Annex 1
Cairngorms Local Biodiversity Action Plan
Working Draft

Contents

PRIORITIES FOR THE CAIRNGORMS LBAP 2013 – 2017

The Cairngorms Local Biodiversity Action Plan has four main aims over the period 2013 to 2017. These are:

1. **Enhance woodland and wetland habitat networks**
2. **Improve the quality of existing habitats (woodland, wetland, moorland, montane & grassland)**
3. **Identify and maintain important, non-designated sites for biodiversity**
4. **Implement a focused conservation action for a small group of key species**

HABITAT ACTION PLANS

(a) Woodland Habitats

i. **Woodland Objective 1: enhance woodland networks**
ii. **Woodland Objective 2: increase the quality of woodlands**
iii. **Woodland Objective 3: Identify and manage key, undesignated woodland sites**

Introduction to woodland habitats

The woodlands of the Cairngorms are of national and international importance because they contain the largest remaining areas of semi-natural woodland habitats in Britain. The Cairngorms area occupies just less than 10% of Scotland's land mass, yet contains 25% of the entire Scottish resource of native woodlands and its Caledonian pinewood are greater in total area and individual size than anywhere else in Scotland. The woodlands of the Cairngorms National Park represent the most extensive area of boreal forest in Britain.

Associated with these woodlands are a number of populations of species found nowhere else in Great Britain. These woodlands are also important components of the landscape, covering about 800km^2, or 18% of the Cairngorms National Park. The woodlands are concentrated in the main river valleys, but there are no woodland habitat links between them. The current extent, distribution, size and composition of Cairngorms woodlands has largely been determined by historical human activities, such as woodland clearance, planting and prevention of natural tree regeneration by burning and grazing.

Habitats included under this category are Caledonian Pinewoods (UKBAP) & conifer plantations (local priority), Upland Birchwoods – incorporating aspen "woodlands"– (UKBAP), Upland Oak (UKBAP) and Wet woodland (UKBAP).

Woodland Issues

- Grazing pressure (either too much or too little)
- Poor natural regeneration
- Limited woodland structural and species diversity
- Lack of deadwood
- Poor landscape design
- Fragmentation of woodlands
- Disease and invasive non-native species
- Climate change and wild fires

Native Pinewood Action Plan

Native pine woodlands, of self-sown Scots pine, are relicts of the ancient Caledonian Forest, which is believed to have covered much of the Scottish Highlands. In the past these indigenous forests may have covered more than 1.5 million ha of Scotland, but today less than 1% of the former range now remains. The Cairngorms contains over half of Scotland's semi-natural pinewood, and are of national and international significance.

Pine woodlands usually contain varying amounts of birch and other broadleaved trees, with juniper often an important understory species. The native 'Caledonian' pine woods are of disproportionate importance in terms of biodiversity, possessing a characteristic plant and animal community, which includes many rare and uncommon species. Contrary to popular belief, remnant native pine woodlands are the product human management over thousands of years.

Actions

- ❖ targeted expansion & restoration to support pine wood habitat networks
- ❖ Improve connectivity between Dee and Spey catchments
- ❖ specific enhancement/linking of core capercaillie habitats in pinewoods (native and plantation) to increase the 'functional' connectivity
- ❖ A focus on improving the quality of all native pinewoods, and in particular the habitat niches within the resource (deadwood, open areas, wetland, scrub, etc.)
- ❖ Enrichment planting within pinewoods with a range of native broadleaves (grown locally from local origin seed) to improve species diversity
- ❖ Undesignated native pinewoods identified and targeted for enhancement

Conifer Plantation Action Plan

Conifer plantations are an important woodland type in the National Park, both in terms of an economic resource and a natural asset. They are a mixture of native Scots Pine and introduced species such as Sitka and Norway spruce, lodgepole pine, Douglas fir and larch. Many plantations are usually of a single species and their structure varies with age of the stand and management. Plantations containing dense stands of conifers with little diversity of ground flora are of limited value for biodiversity

Conifer plantations make up nearly 50% of the total woodland resource in the Cairngorms and more than a third of these are on Ancient Woodland Sites. This continuity of forest cover and high proportion of Scots pine has resulted in many plantations resembling native pinewoods. The biodiversity value of some of these well-managed plantation woods may be equal to that of native pine woodlands in some areas. Significant biodiversity benefits are possible if such productive woodlands can be enhanced by increasing structural diversity (such as enhancing the variety of species and age structures, the creation of deadwood and open space) and adopting Continual Forest Cover management while still providing economic returns.

Actions

- ensure all new conifer plantations contribute towards enhancing the woodland network
- conifer plantations enhanced to increase biodiversity through restructuring, restocking/species enrichment (especially with native broadleaves), deadwood creation, glade creation and field layer management
- Prioritise Plantations on Ancient Woodland Sites (PAWS) for plantation restructuring and enrichment
- All new conifer plantations are designed to maximise their potential for biodiversity
- Conifer plantations that are important for biodiversity identified and targeted for enhancement

Birch and Aspen woodland Action Plan

Birch is the dominant tree species in almost all Cairngorms Broadleaved woodlands, and is by far the most extensive broadleaved woodland type in the Cairngorms representing over a fifth of the woodland in the National Park. Birch grows on a wide range of soil types and is usually the most common tree species at higher altitude. Birch woodland is commonly made up of other tree species such as oak, aspen and hazel and often grows in association with Scots pine in a number of mixed woodlands.

Although Aspen as a species is widely distributed in Great Britain, it is usually associated with birch woods or mixed woodlands. Uniquely, in the Cairngorms, aspen is present in pure stands forming "aspen woodlands" usually with other broadleaved species, particularly birch. These stands of aspen woodlands are small and the total resource is approximately 160 ha, and is all concentrated on the low ground of Strathspey and Deeside. The large aspen stands of the Cairngorms are a remnant of the ancient boreal woodlands that

colonised the area at the end of the last glaciations, and many have a history of continuity going back hundreds of years. These woods support many rare and scarce moths, flies, fungi, lichen and mosses that occur nowhere else in the UK. Associated with Aspen is a community of saproxylic species that are so localised in their distribution that their presence can be regarded as indicators of forests of international importance. The diverse saproxylic insect fauna has strong similarities with semi-natural forests found in Scandinavian countries.

Actions

- Targeted expansion of existing birch wood network
- creating new aspen networks by linking existing aspen stands
- enhancement of habitat niches in existing birch woods (glade & deadwood creation), keeping glades & rides open, enrichment planting of other native species
- increasing proportion of aspen (of local origin stock) planted in all new woodlands
- restoring and enhancing existing birch woods that contain a high degree of aspen stands
- continue to support aspen nursery and seed orchard
- Identify birch woods in need of beneficial grazing to improve their structural diversity, foster natural regeneration and encourage a more natural field layer
- Birch and aspen woods that are important for biodiversity identified and targeted for enhancement

Upland Oak Woodland Action Plan

Upland oak woodlands are characterised by a predominance of Sessile oak and sometimes locally with Pedunculate oak. Upland oak woods generally contain birch and other broadleaved species such as rowan, alder, hazel and holly, and can. Although oak woodland is widely distributed throughout Great Britain, in the Cairngorms they only form a small proportion of the broadleaved woodlands in the area. The combination of poor soils, a harsh climate, the value of its timber and livestock grazing has made this type of woodland rare in the Cairngorms. The richest sites for upland oak woodlands are in the west of Scotland. Most of the oak woodlands in the Cairngorms occur in Deeside and sparingly in Strathspey, the Atholl and Angus glens and it seems likely that the majority of existing stands were planted.

Actions

- Identify the extent and condition of the upland oak resource
- Identify areas for, and create, new oak woodlands
- Existing oak woods enhanced through grazing management, enrichment planting and field layer management

Wet & Riparian Woodland Action Plan

Wet and bog woodlands occur on poorly drained or seasonally wet soils, usually with alder, birch and willows as the predominant tree species, but sometimes with ash, oak and pine on drier riparian areas. They are found on floodplains, as successional habitat on fens, mires

and bogs, and hill-side flushes and in peaty hollows. Wet woods frequently occur in mosaic with other important habitats and consequently their ecological importance is particularly site specific.

Fragments of ancient floodplain forest are rare in the UK, but some of the best surviving examples are in the Cairngorms. These sites include habitats such as 'Residual alluvial forests' and 'Bog woodland' identified under international conservation designations. There are no precise data on the extent of wet or bog woodlands in UK, but it is unlikely that those of the Cairngorms form a particularly large proportion. However, the high ecological quality and importance of riparian woodland in the Cairngorms, especially in Strathspey and Deeside, is probably unsurpassed in a UK and in some cases European context.

Actions

- Riparian woodland habitat created in the upper deforested catchment of rivers and burns (but avoiding key wader habitat)
- Bog and wet woodland enhanced through re-wetting & drain blocking of previous or potential areas.

Other woodland actions:

- Establish an inventory of good quality/biodiversity important moorland and grassland sites. Ensure these important moorland and grassland sites are not converted to woodland, and their network connectivity is maintained.
- Develop a Cairngorms Biodiversity web resource that brings together and publicises key documents and guidance for woodland management in one place. Produce new guidance if required.
- Explore the possibilities of a specific CNP woodland challenge fund to support the expansion of the woodland resource based on enhancing the woodland network.
- Support the Deer Framework for the Cairngorms National Park, working to balance the needs of deer with the need to improve the quality and connectivity of the woodland resource.

(b) Wetland Habitat Action Plans

i. **Wetland Objective 1: Develop wetland creation or restoration projects**
ii. **Wetland Objective 2: Enhance the quality of the existing wetland network**
iii. **Wetland Objective 3: Further the objectives of the Strathspey Wetland & Waders Initiative, Catchment Management Plans and Futurescapes Project**

Habitats included under this are Upland flushes, fens & swamps (UKBAP), Lowland fens (UKBAP), Wet grassland (local priority for nationally significant wader populations), Rivers (UKBAP), and Lochs & ponds (UKBAP)

Introduction to Wetland Habitats

The Cairngorms National Park holds nationally and internationally important wetland sites. Cairngorms river and freshwater habitats and their water are considered of high quality while being home to a rich mix of wildlife. It is also one of the most important UK mainland sites for breeding wading birds.

Wetland habitats in the CNP have been considerably reduced by drainage through past land management practices, and there are both existing and historic wetland sites in need of enhancement or restoration. Remaining wetlands are often small and fragmented and are still under threat from development pressure, diffuse pollution and water resource use pressures such as abstractions, impoundments, and engineering activities.

Waders such as lapwing and redshank have seen their numbers dramatically reduce by over 50% in the last 10 years. Mosaics of well managed wetland habitats are essential for the long-term survival of some of our most special wildlife. Wetlands also can bring multiple benefits beyond their intrinsic nature conservation value such as buffering against flood events, climate change mitigation; diffuse pollution control, aquifer recharge, improvements to landscape quality, educational value as well as tourism and recreational benefits.

Climate change models predict that we will see an increase in rainfall in the autumn months. This has the potential for an increase in flash flooding. There is now a greater need than ever for a sustainable approach to flood management using natural river processes to manage flooding where it arises. Natural flood management using soft engineering options to slow the flow of water upstream and increase water storage in the whole catchment could provide wide ranging benefits for nature and people. The National Park has huge potential to lead the way with these techniques and deliver Scottish Government targets from the Flood Risk Management Act and the Water Framework Directive.

The Cairngorms Nature Partnership will seek opportunities to create, enhance or restore wetland habitats across the CNP and look for innovative ways to demonstrate natural flood management. Following on from work undertaken previously, the partnership will use SEPA wetland inventory maps and the 1:200yr flood risks maps along with more detailed data

collected as part of the Strathspey Wetlands & Waders Initiative farm habitat project to guide where this may be most appropriate. The partnership will also respond as and when opportunities arise for positive wetland work. Much of this work will be delivered by already well established collaborations including the Catchment Management Partnerships, the Futurescapes Project and the Strathspey Wetlands & Waders Initiative (SWWI). It is therefore essential that all partners are actively supporting these areas of work.

Habitats included under this are Upland flushes, fens & swamps (UKBAP), Lowland fens (UKBAP), Wet grassland (local priority for nationally significant wader populations), Rivers (UKBAP), and Lochs & ponds (UKBAP)

Wetland actions

- Continue to support farmers and land managers to conserve the nationally important populations of breeding waders in Strathspey. Look for innovative solutions, through research and practical action, to address the requirements of the priority species.
- Create wet grassland by reinstatement of water sources, creation of scrapes and the installation of sluices to manage water levels if appropriate.
- Encourage blocking of drainage ditches to improve areas of wet grassland.
- Reinstate historically modified burns to provide direct flows into wetland areas.
- Reduce the renewed pressure to increase drainage of wet areas.
- Seek to ensure wetlands are well managed to avoid scrub encroachment and a build up of rank vegetation. Encourage the use of rush-topping equipment and livestock grazing by farmers.
- Continue to support river management to improve ecological status of all water bodies
- Shape future funding sources for wetland restoration and management (i.e. the next phase of SRDP) to ensure that they are attractive to farmers and land managers. Provide information, support and targeted advice to Scottish Government that result in high quality outcomes. Raise awareness of available funding sources. Provide assistance and advice to land owners to enable easy uptake of funding sources.
- Raise awareness of the value of wetlands and wet patches.
- Protect wetland areas from development when considering planning applications.
- Look for opportunities to demonstrate sustainable flood management via the restoration of a natural flooding regime. This will include removing floodwalls and embankments/bank protection to reduce restrictions to flooding and allowing for a more natural floodplain function.

(c) Grassland Habitats

i. Grassland Objective 1: enhance the quality of grassland habitats
ii. Grassland Objective 2: Identify and manage key grassland sites for biodiversity

Introduction to grassland habitats

Farmland and grassland provides habitats for a range of species, including resident and migratory birds, mammals, invertebrates, fungi and plants, many of which depend upon the continuing traditional or modern farming methods for their survival. Generally, the farmland and grassland habitats in the Cairngorms have been managed in a less intensive manner than other areas in the UK. Consequently, many of these areas are important or exceptional because of their historical human management, not in spite of it. From the biodiversity conservation perspective, many traditionally managed farmland habitats mimic the natural grasslands that were once part of the area.

The links between farmland and grassland and other habitats is extremely important for many species. The habitat mosaics that exist in the Cairngorms result in the high populations of several species that use more than one habitat as well as being important for some species that particularly use edge habitats. Therefore, it is important to understand and consider the biological links between adjacent habitats.

Habitats included under this are Upland Calcareous grassland (UKBAP), Upland Hay Meadows (UKBAP), Unimproved neutral grasslands (local priority of national significance) and Acid grassland (local habitat)

Actions

- Important grassland sites are managed to conserve and enhance their biodiversity
- Grassland sites of importance to biodiversity are identified and mapped
- Important grassland sites are protected from woodland or wetland expansion or other changes that impact on their biodiversity

(d) Moorland and Montane Habitats

i. **Moorland/Montane Objective 1: enhance the quality of moorland and montane habitats**
ii. **Moorland/Montane Objective 2: Identify and manage key moorland and montane sites for biodiversity**

Moorland and Montane habitats

The Cairngorms comprises the largest and highest area of montane habitat in Britain. It contains the main summits and plateaux with their associated corries, rocky cliffs, crags, boulder fields, scree slopes and the higher parts of some glens and passes. The vegetation is influenced by factors such as exposure, snow cover and soil type. The main zone is considered to be one of the most spectacular mountain areas in Britain and is recognised nationally and internationally for the quality of its geology, geomorphology and topographic features, and associated soils and biodiversity.

Upland heathland is the most extensive habitat type in the Cairngorms National Park area, frequently in mosaics with blanket bog. Upland heathland or heather moorlands comprise unploughed, non-wooded ground that has dwarf shrub vegetation lying below the tree line. The majority of these communities result from human activities associated with woodland clearance and prevention of natural tree regeneration by burning and grazing. Similar communities extend upwards into the montane zone, but the associated plant communities vary according to altitude, exposure and soil type.

Blanket bog is extensive across the National Park, and it supports the largest and highest tracts of montane bog in Britain. Blanket bog is the second most extensive habitat type after upland heath, which it is often found in association with. Blanket bog grades into wet upland heath, with the predominant vegetation type a Calluna – Eriophorum dominated blanket mire typical of cold wet high plateaux in northern Britain. It occurs in areas with deep peat deposits.

The links between montane, heath and bog habitats and other habitats is extremely important for many species. The habitat mosaics that exist in the Cairngorms result in the high populations of several species that use more than one habitat as well as being important for some species that particularly use edge habitats. Therefore, it is important to understand and consider the biological links between adjacent habitats.

Habitats included under this are Upland heath (UKBAP), Calaminarian Grasslands and rocky outcrops (UKBAP), Blanket Bog (UKBAP), Arctostaphylos Heath (local priority), montane heaths (UKBAP) and Montane scrub (UKBAP)

Moorland and Montane Actions

- Restore and enhance blanket bog habitats
- Important moorland and montane sites are protected from woodland or wetland expansion or other changes to burning or grazing regimes that impact on their biodiversity
- Identify key moorland and montane sites for biodiversity (including areas of Calaminarian grasslands and *Arctostaphylos* heath)

Montane Scrub or Montane Woodland Action Plan

Montane scrub can be defined as the habitat on mountains in which trees and shrubs grow at altitudes higher than the timberline (above which trees can no longer sustain an upright growth form, with good quality timber trunks). It is characterised by a range of shrub and tree species (dwarf willows and birches usually), growing in a low twisted, wind-pruned form, together with a variety of flowering plants, fungi, lichens, insects, birds, and other species particularly associated with this zone.

Montane scrub is the rarest and most threatened of our native woodland types and is confined largely to remnant patches on remote and inaccessible cliffs in Scotland (all are less than 1 hectare in size). It is present in no more than a few hundred localities, and is most evident as scattered trees on cliff faces (well above any woodland on the open hill) showing the upper limits of tree-growth but not forming a continuous treeline. The best example of a continuous treeline in Britain is at Creag Fhiaclach, above Inchriach, where a complex of Scots pine and Juniper scrub has developed at 550 to 650m. Such scattered fragments offer a glimpse of what must have once been much more widespread.

Action

- identify target areas for expansion and restoration of montane scrub
- Existing areas of montane scrub are expanded
- Create new areas of montane scrub
- Encourage the re-instating of diverse woodland edge habitat and natural tree lines
- Support the creation/development of montane woodland tree species nurseries.

Local Biodiversity Sites

The Cairngorms National Park is an area of outstanding semi-natural habitat with a rich mosaic of landforms, landscapes, species, habitats and soils. This is a land cared for and managed by generations of farmers, estate owners and other land managers. Nearly half of the National Park is designated for its natural heritage interest and under some form of management for the designated features.

However, the majority of the National Park that is not designated is of a high quality in terms of its biodiversity and mix of habitats, and in many cases is of the same value as the designated areas. Much of this undesignated land is managed sympathetically by land managers.

There is a need to identify the undesignated areas of the National Park that are special in terms of biodiversity for the local communities and for the large number of naturalists interested in the area. This identification is needed to help protect and conserve the diversity of natural heritage features of locally important sites, and to work with land managers to maintain these sites.

Local communities can help to identify their "Local Biodiversity Sites" along with the naturalist community to build up a register of the important sites, and help to manage such sites.

Actions

- Identify key sites (undesignated) that are important for a range of species & habitats to local communities and naturalists
- Maintain a site register with maps
- Implement a programme of audits of Local Biodiversity Sites
- Develop the concept of "Local Biodiversity Sites" for the next Local Development Plan
- Liaise with site owners on management and site objectives
- Local communities are involved in the management of local Biodiversity sites

SPECIES ACTION PLAN

Key species that require direct action

The Cairngorms National Park is a stronghold for biodiversity and supports over one-quarter of the 1,150 UK Biodiversity Action Plan species. It is also home to many other important species, many of which are rare or only found in the National Park. The 2006 publication "The Nature of the Cairngorms" identified 1,153 species that are considered nationally or internationally important. Of these species, 32% are invertebrates, 28% lichens, 20% fungi, 9% bryophytes and 7% vascular plants. Birds and mammals represented only 2% of this total. The most important habitat type in the Cairngorms National Park for these 1,153 species is woodland that has 446 nationally and internationally important species (39%) associated with this habitat. 35% of the important species are associated with rock and montane habitats, and 13% of important species are associated with freshwater and wetland habitats. Species associated with grassland or moorland habitats in the CNP only make up 3% of the total each.

The focus of this action plan is on woodland and wetland habitats, and on implementing actions at a habitat or ecosystem level. These conservation actions are likely to bring benefits for a large number of the important species. However, some species have very specific requirements and large scale or general actions to enhance or manage habitats cannot deliver conservation benefits to some species. Therefore the LBAP is identifying a small group of species that will be subject to focused conservation action.

The first step is to identify the important priority species in the CNP. This is the "long list" of important Cairngorms species. This long list is being selected through consultation with a wide range of species experts. Expert opinion is used where adequate data is lacking. This species consultation process has produced a "long list" of over 1,200 species of importance in the National Park.

Species have been selected that have met one or more of the following criteria:

1. Cairngorms NP hold a high proportion of UK/National population or range of the species.
2. The Species is a UK Priority in the UK Biodiversity Action Plan.
3. Rarity (national/UK level or endemic). The definition of nationally rare is the JNCC definition, found between 1 and 15 10 km squares in UK. Ideally rarity would be assessed at a Scottish level, but data are more readily available for most species at a UK level.
4. Species with populations present (resident, wintering or breeding) in 5 or fewer ten km squares OR sites in Scotland.
5. Species known to be in decline (by 25% in Scotland or UK).
6. Species known to be under threat.
7. Ecology & data knowledge understood to an adequate level to allow practical action.

8. Practical action is achievable.
9. Species identified as a Local Priority through consultation with species experts.
10. A number of high profile, charismatic species that matter to the local people is being selected to aid public engagement.

The key species for focused action will be selected from the "long-list" following consultation with a wide range of species experts.

- ❖ Individual species actions developed for key species
- ❖ Develop a species "toolkit" to assist Planning Officers and Developers
- ❖ Consider the restoration of historic species now lost to the CNP and Scotland

BIO-SECURITY PLAN

Three areas of focus:
(i) riparian habitats a vector for non-native invasive species;
(ii) aquatic non-native invertebrates & fish;
(iii) grey squirrels;
(iv) pathogens and disease
(v) awareness-raising
(vi) survey/monitoring
(vii) and control/eradication (latter where practical/cost effective)

Actions

- ❖ Produce a Bio-security plan for the Cairngorms National Park
- ❖ Continue to support current non-native initiatives (grey squirrel & mink control; riparian, invasive plants monitoring and control)

BIODIVERSITY DATA AND RESEARCH

Actions

- ❖ Habitats are mapped and data available on line
- ❖ Information on the status and condition of priority habitats is available
- ❖ Species distribution and population status is mapped
- ❖ Improve awareness and appreciation of the extent of historical species loss in the Cairngorms
- ❖ Biological data is used to inform and guide land management and conservation activity
- ❖ Proactive research undertaken for priority species and habitats

COMMUNICATIONS AND COMMUNITY ENGAGEMENT

A key role of the Partnership is to engage with people and raise the awareness of how important the CNP is for biodiversity at a national and international level.

Practical involvement of people in the CNP must be targeted at assisting the delivery of the habitat and species action. Additional resources from within the Partnership is required to deliver this area of work.

Actions

- Local people proactively involved in identifying and managing local sites of importance to biodiversity
- A Volunteer Coordinator post established to coordinate and organise volunteers in targeted action
- An apprenticeship programme established to train a small group of volunteers in specialist species group identification and management, and to become Species Champions
- Ranger Services actively involved with local communities in learning about, and conserving, biodiversity
- Initiatives such as the John Muir Award, Curriculum for Excellence and Junior Ranger programme actively engaged in learning and conserving the biodiversity of the National Park
- Detailed Communication and engagement Strategy developed with a range of communication products and resources identified. Partners take forward outcomes of communications strategy
- Businesses involved and contributing to the conservation and enhancement of biodiversity
- Concept of a "Cairngorms Biodiversity Trust" or other free-standing body developed as a mechanism for attracting funding and leading on biodiversity implementation