

**DRAFT**

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**CAIRNGORMS NATURE DRAFT ACTION PLAN 2013 - 2018**

**FOR CONSULTATION**

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# I. INTRODUCTION

## **A special place for people and nature**

From extensive tracts of ancient woodlands and the sparkling, clean waters of its rivers and lochs, to the high Arctic-style mountainous landscape and species-rich lowlands, the Cairngorms National Park is a haven for nature and wildlife – in all its astonishing variations.

National Parks across the world are renowned icons of global significance. The Cairngorms National Park is no exception. It is of great value and significance to Scotland, to the UK and to the international family of protected areas. Planning for nature is essential for the future conservation, enhancement and enjoyment of one of the country's most important assets.

To put this in perspective, whilst the National Park covers less than two per cent of the UK's landmass, it is home to a remarkable 25 per cent of its threatened animal, insect, lichen, fungi and plant species. Some of these species are found nowhere else in the UK. Almost half of the National Park is designated through the Natura 2000 network as being of European importance for specific nature conservation features. These range from river systems to forests, moorland and the highest arctic-like summits; and from species such as wildcat and otter, to golden eagle and capercaillie. 75 per cent of the designated features are in favourable condition. The two most significant pressures on the favourable status are grazing and burning.

The National Park has more high-level mountain ground than anywhere else in Britain and Ireland, offering exceptional value to rare mountain plants and other scarce wildlife. It has the largest Caledonian forests and is home to many uncommon species like the Scottish crossbill. Some of the world's purest and cleanest rivers and fine quality wetlands support stocks of Atlantic salmon, lampreys and other fish.

Whether living and working here, visiting the many attractions and walking in the outstanding landscapes, makes us happier, healthier and fitter. Be it a simple walk with the dog, bike ride by a loch, or extreme mountaineering, the National Park's high quality, natural environment stimulates our senses and make us fitter, happier and healthier.

The exceptionally high quality of nature, the landscape, the opportunities to enjoy it and the multiple benefits it delivers are important reasons why the Cairngorms National Park was created, guiding both current work and our visions for the future.

## **A cultural landscape**

The work of generations of land managers has produced the blend of different habitats and landscapes we see today. With the possible exception of the highest parts of the plateaux, the landscapes of the National Park are a product of human interaction.

Managing for biodiversity is not something additional to the way land managers work, but part of the way they work. For generations it has been shown that it is possible to deliver biodiversity gain at no extra cost or detriment to the business. Forest management, deer stalking, grouse shooting, fishing, crofts and farms are all fundamentally important to the biodiversity, culture and economy of the National Park.

The way such work benefits biodiversity can be obvious at a very small scale, such as one wood, moor or farm. Add the work in many woods, moors and farms together and you get

a cumulative and significant result of high quality habitats that makes the Cairngorms National Park internationally important for nature conservation.

The history of land management in the Park has seen the forests ebb and flow, moorlands contract and expand and farming systems change. As we manage our land for different means and in different ways, the fortunes of our nature rise and fall.

Whilst the National Park is still undoubtedly one of the best areas in the UK for biodiversity, we need action to halt the biodiversity loss that is taking place, to change some current management practises that are accelerating the decline and to focus our efforts in the many areas where we are leading the way.

### **A unique mosaic**

Nowhere else in Britain can you find such a collection of different habitats of very high quality and exceptional size and scale. And, unlike many other National Parks around the world, people live and work in British National Parks.

All of this means that there are, inevitably, potential conflicts of interest and difficult issues that we, collectively, need to grapple with. For example, high densities of deer can inhibit and prevent scrub and tree regeneration; and, by definition, woodland and wetland expansion will be at the expense of other habitats.

It is crucial that we acknowledge these and many more, similar issues in any plans we make for the future. The Cairngorms Nature Action Plan is biodiversity focussed; it is not a land-use strategy and therefore does not highlight how our landscapes deliver all four aims of the National Park. However, we must overtly recognise and consider any proposed changes to land-use in the light of any competing demands.

Red deer, our largest living native land mammal, are consistently voted amongst the top favourite animals in Scotland. They have a major influence on habitat and on the local economy drawing in wildlife watchers and hunters from all around the world. Unless deer numbers are proactively controlled, their habitat can become degraded; woodland cannot regenerate and shallow upland soils are eroded.

The successful establishment and regeneration of woodlands depends upon the right ground conditions and control of grazing. Deer grazing is controlled by culling, translocation and exclusion using fences. From an ecological, landscape and deer welfare point of view fencing is considered a last resort, but in some circumstances it is the most practical solution to enable woodland expansion in the immediate term. The Cairngorms National Park is one of the few places in the UK where large scale regeneration is taking place without fencing.

The six deer management groups around the National Park assist the many estates involved in deer management to work together collaboratively. The Cairngorms Deer Advisory group has brought together all with an interest in deer management and produced the Deer Framework for the National Park.

## Woodlands

Some of the most important woodland areas in Britain dapple the hills and cloak the low ground in the Cairngorms National Park. Native tree species comprise 79 per cent of the National Park's woodlands, representing a quarter of the entire Scottish native woodland resource. The historic loss of native woodland has largely been halted in recent years. However, there are areas of specific concern, and some native woodland types have not fared so well and need particular attention. For example, in some places there is a significant gap in the age structure of woodlands and a lack of regeneration.

More than half of the surviving **Caledonian forest**, including the largest remaining remnants, is in the National Park. Boosted by recent expansion schemes, this globally important habitat is a western variety of the huge 'boreal' forests that girdle the northern world. Through focussing on quality improvements, expansion and connectivity in suitable and strategic places, there are significant opportunities to minimise loss and fragmentation, further enhancing habitat networks and the outstanding national significance of the Park's Caledonian forest.

There is an immediate need for focussed action across the entire British range of **montane scrub** habitat to reverse hundreds of years of decline. It is so impoverished that many people do not even realise that the tree-line woodland habitat is missing from the high hills. The National Park has the highest natural altitude montane woodland in the UK, including up to the most natural treeline in Britain, at around 640m on *Creag Fhiaclach*. Scattered fragments, particularly in the Northern Cairngorms, offer a glimpse of a more natural transition that was once widespread. These fragments are excellent foundations for landscape scale change, leading the way in the restoration and rejuvenation of one of the UK's rarest and most threatened habitats.

More than one-third of **conifer plantations** are on Ancient Woodland Sites and they comprise nearly half the woodland in the Park. In some cases, the biodiversity value of well-managed plantations can equal that of native pinewoods. Most of the priority species associated with this habitat are present when management tends to mimic that of Caledonian pine woodlands. Therefore, the appropriate biodiversity management of existing planted conifer woodlands could potentially benefit a range of nationally rare species.

Different species of birches are the principal trees in most of the broadleaved woods in the Park. **Birchwoods** are very rich in insects, including the large and attractive Kentish glory moth, and are nationally important for fungi. Stands of **aspen** trees, some strikingly gold and yellow in early autumn, support several of the UK's rarest and most threatened lichens, and the first British discovery of the parasitic fungus, Aspen bracket, was made here in 1999. Appropriate grazing management, habitat loss and fragmentation, are the key issues for birch and aspen woodlands.

The Park holds Scotland's largest extent of **bog woodland**, a European priority for conservation. These are excellent habitats for dragonflies, spiders, amphibians and mosses. The trees, held in check by the wet conditions, are very slow growing and are centuries old.

### **Perfect pine needles**

The conifers of the Cairngorms National Park and their healthy ground cover of native shrubs provide a vitally important refuge for the largest grouse in the world – the capercaillie – which has declined in recent years. About 80% of the UK's capercaillie population are now resident in the Cairngorms National Park.

The name Capercaillie comes from the Gaelic 'capall-coille', meaning 'great cock of the wood', referring to the turkey-size large bodied males. In summer, chicks feed on moth caterpillars that feed on blaeberry plants that grow in sunnier parts of the forests. Adults and older chicks also feed on the berries and leaves. This nutritious diet early in life helps the capercaillie reach its large size. During winter, capercaillie feed almost exclusively on pine needles. No other Scottish bird makes such heavy use of conifer needles as food.

### **Freshwater, wetlands and wet grassland**

The waters of the National Park, both flowing and still, are major assets and a huge reservoir of biodiversity. The rivers are among the longest in Scotland. Add dozens of lochs, numerous smaller lochans and peaty pools, and the importance of water to the overall biodiversity is clear. Some of the highest altitude standing waters in the UK support populations of Arctic charr, probably the first species to colonise the post-glaciation freshwaters of Scotland.

Well-managed wetlands bring benefits to people as well as nature. Climate change has significant potential for increases in flood events. Work needs to be done to re-naturalise our freshwater systems, reconnecting our rivers with their floodplains and slowing the flow of water in our catchments so that we can cope with the pressures that climate change will bring.

**Large wetlands** with their associated **bogs and fens**, are havens for wintering wildfowl and for creatures such as rare water beetles to thrive. Two of the major wetlands in the Park are RAMSAR sites.

Some of the UK's best breeding populations of **wading birds** such as redshank, lapwing, curlew and snipe are in the wet grasslands that form part of the low intensity mixed farming which is so important for the National Park.

**Rivers** in the Park, of which 90 per cent are considered to be in high ecological status, hold nationally important populations of Atlantic salmon and three species of lampreys. They also have healthy populations of many kinds of invertebrates, including insects and the globally endangered freshwater pearl mussel.

However, wetland and wet grassland habitats have been considerably reduced by drainage to improve the quality and potential of the farming land. Many remaining wetlands are in need of enhancement or restoration. Threats still exist to the freshwater environment from a variety of pressures including development, pollution, abstractions and drainage. Some wader species have seen their numbers reduce significantly in recent years.

Mosaics of well-managed **freshwater, wetland and wet grassland habitats** are essential for the long-term survival of some of the most special wildlife in the Park. By focusing on these essential habitats there is the potential for us to buffer against future changes, while enabling the mixed farming system to thrive.

## Uplands

The mountains at its core gave the Cairngorms National Park its name, and it is the uplands that provide some of the most exceptional aspects of the Park's biodiversity. The sheer expanse of higher altitude ground, combined with the near natural conditions in the mountains, helps to shape the communities of scarce plants, lichens, mosses, fungi, insects and birds.

Birds such as dotterel and snow bunting that have links to **Arctic tundra communities** give the National Park exceptional UK value for scarce birds. There are extensive tracts of **'montane' (alpine-like)** plant communities, including plants, insects and primitive organisms, such as slime moulds and rare lichens, associated only with snowbeds. The Park has the highest tracts of **blanket bog** in the UK and wide expanses of wet heath, significant bog mosses, insects and more.

Climate change is likely to have considerable effects on many montane species and the Cairngorms National Park is perhaps the ideal place to conduct research, highlight and demonstrate the action needed to help Scotland's key habitats and species adapt to climate change. Through effective land management we can 'lock up' carbon: restoring peat-forming habitats and increasing forest cover. There are opportunities for developing approaches that secure healthy ecosystems so they can help us to adapt more easily to the effects of climate change.

**Heather moorland** in the uplands plays a huge part in the look and life of the National Park. It covers around 40 per cent of the land. The tones of ling, bell heather, other woody shrubs, grasses and sedges that grow in the moors are a fundamental aspect of the seasonal shifts of colour in the Park. These moors support animals like the economically important red grouse, rare netted mountain moths and reptiles like the adder.

There are areas where important montane and moorland habitats and species are thriving and these can be used to demonstrate good management practise. However, not all upland management is delivering biodiversity gain. Intensive grouse moor management; undergrazing and overgrazing; and lack of muirburn and excessive muirburn can all have profound biodiversity implications.

### Slippery at the top

Slime moulds may have you fooled into thinking it's a fungus or even a soft-bodied animal but these single-celled creatures (like amoebas) have astonishing abilities to work together with others of their own kind to form complicated structures, which move, very slowly, over different surfaces.

They also have a knack of 'shape-shifting', changing appearance from a flat mass to a fruiting body that looks very like a kind of fungus. A high proportion of the entire UK population of slime moulds live high up in the Cairngorms National Park where snowbeds provide them with the ideal conditions for their weird, but undoubtedly wonderful, lives.

### **Tracking Highland tigers**

One of the most elusive, but iconic species of Highland forests is the Scottish wildcat. Also known as the 'Highland tiger', this bushy-tailed feline is very scarce, with the entire Scottish population thought to number only a few hundred.

There has been much research work on wildcats in the Cairngorms National Park in recent years, including surveys using 'camera traps' that trigger when an animal walks past. Thanks to such work, we now know that the mosaic of woods and open ground of the Cairngorms are a major stronghold for this rare species.

### **Lowlands, including farms and croft land**

The low ground of the Cairngorms National Park is of enormous importance for nature because of the diversity of species living there.

The great majority of residents in the National Park live on the low ground. It is where more of them have first-hand experience of nature and importantly where they have a strong influence on it. **Farming and forestry** are key parts of how people use these lowlands. Both allow a wide range of species to live near and within settlements across the National Park.

The **farmland and grassland** habitats in the Park have often been managed in a less intensive way than in other parts of the UK. Their current value for biodiversity is due in no small measure to this history of low intensity management and the mixed farming system. The economic pressures placed on modern-day farming are however often resulting in an intensification of farming and a decline in the biodiversity value.

Other biodiversity highlights of the lowlands include **flower-and-insect-rich grasslands** on base-rich soils. Older grasslands are also important for scarce fungi, such as waxcaps.

### **Buzzing biodiversity**

Since it was re-discovered in Glenmoriston in 1997, the Scabious mining bee *Andrena marginata* has been found at several sites within the Cairngorms National Park, making it the country's most important area for this little insect. The bee was thought to be extinct in Scotland until a few years ago; it now appears that the last remaining sites are in the National Park.

Listed as endangered in seven countries, this mining bee is an internationally important part of the Park's brilliant insect biodiversity. It occupies lowland meadows with patches of bare earth in the National Park and is known, as its name suggests, for liking for different scabious flowers as food.

**The Cairngorms National Park  
A world-class gem for biodiversity**

## 2. VISION

### **Together, we are strong**

The Cairngorms National Park is already the most important, single area in the UK for nature conservation – it has both European and global importance. The quality, variety and extent of species and habitats, many of which are internationally rare and all set within world-famous landscapes, is exceptional.

Across large parts of the National Park, the existence of these havens for biodiversity is thanks to actions by past and present generations of land and water managers, who have helped to shape and conserve them.

Furthermore, there are already organisations, individuals and agencies from a range of sectors who are all committed to, and undertaking sterling work for the benefit of nature in the National Park.

The positive impact of this work is enormous, helping to underpin both many aspects of the Park's biodiversity and the economic benefits that flow from it – whether that is directly in the use of resources such as timber, fish and game or indirectly through the massive benefits linked to tourism, recreation, health and wellbeing.

This is a great point to start this new Cairngorms Nature Action Plan from. Together we can make an even greater difference to this special place for biodiversity in the future.

### **Cairngorms Nature – the next steps**

Cairngorms Nature, the new partnership that has been formed to guide, implement and review this Plan's recommendations acknowledges the major contribution everyone involved in the management of the Park makes.

The Cairngorms Nature Action Plan 2013 – 2018 (CNAP) builds on the foundations laid by the Cairngorms Local Biodiversity Action Plan 2002 – 2012. The LBAP guided work in the National Park for over ten years. During that time, it delivered considerable biodiversity gains.

Cairngorms Nature is a new partnership, open to all who want to contribute. All it takes to be a partner is a desire and commitment to help deliver the Action Plan: the document that will shape and focus partners' work on what we need to do in the next five years to take us one-step nearer our vision.

The plan does not cover everything to do with biodiversity in the National Park, nor does it include everyone who is doing a great deal of positive work. The four aims describe the priorities. Those priorities reflect the National Park Partnership Plan and commonly agreed areas of immediate need. The list of key partners identifies agencies and groups that will provide the drive and support, but it is not meant to represent all those who are doing work in that area.

### Aims of the Cairngorms Nature Action Plan

- Improve the quality and connectivity of woodlands and wetlands for biodiversity
- Implement priority actions for other habitats
- Conserve and enhance key species through focused conservation action
- Encourage and provide opportunities and support for people to get something from, and help to look after, nature

The Cairngorms Nature Steering Group will provide strategic leadership of Cairngorms Nature, overseeing the development of the partnership and the delivery of the Action Plan. Members of the Steering Group are listed in Section 3: Strategy.

Our vision is that...

**...nature in the Cairngorms National Park will be cared for and treasured by all who live and work here and all who visit. Natural habitats, rich in distinctive species, will be even more diverse, even more resilient and even better connected than they are today.**

### **Where we are now and where we want to be in 50 years:**

2013	2063
<b>Land management</b>	
An active land management community based fundamentally around conservation, food production, timber, woodfuel, energy production and sport is vital to the management and enhancement of habitats supporting biodiversity.	The land management community is thriving. It receives strong public support for the services it provides. Nature conservation is incorporated within all land management activities. Land management is tailored to ensure that the patchwork of habitats is even more diverse and rich in native species, hosting a recovery in those that are currently in decline.
<b>Forests and woods</b>	
The largest remaining areas of semi-natural woodlands in Britain are concentrated in the main river valleys of the National Park. They include 25 per cent of the entire Scottish resource of native woodlands; the greatest extent of Caledonian pinewood; some of the best surviving fragments of	Patches of forest and woodland, some miles across, some as small as football fields, link together through farmland and open ground. They are expanding up hillsides and into quiet areas, providing refuges for species to flourish.  They are made up of almost entirely

<p>ancient floodplain forest in the UK; some of the largest remaining stands of Aspen and small, isolated patches of montane scrub.</p> <p>The woodlands of the Cairngorms are nationally and internationally important for many rare species of birds, mammals, invertebrates, lichens, plants and fungi.</p> <p>In places, the forests are fragmented and regeneration is restricted by overgrazing.</p>	<p>native trees: a patchwork of different woodlands, including productive plantations, all with rich understories, trees of all ages, clearings, bogs and deadwood scattered throughout.</p> <p>The UK's largest natural forests are considered an exemplar of woodlands managed for multiple benefits.</p> <p>On the slopes of some mountains and hills, the forests blend naturally with the uplands as montane scrub stretches above the treeline. Birds that are rare, and even some that aren't found anywhere else in the UK, thrive in the biggest tract of natural treeline in Britain.</p>
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**Wetlands, wet grasslands and freshwater**

<p>The National Park contains some of the most important wetlands in Europe and the most important area of natural floodplain in Britain. Away from the Insh Marshes there are only small areas of wetland and many lowland wetlands have been drained.</p> <p>Strathspey is the most important UK mainland breeding site for farmland waders, though numbers are declining.</p> <p>In a UK context, rivers and lochs in the National Park have a high degree of naturalness and are largely of good ecological status. Most of the area's water is of excellent quality and internationally recognised for important habitats and species.</p>	<p>Rivers naturally meander and waters rise and fall seasonally across land grazed by livestock. Large, interconnected wetlands stop damaging flood events further downstream. Allowing natural processes to take place in river catchments does not impact on the productivity of land.</p> <p>Farmland wader populations have recovered and increased throughout the National Park and the area is nationally recognised as a model of wet farmland management for conservation on productive land.</p> <p>The high water quality status has been maintained or increased.</p>
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**Montane**

<p>The Cairngorms plateaux are the largest and most important example of montane habitat in the UK. The area is of high national and European significance for many arctic-alpine specialists.</p> <p>People regard the Cairngorms as one of the UK's last great wild areas, The mountains attract thousands of climbers and walkers each year; trampling and erosion are issues on some of the more popular routes.</p>	<p>The plateaux still support healthy plant and animal communities and are even more widely regarded as the most significant area of montane habitat in the UK.</p> <p>The Cairngorms are renowned for wild land qualities, which visitors to the National Park continue to enjoy responsibly. A network of sensitively managed paths in popular areas protects fragile soils and rare species.</p>
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<p>Climate change threatens many of our rarest and most fragile species</p>	<p>The National Park is a leading centre for research into the effects of Climate change and a range of mitigation and adaptation trials and methods are under-way</p>
<p><b>Moorlands</b></p>	
<p>Nearly half of the National Park is moorland, including upland heath and blanket bog. Many of the designated upland habitats, including blanket bog, are in unfavourable condition</p> <p>Uplands are important breeding areas for red grouse and species such as Merlin and Golden plover. Moorland management, stalking and grouse shooting are fundamental parts of the land-use, economy and culture in the Park.</p> <p>Much of the area was recently designated as being of European importance for Golden eagle, although raptor persecution and high intensity management have a detrimental effect on biodiversity in many areas.</p>	<p>Moorlands link habitats together sympathetically and a natural transition from woodland to montane scrub to upland heath is developing. Moorlands have structural diversity with shrubs and flowering plants in places. A full complement of native raptors live and breed across the fens, woods, moors and mountains.</p> <p>Productive grouse moors and high quality stalking remain a mainstay of life in the Cairngorms, contributing environmentally, economically and socially.</p> <p>Most of the blanket bog is in favourable condition, retains water and acts as a carbon sink. The contribution it makes to ecosystem services is widely recognised.</p>
<p><b>Grassland and farmland</b></p>	
<p>Farmland and grassland in the National Park have been managed less intensively than in most other parts of the UK. The economic pressures of modern farming in a global market are leading to a higher intensity of farming than in the past.</p> <p>Some low intensity grasslands and river banks support many rare plants, invertebrates and fungi.</p>	<p>There's a patchwork of productive land-use which is good for wildlife. It supports thriving communities and reflects centuries of tradition. Delivering biodiversity benefit is an integral part of high quality food production that does not impact on profitability.</p> <p>High quality grasslands support a healthy range of nationally and locally important species.</p>
<p><b>People</b></p>	
<p>Some residents place a high value on their surroundings and are keen to get involved in discussions about its management. The national and international significance of habitats and species is understood by many specialists and interested individuals.</p> <p>Visitors come to the National Park</p>	<p>Wildlife is important to people. We appreciate the benefits we get from nature, speak out passionately in favour of it and spend time, effort and money looking after it.</p> <p>People who live in the National Park are proud of the nature around them and are</p>

<p>motivated by the landscapes and wildlife. Wildlife watching is a burgeoning tourism industry that complements the already substantial sporting offering.</p> <p>Opportunities for non-residents to volunteer or contribute in some way are site and/or organisation specific and relatively small scale.</p>	<p>more widely involved in its management. Visitors respect the landscapes and wildlife they come to see and want to contribute to protecting it.</p> <p>Land based and tourism businesses thrive by looking after the environments they rely on; and contribute to the conservation and enhancement of biodiversity.</p>
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Work will be carried out in the future to help the Cairngorms National Park use the latest knowledge, thinking and research to realise further biodiversity benefits; to deal with the effects and impacts of climate change; and tackle the threats posed by invasive species.

Our **knowledge of biodiversity and ecosystems** will continue to grow through proactive research. Habitat and species mapping and monitoring will be even more comprehensive and up to date whilst policy makers and practitioners will have access to current information and advice via a centralised database.

An integrated habitat network will extend across the Cairngorms National Park, allowing species and ecosystems to respond and/or be robust enough to adapt to **climate change**. Peatlands and woodlands will function as carbon sinks and wetlands will mitigate against the worst impacts of extreme weather events.

Monitoring and management of **invasive species** will be more proactive, preventing and limiting the spread of the most damaging species so they do not have a negative impact upon the effective functioning of ecosystems.

### **3. STRATEGY**

#### **Cairngorms Nature**

Cairngorms Nature is a partnership where people and organisations come together, regardless of sector or background, with a common desire to safeguard and enhance the outstanding nature of the Cairngorms National Park. Working together, we are more likely to achieve and share success. And this means positive change for biodiversity in the Park.

The partnership builds on the success of the previous Local Biodiversity Action Plan 2002 – 2012. Many of the issues and opportunities highlighted in developing and delivering the LBAP have been continued into the work of the Cairngorms Nature Action Plan 2013 - 2018.

The partnership is open to all who care about nature and want to contribute to achieving the aims in this action plan. The partnership is informal; being a part of Cairngorms Nature is simply about contributing to the delivery of the Action Plan in some way. This can range from being a key delivery partner to adding a sighting to a biological recording scheme.

Cairngorms Nature is steered by a strategy group made up of representatives from Dee Fisheries Trust, Forestry Commission Scotland, National Farmers Union Scotland, National Trust for Scotland, Royal Society for the Protection of Birds, Scottish Land & Estates, Scottish Gamekeepers' Association, Scottish Natural Heritage, Cairngorms National Park Authority and a Community Development Officer.

#### **Action Plan**

The Cairngorms Nature Action Plan 2013 - 2018 describes the most important things to do over the next five years and provides a focus for the work of partners. It is an active plan that will react to changes in circumstances and make the most of other opportunities to deliver the aims effectively.

The aims of the plan reflect the consultation on and commitment to the National Park Partnership Plan 2012-2017; the pressing need for action on threatened and endangered habitats and species; and the need to empower and enable people to engage more closely with their natural heritage.

Actions in the plan identify the key partners involved with delivery. This list is not exhaustive. Indeed, it is only with a collective effort that we will be able to deliver much of what we are trying to achieve. Key partners are not solely responsible for delivery, they build the foundations for success: championing, supporting and encouraging delivery.

Through the development of more specific work plans and monitoring procedures, the Cairngorms Nature Strategy Group will oversee delivery of the Action Plan. The partnership will produce annual reports highlighting progress towards targets and key achievements.

A critical issue is the need to ensure the action plan is adequately resourced to make a meaningful difference. The coordination and effective use of partners' joint resources is vital, as is financial support through the Scottish Rural Development Programme. Funding from external sources such as Trusts, the Heritage Lottery, EU LIFE, voluntary donations and corporate sponsors will all need to be pursued.

### 3.1 Aims

The Cairngorms Nature Action Plan 2013 – 2018 outlines how, through the collective and co-ordinated efforts of partners over the next five years, it aims to:

- **Improve the quality and connectivity of woodlands and wetlands for biodiversity**
- **Implement priority actions for other habitats**
- **Conserve and enhance key species through focused conservation action**
- **Encourage and provide opportunities and support for people to get something from, and help to look after, nature**

#### Woodlands and Wetlands

The importance for concerted effort now on woodlands and wetlands has been highlighted through extensive consultation with key partners as part of developing the National Park Partnership Plan. In this regard the Cairngorms Nature Action Plan is a key delivery mechanism for the Partnership Plan.

#### Other priority habitat actions

There are some issues not encompassed by other areas of habitat and species work in the Action Plan that have been identified as needing immediate and direct action. As well as the focussed action on the priorities of woodlands and wetlands, it is also important that we maintain our efforts in other areas; for example on blanket bog restoration.

#### Key species

The Cairngorms National Park is a stronghold for biodiversity and supports one-quarter of the UK Biodiversity Action Plan species as well as many others that are nationally and internationally important. Consultation with local and national experts identified a long-list of approximately 1200 species in the National Park considered to be important for nature conservation.

This 'long-list' was the primary source of information for further determining the key species for focussed action and will later be developed as a Cairngorms Nature Action Plan List, essentially a review of the Cairngorms LBAP list, to inform advice and guidance relating to planning applications. Further detail on the long-list and criteria for inclusion in the Action Plan will be made available as an on-line annex.

#### Involving people

The interaction between people and nature plays a crucial role in the way it is valued. It is therefore vitally important to engage people with the natural world, for the health and wellbeing benefits that this brings, and to empower them to have a say in decisions about their environment. Developing and supporting opportunities for engaging and contributing reflects policies and outcomes in many national strategies and in the National Park Partnership Plan and in the Scottish Biodiversity Strategy.

### **3.2 Policy context**

Scotland's National Parks are national assets that showcase the very best of Scotland's environment and the multiple benefits of landscape scale integrated land use. Their collective management contributes directly to Scottish Government Outcomes and National strategies.

The Cairngorms Nature Action Plan 2013 – 2018 has been developed in harmony with, and contributes to the delivery of, the following policies, plans and strategies.

#### Cairngorms National Park Partnership Plan 2012 - 2017

The Cairngorms National Park Partnership Plan identifies the direction and priorities to which partners agree to direct their effort and resources in the National Park. Public bodies are asked to identify and report in their corporate plans how they contribute to delivery. The Cairngorms Nature Action Plan is a key delivery mechanism for the National Park Partnership Plan and reflects many of the supporting policies and frameworks, notably the Forest and Woodland Framework, the Deer Framework and the Sustainable Tourism Strategy.

#### Cairngorms National Park Local Plan

The Cairngorms National Park Local Plan, subsequently the Local Development Plan, sets out the policies against which planning applications are assessed. Whilst the purpose of the Cairngorms Nature Action Plan is not to afford protection to important habitats and species as part of the planning process, there is significant enhancement potential for species and habitats through the development planning process. It is expected that the aims of the Action Plan will be given greater weight by the planning authorities when determining an application, and in any on and off-site mitigation or compensation measures

#### Designations

The National Park is of extremely high importance for nature conservation and designated sites play a crucial role in delivering biodiversity gain in the National Park. These sites have been designated to protect their qualifying features, which can be habitats or species. Natura sites are a network of protected areas (SACs and SPAs) which were created in response to the EU Habitats Directive and Birds Directives. Regulatory authorities cannot allow developments or work which is likely to damage the integrity of a Natura site, unless there are imperative reasons of overriding public interest and there is no alternative. Any planning authority must consult SNH on applications which may affect an SSSI's designated features or protected species. Operations likely to damage the natural features of an SSSI require consent from SNH.

#### Water Framework Directive

The Water Framework Directive (WFD) is a piece of European environmental legislation which aims to improve and protect the water environment on a catchment scale. The WFD required the production of River Basin Management Plans (RBMPs) as the means by which statutory objectives are set for Scottish waters. The RBMPs cover all types of water body, such as rivers, lochs, lakes, estuaries, coastal waters and groundwater.

#### Climate Change Act

Government ministers regard tackling climate change as essential if we are to achieve sustainable economic growth. The Act sets in statute the Government Economic Strategy

target to reduce Scotland's emissions of greenhouse gases by 80 per cent by 2050, with an interim target of 42 per cent by 2020.

#### Scottish Government Outcomes

Delivering biodiversity gain will directly contribute to the delivery of three of the Scottish Government outcomes and support the delivery of all others.

#### UK Biodiversity Framework

The UK Post-2010 Biodiversity Framework has now succeeded the UK Biodiversity Action Plan. In particular, due to devolution and the creation of country-level biodiversity strategies, much of the work previously carried out under the UK BAP is now focussed at a country level.

The UK BAP lists of priority species and habitats remain, however, important and valuable reference sources. All UK BAP species found in Scotland are on the Scottish Biodiversity List of species and have been used to help draw up statutory lists of priorities.

#### Scottish Biodiversity Strategy – The 2020 Challenge

The (draft) Scottish Biodiversity Strategy '2020 Challenge for Scotland's Biodiversity' is Scotland's response to the European Union's Biodiversity Strategy for 2020 and to the Aichi Targets set by the United Nations Convention on Biological Diversity to halt the loss of biodiversity and to restore the essential services that a healthy natural environment provides.

#### The Nature Conservation (Scotland) Act 2004

The Act places a statutory duty on all public bodies to further the conservation of biodiversity. The duty is aimed at connecting people and their environment. It is not just about protecting specific sites or species but thinking about how we manage biodiversity in the wider environment.

#### Scottish Forestry Strategy

The core principles of the Scottish Forestry Strategy are based on sustainable development and social inclusion, achieved through a culture of 'forestry for and with people' and delivered in well-managed forests and woodlands that integrate effectively with other land uses and businesses.

#### Scottish Land Use Strategy

The Scottish Land Use Strategy is a strategic framework bringing together proposals for getting the best from Scotland's land resources. The Scottish Government expects the wider public sector to take a leading role in implementing the Strategy, by utilising the Principles for Sustainable Land Use in the ways that it manages its own land; develops and implements its plans and strategies; and promotes partnership working.

#### Scotland's Wild Deer: a National Approach (WDNA)

WDNA is an approach to the sustainable management of wild deer. Developed by land managers and public bodies it guides actions on the ground and informs strategic thinking to, amongst other principles, manage deer as an integral and essential part of biodiversity.

### Scotland Rural Development Programme

Funding opportunities identified in the 2014-2020 programmes to help achieve the Government's strategic objectives in rural Scotland will have a significant impact on the resources available to deliver parts of the Cairngorms Nature Action Plan. The availability of options in the new scheme to support habitat creation and enhancement, and species conservation will be an important source of funding for implementing actions in this plan.

### **3.3 Research and data**

There is a lot of high quality data collected, and research undertaken, in the Cairngorms National Park, by a variety of different organisations and individuals. These data are frequently sporadic and localised. It is often challenging to establish the current knowledge base, access information and realise the whole picture across the National Park.

It is important that we do not try to invent more systems for recording but rather we co-ordinate the existing ones and make sure there are opportunities for a wide range of people and organisations to get involved, working closely with the National Biological Network and local Biological Record Centres.

As a principle, Cairngorms Nature will focus efforts on undertaking research, surveying and monitoring that will directly help deliver actions and monitor progress towards targets. Key research actions are listed here. Specific research, survey and monitoring work is identified as actions throughout the plan.

KEY RESEARCH ACTIONS	
ACTION	KEY PARTNERS
Co-ordinate biological recording schemes in the National Park to collate and ensure easy access to data	CNPA, SNH, Local Authorities, Local Biological Record Centres
Progress research recommendations in the CNP species restoration report	CNPA, SNH
Carry out Park-wide strategic spatial planning exercise to identify potential opportunities and priorities for appropriate habitat expansion and connectivity	CNPA, FCS, SNH, SLE
Develop relationships with research facilities to create locally delivered research programmes	UHI, CNPA, FCS, SNH, JHI
Include Cairngorms Nature research needs in the Cairngorms National Park Partnership Plan research strategy, including work on climate change.	CNPA

### **3.4 Bio-security**

Non-native species, pathogens and diseases could, and in some cases, can, have a considerable impact upon the nature of the Cairngorms and subsequently on a range of nature-based economic activities such as fishing, forestry and farming.

Whilst not all non-native species pose a threat to the biodiversity some can kill, harbour disease and compete with native species. Several non-native species have been introduced to the National Park, either deliberately or accidentally, and have become established. These are currently at low densities and pose relatively low threats, for example giant hogweed is only present on parts of the River Don and Japanese knotweed is restricted to a handful of

small sites. However, it is crucial that we continue to survey, monitor and support eradication programmes, such as the current projects controlling grey squirrels and American mink.

BIO-SECURITY ACTIONS	
ACTION	KEY PARTNERS
Promote understanding of the issues caused by non-native species and the remedial measures that can be taken at both a local and a landscape level	CNPA, SNH, FCS, SEPA
Support new and existing eradication and prevention programmes with direct relevance to the Cairngorms National Park	CNPA, SNH, FCS, Fishery Trusts, SEPA, RAFTS, SCI, DCP
Review existing plans and policies, identify gaps and duplications, and formulate a Park-wide strategic approach	CNPA, SNH, FCS, SEPA

## 4 ACTION

Actions are described for the next five years. It is recognised that many of them are already ongoing and many are steps towards outcomes that will be achieved after decades of sustained effort. However, it is felt important to acknowledge the areas of work that underpin progress towards the vision. More detailed delivery plans will be developed that will identify priorities, timescales, resource needs, monitoring and reporting processes.

Key partners are identified as groups and organisations that will act as champions for particular actions. Key partners will often work in a support role as well as directly deliver. The list of key partners is by no means exhaustive. Many others are already doing sterling work in delivery areas and a wide range of partners will contribute to implementing the plan. A glossary provides the full names for the abbreviations used in the tables below.

### 4.1 WOODLAND

The woodlands of the Cairngorms are of national and international importance because they contain the largest remaining areas of semi-natural woodland habitats and the most extensive area of boreal forest in Britain. The Cairngorms National Park occupies just less than 6 percent of Scotland's land mass, yet contains nearly 25 percent of the entire Scottish resource of native woodlands. Associated with these woodlands are a number of species found nowhere else in Great Britain.

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

#### **Caledonian pinewoods (UKBAP)**

The Caledonian pinewoods in the National Park are greater in total area and individual size, and better connected than anywhere else in Scotland. Native pine woodlands, of self-sown Scots pine, are relicts of the ancient Caledonian Forest 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 percent of the former range remains.

Native pinewoods are of a disproportionate value for biodiversity and possess a characteristic plant, fungal and animal community that includes many rare and uncommon species, found nowhere else. The resource is however at threat from habitat loss, lack of regeneration, limited structural diversity and fragmentation. Native pine woodlands would have contained varying amounts of birch and other broadleaved trees, with an important understory of juniper, past management has reduced much of this species diversity in all but a few woods.

Improving the existing resource and encouraging expansion into areas of high strategic value for improved connectivity and resilience will not only mitigate against any further loss, but will also enhance the existing habitat to halt the decline, and encourage the growth, of species of extremely high conservation value.

### **Conifer plantations (local priority)**

Conifer plantations are an important woodland type in the National Park as 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 of a single species and their structure varies with the age of the stand and management.; these can be of limited value for biodiversity in general.

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 the high proportion of Scots pine have resulted in some well-managed plantations resembling the early stages of native pinewoods, though they are still less diverse and have a short felling rotation. Significant biodiversity benefits are possible if such productive woodlands can be enhanced by increasing structural diversity, adopting Continual Forest Cover management, retaining more trees to enable them to become veterans and increasing species diversity.

### **Montane woodland (Mountain Heaths and Willow Scrub UKBAP)**

Montane woodland or scrub can be defined as the habitat on mountains in which trees and shrubs grow at altitudes higher than the treeline. It is characterised by a range of shrub and tree species (dwarf willows, juniper 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.

Confined largely to remnant patches on remote and inaccessible cliffs in Scotland, it is present in no more than a few hundred sites, nearly all less than one ha. It most usually occurs as scattered trees 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 650 metres.

The fragments in the National Park offer one of the best opportunities in the UK to demonstrate landscape-scale restoration of the rarest and most threatened of native woodland types in the UK.

### **Birch and aspen woodland (UKBAP)**

Birch is the dominant tree species in almost all Cairngorms Broadleaved woodlands, and birch woodland is by far the most extensive broadleaved woodland type in the Cairngorms. Birch woodland commonly includes other tree species such as oak, aspen and hazel. Birch often grows in association with Scots pine in mixed woodlands.

A more dynamic approach to management of birch woods is required, particularly the encouragement of vigorous regeneration and the long term retention of trees to allow them to reach veteran status. Appropriate management of deer and domestic livestock is essential to ensure the continuity of many neglected birchwoods. The retention of deadwood and old trees are also important especially with the increased demand for firewood.

Although Aspen as a species is widely distributed in Great Britain, it is a very rare component of woods. The National Park is the UK stronghold for aspen and is usually associated with birch woods or mixed woodlands. Almost uniquely, in the Cairngorms,

aspen can be the dominant species forming a rare type of ‘aspen woodland’ usually with other broadleaved species, particularly birch. These stands of aspen woodlands are small: their total area is probably less than 350 hectares, concentrated on the low ground of Strathspey and Deeside.

The aspen stands 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. Few aspen woods are protected however, and many are in need of targeted management to encourage regeneration and increase the deadwood resource.

### **Wet & riparian woodland (UKBAP)**

Wet and bog woodlands occur on poorly drained or seasonally wet soils, usually alder, birch and willows are the predominant tree species, but sometimes pine on drier areas. They are found on floodplains; as successional habitat on fens, mires and bogs; along streams and hill-side flushes; and in peaty hollows. Wet woods frequently occur in mosaic with other important habitats and play an important role in flood management.

Fragments of ancient floodplain forest are rare in the UK. Some of the best surviving examples are in the Cairngorms. The high ecological quality and importance of riparian and bog woodland in the Cairngorms, especially in Strathspey and Deeside, is probably unsurpassed in a UK and, in some cases, European context.

### **Upland oak (UKBAP)**

Upland oak is a component of the broadleaved woodland in the Park. Although widely distributed throughout Great Britain, the combination of poor soils, harsh climate, the value of the timber, and livestock grazing has made this type of woodland rare in the Cairngorms. Most of the oak woodlands in the National Park occur in Deeside and sparingly in Strathspey and Atholl, and are the result of historical planting. Lack of regeneration and grazing pressure from deer and domestic animals has reduced their biodiversity value.

TARGETS						
INDICATOR	MILESTONES (Cumulative totals)					KEY MONITORING PARTNER
	2014	2015	2016	2017	2018	
Area of new native pinewood (ha)	500	1000	2000	3000	4000	FCS, CNPA
Area of new native pinewood adjacent to existing resource (ha)	100	200	300	450	600	FCS, CNPA
Area of new Birchwood (ha)	100	200	350	200	200	FCS, CNPA

Area of new Birchwood adjacent to existing resource (ha)	50	100	175	275	375	FCS, CNPA
Number of new aspen stands		20			50	HAG, FCS
Area of new montane wood (ha)		50	200		300	HB, FCS
Area of new upland oakwood (ha)		25		50	75	FCS
Length of new riparian wood (km)	20	20	20	20	20	FCS, Catchment Management Groups
Number of new wet/bog woods			2		5	FCS
Area of native pinewood in which enhancement measures have taken place (ha)		250		1000	2000	FCS
Area of native broadleaved woodland in which enhancement measures have taken place (ha)		250		1000	2000	FCS
Area of conifer plantation in which enhancement measures will have taken place (ha)			500		1000	FCS
Per cent of woodlands over 5 hectares certified under the UK Woodlands Assurance Standard					75	UKWAS
Conservation nurseries supplying local indigenous planting stock		2				CNPA
Sharing good practice events on woodland habitat and species management	2	4	5	6	7	CNPA, SNH
Per cent of Plantations on Ancient Woodlands sites under restoration back to native woodland					30%	FCS
By 2018 there will be no reduction in the populations of the key woodland species in this plan						Monitoring partners as per specific actions

AREA OF WORK	ACTION	KEY PARTNERS	WHAT
<b>ACTIONS FOR ALL WOODLAND TYPES</b>			
Improving connectivity	Identify National Park wide strategic opportunities and priorities for expansion and connectivity across all woodland types	CNPA, SNH, Local Authorities	Map projections for current and future potential forest cover taking into consideration the importance of other habitats, designated sites/features, landscape setting and land-use
		CNPA, FCS, SNH	Map potential expansion areas adjacent to existing woodland types
		CNPA, SNH, FCS, SEPA	Explore the potential to establish an external funding opportunities to support local incentives for native woodland creation and enhancement in addition to the SRDP scheme
		CNSG, SEPA, Local Authorities, CDAG, SLE	Investigate opportunities with land managers for strategic planting (including collaborating with neighbours) to support connectivity
		CNPA, SNH, Species and habitat experts and groups, SLE	Identify, map and maintain a register of woodlands with high biodiversity value and liaise with land managers on key management needs
		SNH, CNPA, FCS	Ensure importance of and impact on other habitats and open ground species (designated and non-designated) is considered in woodland expansion schemes
		CDAG, SLE, SGA, SNH, NFE	Review current deer management and moorland burning plans in sensitive and strategic areas to enable woodland expansion

	Encourage land managers to create new native woodlands; and woodlands in strategic areas	CNPA, SLE, NFUS, SGA, Fishery Trusts, SEPA, CDAG WTS, Local Authorities	Raise awareness of forest expansion plans, and the multiple benefits of woodland creation, among land managers, foresters and agents
		FCS, CNPA, SEPA, SLE	Promote expansion and connectivity opportunities through Long Term Forest Plan consultations
		NTS, NFE, SNH, RSPB, SEPA, SLE	Review current forest plans and adapt to maximise strategic opportunities
		CDAG, SLE, SGA, SNH, NFE, WES	Work collaboratively on deer management to enable a mixture of natural regeneration and deer fencing to allow new woodland establishment (taking account of the landscape setting)
Improving biodiversity value	Encourage and promote biodiversity enhancement as part of forest management plans	CNPA, FCS, SNH	Provide advice and guidance for maximising enhancement measures in Long Term Forest Plan consultations above the minimum UK Forestry Standard
		SLE, CNPA, FCS, SNH, RSPB, SLE, WTS, NFE	Work with managers of woodlands with high biodiversity value or strategic importance to identify opportunities for enhancement
	Actively enhance existing woodlands for biodiversity	RSPB, NTS, SNH, NFE, CDAG, SLE	Review current management plans to maximise opportunities for enhancement
		SNH, SG, CNPA, FCS, SLE, NFUS	Raise awareness and provide advice to land managers on disease threats to woodlands
		RSPB, NFE, SNH, NTS, SLE	Create and manage deadwood, bog pools, wetland areas, rides and glades for biodiversity enhancement where appropriate
		RSPB, NFE, SNH, NTS, SLE	Allow a proportion of trees to be permanently retained and develop into veteran trees across all native and non-native woodland types

		RSPB, NFE, SNH, NTS, SLE, WTS	Encourage a range of field layer management techniques (appropriate to the site's needs) including grazing, swiping, burning, cutting and scarifying
		CNPA, NFUS, SLE, NFE, RSPB	Work with land managers to promote cattle grazing (for appropriate site conditions) to improve field layer and maintain a diverse woodland structure with open areas
		RSPB, SNH, NFE, NTS, SLE	Undertake enrichment planting with a range of native broadleaves (including aspen, sessile oak and hazel) and juniper
		RSPB, NTS, SNH, NFE, SLE, CDAG	Review deer and livestock management plans to enable improvements to the field layer and maintain a diverse woodland structure
		CNPA, SNH, FCS, SLE, WTS	Encourage and support land managers to apply for funding to carry out woodland enhancement activities
	Raise awareness and demonstrate the benefits of woodland enhancement; provide training and support	FCS, SNH, NFE, CNPA, CONFOR, ICF	Deliver sharing good practice events on woodland enhancement
		SNH, NFE, RSPB	Promote NNR's as showcases for the benefits of woodland enhancement
		FCS, SLE, Agents, CONFOR, ICF	Promote forest certification through the UK Woodland Assurance Standard across all woodland managers in the National Park
		FCS, FCS, HB, HAG, RSPB, nurseries, local Estate nurseries	Support conservation nurseries in making available indigenous planting stock from local sites particularly the creation of montane planting stock and juniper

		FCS, CNPA, SNH, NFE	Produce CNP specific guidance for managing woodlands, forestry operations and rare species and promote widely through events, forums, and media
ACTIONS SPECIFIC TO DIFFERENT WOODLAND TYPES			
Caledonian pine	Improve structural and species diversity	SNH, RSPB, NTS, SLE, NFE	Promote ground conditions favourable for the natural regeneration of the full range of native tree species
Conifer plantation	Restore Plantations on Ancient Woodland Sites (PAWS) to native woodlands	FCS, SNH, CNPA, SLE	Maximise opportunities for restoration of PAWS through Forest Plan consultations and reviews
		NFE	Restoration of PAWS on all FCS conifer plantations underway
	Increase the amount of continuous cover forestry and landscape improvements	CNPA, FCS, SNH, SLE, NFE, CONFOR, ICF	Provide advice and guidance through Long Term Forest Plan consultations, workshops, demonstration projects and events.
	Enhance forest structure	RSPB, SNH, FCS, NTS, SLE	Carry out stand restructuring and thinning focusing on creating a mosaic of different densities and structures to improve biodiversity
Montane	Create new montane woods, building on the existing resource	HB, SNH, FCS, CNPA, RSPB, SLE, NFE	Establish a landscape scale montane woodland project independently supported by appropriate funding and deer management (taking account of designated sites and features)
		NFE, HB, HAG, RSPB, local nurseries	Collect and grow indigenous origin seed or cuttings from the full range of montane tree species to support future expansion
Wet and riparian	Create new areas of riparian woodland	DCP, RAFTS, SEPA	Plant riparian woodlands along the upper Dee catchment,

		Fisheries Trusts, SLE, SGA, RSPB, SEPA, Crown Estate, DCP, SCI	Initiate riparian planting schemes in the upper Spey, Don and Garry,
		SNH, FCS, CNPA	Ensure new planting schemes do not impact on the designated features of water courses
		CNPA, SNH, SCI, DCP, FCS	Ensure important riparian grassland is protected from new woodland schemes and favourable management undertaken
	Create new and enhance existing bog and wet woodland	SNH, NFE, NTS, RSPB	Identify sites for creating or expanding bog and wet woods
		SNH, NFE, NTS, RSPB, SLE	Block drains and re-wet areas, and remove planted non-native conifers
Birch and aspen	Create new areas of aspen, enhance and link existing stands	SLE, NFE, SNH, RSPB, NTS, CDAG	Modify grazing management to encourage the vigorous regeneration of birch
		HAG, SNH, Local experts	Identify undesignated birch and aspen woodlands that are important for biodiversity value and liaise with land managers on key management needs
		RSPB, NFE, SNH, NTS, Fisheries Trusts, SLE	Manage birchwoods to encourage aspen including the retention of an open woodland structure, fencing off suckering aspen and appropriate grazing regimes
		Fisheries Trusts, SLE, SGA, RSPB, NFE, Crown Estate, DCP, SCI	Undertake enrichment planting of aspen in the lower riparian areas
		HAG, SLE, NFUS, SCI, DCP	Promote aspen conservation and enrichment planting including enhancing the connectivity of aspen stands
Upland oak	Find out more about current status, and potential for expansion	SNH, FCS, species and habitat groups	Collate all existing data and commission survey data if required

KEY SPECIES FOR FOCUSED ACTION			
Capercaillie <i>Tetrao urogallus</i>	Improve the quality and extent of habitat	RSPB, FCS, SNH, CNPA, Crown Estate, SLE, NFE	Increase the connectivity of core capercaillie habitat (stepping stones within 5km of existing woodland and of at least 50Ha in size. Outwith core areas this can be increased to 12km)
	Research and address the reasons for decline	RSPB, FCS, SNH, CNPA, Caper BAP Group, SLE, NFE	Deliver the Capercaillie Research and Management Framework
		RSPB, FCS, SNH, CNPA, Caper BAP Group, SLE, NFE	Investigate the effects of recreation in the conservation of the species and develop guidance and management to reduce potential impacts.
		SGA, SLE, FCS, NFE, RSPB, SNH	Reduce impacts of predation by enhancing legal fox and crow control across the caper range
Scottish wildcat <i>Felis silvestris grampia</i>	Build on the work developed by the Cairngorms Wildcat Project	RZSS, SNH, FCS, SGA, SCA, SLE, GWCT, BASC, SWA, CNPA, FCS	Implement the Scottish Wildcat Conservation Action Group plan (including action on domestic cats and promotion of legal predator control).
Twinflower <i>Linnaea borealis</i>	Build on work of CRPP, continuing management and delivering new action	CRPP	Establish new management trials, monitor existing trials and disseminate results
		BSBI, CRPP, Plantlife, Rangers, SNH, NTS, RSPB, NFE, volunteers	Undertake rolling programme of monitoring sites on a 3-5 year rotation
	Restore genetic diversity and potential for seed production	CRPP	Identify sites and implement translocation trials
One flowered wintergreen <i>Moneses uniflora</i>	Find out more about current status and management needs	RBGE, JHI, Plantlife, Universities, CRPP	Research the reproductive biology, genetics and mycorrhizal associations

		RBGE, CRPP, Plantlife, BSBI, Rangers, NFE, SNH, RSPB, volunteers,	Establish the status of known populations, survey historical records and search for new sites
		CRPP	Identify habitat requirements and key management needs at known sites
		CRPP, BSBI, RBGE, Plantlife, rangers, volunteers, NFE, SNH, RSPB	Establish and monitor habitat management trials and experimental translocations if appropriate
Green Shield Moss <i>Buxbaumia viridis</i>	Monitor sites	Plantlife, BSBI, BBS, BLS, RSPB, FCS, SNH, NFE, volunteers	Compile a rare plants dataset for use in forestry operations and undertake annual monitoring of known and potential sites
	Improve the quality and extent of available habitat	RSPB, SNH, NFE, Plantlife, SLE	Actively manage for deadwood creation in sheltered, humid areas
Pine hoverfly <i>Blera fallax</i>	Protect existing populations, create and support new ones	Malloch Society, SNH, NFE, RSPB	Monitor populations at known and recently created sites
		RSPB, NFE, Rothiemurchus Estate, Curr Wood	Continue to create artificial breeding habitat and deadwood, and promote the creation of veteran trees through long-term retention
		FCS, SNH, CNPA	Liaise with land managers to create artificial breeding habitat adjacent to existing sites
		Malloch Society, RZZS, RSPB, NFE	Continue captive breeding programme and augment new populations with captive breed larvae
Pearl bordered fritillary <i>Boloria euphrosyne</i>	Find out more about status and distribution	BCS, NFE, SNH Rangers volunteers,	Promote and co-ordinate surveys via survey days/workshops and web sites
		BCS, NFE, SNH, Rangers, volunteers,	Monitor selected sites annually to determine long-term trends

	Continue to manage current sites sympathetically and create new habitat nearby	BCS, NFE, woodland agents, volunteers	Liaise with land managers to encourage management for existing populations and creating new habitat
		SNH, NFE, RSPB, NTS, BCS, volunteers, SLE	Undertake habitat management at existing sites and create new habitat adjacent to existing populations
Dark Bordered Beauty <i>Epione paralellaria</i>	Continue to manage current sites sympathetically	BCS, RSPB, Rangers, volunteers	Monitor current populations at selected sites annually
		BCS, RSPB, Balmoral Estate volunteers, Rangers	Undertake management, if required, to enhance habitat conditions for suckering aspen
	Expand current populations	RSPB, BCS, Rangers, volunteers, SLE	Create new habitat adjacent to existing populations
		BCS, RSPB, volunteers	Liaise with land managers to increase the area of suitable habitat adjacent to known populations
		BCS, RSPB, SNH, volunteers	Investigate opportunities for translocations
Kentish Glory <i>Endromis versicolora</i>	Find out more about the species' current status	BCS, NFE, SNH, RSPB, Rangers, volunteers	Promote and co-ordinate surveys and monitor sites annually
	Continue to manage current sites sympathetically and create new habitat	BCS, NFE, SNH, SLE, volunteers	Liaise with land managers to encourage management for regenerating birch to support current and expanding populations
		BCS, NFE, SNH, Rangers, volunteers, SLE	Undertake habitat management at current sites and create new habitat adjacent to existing sites
Wood ants group plan	Determine the current status, distribution and factors affecting wood ant populations	UK Woodant Group, NFE, Buglife, RSPB	Undertake monitoring for wood ants using a standardised protocol
		UK Woodant Group, NFE, Buglife, HBRG, RSPB	Initiate an annual programme of monitoring a selection of sites

		UK Woodant Group, Buglife	Encourage studies into species ecology and management requirements, including impacts of ants on other species
	Manage woodlands sympathetically	FCS, NFE, NTS, SNH, RSPB	Identify key sites and work with site managers to ensure sympathetic management
	Create new habitat	NFE, NTS, SNH, Land managers, SLE, RSPB	Provide deadwood and enhance the field layer in adjacent sites

### **Fending off the american invasion**

Populations of red squirrel are widespread and doing well in the forest habitats of the Cairngorms. The habitat work specified in this plan will benefit them further, but we need to ensure that their unwelcome cousin doesn't spoil things. Grey Squirrels, which are non-native and originally from North America, have been very successful in colonising much of the rest of the UK. They outcompete our native reds and carry the squirrel pox virus that is fatal to reds. We must prevent greys from entering the National Park by ensuring they are controlled at strategic pinch points in the south and east of the National Park to make sure that it remains a stronghold for this charismatic and popular species.

**Action: Monitor and control influx of grey squirrels.**

### **In hot water**

Riparian woodlands provide essential benefits to much more than the obvious species that are regularly seen using them. The link between the trees along the river banks and the biodiversity in the water is significant. Trees provide food and shade that cools the water to a temperature which is suitable for young salmonids. With climate change predictions suggesting that water temperatures on our denuded headwaters will increase to potentially lethal levels for salmonids, they are at greater risk than ever. The freshwater pearl mussel, one of our rarest species, is also dependent on these salmonids during the juvenile stage of their lifecycle. A significant new project "Pearls in Peril" is underway to start addressing this problem, but much more planting needs to be done.

**Action: Plant riparian woodlands (primarily native broadleaves) along river banks and up the tributaries and headwaters of river catchments.**

## **4.2 WETLAND, WET GRASSLANDS AND FRESHWATER**

The Cairngorms National Park holds nationally and internationally important wetland and wet grassland sites. The National Park is one of the most important UK mainland sites for breeding wading birds due to its combination of wetlands, wet grasslands and low intensity mixed farming. Nevertheless, waders such as lapwing and redshank have seen their numbers dramatically reduce by over 50 percent in the last 10 years.

Wetland and wet grassland habitats in the Cairngorms National Park have been considerably reduced by drainage through changes in land use and there are many sites in need of enhancement or restoration to improve their benefits for wildlife. Wetlands in the National Park are often small and fragmented. Their value for biodiversity is affected by development pressure, diffuse pollution and resource-use pressures such as abstractions, impoundments, engineering activities and drainage operations.

### **Wet grasslands**

Wet grasslands are the products of agricultural management, part of a traditional farming system. Almost all areas are grazed and some areas are cut for hay. Inundated pasture or meadow with ditches which maintain the water levels contain seasonal water-filled hollows and permanent ponds with tall fen species such as reeds, but not extensive areas. They are often in low-lying poorly drained areas of fields, where as a result, crop yield and productivity is low. The short vegetation, wet mud and shallow pools in damp grassland and water margins provide an ideal habitat for farmland waders and contribute directly to a wider network of wetland habitats.

### **Wetlands**

Wetlands are seasonally or permanently flooded vegetated areas and would once have been more numerous and extensive. Mosaics of well-managed wetland habitats are essential for the long-term survival of some of our most special wildlife, particularly plants and invertebrates. Wetlands also 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, and educational value as well as tourism and recreational benefits.

Climate change models suggest that rainfall in the autumn months will increase. This may lead to 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. Wetland creation and enhancement along with riparian woodland planting and creating new upland woodlands can help reduce the impacts of flood events. By focusing efforts on these natural solutions upstream we can have significant benefits for the people's lives downstream in the catchment. The Cairngorms 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.

### **Freshwater**

Rivers and lochs in the Cairngorms are of great importance locally, nationally and internationally. They have numerous conservation designations for their biodiversity and high quality of freshwater habitats. The main rivers in the National Park are internationally

famous for the fishing they offer and pure water is a crucial part of the whisky industry. Invasive non-native species in freshwater habitats can have a significant detrimental effect on their biodiversity and the economic income derived from fishing. Rivers are a key vector in the spread of Invasive Non-Native Species and action on prevention is vital.

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).

### High Nature Value Farming

HNV Farming is essential for biodiversity and the long-term prospects of wading birds such as lapwing, rare plants, fungi and invertebrates. The mixed farming system optimises so much of the farmed landscape of the Cairngorms. It is one of low-intensity land use and livestock grazing, the presence of semi-natural vegetation with few artificial inputs and a landscape mosaic of habitat features that has made the area important for waders. The active land-management of HNV farming systems are also part of the rich cultural heritage of the National Park. It is essential that the Cairngorms Nature Action Plan works for farmers to ensure this positive land management can thrive.

**Action: Support HNV Farming to ensure a thriving mixed farming system of grasslands (inbye, rushy pasture and silage), wetlands and arable cropping that is beneficially to biodiversity.**

TARGETS						
INDICATOR	MILESTONE (Cumulative totals)					KEY MONITORING PARTNER
	2014	2015	2016	2017	2018	
Area of new wetland (ha)			10		25	Catchment management groups, SWWI, SEPA
Length of drains with improved water level management (km)	1		3		5	SWWI, Catchment management groups
Number of new wader feeding areas that follow best practise	10		30		50	SWWI
Sharing good practice events on wetland and grassland management	1	2	3	4	5	CNPA, SNH, NFUS
New ponds created to benefit biodiversity			25		50	CNPA

New area of farmland under active management for waders (ha)			250		500	NFUS, SWWI, agricultural agents
Number of natural floodplains reinstated					5	Catchment management groups, SEPA
Number of modified burns reinstated					5	Catchment management groups, SEPA
By 2018 there will be no decrease in the populations of the key wetland/ wet grassland species in this plan						Monitoring partners identified as per specific actions

AREA OF WORK	ACTION	KEY PARTNERS	WHAT
Enhancing and increasing wet grassland habitat	Support farmers and land managers to conserve populations of breeding waders	SWWI partners	Develop and deliver SWWI action plan
		SWWI partners	Raise awareness of the value of wet grasslands amongst land managers
		SRUC, agricultural agents	Promote wader/wetland focused management when advising and developing funding applications.
		NFUS	Promote wader and wet grasslands friendly practices to members
		RSPB, CNPA, SNH	Support initiatives, including surveys, for other important wader areas outside Strathspey
		CNPA (Land Management Officer)	Create and maintain an on-line database of funding guidance and management options
		RSPB, CNPA, SRUC, land agents and advisors	Provide advice and training for land managers

		SNH, CNPA	Encourage management for a range of botanical interests and rare wetland habitats
	Improve and restore wet grassland through positive conservation action	SWWI partners	Facilitate the creation of new wader feeding areas
		SWWI partners RSPB, CNPA, SNH, Catchment Management Partnerships	Seek and develop opportunities and work with land managers to reinstate sources of water e.g. , create wet patches, block drains and install sluices as appropriate
		CNPA, RSPB, Crown Estate, NFUS	Remove scrub with rush topping machinery and other methods of wader friendly management
		SEPA, SNH, RSPB, Fisheries Board, RSPB, CNPA, SLE	Support Catchment Management Partnerships and the Futurescapes Project
		SEPA, SNH, RSPB, Fisheries Board, RSPB, CNPA, SLE	Look for opportunities and initiate action to improve the overall biodiversity value of wet grassland
Increasing and protecting wetland habitats	Investigate opportunities to create new wetlands	CNPA, SNH, SEPA, RSPB, SLE	Identify potential new sites or sites now lost that can be restored with land managers
		CNPA, Local Authorities	Encourage wetland creation, and sustainable urban drainage schemes, as mitigation or compensation work
		SEPA	Encourage and fund opportunities for improving wetland areas and restoring areas lost to historic drainage
	Protect existing wetland areas	CNPA, Local Authorities	Protect wetland sites from development pressure
		SWWI partners	Influence changes in policies that currently encourage active drainage of water logged soils

		CNPA Land Management Officer, SWWI partners	Discourage drainage via grant payments and management agreements	
		SEPA, Local Authorities	Protect groundwater dependent wetlands from significant damage	
		SEPA, Local Authorities	Protect riparian wetlands from significant hydrological change	
	Demonstrate sustainable flood management via the restoration of a natural flooding regime	Catchment Management Partnerships, RSPB, SLE, Local Authorities	Reinstate/naturalise new sections of previously modified burns and ensure the continuation of coarse woody debris in burns	
		SEPA	Identify where woodland management can be used as part of natural flood management	
		Catchment Management Partnerships, SEPA, Local Authorities, SLE	Develop Sustainable Flood Management demonstration projects and promote the benefits of such work to communities and people living downstream	
		RSPB	Develop and trial innovative restoration projects	
		Dee Catchment Management Partnership	Deliver floodplain restoration project upstream of Braemar, taking account of designated features and potential pollution risks	
	Maintain status and increase area of freshwater habitats	Continue to support river management to maintain and improve good ecological status of all water bodies.	SEPA	Improve water bodies so that they meet the SEPA description of “good ecological status”
			SEPA	Explore potential and initiate trials for woodland management to help reduce run-off, soil erosion and sediment delivery from agricultural land
CNPA, SEPA, SNH, Fisheries Trusts, Local Authorities			Ensure that in-stream developments and abstractions do not impact on “good ecological status” and important species	

	Create new ponds.	Pond Conservation Trust, CNPA, ARG UK	Extend the "Create a Million Ponds" project in CNP
		SWWI partners	Encourage pond creation as part of Farm Visits Project
		SWWI partners	Assess the success of new wetland creation or enhancement projects for biodiversity
<b>KEY SPECIES FOR FOCUSED ACTION</b>			
Redshank <i>Tringa totanus</i>	Support land managers to improve the quality and extent of habitat available	SWWI partners	Further investigate reasons for decline
		SWWI partners	Provide advice and training
		RSPB, Crown Estate, NFUS	Employ cattle grazing at seasonally appropriate levels
			Avoid planting trees on or adjacent to wader sites and remove encroaching scrub
			Create a mosaic of different vegetation structures and heights
Create wet areas including shallow scrapes and soft-edged ditches as feeding areas			
Scarlet splash fungus <i>Cytidia salicina</i>	Find out more about status and requirements	local fungus groups, RSPB, FCS, Plantlife, BMS	Survey and monitor known sites and target a selection of suitable sites for investigation
		local fungus groups, FR, Plantlife, BMS	Undertake research to identify the ecological requirements of this fungus and identify the key management practices
		Plantlife, BMS	Provide training and support for the development of mycological expertise and citizen science
	Protect existing populations	Fisheries Trusts, FCS, RSPB	Encourage and advise on appropriate management practices at known sites

		Plantlife, BMS, local fungus groups	Deliver education and awareness raising initiatives on fungi, their importance and their management
Northern damselfly <i>Coenagrion hastulatum</i>	Find out more about the species' status and management needs	BDS, Universities, JHI	Initiate research into the species' habitat and ecological needs
		BDS, local volunteers,	Survey known breeding ponds
	Protect existing populations and create new habitat nearby	RSPB, SNH, FCS, Land managers	Maintain current, sympathetic management practices at known sites and enhance where necessary
		Land managers, FCS RSPB, SNH, NTS	Create new ponds within 1km of known breeding sites
Northern silver-stiletto fly <i>Spiriverpa lunulata</i>	Monitor and identify key sites	CNPA, SEPA, SNH, Buglife, Local experts	Establish a monitoring protocol and survey known sites every three years
		SEPA, Buglife, Local experts	Identify and map key sites
	Encourage appropriate habitat management and creation	SEPA, SNH, CNPA, Buglife	Take account of the requirements of this species in response to applications for flood prevention works, water abstraction or sand extraction from rivers.
		CNPA, FCS, SNH, Buglife, Local experts, Fishery Trusts	Provide advice for land managers on the management of exposed riverine sediments
Freshwater pearl mussel <i>Margaritifera margaritifera</i>	Protect existing populations	SNH, PAWS, RAFTS, Fishery Trusts, LIFE project	Continue to raise awareness of the protected status of this species and the impacts of wildlife crime
		SNH, CNPA	Monitor reintroduction sites and augment populations if necessary
		SEPA, SCI, DCP	Through CMP and RBMP process initiate action to reduce erosion and limit the sediment input to water courses

		SNH, Fisheries Trusts, SEPA	Researching and promote best practice control methods for <i>Ranunculus</i> crowfoot spp
	Create new populations	Landscape Partnership Project, SNH	Survey habitats on the River Avon to determine potential for a reintroduction project
Northern February red stonefly <i>Brachyptera putata</i>	Determine current status and conservation requirements	Buglife, Riverfly Partnership, SNH	Survey and monitor known sites and target a selection of suitable sites for investigation
		Buglife, Riverfly Partnership, SNH	Encourage studies to improve knowledge of habitat requirements and management
	Protect existing populations	Buglife, Riverfly Partnership, FCS, Fisheries Trusts	Encourage land managers to consider management needs in woodland planting schemes
		SEPA	Maintain rivers and burns in good ecological status
		Buglife, Riverfly Partnership	Raise awareness of management needs amongst land managers

**Ancient Wetland Dancers - Common Crane *Grus grus***

The common crane is one of the most ancient species of bird on the planet and one that has historically been the focus of myths and legends throughout the world. These huge, elegant birds are famed for their elaborate courtship dance. Extinct as a breeding bird in Scotland since probably the 16th century, they are now only a rare visitor. Their extinction was likely due to over-hunting; the crane was regarded historically as good food. The destruction and drainage of wetland habitats may also have contributed. A small recolonising population is breeding in the Norfolk Broads and the recent “Great Crane Project” in Somerset has seen them reintroduced there. The enchanting trumpeting call of the crane could be an inspiring flagship species for the conservation and enhancement of multiple-benefit wetlands in the Cairngorms.

**Action: Further investigate the potential for facilitating recolonisation and, if appropriate, instigate a restoration project**

**Ecosystem Engineers – Eurasian Beaver *Castor fiber***

Beavers are well known for their ability to influence their surrounding landscape. By adapting small streams and ditches into broader, deeper watercourses and ponds through damming, the beaver introduces greater variety into watercourses which is beneficial for a range of plants, invertebrates, fish, amphibians, birds, and mammals such as water voles. They became extinct in Scotland due to over-hunting for their very valuable pelts probably in the 16th or 17th century. The Eurasian beaver has been reintroduced in many locations throughout Europe (at least 157 reintroductions). A trial Scottish reintroduction in Knapdale will end in 2014. While a population is now established on the River Tay catchment.

Public bodies are now spending huge sums of money to restore the functions that beavers historically used to provide in an attempt to reduce flood risk and slow the flow caused by heavy rainfall. Beavers could potentially serve as an innovative and “natural” partner to our Natural Flood Management plans in the Cairngorms.

**Action: Further explore the potential for, and the implications of, river catchments in the Cairngorms National Park to host either a trial or full reintroduction.**

## 4.3 OTHER HABITATS

### Montane and moorland

The Cairngorm mountains are widely considered to be one of the most spectacular mountain areas in Britain, recognised nationally and internationally for the quality of geology, geomorphology and topographic features, and associated soils and biodiversity. Much of the high ground resembles mountain tundra found in the Arctic. No other part of Britain has so much high mountain terrain within such a comparatively small area. This dramatic landscape attracts mountaineers and visitors from around the globe. The most serious threat to this extremely fragile habitat comes from climate change. Trampling, erosion and disturbance also threaten the integrity of the montane habitat and its associated species. Managing recreational pressure throughout the National Park, the Cairngorms Outdoor Access Trust constructs high quality paths on popular mountain routes. Ranger services, estate staff and wildlife related business convey the responsibilities that go hand-in-hand with the rights of outdoor access.

Upland heathland is the most extensive habitat type in the Cairngorms National Park, frequently in mosaics with blanket bog. Upland heathland or heather moorlands comprise 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 as well as drainage to support recreational hunting of red grouse and deer. Similar communities extend upwards into the montane zone, but the associated plant communities vary according to altitude, exposure and soil type. Moorland represents approximately half of the National Park therefore this type of land-use has dramatic effect not just on the biodiversity of the Park, but also to the creation of a cultural landscape, the economy and the social fabric.

Blanket bog is extensive across the National Park, which supports the highest tracts of montane bog in Britain. Blanket bog is the second most extensive habitat type after upland heath in the National Park and the two occur in close association. 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. Healthy, active blanket mire vegetation supported by areas of peat soil form an important part of Scotland's contribution to carbon storage. Blanket bog erosion is a key issue contributing to the unfavourable condition of many upland designated sites, and this erosion is likely to be a significant source of carbon emissions. Sustainable deer management and following the Muirburn Code are key challenges in bringing designated upland sites into favourable condition.

The links between montane, heath and bog habitats and other habitats are extremely important for many species. The habitat mosaics of the Cairngorms result in high populations of several species that use more than one habitat as well as being important for some species that particularly use edge habitats.

## Grassland

Generally, the farmland and grassland habitats in the Cairngorms have been managed in a less intensive manner than other areas in the UK until recently. Consequently, many of these areas are important or exceptional because of their historical human management, not in spite of it. These habitats support the livelihoods of farmers, crofters and land managers providing food and employment. The economic reality of modern farming in a global market is leading to a higher intensity of farming than in the past and targeted support for biodiversity management is needed more than ever.

The National Park appears to contain only a very small proportion of the UK's calcareous grassland. Nevertheless, these areas do contain several rare plants, which may be significant in a Scottish context. The small, fragmented lowland and upland hay meadows in the National Park are unlikely to be of national significance, but are locally important for biodiversity. The Cairngorms is one of only two areas in Scotland where Calaminarian grassland pockets on natural serpentine debris have developed.

Habitats included under this are Upland heath (UKBAP), Calaminarian Grasslands and rocky outcrops (UKBAP), Blanket Bog (UKBAP), Arctostaphylos Heath (local priority), montane heaths (UKBAP), Upland Calcareous grassland (UKBAP), Upland Hay Meadows (UKBAP), Unimproved neutral grasslands (local priority of national significance), Acid grassland (local habitat).

TARGETS						
INDICATOR	MILESTONE (Cumulative totals)					KEY MONITORING PARTNER
	2014	2015	2016	2017	2018	
Number of blanket bogs restored		1	2	3	5	SNH
Length of historic moorland drains blocked on blanket bogs (km)		40			100	SLE, SNH
Number of demonstration sites showcasing best practice management for moorland sites		1			2	SLE
Per cent of features on upland designated sites in favourable condition or recovering through assured management				80%		SNH
There will be no decrease in the populations of the key species identified						Monitoring partners as per specific actions

AREAS OF WORK	ACTION	KEY PARTNERS	WHAT	
Enhancing the quality of moorland and montane habitats.	Restore and enhance blanket bog habitats	SNH, SLE	Identify potential restoration sites, including areas with historic moorland drains	
		SNH, SLE, SGA, BASC, WES	Promote the adoption of, and adherence to, the Muirburn Code and the importance of avoiding moorland drainage	
		SNH, SLE, SGA, BASC, CDAG, WES	Showcase examples of best practice moorland management	
		CNPA, SNH	Source climate change/carbon funding to support restoration	
		SNH, SLE, CDAG, WES	Initiate and deliver restoration projects	
	Restore the full community of raptor species	SLE, WES	Trial innovative techniques to increase raptor populations	
		CNPA, SNH, SLE, SGA, BASC, NFUS, RSPB, Police Service	Work together to prevent wildlife crime and support legal predator control	
		CNPA, SNH, ACES, SLE, SGA, BASC, RSPB	Initiate a human dimensions project to investigate conflict resolution	
	Identifying and protecting important sites	Identify key moorland, montane and grassland sites for biodiversity	CNPA, SNH, NTS, BCS	Audit and map <i>Arctostaphylos</i> heath
			CNPA, SNH	Audit and assess the condition of Calaminarian grassland
BLS, SNH, CNPA, local experts			Audit and assess the condition of montane lichen rich heaths	

		SWWI partners	Undertake research into the importance to wader species, particularly curlew
		Local invertebrate specialists	Initiate research on rare upland invertebrates
		Local specialists and groups, SNH	Audit, assess and map key grassland sites
	Encourage and support management that conserves important montane, moorland and grassland sites	CNPA, SNH, SLE, CDAG, WES	Negotiate management agreements with land managers on important sites to secure favourable grazing regimes and burning management
		NFUS, NTS, CNPA, SLE	Investigate the demand and practicalities of creating a “flying flock” of livestock to carry out targeted conservation grazing management
<b>KEY SPECIES FOR FOCUSED ACTION</b>			
Golden eagle <i>Aquila chrysaetos</i>	Increase awareness of issues affecting populations	RSPB, CNPA, HFW, SLE, SGA, Raptor Study Groups	Continue and expand Raptor Track project to help address raptor persecution
		Raptor Study Groups	Monitor nest sites and use data to inform management practises
	Increase the availability of prey and food sources.	SLE, SGA, WES, SNH	Work with moorland managers in the management of mountain hare populations for the benefit of golden eagle
		SLE, SGA, WES, CDAG	Leave deer carcasses or remains out on the hill
Alpine sow thistle <i>Cicerbita alpina</i>	Find out more about status and conservation requirements	RBGE, JHI, Plantlife, Universities, CRPP	Research genetics and reproductive biology, and identify constraints on seed production

		RBGE, BSBI, Rangers, SNH, Plantlife, CRPP, volunteers	Survey all know sites to establish current population status, and search historical or potential habitats for new sites
	Protect and enhance existing populations and establish at new sites	CRPP, SNH, CDAG	Negotiate management agreements for existing populations, in particular grazing management
		RBGE, CRPP, SNH	Reinforce current populations and introduce (or reintroduce) the species at new sites and link with montane scrub project
Tufted saxifrage <i>Saxifraga cespitosa</i>	Find out more about status and requirements	RBGE, CRPP, Plantlife,	Research the sexual and vegetative reproductive biology
		RBGE, CRPP	Determine the cause of loss from historic sites
		CRPP, BSBI	Monitor the one know site, survey all historic sites and target survey work at potential suitable habitat
	Protect existing and create new populations	SNH, NTS, CRPP, SLE, RSPB	Negotiate management agreements for existing populations
		RBGE, Plantlife, CRPP	If appropriate, collect seed and grow plants ex-situ to provide stock for reinforcing existing population and creating new populations at historic sites
Powdered sunshine lichen <i>Vulpicida pinastri</i>	Monitor sites	Plantlife, BSBI, BLS, local experts, CNPA, volunteers	Identify and monitor key areas, and search for new sites
	Encourage appropriate habitat management and creation	BSBI, BLS, local experts, FCS, SNH	Identify woodland schemes that may impact upon lichen communities
		FCS, SNH, RSPB, NTS	Enhance and expand areas of juniper scrub
		BSBI, BLS, local experts, Plantlife, FCS, SNH, CNPA	Provide advice to land managers

		RSPB, SNH, FCS, Plantlife	Investigate opportunities for translocation
Small Dark Yellow Underwing <i>Anarta cordigera</i>	Find out more about status and requirements	BCS, SNH, volunteers, Rangers, RSPB	Promote and co-ordinate surveys via workshops and web sites
		BCS, SNH, volunteers, Rangers, RSPB	Monitor selected sites annually and provide advice to land managers
		BCS, universities, SNH, volunteers	Encourage studies into habitat and management needs
	Undertake habitat management	BCS, SLE, WES	Initiate a number of demonstration projects to share best practice management
A mining bee <i>Andrena marginata</i>	Find out more about requirements	Hymettus, SNH, Universities, JHI	initiate research into the species habitat and food plant needs
	Protect existing populations and encourage expansion	Hymettus, HBRG	Monitor known and potential sites
		Hymettus, Fishery Trusts, golf courses, land managers, local authorities	Continue existing, and encourage new, sympathetic management regimes within and adjacent to known sites
<b>Violet oil beetle</b> <i>Meloe violaceus</i>	Determine the distribution in the National Park	Buglife, Local experts	Undertake targeted surveys
		Buglife, Rangers, Local experts	Deliver citizen science projects to develop identification skills and identify potential habitat
	Encourage appropriate habitat management and creation	Buglife, Hymettus,	Initiate research to determine host solitary bee species and its ecological requirements
		Buglife, Hymettus Local experts	Provide advice to land managers on appropriate management to provide bare ground for nests and nectar sources
		SNH, CNPA, Buglife, Hymettus	Investigate habitat connectivity issues and the role of landscape scale conservation in enabling range expansion

**Birds of the Bush - Ring Ouzel *Turdus torquatus***

Ring ouzels are in severe decline in the UK (over 50 percent in the last 25 years) and have experienced a very marked contraction in range. In Scotland, ring ouzels are generally found in open heather moorland, but the same subspecies in Scandinavia breeds in a mosaic of montane scrub with patches of grass and rocks.

Montane scrub, the mix of low lying dwarf willow and birch bushes between the natural tree line and the open hill, is essentially missing from the landscape. This is a result largely of past management with grazing and fire, from prehistory to the present. This natural transition zone is, for most people, also missing in our thoughts of what a natural landscape should be. Montane scrub is among the rarest natural features of the Scottish landscape with tiny remnants now often restricted to cliffs, crags and boulder fields away from grazing pressure. In Scandinavia, this habitat is common and supports a rich biodiversity.

Evidence suggests that this habitat would also be beneficial for black grouse and potentially improve the breeding prospects for rare breeders like brambling, redwing and fieldfare as well as species that would probably otherwise be here, such as bluethroat and Lapland bunting.

**Action: Establish a landscape-scale montane scrub project**

**Underneath our feet – Crimson waxcap *Hygrocybe punicea***

Some of the biggest organisms living in our grasslands are not the sheep on top of the grass, but the fungi underneath it - the mycelia of fungi like waxcaps spread far and wide. The fungi only reveal themselves briefly each year, when the mushrooms appear like the tips of icebergs, the mycelia however are vital parts in a healthy ecosystem. Fungi are critical in carbon and nutrient cycling, root function in plants, and as a food source for a very wide range of organisms. Their ecology and distribution are still relatively poorly understood.

Waxcaps are very sensitive to the high nitrogen content of artificial fertiliser and are indicators of ancient unfertilised grassland. A good site may contain a dozen to twenty species. A site that has been treated with artificial fertiliser is unlikely to have more than one or two species. Many of the grasslands in the National Park have been grasslands for a long time and are important sites for nationally rare species.

**Action: Determine current status and distribution, and identify its' management needs.**

**Hare today, gone tomorrow? - Mountain hare *Lepus timidus***

This iconic mammal, also known as the blue hare, is perfectly adapted to life on the open mountainside, and to the harsh winter climate. The moorland habitat actively managed for red grouse is also ideal for them. Burnt strips of heather provide fresh shoots to feed on and the taller heather provides shelter from predators such as the golden eagle. Population of mountain hares can fluctuate dramatically making it very difficult to assess their conservation status.

Mountain hares are actively controlled on a number of grouse moors in order to reduce the number of vectors carrying ticks which spread disease to both grouse and people. Control of hare is a legal and legitimate management activity. It is important that we monitor hare numbers to ensure their status as one of our most loved and distinctive montane species in the National Park continues.

**Action: Determine current status and distribution, and monitor populations**

## 4.4 INVOLVING PEOPLE

The National Park is an attractive place: around 17,000 people permanently live here and 1.3million people visit every year. The relationships people have with the landscapes in which they live, work and recreate in are fundamental to the health of the nature of the Cairngorms National Park.

### **Understanding - Appreciation – Protection**

We want people to care intellectually and emotionally about the biodiversity of the Cairngorms National Park, to feel proud of their natural heritage and become informed and passionate advocates for it.

Through understanding and developing knowledge about the significance of our natural heritage and about the way we manage our countryside, people will appreciate it more; and in appreciating what we've got, want to do something to safeguard the many benefits we get from it.

### **Realising the benefits**

The nature of the Cairngorms National Park defines where we live and is a primary part of our shared community identity. Tourism and land-based business are central to our economy. We want more people to understand and enjoy the social, economic and environmental benefits nature brings.

Most of us enjoy being in nature, from quiet, peaceful reflection to adrenaline-fuelled adventure. We know that being in nature makes us healthier – both physically and mentally. It is important we are able to physically and visually access and interact with habitats and landscapes.

The potential for floods to affect people's homes depends on how the land is used in the surrounding catchment; food resources depend on clean water and productive soils; and the carbon released through how we live and work affect our climate.

### **Making a contribution**

We can all make a difference to the nature of the Cairngorms National Park and in turn to the good things that we get from it. There is already a huge amount of good work being undertaken by paid and un-paid researchers, recorders and enthusiasts. We would like to see the existing work supported and developed, complementing a wide range of opportunities for people to put something back, to help protect and enhance our nature.

Volunteers can take a great deal of pride and feel a high degree of ownership through seeing the positive change their efforts have brought about. There are opportunities for skills development and for communities to take more control of their natural heritage. Raising awareness and understanding and forming a close bond between people and place will lead to more and better informed debates and the establishment of valuable connections between expert and community values.

### **Citizen science**

Within the UK there is a long and rich tradition of scientific discovery by unpaid and interest groups. Indeed our current understanding of UK wildlife and the wider environment is due

in large part to the dedication and expertise of the naturalist community. Over the past decade there has been a rapid increase in the diversity and scale of citizen science representing contributory, collaborative and co-created projects ranging in size from national crowd sourcing activities to small groups of local volunteers.

### Getting the message out

In order to inspire and encourage involvement and highlight the opportunities available, we need to communicate effectively. There is a huge amount of good conservation work taking place in the National Park, and there will be more. Through targeted and focussed communications, we can bring this together to paint a picture of the whole that is greater than the sum of its parts.

We will focus our actions on working with the following key groups:

- Residents
- Young people
- Key influencers and communicators
- Tourism based businesses
- Land managers
- Rangers

And in communicating the following messages:

- The Cairngorms National Park is an outstanding place for nature. It is nationally and internationally significant and is arguably one of the most important areas in the UK.
- Conservation in the Cairngorms National Park is a collective and cumulative effort. Many land managers, groups and individuals are all doing work for the benefit of nature in the Park.
- We want people to get out and enjoy the nature in the National Park, to engage with it and realise the benefits it brings.
- Volunteering, in lots of different ways, makes a real and positive difference to the health of the nature of the Park and our own health. Everyone is welcome and there are many ways to get involved.

TARGETS						
INDICATOR	MILESTONES (Cumulative totals)					KEY MONITORING PARTNERS
	2014	2015	2016	2017	2018	
Number of volunteer days per year spent caring for nature in the National Park	100		500		1000	CNPA, regional volunteer co-ordinators, ranger services
Number of communities directly involved with the management of their local natural heritage (through consultation, planning and management plans)	1	2	4	6	8	CNPA, local authorities, community planning officers, ranger services, CDO

AREAS OF WORK	ACTION	KEY PARTNERS	WHAT
Inspiring and engaging	Create, support and celebrate a network of ambassadors	CNPA	Develop and implement a stakeholder engagement plan
		CNPA	Produce and manage a communications toolkit with supporting resources
		CBP	Develop and roll-out 'Make it Yours' - a programme of training and support for NP based businesses
		CNPA, ranger services	Develop and maintain networks for sharing expertise and disseminating information
		CNPA, SLE, CBP	Host annual awards ceremony championing positive work
		CNPA, FCS, SNH, SLE, WES, RSPB, NFUS	Deliver biannual Cairngorms Nature partnership event
	Communicate the significance of the natural heritage, the benefits people derive from it and the work being done to protect and enhance it.	CNPA	Develop and maintain a Cairngorms Nature website and any associated social media activity
		CNPA, SNH, FCS	Produce a range of Cairngorms Nature publications
		WES, ranger services	Improve the understanding and perception of estates by the public and what estate management can deliver in terms of biodiversity
		CNPA, RSPB, SNH, FCS, NTS, SLE, BCS, DFT, ranger services	Joint-brand and position activities and projects relevant to Cairngorms Nature

	Further develop work with young people	CNPA, FCS, RSPB, SNH, Woodland Trust, Local Authorities	Develop schools resources to actively involve young people in experiencing and conserving the biodiversity of the National Park
		JMA, Junior Rangers, Rangers	Include Cairngorms Nature information in programmes of activity
		CNPA	Promote and support skills development s part of volunteering opportunities
	Recognise, support and strengthen the role of key visitor attractions and wildlife tourism operators	CNPA, CBP	Provide training, knowledge and support including managing recreational pressures on important sites and wildlife.
		CNPA, CBP	Co-ordinate distribution and display of Cairngorms Nature publications
		SNH	Promote NNR's as flagships for finding out about Cairngorms nature
		RSPB, NTS, SNH, FCS, RZSS, SLE, ranger services	Include Cairngorms Nature information and interpretation in visitor centres
Providing opportunities	Help communities find ways to engage with, realise the benefits they get from, and have a say in the management of, local natural heritage assets	CNPA, CDO, RSPB, SNH, Rangers, Local Authorities	Work with communities to assess the significance and desired benefits from local natural heritage assets
		CNPA, CDO, FCS, SNH, RSPB, Local Authorities, community planning officers	Facilitate communities to develop management plans for, and facilitate access to, local wildlife sites
		CNPA, CDO, Land Managers, RSPB	Facilitate awareness raising and communication between communities and local land managers

		CNPA, CDO, SNH, Local Authorities, community planning officers	Work with communities on improving biodiversity within settlements and new developments
Provide a wide range of opportunities for people to contribute to the protection and enhancement of biodiversity in the Park		Regional volunteer co-ordinators, CNPA, ranger services.	Co-ordinate volunteering opportunities
		CNPA, CDO, Ranger Services, SNH, RSPB, Woodland Trust, Local Record Centres	Raise awareness of volunteering opportunities and campaigns
		CDO, Rangers, SNH, RSPB, NTS, Woodland Trust, Local Record Centres	Highlight and encourage volunteer participation in nationally run recording schemes
		CNPA	Investigate and pursue options for a visitor payback scheme that includes options for caring for nature
		CNPA, FCS, RSPB, NTS, SNH, SLE	Create, develop and support new and existing large-scale projects to accommodate volunteering efforts, donations and campaigns

### **The John Muir Award**

Many education programmes take people to the outdoors so they can learn about it. The John Muir Award is rather different. It's a flexible programme that allows people to make their own meaning or sense of a place through their experiences, rather than through teaching or learning. At the heart of the scheme is the simple power of awakening people to nature.

People often see their local woods or hills differently after doing the John Muir Award. We are all a little guilty of taking things for granted and the award helps us look again at the nature around us.

**Action: Support the John Muir Award programme in raising awareness and understanding of the value and importance of nature in the Cairngorms**

### **Citizen science**

In 2006 the Cairngorms National Park hosted the largest non-native predator eradication programme in Europe as part of a project to halt the decline in water vole populations. The project was incredibly successful, helping the recovery of water voles and benefiting ground nesting birds and fish like salmon. The Rivers and Fisheries Trusts of Scotland (RAFTS) continues to run the Scottish Mink Initiative, working with a range of land owners, managers, agencies and communities to eradicate American mink throughout the North of Scotland.

Volunteers are fundamental to the success of the project monitoring and reporting mink activity and checking for footprints on the mink raft as mink are dispersing from areas adjacent to the National Park. The initiative provides equipment, support and training and, through working closely with local groups and volunteers, hopes to develop a long term strategy so the work continues after the initiative ends.

**Action: Develop and support a range of opportunities for citizen science**

## 5 GLOSSARY

ACES	Aberdeen Centre for Environmental Sustainability
BAP	Biodiversity Action Plan
BASC	British Association for Shooting and Conservation
BBS	British Bryological Society
BCS	Butterfly Conservation Scotland
BDS	British Dragonfly Society
BLS	British Lichen society
BMS	British Mycological Society
BSBI	Botanical Society for the British Isles
CBP	Cairngorms Business Partnership
CDAG	Cairngorms Deer Advisory Group
CDO	Community Development Officer
CNPA	Cairngorms National Park Authority
COAT	Cairngorms Outdoor Access Trust
CONFOR	Confor: promoting forestry and wood
CRPP	Cairngorms Rare Plants Project
DCP	Dee Catchment Partnership
DFT	Dee Fisheries Trust
EU	European Union
FCS	Forestry Commission Scotland
FRA	Forest Research Agency
GWCT	Game and Wildlife Conservation Trust
HAG	Highland Aspen Group
HB	Highland Birchwoods
HBRG	Highland Biological Recording Group
HFV	Highland Foundation for Wildlife
ICF	Institute of Chartered Foresters
JHI	James Hutton Institute
JMA	John Muir Award
NFUS	National Farmers Union Scotland
NTS	National Trust for Scotland
NFE	National Forest Estate
PAWS	Partnership for action Against Wildlife crime Scotland
RAFTS	Rivers And Fisheries Trusts Scotland
RAMSAR	Convention on Wetlands of international importance

RBGE	Royal Botanic Garden Edinburgh
RSPB	Royal Society for the Protection of Birds
RZSS	Royal Zoological Society Scotland
SAC	Special Area of Conservation
SRUC	Scottish Rural College
SCA	Scottish Countryside Alliance
SCI	Spey Catchment Initiative
SEPA	Scottish Environment Protection Agency
SG	Scottish Government
SGA	Scottish Gamekeepers Association
SLE	Scottish Land and Estates
SNH	Scottish Natural Heritage
SPA	Special Protected Area
SRDP	Scottish Rural Development Programme
SSSI	Site of Special Scientific Interest
SWA	Scottish Wildcat Association
SWWI	Strathspey Wetlands and Waders Initiative
UHI	University of the Highlands & Islands
WES	Wildlife Estates Scotland
WTS	Woodland Trust Scotland
UKBAP	United Kingdom Biodiversity Action Plan