

Falkirk Area Biodiversity Action Plan 2010-2013:

Scoping Request

Falkirk Council

September 2010

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1. Context

1.1 The Plan

Plan name, area covered, period covered, timescales for preparation

1.1.1 The Falkirk Area Biodiversity Action Plan (FABAP) 2010-2013 will cover the entire Falkirk Council area and will cover a three year period from 2010, after which it will be reviewed and updated. It is intended to produce a Consultative Draft by October 2010; this will be accompanied by an Environmental Report.

Legal requirement for plan

1.1.2 There is no legal requirement to produce this plan; however, a reviewed Biodiversity Action Plan is now required under the timetable set out in the original action plan, which was prompted by the Convention on Biological Diversity 1992. Production and implementation of the plan forms part of the Council's response to its duty to conserve biodiversity under Part 1 of the Nature Conservation (Scotland) Act 2004.

Plan purpose, subject and proposed objectives

1.1.3 The Falkirk Area Biodiversity Action Plan 2010-2013 is intended to update the existing Falkirk Area Biodiversity Action Plan (published in 2002). The plan aims to focus local conservation activity towards a number of priority habitats and species, encouraging greater partnership working and public participation in the process.

1.1.4 The plan will identify broad objectives for local biodiversity conservation and detail a number of projects to be undertaken to help conserve a variety of habitats and species already identified as conservation priorities within the Falkirk Council Area. It will briefly review the original Falkirk Area Biodiversity Action Plan, outline the direction of the revised plan, identify the main objective(s) of the Biodiversity Action Plan process in the long term and during the plan period 2010-2013, identify the priority habitats and species being targeted locally, and provide a programme of biodiversity projects to be implemented during the period 2010-2013 to help conserve and enhance some of these priority habitats and species.

1.1.5 The objective of the Falkirk Area Biodiversity Action Plan 2010-2013 is to **safeguard the local variety of life**. In working towards this objective, it aims to:

- Protect and enhance our rare and threatened plants, animals and habitats, responding to the local and national needs of biodiversity

- Encourage, inspire and enable local groups and individuals to take action to conserve their local biodiversity
- Promote awareness and understanding of biodiversity, its importance for local and global communities, and our responsibility to conserve and use it wisely.

Relationship with other relevant Plans and Programmes

- 1.1.6 The plan will help to deliver the Scottish Biodiversity Strategy and UK Biodiversity Action Plan at a local level, particularly for those nationally important species and habitats which occur within the Falkirk Council area and can be significantly benefitted by local conservation action.
- 1.1.7 This plan is a review of the original Falkirk Area Biodiversity Action Plan, published in 2002. While the actions detailed within this plan supersede those in the original plan, much of the background information and aspirations remain valid and continue to provide the context to this reviewed plan.
- 1.1.8 The Falkirk Council Structure Plan (2007) and Falkirk Council Local Plan (2010) promote the aims and objectives of the Biodiversity Action Plan and the protection of the local priority species and habitats highlighted within that plan. These policies will apply to any subsequent reviews of the Falkirk Area Biodiversity Action Plan.
- 1.1.9 The FABAP will set the framework for a realistic programme of biodiversity projects which will help to conserve Falkirk's priority habitats and species. The locations, nature and size of projects will be identified through the LBAP, and it will identify priorities for resource allocation. By identifying priority habitats and species the Plan hopes to influence the work priorities and projects of both the Council and partner organisations, encouraging them to undertake further work to conserve or enhance these priorities. The Falkirk Area Biodiversity Action Plan may influence the development and implementation of plans and programmes such as Local site management plans, the Core Path Strategy, the Open Space Strategy, and the Biodiversity and Development SPG.

1.2 The Area

The following are existing environmental problems or issues within the Falkirk area and relevant to the Falkirk Area Biodiversity Action Plan 2010-2013.

1.2.1 Biodiversity – Flora & Fauna

- Decline in species population distribution and numbers for a number of national, regional and /or locally important species.
- A reduction in the area and/or quality of semi-natural habitats or habitats important to nationally, regionally or locally important species populations
- Inappropriate or inadequate management of important habitat resulting in habitat degradation and possible negative impacts on the species dependant on that habitat.
- Pressures from development, agricultural practices and other land uses, resulting in habitat disturbance, degradation or loss and/or species disturbance or loss.
- Fragmentation and isolation of habitats (making both the habitat areas and their dependant species populations vulnerable).
- Loss of or damage to sites/areas of high ecological importance.
- Loss of ecosystem integrity, resulting in a loss of ecosystem services (e.g. flood alleviation) and/or increased vulnerability of species and semi-natural habitats.
- Spread of invasive, non-native species.
- Potential overall loss of biodiversity within the Plan area through local extinctions.

1.2.2 Landscape

- Fragmentation and isolation of areas of natural heritage interest within the wider landscape.
- A loss of green infrastructure, making it difficult for species to move between areas of suitable habitat.

1.2.3 Population

- Limited access to opportunities to enjoy and engage with local biodiversity/natural heritage.
- Limited understanding of biodiversity and its value, the impacts people have on our biodiversity and the role people can play in conserving and enhancing it.

1.2.4 Water

- Some areas of running and/or standing water exhibit poor water quality which has a negative impact on the biodiversity present.
- Inappropriate or absent habitat management within or adjacent to water and wetland features, reducing their value for biodiversity.

- Pressure and potential pollution from adjacent landuse, e.g. development or intensive agriculture, reducing water quality and the biodiversity value of aquatic habitats.
- Isolation of wetland and water features within the landscape, which increases their vulnerability and reduces their value for biodiversity.
- The spread of aquatic invasive, non-native species

1.3 Summary of likely future changes to the environment without the plan

The following environmental changes are likely to occur without implementation of the plan.

1.3.1 Biodiversity – Flora & Fauna

- Many local priority species & habitats will continue to be under threat, and may decline in population size, area or quality.
- Local conservation work may be undertaken in an ad hoc manner, not guided by agreed local targets and with reduced partnership working. This may result in less effective local conservation with reduced benefit for priority species or habitats.
- Possible overall reduction in biodiversity within the local area,
- Potential degradation of some key sites due to lack of appropriate management, with a corresponding degradation or loss of important habitats or species.
- Continued spread of invasive, non-native species, with a detrimental impact on native flora and fauna.

1.3.2 Landscape

- Continued fragmentation of habitats and limited application of integrated habitat network approaches locally, resulting in further isolation and fragmentation of semi-natural habitat.

1.3.3 Population

- Little change in the local availability of opportunities to engage in biodiversity conservation.
- Limited understanding of biodiversity and knowledge of appropriate action and land management techniques that people could undertake to benefit biodiversity.

1.3.4 Water

- Many local priority aquatic species & habitats will continue to be under threat, and may decline in population size, area or quality.
- Local conservation work may be undertaken in an ad hoc manner, not guided by agreed local targets and with reduced partnership working. This may result in less effective local conservation with reduced benefit for priority species or habitats.
- Possible overall reduction in aquatic biodiversity within the local area,
- Potential degradation of some key wetland sites due to lack of appropriate management, with a corresponding degradation or loss of important habitats or species.

- Continued spread of aquatic invasive, non-native species, with a detrimental impact on native flora and fauna.

1.4 Environmental characteristics of areas or features likely to be significantly affected by the plan or programme

Biodiversity (Flora and Fauna), Water and Landscape

Habitats

- 1.4.1 The Falkirk Council area has a rich diversity of habitats considering the relatively small land area. Habitats include: rivers and streams, ponds, lochs, canals and other wetlands; estuarine habitats; woodlands; farmland; grassland and meadows; heaths and upland areas; rocky outcrops, quarries and spoil heaps; peat bogs; brownfield sites and urban greenspace.
- 1.4.2 The most extensive habitats within Falkirk Council area are improved grasslands, arable and horticultural land, built up areas and gardens. This reflects the area's intensive human occupation. Despite this, Falkirk still supports 24 of the 65 UK BAP priority habitats.
- 1.4.3 Habitats that have a disproportionately high representation within the area are: neutral grasslands, lowland dry acidic grassland, lowland raised and intermediate bog, mudflats, upland oakwoods, upland mixed ash woods, wet woodlands, saltmarsh, canals, and open mosaic habitat on previously developed land (brownfield sites).
- 1.4.4 Falkirk Council has recently updated its phase 1 habitat survey of the entire Council area. This provides up to date information about the relative extent of different habitat types and an indication of recent changes to habitat cover.
- 1.4.5 See Appendix A for a full list of the draft Falkirk Area Biodiversity Action Plan priority habitats. These habitats are arranged into six broad habitat types within the plan, brief details of which are given below.
- 1.4.6 Estuary
About 4.6% (14.4km²) of the FABAP area consists of inter-tidal mud and sand, and saltmarsh. In addition several saline lagoons occur beside the Forth Estuary. Due to its high ecological importance, much of this estuarine habitat is protected by its statutory designation as an SPA. As such the overall extent of this habitat remains relatively stable.
- 1.4.7 Farmland and grassland
Around 54.4% (171.2km²) of the FABAP area is covered by grassland or arable cultivation. Much of this (48.9km²) is arable and as such is likely to have limited value for biodiversity. However, where arable field margins and other agricultural areas are specifically enhanced for biodiversity these can have a positive benefit. The bulk of the grassland habitat is improved or poor semi-improved grassland. However, there are smaller areas of semi-improved or unimproved neutral grassland (2.9km²) and acidic grassland (5.4km²) which are of

greater biodiversity interest. The unimproved grassland tends to exist as small localised remnants of a formerly widespread habitat which has been gradually eroded by agriculture, afforestation and urban development. Amenity grassland covers 7.6km² of the FABAP area.

1.4.8 Heath and bog

Heath and heath-grassland mosaics cover just 0.5% (1.5km²) of the FABAP area. This habitat tends to occur in relatively small remnant pockets, however these areas will still support valuable heathland species.

Although small areas, totalling 3.8km², of blanket bog occur within the FABAP area, of far greater importance are its many raised and intermediate bogs. There are at least 45 raised and intermediate bog sites within the area, totalling around 3.7km². Human activity has greatly modified most of these peatlands, and degradation of many local bogs will continue without intervention.

1.4.9 Inland water and wetland

The FABAP area has over 583.8km of running water (rivers, burns drainage ditches etc.). The area's main rivers are the River Carron and the River Avon both of which flow into the Forth Estuary. In addition there is about 2.2km² of standing water habitat. This includes canals, ponds, lochs, reservoirs and pools. Wetland habitats such as fen, swamp, marsh and flushes account for just over 1km². These habitats tend to be relatively small, infrequent and scattered.

1.4.10 Urban

Approximately 20% of the FABAP area is urban in nature, consisting of built up areas and gardens. In addition, areas of spoil and tips (at various stages of use, restoration or regeneration) cover about 1km². Urban features such as buildings, churchyards, bings, railway lines, and road verges can all be beneficial to biodiversity. Bare ground accounts for about 1.2km² of the FABAP area. While the nature of this habitat will be very variable, unique and important biodiversity can occur where vegetation begins to recolonise brownfield sites. Gardens can form a particularly important refuge for species within urban areas, as well as helping to provide green corridors through the 'urban jungle'.

1.4.11 Woodland

Woodland covers about 33.6km² (10.7%) of the FABAP area. Of this, 12.6km² are broadleaved, 13.2km² are conifer and 7.8km² are mixed woodland.

There are limited, but significant, areas of ancient or long-established woodland, as follows:

27 Ancient Woodlands

5 Long established woodlands (semi-natural origin)

26 Long established woodlands (plantation origin)

There has been no overall decline in woodland recently. In fact the area of broadleaved plantation woodland has significantly increased in the period between 1994 and 2008, partly due to a range of planting programmes.

Parkland and scattered trees cover 2km² of the area. While the nature and quality of these areas will be very variable, longer established areas of scattered trees can have significant biodiversity benefits.

In addition dense, continuous scrub covers about 3.2km² and can also be of significant benefit to biodiversity depending on the extent, species and location.

Species

1.4.12 There are 45 UK priority species (almost 4% of the UK Biodiversity Action Plan priority species) known to occur within the Falkirk Council area. Above and beyond these there are 19 other species which feature on the Scottish Biodiversity List. The FABAP review process has also identified a further 38 locally important species. See appendix B for a list of the draft Falkirk Area Biodiversity Action Plan 2010-2013 priority species.

Protected Sites

1.4.13 The FABAP area has a number of local, national and internationally designated sites for nature conservation. These are:

International designations:

- 1 Ramsar site: Firth of Forth
- 1 Special Area for Conservation: Black Loch Moss
- 2 Special Protection Areas: Firth of Forth, Slamannan Plateau

National designations:

- 10 SSSIs: Avon Gorge, Bo'mains Meadow, Black Loch Moss, Carron Dams, Carron Glen, Darnrig Moss, Denny Muir, Firth of Forth, Howierig Muir, Slamannan Plateau

Local designations:

- 62 Wildlife Sites
- 24 SINC
- 1 Local Nature Reserve

1.4.14 A relatively small number of the locally designated sites are currently under active management.

Habitat networks

1.4.15 For this area Integrated Habitat Networks have been identified for woodland, wetland, and grassland habitats. A more detailed analysis of integrated habitats in the Council area is contained within the “Falkirk Integrated Habitat Networks” report June 2008. Table 1 below shows the 500m dispersal distance habitat networks which exist within the Falkirk Council area:

Network type	Number of networks identified	Total area of networks (hectares)	Percentage of less favoured habitat in network
Woodland generalist	2097	17460	34.8%
Broadleaved specialists	1928	6701	53.3%
Ancient broadleaved specialists	395	2961	61.6%
Wetland	2648	3434	31.1%
Grassland generalist	90	1407	28.8%
Lowland acid grassland specialist	57	1252	49.9%
Lowland grassland specialist	13	101	34.9%
Raised bogs	56	1122	17.7%

Table 1: Landscape Metrics for 500m dispersal distance habitat networks within the Falkirk Council area.

1.4.16 With appropriate habitat creation and management there is scope to increase the connectivity of these habitat networks. This would result in a reduction in the overall number of discrete networks and an increase in the average network size and ideally a decrease in the average percentage of unfavourable habitat within a network.

Invasive, non-native species

1.4.17 Invasive, non-native species known to occur within the FABAP area include:

- American mink
- Giant Hogweed
- Grey squirrel
- Himalayan Balsam
- Japanese Knotweed
- New Zealand pygmy weed

Rhododendron ponticum

Other non-native, invasive species are likely to occur within the area.

- 1.4.18 Data on the extent and distribution of these species is very limited at present. There has been little co-ordinated action to control these species at an area-wide level to date. However, some invasive species control has been undertaken at a number of specific sites.

Population

- 1.4.19 Opportunities to experience the areas natural heritage are varied, ranging from the informal to the formal, from guided activities to self-led walks. A range of local organisations provide opportunities including the Council's Outdoor Ranger Service. Limited opportunities to participate in practical conservation or enhancement are provided by a number of local community groups and organisations such as BTCV and CSFT.
- 1.4.20 The Open Space Audit undertaken as part of the Open Space Strategy indicates that across the Council area, 78.1% of the population have access to Natural/Semi Natural Open Space within 1200m (15 minutes walk). Access to Natural/ Semi Natural Open Space is not uniform across the Council area. In Bo'ness the percentage rises to 99.7% of the population, in Grangemouth the percentage falls to only 22.1% of the population.
- 1.4.21 No work has been undertaken locally to measure the current level of awareness and understanding of biodiversity and conservation issues.

2. Scope

2.1 Scope and Level of Detail

Issues to be considered in the Environmental Report	Issues to be scoped out of the Environmental Report
<ul style="list-style-type: none">• Biodiversity – Flora & Fauna• Landscape• Population - improve and promote appropriate access to the natural and historic environment• Water	<ul style="list-style-type: none">• Air• Soil• Climatic Factors• Material Assets• Human Health• Cultural Heritage

Summary of any environmental issues to be considered in the Environmental Report with justifications

2.1.1 The environmental report will consider the issues of biodiversity, landscape, population and water.

Biodiversity – Flora and Fauna

2.1.2 The FABAP 2010-2013 has the potential to significantly affect the biodiversity resource of the Falkirk Council area as it aims to:

- Protect and enhance a range of local priority habitats and species within the Council area through targeted conservation action.

Landscape - Habitat connectivity

2.1.3 The FABAP 2010-2013 has the potential to significantly affect the landscape and habitat connectivity of the Falkirk Council area by:

- Improving the connectivity of habitats within the area, through focused habitat protection, management, enhancement and creation guided by the Integrated Habitat Network approach.
- Promoting the protection, enhancement and management of key sites for biodiversity.

Population

2.1.4 The FABAP 2010-2013 has the potential to significantly affect the availability of opportunities to access and enjoy the natural and historic environment by:

- Promoting local biodiversity and sites/areas where this can be experienced firsthand.
- Encouraging local people to take a more active role in enjoying and protecting biodiversity.

- Encouraging the provision of practical conservation activities in which local people can participate.

Water

2.1.5 The FABAP 2010-2013 has the potential to significantly affect the water resource in the Falkirk Council area as it aims to:

- Protect and enhance a range of local priority habitats including rivers, streams, wetlands, and standing open water and a range of aquatic species.

Summary of any environmental issues not to be considered in the Environmental Report with justifications

2.1.6 Not included within the report will be environmental issues relating to: Air, Soil, Climatic Factors, Material Assets, Human Health and Cultural Heritage.

Air

2.1.7 The Biodiversity Action Plan is unlikely to have any significant impact on air quality.

2.1.8 The Biodiversity Action Plan may identify and implement habitat and species conservation projects which increase vegetation cover which could have a localised, positive effect on air quality. However, any effect would be negligible and therefore not significant.

Soil

2.1.9 The Biodiversity Action Plan is unlikely to have any significant impact on soils.

2.1.10 The Biodiversity Action Plan may identify and implement habitat and species conservation projects on habitat which is dependant on important underlying soil reserves such as peat or ancient woodland soils. However, any effect on the soil itself would be negligible and therefore not significant.

Climatic Factors

2.1.11 The Biodiversity Action Plan may identify projects which indirectly increase flood water retention or protect and enhance floodplains. However, it seems unlikely that this will have a significant effect on the level of flooding experienced within the Falkirk Council area.

2.1.12 The Biodiversity Action Plan may identify and implement habitat and species conservation projects which increase vegetation cover and/or

enhance active raised bogs which could have an effect on the capacity of the Falkirk Council area to absorb carbon dioxide. However, the effect of the Action Plan on global or even the Council areas greenhouse gasses is not considered to be significant.

Material Assets

2.1.13 The Biodiversity Action Plan is unlikely to have a significant effect on material assets.

Human Health

2.1.14 The FABAP is unlikely to have a significant effect on human health in terms of noise, odour, waste management sites or proximity to potential sources of pollution.

2.1.15 Individual projects identified by the FABAP process may potentially (depending on their subsequent detailed design and implementation) have a negative impact in terms of noise or odour. However these projects will undergo an in-house environmental assessment during their development and prior to implementation, to ensure that they do not have significant negative impacts on human health.

Cultural Heritage

2.1.16 The FABAP 2010-2013 has the potential to significantly affect the designated cultural heritage features within the area (if project work is undertaken inappropriately) by carrying out biodiversity conservation project work on or near sites of cultural heritage importance in a manner that has a negative impact on that cultural heritage.

2.1.17 However, each proposed project will, at a later stage in its design and development, undergo an in-house environmental assessment. This assessment will include consideration of whether the project will have an impact on any features of cultural heritage. Where there is a negative impact identified, that cannot be mitigated, the project will not commence. Therefore it is unlikely that there will be a significant impact on cultural heritage.

Summary of the proposed level of detail of assessment

2.1.18 The Falkirk Area Biodiversity Action Plan 2010-2013 will identify:

- A broad overall objective and a number of aims which expand upon this objective
- a number of principles and criteria for the selection of biodiversity projects to be undertaken within the plan lifespan, and
- a range of projects to be undertaken during that three year lifespan.

- 2.1.19 Strategic Environmental Assessment will be carried out on the Plan's broad objective and, in particular, the aims that this is translated into. It will also be carried out for the criteria for the selection of specific biodiversity projects to be highlighted within the plan.
- 2.1.20 Strategic Environmental Assessment will not be carried out on the individual projects proposed within the FABAP.
- 2.1.21 At this stage the individual projects are not sufficiently developed to allow for meaningful environmental assessment.
- 2.1.22 The project selection criteria detailed within the FABAP (and subject to SEA) will help to ensure that the positive environmental impacts of the FABAP are maximised, subject to local constraints, through the selection of appropriate projects.
- 2.1.23 While the FABAP identifies outline projects, these will be further developed and then undergo an in-house environmental assessment to ensure that they will not have a significant negative environmental impact, prior to implementation. This assessment can only be effectively undertaken during the detailed design phase of a project. At this detailed project phase an in-house environmental assessment is the most appropriate assessment tool and not SEA (which is to be applied to plans, programmes and strategies rather than specific projects or actions). Should a proposed project be shown to have a significant negative environmental impact that cannot be mitigated for, the project will not be implemented.

2.2 Alternatives & Mitigation

2.2.1 The FABAP identifies a broad objective to 'Safeguard the local variety of life'. This will be translated into a number of more specific aims. The following list is a broad indication of the alternative aims that the FABAP could adopt:

Aim 1:

- a) Protect and enhance a number of priority habitats and species that are identified in response to local and national priorities.
- b) Protect and enhance a number of habitats and species that are identified in response to national priorities only.
- c) Protect and enhance a number of habitats and species that are identified in response to local priorities only.
- d) Protect and enhance all habitats and species

Aim 2:

- a) Encourage and help all local groups and individuals to participate in active local conservation.
- b) Focus engagement in active conservation on existing conservation interest groups only.
- c) Do not adopt an aim relating to engagement

Aim 3:

- a) Promote awareness and understanding of biodiversity to all possible audiences.
- b) Promote awareness and understanding of biodiversity to a limited number of key audiences
- c) Do not adopt an aim relating to awareness raising and education

2.2.2 The Falkirk Area Biodiversity Action Plan 2010-2013 identifies a range of broad habitat types / biodiversity themes. These are:

Woodland
Farmland & grassland
Estuarine
Heath & Bog
Water and Wetland
Urban habitats
Education and Participation

The selection of projects could aim to:

- a) identify one or more projects from each of the range of broad habitat types/themes, or
- b) identify projects from a limited number of the broad habitats/themes identified

2.2.3 The FABAP will identify criteria for the selection of projects for inclusion within the plan. The following list is a broad indication of the sort of criteria that could be used:

- The national and local status of the habitat or species to be benefitted
- The likely local and national impact of the project on the species/habitat
- The number of priority species/habitats likely to benefit from the project
- The capacity of the biodiversity officer or another officer to lead on the project
- The capacity of partner organisations to help implement the project
- Cost and available funding
- The potential for joint working with other organisations and LBAP areas
- The value of the project for awareness raising, engagement and education

Alternative approaches to identifying criteria would be:

- a) Use all of the above criteria but prioritise those relating to the likely benefit afforded to species and habitats with a view to their local and national status.
- b) Use all of the above criteria but prioritise those relating to capacity to deliver and resource availability (e.g. capacity of organisations to implement, cost etc.)
- c) Use all of the above criteria but prioritise those relating to the value of the project for partnership building, education, awareness raising, and engagement.

2.2.4 The Biodiversity Action Plan 2010-2013 is unlikely to have a negative effect on any environmental asset so mitigation is unlikely to be necessary.

2.3 Methods

Assessment Method Summary

2.3.1 The proposed approach to assessment will be to ask specific questions of each aim or criteria, then consider how each will be likely to perform and how they can be altered to enhance performance.

ENVIRONMENTAL STOCK CRITERIA			
	Draft SEA Objectives	Draft Assessment Questions	Draft Performance Indicators
Biodiversity	<ul style="list-style-type: none"> Safeguard and enhance priority habitats and species (as defined in the FABAP) Safeguard designated sites and key areas of habitat Increase/enhance biodiversity in the wider environment. Contribute to improved habitat connectivity, guided by the Falkirk integrated habitat network study. 	<ul style="list-style-type: none"> To what extent will the alternative conserve/enhance or degrade biodiversity? (consider the number/area and status of species or habitats in question) Does the alternative protect or degrade designated sites? Does the alternative enhance the wider Falkirk Integrated Habitat Network? 	<ul style="list-style-type: none"> Number and status of priority species safeguarded. Area and quality of priority habitats protected or enhanced. Number of designated sites enhanced or put into positive management Number of habitat networks increased in size, enhanced or connected
Landscape	<ul style="list-style-type: none"> Improve the functional connectivity of habitats within the landscape Retain/protect designated sites and secure their appropriate management. 	<ul style="list-style-type: none"> To what extent will the alternative help to improve functional habitat connectivity? Will the alternative affect designated sites? 	<ul style="list-style-type: none"> Number of habitat networks increased in size, enhanced or connected Number and management status of designated sites
Population	<ul style="list-style-type: none"> Ensure that the local population has opportunities to enjoy local biodiversity firsthand. Provide opportunities for participation in practical conservation Increase awareness and understanding of biodiversity and how we affect it 	<ul style="list-style-type: none"> To what extent will the alternative provide opportunities for the enjoyment of local biodiversity? To what extent will the alternative provide opportunities for participation in practical conservation? To what extent will the alternative raise awareness and understanding of biodiversity issues? 	<ul style="list-style-type: none"> Number of organised opportunities to enjoy biodiversity Number of key biodiversity sites accessible to members of the public Number of organised opportunities to participate in practical conservation tasks
Water	<ul style="list-style-type: none"> Safeguard and enhance priority water/wetland habitats and aquatic species Improve habitat connectivity of wetland and water habitats, in line with the integrated habitat network study Improve water quality through appropriate habitat enhancement works 	<ul style="list-style-type: none"> To what extent will the alternative conserve/enhance or degrade aquatic/wetland biodiversity? (consider the number/area and status of species or habitats in question) Does the alternative enhance the wider Falkirk Integrated Habitat Network in relation to water/wetland habitats? Does the alternative help to improve water quality 	<ul style="list-style-type: none"> Number and status of priority aquatic species safeguarded. Area and quality of priority water/wetland habitats protected or enhanced. Number of water/wetland habitat networks increased in size, enhanced or connected Improvements to water quality assessments (undertaken by SEPA) for the Carron and Avon Rivers and their tributaries

2.3.2 Where alternatives are to be considered, a summary matrix will be presented to detail what effect the alternatives have on biodiversity, landscape, population, and water. This will be for illustrative purposes only, as the aim of the assessment process is to identify the environmental effects of each alternative to aid decision making rather than to complete a tick box exercise.

Sample Summary Matrix

Aim / Criteria	biodiversity	landscape	population	water	Assessment Commentary (including information on short, medium, long term; permanent, temporary; secondary, cumulative, synergistic effects)	Proposed changes to the PPS or proposed mitigation

Effects on each environmental issue will be scored using the following key:

Significant positive impact	Minimal positive impact	Neutral or unknown impact	Minimal negative impact	Significant negative impact
++	+	?	-	--

2.3.3 It is expected that monitoring of the Falkirk Area Biodiversity Action Plan 2010-2013 will take place through:

- Monitoring the implementation of projects identified within the plan.
- Identifying measures of success for these projects and monitoring and reporting on these.
- Monitoring the number of locally designated sites protected and placed under appropriate management.
- Monitoring changes in the Falkirk area integrated habitat network.
- Where possible, encouraging and promoting local biological recording to assist in the monitoring of local priority species and habitats.

2.4 Next Steps

Consultation

2.4.1 It is proposed that consultation will be undertaken on the environmental report and The Falkirk Area Biodiversity Action Plan 2010-2013 consultation draft at the same. The form of this consultation is likely to be by circulating copies of the draft plan and environmental report to key agencies and stakeholders and asking them to comment on the documents and answer specific consultation questions. The draft plan and environmental report will also be made available for comment on the Falkirk Council website.

Consultation Timetable

2.4.2 It is planned that consultation will be undertaken for an eight week period, following approval of the draft Falkirk Area Biodiversity Action Plan 2010-2013 by the relevant Falkirk Council committee. Currently this is estimated to take place from November 2010.

Appendix A

Draft FABAP 2010-2013 priority habitats

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

Appendix B

Draft FABAP 2010-2013 priority species

Common name	Scientific name	Species status	
Mammals			
Badger	<i>Meles meles</i>		S
Brown hare	<i>Lepus europaeus</i>	UK	S
Brown long-eared bat	<i>Plecotus auritus</i>	UK	S
European otter	<i>Lutra lutra</i>	UK	S
Hedgehog	<i>Erinaceus europaeus</i>	UK	
Soprano Pipistrelle bat	<i>Pipistrellus pygmaeus</i>	UK	S
Water vole	<i>Arvicola terrestris</i>	UK	S
Birds			
Barn owl	<i>Tyto alba</i>		S
Bean goose	<i>Anser fabilis</i>		S
Black grouse	<i>Tetrao tetrix</i>	UK	S
Black-tailed godwit	<i>Limosa limosa</i>	UK	S
Bullfinch	<i>Pyrrhula pyrrhula</i>	UK	S
Common tern	<i>Sterna hirundo</i>		S
Cuckoo	<i>Cuculus canorus</i>	+	UK
Curlew	<i>Numenius arquata</i>	UK	S
Dipper	<i>Cinclus cinclus</i>		
Dunlin	<i>Calidris alpina</i>		S
Golden Plover	<i>Pluvialis apricaria</i>		S
Grasshopper warbler	<i>Locustella naevia</i>	+	UK
Great crested grebe	<i>Podiceps cristatus</i>		
Green woodpecker	<i>Picus viridis</i>		
Grey partridge	<i>Perdix perdix</i>	UK	S
Greylag goose	<i>Anser anser</i>		
Hen harrier	<i>Circus cyaneus</i>		S
House Sparrow	<i>Passer domesticus</i>	+	UK
Kestrel	<i>Falco tinnuculus</i>		S
Kingfisher	<i>Alcedo atthis</i>		S
Knot	<i>Calidris canutus</i>		
Lapwing	<i>Vanellus vanellus</i>	UK	S
Lesser redpoll	<i>Carduelis flammea</i>	UK	
Linnet	<i>Carduelis cannabina</i>	UK	S
Merlin	<i>Falco columbarius</i>		S
Pink-footed goose	<i>Anser brachyrhynchus</i>		
Pintail	<i>Anas acuta</i>		
Red-breasted merganser	<i>Mergus serrator</i>		
Redshank	<i>Tringa tetanus</i>		
Reed bunting	<i>Emberiza schoeniculus</i>	UK	S
Sand martin	<i>Riparia riparia</i>		
Sedge warbler	<i>Acrocephalus schoenobaenus</i>		
Shelduck	<i>Tadorna tadorna</i>		
Short-eared owl	<i>Asio flammeus</i>		S
Skylark	<i>Alauda arvensis</i>	UK	S
Snipe	<i>Gallinago gallinago</i>		
Song thrush	<i>Urdus philomelos</i>	UK	S
Spotted flycatcher	<i>Muscicapa striata</i>	UK	S
Starling	<i>Sturnus vulgaris</i>	+	UK
Swallow	<i>Hirundo rustica</i>		
Swift	<i>Apus apus</i>		S
Teal	<i>Anas cracca</i>		
Tree pipit	<i>Anthus trivialis</i>	UK	
Tree sparrow	<i>Passer montanus</i>	UK	
Twite	<i>Carduelis flavirostris</i>	UK	

Water rail	<i>Rallus aquaticus</i>			
Wood warbler	<i>Phylloscopus sibilatrix</i>		UK	S
Woodcock	<i>Scolopax rusticola</i>			S
Yellowhammer	<i>Emberiza citrinella</i>		UK	
Amphibians, reptiles and fish				
Common frog	<i>Rana temporaria</i>			
Common toad	<i>Bufo bufo</i>		UK	
Great crested newt	<i>Triturus cristatus</i>		UK	S
Palmate newt	<i>Triturus helveticus</i>			
Smooth newt	<i>Triturus vulgaris</i>			
Adder	<i>Vipera berus</i>		UK	
Common Lizard	<i>Lacerta vivipara</i>	+	UK	
Slow worm	<i>Anguis fragilis</i>	+	UK	
Atlantic salmon	<i>Salmo salar</i>		UK	S
Brook lamprey	<i>Lampetra planeri</i>			S
European Eel	<i>Anguilla anguilla</i>	+	UK	
River lamprey	<i>Lampetra fluviatilis</i>		UK	S
Sea/Brown trout	<i>Salmo trutta fario</i>		UK	
Sparling (smelt)	<i>Osmerus eperlanus</i>		UK	S
Twaite shad	<i>Alosa fallax</i>		UK	S
Invertebrates				
Small pearl-bordered fritillary	<i>Boloria selene</i>		UK	
Green hairstreak butterfly	<i>Callophrys rubi</i>			
Large heath butterfly	<i>Coenonympha tullia</i>		UK	
A Mud snail	<i>Omphiscola glabra</i>		UK	S
Common blue butterfly	<i>Polyommatus icarus</i>			
Swordgrass moth	<i>Xylena exsoleta</i>		UK	S
Flowering Plants				
Annual Knawel	<i>Scleranthus annuus</i>	+	UK	S
Bennett's pondweed	<i>Potamogeton x bennetti</i>			
Bluebell	<i>Hyacinthoides non-scripta</i>			S
Dune helleborine	<i>Epipactis leptochila dunensis</i>			
Field scabious	<i>Knautica arvensis</i>			I
Grass of Parnassus	<i>Parnassia palustris</i>			
Greater butterfly orchid	<i>Platanthera chlorantha</i>			S
Harebell	<i>Campanula rotundifolia</i>			S
Ivy-leaved water crowfoot	<i>Ranunculus hederaceus</i>			
Lesser Butterfly Orchid	<i>Platanthera bifolia</i>	+	UK	S
Ox-eye daisy	<i>Chrysanthemum leucanthemum</i>			I
Purple ramping fumitory	<i>Fumaria purpurea</i>		UK	S
Ragged robin	<i>Lychnis flos-cuculi</i>			I
Round-leaved sundew	<i>Drosera rotundifolia</i>			I
Smooth cats-ear	<i>Hypochaeris glabra</i>			S
Tufted loosestrife	<i>Naumburgia thyrsoiflora</i>			
Whorled caraway	<i>Carum verticillatum</i>			
Wych elm	<i>Ulmus glabra</i>			
Young's helleborine	<i>Epipactis youngiana</i>			
Ferns and lower plants				
Hay scented buckler fern	<i>Dryopteris aemula</i>			
A liverwort	<i>Plagiochilia spinulosa</i>			
Moonwort	<i>Botrychium lunaria</i>			
Pillwort	<i>Pilularia globulifera</i>			S
A liverwort	<i>Lepidozia pearsonii</i>			

Species status key

+ - species added to the list in 2010

UK – UKBAP priority species

S - Scottish Biodiversity List species

I – Indicator species

Appendix C

Phase I habitat survey update 2008: Area coverage of different habitat types.

Falkirk Council
Phase 1 Habitat Survey Update
Falkirk 2008



Table 1: Area coverage of different habitat types

Habitat	Category	1994-95			2008			
		Km ²	Km ²	%	Km ²	Km ²	%	
Coastland (4.6%)	Intertidal - mud/sand	12.2	13.8	4.4				
	Intertidal - shingle/cobbles		0.0	0.0				
	Saltmarsh - dense/continuous	1	0.6	0.2				
	Coastal grassland	0.04						
Grassland and Marsh (36.4%)	Acid grassland - semi-improved	5.3	4.7	1.5				
	Acid grassland - unimproved		0.7	0.2				
	Calcareous grassland - semi-improved		0.0	0.0				
	Improved grassland	103.7	87.8	27.9				
	Marsh/marshy grassland	3.77	4.1	1.3				
	Neutral grassland - semi-improved	5	2.1	0.7				
	Neutral grassland - unimproved		0.8	0.3				
	Poor semi-improved		14.5	4.6				
	Heathland (0.5%)	Dry dwarf shrub heath - acid		0.3	0.1			
		Dry dwarf shrub heath - basic	0.4	0.0	0.0			
Dry heath/acid grassland mosaic		0.8	0.6	0.2				
Wet dwarf shrub heath		0.5	0.3	0.1				
Wet heath/acid grassland mosaic		0.05	0.3	0.1				
Mire (3.6%)	Bare peat	1.8	2.6	0.8				
	Blanket bog	0.6	3.8	1.2				
	Dry modified bog	0.5	1.4	0.4				
	Fen	0.2	0.6	0.2				
	Fen - basin mire		0.3	0.1				
	Fen - valley mire	1.5	0.2	0.1				
	Flush and spring - acid/neutral flush	0.9	0.0	0.0				
	Raised bog	2.4	0.1	0.0				
	Wet modified bog	1.6	2.2	0.7				
	Miscellaneous (21.7%)	Bare ground	0.7	1.2	0.4			
		Built-up areas	27.7					
Buildings			9.4	3.0				
Cultivated/disturbed land - amenity grassland		9.2	7.6	2.4				
Cultivated/disturbed land - arable		41.8	48.9	15.5				
Cultivated/disturbed land - ephemeral/short perennial		0.1	0.1	0.0				
Introduced shrub		0.01	0.1	0.0				
Other habitat		0	0.8	0.3				
Sea wall			0.0	0.0				
Open Water (1.4%) ⁶		Running water	0.1	2.2	0.7			
		Standing water	1.5	2.2	0.7			
Rock Exposure and Waste (0.9%)	Inland cliff - acid/neutral	0.01	0.0	0.0				
	Mine	0.007	0.1	0.0				
	Quarry	2.8	1.6	0.5				

⁶ Sub-categories (trophic stages) combined

Habitat	Category	1994-95	2008	
		Km ²	Km ²	%
Swamp, marginal and inundation	Refuse tip	0.8	0.7	0.2
	Spoil	0.2	0.3	0.1
	Swamp	0.3	0.1	0.0
	Marginal and inundation	0.01	-	-
Tall Herb and Fern (0.6%)	Bracken - continuous	0.6	0.2	0.1
	Tall ruderal	0.9	1.8	0.6
Woodland and Scrub (13.5%)	Broadleaved woodland - plantation	1.1	8.2	2.6
	Broadleaved woodland - semi-natural	7.9	4.4	1.4
	Coniferous woodland - plantation	14.5	13.2	4.2
	Mixed woodland - plantation	0.8	7.8	2.5
	Parkland and scattered trees - broadleaved		1.6	0.5
	Parkland and scattered trees - coniferous		0.1	0.0
	Parkland and scattered trees - mixed		0.3	0.1
	Recently felled woodland - broadleaved		0.0	0.0
	Recently felled woodland - coniferous	1.3	1.1	0.3
	Recently felled woodland - mixed		0.3	0.1
	Scrub - dense/continuous	1.9	3.2	1.0
	Scrub - scattered		2.4	0.8
Unclassified			55.8	17.7
Totals			314.9	100.0

A total of 981.9 km of linear features were classified in the 2008 Phase 1 Habitat Survey (Table 2).

Table 2: Linear features 2008

Habitat	Category	Km
Miscellaneous	Boundary removed	0.3
	Hedges - defunct - species-poor	128.3
	Hedges - intact species-poor	35.5
	Hedges - intact species-rich	2.9
	Hedges - with trees - species-poor	19.6
	Hedges - with trees - species-rich	1.2
	Wall	210.0
Open Water	Running water	583.8
Totals		981.9

Appendix D

Phase I habitat survey update 2008: Overview of habitat types

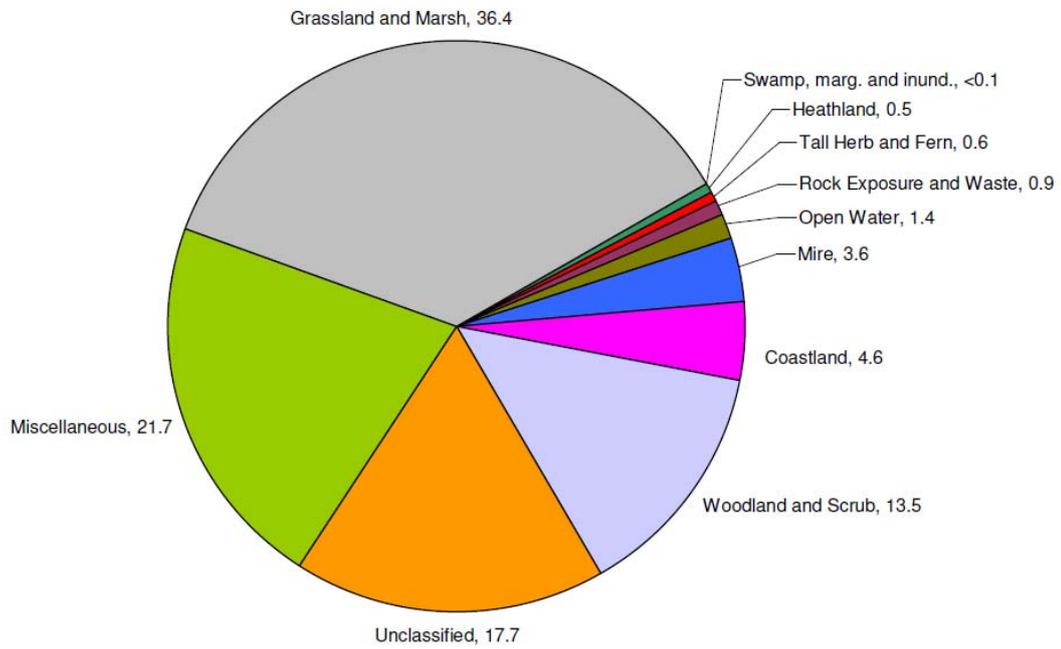


Figure 3: Overview of habitat types (values in %, ± 0.1)

Note: the unclassified land largely represents urban, built environments.