

Second Nature: A Biodiversity Action Plan for the Falkirk Council Area – Consultation Draft

Falkirk Council

Title: Second Nature: A Biodiversity Action Plan for the Falkirk

Council Area – Consultation Draft

Meeting: Executive Date: 15th May 2018

Submitted By: Director of Development Service

1. Purpose of Report

1.1. The third Biodiversity Action Plan for the Falkirk Council area has been drafted for consultation. It is entitled "Second Nature: A Biodiversity Action Plan for the Falkirk Council Area – Consultative Draft". This report seeks Executive approval to undertake public consultation on the draft plan.

2. Recommendations

2.1. It is recommended that the Executive:

- (1) approves "Second Nature: A Biodiversity Action Plan for the Falkirk Council Area Consultative Draft" for consultation purposes;
- (2) instructs officers to carry out a programme of public consultation; and
- (3) instructs officers to prepare a finalised plan following consultation and report back to the Executive for final approval.

3. Background

- 3.1 The Council-led Falkirk Area Biodiversity Action Plan process works to conserve and enhance the wild plants, animals and habitats of the Falkirk Council area. It aims to coordinate and focus the work of numerous local organisations and individuals, to help conserve our most important and/or threatened local wildlife.
- 3.2 Maintenance of an up to date Biodiversity Action Plan is vital to Falkirk Council fulfilling its statutory duty to further the conservation of biodiversity detailed in the Nature Conservation (Scotland) Act 2004.
- 3.3 The first Biodiversity Action Plan for the Falkirk Council area was published in 2002. A revised plan was published in 2011. These plans set out the actions or projects required to conserve this area's most important and/or threatened wildlife. To date over 450 actions or projects have been completed to help conserve and improve local wildlife, including:-
 - Creation or enhancement of 8 wildflower meadows.
 - Work to protect and review 100 locally designated local nature conservation sites.
 - A barn owl nest box scheme.
 - Projects to improve and promote three Local Nature Reserves.

- Creation or improvement of 11 ponds for rare great crested newts and other amphibians.
- Work to control invasive non-native plants along the River Avon and River Carron.
- Creation of several green roofs, including on the new Carrongrange High School.
- Protection of our rare wintering bean goose flock, including GPS tagging geese to track their migration route from Slamannan to Sweden.
- Protection and management of important brownfield sites with the help of a regular team of volunteers.
- 3.4 A third, updated plan is now required. This plan has been drafted and sets out a range of new actions to conserve and enhance local wildlife.

4. Considerations

4.1 Our latest plan, titled "Second Nature: A Biodiversity Action Plan for the Falkirk Council Area – Consultative Draft", reflects previously agreed local priorities and objectives for wildlife conservation. It is also informed by the results of a workshop involving the main wildlife conservation organisations and groups working locally, including, Buglife Scotland, Scottish Natural Heritage, The Royal Society for the Protection of Birds, The River Forth Fisheries Trust, Scottish Wildlife Trust, Central Scotland Green Network Trust, and Froglife.

4.2 The draft plan includes:

- An introduction to the area's wildlife and why we need to conserve it.
- A vision and targets for local wildlife conservation and enhancement.
- A series of 9 action plans. These list over 100 actions or projects to conserve and enhance our most important and/or threatened local wildlife.

Important measures introduced in the draft plan include:-

- Developing and implementing long term management plans for the protected sites at Bothkennar and Kinneil Lagoons.
- Creating additional new meadows and other pollinator habitat as part of the 'Pollinator Parks' and 'John Muir Pollinator Way' projects.
- Reviewing the Council's open space maintenance regimes, establishing a range of grass cutting options including some of benefit to wildlife.
- Restoring 10 raised bog sites.
- Implementing a pond project mapping our existing ponds, raising awareness of pond wildlife and improving and creating networks of ponds for wildlife.
- A range of projects to protect and conserve important species including: mud snail, water vole, pine marten, bluebell, great crested newt, large heath butterfly, and bean goose.
- A project to enhance the wildlife value of our existing woodlands.
- Integrating action for wildlife in community growing and orchard projects.

- Enhancing and promoting our Local Nature Reserves.
- Projects to promote our local wildlife and encourage people to look after it.

5 Consultation

- 5.1 The revised Biodiversity Action Plan has been produced in consultation with the main delivery partners. A workshop in May 2017 brought together representatives from 14 organisations and community groups involved in local biodiversity conservation and enhancement. They helped to identify:
 - a long term vision for our local wildlife;
 - the biodiversity issues and opportunities we need to focus on locally; and
 - a series of potential projects to include in the new biodiversity action plan.
- 5.2 The proposed consultation on the draft plan will involve:
 - An eight week period of public consultation. The plan will be made available online, at Abbotsford House and in libraries. The consultation process will be promoted using social media. Community Councils will also be contacted directly seeking comment on the plan.
 - The main delivery partners, organisations, community groups and individuals involved in the Biodiversity Action Plan process or likely to be involved in delivering the plan, will be consulted directly during this eight week period.
- 5.3 After the proposed consultation period, all responses will be considered. The document will be finalised in light of these responses. The finalised document and a summary of the consultation results will be reported to the Executive for approval.

6 Implications

Financial

6.1 Funding for project work will be met from existing budgets and through bids for support from external funding sources. Over the last five years over £39,500 of external funding has been directly secured by Falkirk Council to help deliver our current plan. In addition significant external funding has been secured by partner organisations working with Falkirk Council on its delivery.

Resources

6.2 The Biodiversity Action Plan will be implemented using existing staff resources, particularly the Biodiversity Officer.

Legal

6.3 None

Risk

6.4 None

Equalities

6.5 An equality and poverty impact assessment is not required.

Sustainability/Environmental Impact

6.6 The Biodiversity Action Plan will have a positive environmental effect. It has been agreed in consultation with the Scottish Government's SEA Gateway that a full Strategic Environmental Assessment is not required.

7 Conclusions

- 7.1 Production of a revised and updated Biodiversity Action Plan is necessary to ensure continued success in conserving and enhancing our local wildlife. The plan is also an essential part of the Council's response to its statutory duty to further the conservation of biodiversity.
- 7.2 A draft plan has been produced in consultation with the main stakeholders. An eight week period of public and stakeholder consultation is now proposed, prior to finalising the plan.

Director of Development Services

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Appendices

"Second Nature: A Biodiversity Action Plan for the Falkirk Council Area – Consultative Draft"

List of Background Papers:

The following papers were relied on in the preparation of this report in terms of the Local Government (Scotland) Act 1973:

Falkirk Area Biodiversity Action Plan 2011-2014

Second Nature

A Biodiversity Action Plan for the Falkirk Council area

Consultative draft

April 2018

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1. Our wildlife!

The Falkirk Council area is home to a rich variety of wildlife.

It has a fantastic array of habitats ranging from estuary to peat bog; from parks and gardens to ancient woodland.

Our many different habitats support thousands of different types of plants and animals, some of them nationally important or rare.

We also have some really special natural places where wildlife can thrive. Over one hundred local sites are protected because of their special importance for wildlife.

There are many accessible sites where you can discover and enjoy our fascinating local wildlife.

By 'wildlife' we mean all living things – plants, animals, micro-organisms, habitats, and wild places. You might sometimes hear this called 'Biodiversity'.

Our habitats

This area has a wonderful variety of different habitats. This includes 24 types of habitat which are UK priorities for conservation action.

- There are over 580km of rivers and burns locally. They are great places for wildlife & people!
- Woodlands, ancient and new, cover about 33 km² of this area. Why not get out and visit one?
- We have many ponds, pools and lochs. They are home to a huge number of plants & animals!
- Nature is great at recolonising derelict industrial sites. These sites can be amazing havens for wildlife.
- The Forth & Clyde canal and the Union canal are wonderful wildlife corridors.
- Several new meadows have been created recently. Their wildflowers and grasses are perfect for pollinating insects.
- Farmland covers much of this area. Features like hedgerows, trees, pools & field margins can be great for wildlife.
- The Forth Estuary stretches for 48kilometres. It includes mudflats, saltmarsh and rare saltwater lagoons.
- Raised bogs take thousands of years to form and are nationally rare. We have many raised bogs in this area.
- Our parks and gardens cover a huge area. They are a home to wildlife right on our doorsteps.
- About 20% of our area is urban. Greenspaces in towns and cities provide vital refuges for wildlife.

Our plants and animals

This area is home to many fascinating plants and animals. Some of them are nationally important or threatened. At least 45 of our plants and animals are UK priorities for conservation. A further 19 are Scottish priorities.

- Great crested newts are a European protected species. They thrive in several local ponds.
- Every year the Forth Estuary is home to thousands of wintering waders and wildfowl.
- The much loved bluebell brings spring colour to our woodlands.
- A unique group of orchids grows in this area. Only a handful of places in the country have similar ones.
- Specialist invertebrates, like the rare Hobo spider, love disturbed ground on old industrial sites.
- Salmon now live and breed in the River Carron and the River Avon.
- If you are lucky you might spot a lizard. Slow worms and adders also live here but are rarely seen.
- Our rivers and streams are home to otter families. In a few places water voles can also still be found.
- The round-leaved sundew grows on bogs. It doesn't get its food from the soil. Instead it catches bugs to eat!
- Over the last 10 years 38 young barn owls have fledged from nest boxes put up in this area.
- Insects like hoverflies and bees love wild flowers. They do a vital job pollinating crops.

2. Why is our wildlife important?

Wildlife plays a crucial role in our lives. A healthy and diverse natural environment is important.

- It is good for our physical and mental health.
- It creates pleasant places where we can live, work, play and grow.
- It provides us with many vital resources including food, textiles, timber, fuel, and medicines.
- It is estimated to be worth about £17.2 billion to the Scottish economy!
- It does an amazing job filtering our water, cleaning our air, storing flood waters, and soaking up carbon dioxide.
- It has a really important place in our culture, art and national identity.

Plus, our wildlife has intrinsic value; it is important in its own right. It's amazing, beautiful, awe inspiring and pulsing with life!

These benefits are not just for now. We need to make sure that future generations can enjoy them too.

3. What threats does our wildlife face?

The last century has seen dramatic declines in the number and health of many of our wild plants, animals and habitats. Human activities are placing ever-increasing demands on the natural environment.

Major threats to our wildlife include:

Fragmentation

Our remaining natural areas are becoming smaller and more isolated.

Land use

Much of our land is developed or intensively managed, often making it less attractive for wildlife.

Invasive non-native species

Invasive plants and animals that have been introduced to an area by people can cause big problems for our native wildlife.

Pollution

Pollution can weaken or kill our wild plants and animals, and damage the habitats where they live.

Our connection to nature

Society is becoming less connected to nature. Fewer people are experiencing first-hand the wildlife around them.

Climate change

Our plants and animals have to cope with a changing climate. Some may benefit but others will struggle to adapt.

4. Whose job is it to look after our wildlife?

We have a shared responsibility to look after our local wildlife for the good of current and future generations.

Everyone can play a part, including:

- Individuals
- Communities
- Falkirk Council
- Environmental organisations
- Landowners
- Wildlife experts
- Businesses
- Local clubs & interest groups
- Land managers
- Public bodies (like NHS or Scottish Canals)
- Schools and colleges

Over the past 17 years all these sorts of groups have helped to take action to protect and improve our local wildlife. This action plan will guide and encourage us all to keep working together, so that we can do more.

By law, public bodies like Falkirk Council have to look after our local wildlife. The 'Biodiversity Duty' places a legal duty on all public bodies to help conserve wildlife during their day to day work.

5. What do we want to achieve?

By 2040 ...

Respecting, enjoying and looking after our wildlife is second nature to everyone.

So that:

- We all consider our impact on wildlife and look for opportunities to help wildlife as part of every job, project or activity we do.
- We have a rich variety of local wildlife which is healthy, robust and thriving.
- Our natural habitats are home to the full range of plants and animals we would expect to live there.
- Our natural habitats connect up to form an extensive habitat network for wildlife to live in and move through.
- We, and future generations, are able to enjoy and benefit from the many vital services and resources our local wildlife can deliver.
- Local organisations, groups and individuals are encouraged and supported to look after and improve their local wildlife.

This plan helps to focus our action where it is most needed. It aims to ensure that we use our time, money and enthusiasm to get the best results for local wildlife. It will also make sure that we concentrate on helping the wildlife that needs action most urgently.

We have already identified 20 local priority habitats and 102 local priority species. These are the habitats and species that we should focus on. Lists of these habitats and species can be found on pages 36 and 37.

6. What do we need to do?

The following action plans detail projects which will benefit our local wildlife. They focus especially on work to help the habitats, plants and animals which we know are local priorities for action.

There are action plans covering the following themes:

- Estuary
- Farmland and grassland
- Heath and bog
- Water and wetland
- Urban
- Woodland
- Bean geese
- · Connecting people and wildlife
- Invasive non-native species

The projects will be done by all sorts of different organisations, often working together. The action plans list some of the groups most likely to help get the work done. However, other groups and individuals are actively encouraged to join in.

Lots of other local projects are already happening to help wildlife. Other new projects (not included in these plans) may also happen. That's great! We will try to support and encourage any projects which help local wildlife.

This plan needs to be able to respond to new opportunities and challenges. Projects may be altered if needed and new projects might come forward. The action plans include some 'aspirational projects'. These are projects that it would be good to do if the resources and opportunities arise.

It is important that we check that these projects are being done and are benefiting our local wildlife. We will:

- Check annually that the projects in the action plans are being done.
- Encourage local wildlife recording, to help us measure how our plants, animals and habitats are doing.
- Review and update the action plans when necessary.

7. What can you do?

Everyone can help look after our local wildlife.

If you want to help us deliver some of the projects in the action plans please do get in touch.

There are also lots of other things you can do. Here are some ideas:

- Create areas for wildlife in your garden
- Help us record local wildlife
- Develop a space for wildlife in your local community, school or workplace
- Get involved in a local conservation group like the Falkirk Wildlife Volunteers Group
- Enjoy and look after your local green space.
- Get out and about to explore our local wildlife, and let us know what you find.

For more information about this plan or help to take action for local wildlife contact:

The Biodiversity Officer Falkirk Council Abbotsford House David's Loan Falkirk FK2 7YZ

E-mail: biodiversity@falkirk.gov.uk

Tel: 01324 504950 www.falkirk.gov.uk

For inspiration and advice about:	Contact or have a look at:
Wildlife gardening and making a home for nature	Jupiter Urban Wildlife Centre, Grangemouth:
making a nome for nature	www.scottishwildlifetrust.org.uk
	Royal Society for the Protection of Birds www.rspb.org.uk/get-involved/
Local wildlife and wild places to explore	Facebook - falkirkexplored
Wildlife walks & activities	Falkirk Council Outdoor Rangers
	www.rangers@falkirk.gov.uk
	Facebook - falkirkexplored
Wildlife volunteering	Falkirk Wildlife Volunteer Group
	lesley.sweeney@falkirk.gov.uk
Wildlife recording	The Wildlife Information Centre:
-	www.wildlifeinformation.co.uk
Invertebrates	www.buglife.org.uk
Amphibians and reptiles	www.froglife.org
Birds	www.rspb.org.uk

Action Plans

Estuary Action Plan

The Forth Estuary is one of the major estuaries of the British coastline. It stretches for approximately 48km from just above Stirling to the Forth Road Bridge. Estuary habitats include saltmarsh, saltwater lagoons, and mudflats. They support a vast range of different plants and animals, many of them uniquely adapted to estuary life.

The Forth Estuary is home to thousands of waders and wildfowl. In winter there are internationally and nationally important flocks of birds such as pink-footed geese, knot, dunlins, and shelducks. The Forth Estuary is a designated Special Protection Area because of these wintering birds. The millions of invertebrates found in the estuary mud provide food for birds as well as for other aquatic animals. The estuary provides nursery grounds for fish and is home to marine mammals like seals and porpoises.

The estuary experiences a lot of human activity. As well as high levels of industrial activity there is also a lot of fishing and recreational use. These human pressures can have a significant impact on the ecological health of the estuary.

The conservation of our estuaries is further complicated by the impacts of climate change and sea level rise. It is important that our estuary wildlife is able to adapt to these changes.

What we have already done

Over the last ten years, many projects have helped to protect and improve the wildlife of the Forth Estuary. These include:

- Enhancement projects at Kinneil Foreshore, Bothkennar and Kinneil lagoon.
- Several other Inner Forth Landscape Initiative projects.
- A detailed bird survey and assessment of disturbance factors on the Forth Estuary from Dunmore to Blackness.

- > Enhancement and management work at RSPB's Skinflats Reserve.
- Ongoing legal protection of the Firth of Forth Special Protection Area.
- Beach cleans by community and school groups.

- Agree and implement a long term restoration and management plan for Kinneil Lagoons.
- 2 Ensure restoration of Kinneil Landfill includes wildlife benefits.
- Undertake further green network enhancement & management around the harbour area at Bo'ness and Grangepans (linking to Bridgeness and Kinneil Foreshore).
- Deliver environmental enhancements as part of the Grangemouth flood prevention scheme, potentially including compensatory habitat for SPA species.
- Produce and implement a management plan for Bothkennar Pools Site of Special Scientific Interest.
- 6 Do at least one beach clean / litter pick per year.
- 7 Deliver appropriate management and enhancement of the island and shoreline at Kinneil Foreshore Local Nature Reserve.
- Monitor the use of the tern rafts at Bothkennar, doing maintenance as necessary and assessing the need for additional rafts if the original ones are used.
- Take opportunities to raise awareness of the Firth of Forth Special Protection Area amongst local communities and landowners.
- Promote responsible recreation and dog walking along the foreshore, to minimise disturbance to the SPA bird species.

As well as the above projects, it would be beneficial to do the following projects if resources become available.

1	Promote biological recording at important estuary sites.
2	Monitor invasive species in estuarine habitats and take action to control them.
3	Promote monitoring of nurdles (and other plastics) along the shoreline, with associated awareness raising campaigns and litter picks.
4	Reduce the use of disposable/one-use plastics within Falkirk Council and other partner organisations, to help combat marine pollution by plastics.

Who can help?

The following groups are likely to be important in getting these projects done:

Falkirk Council
Forth Estuary Forum
Friends of Kinneil (Kinneil Foreshore Management Group)
Inner Forth Landscape Initiative
Royal Society for the Protection of Birds
Scottish Natural Heritage
Volunteer biological recorders

..... but other groups and individuals can also help.

Priority estuary species, habitats and sites

Priority Species	Priority Habitats	Important Sites
Birds Black-tailed godwit Common Tern	Estuary Intertidal mudflats	Skinflats Reserve Bothkennar (aka Skinflats)
Dunlin Golden plover Great crested grebe	Saline lagoons	Kinneil Kerse
Greylag goose Knot	Saltmarsh	Kinneil Foreshore
Pink-footed goose Pintail Red-breasted meganser Redshank Shelduck Teal		Blackness Bay
Fish Atlantic salmon European eel River lamprey Sea trout Sparling Twaite shad		

Farmland and Grassland Action Plan

This area's countryside is dominated by farmland. Grassland and farm crops cover over 17,000 hectares. That is about 61% of the whole Falkirk Council area. Farming has a big impact on how the landscape looks and the wildlife it supports.

Farms often include features such as crops, set-aside, grassland, hedgerows, trees, dykes, ditches and field margins. They may also have areas of natural habitat like heath, rough grassland, woodland and wetland. All these can be good for wildlife, if managed appropriately. They provide food, shelter and breeding areas as well as corridors to help wildlife to move around the countryside. This is especially important where intensive farming makes the cropped area of fields less hospitable.

Our agricultural landscape is, to a large extent, a man-made environment. Continued management is essential to maintain many of the features and habitats that are valuable to wildlife. Agri-environment payment schemes have a big influence on how we deliver wildlife conservation on farmland.

This area also has 950 hectares of amenity grassland and further small pockets of unimproved or semi-improved grassland in urban areas. These include a number of recently created wildflower meadows.

What we have already done

Over the last ten years, many projects have helped to protect and improve our farmland and grassland wildlife. These include:

- > A barn owl nest box project
- An integrated habitat network study
- Management and enhancement of grassland at 8 Wildlife Sites, Sites of Importance for Nature Conservation and Local Nature Reserves
- > A "Save the Wee Bees" campaign

- Meadow creation and management at 10 sites
- > 'Pollinator Parks' and 'John Muir Pollinator Way' projects
- > A tree sparrow nest box and feeding project

- Continue the Barn owl nest box project relocating unused boxes and doing habitat enhancement at box sites.
- Review Falkirk Council's open-space maintenance regimes. Work with Falkirk Council to establish a range of grass cutting options (including some of increased benefit to wildlife) supported by appropriate machinery, training and awareness raising.
- Carry out appropriate grassland management at all council owned Sites of Importance for Nature Conservation and Wildlife Sites.
- Continue the Falkirk pollinator project (creating or enhancing several pollinator parks, John Muir pollinator way sites, or other sites for pollinators annually).
- Promote the creation of pollinator habitat through awareness raising and training activities associated with the pollinator project.
- Tree sparrow project work to restore the number of tree sparrows using the Bo'mains site, including nest box cleaning and habitat improvement.
- 7 Kestrel nest box project erect kestrel nest boxes alongside existing roost boxes and monitor their use.
- 8 Management and monitoring of the butterfly orchid site and meadow at Muiravonside Country Park.
- A hedgerow project establishing species-rich native hedges where they can provide habitat corridors between existing sites of value for wildlife.

As well as the above projects, if would be beneficial to do the following projects if resources become available.

1	Farm ponds & wetlands project -creating a network of farmland
I	ponds and wetlands.
2	A pilot project to safeguard and enhance wildlife road verges.
3	Monitor, influence and promote agri-environment schemes where
3	possible.
	Identify previously recorded Whorled caraway, Annual knawel,
4	Purple ramping-fumitory and Moonwort sites and survey to see if
	the plants are still present.
5	Promote work on golf courses to benefit wildlife.

Who can help?

The following groups are likely to be important in getting these projects done:

Buglife
Callendar Estates
Central Scotland Green Network Trust
Falkirk Community Trust
Falkirk Council
Falkirk Conservation Volunteers Group
Individual farmers/landowners
Inner Forth Landscape Initiative
Royal Society for the Protection of Birds
Scotland's Rural College
Scottish Wildlife Trust

..... but other groups and individuals can also help.

Priority farmland and grassland species, habitats and sites

Priority Species	Priority Habitats	Important Sites
Mammals	Arable	The low lying carse-land
Brown hare		in the northeast and
	Neutral grassland	east and the Avon valley
Birds		are the main arable
Barn owl	Lowland dry acidic	farming areas.
Bean goose	grassland	El I to the cont
Curlew	Douglass footures	Farmland to the west and south is dominated
Grasshopper warbler	Boundary features	
Grey partridge Kestrel		by grassland.
Lapwing Linnet		Meadow sites include:
Skylark		Weadow Sites include.
Snipe		Bonnyfield nature park
Swallow		Grangepans
Tree sparrow		Kinneil Foreshore
Yellowhammer		Camelon public park
		Policy bing
Invertebrates		, 0
Common blue butterfly		
Swordgrass moth		
Plants		
Annual knawel		
Field scabious		
Greater butterfly orchid		
Harebell		
Lesser butterfly orchid		
Moonwort		
Ox-eye daisy		
Purple ramping-fumitory		
Smooth cats ear		
Whorled caraway		

Heath and Bog Action Plan

Heaths

In Scotland we most commonly associate heath with vast stretches of upland heather moorland. However other types of heath, supporting slightly different groups of plants, occur in lowland or coastal areas.

Heaths are home to many different animals. These include birds such as the meadow pipit, twite, and merlin, and moorland invertebrates like the large heath butterfly.

Heath in the Falkirk area tends to occur in relatively small pockets. These areas are important remnants and may still support valuable heathland species. Changing landuse and poor management of heaths continues to be a threat.

Bogs

Bogs can basically be divided into two types: blanket bogs and lowland raised bogs. Although intermediate bogs can show characteristics of both.

Locally our most important bogs are raised and intermediate bogs. Raised bogs have a characteristic dome of peat which forms over thousands of years. They do a remarkable job absorbing greenhouse gases, filtering and slowing the release of water, and supporting a distinctive range of plants and animals.

Raised bogs are very vulnerable to drainage, over grazing, tree growth and peat removal. Across the UK over 95% of our raised bogs have been seriously damaged or destroyed. Many of our remaining peatlands could take hundreds of years to fully recover from past damage.

What we have already done

Over the last ten years, many projects have helped to protect and improve our heath and bog wildlife. These include:

- A survey for the large heath butterfly (which also identified Small pearl-bordered fritillaries and Green hairstreaks).
- Management of Darnrig Moss SSSI and Howierig Muir SSSI
- Start of the Falkirk Bog Restoration Project
- Review of bog and heath Wildlife Sites and Sites of Importance for Nature Conservation.
- Vegetation, protected species and peat depth surveys on many of our raised bogs.
- Development of planning policies to protect carbon rich soils such as peat.

- Falkirk Bog Restoration Project implement practical restoration on at least 10 sites.
- 2 Encourage or put in place appropriate management of Wildlife Sites and SINCs that support heath habitat.
- Provide advice to landowners of heath and bog sites (covering both habitat and species management).
- 4 Undertake a Large Heath butterfly survey at suitable sites.

 Quantify current peat use by Falkirk Council and, if necessary,
- work to stop the purchase of peat or products made/grown using peat.
- 6 Maintain the protection of peat habitats through the planning process.
- Survey or resurvey known or possible small pearl-bordered fritillary sites.

As well as the above projects, if would be beneficial to do the following projects if resources become available.

1	Monitor the use of Letham moss and Gardrum Moss to identify opportunities for restoration and enhancement if possible.
2	Carry out reptile surveys at appropriate bog and heath sites, and identify any actions needed to protect or benefit reptiles.
3	Explore potential for enhancement at Dunmore Moss by trying to make contact with the landowner.
4	Extend the action to cease peat use to other partner organisations, as appropriate.
5	Establish the historical location(s) of <i>Lepidozia pearsonii</i> and survey to determine if it is still present.

Who can help?

The following groups are likely to be important in getting these projects done:

Buglife
Butterfly Conservation
Callendar Estates
Central Scotland Green Network Trust
Falkirk Council
Froglife
Landowners
Royal Society for the Protection of Birds
Scottish Natural Heritage
Scottish Wildlife Trust

..... but other groups and individuals can also help.

Priority heath and bog species, habitats and sites

Priority Species	Priority Habitats	Important Sites
Birds Black grouse Curlew Grasshopper warbler Hen harrier Merlin	Heath Lowland raised and intermediate bog	Barleyside Black Loch Moss SSSI and SAC Darnrig Moss SSSI Howeirig Muir SSSI Newcraig Moss
Short-eared owl Snipe Twite		Easter Greenrig Grangeneuk Garbethill Muir Salterhill Moss Shippytrouty
Adder Common lizard Slow worm		Shippytrouty
Invertebrates Green hairstreak Large heath		
Plants Round-leaved sundew Liverwort (Lepidozia pearsonii).		

Water and Wetland Action Plan

Water and wetland habitats include:

- rivers and streams
- natural and man-made pools and lochs,
- reservoirs
- canals
- ditches and drainage channels,
- fens, marshes, flushes and swamps.

The Falkirk area includes over 580km of running water. These rivers, burns and ditches are home to lots of wildlife. They also form valuable wildlife corridors, linking other fragmented habitats.

The Falkirk Council area has many ponds, pools, lochs, and reservoirs. These support numerous aquatic species as well as providing feeding and roosting sites for other animals.

Two canals cross the Falkirk area, the Forth & Clyde Canal and the Union Canal. Canals are valuable wildlife areas. They also bring a little bit of countryside into the heart of built up and industrial areas.

Fens, marshes, swamps and flushes are important wetland habitats. They often occur in or next to other habitats such as bogs, marshy grassland, wet heath, or even woodland. They are vital for plants and animals that are especially adapted to wet conditions.

Water and wetlands are vulnerable to human activities because of their relatively small size. They receive most of their water from the land around them, so are sensitive to surrounding land use. Although pollution is a major factor in the health of wetlands, other factors like channel engineering and invasive species also have an impact.

What we have already done

Over the last ten years, many projects have helped to protect and improve our water and wetland wildlife. These include:

- Communities Along The Carron Association projects on the River Carron.
- Surveys for water voles at several key sites.
- Surveys for aquatic invertebrates (including mud snails).
- Pond creation and enhancement for Great crested newts.
- Installation of a fish pass and fish counter at Fankerton Weir.
- Work to enhance the upper reaches of the River Avon.
- Installation of dipper boxes on the Bonny Water.
- ➤ Habitat enhancement and management at Carron Dams Site of Special Scientific Interest and Local Nature Reserve.
- Riverfly Identification workshops
- Work to control invasive, non-native species along our rivers.

- Carry out a 'health check' survey of the River Carron, identifying further conservation and enhancement projects for the river.
- Develop a project to engage local people in mapping, surveying creating, enhancing and looking after ponds for wildlife.
- 3 Enhance the Culloch Burn at the Rumlie, Slamannan.
- Deliver environmental enhancements as part of the Grangemouth flood prevention scheme.
- Undertake enhancement work in the upper reaches of the Avon aiming to improve its current 'bad' classification.
- 6 Protect and monitor known great crested newt sites.
- 7 Identify sites for pond creation and enhancement to link existing great crested newt sites. Create at least one new pond.
- 8 Enhance the Carron Lade, creating areas of open water.
- Continue habitat management and community engagement at Carron Dams Local Nature Reserve.
- Deliver a Mud Snail Project (focused on the known site in the
- Falkirk area) to protect the site, create suitable habitat nearby, breed & release mud snails, and raise awareness of the species.
- Survey areas of suitable water vole habitat close to known or suspected water vole sites. Assess the need for habitat

	enhancement where water voles are found.
12	Continue the 'Fish in the Classroom' project.
13	Create and maintain a sand martin bank at Avonglen Quarry and encourage maintenance of the nest sites at Avondale.
14	Ensure the creation of new riparian parkland in association with development at Banknock South, Gilston & Cauldhame Farm.
15	Encourage river restoration and opportunities to open up culverted watercourses through the Development Management process.

As well as the above projects, if would be beneficial to do the following projects if resources become available.

1	Riparian tree planting project (identify opportunities for riparian tree planting and implement tree planting projects).
2	Explore natural flood management opportunities.
3	Identify any particularly poor quality burns (especially within the urban area) and develop enhancement projects.
4	Develop a project to de-channelise the Culloch Burn through Slamannan, delivering channel enhancement and natural flood management benefits.

Who can help?

The following groups are likely to be important in getting these projects done:

Buglife
Falkirk Council
Froglife
Scottish Canals
Scottish Natural Heritage
Scottish Wildlife Trust
Housebuilders

..... but other groups and individuals can also help.

Priority water and wetland species, habitats and sites

Woodland Action Plan

Within the Falkirk area there are over 1100 hectares of broad-leaved woodland. Over 800 hectares of this is semi-natural, in other words the sort of woodland that naturally occurs within Scotland. Much of this semi-natural woodland is over 150 years old.

This area has around 1500 hectares of conifer plantation, planted mainly for timber production. Other areas of woodland, often more recently planted, include farm woods, amenity woodlands, community woodlands, policy woodlands associated with large estates, and shelter belts or landscaping. Areas of scrub also provide valuable wildlife habitat.

Woodland is important for many of our plants and animals. The mature trees, dead wood and woodland floor are home to hundreds of different invertebrates, as well as more familiar woodland plants, birds and mammals. We tend to associate most woodland wildlife with broadleaved woods. However, conifer woods can also support many species, particularly if they are managed with wildlife in mind. In fact some species, like the red squirrel, particularly favour conifer woods.

The amount of broadleaved and conifer woodland in the Falkirk area has remained relatively stable over recent years. There remains a need to protect our ancient and semi-natural woodlands. There are also opportunities to improve the value of our woodlands for wildlife. This can be achieved by appropriate management and enhancement, and by connecting woodlands to create habitat networks. The Forestry and Woodland Strategy for this area includes a target for delivering 850 hectares of new woodland between 2015 and 2055.

What we have already done

Over the last ten years, many projects have helped to protect and improve our woodland wildlife. These include:

New woodland creation.

- Management of Scottish Wildlife Trust woodland reserves at Carron Glen and Wallacebank Woods.
- Use of woods by schools as outdoor classrooms.
- A Phase I survey and Integrated Habitat Network study
- > Enhancement of Polmont woods and other woodland Wildlife Sites.
- ➤ Enhancement of Larbert Hospital wood and its use as an outdoor classroom.
- Production of a Forestry and Woodland Strategy
- Appointment of an officer to look at management of the Council's woodlands.
- Designation of several additional woodland Wildlife Sites.

- Enhance existing woodlands to improve their value for wildlife –

 1 focusing on council owned woodlands, community woodlands and Wildlife Sites.
- A pine marten project surveying and monitoring populations,
 engaging with landowners and providing suitable habitat and den areas.
- Provide guidance to owners of woodland Wildlife Sites and Sites of Importance for Nature Conservation, about enhancing woodlands for wildlife.
- Produce a long term plan for the Council's woodland estate, ensuring that the programme of management and woodland expansion includes measures to benefit wildlife.
- Plant native bluebells at a minimum of 10 suitable woodland locations (ensuring that no Spanish or hybrid bluebells are also present).
- Survey or resurvey known or possible small pearl-bordered fritillary sites.
- 7 Use the integrated habitat network study to identify key areas for woodland management and expansion.

As well as the above projects, if would be beneficial to do the following projects if resources become available.

1	Veteran trees project: Identification of our most valued veteran trees. Followed by wildlife surveys of the trees and planting of 'veteran trees of the future' nearby.
2	Try to identify the historical location(s) of <i>plagiochilia spinulosa</i> and hay-scented buckler fern and survey to see if it they are still present.
3	Carry out bat box schemes at at least 5 suitable sites (including provision of materials and support for community groups to make and erect boxes).

Who can help?

The following groups are likely to be important in getting these projects done:

Butterfly Conservation
Callendar Estates
Central Scotland Green Network Trust
Forestry Commission Scotland
Falkirk Community Trust
Falkirk Council
Landowners
Scottish Natural Heritage
Scottish Wildlife Trust

..... but other groups and individuals can also help.

Priority woodland species, habitats and sites

Priority Species	Priority Habitats	Important Sites
Mammals Badger Brown long-eared bat Pine Marten	Broadleaved and mixed woodland Lowland wood pastures	Carron Glen SSSI Avon Gorge SSSI
Soprano pipestrelle	and parkland	20 Wildlife Sites
Birds Bullfinch Cuckoo Green woodpecker Redpoll Song thrush Spotted flycatcher Tree pipit Wood warbler Woodcock		11 Sites of Importance for Nature Conservation
Invertebrates Small pearl-bordered fritillary		
Plants Wych elm Hay-scented buckler fern Bluebell Plagiochilia spinulosa (liverwort)		

Urban Action Plan

The urban area is where people and nature meet most often. A surprising variety of plants and animals have adapted to urban life. Many different habitats can also survive in urban areas and some actually need disturbed, post-industrial sites.

About 16% of the Falkirk Council area is buildings and gardens. As well as small remnants of semi-natural habitat like woodlands, the built landscape has some uniquely urban habitats. These include manmade structures, parks, churchyards and cemeteries, gardens, allotments, and waste ground.

Urban habitats are especially valuable where they form a network of open areas or wildlife corridors. These networks allow animals and plant seeds to move from site to site.

Urban wildlife refuges can be particularly important for plants and animals whose natural countryside habitat is being lost or damaged. Some plants and animals are perfectly adapted to urban habitats. The helleborine orchids at Almond Bing depend on the old spoil heaps, a remnant of industrial activity.

People have an enormous impact on our urban environment. This impact does not have to be negative; we are in an ideal position to improve our gardens, parks and other urban areas to benefit wildlife.

What we have already done

Over the last ten years, many projects have helped to protect and improve our urban wildlife. These include:

- Making 'Pollinator Parks' with new meadows and other planting.
- Managing our unique helleborine orchid population.
- Managing Local Nature Reserves at Bonnyfield, Carron Dams and Kinneil Foreshore.

- Publishing Biodiversity and Development Supplementary Planning Guidance.
- Protecting our locally designated Wildlife Sites and Sites of Importance for Nature Conservation.
- Protecting and improving our most important brownfield sites.
- Creating two green roofs in the Grangemouth area.
- > Planting nectar-rich flowers on some roundabouts.
- Identifying semi-natural areas in the Open Space Strategy.
- Creating wildlife gardens and orchards in schools.

- Help schools to enhance their orchards and growing spaces for wildlife.
- 2 Promote wildlife enhancements at community growing sites.
- Assess wildlife enhancement opportunities at council managed cemeteries and graveyards implement a wildlife project at at
- least one site.
- Continue to manage and enhance all brownfield Wildlife Sites and Garibaldi Bing.
- Create and maintain a sand martin bank at Avonglen Quarry and encourage maintenance of the nest sites at Avondale.
- Develop a project to promote wildlife gardening (making links to community growing, school gardens and existing wildlife gardening campaigns).
- 7 Monitor the helleborine orchids at Almond Bing and undertake management if required.
- Create new 'Pollinator Parks' and 'John Muir Pollinator Way' sites, aiming to do at least two sites per year.
- Ontinue to support the local management groups for the 3 Local Nature Reserves and promote enhancement projects at each site.
- Promote appropriate management of urban Wildlife Sites and Sites of Importance for Nature Conservation. Ensure all council owned sites are under appropriate management.
- 11 Provide appropriate training to planners and other council staff as

	required
12	Create a new semi natural area in Zetland Park and provide new semi natural parkland in Whitecross to meet deficiencies identified within the Open Space Strategy.

As well as the above projects, if would be beneficial to do the following projects if resources become available.

1	Develop a House sparrow nest box project
2	Do a pilot project to manage road verges, roundabouts etc. to
	benefit wildlife.
3	Improve greenspace in housing association areas to benefit wildlife.
4	Provide a section in Council building maintenance manuals
4	covering wildlife opportunities and protection.
5	Assess the potential for green roofs on council buildings as
5	buildings come up for maintenance review.
6	Develop a Rain Gardens project.
7	Do surveys for swifts in known or suspected nesting areas and
/	promote pubic reporting of sightings.
8	Promote work on golf courses to benefit wildlife.
	Do bat box schemes at at least 5 suitable sites (including
9	provision of materials and support for community groups to make
	and erect boxes).

Who can help?

The following groups are likely to be important in getting these projects done:

Buglife Central Scotland Green Network Trust
Jupiter Urban Wildlife Centre
Falkirk Council Falkirk Conservation Volunteers Group
Forth Environment Link

LNR management groups Plantlife Scotland

Scottish Wildlife Trust The Conservation Volunteers Scotland

..... but other groups and individuals can also help.

Priority urban species, habitats and sites

Priority Species	Priority Habitats	Important Sites
Mammals Brown long-eared bat	Gardens	Almond Bing
Soprano pipistrelle bat Hedgehog	Urban greenspace	Bonnyfield Nature Park
Birds Bullfinch	Urban wildlife corridors Open mosaic habitat on	Bridgeness shipbreakers
Green woodpecker House sparrow Kestrel	previously developed ground (including bings). (Also known as	Carron Dams Local Nature Reserve
Sand martin Song thrush Starling Swallow	Brownfield habitat)	Jupiter urban wildlife centre
Swift Amphibians		
Common frog Common toad		
Invertebrates Common blue butterfly		
Plants Bluebell Dune helleborine		
Field scabious Harebell Ox-eye daisy		
Wych elm Young's helleborine		

Bean Goose Action Plan

Conservation of the local bean goose flock is being actively progressed by a Bean Goose Action Group. This group covers the Falkirk and North Lanarkshire Biodiversity Action Plan areas. The group has produced and is implementing a species action plan for bean geese. The full action plan is currently available to download at www.northlanarkshire.gov.uk. The following is a brief summary.

The Slamannan Plateau lies just east of Cumbernauld, in the headwaters of the River Avon. The area includes two small lochs and their surrounding peatlands and associated areas of rough and improved grassland. These habitats support over-wintering roosting and feeding Taiga bean geese (*Anser fabalis*).

Bean geese over-winter on the Slamannan Plateau between late September and late February, with peak flock counts ranging between 214 and 267 birds over the last 5 years. The Slamannan Plateau bean goose flock now represents over half of the over-wintering bean goose population within Britain. It is therefore of national and international importance.

What we have already done

Over the last ten years, considerable work has been done to protect our wintering bean geese. This includes:

- ➤ The Bean Goose Action Group, founded in the early 1990's, coordinates action to conserve the wintering flock of bean geese on the Slamannan Plateau.
- > Designation of the Slamannan Plateau SSSI and SPA to protect the bean geese.
- Voluntary bean goose fieldworkers monitor the wintering bean goose flock annually.
- SNH has developed and promoted a Natural Care Scheme to encourage management of parts of the bean goose study area to benefit the bean goose flock. The management scheme is now under review.

- ➤ 18 geese have been fitted with GPS tracking devices and a further 22 have been ringed.
- > A bean goose newsletter has been produced
- > The bean goose website has been developed and holds a lot of information about the geese.
- ➤ The Local Development Plan, Supplementary Guidance and Planning applications are assessed for their potential impact on the bean goose flock.

What we need to do next

The full Bean Goose Action Plan includes many actions and can be viewed on the North Lanarkshire Council website. The main forthcoming actions include:

- Continue the annual monitoring of the bean goose flock, including roost counts.
- Continue the project to track the local and migratory movement of individual geese via GPS tagging.
- Protect the bean goose flock from damaging development through the planning process.
- Ensure that provision and promotion of countryside access does not cause disturbance to the bean goose flock.
- Take opportunities to enhance bean goose habitat as part of raised bog restoration projects taking place on the Slamannan plateau.
- Review the Bean Goose management scheme and promote a revised or new scheme as soon as possible.
- Finalise a research and monitoring plan to prioritise research and monitoring needs and opportunities.
- Highlight the work of the Bean Goose Action Group to similar groups and statutory nature conservation agencies within the Bean
- groups and statutory nature conservation agencies within the Bean Goose range.
- Develop contacts with universities, research units and other organisations/individuals with an interest in bean geese.
- 10 Produce a bean goose newsletter to promote the work of the group

and raise awareness of the flock.

- 11 Develop an education programme with local primary schools.
- 12 Maintain, develop and manage the bean goose website.

What we should do if we get a chance

As well as the above projects, if would be beneficial to do the following projects if resources become available.

- Influence forthcoming agri-environment schemes to try to ensure that they deliver beneficial outcomes for the bean goose flock and support landowners with fields used by the bean geese.
- Secure funding for a research trip to the Bean Goose breeding grounds by one or more of the monitoring officer(s).

Who can help?

The following groups are likely to be important in getting these projects done:

Bean Goose Action Group
Falkirk Council
Forestry Commission
Landowners
North Lanarkshire Council
Royal Society of the Protection of Birds
Scotland's Rural College
Scottish Natural Heritage
Volunteers
Wildfowl and Wetlands Trust

..... but other groups and individuals can also help.

Connecting people and wildlife

We want everyone to respect, enjoy and help look after our local wildlife. This will only happen if people understand how their lives are linked to wildlife and are encouraged to take action to conserve it.

Education and awareness raising is fundamental to successful long term conservation of our local wildlife. This plan aims to increase awareness and understanding of our wildlife. It will encourage people to participate in wildlife conservation. It will also provide opportunities and support to help local groups and individuals to get involved.

What we have already done

Over the last ten years, many projects have helped to raise awareness and understanding of wildlife. Others have encouraged and supported people to get involved in wildlife conservation. These include:

- Organised wildlife walks, talks and activities
- Nature trails leaflet and other publications promoting the outdoors
- A regular 'Life' newsletter
- Wildlife recording events and training
- Schools projects such as the 'Where have you Bean Geese?' education programme.
- Art and interpretation projects, including creation of metal entrance features at Carron Dams.
- Ranger service events and activities
- Various campaigns and education projects from a range of organisations working locally
- > Fish in the Classroom projects
- > The work of the Jupiter Urban Widlife Centre in Grangemouth
- Schools orchards and wildlife gardens
- > Specialist training sessions, for example for the Council's Development Services staff.
- Webpages and facebook pages such as Fakirkexplored.

- 1 Hold a Biodiversity Partnership event annually.
- Help schools to enhance their orchards and growing spaces for wildlife.
- Maps & Apps project use interactive mapping, social media and apps to help people discover local wildlife and wild places and to get involved with biological recording and volunteering.
- 4 Continue the 'Fish in the classroom' programme
- Develop the Wildlife Camera Trap project to enable more groups to get involved in camera trapping in additional areas.
- Encourage biological recording and citizen science promote one public recording initiative per year, with appropriate training and publicity. (Linked to other projects such as garden wildlife, ponds, swifts, bluebells etc.) .
- 7 Wildlife gardening promotion (with links to community growing)
- 8 Produce the 'Life' Newsletter annually
- Support the Falkirk Wildlife Volunteer Group to provide volunteering opportunities and help deliver wildlife projects.
- Pollinator patch project to encourage people to plant for pollinators.
- 11 Continue the Buglife volunteer group.
- Use the Falkirkexplored Facebook page to promote local wildlife and opportunities to get involved.
- Provide training and awareness raising on wildlife issues to Council members and staff as required.

As well as the above projects, if would be beneficial to do the following projects if resources become available.

- Promote outdoor/wild play and discovery, signposting a number of key wild play sites or opportunities and holding several wild play/discovery events. (Potentially focused along the John Muir Way.)
- Develop a network of Outdoor Learning Sites around the Council area.
- 3 'Summer of...' project: Promoting a different habitat or group of species each summer.

Who can help?

The following groups are likely to be important in getting these projects done:

Angling clubs

Buglife

Communities Along The Carron Association

Central Scotland Green Network Trust

Falkirk Council

Falkirk Conservation Volunteers Group

Froglife

John Muir Trust

River Forth Fisheries Trust

Royal Society for the Protection of Birds

Scottish Wildlife Trust

The Conservation Volunteers (Scotland)

The Wildlife Information Centre

..... but other groups and individuals can also help.

Invasive Non-native Species Action Plan

Non-native species are those which would not naturally occur in this country. They have been introduced here, either accidentally or on purpose. There are many non-native species in the UK, but only a small proportion are invasive. An invasive animal or plant has the ability to spread, causing damage to the environment, the economy, our health or the way we live. Invasive non-native species are estimated to cost Britain over £1.7 billion a year.

There are at least 18 invasive non-native species known or expected to occur in this area. Invasive non-native species which are currently causing particular problems locally include:

- Japanese knotweed
- Giant Hogweed
- Himalayan Balsam
- Rhododendron
- Sea Buckthorn
- Mink

Others may spread to the area or become more of a problem in the future.

What we have already done

Over the last ten years, many projects have helped to combat the impact of invasive, non-native species on our local wildlife. These include:

- > Treating Japanese knotweed and giant hogweed along our river systems and on council owned ground.
- Establishing the Falkirk Invasive Species Forum to coordinate treatment of invasive, non-native species and undertake education, training and awareness raising.
- > A project to control mink on the River Avon.
- Himalayan balsam removal by volunteers at several sites.

- ➤ A leaflet to help people identify Japanese knotweed.
- Rhododendron control at several sites.
- Sea buckthorn control at Kinneil Foreshore.

1	Continue Japanese Knotweed (and giant hogweed) control programmes on the river systems.
2	Treat Japanese Knotweed and Giant Hogweed on Council owned land.
3	Continue control of sea buckthorn at Bo'ness.
4	Encourage the treatment of Japanese knotweed and giant hogweed on privately owned land.
5	Assess the scale of Himalayan balsam and Rhododendron Ponticum growth in Wildlife sites and SINCs (focusing initially on council owned sites). Identify sites where control of these species would be feasible.
6	Continue mink monitoring and control on the River Avon.
7	Provide and update information about invasive non-native species on the Council website.
8	Identify the most likely new invasive non-native species that might spread to this area. Highlight these to those people best placed to spot and report their presence quickly.
9	Promote national awareness campaigns such as 'plant wise' and 'check, clean, dry'.
10	Encourage reporting of invasive non-native species by volunteer path wardens and other volunteer groups.

As well as the above projects, if would be beneficial to do the following projects if resources become available.

1	Contact other relevant landowners (Scottish Water, Network Rail, Amey etc) to encourage control of invasive non-native species.
2	Undertake control of Himalayan Balsam at several sites.
3	Undertake control of Rhododendron Ponticum at several sites.
4	Gradually replace the Sea Buckthorn along the foreshore at Bo'ness with more suitable species.

Who can help?

The following groups are likely to be important in getting these projects done:

Communities Along The Carron Association
Falkirk Community Trust
Falkirk Council
Falkirk Invasive Species Forum
Friends of Kinneil (Kinneil Foreshore Management Group)
Larbert and Stenhousemuir Angling Club
River Avon Federation
River Forth Fisheries Trust
Slamannan Angling and Protective Association

..... but other groups and individuals can also help.

Project summary table

	Project	Target habitat(s)	Target species	Potential delivery partners*
1	Agree and implement a long term restoration and management plan for Kinneil Lagoons.	Saline lagoons	Estuarine birds	Falkirk Council, RSPB, SNH
2	Ensure restoration of Kinneil Landfill includes wildlife benefits.	Estuary	Estuarine birds	Falkirk Council
3	Undertake further green network enhancement & management around the harbour area at Bo'ness and Grangepans (linking to Bridgeness and Kinneil Foreshore).	Estuary, mudflats	Estuarine birds	Falkirk Council, Friends of Kinneil (foreshore group)
4	Deliver environmental enhancements as part of the Grangemouth flood prevention scheme, potentially including compensatory habitat for SPA species.	Estuary, saltmarsh, mudflats	Estuarine birds	Falkirk Council
5	Produce and implement a management plan for Bothkennar Pools Site of Special Scientific Interest.	Saline lagoons	Estuarine birds	Falkirk Council, RSPB, SNH
6	Do at least one beach clean / litter pick per year.	Estuary		
7	Deliver appropriate management and enhancement of the island and shoreline at Kinneil Foreshore Local Nature Reserve.	Estuary	Estuarine birds	Friends of Kinneil (foreshore group), Falkirk Council
8	Monitor the use of the tern rafts at Bothkennar, doing maintenance as necessary and assessing the need for additional rafts if the original ones are used.		Common tern (and other estuarine birds)	Falkirk Council, RSPB, TCV
9	Take opportunities to raise awareness of the Firth of Forth Special Protection Area amongst local communities and landowners.	Estuary, saline lagoon, saltmarsh, mudflat	Estuarine birds, fish and mammals	SNH, Falkirk Council, RSPB
10	Promote responsible recreation and dog walking along the foreshore, to minimise disturbance to the SPA bird species.		Estuarine birds	Falkirk Council
11	Continue the Barn owl nest box project – relocating unused boxes and doing habitat enhancement at box sites.		Barn owl	Falkirk Conservation Volunteers Group
12	Review Falkirk Council's open-space maintenance regimes. Work with Falkirk Council to establish a range of grass cutting options (including some of increased benefit to wildlife) - supported by appropriate machinery, training and awareness raising.	Neutral grassland (meadow), urban greenspace		Falkirk Council
13	Do appropriate grassland management at all council owned Sites of Importance for Nature Conservation and Wildlife Sites.	Neutral grassland (meadow), lowland acidic		Falkirk Council

		grassland		
14	Continue the Falkirk pollinator project (creating or enhancing several pollinator parks, John Muir pollinator way sites, or other sites for	Neutral grassland (meadow)	Pollinating insects	Buglife Central Scotland Green
	pollinators annually).	(meadow)		network Trust, Falkirk
4.5			D. W. C. C.	Council
15	Promote the creation of pollinator habitat through awareness raising and training activities associated with the pollinator project.		Pollinating insects	Buglife, Falkirk Council, CSGNT
16	Tree sparrow project – work to restore the number of tree sparrows		Tree sparrows	Falkirk Conservation
	using the Bo'mains site, including nest box cleaning and habitat improvement.			Volunteers Group, SWT
17	Kestrel nest box project - erect kestrel nest boxes alongside existing		Kestrel	Falkirk Conservation
	roost boxes and monitor their use.			Volunteers Group
18		Neutral	Butterfly orchid	Falkirk Community Trust
	Muiravonside Country Park.	grassland, meadow		
19		Boundary		
	they can provide habitat corridors between existing sites of value for wildlife.	features (species- rich hedgerow)		
20	Falkirk Bog Restoration Project – implement practical restoration on at least 10 sites.	Raised bogs	All bog species	Falkirk Bog Restoration Project Partnership members, Buglife, Forestry Commission
21	Encourage or put in place appropriate management of Wildlife Sites and SINCs that support heath habitat.	Lowland heath	All heath species	Falkirk Council
22	Provide advice to landowners of heath and bog sites (covering both habitat and species management).	Lowland heath, bog	All heath & bog species	Falkirk Council, Buglife, Froglife, Butterfly Conservation
23	Undertake a Large Heath butterfly survey at suitable sites.		Large heath butterfly	Butterfly Conservation, TWIC, Buglife, Falkirk Council
24	Quantify current peat use by Falkirk Council and, if necessary, work to	Raised bog		Falkirk Council
0.5	stop the purchase of peat or products made/grown using peat.	Deinselher		Fall into Onoma ail
25		Raised bog	Constitution of the	Falkirk Council
26	Survey or resurvey known or possible small pearl-bordered fritillary sites.		Small pearl- bordered fritillary	Butterfly Conservation, TWIC, Buglife, Falkirk Council
27	Do a 'health check' survey of the River Carron, identifying further	Rivers & streams	All river species	Communities Along the

		conservation and enhancement projects for the river.			Carron, River Forth Fisheries Trust, Falkirk Council, Angling club
	28	Develop a project to engage local people in mapping, surveying creating, enhancing and looking after ponds for wildlife.	Standing open water (ponds)	Amphibians	Falkirk Council, Froglife
	29	Enhance the Culloch Burn at the Rumlie, Slamannan.	Rivers and streams	Salmon, sea trout, eel, lamprey	CSGNT, Falkirk Council, River Forth Fisheries Trust
	30	prevention scheme.	Rivers and streams		Falkirk Council
;	31	Undertake enhancement work in the upper reaches of the Avon – aiming to improve its current 'bad' classification.	Rivers and streams	Salmon, sea trout, eel, lamprey	River Forth Fisheries Trust, River Avon Federation, Slamannan Angling & Protective Association
	32			Great crested newt	Falkirk Council, Falkirk Community Trust, Falkirk Conservation Volunteers Group, Froglife, Echoes Ecology
	33	Identify sites for pond creation and enhancement to link existing great crested newt sites. Create at least one new pond.	Standing open water (ponds)	Great crested newt, amphibians	Falkirk Council
	34	Enhance the Carron Lade, creating areas of open water.	Standing open water, urban wildlife corridors		Falkirk Council, CATCA
;	35	Continue habitat management and community engagement at Carron Dams Local Nature Reserve.	Fen, marsh and swamp, standing open water, brownfield habitat		Carron Dams Management Group, SWT, Falkirk Council, SNH
	36	Deliver a Mud Snail Project (focused on the known site in the Falkirk area) to protect the site, create suitable habitat nearby, breed & release mud snails, and raise awareness of the species.		Mud snail	Buglife Landowner
	37	suspected water vole sites. Assess the need for habitat enhancement where water voles are found.		Water vole	Falkirk Council, River Avon Federation, SAPA
	38	Continue the 'Fish in the Classroom' project	Rivers and streams	Salmon, sea trout	River Forth Fisheries Trust, SAPA, River Avon Federation, CATCA
	39	Create and maintain a sand martin bank at Avonglen Quarry and		Sand martin	Falkirk Council

	encourage maintenance of the nest sites at Avondale.			
40	Ensure the creation of new riparian parkland in association with	Rivers and		Falkirk Council, house
	development at Banknock South, Gilston & Cauldhame Farm.	streams, urban		builders
		greenspace		
41	Encourage river restoration and opportunities to open up culverted	Rivers and		Falkirk Council
	watercourses through the Development Management process.	streams		
42		Broadleaved and	All woodland	Falkirk Council, CSGNT,
	focusing on council owned woodlands, community woodlands and	mixed woodland	species	Community woodland
	Wildlife Sites.			groups, Plantlife
43	A pine marten project – surveying and monitoring populations,		Pine marten	Falkirk Council, SWT,
	engaging with landowners and providing suitable habitat and den			landowners, camera
	areas.			trapping volunteers
44	Provide guidance to owners of woodland Wildlife Sites and Sites of	Broadleaved and	All woodland	Falkirk Council
	Importance for Nature Conservation, about enhancing woodlands for	mixed woodland	species	
4.5	wildlife.	December of an element	Allows a discord	Fall into Carracit COONIT
45	,	Broadleaved and	All woodland	Falkirk Council, CSGNT,
	that the programme of management and woodland expansion includes	mixed woodland	species	Forestry Commission
46	measures to benefit wildlife. Plant native bluebells at a minimum of 10 suitable woodland locations		Bluebell	Falkirk Council, community
40	(ensuring that no Spanish or hybrid bluebells are also present).		Diuebeli	woodland groups, CSGNT
47			Small pearl-	Butterfly conservation,
77	sites.		bordered fritillary	TWIC, Falkirk Council
48	Use the integrated habitat network study to identify key areas for	Broadleaved and	bordered military	Falkirk Council, CSGNT,
.0	woodland management and expansion.	mixed woodland		Forestry Commission
49	Help schools to enhance their orchards and growing spaces for wildlife.	Urban		Falkirk Council, Forth
. •	The provided the contained from the contained that growing operation to the contained	greenspace,		Environment Link,
		gardens		,
50	Promote wildlife enhancements at community growing sites.	Urban		Falkirk Council, Forth
		greenspace,		Environment Link,
		gardens		
51	Assess wildlife enhancement opportunities at council managed	Urban		Falkirk Council
	cemeteries and graveyards – implement a wildlife project at at least	greenspace		
	one site.			
52	Continue to manage and enhance all brownfield Wildlife Sites and	Open mosaic		Buglife, Falkirk Council
	Garibaldi Bing.	habitat on		
		previously		
		developed land		

53	Create and maintain a sand martin bank at Avonglen Quarry and encourage maintenance of the nest sites at Avondale.		Sand martin	Falkirk Council
54	Develop a project to promote wildlife gardening (making links to community growing, school gardens and existing wildlife gardening campaigns).	Gardens, urban greenspace		Jupiter Centre (SWT), Forth Environment Link, Falkirk Council
55	Monitor the helleborine orchids at Almond Bing and undertake management if required.		Helleborine orchids	Falkirk Council, Plantlife
56	Create new 'Pollinator Parks' and 'John Muir Pollinator Way' sites, aiming to do at least two sites per year.	Urban greenspace, meadow	Pollinating insects	Falkirk Council, Buglife, CSGNT
57	Continue to support the local management groups for the 3 Local Nature Reserves and promote enhancement projects at each site.	Urban greenspace		Falkirk Council
58	Promote appropriate management of urban Wildlife Sites and Sites of Importance for Nature Conservation. Ensure all council owned sites are under appropriate management.	Urban greenspace, urban wildlife corridors		Falkirk Council
59	Provide appropriate training to planners and other council staff as required	All		Falkirk Council
60	Create a new semi natural area in Zetland Park and provide new semi natural parkland in Whitecross to meet deficiencies identified within the Open Space Strategy.	Urban greenspace		Falkirk Council, Friends of Zetland Park
61	Continue the annual monitoring of the bean goose flock, including roost counts.		Bean Goose	Bean Goose Action Group
62	Continue the project to track the local and migratory movement of individual geese via GPS tagging.		Bean Goose	Bean Goose Action Group
63			Bean Goose	Bean Goose Action Group
64	Ensure that provision and promotion of countryside access does not cause disturbance to the bean goose flock.		Bean Goose	Bean Goose Action Group
65	Take opportunities to enhance bean goose habitat as part of raised bog restoration projects taking place on the Slamannan plateau.		Bean Goose	Bean Goose Action Group
66	Review the Bean Goose management scheme and promote a revised or new scheme as soon as possible.		Bean Goose	Bean Goose Action Group
67			Bean Goose	Bean Goose Action Group
68	Highlight the work of the Bean Goose Action Group to similar groups and statutory nature conservation agencies within the Bean Goose		Bean Goose	Bean Goose Action Group

	range.			
69	Develop contacts with universities, research units and other		Bean Goose	Bean Goose Action Group
	organisations/individuals with an interest in bean geese.			·
70	Produce a bean goose newsletter to promote the work of the group and		Bean Goose	Bean Goose Action Group
	raise awareness of the flock.			·
71	Develop an education programme with local primary schools.		Bean Goose	Bean Goose Action Group
72			Bean Goose	Bean Goose Action Group
73	Hold a Biodiversity Partnership event annually.			Falkirk Council
74	Help schools to enhance their orchards and growing spaces for wildlife.	Urban		Falkirk Council, Forth
		greenspace,		Environment Link
		gardens		
75	Maps & Apps project – use interactive mapping, social media and apps			Falkirk Council
	to help people discover local wildlife and wild places and to get involved			
	with biological recording and volunteering.			
76	Continue the 'Fish in the classroom' programme	Rivers and	Salmon, sea	River Forth Fisheries Trust,
		streams	trout, lamprey, eel	SAPA, River Avon
77	Develop the Midlife Occase Tree project to each be seen as a see to red		A II	Federation, CATCA
77	Develop the Wildlife Camera Trap project to enable more groups to get		All	Falkirk Council, camera
70	involved in camera trapping in additional areas.		A II	trapping volunteers, TWIC
78	Encourage biological recording and citizen science – promote one		All	TWIC, Falkirk Council
	public recording initiative per year, with appropriate training and publicity. (Linked to other projects such as garden wildlife, ponds,			
	swifts, bluebells etc.) .			
70	Wildlife gardening promotion (with links to community growing)	Gardens		Jupiter centre (SWT, Falkirk
7 9	Whalle gardening promotion (with links to community growing)	Cardens		Council, Forth Environment
				Link
80	Produce the 'Life' Newsletter annually			Falkirk Council
81	Support the Falkirk Wildlife Volunteer Group to provide volunteering		All	
	opportunities and help deliver wildlife projects.			
82	Pollinator patch project – to encourage people to plant for pollinators.		Pollinating insects	Buglife, Falkirk Council,
			ŭ	CSGNT, Jupiter centre
				(SWT)
83	Continue the Buglife volunteer group.			Buglife
84	Use the Falkirkexplored Facebook page to promote local wildlife and			Falkirk Council
	opportunities to get involved.			
85	Provide training and awareness raising on wildlife issues to Council			Falkirk Council
	members and staff as required.			

86	Continue Japanese Knotweed (and giant hogweed) control programmes on the river systems.	Rivers and streams	Invasive species	River Forth Fisheries Trust, River Avon Federation, CATCA, Falkirk Council, Angling clubs
87	Treat Japanese Knotweed and Giant Hogweed on Council owned land.		Invasive species	Falkirk Council
88	Continue control of sea buckthorn at Bo'ness.	Neutral grassland (meadow), estuary		Falkirk Council, Friends of Kinneil (foreshore group)
89	Encourage the treatment of Japanese knotweed and giant hogweed on privately owned land.		Invasive species	Falkirk Invasive Species Forum members
90	Assess the scale of Himalayan balsam and Rhododendron Ponticum growth in Wildlife sites and SINCs (focusing initially on council owned sites). Identify sites where control of these species would be feasible.		Invasive species	Falkirk Council, Falkirk Invasive Species Forum members
91	Continue mink monitoring and control on the River Avon.		Mink	River Avon Federation, Slamannan Angling and Protective Association, River Forth Fisheries Trust
92	Provide and update information about invasive non-native species on the Council website.		Invasvie species	Falkirk Council
93	Identify the most likely new invasive non-native species that might spread to this area. Highlight these to those people best placed to spot and report their presence quickly.		Invasive species	Falkirk Invasive Species Forum
94	Promote national awareness campaigns such as 'plant wise' and 'check, clean, dry'.		Invasive species	Falkirk Invasive Species Forum
95	Encourage reporting of invasive non-native species by volunteer path wardens and other volunteer groups.		Invasive species	Falkirk Invasive Species Forum

^{*} This section gives an indication of the organisation(s) likely to be involved in delivering each action. However it will be added to or altered during consultation and as the projects develop.

Aspirational project summary table

	Project	Target habitat(s)	Target species	Potential delivery partners*
1	Promote biological recording at important estuary sites.	Estuary, mudflats, saline lagoons, saltmarsh		
2	Monitor invasive species in estuarine habitats and take action to control them.	Estuary, mudflats, saline lagoons, saltmarsh		
3	Promote monitoring of nurdles (and other plastics) along the shoreline, with associated awareness raising campaigns and litter picks.	Estuary, mudflats, saltmarsh		
4	Reduce the use of disposable/one-use plastics within Falkirk Council and other partner organisations, to help combat marine pollution by plastics.	Estuary		
5	Farm ponds & wetlands project –creating a network of farmland ponds and wetlands.	Ponds (standing water)	Amphibians	
6	A pilot project to safeguard and enhance wildlife road verges.	Neutral Grassland, lowland acidic grassland, boundary features		
7	Monitor, influence and promote agri-environment schemes where possible.	Grassland, heath, bog, boundary features, standing water, fen, marsh and swamp, woodland		
8	Identify previously recorded Whorled caraway, Annual knawel, Purple ramping-fumitory and Moonwort sites and survey to see if the plants are still present.		Whorled caraway, Annual knawel, Purple ramping fumitory, Moonwort	
9	Promote work on golf courses to benefit wildlife.	Grassland, boundary features, woodland, standing water, fen, marsh and swamp.		
10	Monitor the use of Letham moss and Gardrum Moss to identify opportunities for restoration and enhancement if possible.	Raised bog		

11	Do reptile surveys at appropriate bog and heath sites, and identify any actions needed to protect or benefit reptiles.		Reptiles (adder, slow worm and lizard)	
12	Explore potential for enhancement at Dunmore Moss by trying to make contact with the landowner.	Raised bog		
13	appropriate.	Raised bog		
14	Establish the historical location(s) of <i>Lepidozia pearsonii</i> and survey to determine if it is still present.		Lepidozia pearsonii	
15	Riparian tree planting project (identify opportunities for riparian tree planting and implement tree planting projects).	Rivers & streams, woodland		
16	Explore natural flood management opportunities.	Rivers and streams, woodland		
17	Identify any particularly poor quality burns (especially within the urban area) and develop enhancement projects.	Rivers and streams		
18	Develop a project to de-channelise the Culloch Burn through Slamannan, delivering channel enhancement and natural flood management benefits.	Rivers and streams	Salmon, sea trout	
19	Veteran trees project: Identification of our most valued veteran trees. Followed by wildlife surveys of the trees and planting of 'veteran trees of the future' nearby.	Parkland, woodland		
20	Try to identify the historical location(s) of <i>plagiochilia spinulosa</i> and hay- scented buckler fern and survey to see if it they are still present.		Plagiochila spinulosa, hayscented buckler fern	
21	Do bat box schemes at at least 5 suitable sites (including provision of materials and support for community groups to make and erect boxes).		Bats	
22	Develop a House sparrow nest box project		House sparrow	
23	Do a pilot project to manage road verges, roundabouts etc. to benefit wildlife.	Neutral Grassland, lowland acidic grassland, boundary features	Pollinating insects	
24	Improve greenspace in housing association areas to benefit wildlife	Urban greenspace		
25	Provide a section in Council building maintenance manuals covering wildlife opportunities and protection.	Urban greenspace		
26	Assess the potential for green roofs on council buildings as buildings come up for maintenance review.	Urban greenspace, grassland, Open		

			mosaic habitat on		
			previously developed		
			land		
	27	Develop a Rain Gardens project.	Urban greespace		
	28	Do surveys for swifts in known or suspected nesting areas and promote		Swifts	
28	20	pubic reporting of sightings.			
		Promote work on golf courses to benefit wildlife.	Grassland, boundary		
		The state of the s	features, woodland,		
	29		standing water, fen,		
			marsh and swamp.	_	
	30	Do bat box schemes at at least 5 suitable sites (including provision of		Bats	
	00	materials and support for community groups to make and erect boxes).			
	31	Influence forthcoming agri-environment schemes to try to ensure that they		Bean geese	
		deliver beneficial outcomes for the bean goose flock and support			
		landowners with fields used by the bean geese.			
	32	Secure funding for a research trip to the Bean Goose breeding grounds by		Bean geese	
		one or more of the monitoring officer(s).		S	
	33	Promote outdoor/wild play and discovery, signposting a number of key			
	55				
		wild play sites or opportunities and holding several wild play/discovery			
		events. (Potentially focused along the John Muir Way.)			
	34	Develop a network of Outdoor Learning Sites around the Council area.			
	35	'Summer of' project: Promoting a different habitat or group of species			
		each summer.			
	36	Contact other relevant landowners (Scottish Water, Network Rail, Amey		Invasive species	
		etc) to encourage control of invasive non-native species.		'	
	37	Undertake control of Himalayan Balsam at several sites.		Invasive species	
	38	Undertake control of Rhododendron Ponticum at several sites.		Invasive species	
			N	ilivasive species	
	39	Gradually replace the Sea Buckthorn along the foreshore at Bo'ness with	Neutral grassland,		
		more suitable species.	meadow, estuary		
_					

^{*} This section will give an indication of the organisation(s) likely to be involved in delivering each action. It will be added to during consultation and as specific projects develop.

Priority habitat list

Habitat	Habitat Plan	UK priority habitats included
Estuary	Estuary	
Mudflats		Intertidal mudflats
Saline Lagoons		Saline lagoons
Saltmarsh		Coastal saltmarsh
Arable	Farmland and	Arable Field Margins
Boundary Features	Grassland	Hedgerows
Lowland, dry, acidic grassland		Lowland Dry Acid Grassland
Neutral Grassland		Coastal and Floodplain Grazing Marsh
Heath	Heath and Bog	Lowland Heathland
		Upland Heathland
Lowland raised and intermediate bogs		Lowland Raised Bog
Canals	Inland water and	
Fen, marsh and swamp	wetland	Lowland Fens
		Reedbeds
		Upland Flushes, Fens and
		Swamps
Rivers and Streams		Rivers
Standing open water		Eutrophic Standing Waters Ponds
Open mosaic habitat on	Urban	Open Mosaic Habitats on
previously developed land (including Bings)		Previously Developed Land
Gardens		
Urban Greenspace		
Urban wildlife corridors		
Broadleaved and mixed	Woodland	Lowland Mixed Deciduous
woodland		Woodland
		Upland Mixed Ashwoods
		Upland Oakwood
		Wet Woodland
Wood pasture and		Wood-Pasture & Parkland
parkland		

Priority species list

This list shows the local priority species for the Falkirk area and the main Habitat Plan(s) they are associated with.

Mammals Badger Woodland S Brown hare Farmland & grassland UK S Brown long-eared bat Woodland / Urban UK S European otter Inland water & wetland UK S Pine Marten Woodland UK S Soprano Pipistrelle bat Woodland / Urban UK S Water vole Inland water & wetland UK S Birds Barn owl Farmland & grassland S Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK S Common tern Estuary UK S Curlew Farmland & grassland UK S Dipper Inland water & wetland UK S Dipper Inland water & wetland UK S Grasshopper warbler Farmland & grassland IV S Great crested Estuary S Green woodpecker Woodland Grey partridge Farmland & grassland UK S	Common name	Habitat Plan(s)	S	pecies
Badger Woodland S Brown hare Farmland & grassland UK S Brown long-eared bat Woodland / Urban UK S European otter Inland water & wetland UK S Hedgehog Urban / Woodland UK S Soprano Pipistrelle bat Woodland / Urban UK S Water vole Inland water & wetlands UK S Birds Barn owl Farmland & grassland S Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK S Common tern Estuary S Cuckoo Woodland UK S Curlew Farmland & grassland UK S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK & bog Great crested Estuary Green woodpecker Woodland				
Brown long-eared bat European otter Inland water & wetland UK Hedgehog Urban / Woodland UK Pine Marten Woodland Woodland UK Soprano Pipistrelle bat Water vole Inland water & wetland UK Soprano Pipistrelle bat Woodland / Urban UK S Water vole Inland water & wetlands UK S Birds Barn owl Bean goose Farmland & grassland Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK Common tern Estuary S Cuckoo Woodland Curlew Farmland & grassland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Grasshopper warbler Farmland & grassland / Heath & bog Great crested Estuary Green woodpecker Woodland	Mammals			
Brown long-eared bat European otter Inland water & wetland UK Hedgehog Urban / Woodland UK Pine Marten Woodland Woodland UK Soprano Pipistrelle bat Water vole Inland water & wetland UK Soprano Pipistrelle bat Woodland / Urban UK S Water vole Inland water & wetlands UK S Birds Barn owl Bean goose Farmland & grassland Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK Common tern Estuary S Cuckoo Woodland Curlew Farmland & grassland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Grasshopper warbler Farmland & grassland / Heath & bog Great crested Estuary Green woodpecker Woodland	Badger	Woodland		S
European otter Inland water & wetland UK S Hedgehog Urban / Woodland UK S Soprano Pipistrelle bat Woodland / Urban UK S Water vole Inland water & wetlands UK S Birds Barn owl Farmland & grassland S Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK S Common tern Estuary S Cuckoo Woodland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Great crested Estuary Green woodpecker Woodland	Brown hare		UK	S
Hedgehog Urban / Woodland UK Soprano Pipistrelle bat Woodland / Urban UK Soprano Pipistrelle bat Woodland Soprano VK Sopr	Brown long-eared bat	Woodland / Urban	UK	
Pine Marten Soprano Pipistrelle bat Woodland / Urban UK S Water vole Inland water & wetlands UK S Water vole Inland water & wetlands UK S Birds Barn owl Bean goose Farmland & grassland Bean gouse Heath & bog UK S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK S Common tern Estuary S Cuckoo Woodland UK Curlew Farmland & grassland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath & bog Great crested Green woodpecker Woodland	European otter	Inland water & wetland	UK	S
Soprano Pipistrelle bat Woodland / Urban UK S UK S Birds Barn owl Farmland & grassland S Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK S Common tern Estuary S Cuckoo Woodland UK S Dipper Inland & grassland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK S Great crested Estuary S Green woodpecker Woodland		Urban / Woodland	UK	
Birds S Barn owl Farmland & grassland S Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK S Common tern Estuary S Cuckoo Woodland UK S Dipper Inland water & wetland UK S Dipper Inland water & wetland UK S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK & bog Estuary S Great crested Estuary S Green woodpecker Woodland	Pine Marten	Woodland	UK	
Birds Barn owl Farmland & grassland S Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK S Common tern Estuary S Cuckoo Woodland UK Curlew Farmland & grassland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK & bog Great crested Estuary Green woodpecker Woodland	Soprano Pipistrelle bat	Woodland / Urban	UK	
Barn owl Farmland & grassland S Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK S Common tern Estuary S Cuckoo Woodland UK S Dipper Inland & grassland UK S Dipper Inland water & wetland UK S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK & bog Great crested Estuary Green woodpecker Woodland	Water vole	Inland water & wetlands	UK	S
Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK S Common tern Estuary S Cuckoo Woodland UK S Dipper Inland & grassland UK S Dipper Inland water & wetland UK S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK & bog Great crested Estuary Green woodpecker Woodland	Birds			
Bean goose Farmland & grassland S Black grouse Heath & bog UK S Black-tailed godwit Estuary UK S Bullfinch Woodland UK S Common tern Estuary S Cuckoo Woodland UK S Dipper Inland & grassland UK S Dipper Inland water & wetland UK S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK & bog Great crested Estuary Green woodpecker Woodland	Barn owl	Farmland & grassland		S
Common tern Estuary S Cuckoo Woodland UK Curlew Farmland & grassland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath & bog Great crested Estuary grebe Green woodpecker Woodland	Bean goose			S
Common tern Estuary S Cuckoo Woodland UK Curlew Farmland & grassland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath & bog Great crested Estuary grebe Green woodpecker Woodland		<u> </u>	UK	S
Common tern Estuary S Cuckoo Woodland UK Curlew Farmland & grassland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath & bog Great crested Estuary grebe Green woodpecker Woodland		· ·	UK	S
Common tern Estuary S Cuckoo Woodland UK Curlew Farmland & grassland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath & bog Great crested Estuary grebe Green woodpecker Woodland			UK	S
Cuckoo Woodland UK Curlew Farmland & grassland UK S Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath & bog Great crested Estuary grebe Green woodpecker Woodland	Common tern	Estuary		S
Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK & bog Great crested Estuary grebe Green woodpecker Woodland	Cuckoo	•	UK	
Dipper Inland water & wetland Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK & bog Great crested Estuary grebe Green woodpecker Woodland	Curlew	Farmland & grassland	UK	S
Dunlin Estuary S Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK & bog Great crested Estuary grebe Green woodpecker Woodland	Dipper			
Golden Plover Estuary S Grasshopper warbler Farmland & grassland / Heath UK & bog Great crested Estuary grebe Green woodpecker Woodland		Estuary		S
Grasshopper warbler Farmland & grassland / Heath UK & bog Great crested Estuary grebe Green woodpecker Woodland	Golden Plover			
& bog Great crested Estuary grebe Green woodpecker Woodland	Grasshopper warbler	•	UK	
Great crested Estuary grebe Green woodpecker Woodland				
grebe Green woodpecker Woodland	Great crested	•		
Green woodpecker Woodland	grebe	•		
•	•	Woodland		
	•	Farmland & grassland	UK	S
Greylag goose Estuary				_
Hen harrier Heath & bog S		•		S
House Sparrow Urban UK		<u> </u>	UK	_
Kestrel Urban / Farmland & grassland S				S
Kingfisher Inland water & wetland S		•		S

Knot	Estuary		
Lapwing	Farmland & grassland	UK	S
Lesser redpoll	Woodland	UK	
Linnet	Farmland & grassland	UK	S
Merlin	Heath & bog		S
Pink-footed goose	Estuary		
Pintail	Estuary		
Red-breasted	Estuary		
merganser	,		
Redshank	Estuary		
Reed bunting	Inland water & wetland	UK	S
Sand martin	Urban / Inland water & wetland	• • •	
Sedge warbler	Inland water & wetland		
Shelduck	Estuary		
Short-eared owl	Heath & bog		S
Skylark	Farmland & grassland	UK	S
Snipe	Farmland & grassland / Heath	Oit	Ü
Cripe	& bog		
Song thrush	Urban / Woodland	UK	S
Spotted flycatcher	Woodland	UK	S
Starling	Urban / Woodland	UK	O
Swallow	Farmland & grassland	OIX	
Swift	Urban		S
Teal	Estuary		0
Tree pipit	Woodland	UK	
Tree sparrow	Farmland & grassland	UK	
Twite	Heath & bog	UK	
Water rail	Inland water & wetland	OIX	
Wood warbler	Woodland	UK	S
Woodcock	Woodland	OK	S
Yellowhammer	Farmland & grassland	UK	3
renownammer	Fairmand & grassiand	UK	
Amphibians, reptiles an	d fish		
Common frog	Inland water & wetland		
Common toad	Inland water & wetland	UK	
Great crested newt	Inland water & wetland	UK	S
Palmate newt	Inland water & wetland		
Smooth newt	Inland water & wetland		
Adder	Heath & bog	UK	
Common Lizard	Heath & bog	UK	
Slow worm	Heath & bog	UK	

Atlantic salmon	Inland water & wetland	UK	S	
Brook lamprey	Inland water & wetland		S	
European Eel	Inland water & wetland	UK		
River lamprey	Inland water & wetland	UK	S	
Sea/Brown trout	Inland water & wetland	UK	•	
Sparling (smelt)	Estuary	UK	S	
Twaite shad	Estuary	UK	S	
i waite shau	Estuary	UK	3	
Invertebrates				
Small pearl-bordered	Woodland	UK		
fritillary	VVOCalaria	OIX		
Green hairstreak	Hooth 9 hog			
	Heath & bog			
butterfly				
Large heath	Heath & bog	UK		
butterfly				
A Mud snail	Inland water & wetland	UK	S	
Common blue	Farmland & grassland			
butterfly	-			
Swordgrass moth	Farmland & grassland	UK	S	
3	ŭ			
Flowering Plants				
Annual Knawel	Farmland & grassland	UK	S	
Bennett's	Inland water & wetland			
pondweed				
Bluebell	Woodland		S	
Dune helleborine	Urban		Ū	
Field scabious	Farmland & grassland			ı
Grass of	Inland water & wetland			'
	mand water & wetland			
Parnassus	-		_	
Greater butterfly	Farmland & grassland		S	
orchid	_		_	
Harebell	Farmland & grassland		S	
lvy-leaved water	Inland water & wetland			
crowfoot				
Lesser Butterfly Orchid	Farmland & grassland	UK	S	
Ox-eye daisy	Urban / Farmland & grassland			ı
Purple ramping	Farmland & grassland	UK	S	
fumitory	5 5. g. 3.00.0		-	
Ragged robin	Inland water & wetland			ı
Round-leaved	Heath & bog			i
	rieatri & bog			'
Sundew				

Smooth cats-ear Tufted loosestrife Whorled caraway Wych elm Young's helleborine	Farmland & grassland Inland water & wetland Farmland & grassland Woodland Urban	S
Ferns and lower plants		
Hay scented .	Woodland	
buckler fern		
A liverwort (<i>Plagiochilia</i> spinulosa)	Woodland	
Moonwort	Farmland & grassland	
Pillwort	Inland water & wetland	S
A liverwort (<i>Lepidozia</i>	Heath & bog	
pearsonii)		

*Species status key

- UK UKBAP priority species
 S Species on the Scottish Biodiversity List
 I Indicator species (Used to help indicate the presence and/or ecological health of a specific priority habitat)