

# Supplementary Guidance 26

## Biodiversity

## Conservation







## Draft Supplementary Guidance 26

### Biodiversity conservation – Statutory requirements; and the consideration of biodiversity in planning decision-making.

*This Supplementary Guidance relates specifically to PP10 and Policies (35 - 37) in the Stirling Local Development Plan, but is relevant to most development situations. It has three Parts:*

- *A restatement of the Primary Planning Policy and the main policy covering biodiversity in the general environment; definitions of terms used in the policies; other matters necessary for the interpretation and implementation of the policies; and including a summary of the statutory position on biodiversity conservation;*
- *A summary description of the biodiversity resource of the Plan area;*
- *Site assessment for biodiversity, including a 'biodiversity checklist' to be used by applicants when assessing their proposed development site prior to working up proposals, and to be used by Planning case officers in assessing both sites and proposals.*

#### Part One: Statutory

The quality of the natural environment is one of Stirling's principal assets. The state of the environment and the quality of biodiversity is a key indicator of sustainability. Biodiversity encompasses all living things and their relationship with each other, with their environments and with humans. It is not only a concept, but also a process, implying action planning for the integration of biodiversity into everyday activities.

The guiding principle for protection of Stirling's biodiversity will be that there is no net loss of biodiversity. Any adverse effects should be avoided, minimised and/or compensated, and every opportunity should be taken to create improvements for biodiversity, so making a significant contribution to the achievement of national, regional and local biodiversity targets.

This principle recognises that whilst new development and change are desirable and inevitable, changes should be sustainable. The 'no net loss' approach does not necessarily preclude development by protecting all sites and features of interest. Biodiversity and ecological systems must be recognised as being highly complex and influenced by a very wide range of interacting and dynamic factors and processes. They can be quite resilient and capable of absorbing change (but not in all cases). The degree of protection offered to a site will depend upon its ecological value and any designations to protect species and habitats.

#### Local Development Plan policies:

##### PP10 Conservation and enhancement of Biodiversity

The protection, conservation and enhancement of wildlife, wildlife habitats and other natural features in areas designated for these purposes (and in adjacent areas where relevant) will be supported in line with statutory requirements. No proposal brought forward in relation to any policy, proposal or strategy in this Plan will be approved before an appropriate assessment of any likely significant adverse effects on Natura sites has been



carried out and it has been ascertained that there will be no adverse effect upon the integrity of a Natura site. When considering development proposals statutory species protection requirements must also be taken into account. Outwith areas covered by statutory designations, appropriate levels of protection for areas important for their contributions to biodiversity will be applied. The Council will:

1. consider the potential of all developments to contribute positively to biodiversity conservation and enhancement (and seek mitigation for any adverse impacts);
2. identify Local Nature Conservation Sites (see Pol.36);
3. consider (particularly in the context of the Green Network - see SG02) means of identifying, protecting and enhancing habitat networks (including creating linking features).

### **Pol.35 Biodiversity duty**

All development proposals will be assessed for their potential impact upon biodiversity. This may be a specific impact on species or habitats at the proposed site, or cumulative impact if the species or habitats have a restricted distribution. Developments likely to lead to a significant loss of biodiversity (relative to the Stirling Biodiversity Action Plan, the Scottish Biodiversity List and 'Natural Heritage Futures') will only be permitted if the Planning Authority is satisfied that adequate provision can be made on or off site to maintain species populations and/or create or enhance comparable habitats such that overall biodiversity is maintained.

*Two other policies cover Local Nature Conservation Sites and Geological Conservation Review sites.*

### **Definitions and statutory requirements:**

#### **Biodiversity; Biodiversity Duty**

In plain language biodiversity is all animal and plant species and the habitats they occupy. Formally, "It is the duty of every public body and office-holder, in exercising any functions, to further the conservation of biodiversity so far as is consistent with the proper exercise of those functions" (Nature Conservation (Scotland) Act 2004). For the purposes of the Act, "biodiversity" has the same meaning as has "biological diversity" in the United Nations Environmental Programme Convention on Biological Diversity of 5 June 1992, i.e. "Biological diversity means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems". (Guidance on the Scottish Biodiversity Duty, Scottish Executive, 2005

<http://www.biodiversityscotland.gov.uk/duty/index.htm>).

#### **Natural features**

SNH's Corporate Strategy defines Scotland's natural heritage as "its wildlife, habitats, landscapes and natural beauty and includes the rocks, soils, landforms and water on which these are based." Article 10 of the European Habitats Directive goes a little further in making it clear that man-made features (such as drystone walls) may also be habitats, and may be important in linking otherwise fragmented habitats. On a regional scale, SNH's identification of 'Natural Heritage Futures' on the basis of a broad commonality of natural features provides one means of considering how significant a species or habitat is in the wider Scottish context. There is a large extent of 'Ancient and Semi-Natural Woodland' in the Plan area. As long-established woodland it tends to have higher



biodiversity than recently planted woodland and may include re-planted woodland on ancient woodland sites, where ground flora, soil invertebrates, fungi, etc have persisted. Even single or small groups of 'veteran' trees will have high wildlife value. The SPP (2010) states that ancient and semi-natural woodland is "an important and irreplaceable national resource that should be protected and enhanced" but does not give it the status of a formal designation. This Plan supports woodland conservation through Pol.40, SG31, etc.

### **Designated areas; Natura sites**

Scottish Natural Heritage (SNH) advises Government and other public bodies, carries out research, promotes best practice and publishes a wide variety of advice and guidance. It is responsible for designating and setting management prescriptions for SSSIs and making recommendations for European and other designations. In any case when there is any doubt as to whether there may be statutory requirements attaching to a site or species, SNH should be consulted. The national system of site designation and nature reserves has evolved over a long period and was largely updated by the Wildlife and Countryside Act 1981, and the Nature Conservation (Scotland) Act 2004, and the Wildlife and Natural Environment (Scotland) Act 2011.

<http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/sssisi/>

### **Site of Special Scientific Interest (SSSI)**

Sites including representative examples of the habitats occurring in the UK. Not necessarily specifically managed in the interests of wildlife conservation. In order to allow other land uses (generally agriculture) to continue, SNH identifies permitted operations and operations that require their approval. Development proposals in or adjacent to sites cannot be approved by the planning authority without consulting SNH. (see Appendix 1 for sites))

### **National Nature Reserve (NNR)**

Areas specifically managed for nature conservation, and where possible public appreciation of wildlife and habitats. Will have a primary designation such as SSSI, which will determine its planning status (Flanders Moss is partly designated as a National Nature reserve; the area is also a SSSI and SAC). <http://www.nnr-scotland.org.uk/about-reserves/introducing-nnrs/>

### **Special Area of Conservation (SAC)**

Designation deriving from European Habitats Directive. May or may not have a pre-existing status as an SSSI (see Appendix 1 for dual designations). Has international importance as a habitat of importance at a European level, or harbouring one or more species whose conservation is regarded as of European significance (see Appendix 2). In planning terms the status is similar to a SSSI but developments outwith the designated area that are considered likely to have adverse effects upon the site, or upon mobile species using the site, cannot be approved by the planning authority without an 'appropriate assessment' being undertaken (the responsibility of the planning authority). If the assessment exonerates the development of having the potential impacts (or if the impacts can be satisfactorily mitigated, e.g, by creating comparable habitat off-site) the development can be approved. Scottish Ministers have limited discretion to approve damaging developments in the wider national social and/or economic interest. SACs and SPAs are collectively known as Natura sites. <http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/international-designations/natura-sites/natura-site-protection/>



### **Special Protection Area (SPA)**

Designation deriving from the European Wild Birds Directive. May or may not have a pre-existing status as an SSSI (see Appendix 1 for dual designations). Has international importance for harbouring one or more species whose conservation is regarded as of European significance (see Appendix 2). As with an SAC the planning authority has also to consider neighbouring areas utilised by the bird species for whose conservation the site is designated. Planning consideration of development proposals as for SAC. (Firth of Forth, Stirling's only SPA, is also a SSSI, and is further recognised as a RAMSAR site of international importance for wildfowl conservation, though this does not introduce any further planning requirements). SPAs and SACs are collectively known as Natura sites.

### **Local Nature Reserve (LNR)**

Nature reserve designated by a Local Authority. Stirling has one such, at Balquhiderock Wood. This site is also a SSSI, and the planning requirements are as for an SSSI. (see LNCS below).

### **Appropriate assessment**

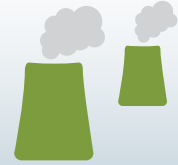
Development Plans covering areas containing or in the vicinity of Natura sites have to undergo a 'Habitat Regulations Assessment' (HRA) before being adopted. The adopted plan should not then lead to any developments having significant adverse impacts upon the conservation interests for which the Natura sites have been designated (see Appendix 2). Any subsequent development proposals (even if located on sites included in the HRA of the plan) have further to be subject to another Appropriate Assessment if there is likely to be a significant adverse impact on the 'Qualifying Interests' (habitats and/or species) of a Natura site. (All in accordance with Article 6(3) of the European Habitats Directive; transposed into UK law by the Conservation (Natural Habitats, &c.) Regulations 1994). Planning application assessments are the responsibility of the planning authority. <http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/international-designations/natura-sites/habitats-regulations-appraisal/>

### **Mitigation**

Most developments and land use changes will have unavoidable impacts upon biodiversity, if only in terms of invertebrates through disturbance of the soil. If the sites concerned have been properly assessed beforehand from a biodiversity point of view, ways and means may be found to accommodate existing species and habitats on-site, or arrangements made to provide or enhance comparable habitats nearby. If the species concerned are not specially protected, mitigation might also take the form of enhancing management of other habitats on-site or nearby such that the overall richness of biodiversity across the area is maintained though with a different species composition (see Part Three for preferred approach to mitigation). Mitigation in terms of an appropriate assessment has to be agreed by SNH.

### **Species protection**

European Protected Species (Article 1 of the Habitats and Species Directive – mammals, fish, etc; Annex 1 of the EU Birds Directive - birds) enjoy special protection, including having to be taken into account in planning policy and decision-making. They are protected wherever they occur (and this includes places where there is only indirect evidence of their presence for part of the year). Species named in the Qualifying Interests for SACs



and SPAs also have similar protection. Planning consideration therefore is not limited to designated sites, such as SSSIs. Otherwise species protection is still largely as set out in the Wildlife and Countryside Act 1981, as amended by the Nature Conservation (Scotland) Act 2004. Generally speaking all wild birds and their nests are protected, and wild plants cannot be uprooted. <http://www.snh.gov.uk/protecting-scotlands-nature/protected-species/legal-framework/wca-1981/> There is specific legislation protecting badgers and their setts: <http://www.snh.gov.uk/protecting-scotlands-nature/protected-species/legal-framework/badger-protection/>

### **Local Nature Conservation Site (LNCS)**

The SPP (2010) indicates that any site that the Planning Authority wishes to protect for nature conservation purposes and which is not designated as one of the national series or as a Natura site, should be referred to as a Local Nature Conservation Site (LNCS). The SPP further indicates that “The level of protection given to local designations through the development plan should not be as high as the level of protection given to international or national designations”. The Council indicates its intention to identify sites and to adopt a policy setting out an appropriate level of planning protection (see Pol.36). It has been discussing possible sites for designation with Scottish Wildlife Trust. Other possibilities include some sites identified in the Stirling ‘Urban Nature Conservation Strategy’. Meantime the following sites will be identified as LNCS (in addition to any other status that they currently have):-

Voluntary sector nature reserves: Loch Ardinning (Scottish Wildlife Trust).

Council countryside sites: Doune Ponds.

n.b. Ballagan Glen, the other Scottish Wildlife Trust reserve in the Plan area, is an SSSI.

### **Habitat networks**

As a general rule, wildlife habitats are more species rich, successful and stable if they are large. As land use has become more intensive and development has spread, most habitats have become fragmented. The basic idea behind habitat networks is to examine whether remaining viable habitat patches can be re-linked, both to increase functioning size and perhaps to provide species obliged to change their distribution (for climate change or other reasons) with routes to enable them to ‘migrate’. A specific project (by the Forestry Commission under the aegis of CSGN) is Integrated Habitat Network (IHN) modelling, for woodlands, wetlands (including peat areas) and grassland. It examines the functional connectivity of existing habitat patches and helps indicate where efforts might best be focused to enhance habitat networks. It analyses the degree to which representative species can move or disperse within and between habitat patches, through the intervening landscape. (However, it is emphasised that where resources are scarce they are best targeted at improved management of existing areas of habitat).

### **Green Network (see SG02)**

### **Geological conservation review (GCR)**

“The (Geological conservation review) GCR was designed to identify those sites of national and international importance needed to show all the key scientific elements of the Earth heritage of Britain. These sites display sediments, rocks, fossils, and features of the landscape that make a special contribution to our understanding



and appreciation of Earth science and the geological history of Britain, which stretches back hundreds of millions of years.” <http://www.jncc.gov.uk/page-2947> Some GCR sites are within designated SSSIs (see Appendix z). Those that are not will be afforded a measure of protection through Pl.37 whereby the Planning Authority will consult with SNH regarding any planning proposals likely to impact on the sites. GCR sites covering landscape features will be considered for inclusion in Local Landscape Area designations (see Pl.38 and SG27 check).

n.b. The Scottish Government now recognises the importance of soil protection in providing valued habitats and sustaining biodiversity, as set out in the Scottish Soil Framework (SSF) published in June 2009 -<http://www.scotland.gov.uk/Publications/2009/05/20145602/0> (see PP16).

### **Stirling Biodiversity Action Plan (SBAP)**

The Stirling Biodiversity Action Plan

<http://www.stirling.gov.uk/index/leisure/countryside/biodiversity/cs-biodiversity-lbap.htm>

(originally published as the Local Biodiversity Action Plan in 2004 to augment the national biodiversity strategy by creating Species and Habitat Action Plans for species and habitats of local conservation concern) seeks to ensure that nationally and locally important species and habitats are conserved and enhanced through focused local action. The role of the SBAP is to help inform and guide action by; setting out a list of actions that have been agreed as priorities for the conservation and enhancement of biodiversity within the SBAP area. The Plan does not map habitats or species distributions and so in its present form it is not easy for non-specialists to obtain site – specific planning guidance from it. Nevertheless it provides a source of local biodiversity information and sets out actions for the protection and enhancement of priority species, habitats and ecosystems, as well as for more cross-cutting issues such as education and awareness raising, increasing the availability of biological data, protecting and managing sites that are designated for their ecological value, incorporating biodiversity considerations into decision making for policies and strategies, and helping habitats and species to adapt to climate change. Recently some ‘Priority Habitats and Species’ have been derived from the LBAP (see Part Two below).

### **Scottish Biodiversity List**

A list of animals, plants and habitats that Scottish Ministers consider to be of principal importance for biodiversity conservation in Scotland. It includes a long ‘scientific’ list and a short list chosen by the public. The purpose of the list is to help public bodies carry out their Biodiversity Duty by identifying the species and habitats which are the highest priority for biodiversity conservation in Scotland. <http://www.snh.gov.uk/protecting-scotlands-nature/biodiversity-scotland/scottish-biodiversity-list/>

### **Natural Heritage Futures:**

SNH’s ‘Natural Heritage Futures’ reports (updated 2009) for Eastern Lowlands, West Central Belt, and Loch Lomond, The Trossachs and Breadalbane cover the Plan area. These are very large geographical units but offer long term visions for the area in terms of landscape and wildlife. They have associated natural heritage Objectives, of which 14 are either unique to one zone or common to two or three:



- Maintain key upland habitats
- Secure widespread recovery of native woodland and scrub
- Restore range and viability of key species
- Restore biodiversity of rivers, lochs and wetlands
- Maintain low ground farmland habitats
- Maintain high quality landscapes
- Provide for responsible outdoor recreation
- Conserve range of coastal habitats
- Enhance local landscapes and wildlife
- Achieve better integration of settlements with the natural heritage
- Create a diverse and attractive urban landscape
- Achieve re-use of vacant and derelict land
- Promote sustainable use of natural resources & reduce contributions to causes of climate change
- Increase awareness and understanding of natural heritage

The zones also provide a basis for one set of benchmarks (e.g. the conservation status of species insofar as they occur across an area; or the total amount of a particular habitat in the area), above the local but below the national level, for considering the significance of an impact upon a species or habitat. <http://www.snh.gov.uk/about-snh/what-we-do/nhf/nhf-downloads/>

## Part Two: Non-Statutory

Stirling is fortunate in the quality of its natural environment. While this is most evident in the landscapes of the area, it is also revealed in the impressive range and quality of wildlife habitats and attendant biodiversity and geodiversity:

- Some of the largest and most important lowland raised bog habitats in the UK
- Upland habitats and botanical resources north and west of Killin
- A network of conservation – designated river systems, and the upper estuarine section of one of Scotland's most diverse and important marine inlets - the Firth of Forth
- Significant areas of ancient and semi-natural woodland
- Lowland farmland important for nationally declining birds and mammals, and for wintering grey geese
- A key position in Central Scotland in terms of habitat networks - and potentially habitat-related climate change adaptation.
- Internationally important localities for Devonian age fish and plant fossils.
- The Forth valley contains features preserving a detailed record of relative sea-level change in Scotland covering the last 13,000 years.
- Nationally important landforms and deposits associated with the Loch Lomond Re-advance occur in the Teith and Forth valleys and south of Loch Lomond.



The detached northern part of the plan area covers c.221 sq kms and comprises Glen Lochay, and the lochshores, slopes and hills/plateau area between Lochs Tay and Earn and east of the Glen Ogle watershed. Glen Lochay is a sparsely populated glen of very high scenic and nature conservation quality, containing a small part of the Loch Rannoch & Glen Lyon NSA, with the remainder designated LLA. There are parts of 3 montane and 1 riverine SAC, and the whole or parts of 6 SSSIs. There are significant areas of Ancient and Semi-natural woodland, particularly in the lower parts of the glen. The area SE and E of Killin is, apart from Loch Tay itself, less notable scenically, but is nevertheless designated LLA. Nature conservation interest is mainly in low ground wetland and botanical sites – another part of the Tay SAC and all or part of 3 SSSIs. (see Appendices 1 & 2)

The main southern part of the plan area extends to some 852 sq kms. Topographically it comprises the middle Teith and Forth valleys (and part of the Forth estuary), the upper and middle Endrick valley, lower Strathallan and the intervening and surrounding tracts of high ground. Essentially flat land is extensive from the Forth estuary westwards past Stirling along the Carse of Forth into the eastern fringes of the National Park, and contains the internationally important lowland raised bogs of Flanders Moss as well as much agricultural land and, close to the Park boundary, plantation forestry. Where the carseland narrows at Stirling, three small but dramatic volcanic intrusions (Castle Rock, Abbey Craig and Craigforth) punctuate the landscape. Overall the contrast between the low flat Carse and the flanking hills, mountains and escarpments gives the area much of its character and habitat diversity. At intermediate altitudes undulating farmland and moorland, in places well-wooded (including plantation conifers), occurs at Sheriffmuir, along the lower Braes of Doune, close to the Highland Boundary Fault, in the far SW (Stockiemuir, etc), and around the N and E margins of the southern hills (e.g. Ballindalloch and Kippen Muirs). The main uplands (over 300m) are the western Ochils, the northern Braes of Doune, and the distinctive steep-edged volcanic plateaux of the Campsie Fells and Fintry – Gargunnoch – Touch Hills.

This area is of varying but generally very high environmental quality because of its landscape character and quality (c.37% LLA), and nature conservation interest (part of one SPA/Ramsar site, all or parts of 5 SACs, all or parts of 33 SSSIs, and one NNR).

Further information on designated sites can be accessed via the SNHi/SiteLink website:

[http://gateway.snh.gov.uk/portal/page?\\_pageid=53,910284,53\\_920284&\\_dad=portal&\\_schema=PORTAL](http://gateway.snh.gov.uk/portal/page?_pageid=53,910284,53_920284&_dad=portal&_schema=PORTAL)

The Council has produced a draft list of Priority Species and Habitats derived from the Local Biodiversity Action Plan.

**Species:** Water Vole, Brown Hare, Swift, Barn Owl, Tree Sparrow & other farmland seed-eating birds, Grey Partridge, Black Grouse, Atlantic Salmon, Trout, Juniper and Sticky Catchfly.

**Habitats:** Urban habitats, Boundary habitats, Lochs, lochans & pools, Rivers & burns, Lowland broad-leaved woodlands and Lowland raised bogs.



### Part Three: Non-Statutory

Development should result in no net loss of biodiversity. In recognition of the Biodiversity Duty emanating from the Nature Conservation Act, and in pursuance of sustainable development, the Planning Authority will consider the implications for biodiversity of any development proposal in accordance with the following hierarchy:

- The preferred solution for new developments is to avoid damage to the natural heritage by careful location of development sites, and by the layout of built development and the protection of habitat areas within the selected site.
- When development is in all other respects acceptable but there is some adverse impact on natural heritage interests, the aim should be to minimise those impacts and the mitigate any damage.
- When development is in all other respects acceptable but there is some adverse impact on natural heritage interests, and measures to minimise the impacts and mitigate the damage have been incorporated as far as is feasible, every effort should be made to compensate for the biodiversity loss on-site.
- If the nature of the site and the development is are such that adequate on-site measures cannot be implemented, then off-site mitigation to compensate for loss of biodiversity may be considered (for instance at an appropriate nearby location within a Green Corridor – such measures to be agreed with the planning authority and to be secured by a legal agreement).

If the adverse impact is upon a Natura site, the assessment must satisfy the appropriate regulations, as referenced in Part One.

#### **Benefits of early discussions**

Early discussion may highlight specific site survey requirements and historic site issues which are relevant to developing proposals and which will be required to accompany a planning application. For larger proposals there may be a specific statutory requirement under the Environmental Impact Assessment Regulations. There may also be specific processes (e.g. licensing) that need to be followed where there are protected species issues to address.

Seasonal constraints can apply to ecological surveys for specific species and habitats. This may be due to factors such as over-wintering, breeding, hibernation, presence of vegetation etc. It is important to be aware of any constraints to allow a suitable lead in time for survey requirements and to carry out survey tasks at appropriate times. (see guideline chart below).

#### **Biodiversity checklist**

This procedure is designed to identify those developments which may have an impact on the natural environment. It allows developers to identify and address any nature conservation issues before a planning application is submitted. The Checklist includes criteria designed to ensure that applications are only highlighted when it is likely that natural heritage features of importance are affected. Impacts on natural features are difficult to predict and therefore using the Checklist cannot guarantee that every feature will be detected in all cases. Applicants should use the Checklist to carry out a 'first impressions' survey of their application site. A first



impressions survey should be carried out while on site, and does not require ecological expertise. Applicants should work their way down the checklist; if they encounter any of the indicators in reference to the proposed development site, the submitted planning application should be accompanied by a biodiversity assessment. In some circumstances (for certain types and scales of development, or developments in environmentally sensitive locations) an Environmental Impact Assessment may be required and the biodiversity assessment will be part of this.

The biodiversity assessment should preferably prepared by a qualified ecologist and should describe:

- which indicators have been triggered;
- whether or not the relevant feature is indeed present
- any other nature conservation features which may come to light during the ecological survey and
- what has been done to protect, mitigate, compensate and enhance biodiversity as part of the development
- the data resulting from the assessment must be shared with the Council's biodiversity officer.

The checklist can also be used by Planning case officers in assessing both sites and proposals.

<b>Biodiversity Checklist (1)</b>	<b>Tick if yes</b>		<b>Done?</b>
Does site include all or part of a statutorily designated site?		Consult SNH & the Council	
Does the site include all or part of a non-statutorily recognized site?		Consult the Council (biodiversity officer)	
Is the site within 10 metres of any of the above?		Consult SNH & the Council	
Does any part of the site impinge upon a green or habitat corridor?		Assess ecological impact of proposal on site and corridor	



<b>Biodiversity Checklist (2)</b>												
Proposals for development that will trigger a Biodiversity Assessment/ Protected Species survey	Bats spp	Barn Owl	Other breeding birds	Great Crested Newt	Other Amphibians	Red Squirrel	Water Vole	Badger	Reptiles	Otter	Invertebrates	Plants
Modification, conversion, demolition or removal of barns or farm buildings of brick or stone construction, or with exposed wooden beams, whether derelict or in use	Y	Y	Y									
Removal or modification of cladding on buildings of any age within 50m of woodland, water or mature trees	Y											
Change to older roof structures (not metal or prefabricated sheeting roofs) where there is access through open eaves, missing tiles, cracks in stonework, etc.	Y											
Works to any structures with underground spaces (cellars, ice-houses, tunnels, etc)	Y											
Works to any bridge structures, aqueducts, etc (especially over water and wet ground).	Y											
Proposals involving external floodlighting of churches and listed buildings within 50m of a green space, woodland or water.	Y	Y	Y								Y	
Proposals affecting woodland, hedgerows and/or lines of trees with obvious connectivity to woodland or water bodies.	Y		Y			Y		Y				Y
Proposals affecting 'Veteran' trees on or overhanging the development site.	Y	Y	Y			Y					Y	
Proposals affecting natural or artificial rock faces and outcrops, with crevices or caves	Y		Y						Y			
Proposals affecting or within 200m of rivers, streams, canals, lakes, ponds (including garden ponds) or other aquatic habitats.	Y	Y	Y	Y	Y		Y			Y	Y	Y
Proposals affecting vacant or derelict land, bings, spoil tips, allotments and railway land.	Y			Y	Y			Y	Y		Y	Y
Proposals affecting any other buildings, structures, features or locations where protected species are known to be present .	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Proposals involving clearance of natural shrubs/scrub or woodland of more than 100m <sup>2</sup> ; site contains areas of rough grass.			Y					Y				Y



Optimum survey times for habitats:

Habitat	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rivers & ponds												
Grassland & marsh												
Reedbed & swamp												
Heathland												
Woodland & scrub												
Hedgerows												

Farmland?

Moorland? = Heathland?

Upland/moorland?

Optimum survey times for species\*

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Bats spp	Hibernation roost survey				Summer/maternity roost surveys						As Jan-Feb		
	Habitat suitability assessments												
Otter	Survey any time of year, provided river flows normal or low												
Red Squirrel				Surveys can be undertaken any time of year									
Badger								Activity surveys					
Water Vole					Activity surveys								
	Habitat suitability assessments												
Birds	Wintering birds		Migrant birds						Migrant birds		Wintering Birds		
	Breeding bird surveys												
Vegetation	Phase 1 habitats only			Phase 1 and NVC survey						Phase 1 habitats only			
Great Crested Newt				Eggs, etc <sup>1</sup>			Larvae only						
	Habitat suitability assessments												
Reptiles						Activity/refugia surveys							
Pearl mussels													

<sup>1</sup> Torching, netting & egg searches to determine presence and/or estimate population

	Optimal Survey Period
	Sub-optimal Survey Period
	Unsuitable Survey Period

General guide only. Timing of surveys may need to be varied according to location due to weather, etc. Certain birds such as wildfowl need to be surveyed at specific times (e.g. to coincide with national surveys).

\* With acknowledgements to Cairngorms National Park Authority.



Appendix 1 Nature conservation designation statistics for LDP area [Insert A4 map of SSSIs]

Northern area:

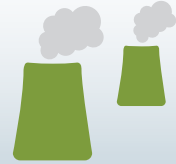
Site	Summarised interest	(Extent to nearest ha. in plan area)		Notes
		SAC	SSSI	
<i>Ben Heasgarnich*</i>	<i>Mixed upland habitats, species</i>	950	1640	<i>All SAC is also SSSI</i>
<i>Ben Lawers*</i>	<i>Mixed upland habitats, species</i>	183	183	<i>Same area</i>
<i>Cambusurich Wood</i>	<i>Mixed woodland, invertebrates</i>	-	55	
<i>Dalveich Meadow</i>	<i>Grassland</i>	-	36	
<i>Finlarig Burn</i>	<i>Mixed woodland</i>	-	9	
<i>Glen Lochay Woods</i>	<i>Mixed woodland, invertebrates</i>	(See note >)	216	<i>Slight overlap with R Tay SAC</i>
<i>Loch Tay Marshes</i>	<i>Fen, mixed woodland</i>	(See note >)	56	<i>39 ha. also in R Tay SAC</i>
<i>Meall Ghaordie*</i>	<i>Montane habitats, plants</i>	-	665	
<i>Meall na Samhna*</i>	<i>Montane habitats, plants, species</i>	970	1590	<i>All SAC is also SSSI</i>
<i>River Tay*</i>	<i>Open water, fish, mammals</i>	c.650	-	<i>(Overlap with 2 SSSIs)</i>
	<b>Totals</b>	<b>2753</b>	<b>4450</b>	
<b>Total designated area c. 5061 ha., of which 2753 ha. of international importance</b>				

\* all large upland sites and R Tay shared with National Park or Perth & Kinross



Southern area:

Site	Summarised interest	(Extent to nearest ha. in plan area)						Notes:
		SAC	SPA	RAMSAR	SSSI	NNR	LNR	
Abbey Craig	Mixed woodland				8			
Arnprior Glen	Mixed woodland				6			
Aucheneck	Geology, geomorphology				106			
Balglass Corries	Upland assemblage, geology				269			
Ballagan Glen	Mixed woodland				7			
Ballanucater	Palaeontology				1			
Balquhiddelock Wood	Mixed woodland				6		6	SSSI & LNR almost coincident
Blane, etc Woods	Mixed woodland				30			
Carbeth Loch	Open water, fen				10			
Carron Glen	Mixed woodland, grassland				2			
Craigallian Marshes	Fen				8			
Double Craigs	Geology, grassland				10			
Dumbrook Loch Meadows	Grassland				28			
Endrick Water	Geomorphology, fish, plant sp.	125			125			Large site – part in National Park; SAC & SSSI coincident
Firth of Forth	Birds		62	62	72			Very large site – Natura elements mostly outwith Stirling; SPA & Ramsar coincident
Flanders Moss	Raised bog, geomorphology, invertebrates	1074			859	210		All NNR is SSSI. The 5 Mosses together make up the SAC
Collymoon Moss	Raised bog				98			
Killorn Moss	Raised bog				35			
Offerance Moss	Raised bog				42			
Shirgarton Moss	Raised bog				39			
Gartfarran Woods	Mixed woodland				37			
Kippenrait Glen	Mixed woodland, invertebrates	62			62			SAC & SSSI coincident
Lake of Menteith	(Open water, birds) plants				4			Large site, mostly in National Park
L Mahaick	Open water, birds, fen				35			
L Watston	Open water, fen, plants				14			
Mugdock Wood	Mixed woodland, open water, heath				113			
Ochertyre Moss	Raised bog, invertebrates				35			
Sauchie Craig Wood	Mixed woodland, geology				17			



Site	Summarised interest	(Extent to nearest ha. in plan area)						Notes:
		SAC	SPA	RAMSAR	SSSI	NNR	LNR	
Tynaspirit	Geology, geomorphology				1			
W Balgair Meadow	Grassland, heath, fen				19			
Wester Moss	Raised bog				30			
Westerton Water Meadow	Fen				7			
Wolf's Hole Quarry	Palaeontology				1			
R Teith	Fish	c.130						Large site – part in National Park; not SSSI
	<b>Total</b>	<b>1391</b>	<b>62</b>	<b>62</b>	<b>2136</b>	<b>210</b>	<b>6</b>	
Total designated area c. 2266 ha., of which 1453 ha. of international importance								

Therefore in the whole plan area, 7327 ha. (c. 6.8% of the land area) is designated for its national or international nature conservation importance, with 4206 ha. having international status (see Appendix C).

## Appendix 2 Natura Designated Sites, Qualifying Interests and Conservation Objectives

[Insert A4 map of SACs, SPAs]

<b>Kippenrait Glen SAC</b>	
<i>Woodland and streams between Bridge of Allan and Dunblane.</i>	
<i>This is also a SSSI.</i>	
Qualifying Interests	Annex 1 Habitats & Annex II Species Conservation Objectives
<ul style="list-style-type: none"> <li>Mixed woodland on base-rich soils associated with rocky slopes</li> </ul>	<p>To avoid deterioration of the qualifying habitat:</p> <ul style="list-style-type: none"> <li><i>Tilio-Acerion forests of slopes, screes and ravines (Priority Habitat).</i></li> </ul> <p>thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving Favourable Conservation Status (FCS) for each of the qualifying features.</p> <p>To ensure for the qualifying habitat(s) that the following are maintained in the long term:</p> <ul style="list-style-type: none"> <li>Extent of the habitat on site</li> <li>Distribution of the habitat within site</li> <li>Structure and function of habitat</li> <li>Processes supporting the habitat</li> <li>Distribution of typical species of the habitat</li> <li>Viability of typical species as components of the habitat</li> <li>No significant disturbance of typical species of the habitat</li> </ul>



Flanders Mosses SAC	
<i>Flanders Moss, Offerance Moss, Collymoon Moss and Shirgarten Moss. These are also SSSI's.</i>	
<i>Qualifying Interest</i>	<i>Annex 1 Habitats &amp; Annex II Species Conservation Objectives</i>
<ul style="list-style-type: none"> <li>• Degraded raised bog</li> </ul>	<p>To avoid deterioration of the qualifying habitats:</p> <ul style="list-style-type: none"> <li>• Active raised bogs (Priority Habitat)</li> <li>• Degraded raised bog still capable of natural regeneration</li> </ul> <p>thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving FCS for each of the qualifying features To ensure for the qualifying habitats that the following are maintained in the long term:</p> <ul style="list-style-type: none"> <li>• Extent of the habitat on site</li> <li>• Distribution of the habitat within site</li> <li>• Structure and function of the habitat</li> <li>• Processes supporting the habitat</li> <li>• Distribution of typical species of the habitat</li> <li>• Viability of typical species as components of the habitat</li> <li>• No significant disturbance of typical species of the habitat</li> </ul> <p>There is a policy in the Minerals Developments section of the Adopted Local Plan (Policy E8) that protects the Flanders Mosses: "The Council will operate a presumption against developments or land use and management proposals likely to be injurious to the designated Sites of Special Scientific Interest (proposed Special Area of Conservation) comprising the Flanders Moss complex of active raised bog habitat".</p>



<b>Ben Heasgarnich SAC</b>	
<b>Beinn Heasgarnich and neighbouring summits.</b>	
<i>This is part of a larger SSSI, part of which is outwith Stirling.</i>	
<i>Qualifying Interests</i>	<i>Annex 1 Habitats &amp; Annex II Species Conservation Objectives</i>
<ul style="list-style-type: none"> <li>• Mountain willow scrub</li> <li>• Plants in crevices on acid rocks</li> <li>• Acidic scree</li> <li>• Calcium-rich springwater-fed fens</li> <li>• Very wet mires often identified by an unstable 'quaking' surface</li> <li>• Blanket bog</li> <li>• Montane acid grasslands</li> <li>• Alpine and subalpine heaths</li> <li>• Dry heaths</li> <li>• Wet heathland with cross-leaved heath</li> <li>• Western acidic oak woodland</li> <li>• Alpine and subalpine calcareous grasslands</li> <li>• Species-rich grassland with mat-grass in upland areas</li> <li>• Plants in crevices in base-rich rocks</li> <li>• High-altitude plant communities associated with areas of water seepage</li> <li>• Tall herb communities</li> </ul>	<p>To avoid deterioration of the qualifying habitats thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving FCS for each of the qualifying features To ensure for the qualifying habitats that the following are maintained in the long term:·</p> <ul style="list-style-type: none"> <li>• Extent of the habitat on site</li> <li>• Distribution of the habitat within site</li> <li>• Structure and function of the habitat</li> <li>• Processes supporting the habitat</li> <li>• Distribution of typical species of the habitat</li> <li>• Viability of typical species as components of the habitat</li> <li>• No significant disturbance of typical species of the habitat</li> </ul>



<b>Meall na Samhna SAC</b>	
Meall na Samhna and neighbouring summits. This is part of a larger SSSI.	
Qualifying Interests	Annex 1 Habitats & Annex II Species Conservation Objectives
<ul style="list-style-type: none"> <li>• Blanket bog</li> <li>• Acidic scree</li> <li>• Alpine and subalpine heaths</li> <li>• High-altitude plant communities associated with areas of water seepage</li> <li>• Dry heaths</li> <li>• Wet heathland with cross-leaved heath</li> <li>• Species-rich grassland with mat-grass in upland areas</li> <li>• Mountain willow scrub</li> <li>• Tall herb communities</li> <li>• Plants in crevices in base-rich rocks</li> <li>• Calcium-rich springwater-fed fens</li> <li>• Alpine and subalpine calcareous grasslands</li> <li>• Very wet mires often identified by an unstable 'quaking' surface</li> <li>• Montane acid grasslands</li> </ul>	<p>To avoid deterioration of the qualifying habitats thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving FCS for each of the qualifying features</p> <p>To ensure for the qualifying habitats that the following are maintained in the long term:</p> <ul style="list-style-type: none"> <li>• Extent of the habitat on site</li> <li>• Distribution of the habitat within site</li> <li>• Structure and function of the habitat</li> <li>• Processes supporting the habitat</li> <li>• Distribution of typical species of the habitat</li> <li>• Viability of typical species as components of the habitat</li> <li>• No significant disturbance of typical species of the habitat</li> </ul>



Ben Lawers SAC	
Meall nan Tarmachan and neighbouring summits.	
<i>This is part of a larger SSSI (the greater part of which lies outwith the Stirling Council area).</i>	
Qualifying Interests	Annex 1 Habitats & Annex II Species Conservation Objectives
<ul style="list-style-type: none"> <li>• Plants in crevices in base-rich rocks</li> <li>• High-altitude plant communities associated with areas of water seepage*</li> <li>• Tall herb communities</li> <li>• Mountain willow scrub</li> <li>• Clear-water lochs with aquatic vegetation and poor to moderate nutrient levels</li> <li>• Plants in crevices on acid rocks</li> <li>• Base-rich fens</li> <li>• Blanket bog*</li> <li>• Species-rich grassland with mat-grass in upland areas*</li> <li>• Montane acid grasslands</li> <li>• Alpine and subalpine heaths</li> <li>• Alpine and subalpine calcareous grasslands</li> <li>• Dry heaths</li> </ul> <p>* = Priority habitats</p>	<p>To avoid deterioration of the qualifying habitats (listed below) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and</p> <p>To ensure for the qualifying habitats that the following are maintained in the long term:</p> <ul style="list-style-type: none"> <li>• Extent of the habitat on site</li> <li>• Distribution of the habitat within site</li> <li>• Structure and function of the habitat</li> <li>• Processes supporting the habitat</li> <li>• Distribution of typical species of the habitat</li> <li>• Viability of typical species as components of the habitat</li> <li>• No significant disturbance of typical species of the habitat</li> </ul>



<b>River Tay SAC</b> <b>River Lochay, Loch Tay (part) and some riparian areas (part of a very much larger site, the greater part of which lies outwith the Stirling Council area).</b> <i>Loch Tay Marshes is also a SSSI.</i>	
<i>Qualifying Interests</i>	<i>Annex 1 Habitats &amp; Annex II Species Conservation Objectives</i>
<ul style="list-style-type: none"> <li>• Clear-water lochs with aquatic vegetation and poor to moderate nutrient levels</li> <li>• Sea lamprey</li> <li>• River lamprey</li> <li>• Brook lamprey</li> <li>• Atlantic salmon</li> <li>• Otter</li> </ul>	<p>To avoid deterioration of the qualifying habitats (listed below) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and</p> <p>To ensure for the qualifying habitats that the following are maintained in the long term:</p> <ul style="list-style-type: none"> <li>• Extent of the habitat on site</li> <li>• Distribution of the habitat within site</li> <li>• Structure and function of the habitat</li> <li>• Processes supporting the habitat</li> <li>• Distribution of typical species of the habitat</li> <li>• Viability of typical species as components of the habitat</li> <li>• No significant disturbance of typical species of the habitat</li> </ul> <p>To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and</p> <p>To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> <li>• Population of the species, including range of genetic types for salmon, as a viable component of the site</li> <li>• Distribution of the species within site</li> <li>• Distribution and extent of habitats supporting the species</li> <li>• Structure, function and supporting processes of habitats supporting the species</li> <li>• No significant disturbance of the species</li> </ul>



<p align="center"><b>River Teith SAC</b></p> <p><i>The stem river from its confluence with the Keltie Water, parts of some tributaries, the River Forth from its confluence to the Stirling Bridge, and some adjoining riparian areas.</i></p>	
Qualifying Interests	Annex 1 Habitats & Annex II Species Conservation Objectives
<ul style="list-style-type: none"> <li>• Atlantic salmon</li> <li>• Brook lamprey</li> <li>• River lamprey</li> <li>• Sea lamprey</li> </ul>	<p>To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species</p> <ul style="list-style-type: none"> <li>• Sea lamprey</li> <li>• Brook lamprey</li> <li>• River lamprey</li> <li>• Atlantic salmon</li> </ul> <p>thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving FCS for each of the qualifying features</p> <p>To ensure for the qualifying species that the following are maintained in the long term</p> <ul style="list-style-type: none"> <li>• Population of the species (including range of genetic types) as a viable component of the site</li> <li>• Distribution of the species within site</li> <li>• Distribution and extent of habitats supporting the species</li> <li>• Structure, function and supporting processes of habitats supporting the species</li> <li>• No significant disturbance of the species</li> <li>• Distribution and viability of the species' host species</li> <li>• Structure, function and supporting processes of habitats supporting the species' host species</li> </ul>



Endrick Water SAC	
<i>The stem river and some riparian areas, from Loup of Fintry down to Croftamie.</i>	
<i>Qualifying Interests</i>	<i>Annex I Habitats &amp; Annex II Species Conservation Objectives</i>
<ul style="list-style-type: none"> <li>• River lamprey</li> <li>• Brook lamprey</li> <li>• Atlantic salmon</li> </ul>	<p>To avoid deterioration of the habitats of the qualifying species or significant disturbance to the qualifying species</p> <ul style="list-style-type: none"> <li>• Brook lamprey</li> <li>• River lamprey</li> <li>• Atlantic salmon</li> </ul> <p>thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving FCS for each of the qualifying features To ensure for the qualifying species that the following are maintained in the long term</p> <ul style="list-style-type: none"> <li>• Population of the species including range of genetic types as a viable component of the site</li> <li>• Distribution of the species within site</li> <li>• Distribution and extent of habitats supporting the species</li> <li>• Structure, function and supporting processes of habitats supporting the species</li> <li>• No significant disturbance of the species</li> <li>• Distribution and viability of the species' host species (eg Powan)</li> <li>• Structure, function and supporting processes of habitats supporting the species' host species</li> </ul>



**Firth of Forth SPA**

**Forth estuary, intertidal areas and some onshore areas from Bandeath to Kersie Bridge (part of a very much larger site, the greater part of which lies outwith the Stirling Council area)**

*This is also a SSSI and a Ramsar (Convention on Wetlands of International Importance especially for Waterfowl Habitat) site.*

<i>Qualifying Interests</i>	<i>Annex 1 Habitats &amp; Annex II Species Conservation Objectives</i>
<ul style="list-style-type: none"> <li>• Bar-tailed godwit</li> <li>• Common scoter *</li> <li>• Cormorant *</li> <li>• Curlew *</li> <li>• Dunlin *</li> <li>• Eider *</li> <li>• Golden plover</li> <li>• Goldeneye *</li> <li>• Great crested grebe *</li> <li>• Grey plover *</li> <li>• Knot</li> <li>• Lapwing *</li> <li>• Long-tailed duck *</li> <li>• Mallard *</li> <li>• Oystercatcher *</li> <li>• Pink-footed goose</li> <li>• Red-breasted merganser *</li> <li>• Redshank</li> <li>• Red-throated diver</li> <li>• Ringed plover *</li> <li>• Sandwich tren</li> <li>• Scaup *</li> <li>• Shelduck</li> <li>• Slavonian grebe</li> <li>• Turnstone</li> <li>• Velvet scoter *</li> <li>• Wigeon *</li> <li>• (Waterfowl assemblage)</li> </ul> <p>* indicates assemblage qualifier only</p>	<p>To avoid deterioration of the habitats of the qualifying species (listed opposite) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and</p> <p>To ensure for the qualifying species that the following are maintained in the long term:</p> <ul style="list-style-type: none"> <li>• Population of the species as a viable component of the site</li> <li>• Distribution of the species within site</li> <li>• Distribution and extent of habitats supporting the species</li> <li>• Structure, function and supporting processes of habitats supporting the species</li> <li>• No significant disturbance of the species</li> </ul>

The Alloa Inches part of the Firth of Forth SPA, most relevant to the SPG area, does not have a list of Qualifying Interests disaggregated from that for the much larger and ecologically very varied 'Site' of which it is a small part. Of the Qualifying Species listed for the whole SPA, available count data suggests that this part of the designated site support, at some period(s) of the year, significant numbers of:

- Cormorant
- Curlew
- Lapwing
- Pink-footed Goose
- Shelduck
- Wigeon

None of this data gives any indication of whether or to what extent the land area outwith the designated SPA site is utilised by these species. It is proposed to commission a study to remedy this.



## Appendix 3

### Geological Conservation Review sites

Code	Name	Block	Grid Ref	GCR Site Account
832	Aucheneck (SSSI)	Quaternary of Scotland	NS478830	Site Account
1561	Ballagan Glen (SSSI)	Dinantian of Scotland	NS573800	Not available
390	Ballanucater Farm	Palaeozoic Palaeobotany	NN630022	Not available
2447	Ben Heasgarnich (SSSI)?	Mineralogy of Scotland	NN428385	Not available
1147	Campsie Fells	Carboniferous-Permian Igneous	NS535825	Not available
1562	Gargunnock Burn	Dinantian of Scotland	NS707932	Not available
484	Gartness	Quaternary of Scotland	NS495875	Site Account
2700	Keltie Water, Callander (part SAC)	Dalradian	NN645125	Not available
1011	Leny Quarry	Cambrian	NN615098	Not available
2509	Sheriffmuir Road to Menstrie Burn	Silurian and Devonian Volcanic Rocks	NS813979	Site Account
1563	Todholes	Dinantian of Scotland	NS739877	Not available
1564	Touchadam	Dinantian of Scotland	NS761906	Not available
1934	Tynaspirit (SSSI)	Quaternary of Scotland	NN666047	Site Account
1387	Wallstale	Carboniferous-Permian Igneous	NS773912	Not available
2303	Western Forth Valley Menteith Moraine and Kippen	Quaternary of Scotland	NN595005	Not available
357	Wolf's Hole Quarry (SSSI)	Silurian - Devonian Chordata	NS790981	Site Account



## Further Information

### **Please contact:**

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