

Glasgow Biodiversity Duty Report

(2017/18, 2018/19 and 2019/20)



1. Introduction



- 1.1** 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.
- 1.2** 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 third report.
- 1.3** The Biodiversity Duty is not only about protecting biodiversity through managing specific sites, habitats and species. It also aims to increase the level of understanding and connection between people and the living environment, promote consideration of all our impacts on the natural world through our actions and decisions, including through procurement and use of resources and encourage staff, partners and customers to engage with and understand and consider biodiversity.
- 1.4** The designated Scottish Biodiversity Strategy is ‘Scotland’s Biodiversity: It’s in Your Hands (2004) which sets out a vision for 2030 for the health of Scotland’s biodiversity. This has now been supplemented by the ‘2020 Challenge for Scotland’s Biodiversity’ which focuses on desired outcomes for 2020.
- 1.5** The two documents together are now designated by the Scottish Government as comprising the Scottish Biodiversity Strategy.
- 1.6** 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.

- 1.7** There are 7 Core Council Services: Chief Executive's Office, Corporate Services, Development and Regeneration Services, Land and Environmental Services, Education Services, Financial Services and Social Work Services as well as 10 Arm's Length External Organisations (ALEOs). These are ACCESS, City Building, City Parking, City Property, Clyde Gateway, Cordia, Glasgow City Marketing Bureau, Glasgow Community and Safety Services, Glasgow Life and Jobs and Business Glasgow. Relevant services and ALEOs were consulted for this current report.
- 1.8** As required by the legislation, this report covers the three years April 2017- March 2018, April 2018- March 2019 and April 2019- March 2020 (see Appendices).
- 1.9** Glasgow City Council delivers its key biodiversity responsibilities and project implementation through its Natural Environment officers within Neighbourhoods & Sustainability (NS). These are Biodiversity/Ecology Officers, Countryside Rangers, Arboriculture and Woodland Officers and a Horticulture Officer.
- 1.10** The Council is the lead organisation, and chair of, the Glasgow Local Biodiversity Action Plan which involves 15 partner organisations in carrying out projects and actions to conserve and enhance the City's biodiversity.
<https://www.glasgow.gov.uk/index.aspx?articleid=18407>
- 1.11** 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 protect biodiversity and connect people with nature

- 2.1** Glasgow currently has 12 LNRs and aims to designate additional LNRs to reach a target of 1 Ha per 1000 population.
- 2.2** 30 key grassland sites are managed for wildflowers, wildlife and people's enjoyment across the city.
- 2.3** There are over 70 Friends of Parks and Greenspaces looking after their local site and undertaking environmental projects and activities, including biodiversity.

3. Mainstreaming

- 3.1 The quality standard 'Green Flag' award-winning parks (Keep Scotland Beautiful and other partners) in Glasgow all include some biodiversity elements.
- 3.2 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.
- 3.3 Biodiversity benefits are integrated into the Metropolitan Glasgow Strategic Drainage Plan through the delivery of Sustainable Drainage Systems (SUDS), green infrastructure and blue-green networks.
<http://www.mgsdp.org/>
- 3.4 Protecting biodiversity is a key consideration within Glasgow's Energy and Carbon Masterplan. The risks and opportunities of a changing climate for local biodiversity were assessed and appropriate action prioritised and considered in preparation for the City's Climate Resilient Strategy and Action Plan.
<https://www.glasgow.gov.uk/CHttpHandler.ashx?id=32441&p=0>
- 3.5 Climate Ready Clyde, a City Region partnership programme includes biodiversity as a key part of its vision for a climate ready future.
- 3.6 Biodiversity 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)**

4. Nature-based solutions and climate change

- 4.1 Integrated habitat networks are referenced in Glasgow's City Development Plan (CDP) 7 Natural Environment. The Glasgow Open Space Strategy section 13 'Connecting Habitats' seeks to further the conservation of biodiversity and deliver greater connectivity between the City's habitats to help inform current and future need for open space. The Council worked with partners, GCV, to produce the Green Network Blueprint which develops a strategic habitat network.
- 4.2 Sustainable Drainage Systems (SUDS) are required for all new developments. SUDS design is referenced in Glasgow's City Development Plan, the statutory planning document (adopted 2017). CDP8 Water Environment states that 'SUDS should be designed to deliver enhancements for biodiversity and people.'
- 4.3 The Council and partners through the Metropolitan Glasgow Strategic Drainage Partnership are delivering deculverting projects such as Cardowan and Sandyhills Park.










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 NatureScot (formerly SNH), 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 over 16 square kilometres 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 Land & Environmental Services and Glasgow Life.
<https://www.rspb.org.uk/about-the-rspb/at-home-andabroad/scotland/glasgow/>
- 5.5** GCC-DRS, Glasgow Life and Scottish Badgers signed a data sharing agreement in 2012 to assist with the planning process and to ensure protected species statutory obligations are met.
- 5.6** The Council's Countryside Rangers delivered the biodiversity message to 14, 344 members of the public in 2019/20. This number includes 3,341 school children at outdoor education events/studies, 8,582 at guided walks & Local Nature Reserve days and 2,342 through volunteering on practical conservation tasks. The Countryside Rangers worked collaboratively with 22 different partner agencies and 9 community Friends groups in achieving these outputs and outcomes.
- 5.7** The Conservation Volunteers (TCV) completed a total of 164 volunteer days as part of their habitat restoration and management work at 17 Council-owned sites.
- 5.8** Fossorial water vole website and 'Water Vole Fun Facts' were created to promote the special fossorial water vole population in Glasgow. Research, monitoring, and survey training has been carried out by the University of Glasgow, supported by Scottish Natural Heritage, Glasgow Natural History Society and the Council.
<https://www.glasgow.gov.uk/index.aspx?articleid=19877>

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).

<http://www.glasgowlife.org.uk/museums/aboutglasgow-museums/projects/Wild%20About%20Glasgow/Pages/default.aspx>

-  **Water fowl 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.**
-  **Monitoring of key LBAP species is carried out – Bog Rosemary, Green Hairstreak, Small Pearl-bordered Fritillary.**
-  **Butterfly Transects and surveys are carried out annually at a number of sites.**
-  **Water Vole surveys have been carried out at a variety of East End sites.**
-  **Surveys of Badgers and Otters are carried out as required.**
-  **The survey of the Council's trees continues, with over 57,000 trees now captured in the database.**



7. Contribution to targets

Targets/key steps from Chapter 1 (Healthy ecosystems) of the '2020 Challenge for Scotland's Biodiversity'	Contribution to key step	Justification
1.1 Encourage and support ecosystem restoration and management, especially in catchments that have experienced the greatest degradation		Seven Lochs Wetland Park project is a landscape scale project which encourages and supports ecosystem restoration and management
1.2 Use assessments of ecosystem health at a catchment level to determine what needs to be done		Seven Lochs Wetland Park project has involved peatland and hydrology studies and ecological monitoring of water courses to inform a Landscape Conservation Action Plan which is now being implemented.
1.3 Government and public bodies, including SNH, SEPA and FCS, will work together towards a shared agenda for action to restore ecosystem health at a catchment scale across Scotland		The implementation of Glasgow LBAP actions contribute to action to restore ecosystem health.
1.4 Establish plans and decisions about land use based on an understanding of ecosystems. Take full account of land use impacts on the ecosystems services that underpin social, economic and environmental health		The City Development Plan Supplementary Guidance 7 'Natural Environment' states that all new developments should conserve and enhance populations of LBAP priority species and that development should not result in biodiversity loss.
3.1 Provide opportunities for everyone to experience and enjoy nature regularly, with a particular focus on disadvantaged groups		GCC-CRS events promote biodiversity to a diverse range of audiences. Glasgow has 12 Local Nature Reserves for biodiversity and public access and enjoyment of nature.
3.2 Support local authorities and communities to improve local environments and enhance biodiversity using greenspace and green networks, allowing nature to flourish and so enhancing the quality of life for people who live there		The implementation of Glasgow LBAP actions.
3.3 Build on good practice being developed by the National Health Service (NHS) and others to help encourage greenspace, green exercise and social prescribing initiatives that will improve health and wellbeing through connecting people with nature		TCV and other volunteers have carried out habitat management in Glasgow parks, local nature reserves and other open spaces.

3.4 Increase access to nature within and close to schools, and support teachers in developing the role of outdoor learning across the Curriculum for Excellence	✓	GCC-CR work with schools for outdoor learning and the Curriculum for Excellence.
3.5 Encourage public organisations and businesses to review their responsibilities and action for biodiversity, and recognise that increasing their positive contribution to nature and landscapes can help meet their corporate priorities and performance	✓	The Council carries out its Biodiversity Duty primarily through the implementation of the LBAP and via its Biodiversity Officers.
4.1 Ensure that the management of protected places for nature also provides wider public benefits	✓	Glasgow's Local Nature Reserves provide places for wildlife and for people's enjoyment and access to nature
4.3 Integrate protected areas policy with action for wider habitats to combat fragmentation and restore key habitats	✓	City Development Plan SG7 highlights the need to protect green networks through the planning process.
4.5 Involve many more people than at present in this work and improve understanding of the poorly known elements of nature	✓	TCV, Friends of Parks and other volunteers contribute to habitat management and this helps raise awareness of biodiversity in the city.
5.1 Promote an ecosystem approach to land management that fosters sustainable use of natural resources and puts biodiversity at the heart of land-use planning and decisionmaking	✓	The refreshed LBAP takes an ecosystem approach to habitats and species management.
5.3 Support 'High Nature Value' farming and forestry	✓	Woodlands in GCC ownership are managed for wildlife and recreation. Over 80 hectares of farmland at Carmunnock, Pedmyre and Windlaw is managed positively for biodiversity.
5.4 Put in place the management necessary to bring Scotland's protected areas into favourable condition and improve the ecological status of water bodies	✓	Management of Cart & Kittoch SSSI aims to bring the site into favourable condition. LNRs are managed to conserve and enhance biodiversity. Glasgow's pond naturalisation programme is improving the ecology of city park ponds.
5.6 Restore and extend natural habitats as a means of building reserves of carbon and to help mitigate climate change	✓	Restoration of Commonhead Moss raised bog by installing dams to raise the water level. City-wide pond creation and naturalisation, woodland and hedge planting, grassland management and meadow creation.
5.7 Provide clear advice to land and water managers on best practice	✓	GCC-NS Natural Environment Officers provide advice on habitat and species management to other Council staff

Biodiversity Monitoring Report

April 2017 - March 2018

1. Background and Context

- 1.1** This report has been compiled by Land and Environmental Services' Natural Environment Team (Biodiversity), 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 16 different environmental organisations. Key partners include Scottish Natural Heritage (SNH), Forestry Commission Scotland (FCS), 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** Monitoring is a crucial part of the process and this report summarises the outcomes of the 14th Monitoring Report of Glasgow's Local Biodiversity Action Plan and early outcomes from the Pollinator Plan.
- 1.4** Over the past year, the Natural Environment Team has been working with its partners 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** 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 2021.

2. Monitoring Report

2.1 The year to end March 2018 saw further progress on the main Ec systems and useful work being undertaken for several species groups, including Water Vole which have specific actions in the LBAP Implementation Plan. Many initiatives are on-going; however, each year there are new projects and activities.

A project or activity reported on in the monitoring report may help to achieve one or more actions within the LBAP and PP, therefore each project or activity is tagged, where applicable, using the numbered actions within the LBAP and PP Implementation Plans and the following key:

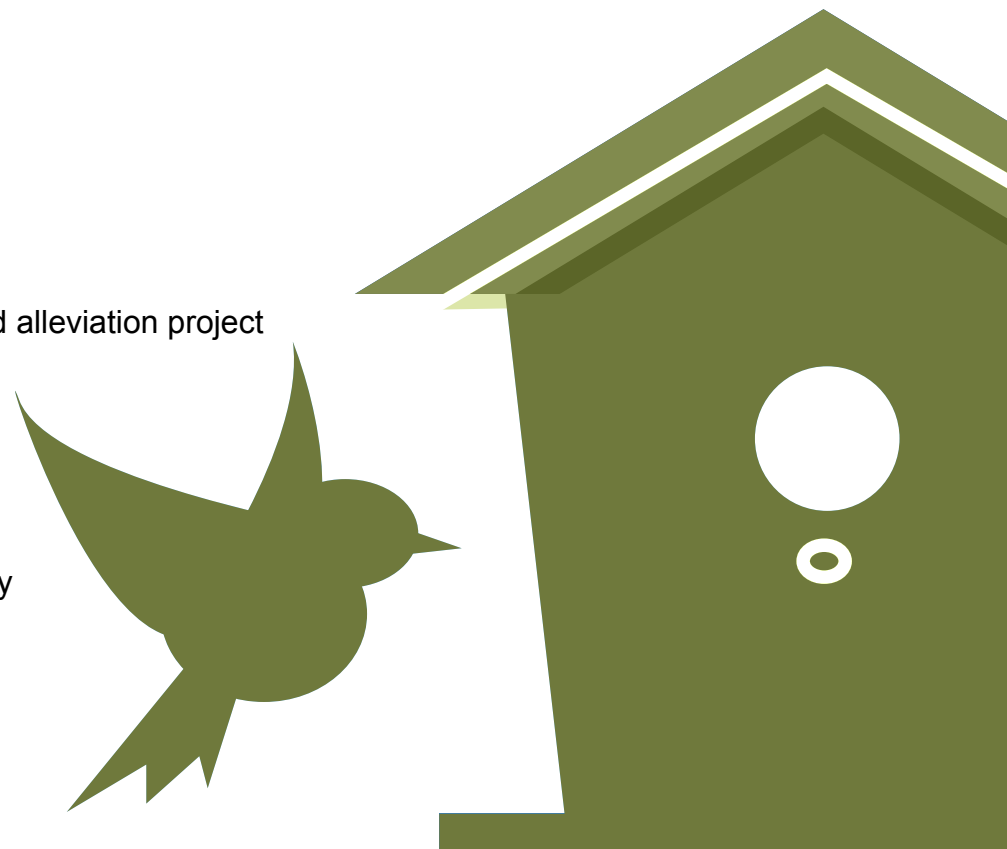
UP	Urban: Parks and Open Spaces
UA	Urban: Awareness Raising
G	Grassland
WO	Woodland
W	Wetland
F	Farmland
WV	Water Vole
PP	Pollinator Plan
Other projects and activities help achieve the general aims and objectives of the LBAP by improving biodiversity in the city.	



2.1.1 Urban: Parks and Open Spaces

- ▶ Biological records sent six-monthly by GCC Natural Environment Officers (Biodiversity) to the Glasgow Biological Records Centre (UP1)
- ▶ 25,000 new biological records added to audit (UP1)
- ▶ Natural Environment Officer (Biodiversity) contributed to Botanic Gardens Bioblitz (UP1, UAR18)
- ▶ Extension to Hogganfield Park LNR declared on 12/3/18 (UP2)
- ▶ LNR vision prepared (UP2)
- ▶ Butterfly transect carried out at Glasgow Museums Resource Centre (UP3,PP17)
- ▶ Butterfly transects carried out at Hogganfield Park and Cardowan Moss by Seven Lochs volunteers (UP3,PP17)
- ▶ Natural Environment Officer (Biodiversity) contributed to the Climate Change Reporting (UP 10)
- ▶ Weekly planning lists monitored by Natural Environment Officer (Biodiversity) for potential biodiversity impacts and enhancement opportunities (UP14)
- ▶ RSPB house sparrow project delivered 12 meadow plots (UP16)
- ▶ RSPB house sparrow project delivered house sparrow boxes across the city (UP17)
- ▶ SINC Review information prepared (UP19)
- ▶ Froglife Green Pathways planted 120 bulbs (crocus, snowdrops) at 4 sites (PP10))
- ▶ Solitary bee population monitoring carried out at Victoria Park (PP16)

- ▶ Refreshed LBAP produced
- ▶ Natural Environment Officer (Biodiversity) attended Green Flag park judging at Kelvingrove Park, Linn Park and Hogganfield Park
- ▶ LES represented by Natural Environment Officer (Biodiversity) on Hamiltonhill Claypits LNR management group
- ▶ Biodiversity information provided for annual GCC climate change update report
- ▶ Bat survey carried out at Bellahouston Park
- ▶ Tree assessments for birds and bats carried out at a variety of locations
- ▶ Cart to Castlemilk Greenspace Feasibility Study carried out
- ▶ Raptor surveys carried out in Seven Lochs Wetland Park area
- ▶ Biodiversity input provided to the Green Infrastructure projects and flood alleviation project at Blairtummock, Cranhill, Croftcroighn and Early Braes
- ▶ Habitat Blueprint workshop organised by GCVGN partnership for Glasgow
- ▶ FoGLNRs monitored bird nest boxes at Bingham's Pond, Hogganfield Park and Dawsholm Park of 20 out of 27 nest boxes were being used by blue tits and great tits



2.1.2 Grassland

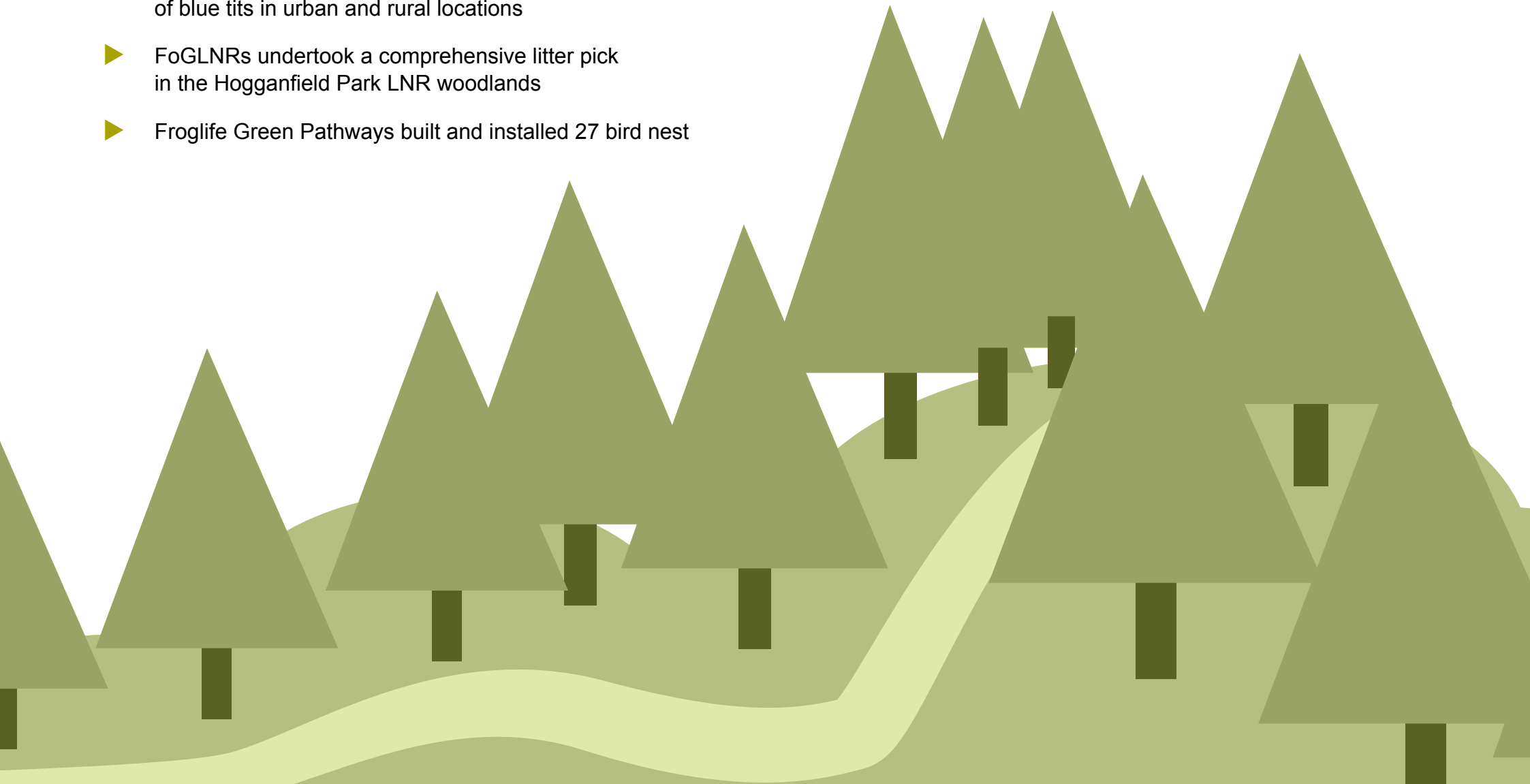
- ▶ Large meadows (8) managed through contract (G2, PP4)
- ▶ FCS managed 5.5 Hectares of acid grassland at Cleddans Burn (G2, PP4)
- ▶ Pictorial meadow strips (1 metre wide) created at the front of uncut grass and seeded with cornfield annuals – 38 strips, totalling 3930 square metres and over 7 kilogrammes of seed (G3, PP5)
- ▶ Wildflower seed provided to create small meadows at Langside Library and Glasgow Botanic Gardens Arboretum (G4,PP7)
- ▶ Wildflower plugs and seed planted at Elder Park (G4)
- ▶ Over 400,000 daffodils and 75,000 mixed bulbs planted citywide. Although non-native, they can contribute to pollinator nectar sources
- ▶ Vegetative grassland species ID training for CRS
- ▶ Froglife Green Pathways worked with young people to create wildflower areas in 7 sites across Glasgow, totalling 26 square metres of area in planters, raised beds and previously mown grass areas.



2.1.3 Woodlands

- ▶ FES removed invasive species – Japanese Knotweed and Himalayan Balsam from across
- ▶ Auchenshuggle, Easterhouse and Drumchapel woodlands (WO11)
- ▶ Seven Lochs volunteers collected willow at Bishop Loch and replaced an existing willow fence at
- ▶ entrance to site. Now a living willow fence of 100 metres length
- ▶ Seven Lochs volunteers carried out woodland thinning at Todd's Well (WO11)
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- ▶ Seven Lochs volunteers created a short section of Hazel fencing at Cardowan Moss
- ▶ Seven Lochs volunteers planted 800 native trees and laid 60 metres of Hawthorn hedge
- ▶ Glasgow University carried out research on breeding success of blue tits in urban and rural locations
- ▶ FoGLNRs undertook a comprehensive litter pick in the Hogganfield Park LNR woodlands
- ▶ Froglife Green Pathways built and installed 27 bird nest

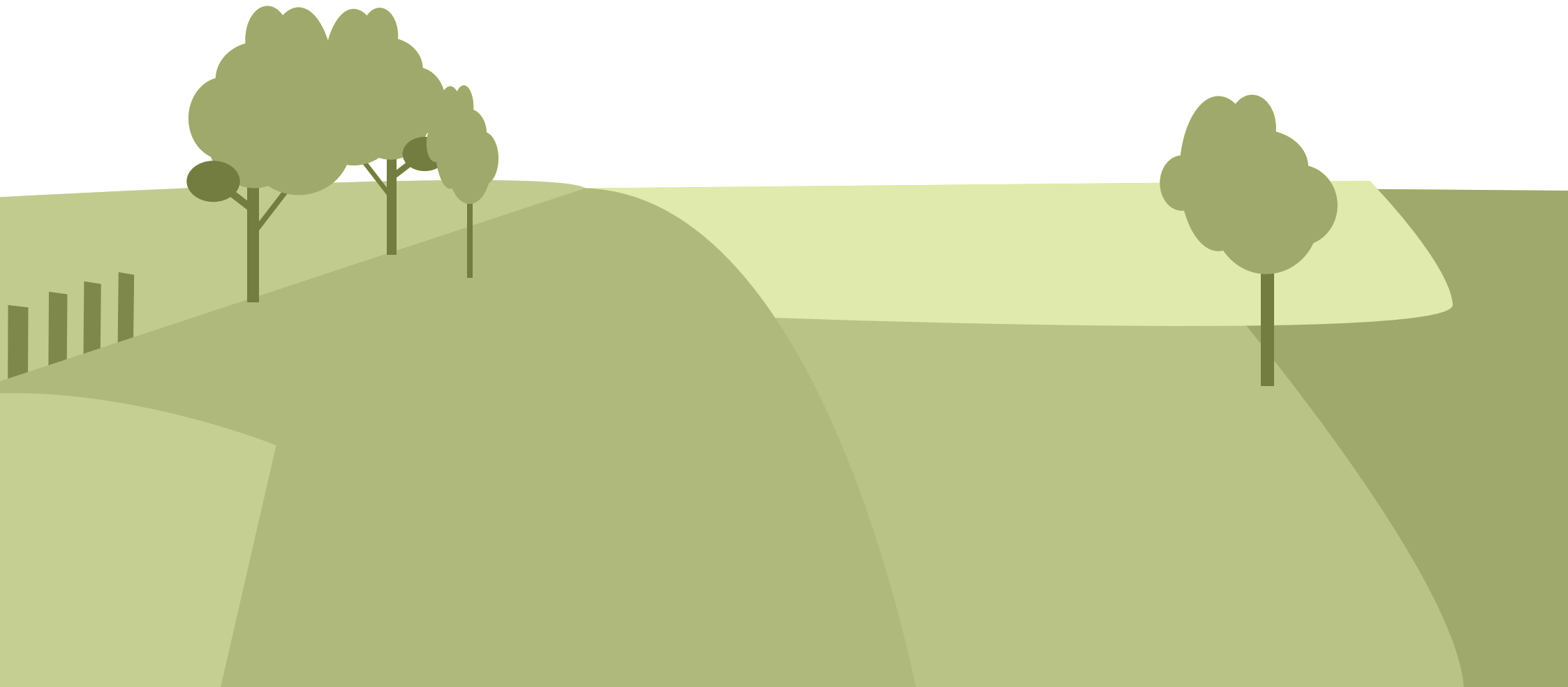


2.1.4 Wetland

- ▶ Annual blue-green algal monitoring carried out (W1)
- ▶ Water quality sampling carried out at Hogganfield Loch (W3)
- ▶ Large Biohavens launched at Hogganfield Loch (W7)
- ▶ Trial of low ground pressure specialist equipment on loan from SNH at Robroyston Park LNR, Hogganfield Park LNR and Craighend Moss to manage for water voles, damp meadow and marsh (W7)
- ▶ Common Frog population monitoring 2018 initiated (W8)
- ▶ FoGLNRs monitored usage of the 5 original biohavens on Hogganfield Loch – 2 pairs of Great Crested Grebe nested on the artificial islands with one pair being successful in raising young (W14)
- ▶ Millerston-Robroyston Phase 1 survey carried out
- ▶ Springburn Park SINC biodiversity improvements included vegetation removal from ponds to increase area of open water, and thinning of island vegetation to create nesting areas for waterfowl
- ▶ Queen's Park duck pond repaired and a 'beach' created adjacent to the island, vegetation removal and a diversity of marginal plantings to improve habitat for waterfowl and amphibians
- ▶ Victoria Park fossil grove pond repaired and aquatic native plants added as egg-laying plants for the Palmate Newt population
- ▶ Pond reinstated at Bellahouston Park Demonstration Garden by LES in conjunction with Froglife and Govan High School
- ▶ Pond created at Croftburn Allotments by Froglife
- ▶ FES staff hand-pulled Himalayan Balsam along Cleddans Burn
- ▶ Froglife Green Pathways restored 11 ponds, created 2 new ponds, 3 new mini-ponds and 2 new bog gardens.

2.1.5 Farmland

- ▶ Meadow management carried out at Carmunnock (F1)
- ▶ Cattle grazing used for habitat management at Carnbooth and Pollok Country Park (F2).



2.1.6 Water Vole

- ▶ Ecological consultant produced draft water vole receptor site report (WV1)
- ▶ Successful grants from the People's Trust for Endangered Species (PTES) and SNH towards the post of water vole project officer (WV2)
- ▶ Regular fossorial water vole meetings held with partner organisations (WV3)
- ▶ Water vole survey carried out at Garscadden Burn in Knightswood Park and Knightswood area (W5,WV10)
- ▶ Water vole survey carried out at Lethamhill (W5, WV10)
- ▶ Glasgow's Wetland and Grassland Water Voles' leaflet published and available online (WV5)
- ▶ Water vole poster produced (WV5)
- ▶ 'Water Voles in Grasslands and Gardens' factsheet uploaded to GCC website (WV5)
- ▶ Regular update of water vole records sent to Glasgow Biological Records Centre (WV6)
- ▶ Water vole trigger map produced for GCC-DRS (WV6)
- ▶ CRS fossorial water vole surveys carried out (WV13)
- ▶ Water vole article published in the Journal of Urban Ecology
- ▶ Student water vole video launched and promoted by Seven Lochs Wetland Park, GCC, water vole project Facebook page, University of Glasgow, Glasgow Natural History Society and RSPB
- ▶ GCC webpage www.glasgow.gov.uk/watervoles regularly updated.

2.1.7 Urban: Awareness Raising

- ▶ Glasgow Pollinator Plan produced (UA2)
- ▶ CRS delivered 155 Curriculum for Excellence (Cfe) sessions (UA5)
- ▶ CRS worked with almost 4000 pupils in 83 schools
- ▶ CRS held 41 Wild About Glasgow events (UA7)
- ▶ CRS held 65 events in total with 6,300 attendees
- ▶ CRS worked with volunteers carrying out 4000 hours
- ▶ Seven Lochs volunteers carried out tasks including scrub removal, wildflower planting and litter removal at a number of sites
- ▶ Seven Lochs Heritage Volunteering Officer organised a series of Family Explorer Walks with nature based themes
- ▶ Cathkin Braes LNR Celebration held in September (UA6)
- ▶ FoGLNRs attended Cathkin Braes celebration, providing wildlife information and undertaking a litter pick (UA6)
- ▶ Schools' Biodiversity Day held at Dams to Darnley LNR (UA6)
- ▶ Hogganfield Park LNR 20th birthday celebration held (UA6)
- ▶ FoGLNRs produced two leaflets about Hogganfield Park LNR and the birds recorded there (UA10)
- ▶ Friends of Glasgow's LNRs won the GCC Environmental Initiative at the Evening Times Streets
- ▶ Ahead Awards 2017 for work on floating islands at Hogganfield Park LNR (UA11)
- ▶ FoGLNRs carried out 5 wildfowl feeding and education events at Hogganfield Park LNR (UA11)

- ▶ Seven Lochs volunteers carried out wildflower planting, pond creation and learned hedge-laying skills at Hogganfield Park LNR (UA11)
- ▶ RSPB worked in Kelvingrove Park to deliver environmental education through outreach sessions and John Muir and pre-5 education – engaged with 1787 children
- ▶ RSPB bulb planting and annual wildflower seeding at Kelvingrove Park as part of GNAH (UA12)
- ▶ RSPB engaged with 6 schools for priority species – water vole, garden bumblebee, swift and house sparrow. This included planting at 6 locations to improve habitat for the chosen species(UA13)
- ▶ RSPB delivered outreach through Aldi funded officer post to 4911 children (UA13)
- ▶ RSPB delivered CPD to Glasgow University and University of West of Scotland, engaging with 500 students (UA13)
- ▶ RSPB Events Co-ordinator, Glasgow Wildlife Garden Festival 2018 appointed (UA14)
- ▶ Give Nature a Home annual Wildfest month long festival held (UA14)
- ▶ RSPB annual Wild Fest launched in March (UA14)
- ▶ TCV Corporate volunteers from RBS completed 148 hours of habitat enhancement work (including beebank creation and hibernacula creation) at Garscadden Burn and Springburn Park SINC's (UA16)
- ▶ TCV mid-week group volunteers completed 536 hours of habitat enhancement work including: work on meadow management and restoration at 9 Parks, 4 LNRs and Cart and Kittoch SSSI; woodland management at Cart and Kittoch SSSI and Dams to Darnley LNR and wetland habitat enhancement in Toryglen (UA16)
- ▶ Bellahouston Park Demonstration Garden – swift habitat installed and 2 wildflower verges maintained by LES in conjunction with RSPB and Ibrox Primary School, involving 20 volunteer hours (UA16)
- ▶ New display case at Kelvingrove Museum, completed summer 2017, looks at conservation issues world-wide and uses Glasgow-related examples (UA18)
- ▶ Bee Bank created at Springburn Park by corporate volunteers (PP15)
- ▶ Woodland wildflowers planted at Springburn Park by corporate volunteers (PP15)

- ▶ Glasgow Museums Resource Centre hosted a micro moth workshop run by Butterfly Conservation and attended by local vice county moth recorders and others (PP15,16)
- ▶ RSPB worked with 20 partner organisations to deliver 23 walks and talks and 340 connections to nature with 1500 people attending the Botanic Gardens Bioblitz
- ▶ Biodiversity Officer attended the annual Biodiversity Stakeholders' Conference at SNH Battleby
- ▶ Biodiversity Officers attended bi-annual Biodiversity Network meetings
- ▶ Wildlife Haven – this area is managed for biodiversity' signage installed at various sites across the city
- ▶ 'Feed Birds Responsibly' signage installed at various parks
- ▶ 'Launch of Glasgow City region Green Network Strategy (CSGN)
- ▶ 'Biodiversity information formed part of the 'Kelvin in the Kibble' display
- ▶ 'Glasgow Natural History Society undertook field excursions to Cardowan Moss, Victoria Park and Ruchill Park
- ▶ 'Kelvin in the Kibble display held
- ▶ 'Glasgow Natural History Society provided 4 bursaries towards attendance at FSC taxonomy courses
- ▶ The 'Glasgow Naturalist' 2017 issue included a series of papers on the wildlife of the River Kelvin; and a note on Giant Puffballs in Queen's Park
- ▶ CRS gave a presentation on wildlife to Friends of Glasgow Green
- ▶ Froglife Green Pathways attended 11 events to provide information and awareness of biodiversity, amphibian and reptile conservation and Froglife's work in Scotland
- ▶ Froglife Green Pathways worked with 23 different groups of young people (aged 5-25) and a total of 1,720 young people and 200 people over the age of 25

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- ▶ 'Glasgow Natural History Society undertook field excursions to Cardowan Moss, Victoria Park and Ruchill Park

Biodiversity Monitoring Report

April 2018 - March 2019

1. Monitoring Report

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1.1.1 Urban: Parks and Open Spaces

Action	Date	Lead	Progress
Maintain and update the Biological Audit	2018-2023	GL	<ul style="list-style-type: none"> ▶ Large number of records added to the database. Currently 6,200 species and a further 395 peripheral specie ▶ Biological records sent six-monthly by GCC Natural Environment Officers (Biodiversity) to the Glasgow Biological Records Centre ▶ The Countryside Rangers provided 466 records for the audit ▶ Robroyston Park LNR bioblitz carried out and species recorded to audit ▶ Castlemilk Park Community Woodland Officer involved volunteers in recording various species ▶ Friends of Garnethill Green Spaces monitored the bird life in their community garden
Designate additional LNRs to reach target of 1 hectare per 1,000 population	2023	GCC-NS	▶ Declaration of Hogganfield Park LNR extension in March 2018 promoted through GCC twitter feed
Continue to co-ordinate butterfly transects at a minimum of 4 sites	2018-2023	GCC-NS/BC	▶ See pollinator plan
Deliver Community Rewilding project across Yoker area, engaging with local communities to plant wildflowers, trees and wilding of sites	2018-2019	TCV	▶ TCV worked with local volunteers to design and install a multi-layered perennial forest garden on a piece of underutilized amenity green space in Yoker. A canopy layer of fruit, nut, and seed trees were planted with nitrogen fixing and food producing, shrubs and herbs were planted to form the lower layers. Edible native meadow varieties were planted to fill in gaps while the garden canopy is still developing and there is less shade. In total over 40 varieties of edible plants are growing in the space. The perennial plant species will form a system that maintains soil fertility and improves soil structure, while providing access to foraged fruits and vegetables and a wildlife environment to the local community with minimal maintenance requirements.

BC: Butterfly Conservation **GCC-DRS:** Glasgow City Council-Development and Regeneration Services **GCC-NS:** Glasgow City Council-Neighbourhoods and Sustainability **GL:** Glasgow Life **TCV:** The Conservation Volunteers

Action	Date	Lead	Progress
Develop Citizen Science and Environmental Monitoring projects for key habitats and species	2018-2023	TCV/ GCC-NS	<ul style="list-style-type: none"> ▶ TCV has developed a brand new Citizen Science survey - The Dead Good Deadwood Survey. This is funded by the Scotland Counts Partners - SNH, Scottish Government and Scottish Forestry. ▶ TCV designed and produced a deadwood survey pack that is simple and accessible for all. ▶ The aim of this survey is to increase knowledge and understanding of the importance of deadwood and also allows participants to record its associated wildlife. ▶ TCV have been funded by The British Hedgehog Preservation Society to run a hedgehog mapping and monitoring project until July 2020. ▶ TCV have 50 volunteers who are trained hedgehog volunteers and have assisted on survey nights. Yorkhill Green Spaces installed bat boxes and insect hotels in Overnewton Park and Cherry Park
Ensure SUDS designs incorporate biodiversity	2018-2023	GCC- DRS/ GCC-NS	<ul style="list-style-type: none"> ▶ Comments on individual planning applications provided to support biodiversity-rich SUDS where appropriate ▶ SUDS are required for all new developments. SUDS design referenced in City Development Plan the statutory planning document (adopted 2017). CDP8 Water Environment 'SUDS should be designed to deliver enhancements for biodiversity and people.'
Seek to assess and update the list of derelict sites of particular importance for biodiversity and outline management needs	2018-2023	Buglife	<ul style="list-style-type: none"> ▶ Ongoing
Maintain swift trigger map showing locations citywide of flocking/breeding swifts	2019	GCC-NS/ RSPB	<ul style="list-style-type: none"> ▶ Swift trigger map maintained ▶ Swift advisory note provided to GCC-DRS for planning applications

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Action	Date	Lead	Progress
Aim to ensure connectivity of integrated habitat networks throughout the city through the planning process	2018-2023	GCC-DRS/ NS	<ul style="list-style-type: none"> ▶ Comments made on planning applications ▶ Integrated habitat networks referenced in CDP7 Natural Environment. The Consultative Draft Open Space Strategy section 13 'Connecting Habitats' seeks to further the conservation of biodiversity and deliver greater connectivity between the City's habitats to help inform current and future need for open space. Worked with partners, GCV, to produce the recently released Green Network Blueprint which develops a strategic habitat network.
Align LBAP to emerging Parks and Greenspaces Vision	2020	GCC-NS	<ul style="list-style-type: none"> ▶ Biodiversity information provided for annual GCC climate change update report ▶ Implementation of the LBAP is a key action within the new Parks Vision document.
Ensure biodiversity is considered within the Glasgow Open Space Strategy	2018-2019	GCC-DRS/ GCC-NS	<ul style="list-style-type: none"> ▶ CSGN workshops held to identify green networks through Glasgow and beyond to map, protect and enhance habitats ▶ The importance and benefits of biodiversity are referenced throughout the Consultative Draft Open Space Strategy especially sections: 8. Growing spaces; 11. Surface Water Management; 12. Protecting Sites and Species; and 13. Connecting Habitats.
Ensure that biodiversity is considered in the Stalled Spaces planning process	2018-2023	GCC-DRS	<ul style="list-style-type: none"> ▶ See pollinator plan actions ▶ Biodiversity is strongly considered in the Stalled Spaces process. ▶ A number of projects with biodiversity benefits such as urban growing, environmental education, natural play, and green network improvements have been supported and continue to be welcomed.
Encourage the development of Green Roofs through the planning process	2018-2023	GCC-DRS	<ul style="list-style-type: none"> ▶ Green Roofs are suggested as an option in policy. The City Development Plan recognises green roofs as an element of the green network in CDP6. Green roofs are recognised as a way of enhancing biodiversity in SG7 and as a water management method in SG8.

GCC-DRS: Glasgow City Council-Development and Regeneration Services GCC NS: Glasgow City Council-Neighbourhoods and Sustainability

Action	Date	Lead	Progress
Ensure new developments enhance biodiversity wherever possible	2018-2023		<ul style="list-style-type: none"> ▶ Weekly planning lists monitored by Natural Environment Officer (Biodiversity) for potential biodiversity impacts and enhancement opportunities ▶ In policy terms, CDP 7 Natural Environments seeks to ensure that 'new development should not have an unacceptable effect, either directly, indirectly, or cumulatively' on biodiversity. Supplementary Guidance ▶ 7: Natural Environment contains information and examples for new developments in section 5 Enhancing Biodiversity ▶ Bid for Green Infrastructure Funding in support of North Toryglen TRA Greenspace, aiming to enhance this greenspace in terms of appearance, connectivity and biodiversity through investment in woodland, wetland and parkland
Encourage incorporation of spaces for building dwelling species such as swift in new buildings where appropriate	2018-2023		▶ Advisory note produced for new developments. Consideration being given on how we can better implement the development plan provision on enhancing biodiversity in new development, providing a stronger position on swift boxes and other biodiversity measures.
Create and maintain House Sparrow Plots as funding allows	2018-2023		▶ RSPB house sparrow project delivered 12 meadow plots
Erect a minimum of 30 House Sparrow boxes at targeted sites across the city	2018-2023		▶ RSPB house sparrow project delivered house sparrow boxes across Glasgow
Undertake Phase 1 Habitat Survey of Pollok Country Park	2018-2019		▶ Ongoing and forms part of the Pollok Country Park Working Group actions
Undertake a review of SINCS	2018-2023		<ul style="list-style-type: none"> ▶ SINC review brief produced ▶ The Council are currently in the process of procuring an external consultancy to undertake a year-long study of all SINCS to identify whether their status as a SINC is correct and their boundaries are relevant.
Update grassland map on GIS	2018	GCC-NS	▶ Grassland sites mapped on GIS showing year and area of cuts.

GCC-DRS: Glasgow City Council-Development and Regeneration Services GCC-NS: Glasgow City Council-Neighbourhoods and Sustainability RSPB: Royal Society for the Protection of Birds

Other actions for Urban: Parks and Open Spaces

- ▶ Natural Environment Officer attended Biodiversity network meeting in East Dunbartonshire
- ▶ FoGLNRs monitored bird nest boxes at Bingham’s Pond, Hogganfield Park LNR and Dawsholm Park LNR – 20 out of 26 boxes were being used by Blue Tits (13) and Great Tits (7)
- ▶ Nest boxes installed at the courtyard, Glasgow Museums Resource Centre, Nitshill

1.1.2 Grassland

Action	Date	Lead	Progress
Manage 30 key grassland sites as traditional meadows in a sustainable manner, on GCC land	2018-2023	GCC-NS	<ul style="list-style-type: none"> ▶ Large meadows (9) managed through contract ▶ TCV undertook scrub removal from meadows at Robroyston Park LNR ▶ TCV undertook work on meadow management and restoration at 4 Parks, 5 LNRs and Cart and Kittoch SSSI ▶ FCS managed meadow at Cleddans Burn by cut and lift
Enhance areas of unmown grassland by introducing local provenance wildflowers. Enhance 1 hectare annually	2018-2023	GCC-NS	<ul style="list-style-type: none"> ▶ Pictorial meadow strips (1 metre wide) created at the front of uncut grass and seeded with cornfield annuals – 42 strips, totalling 4,180 square metres and over 8 kilogrammes of seed ▶ Currently assessing areas across the city for wildflower creation amounting to totalling 9,000 square metres
Create or extend 5 new meadows citywide	By 2023	GCC-NS	<ul style="list-style-type: none"> ▶ Development of new meadows at Springburn Park

GCC-NS: Glasgow City Council-Neighbourhoods and Sustainability

Action	Date	Lead	Progress
Enhance existing meadows by wildflower planting at 8 sites	2018-2023	GCC-NS	<ul style="list-style-type: none"> ▶ Volunteers planted 1,649 wildflowers at LNR celebration days ▶ RSPB planted wildflower meadows at Cardowan Moss with 7 Lochs and Ambassador schools
Establish and identify mechanism to maintain GCC wildflower nursery at Pollok Country Park	2018-2023	GCC-NS	▶ Flower Power nursery at Pollok CP maintained with volunteer support
Encourage sowing and growing of Scottish provenance wildflowers	2018-2023	GCC-NS	▶ Wildflower area at Bellahouston Park nursery tidied, stock audit carried out and self-seeders potted up for use Yorkhill Green Spaces sowed wildflower seed at Overnewton Park and Cherry Park
Trial new council cut and collect equipment for meadow management	2018-2019	GCC-NS	▶ Currently being researched by NS Operations officers.
Implement dwarf shrub heath annual management at 1 site	2018-2023	GCC-NS	▶ Ongoing
Carry out survey of rare plants (Burnet-saxifrage) annually	2018-2023	GCC-NS	▶ Burnet-saxifrage surveyed
Carry out annual management of Glasgow Museums Resource Centre meadow	2018-2023	GL	▶ Annual management of meadow carried out
Enhance water vole meadow at The Bridge, Easterhouse	2018-2023	GL/SLWP	▶ Meadow enhanced and managed for water voles

GL: Glasgow Life GCC-NS: Glasgow City Council-Neighbourhoods and Sustainability SLWP: Seven Lochs Wetland Park

1.1.3 Woodland

Action	Date	Lead	Progress
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-NS	▶ • GCC Natural Environment Officer (Woodlands) recruitment currently being progressed to lead on this action.
Individual management plans for Ancient and Veteran trees within Wood Pasture and Parkland Habitat in Pollok Country Park	2018-2023	GCC-NS	▶ • GCC Natural Environment Officer (Woodlands) recruitment currently being progressed to lead on this action
Improve condition of Upland Mixed Ashwoods and Upland Oakwoods woodlands at Cart and Kittoch SSSI	2018	GCC-NS	▶ • GCC Natural Environment Officer (Woodlands) recruitment currently being progressed to lead on this action
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-NS	▶ • GCC Natural Environment Officer (Woodlands) recruitment currently being progressed to lead on this action

GCC-NS: Glasgow City Council-Neighbourhoods and Sustainability

Action	Date	Lead	Progress
Commence citywide NVC survey of woodlands (not already surveyed) to ascertain UK BAP Priority Habitats extent in Glasgow	2018-2023	GCC/NS	▶ GCC Natural Environment Officer (Woodlands) recruitment currently being progressed to lead on this action
Develop 8 Urban Woodland Management Plans for larger woodlands city-wide (over 400 hectares in total)	2018-2023	GCC-NS	▶ Cart and Kittoch SSSI Management Plan produced
Deliver a woodland management strategy for the Greater Easterhouse area	2018-2023	GCC-DRS	▶ Potentially being explored in the upcoming Strategic Development Framework for Greater Easterhouse
Promote woodland as a temporary greening and bioremediation on vacant and derelict land	Ongoing	GCC-NS/DRS	▶ Temporary greening and bioremediation on vacant and derelict land continues to be supported through Stalled Spaces.
Create 3 new woodlands within city boundary (or expansion of existing woodlands) totalling 10 hectares or more	2018-2023	GCC-NS	<ul style="list-style-type: none"> ▶ TCV undertook tree planting at Cathkin Braes as part of re-establishment of semi-natural broad-leaved woodland on the Braes - 1.8 hectares ▶ Woodland planting carried out to enhance Castlemilk Park woodlands ▶ TCV undertook woodland planting at Provanmill (M80) wildlife corridor - 0.5 hectares ▶ Yorkhill Green Spaces planted trees in Cherry Park
Protect and enhance habitats for wildlife as part of continued management at Drumchapel and Easterhouse Woods lease	2018-2023	FALS	▶ Wildlife habitats protected and enhanced through the implementation of management plans at Drumchapel and Easterhouse woodlands

GCC-DRS: Glasgow City Council-Development and Regeneration Services GCC-NS: Glasgow City Council-Neighbourhoods and Sustainability SLWP: Seven Lochs Wetland Park SNH: Scottish Natural Heritage U of G: University of Glasgow

Action	Date	Lead	Progress
Remove invasive species where appropriate and manage sites to encourage a varied tree age, species and structure at Drumchapel and Easterhouse Woodlands	2018-2021	FALS	<ul style="list-style-type: none"> ▶ FCS undertook Japanese Knotweed treatment at Drumchapel and Easterhouse woods ▶ FCS undertook woodland thinning at Drumchapel woods ▶ FCS installed three nest planted exclosures of Oak at Bishop Loch to improve understorey planting
Carry out annual monitoring of rare woodland plants	2018-2023	GCC-NS	▶ Countryside Rangers counted Toothwort spikes with volunteer help
Undertake strategic tree planting programme annually	2018-2023	GCC-NS	▶ 150 trees planted with associated 1,000 square metres of new sown perennial wildflower meadow at Blairdardie and a further 200 square metres of plug planting in Waverley Gardens

Other actions for woodland:

- ▶ 75 metres of native species hedgerow planted at Trinley Brae Allotments in Knightswood
- ▶ Alders planted at Old Station Park on request from community group
- ▶ FCS carried out tree work and willow thinning at Auchenshuggle Wood
- ▶ Castlemilk Park Community Woodland Officer carried out bat recording and installed 15 bat boxes – Common Pipistrelle were recorded using the boxes
- ▶ Castlemilk Park Community Woodland Officer carried out species monitoring
- ▶ 500 native trees planted by volunteers during LNR celebration days

FAL: Forestry and Land Scotland **GCC-NS:** Glasgow City Council-Neighbourhoods and Sustainability

1.1.4 Wetland1.1.4 Wetland

Action	Date	Lead	Progress
Carry out annual blue green algae monitoring at 43 sites citywide	2018-2023	GCC-NS	▶ Annual blue-green algae monitoring carried out at 43 ponds citywide
Carry out annual WeBS counts at 15 key sites	2018-2023	GCC-NS	▶ GCC Countryside Rangers continue to monitor key sites for wetland birds
Carry out water quality tests at key sites - Hogganfield Loch, Queen's Park, Richmond Park and Knightswood Park ponds	2018-2023	GCC-NS	▶ Water quality sampling carried out at Hogganfield Loch ▶ Water quality sampling taking place at Richmond Park during 2019-2020 ▶ Timescales for Queen's Park and Knightswood Park Pond Water
Naturalise 50% of Queen's Park boating pond	2018-2019	GCC-NS	▶ GCC NS will continue to engage and assist interested parties towards building support for this proposal.
Carry out riparian water vole surveys at 2 sites per year	2018-2023	GCC-NS	▶ Water vole surveys carried out at Garscadden Burn Park and Garscasprindden Burn through Knightswood Park and adjacent areas
Identify Bog Rosemary populations and monitor health and spread	2018-2023	GCC-NS	▶ Ongoing.

GCC-NS: Glasgow City Council-Neighbourhoods and Sustainability

Action	Date	Lead	Progress
Monitor frog populations at Robroyston Park and Cathkin Braes, to assess health of population in north and south of city	2018-2023	GCC-NS	▶ Common Frog population monitoring carried out by Countryside Rangers, TCV, and volunteers
Carry out wetland management at 5 Local Nature Reserves, including water level control at Robroyston Park for wading birds	2018-2023	GCC-NS	▶ TCV undertook wetland habitat enhancement in Toryglen ▶ FoGLNRs monitored usage of the 5 original biohavens at Hogganfield Loch – 1 pair of Great Crested Grebe and 1 pair of Moorhen nested on them with numerous other species using them to rest and preen
Continue to restore 3 raised bogs and monitor results for water levels and biodiversity	2018-2023	SLWP/ GCC-NS	▶ Water levels recorded at Commonhead Moss and Bog Myrtle and birch removed
Promote river restoration and deculverting projects	2018-2023	GCC- DRS	▶ CDP8: 'with reference to the Scotland River Basin Management Plan, new development proposals should take opportunities to reinstate natural flood management measures, including the removal of culverts.' The Council and partners through the MGSDP are delivering deculverting projects such as Cardowan and Sandyhills Park
Monitor INNS and protected freshwater fish species	2018-2023	CRF	▶ No report received to date
Monitor snipe species at key wetland sites	2018-2023	GCC-NS	▶ Common Snipe and Jack Snipe monitored at Windlaw Marsh

CRF: Clyde River Foundation GCC-DRS: Glasgow City Council-Development and Regeneration Services GCC-NS: Glasgow City Council-Neighbourhoods and Sustainability SLWP: Seven Lochs Wetland Park

Action	Date	Lead	Progress
Implement Integrated Green Network proposals as part of the Cardowan Surface Water Management Plan and Blairtummock	2019	GCC-DRS	▶ Work is underway to deliver the Cardowan Surface Water Management Plan. This involves deculverting and the creation of an attenuation area to manage water through sustainable processes and reduce sewer flooding. The project will deliver multi-functional use of the open space and enable the redevelopment of nearby sites

Other actions for woodland:

- ▶ Victoria Park Fossil Grove pond repaired and enhanced for Palmate Newt population through native species planting
- ▶ Pond naturalisation projects at 8 sites assessed for management works to enhance biodiversity
- ▶ Biodiversity advice provided by GCC Natural Environment Officers on flood alleviation schemes citywide
- ▶ Castlemilk stream bioblitz held by Castlemilk Park Community Woodland Officer and TCV was attended by 60 people

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SLWP: Seven Lochs Wetland Park SNH: Scottish Natural Heritage U of G: University of Glasgow

1.1.5 Farmland

Action	Date	Lead	Progress
Implement wetland management for biodiversity as part of 7 Lochs Wetland Project	2018-2023	SLWP	▶ Wetland habitat creation and management carried out at 3 sites within Seven Lochs Wetland Park
Manage 50 hectares as traditional meadow on GCC owned farmland at Carmunnock	2018-2023	GCC-NS	▶ All meadows at Carmunnock cut and lifted
Use cattle grazing as a management tool at Dawsholm Park, Carnbooth and Pollok Country Park	2018-2023	GCC-NS	▶ Cattle grazed at all three sites
Continue hedgerow management by creating new hedges and enhancing existing hedges	2018-2023	GCC-NS	▶ Ongoing discussions with NS Operations and Park Development to enhance the current maintenance processes in place
Maintain and enhance wild bird plot at Carmunnock	2018-2023	GCC-NS	▶ This plot is no longer actively maintained by NS due to other priorities.
Monitor breeding tree sparrow populations at Millichen farms	2018-2023	RSPB	▶ Tree sparrows were ringed by member of Clyde Ringing Group near to Millichen site ▶ Food supplied in feeders for Tree Sparrows near to Millichen site
Develop and deliver the 7 Lochs Co-operative Habitat Restoration project in partnership with landowners and land managers	2018-2021	SLWP	▶ Secured funding for new Species Rich Networks Team (SpRiNT) project in July 2019 to deliver habitat creation, enhancement and management at 15 sites by Sep 2020

CC-NS: Glasgow City Council-Neighbourhoods and Sustainability RSPB: Royal Society for the Protection of Birds SLWP: Seven Lochs Wetland Park

Action	Date	Lead	Progress
Develop and produce water vole Plan	2018-2019	GCC-NS/ SNH/ U of G	▶ Draft 'Interim guidelines for the conservation of grassland water voles' developed by LES, University of Glasgow and SNH
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-NS/ SNH/ U of G	▶ Project extended with funding from Seven Lochs Wetland Park, GCC, SNH and PTES
Host the East End Water Vole Project meetings	2018-2023	GCC-NS	▶ Regular water vole project meetings held ▶ Water Vole Knowledge Exchange workshops hosted by Seven Lochs Wetland Park
Carry out scientific assessment of disturbance caused by grass cutting, under licence	2018-2021	GCC-NS/ SNH/ U of G	▶ Grassland management trial underway with U of G/SNH at SLWP
Develop, review and update guidance on habitat management	2018-2023	GCC-NS/ SNH	▶ Draft Interim Guidelines include information on habitat creation and enhancement
Update water vole distribution map and annually update trigger map for development planning	2018-2023	GCC-NS/ DRS	▶ Distribution map updated

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Action	Date	Lead	Progress
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 creation underway at Cranhill, Croftcroighn and Blairtummock Parks as part of Greater Easterhouse green infrastructure project
Trial habitat management at key sites as part of Water Voles in the City project	2018-2021	SLWP	▶ Methodology developed in partnership with SNH and University of Glasgow with trial to start in September 2019
Implement Integrated Green Network proposals as part of the Cardowan Surface Water Management Plan and Blairtummock	2018-2019	GCC-DRS	▶ Habitat creation works for water vole translocation and Green Infrastructure at Hogganfield and Riggside
Carry out riparian water vole surveys at 2 sites per year	2018-2023	GCC-NS	▶ See Wetland
Monitor and assess success of habitat creation and management projects	2018-2023	GCC-NS/ SNH/ U of G	▶ Monitoring and assessment ongoing
Develop a project protocol for assessing the population dynamics of water voles in Glasgow	2018-2019	GCC-NS/ SNH/ U of G	▶ Research carried out on water vole territory size and range
Survey 20 square kilometres annually as part of fossorial water vole landscape scale monitoring	2018-2023	GCC-NS	▶ Ongoing

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