TCV with some assistance from NRS Neighbourhood Services
			Additional TCV meadow management – a total of 6 days' work (168 hours) was carried out at 4 sites – Elder Park, Glasgow Necropolis, Ruchill Park and Springburn Park
			RSPB Scotland cut and lifted existing wildflower meadow behind Kelvingrove Art Gallery to reduce nutrients and enhance biodiversity
3. Enhance areas of unmown grassland by introducing local provenance wildflowers. Enhance 1 Ha annually	2018-2023	GCC-NRS	Pictorial meadow strips (1m wide) created at the front of uncut grass and seeded with cornfield annuals – totalling 7500m sq over 23 sites
			40,000 pollinator-friendly bulbs planted at Ruchill Park and Queen's Park
			640msq of meadow managed and 16,100 wildflower bulbs/plugs planted by TCVs Glasgow Midweek volunteer group
			500 wildflower plugs planted at Queen's Park by volunteers
4. Create or extend 5 new meadows city-wide	By 2023	GCC-NRS	1000m2 of wildflower meadow sown at Keal Avenue open space.
			Friends of Castlemilk Park developed a wildflower meadow and this contributed greatly towards their awarded first Community Green Flag Award
			Wildflower seeding carried out by Scottish Canals as part of paths and access works at Claypits LNR

Action	Date	Lead	Progress
5. Enhance existing meadows by wildflower planting at 8 sites	2018-2023	GCC-NRS	BSC Helping Hands project carried out grassland habitat maintenance and wildflower plug planting of the south-facing side of Ruchill Park
			BCS Helping Hands project carried out meadow preparation at Elder Park, then wildflower seeding and plug planting along with Friends of Elder Park
			BCS Helping Hands project carried out wildflower planting at Springburn Park
			Enhancement of meadow behind the Kelvingrove Art Gallery. Over 40 squares of turf removed in species-poor area of meadow and planted with plug plants (150 plugs of various species) and sown with native wildflower seed to improve species diversity in area of meadow with low diversity. Border strip around existing meadow also sown with native wildflower seed including cornfield annuals for colour
6. Establish and identify mechanism to maintain GCC wildflower nursery at Pollok Country Park	2018-2023	GCC-NRS	Flower Power nursery at PCP maintained with volunteer support
			Involvement by the Friends of Pollok Country Park and Friends of Linn Park to water plants during covid. No new wildflowers were sown during covid as classified as indoor space.
7. Encourage sowing and growing of Scottish provenance wildflowers	2018-2023	GCC-NRS	Flower Power nursery at Pollok CP grew wildflower seedlings
			CR planted up 13 trays of scotia seeds with Friends of Linn Park and relocated from wildflower nursery at start of Covid restrictions when no watering would be available
			CR supported Friends of Linn Park to work up a project to create wildflower nursery
8. Trial new council cut and collect equipment for meadow management	2018-2019	GCC-NRS	Ongoing
9. Implement dwarf shrub heath annual management at 1 site	2018-2023	GCC-NRS	TCV carried out dwarf shrub heath management at Cathkin Braes on ongoing basis

Action	Date	Lead	Progress
10. Carry out survey of rare plants (Burnet-saxifrage) annually	2018-2023	GCC-NRS	Burnet-saxifrage monitoring showed a healthy population
			New Bog Rosemary population discovered at Commonhead Moss
11. Carry out annual management of Glasgow Museums Resource Centre meadow	2018-2023	GL	Not carried out due to Covid restrictions
12. Enhance water vole meadow at The Bridge, Easterhouse	2018-2023	GL/SLWP	Ongoing annual low intensity management for water voles not carried out due to Covid restrictions reducing volunteer capacity

Other actions for Grassland:

- Plantlife Cowslip survey was carried out by a Castlemilk Park volunteer in March 2020

2.1.3. Woodland

Action	Date	Lead	Progress
1. National Vegetation Classification (NVC) survey of Pollok Country Park Wood Pasture and Parkland Habitat to identify exact species compositions and conditions as base point for future management planning and assessments	2018-2023	GCC-NRS	Project Coordinator Community Woodlands to review this target in light of emerging requirement for a Forestry and Woodland Strategy
2. Individual management plans for Ancient and Veteran trees within Wood Pasture and Parkland Habitat in Pollok Country Park	2018-2023	GCC-NRS	Project Coordinator Community Woodlands officer to review this target in light of emerging requirement for a Forestry and Woodland Strategy
3. Improve condition of Upland Mixed Ashwoods and Upland Oakwoods woodlands at Cart & Kitchoch SSSI	2018	GCC-NRS	Project Coordinator Community Woodlands officer to review this target in light of emerging requirement for a Forestry and Woodland Strategy

Action	Date	Lead	Progress
			14.5ha of oak woodland mix (minus ash) planted to support biodiversity and climate mitigation as well as creating valuable foundation for future physical and access links from Cart and Kittock SSSI to Cathkin Braes LNR for wildlife and people.
4. Assess all UK BAP Woodland Priority Habitat types (excluding Lowland Mixed Deciduous Woodland), to confirm council ownership and establish woodland condition and management requirements	2018-2023	GCC-NRS	Project Coordinator Community Woodlands officer to review this target in light of emerging requirement for a Forestry and Woodland Strategy
			Castlemilk Park volunteer, as part of a John Muir Award, has completed a phase 1 survey of Croftfoot woodland
5. Commence city wide NVC survey of woodlands (not already surveyed) to ascertain UK BAP Priority Habitats extent in Glasgow	2018-2023	GCC-NRS	Project Coordinator Community Woodlands officer to review this target in light of emerging requirement for a Forestry and Woodland Strategy
6. Develop 8 Urban Woodland Management Plans for larger woodlands city-wide (over 400 Ha in total)	2018-2023	GCC-NRS	Project Coordinator Community Woodlands officer to review this target in light of emerging requirement for a Forestry and Woodland Strategy
7. Deliver a woodland management strategy for the Greater Easterhouse area	2018-2023	GCC-NRS	Project Coordinator Community Woodlands officer to review this target in light of emerging requirement for a Forestry and Woodland Strategy
8. Promote woodland as a temporary greening and bioremediation on vacant and derelict land	Ongoing	GCC-NRS	Vacant and Derelict Land Fund (VDLF) has recently contributed to projects such as Tiny Forests at Avenue End Road, Local Nature Reserves at Malls Mire and Clay Pits
			Temporary greening and bioremediation on vacant and derelict land continues to be supported through Stalled Spaces

Action	Date	Lead	Progress
9. Create 3 new woodlands within city boundary (or expansion of existing woodlands) totalling 10ha or more	2018-2023	GCC-NRS	100m2 of woodland managed by TCVs Glasgow Midweek volunteer group.
			Friends of Castlemilk Park planted 15 small trees planted from the WoodlandTrust -Rowan, Crab apple and Hazel
			Two areas of woodland at Malls Mire LNR were thinned in line with the Woodland Management Plan and felled trees were left on site to provide deadwood habitat
10. Protect and enhance habitats for wildlife as part of continued management at Drumchapel and Easterhouse Woods	2018-2023	FLS, now GCC	Wildlife habitats protected and enhanced through the implementation of management plans at Drumchapel and Easterhouse woodlands
11. Remove invasive species where appropriate and manage sites to encourage a varied tree age, species and structure at Drumchapel and Easterhouse Woodlands	2018-2021	FLS	Final thinning work in Drumchapel and Easterhouse woods
			No further invasive species removal or treatment by FLS
			CR removed yellow archangel at Pollok Country Park bluebell site
12. Carry out annual monitoring of rare woodland plants	2018-2023	GCC-NRS	Ongoing
13. Undertake strategic tree planting programme annually	2018-2023	GCC-NRS	300 trees planted in parks, open spaces, road verges to ensure the tree cover of the City is maintained and enhanced whilst supporting historical and aesthetic landscape settings, climate change mitigation and biodiversity
			<ul style="list-style-type: none"> Mansewood Park additional 1200 trees planted

Other action for Woodlands:

- Friends of Castlemilk Park thinned the middle island at Castlemilk Park pond of dangerous trees (sycamore, ash and willow).The friends of Castlemilk also have

purchased a small number of trees i.e. downy birch, crab apple and hazel to re-plant, a wet wildflower mix and two tawny owl boxes

- Friends of Castlemilk Park and community have carried out litter picks to help protect the wildlife of the park
- Castlemilk Park now has 22 bat boxes in the park within three areas of the woodland which are monitored by the Community Woodland Officer

2.1.4. Wetland

Action	Date	Lead	Progress
1. Carry out annual blue green algal monitoring at 43 sites city-wide	2018-2023	GCC-NRS	No SEPA water testing possible during Covid restrictions as offices closed. CR issued instruction for warning signage to be erected in early June at all water bodies with history of >100,000ppm readings.
2. Carry out annual WeBS counts at 15 key sites	2018-2023	GCC-NRS	GCC Countryside Rangers continue to monitor key sites for wetland birds
			Webs undertaken from Aug 2020 - March 2021 and data inputted online
3. Carry out water quality tests at key sites- Hogganfield Loch, Queen's Park, Richmond Park and Knightswood Park ponds	2018-2023	GCC-NRS	Not carried out due to Covid restrictions
4. Naturalise 50% of Queen's Park boating pond	2018-2019	GCC-NRS	See monitoring report 2018-2019
5. Carry out riparian water vole surveys at 2 sites per year	2018-2023	GCC-NRS	General surveys reduced due to Covid restrictions
			GCC carried out water vole survey on short section of Molendinar Burn and Garscadden Burn (Knightswood Golf Course) in response to proposed projects
6. Identify Bog Rosemary populations and monitor health and spread	2018-2023	GCC-NRS	Not carried out due to Covid restrictions
7. Carry out wetland management at 5 Local Nature Reserves, including water level control at Robroyston Park for wading birds	2018-2023	GCC-NRS	SUDS created at Claypits LNR by Scottish Canals
			Urban Roots (Women in the Woods group) removed regenerating tree saplings and rosebay willowherb from the wetland area in Malls Mire LNR

Action	Date	Lead	Progress
8. Monitor frog populations at Robroyston Park and Cathkin Braes, to assess health of population in north and south of city	2018-2023	GCC-NRS	Not carried out due to Covid-19 restrictions
			CR at PCP carried out frogspawn survey March 2021
9. Continue to restore 3 raised bogs and monitor results for water levels and biodiversity	2018-2023	SLWP/ GCC-NRS	TCV Seven Lochs volunteers carried out bog restoration work (scrub clearance) at Commonhead Moss LNR on an ongoing basis
10. Promote river restoration and deculverting projects	2018-2023	GCC-NRS	The Sandyhills Park element of the Garrowhill surface water management plan has deculverted circa 250m of the Tollcross Burn through Sandyhills Park. This element of the project achieved practical completion March 2021
			The South East Glasgow surface water management plan has deculverted circa 50m of the Spittal Burn through Kings Park. This project achieved practical completion January 2021
11. Monitor Invasive Non Native Species (INNS) and protected freshwater fish species	2018-2023	CRF	No update
12. Monitor snipe species at key wetland sites	2018-2023	GCC-NRS	No update
13. Implement Integrated Green Network proposals as part of the Cardowan Surface Water Management Plan and Blairtummock	2019	GCC-NRS	The Cardowan surface water management plan has delivered green network improvements through Blairtummock Park in Easterhouse, as well as at Croftcroighn Road and Cranhill Park
14. Implement wetland management for biodiversity as part of 7 Lochs Wetland Project	2018-2023	SLWP	Wetland habitat creation and management carried out at sites within Seven Lochs Wetland Park

Other actions for Wetland:

- Newlands Pond has been surveyed by Froglife for Newts and good numbers identified.

2.1.5. Farmland

Action	Date	Lead	Progress
1. Manage 50 hectares as traditional meadow on GCC owned farmland at Carmunnock	2018-2023	GCC-NRS	All meadows at Cathkin and Windlaw continue to be managed by either local farmer or contractor
2. Use cattle grazing as a management tool at Dawsholm Park, Carnbooth and Pollok Country Park	2018-2023	GCC-NRS	Ongoing
			Cattle at Carnbooth have been absent and assessment has taken place on re-introducing them including costing new fencing and gates and securing funding
3. Continue hedgerow management by creating new hedges and enhancing existing hedges	2018-2023	GCC-NRS	162m of new hedges created as part of Glasgow Hogwatch and Seven Lochs Wetland Park.
			Further 80m from Pollok Country Park volunteers as part of Hogwatch.
			CR planted Holly hedge at PCP Shinty field bluebell slope
4. Maintain and enhance wild bird plot at Carmunnock	2018-2023	GCC-NRS	See monitoring report 2018-2019
5. Monitor breeding tree sparrow populations at Millichen farms	2018-2023	RSPB	RSPB had meeting with Clyde Ringing group volunteers about monitoring and offered continued support
6. Develop and deliver the 7 Lochs Co-operative Habitat Restoration project in partnership with landowners and land managers	2018-2021	SLWP	No update

2.1.6. Water Vole

Action	Date	Lead	Progress
1. Develop and produce water vole Plan	2018-2019	GCC-NRS/ Nature Scot/U of G	Funding sourced (NatureScot, GCC and SLWP), tender issued and consultant appointed for production of Water Vole Conservation Action Plan for the northeast of City/N Lanarkshire
2. Seek funding to extend the fossorial water vole project. The water vole project is required for scientific monitoring of habitat creation, management and development of guidelines as well as assessing the wider water population dynamics	2018	GCC-NRS/ Nature Scot/U of G	See monitoring report 2018-2019
			Funding successfully sourced for production of Water Vole Conservation Action Plan
3. Host the East End Water Vole Project meetings	2018-2023	GCC-NRS	Meetings and events subject to Covid restrictions so no event hosted and meetings moved online
4. Carry out scientific assessment of disturbance caused by grass cutting, under licence	2018-2021	GCC-NRS/ Nature Scot	3 year Grassland water vole habitat management project developed and Year 2 actions implemented by University of Glasgow, GCC, NatureScot and SLWP
5. Develop, review and update guidance on habitat management	2018-2023	GCC-NRS/ Nature Scot	Awaiting outcomes from habitat management trial
6. Update water vole distribution map and annually update trigger map for development planning	2018-2023	GCC-NRS	Delay in updating of records due to lack of IT access for home working
			Trigger Map updated and sent for inclusion in Uniform, but not updated due to software issues

Action	Date	Lead	Progress
7. Create fossorial water vole habitat at key sites as part of the Water Voles in the City project (including Blairtummock Park, Cranhill Park, Hogganfield Park and Auchinlea Park)	2018-2021	SLWP	Habitat created at Cranhill, Croftcroighn and Blairtummock Parks as part of Greater Easterhouse green infrastructure project
			SLWP developed proposals for water vole habitat and access on Vacant and Derelict Land at Avenue End Road and Baldragon Road with implementation subject to planning and funding
8. Trial habitat management at key sites as part of Water Voles in the City project	2018-2021	SLWP	Year 2 actions of the 3 year Grassland Management Trial (GCC, NatureScot, SLWP, University of Glasgow) completed with exceptions of spring 2020 surveys (due to Covid restrictions) and small area of wildflower plating/seeding not completed due to material/volunteer availability. All other aspects completed including perimeter/ assess cuts (delayed), pre and post plot cut surveys, grassland management, planting 600 wildflowers, licence return and application for amendment to licence
9. Implement Integrated Green Network proposals as part of the Cardowan Surface Water Management Plan and Blairtummock	2018-2019	GCC-NRS	Habitat creation completed including new SUDs, daylighted section of burn, tree planting and meadow/water vole habitat as well as improved access and signage
10. Carry out riparian water vole surveys at 2 sites per year	2018-2023	GCC-NRS	See Wetland
11. Monitor and assess success of habitat creation and management projects	2018-2023	GCC-Nature Scot/U of G	Monitoring and assessment ongoing
12. Develop a project protocol for assessing the population dynamics of water voles in Glasgow	2018-2019	GCC-NRS/Nature Scot/U of G	Completed and incorporated into guidelines

Action	Date	Lead	Progress
13. Survey 20km squares annually as part of fossorial water vole landscape scale monitoring	2018-2023	GCC-NRS	On hold until Water Vole Conservation Action Plan complete
14. Develop training programme of specialist groups including operations staff, ecological consultants and pest control operatives	2018-2021	GCC-NRS/ Nature Scot/U of G	Toolbox talk developed for GCC Neighbourhood Services staff

Other actions for water voles:

- GCC webpage www.glasgow.gov.uk/watervoles and Glasgow Water Vole Project (GWVP) facebook page regularly updated
- GCC and the GWVP highlighted water voles as part of the Mammal Society's Mammal Week
- Glasgow's unique water voles featured in the Wildlife Trusts Wild 26 project with an engaging poem about life as a grassland water vole living on the verge of the M8 <https://26project.org.uk/26wild/water-vole/>
- University of Glasgow produced a short communication 'Potential importance of urban areas for water voles: Arvicola amphibius' which was published in the European Journal of Wildlife Research <https://link.springer.com/article/10.1007/s10344-021-01467-5>
- Water Voles in the City project promoted in the first edition of GCC's new Parklife newsletter <https://www.glasgow.gov.uk/CHttpHandler.ashx?id=50950&p=0>

2.1.7. Urban Awareness Raising

Action	Date	Lead	Progress
1. Produce LBAP Communication Plan	2018-2019	GCC-NRS	To be developed
2. Produce Pollinator Plan for the city	2018	GCC-NRS	See monitoring report 2018-2019
3. Produce Water Vole Plan for the city	2018-2019	GCC-NRS	See Water Vole
4. Raise awareness of biodiversity value of habitats and species within Glasgow through monthly articles for the Evening Times advice column on Gardens and Wildlife	2018-2023	GCC-NRS	Biodiversity highlighted through GCC twitter feed, rather than articles

Action	Date	Lead	Progress
			Biodiversity articles feature in the new ParkLife newsletter circulated to community groups, interest organisations, elected members, council staff
			CR put out Weekly Ranger Corner tweets, different species every week according to season and national days with 54 tweets put out
			Magnificent 11 leaflet written by CR and finalised with graphics designer and Scottish Ramblers GL
5. Raise awareness of biodiversity value through delivering Outdoor Learning sessions for Glasgow Schools (Curriculum for Excellence)	2018-2023	GCC-NRS	PCP rangers created biodiversity packs and 5 ranger-led videos for Milldale ASL and Onslow drive nursery groups
			4 CfE session were delivered to schools by CR in parks in the north and 2 forest school session were delivered at St Benedicts primary at Bishop Loch and Milton nursery at Milton Community Garden
			FLS community ranger supported Seven Lochs/ TCV with 6 week block of forestry school sessions with Avenue End nurture group
6. Promote LNRs by holding celebration events	2018-2023	GCC-NRS	Not carried out due to Covid restrictions
7. Organise annual Wild About Glasgow countryside events for the public	2018-2023	GCC-NRS	Not carried out due to Covid restrictions
8. Promote Glasgow biodiversity and engagement through teacher training events and Eco Schools days	2018-2023	GCC-NRS	CR attended a careers day to Kevin college students via Zoom
			CR delivered to Cardonald College student teachers 'interpreting your environment' woodland session
			CR created a sample ranger-led teacher CPD itinerary for new Outdoor learning web page
			FLS community ranger continues to work with Glasgow Kelvin College to provide woodland settings to run forest kindergarten training to Early Years students

Action	Date	Lead	Progress
9. Produce Biodiversity Duty Report for Scottish Government	2018-2023	GCC-NRS	Biodiversity Duty Report for Scottish Government produced Jan 2021
10. Continue to promote biodiversity projects within the 7 Lochs wetland park	2018-2023	GCC-NRS/SLWP	Biodiversity projects promoted through Seven Lochs events website and social media
11. Continue to engage with communities in practical activities within 7 Lochs area	2018-2023	SLWP / TCV	The community engagement officer at Seven Lochs led environmental activity sessions for four community groups during the 2020 summer school holidays. 6 sessions were in local greenspace and 2 online and sessions were attended by up to 13 children age P1-7
			The community engagement officer at Seven Lochs led environmental activity sessions for three community groups at three sites in Seven Lochs. 8 sessions were outside and 2 online with a maximum of 13 children age P1-7 attending each session
			The community engagement officer at Seven Lochs led environmental education sessions at Avenue End Primary, St Benedict's Primary and Sunnyside Primary. This included mainstream, JMA, Forest School and nurture groups. In total 43 sessions were delivered to groups of up to 32 children per session
			The community engagement officer at Seven Lochs led 2 outdoor play sessions in March 2021 at Bishop Loch. Numbers were limited to 8 children and age limited to 8-11 years
			The community engagement officer at Seven Lochs led wildlife surveys with Seven Lochs Wildlife Survey Volunteers. These were carried out at Hogganfield Park LNR and Cardowan Moss. They included 2 WeBS surveys, 6 bee and butterfly transect surveys and also looking at fungi, lichen and winter trees
			Programme of public events and activities ongoing
			Weekly TCV volunteer conservation tasks throughout Seven Lochs area
			FLS and TCV ran a 10 week branching out programme at Cardowan Moss to improve participants mental health through Eco therapy and conservation work

Action	Date	Lead	Progress
12. Continue to promote and implement 'Giving Nature a Home' project city-wide	2018-2020	RSPB/ GCC- NRS	RSPB Scotland developed a biodiversity trail leaflet for Kelvingrove Park highlighting key species and nature-based activities throughout the year
			Teacher training continued
13. Continue Ambassador Schools project	2018-2020	RSPB/ GCC- NRS	Ongoing
14. Hold annual Glasgow Wildfest	2018-2020	RSPB/ GCC- NRS	Bioblitz event held as part of City Nature Challenge 2020- a global competition to record wildlife in cities. 113 people took part in the City Nature Challenge Event and 582 species were recorded across Glasgow
15. Continue Young Roots project	2018-2020	RSPB	This project has now been completed
16. Continue to encourage conservation volunteering through undertaking projects and holding events at LNRs and other wildlife sites	2018-2023	GCC- NRS/ TCV/ FoGLNR s	CR carried out improvements to Pollok Country Park wildlife pond, with Friends of PCP and scout groups
			CR at PCP assisted the S1 students from Hyndland Academy in their John Muir Award
			TCV completed a total of 164 volunteer days as part of their habitat restoration and management work at 17 GCC sites
			TCV Glasgow Hogwatch carried out 16 school education sessions and outreach, 4 public events
			FoGLNRs volunteers monitored nest boxes on a regular basis All 3 boxes used at Bingham's Pond SINC 19 out of 20 boxes used at Dawsholm Park LNR Hogganfield Park LNR 5 out of 10 boxes used Cardowan Moss LNR 2 out of 5 boxes used.
			FoGLNRs worked with Seven Lochs Wetland Park and Platform to progress a project aimed at upgrading the 3 semi-derelict shelters at Hogganfield Park LNR. The project involved working with schools and locals with a successful grant application to NatureScot and the project has progressed, although not completed

Action	Date	Lead	Progress
			FoGLNRs produced comprehensive bird lists linked to their web site for Dawsholm Park LNR, Dams to Darnley LNR and Bingham's Pond SINC as well as updating the list for Hogganfield Park LNR.
			GNHS members participated in the City Nature Challenge in their own neighbourhood
			The Glasgow Naturalist 27 (2) included a short note on new Earth-star (<i>Geastrum</i> sp.) records in Glasgow
			Sand Martin nest wall installed on Garscube Campus funded by GNHS BLB Bequest
			Langside Sports Club biodiversity group at Albert Park seeded a 100m grass bank with a wild flower mix from Scotia seeds and greened hard surfaces with planters containing a variety of pollinator friendly plants as well as planting snowdrops, bluebells and daffodils to attract pollinators
			Langside Sports Club biodiversity group at Albert Park created a smaller living habitat hedge by planting some perennial pollinator friendly shrubs, installed 8 bird boxes, reclaimed some long unmaintained flower beds and planted them with pollinator friendly plants and rehomed 3 hoglets from Hessilhead animal sanctuary
			Yorkhill Green Spaces installed 8 bird boxes at Yorkhill Park and Overnewton Park
			Castlemilk Park recorded nearly 500 volunteer hours. This included woodland management, supporting events and biodiversity recording.
			The Castlemilk Park volunteers were put forward for the RSPB Nature of Scotland Awards 2020 Community Initiative Award in which they were "Highly commended"
			Urban Roots working with a local primary school planted wildflower plugs and bulbs (woodland shade) at Malls Mire LNR
17. Organise biodiversity-themed activities at park venues	2018-2023	GCC-NRS	CR attended 19 virtual meetings of Friends groups including Friends of Hamiltonhill Claypit, Friends of Linn park, Friends of Pollok Park, Friends of Kings Park, Rosshall park (new), Friends of Maxwell park
			CR assisted Friends Groups with specifications, costs, and guidance to support Wee Green Grants projects for round of applications

Action	Date	Lead	Progress
			CR assisted Friends of PCP in wildlife garden improvements to pond and sourced materials and provided volunteers to assist via the Scouts
			CR helped in creation of a new bird feeding station in PCP in conjunction with the Woodland outdoor kindergarten and creating new steps at the hobbit trail and making ready for Christmas 2020
			CR gave a Zoom presentation to Castlemilk volunteers on a beginners guide to fungi ID. This resulted in a rare fungi being found plus several other species ID in Castlemilk Park
			CR created a new web page called Outdoor Learning in Glasgow parks https://www.glasgow.gov.uk/outdoorlearning to provide a one stop resource assistance to early years, schools and outdoor play providers during Covid to access parks safely and take the correct steps to secure permissions and follow sustainable practises including for biodiversity
			CR supported the establishment of 3 brand new outdoor nurseries at Hide and Seek at Glasgow green, 3D Drumchapel at Stonedyke greenspace and Rosshall nursery at Rosshall park
			CR created and erected specific Scottish Outdoor Access Code notices for dog owners in relation to wildfowl and deer
			CR responded to public reports of wildlife crime and injured animals

2.1.8. Pollinator Plan

Action	Date	Lead	Progress
1. Monitor the Pollinator Plan through annual LBAP Monitoring Report and Biodiversity Duty Reports	Annually	GCC-NRS	The Pollinator Plan actions are included in the Biodiversity Annual Monitoring Report and in the Biodiversity Duty Report
2. Continue to protect habitat and species value through the designation and maintenance of SSSIs, LNRs and SINCs	Ongoing	GCC-NRS/ Nature Scot	SSSIs and LNRs are statutory designations that are designated via separate legislation to the development planning process but the Council has a duty to protect them. SINCs are non-statutory designations identified through the development planning process and are currently being reviewed

Action	Date	Lead	Progress
3. Aim to ensure connectivity of integrated habitat networks throughout the city through the planning process (LBAP Action)	2017-2022	GCC-NRS	Planning policy incorporated into the City Development Plan 2017 (policy CDP7) and associated Supplementary Guidance (SG7) and advice provided on planning applications to implement policy/SG as appropriate
			Adoption of Open Space Strategy (Feb 2020) and preparation of OSS Delivery Plan, will provide an opportunity to pro-actively promote habitat connectivity at an early stage
4. Manage 30 key grassland sites as traditional meadows in a sustainable manner, on GCC land (LBAP Action)	2017-2022	GCC-NRS	See Grassland
5. Enhance areas of unmown grassland by introducing local provenance wildflowers. Enhance 1 Ha annually (LBAP Action)	2017-2022	GCC-NRS	See Grassland
			CR donated additional Flower Power wildflowers to Friends Groups for planting out
6. Grow pollinator-friendly plants in the Pollok Wildflower Nursery	2017 onwards	GCC-NRS	See Grassland
			200 plants grown on from March 2020 planting. No new plants sown during Covid lockdown as no capacity to maintain
			Seed sown in March 2021. Regular daily watering and weeding
7. Plant pollinator-friendly wildflowers city-wide at SINCS, LNRs and Parks	2017-2022	GCC-NRS	Flower Power grown wildflowers planted out at various sites
			Yorkhill Green Spaces planted over 1,200 spring bulbs (crocuses, winter aconites, native bluebells, grape hyacinths, winter windflower (Anemone blanda), alliums, tulips) at Cherry Park and Overnewton Park into borders and naturalised under trees
8. Incorporate nectar-rich plants into formal planting schemes in parks and open spaces	2017-2022	GCC-NRS	Ongoing as part of parks and open spaces management plans

Action	Date	Lead	Progress
			5000 crocuses were planted on the Cenotaph beds on George Square under the trees
9. Assess nectar-rich plants for use in Parks bedding schemes/planters	2018	GCC-NRS	See monitoring report 2018-2019
			Pollinator-friendly plants – Ajuga, heathers and Bergenia used in city centre planters
10. Aim to ensure early and late nectar sources in plantings	2017-2022	GCC-NRS	CR and volunteers planted over 4000 crocus and grape hyacinth bulbs planted in previous amenity grass at Queens, Kings and Linn Park's with volunteers.
			Bulb planting at Ruchill Park, Springburn Park and Avenue End meadow with 162 volunteers improved 90m2
11. Create a butterfly garden within a Glasgow park	2017-2018	BC/GCC-NRS	See monitoring report 2018-2019
			CR created a butterfly garden at PCP wildlife garden with Friends of PCP
12. Identify a park and/or LNR to promote as a pollinator demonstration site	2018	GCC-NRS	Hogganfield Park LNR and Queen's Park designated as Pollinator Parks
13. Carry out events for Urban Butterfly Project (LBAP Action)	2017-2018	BC/GCC-NRS	See monitoring report 2018-2019
14. Work with Buglife, Butterfly Conservation, Friends of the Earth Scotland and others to ensure best practice for pollinator action in Glasgow	2017 onwards	GCC-NRS/BL/FoES/SLWP	CR advertised Butterfly Conservation virtual events on Flower Power web pages and by email to volunteer contacts
			TCV Citizen Science project in development with Buglife 'HoverSpotters' hoverfly monitoring trialled with 2 community groups
			Five new solitary bee hotels (for mason bees and leaf-cutter bees) installed at Overnewton Park, Cherry Park and Yorkhill Park and a bee hotel given to Yorkhill Park Allotment Growers by Yorkhill Green Spaces community group

Action	Date	Lead	Progress
15. Raise awareness of the importance of pollinators through website information, leaflets, events	2017-2022	GCC-CRS//BL/ BC/ FoES/ (GG)/ SLWP	CR produced 6 Ranger Corner tweets about bees and pollinators and nectar friendly flowers
			CR provided regular updates to the Flower Power Facebook page and responded to public enquiries through page to volunteer
			Pollinator Plan promoted through GCC website twitter feed
			Progress on the Pollinator Plan and case studies provided to SNH for the national strategy progress report and SNH pollinator blog
16. Carry out surveys and monitoring of butterflies, bees and hoverflies at key sites	2017-2022	GCC-CR/BC/ SLWP	4 established Beewalks transects surveyed and monitored
17. Continue to co-ordinate butterfly transects at a minimum of 4 sites	2017-2022	GCC-NRS/ BCS	Ongoing
18. Encourage Stalled Spaces projects to include pollinator friendly practices	2017-2022	GCC-NRS	During the review of the Stalled Spaces programme, a recommendation has been made to management that pollinators need to be considered within all Stalled Spaces projects
19. Provide information to support creation of additional nectar-rich plantings to compensate for new honeybee hive locations	2017-2022	GCC-NRS	Bee keeping and Biodiversity Factsheet includes advice to help reduce competition with native pollinators
20. Provide information to support creation of additional nectar-rich plantings at allotments and community growing spaces	2017-2022	GCC-NRS	Information on honey bees and wild bees provided to groups
21. Seek funding opportunities for Pollinator Projects	2017-2022	GCC-NRS/ TCV	Weekly funding information provided to parks & greenspaces community groups with some successful projects likely to benefit pollinators

Action	Date	Lead	Progress
			TCV is working with Field Studies Council to produce printed copies, make a school package and run taster sessions during summer 2021 for hoverfly survey
22. Investigate the potential for a B-Line within the city to connect to the wider countryside	2018	GCC-NRS/BL/SLWP	Green Connectors project focuses on the B-Lines and makes connections between them
23. Seek volunteers to set up Beewalk transects at key sites	2018	GCC-CRS/BBCT	BBCT co-ordinated 4 Beewalk transects
24. Carry out a survey of Marsh Violet at Commonhead Moss and adjacent sites (food plant for Small Pearl-bordered Fritillary)	2018	GCC-CR/SLWP	See monitoring report 2018-2019
25. Investigate propagation of local provenance Marsh Violet for planting at appropriate sites to aid Small Pearl-bordered Fritillary populations	2018	GCC-NRS/SLWP	See monitoring report 2018-2019

3. Acronyms

BBCT	Bumblebee Conservation Trust
BCS	Butterfly Conservation (Scotland)
BL	Buglife
BTO	British Trust for Ornithology
CDP	City Development Plan
CP	Country Park
CRF	Clyde River Foundation
CR	Countryside Rangers
FLS	Forestry & Land Scotland
FoES (GG)	Friends of the Earth Scotland (Glasgow Group)
FoGLNRs	Friends of Glasgow's Local Nature Reserves
GCC	Glasgow City Council
GIS	Geographic Information System
GL	Glasgow Life
GNAH	Giving Nature a Home
GNHS	Glasgow Natural History Society
Ha	Hectare
ID	Identification
INNS	Invasive Non-Native Species
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve

NRS	Neighbourhoods, Regeneration & Sustainability
OSS	Open Space Strategy
PCP	Pollok Country Park
PP	Pollinator Plan
PTES	People's Trust for Endangered Species
RSPB	Royal Society for the Protection of Birds
SEPA	Scottish Environment Protection Agency
SG	Supplementary Guidance
SIMD	Scottish Index of Multiple Deprivation
SINC	Site of Importance for Nature Conservation
SLWP	Seven Lochs Wetland Park
SOC	Scottish Ornithologists' Club
SpRiNT	Species Rich Networks Team
SSSI	Site of Special Scientific Interest
SUDS	Sustainable Drainage System
SWT	Scottish Wildlife Trust
TCV	The Conservation Volunteers
U of G	University of Glasgow
UKBMS	United Kingdom Butterfly Monitoring Scheme

4. LBAP Partners

Buglife
 Butterfly Conservation (Scotland)
 Clyde River Foundation
 Forestry & Land Scotland
 Friends of Glasgow's Local Nature Reserves
 Froglife
 Glasgow City Council
 Glasgow Life
 Glasgow Museums Resource Centre
 Glasgow Natural History Society
 NatureScot
 Royal Society for the Protection of Birds (Scotland)
 Scottish Canals
 Scottish Environment Protection Agency
 Scottish Ornithologists' Club
 Scottish Wildlife Trust
 Seven Lochs Wetland Park
 The Conservation Volunteers
 Urban Roots
 Woodland Trust