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Urban Ecosystems



Wildflower roundabout, Perth © Beautiful Perth

Background

Urban areas, from small villages to larger towns and cities provide invaluable space for wildlife. Across Tayside there are wildlife garden projects and wildflower areas in communities within care homes, school grounds, churchyards, and industrial estates all providing valuable greenspace. The surrounding golf courses include wildlife-rich ponds that host amphibians and dragonflies and rare insects, waxcap fungi and lichens find homes in a range of surprising urban settings. Urban bluespaces - watercourses, ponds, sustainable urban drainage systems (SUDS) and rivers support biodiversity and there are opportunities to manage them with this in mind.

The built environment is as important as the greenspace surrounding it - buildings can all support wildlife. In addition to safeguarding the wildlife utilizing older buildings, new developments are now including integral bird nestboxes and bat

roosts. Living roofs are becoming more common on public buildings, such as schools, as well as on architect-designed properties and mature trees are increasingly being retained within new developments and road-widening projects to improve the visual aspect of the landscape as well as safeguard biodiversity. Greenspace and private gardens create a buffer between the built environment and surrounding countryside.

Well-managed urban greenspace greatly helps mitigate against the effects of climate change: sustainable urban drainage ponds, swales and rain gardens reduce the effect of flash floods and ecosystem services provided by 'living', 'green' or 'brown' roofs, helps reduce both the urban heat island effect and the impact of summer storms. With the intensification of agricultural practices urban species are all the more precious, especially where pollinating insects are concerned. Grassland



and woodland alongside railways, roads and watercourses provide important habitat for a range of species.

Importantly, urban greenspace directly contributes to physical and mental well-being by way of recreation and volunteering opportunities. Community orchards and allotments are important refugia for a variety of species and help to safeguard genetic diversity, especially where Scottish fruit varieties are concerned. Everyone can help increase biodiversity in urban areas: leaving gaps under fences to allow hedgehogs to move between gardens, creating ponds, growing bee-friendly plants to encourage pollination, or planting berried trees to help feed the birds and provide spring blossom. There are some 23 million gardens across the UK so they create a web of wildlife corridors which enable many species to colonise or forage across a huge area.

Objectives

- 1 Endeavour to reduce the direct pressures on urban biodiversity by implementing projects to protect and restore ecosystem health
- 2 Safeguard urban ecosystems, species and genetic diversity by enhancing their connectivity and where possible preventing decline
- 3 Mainstream actions for biodiversity conservation by raising awareness of the benefits of the natural environment and the services it provides for the enjoyment of the local communities

Priority Habitats

- Riparian corridors
- Open Mosaic habitats, including brownfield sites
- Urban woodland and community orchards
- Pollinator networks
- Green roofs
- Species rich verges
- Designed landscapes



Key Sites

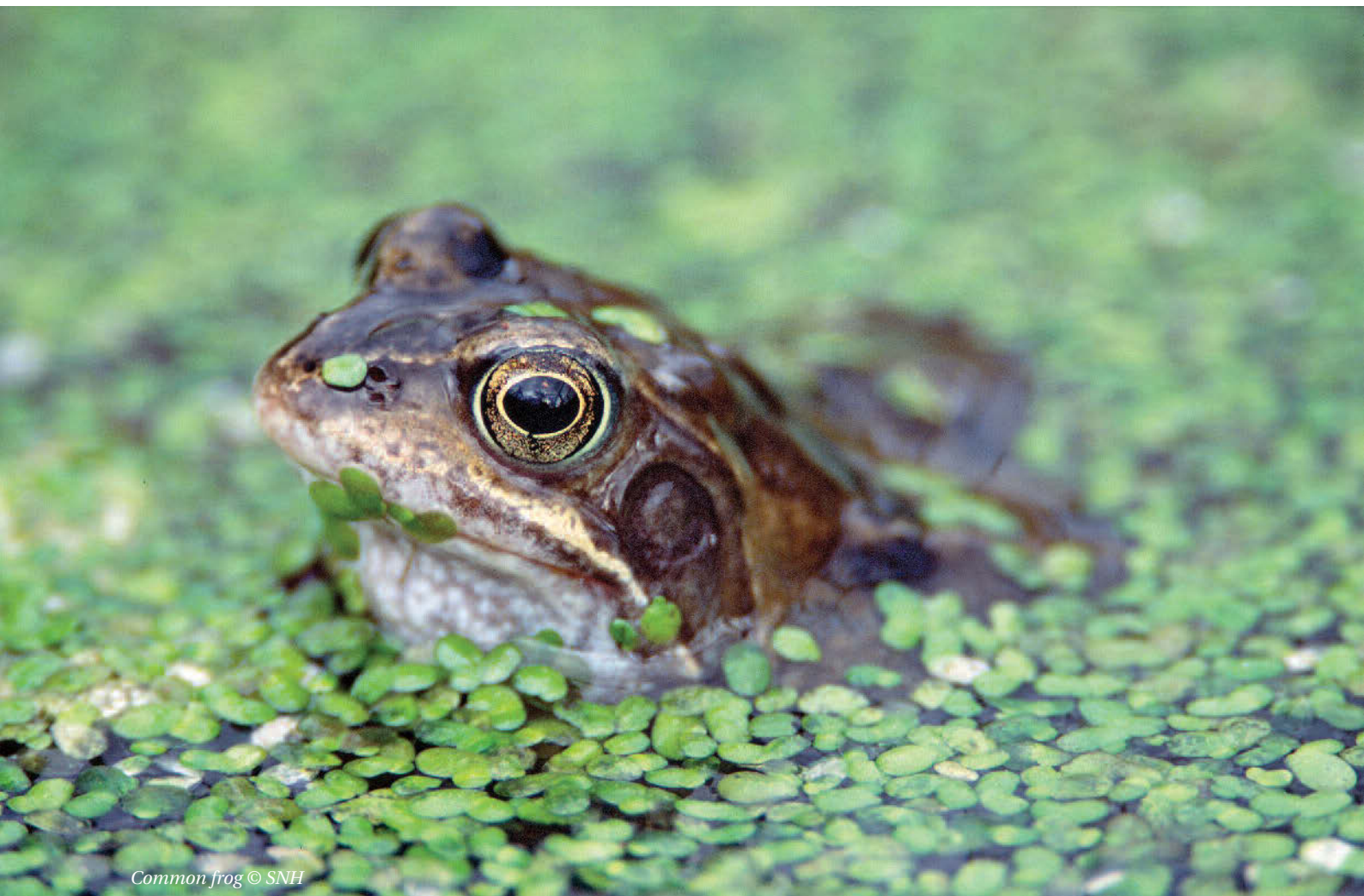
- Buildings, including open spaces, bridges and walls
- Urban corridors: waterways, railways, roads and paths
- Businesses with Land, including golf courses and industrial estates
- Healthcare and Education premises, including care homes
- Burial Grounds (Kirkyards and Cemeteries)

Key Sites Designated

Tay (SAC) & catchment tributaries
Kinnoull Hill, Perth
River South Esk (SAC)
Birks of Aberfeldy
Weem Meadow Aberfeldy
Loch Leven, Kinross
Comrie Woods, Comrie

Key Species

- Mammals, including Red Squirrel, Bat and Hedgehog
- Birds, including Swift and House Sparrow
- Amphibians, including Common Toad
- Pollinators, including bees and butterflies
- Invasive non-native species, e.g. Japanese Knotweed, Grey Squirrel



Common frog © SNH

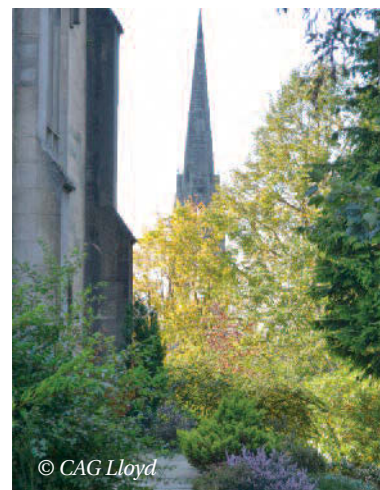
Green Graveyard Initiative

Churchyards are sanctuaries for the living as well as the dead. The Perth & Kinross Heritage Trust's project in East Perthshire achieved a suite of sustainable management initiatives with the support of the SITA Tayside Biodiversity Action Fund. Wildflowers were established around headstones to safeguard lichens from herbicide usage, Red squirrel feeding areas and bat and bird boxes were included at each site, and hedges planted to give refuge to insects, birds and small mammals. Reptiles and amphibians were also considered when improving stonework and boundary walls. The Scottish Churchyard Lichen Group's fieldwork in the

graveyards discovered 176 lichen species, 30 of them very rare. Astonishingly there were two new British records: a tiny crustose lichen *Lecanora invadens* and a lichen parasite, *Sclerococcum tephromelarum*, found growing on the black shields lichen *Tephromela atra*.

The Tayside Green Graveyard Initiative continues to work with churches and Eco-Congregations across Tayside. The article 'Kirkyard Heritage: Graveyard Conservation in Scotland', co-authored by Dr Susan Buckham and the Tayside Biodiversity Co-ordinator, featured in the 2013 Historic Churches journal and is now available on the Building

Conservation website. The Perth & Kinross Tree Wardens Network hope to set up a Church Yew project and Tayside Biodiversity partners are considering a Swifts & Bats in Churches project.



Brownfield Site Management

Muirton's Buzzing Project, Perth

Over 97% of wildflower meadows have been lost in the UK since the Second World War and the loss of these habitats has resulted in the decline in many of our pollinating insects. The site selected for the creation of a wildflower meadow for this project was in an area with a stalled housing development in Muirton in the north of Perth. Habitat creation

involved planting a native wildflower seed mix including 21 species of annuals, biennials and perennials as well as the creation of two bee banks.

Members of the local community were involved throughout the project. A talk to a class from a local primary school promoted the importance of invertebrates, especially pollinating insects and what people can do in their gardens to help bugs.

The class, along with members of the local community, helped plant wildflowers and later, on site, the community groups

and council planners discussed the importance of brownfields.

This pilot project involved Buglife Scotland, Perth & Kinross Council and the Tayside Biodiversity Partnership. The wildflower meadow added colour and life to the area, as well as providing important foraging habitat for a suite of pollinating insects including solitary bees and hoverflies and all six bumblebee species. Together with the surrounding brownfield land, the meadow also provided a home for a wide number of other wildlife species.



Muirton © Buglife Scotland

Ecosystem Services and Ecosystem Scale Projects

Ecosystem Services

- Flood management and natural attenuation
- Climate regulation
- Food production and waste management
- Recreation and leisure
- Health and wellbeing
- Tourism

Ecosystem Scale Projects

- Swift Conservation Project – community-based projects across the area: safeguarding existing natural nest sites and creating new nest sites.
- Biodiversity Villages Project – local communities, groups, churches and schools enhancing local greenspace for biodiversity.
- Green Graveyard Initiative – partnership working to enhance existing and new graveyards.
- BeeWild projects for Businesses, Care Homes and Day Care Centres.
- Going the Whole Hog – providing hedgehog hibernation boxes, wildflower plants and wildlife gardening advice within Angus schools.
- Control of invasive non-native species – River South Esk and the Scottish Wildlife Trust's Save Scotland's Red Squirrels.
- Urban Grassland Management, e.g. Muirton's Buzzing Project (Perth) and Monifieth Wildflower Meadow.
- Recreation and Well-being – including walking, cycling, sports, volunteering, gardening, visiting public greenspace.

Pressures

Development

Poor planning at the masterplan stage of development can lead to the fragmentation of species populations, loss of notable or veteran trees and hedgerows, together with destruction of wildlife habitats.

Pollution, Pesticides and Litter

Vehicle exhausts fumes; industrial leakage, oil and salt from the road surface all have a direct impact on wildlife, especially trees, amphibians, invertebrates and birds. Over-use of chemicals to control insects and weeds seriously impacts the diversity of urban wildlife, including woodworm treatment in attics which can destroy bat colonies.

Wildlife Crime

Trees illegally felled, hedges trimmed and scaffolding erected during bird and bat breeding season, and wildflowers uprooted (especially the native bluebell) are all common occurrences of urban wildlife crime.

Invasive Non-Native Species

A range of plant and animal species impact on native biodiversity and have a serious detrimental effect. Plant species can outcompete natives and cause erosion. The New Zealand Flatworm *Artioposthia triangulata* is well-established in Tayside and is causing the eradication of native earthworms in farmland and garden soils. This has a direct impact on soil fertility and mammals such as moles.



Himalayan Balsam © Kelly Ann Dempsey



Swift © Bev O'Lone

Swift Conservation in Tayside

Stanley Community Swift Project

The idea of a Stanley Swift Project came about during an evening Wildlife Walk in Stanley in the summer of 2014. The wildlife walkers were delighted to hear that Stanley is a hot spot for swifts in Perthshire and said that it would be great to do whatever they could as a community to not just protect them, but also ensure the birds continue to have a safe place to return to and breed each year after their 6,000 mile migration back from Africa.

In July 2014, a small group of keen volunteers undertook a survey of swift numbers and nest sites in the village. They surveyed the area three times at weekly intervals on beautiful summer evenings and counted – as best they could – given the sweeping and swirling of ever-changing group sizes in the skies above them, the swift screaming parties. The village residents also added information from sightings in between times.

There were frequently groups of about 40 swifts, and once or twice the numbers increased to around 70 to 80 birds, which at that time of year is likely to have included late arriving nonbreeding juveniles.

Through their observations, the group began to recognise when birds were gathering to roost, and

by standing and watching carefully 15 nest sites were located as the birds whizzed in for the night, which would mean 30 breeding adults. Most of the nest sites were in eaves behind gutters or fascias, but one excellent bit of news was that one of the nest boxes recently installed on the Tayside Hotel was found to be occupied by a pair of swifts. The 15 nest sites were recorded on street maps provided by Perth and Kinross Council and the information will contribute to the “dots on maps” survey work that is going on throughout Tayside.

The group hopes more people will want to become involved in Stanley so that a full picture of swift activity in the village can be built up and the information shared with Tayside Swifts. They will continue to raise awareness about this special bird, help to improve their protection, install nest boxes and aim to at least maintain or ideally increase swift numbers in the village over the coming years.

The Carse of Gowrie Swift Conservation Project was the first of its kind in Tayside, working with the local community in surveying nest sites and helping to safeguard them in the future. The Kirriemuir Swift Conservation Area Regeneration Project followed and there are numerous ongoing projects in Strathearn, as well as in Stanley.

Urban Ecosystems Actions Schedule

Key for timescale Short: 1-3 yrs **Medium:** 4-6 yrs **Long:** 7-10 yrs

Actions will be input into the UK Biodiversity Action System (UKBARS) where Lead Partners will be outlined

Maintaining & Improving Habitats

Action	Action breakdown	Who takes the action	Timescale
1 Encourage utilisation and upgrading/creation of Urban Greenspaces.	<p>Urban Greenspace Project (incorporating community orchards, allotments and community gardens) Establish best practice projects with local communities.</p> <p>Raise awareness of health and wellbeing benefits.</p> <p>Raise awareness of grassland maintenance and creation for biodiversity.</p> <p>Develop the Inch area at the Brechin Flood Prevention Scheme site and provide outdoor classroom activities.</p> <p>Distribute the Tayside Biodiversity Partnership's "Making Way for Nature" advisory booklet.</p>	<p>Angus Council</p> <p>Perth & Kinross Council</p> <p>Tayside Biodiversity Partnership</p> <p>Tay Landscape Partnership</p> <p>Hillcrest Housing Association</p> <p>Trellis</p> <p>LandLife</p> <p>NHS Scotland</p> <p>Scottish Natural Heritage</p> <p>Perth & Kinross Heritage Trust</p> <p>River South Esk Catchment Partnership</p> <p>Sustrans</p>	Medium
2 Promote the sustainable development of the Partnership urban areas through increased policy integration.	<p>Ensure that TAYplan (Strategic Development Plan), Perth & Kinross and Angus Local Development Plans take into account the sustainable development of urban areas.</p> <p>Encourage the integration of biodiversity management and innovative projects in place-based policies or community initiatives, including town and city plans, and development masterplans.</p> <p>Annually produce updates for Local Authority Climate Change Declaration, reporting where appropriate.</p> <p>Annually produce updates for Local Authority statutory biodiversity reporting against the 2020 Challenge.</p>	<p>Angus Council</p> <p>Perth & Kinross Council</p> <p>Scottish Natural Heritage</p> <p>Tayside Biodiversity Partnership</p> <p>Chambers of Commerce</p> <p>Urban Regeneration Companies</p> <p>Developers</p>	Long

Maintaining & Improving Habitats

Action	Action breakdown	Who takes the action	Timescale
3 Increase opportunities for communities to participate in experiencing and enjoyment of nature.	<p>Urban Meadows Projects Manage urban grassland and planted wildflower meadows with biodiversity in mind.</p> <p>Roll out Buglife's "Buzzing" project across Tayside and investigate new areas of stalled space within cities, towns and villages.</p> <p>Continue the management of Monifieth Wildflower Meadow.</p> <p>Encourage InBloom group contributions to wildflower or pictorial meadow plantings at roundabouts, flower beds, etc.</p> <p>Biodiversity Villages Initiative Investigate the potential to set up a suite of village-based projects to encourage local communities to participate in a wide range of projects and events.</p>	<p>Angus Council</p> <p>Perth & Kinross Council</p> <p>Tayside Biodiversity Partnership</p> <p>Buglife Scotland</p> <p>Local community groups</p>	Long
4 Improve the biodiversity quality of greenspace and green networks.	<p>Verge Champion Initiative Set up a Verge Champion Initiative to engage volunteers and specialists to survey key sites and to then nominate important biodiversity verges for future management to safeguard species.</p> <p>Encourage local authorities to manage road verges for biodiversity taking into consideration the guidance given in the Plantlife 'Good Verge Guide: a different approach to managing our waysides and verges'.</p> <p>Instigate the use of A5 laminated cab cards or similar to provide site-specific verge management advice to operatives.</p> <p>B-Lines Encourage participation on all spatial scales in habitat enhancement for pollinators in line with B-Lines guidance.</p>	<p>Angus Council</p> <p>Perth & Kinross Council</p> <p>Tayside Biodiversity Partnership</p> <p>Tay Landscape Partnership</p> <p>Botanical Society Britain and Ireland</p> <p>Buglife Scotland</p> <p>Plantlife Scotland</p> <p>Scottish Wildlife Trust</p> <p>BEAR Scotland</p>	Medium

Maintaining & Improving Habitats

Action	Action breakdown	Who takes the action	Timescale
5 Raise awareness of Urban issues to Local Authorities, Community Planning Partners and the wider stakeholder network.	<p>Report twice yearly to community planning thematic partnerships on project contributions to local and national Single Outcome Agreement objectives.</p> <p>Regularly provide biodiversity seminars and workshops to local authority staff on relevant legislation and good practice.</p> <p>Use social media and targeted websites to promote urban issues to as wide an audience as possible.</p>	<p>Tayside Biodiversity Partnership</p> <p>Angus Council</p> <p>Perth & Kinross Council</p>	Long
6 Improve the biodiversity quality of greenspace and green networks in graveyards.	<p>Green Graveyard Initiative</p> <p>Expand existing green graveyard projects (beyond the Carse of Gowrie and N E Perthshire) and undertake biodiversity management of graveyards, cemeteries and crematorium across Tayside.</p>	<p>Tayside Biodiversity Partnership</p> <p>Angus Council</p> <p>Perth & Kinross Council</p> <p>Perth & Kinross Heritage Trust</p> <p>Tay Landscape Partnership</p> <p>Eco-Congregation Scotland</p>	Long
7 Improve the biodiversity quality of greenspace and green networks on golf courses.	<p>Wildlife in the Rough - Tayside Golf Course Projects</p> <p>Monitor all those Perth & Kinross golf courses that received Ryder Cup funding (£44,000) during 2014 and 2015 and raise awareness of all that has been achieved.</p> <p>Research funding options to expand the participation in projects across Tayside.</p> <p>Encourage and support an increase in the wide range of biodiversity projects currently underway on Tayside golf courses.</p>	<p>Scottish Golf</p> <p>Tayside Biodiversity Partnership</p> <p>Local golf clubs</p>	Medium
8 Improve the biodiversity quality of greenspace and green networks on buildings.	<p>Living Roofs & Greening Infrastructure Initiative</p> <p>Mainstream the use and increase the number of green/living roofs, and rain gardens.</p> <p>Raise awareness of biodiversity and sustainable development benefits from green/living roofs, SUDS and rain gardens.</p> <p>Collate Tayside good practice examples for the Scottish Green Roof Forum and Scottish Green Infrastructure website.</p> <p>Complete audit of Tayside's SUDS and shortlist those suitable for community pond projects.</p> <p>Encourage installation of dropped kerbs, wildlife kerbs and amphibian ladders in new build developments and encourage retrofit where appropriate.</p>	<p>Tayside Biodiversity Partnership</p> <p>Angus Council</p> <p>Perth & Kinross Council</p> <p>Scottish Green Infrastructure Forum</p> <p>Royal Institute of Chartered Surveyors</p> <p>Tayside Amphibian & Reptile Group</p>	Long

Maintaining & Improving Habitats

Action	Action breakdown	Who takes the action	Timescale
9 Improve the biodiversity quality of greenspace and green networks by working with local businesses and Local Authorities.	<p>Raise awareness of the benefits of pollinator plants within urban greenspace.</p> <p>Mainstream wildlife gardening and management techniques in private and community gardens, allotments and greenspace.</p> <p>Mainstream biodiversity management of greenspace in business parks and industrial estates.</p> <p>Encourage active input into gardening from local communities to improve wellbeing and health.</p> <p>Increase urban biodiversity across Tayside and its enjoyment by local people.</p> <p>Tayside BeeWild Community Project</p> <p>Prepare a Site Biodiversity Action Plan template for businesses (including care homes) and schools to use to manage their greenspace and gardens for wildlife.</p> <p>Support delivery and continue to raise awareness of good practice examples within hospitals, schools, care homes, sheltered housing complexes, day care centres and businesses with land (industrial estates, business parks, etc).</p> <p>Set up a BeeWild project in Angus (x25 sites 2016-18) and expand project across Tayside (2020-26).</p>	<p>Angus Council</p> <p>Perth & Kinross Council</p> <p>Tayside Biodiversity Partnership</p> <p>Voluntary Action Angus</p> <p>Scottish Environment Protection Agency</p> <p>Balhousie Care Group</p> <p>Barchester Healthcare</p> <p>Hillcrest Housing Association</p> <p>Bumblebee Conservation Trust</p> <p>Buglife Scotland</p> <p>NHS Scotland</p> <p>Business parks and industrial estates</p>	Medium
10 Work with public organisations and businesses to highlight their responsibilities to biodiversity protection in development and action for biodiversity to make positive contributions.	<p>Tayside Swift Conservation Project</p> <p>Work with communities across the region to safeguard existing nest sites and to create new ones.</p> <p>Work with Planners and developers across Tayside to install integral nestboxes in new-builds and to safeguard existing nest sites in properties being restored, insulated or renovated.</p> <p>Use the Carse of Gowrie Pilot Project as a model and expand the project across Tayside.</p> <p>Support the Tay Landscape Partnership in installing external nestboxes across its region.</p> <p>Use the Kirriemuir Swift Conservation Project as a model to work with other Conservation Area Regeneration Schemes across Tayside.</p> <p>Advise on Biodiversity Villages Initiative incorporation of swift projects, using the Stanley Community Swift Group as a model of best practice.</p> <p>Where appropriate, Hillcrest Housing Association to install integral and external nestboxes in its programme of works throughout Tayside.</p>	<p>Tayside Biodiversity Partnership</p> <p>Hillcrest Housing Association</p> <p>Tayside Swifts</p> <p>Tay Landscape Partnership</p> <p>The Carse of Gowrie Sustainability Group</p> <p>Stanley Community Group</p> <p>Concern for Swifts Scotland</p> <p>Swift Conservation</p> <p>Angus Council</p> <p>Tayside Development Trusts</p> <p>Perth & Kinross Council</p> <p>Royal Society for the Protection of Birds</p> <p>Perth and Kinross Heritage Trust</p> <p>Historic Environment Scotland</p> <p>National Trust for Scotland</p> <p>Scottish Wildlife Trust</p>	Short/ Medium

Surveying & Monitoring

Action	Action breakdown	Who takes the action	Timescale
11 Encourage participation in urban citizen science surveys and projects.	<p>Scotland's Urban Flora Project Encourage collection of survey data on flowering plants, ferns, mosses, lichens and fungi within the city limits of Perth.</p> <p>Hirundine Survey Prepare and circulate postcard and poster to raise awareness of swallows, house martins and sand martins and to obtain 'first sightings' data to share with NGOs.</p> <p>Fixed point Photography Identify partners using fixed point photography to monitor changes in urban habitats and species distribution.</p> <p>National Species Surveys Encourage local communities to partake in a wide variety of surveys, including the National Bat Monitoring Programme, RSBP Big Garden Birdwatch, BeeWalks, Big Butterfly Count, National Moth Nights, Living with Mammals, National Insect Week, National Plant Monitoring Scheme, and OPAL Bugs Count surveys.</p> <p>Tayside Swift Survey Continue and widen the Tayside Swift Survey, reporting back data to appropriate organisations.</p> <p>Map Swift populations and nest sites to add to local authority planning GIS layers.</p> <p>Understanding Our Rivers Promote educational activities, including suitable surveys, on the River South Esk at Brechin and Montrose.</p> <p>Local Patch Survey Investigate the repeating of the Tayside Local Patch (Wildlife on your Doorstep) surveys to engage the public in urban biodiversity recording.</p> <p>Wildlife Watching Engage the tourism industry in participating in biodiversity surveys, projects and awareness-raising for all their visitors, service providers, operatives and staff.</p> <p>Work with eco-tourism organisations to raise awareness of key species in and near Tayside towns such as Red Squirrel, Eurasian Beaver, Peregrines; encourage best practice guidelines in wildlife watching.</p>	<p>Tayside Biodiversity Partnership</p> <p>Botanical Society of Britain & Ireland</p> <p>British Trust for Ornithology</p> <p>Royal Society for the Protection of Birds</p> <p>Bumblebee Conservation Trust</p> <p>Buglife Scotland</p> <p>Plantlife Scotland</p> <p>Bat Conservation Trust</p> <p>Mammal Society</p> <p>Butterfly Conservation Scotland</p> <p>Wild Scotland</p> <p>VisitScotland</p> <p>Tourism and business community</p> <p>River South Esk Catchment Partnership</p>	Medium

Education & Awareness Raising

Action	Action breakdown	Who takes the action	Timescale
12 Raise public awareness of their connections with urban biodiversity.	<p>Connect people of all ages with the seasons and their special places by encouraging them to explore their local area.</p> <p>Increase wellbeing through interaction with the natural environment.</p> <p>Support biodiversity awareness – raising projects and initiatives in local garden centres, gardens open to the public and their visitors.</p> <p>ZOOMIn2 Project Encourage participation in the time-lapse nature photography project with its own website – www.zoomin2.co.uk</p>	<p>Tayside Biodiversity Partnership</p> <p>Schools, local community groups, special interest groups (walkers, photographers, etc)</p> <p>Business community</p> <p>Scottish Natural Heritage</p> <p>Royal Society for the Protection of Birds</p> <p>Butterfly Conservation Scotland</p>	Short
13 Encourage school age participation in projects relating to urban issues, working with schools to increase access to nature.	<p>Going the Whole Hog (Angus) Provide 70 schools in Angus with access to the Hedgehog Street education packs and/or the Hedgehog Preservation Society packs to promote their work.</p> <p>Provide 70 schools in Angus with a hedgehog hibernation box, as well as hedgehog-friendly pack of hedging, wildflower seeds and bulbs.</p> <p>Hold a series of biodiversity fairs at key schools within each burgh to raise awareness of wildlife gardening.</p> <p>Expand the project into Perth & Kinross.</p> <p>Contribute records to the People's Trust for Endangered Species' Big Hedgehog Map and publicise the Hedgehog Street projects.</p> <p>School Bats Project Work with schools to install bat roosting boxes where appropriate and to learn more about the ecology of bats.</p>	<p>Angus Alive Ranger Service</p> <p>Tayside Biodiversity Partnership</p> <p>Perth & Kinross Council</p> <p>River South Esk Catchment Partnership</p> <p>Scottish Wildlife Trust</p> <p>Tayside Biodiversity Partnership</p>	Medium
14 Raise awareness across the community of the importance of urban bats and their protection.	<p>Urban Bats Increase the bat population by a variety of conservation methods and surveys, expanding the original Perth-fectly Batty Project.</p>	<p>Tayside Bat Group</p> <p>Bat Conservation Trust</p> <p>Angus Alive Ranger Service</p> <p>Tayside Biodiversity Partnership</p>	Medium

Education & Awareness Raising

Action	Action breakdown	Who takes the action	Timescale
15 Reduce littering and safeguard wildlife.	<p>Don't Let Go Work with the local authorities to implement policies relating to the ban of mass balloon or sky lantern releases.</p> <p>Raise awareness of alternatives to balloon releases.</p> <p>Raise awareness of alternatives to phosphate-rich household cleaning products – consider repeating the "Make the Link to your Sink" tea-towel campaign.</p>	<p>Tayside Biodiversity Partnership</p> <p>Marine Conservation Society</p> <p>National Farmers Union of Scotland</p> <p>Angus Council</p> <p>Perth & Kinross Council</p> <p>River South Esk Catchment Partnership</p>	
16 Raise awareness in villages of endangered species.	<p>Tree Sparrows on the Edge Increase the population and distribution of Tree sparrows in Perth and Kinross and Angus by providing nestboxes and raising awareness within local communities.</p> <p>Biodiversity Villages Initiative - Encourage Tayside village communities to audit their local biodiversity by surveys and BioBlitz events. Facilitate community participation in safeguarding common and endangered species.</p>	<p>Tayside Biodiversity Partnership</p> <p>Volunteer Action Angus</p> <p>Scottish Natural Heritage</p> <p>Royal Society for the Protection of Birds</p> <p>British Trust for Ornithology</p> <p>Tay Landscape Partnership</p> <p>Angus and Dundee Bird Group</p> <p>Perth & Kinross Council</p> <p>Angus Council</p> <p>Local communities</p>	
17 Promote local recorders, clubs and biodiversity open days.	<p>Maintain an up to date database of local recorders and specialist clubs.</p> <p>Utilise the skills of local recorders and clubs to target specific projects including local BioBlitzes.</p> <p>Encourage local open days and promote to the partnerships extended network.</p>	<p>Tayside Biodiversity Partnership</p> <p>Tayside Recorders' Forum</p> <p>Butterfly Conservation Scotland</p> <p>Scottish Natural Heritage</p>	Medium

Invasive Non-Native Species

Action	Action breakdown	Who takes the action	Timescale
18 Raise awareness of INNS and actions that can be taken to halt their spread and treat existing problem areas.	<p>Biosecurity Initiative Support agencies involved in the control of the spread of invasive non-native species, especially Japanese Knotweed, Giant Hogweed, American Skunk Cabbage and Himalayan Balsam. Limit the spread of Grey squirrel.</p> <p>Raise awareness of invasive non-native species and demonstrate the impact that can be achieved by labour intensive (volunteer) control.</p> <p>Facilitate the production of urban area maps highlighting key areas threatened by invasive non-native species.</p> <p>Facilitate work party days with volunteer input to carry out control.</p> <p>Focus on urban areas and in particular those within the following catchments: River Tay and tributaries Western Catchments River South Esk River North Esk Lunan Water</p>	<p>Scottish Environmental Protection Agency</p> <p>Angus Council</p> <p>River South Esk Catchment Partnership</p> <p>Perth & Kinross Council</p> <p>Landowners and land managers</p> <p>Rivers & Fisheries Trust of Scotland</p> <p>Scottish Wildlife Trust</p> <p>Scottish Natural Heritage</p> <p>Tayside Biodiversity Partnership</p> <p>Voluntary Action Angus</p>	Long
19 Safeguard EU Protected Species.	<p>Targeting INNS Assist in targeting INNS in Tayside as directed by Scottish Biodiversity Committee INNS Forum, especially Grey Squirrel control (SWT Red Squirrel Project).</p>	<p>Scottish Environmental Protection Agency</p> <p>River South Esk Catchment Partnership</p> <p>Angus Council</p> <p>Scottish Wildlife Trust</p> <p>Perth & Kinross Council</p> <p>Landowners and land managers</p>	Long
20 Raise awareness of INNS garden pests such as New Zealand Flatworm and actions that can be taken.	<p>New Zealand Flatworm Sightings Publicise the James Hutton Institute campaign to raise awareness of this major threat to biodiversity.</p>	<p>James Hutton Institute</p>	Medium