

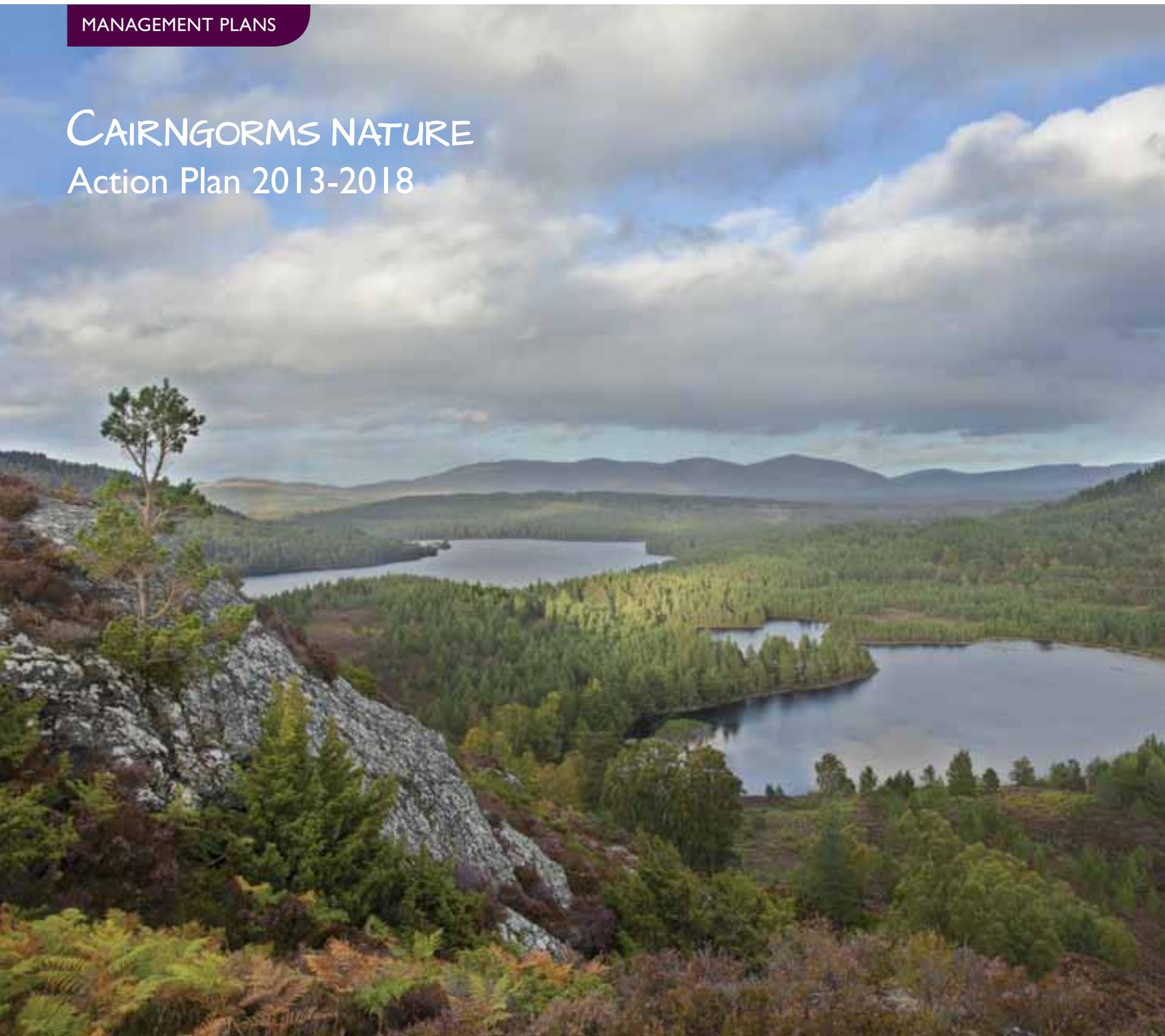


Cairngorms
NATIONAL PARK
Pàirc Nàiseanta a' Mhonaidh Ruaidh

MANAGEMENT PLANS

CAIRNGORMS NATURE

Action Plan 2013-2018





Vision
Strategy
Action

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14 The Square
Grantown-on-Spey
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Email: enquiries@cairngorms.co.uk
Tel: 01479 873535
Fax: 01479 873527

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FOREWORD

The nature of the Cairngorms National Park is outstanding - a refuge for rare and endangered wildlife where wild cat live in ancient pine forests alongside less celebrated but equally important plants and insects. Considered amongst the 50 Last Great Places in the World by National Geographic, our National Park is of exceptional value to Scotland and to our international reputation.

The diversity of land use is fundamental to the biodiversity, culture and economy of the Park. The high quality of nature, now protected by European directives, is due in no small part to the way the land has been managed, valued and enjoyed by enthusiastic and passionate people from all walks of life. However, challenges are ever present. We need to focus our efforts to halt biodiversity loss. Collective care is required by all these activities to enhance our wildlife stronghold and keep our economy sustainable.

We are all stewards of this extraordinary place. Cairngorms Nature brings together people and organisation with the common desire to safeguard our wildlife and the benefits we get from it. Through collaboration and co-operation we can ensure a sustainable future for our nature. I hope you will play your part too.



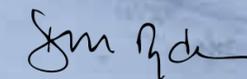
Duncan Bryden
Convener, Cairngorms National Park Authority

RO-RÀDH NÀDAR A' MHONAI DH RUAI DH

Tha iongantasan nàdarra Pàirce Nàiseanta a' Mhonaidh Ruaidh air leth – tèarmann do bheathaichean agus do eòin annasach agus ann an cunnart, beò ann am beanntan agus glinn aosta, còmhla ri lusan agus bhiastagan nach eil cho comharraichte ach a tha a' cheart cho cudromach. Aithnichte mar aon de na 50 Àite Cudromach mu Dheireadh san t-Saoghal le National Geographic, tha a' Phàirc Nàiseanta againne le luach air leth do dh'Alba agus do ar cliù eadar-nàiseanta.

Tha iomadachd ann an cleachdadh fearainn sa Phàirc mar bhunait do ar bith-iomadachd, dualchas agus eaconamaidh. Tha àrd-chàileachd ar nàdair a-nis gu mòr air a dhìon le stiùireachais Eòrpach, agus tha an staid sa bheil e mar thoradh air an dòigh san deach na cnuic, na coilltean agus an talamh àiteachais a riaghladh, a luachadh agus a mhealtainn le daoine deònach agus sgileil. Ach tha dùbhlain daonnan romhainn. Tha feum air oidhirp chiuimseach gus casg a chur air call bith-iomadachd agus gus a bhith a' dèiligeadh ri atharrachadh aimsir. Feumaidh a h-uile neach a bhith an sàs còmhla gus cur ri ar daingneach fhiadh-bheatha agus gus ar n-eaconamaidh a chumail seasmhach.

Tha sinn uile nar stiùbhartan air an àite air leth iongantach a tha seo. Tha Nàdar a' Mhonaidh Ruaidh a' tarraing ri chèile dhaoine agus bhuidhnean aig a bheil ùidh choitcheann ann a bhith a' dìon ar fiadh-bheatha agus na sochairean a tha sinn a' faighinn bhuaithe. Tro chonaltradh agus cho-obrachadh, nì sinn cinnteach gum bi àm ri teachd a bhios seasmhach aig ar nàdar. Tha mi an dòchas gun cluich sibhse ur pàirt fhèin ann cuideachd.



Duncan Bryden
Convener, Cairngorms National Park Authority

A SPECIAL PLACE FOR PEOPLE AND NATURE



I. INTRODUCTION

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.

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 as one of the international family of protected areas. Planning for biodiversity 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 are found nowhere else in the UK. Almost half of the National Park is designated within 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. 77 per cent of the designated features are in favourable condition.

The National Park has more high-level mountain ground than anywhere else in Britain and Ireland, offering vital habitat for 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 UK's purest and cleanest rivers and high-quality wetlands support stocks of Atlantic salmon, lampreys and other fish.

Whether it's a simple walk with the dog, a bike ride by a loch, or extreme mountaineering, being in the National Park's high-quality, natural environment, stimulates our senses and make us fitter, happier and healthier.

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

COVERING 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

A CULTURAL LANDSCAPE

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 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 plateau, the landscapes of the National Park are a product of human action.

Managing for biodiversity is not something additional to the work of many land managers, but part of their everyday activity. For generations it has been recognised 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. Together, the work in many woods, moors and farms creates the 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. We need to make sure that all of our land management practices help to enhance biodiversity as much as they can, and focus our efforts in the many areas where we are leading the way in positive, productive land management.





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; 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 focuses on biodiversity. 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 clearly recognise and consider any proposed changes to land use in the light of competing demands and make sure they prioritise biodiversity and productivity in equal measure.

RED DEER HAVE A MAJOR INFLUENCE ON HABITAT AND ON THE LOCAL ECONOMY, DRAWING IN WILDLIFE WATCHERS AND HUNTERS FROM ALL AROUND THE WORLD



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, shallow upland soils are eroded and the condition of the deer will deteriorate.

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 regeneration is taking place without fencing.

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

WOODLANDS

Some of the most important woodlands in Britain dapple the hills and cloak the low ground of 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, some native woodland types have not fared so well and need particular attention. For example, in some woodlands there is a significant gap in the age structure and a lack of regeneration.

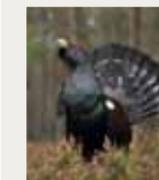
More than half of the surviving **Caledonian forest**, including the largest remaining remnants, is in the National Park. Boosted by recent expansion schemes, this globally important habitat is a western variety of the huge boreal forests that girdle the northern world. Through focusing on quality improvements, 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.

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

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. Grazing management, habitat loss, lack of regeneration 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 per cent of the UK's capercaillies now live in the Park.

The name capercaillie comes from the Gaelic 'capull-coille', meaning 'horse of the wood', referring to the turkey-size males. In summer, chicks feed on moth caterpillars feeding 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.



The waters of the National Park, both flowing and still, are major assets and a huge reservoir of biodiversity. The rivers flowing from the Park are among the longest, cleanest and most natural 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 freshwaters of Scotland after the last ice age.

Well-managed wetlands bring benefits to people as well as nature. Climate change has significant potential to increase the number and severity of 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.

Rivers in the Park, of which 70 per cent are considered to be in good ecological status, have 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.

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 globally-recognised 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.

Wetland and wet grassland habitats have been considerably reduced in area by drainage to improve the quality and potential of land for farming. 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, nutrient run-off and drainage. The numbers of some wader species have reduced 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.

FRESHWATER, WETLANDS AND WET GRASSLAND





The mountains at its core give 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 found there, helps to shape the communities of scarce plants, lichens, mosses, fungi, insects and birds.

Birds such as dotterel and snow bunting, with 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. The Cairngorms National Park is an ideal place to conduct research and demonstrate the actions needed to help Scotland's key habitats and species adapt. By restoring peat-forming habitats and increasing forest cover we can 'lock up' carbon and secure healthy ecosystems and 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.

After hundreds of years of decline, **montane scrub** is so impoverished in the UK that many people do not even realise that it is missing. The National Park has some of the last few remaining, scattered fragments, particularly in the northern Cairngorms and Glen Doll. They offer a glimpse of a more natural transition that was once widespread. These fragments, including the highest natural montane scrub and the most natural treeline in Britain, at around 640m on *Creag Fhiaclach*, are excellent foundations for landscape-scale change, leading the way in the restoration and rejuvenation of one of our most threatened habitats.

Some montane and moorland habitats and species in the Park are in good health and these can be used to demonstrate good management practice. However, not all upland management is delivering biodiversity gain. Only 65 per cent of designated upland features are in favourable condition, significantly less than the national average. The two biggest pressures on the favourable status of upland designated sites are grazing and burning.

SLIPPERY AT THE TOP

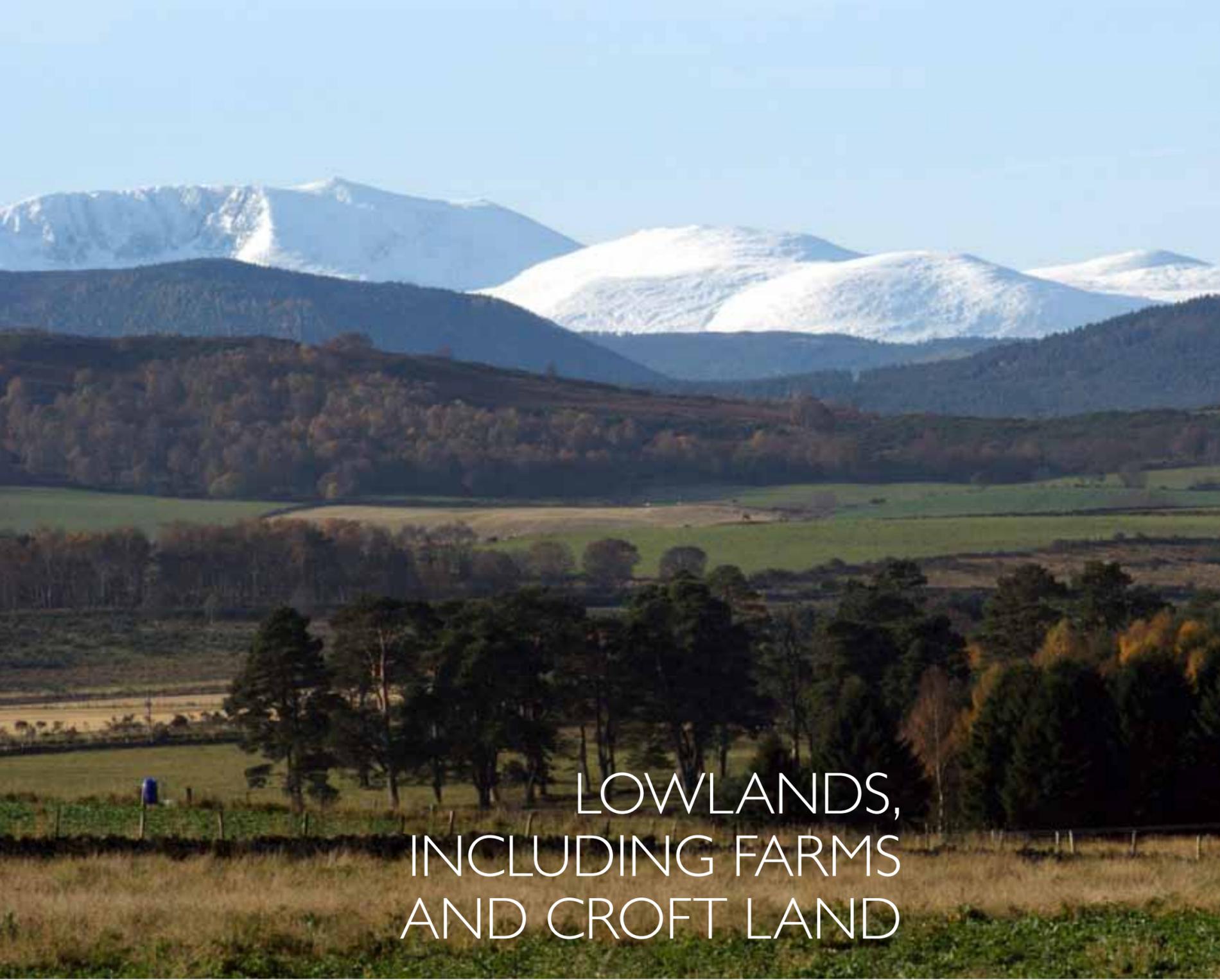


Slime moulds may have you fooled into thinking they are fungi or even soft-bodied animals, but these single-celled creatures (like amoebas) have astonishing abilities to work

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 like a kind of fungus. A high proportion of the entire UK population of alpine 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.

UPLANDS



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 of 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 less intensively 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, however, often result in an intensification of farming and a decline in the biodiversity value.

It is important that farming systems in the Park remain the well-managed, productive systems that deliver biodiversity gain and that we avoid the intensification that we have seen in other parts of Scotland.

The lowlands are vitally important areas for grazing and often include flower-and-insect-rich grasslands on base-rich soils. Older grasslands are also important for scarce fungi, such as waxcaps.



BUZZING BIODIVERSITY

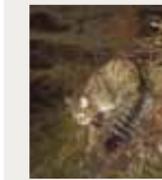


The Scabious mining bee *Andrena marginata* was thought extinct in Scotland from 1949 until found in Boat of Garten in 2002. Since it was re-discovered, it has been found

at several sites in the Highlands, including new records in the National Park.

Listed as endangered in seven other European countries, this mining bee is an internationally important part of the Park's brilliant insect biodiversity. It prefers lowland meadows with sun-warmed banks and, as its name suggests, is closely associated with its only known pollen source recorded in Scotland, Devil's-bit Scabious.

TRACKING HIGHLAND TIGERS



One of the most elusive and 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 in the Cairngorms is a stronghold for this rare species.

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 are exceptional, many of which are internationally rare and all are set within world-famous landscapes.

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, many organisations, individuals and agencies from a range of sectors are all committed to, and undertaking sterling work for, the benefit of biodiversity 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 directly in the use of resources such as timber, fish and game, or indirectly through the massive benefits linked to clean water, tourism, recreation, health and wellbeing.

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

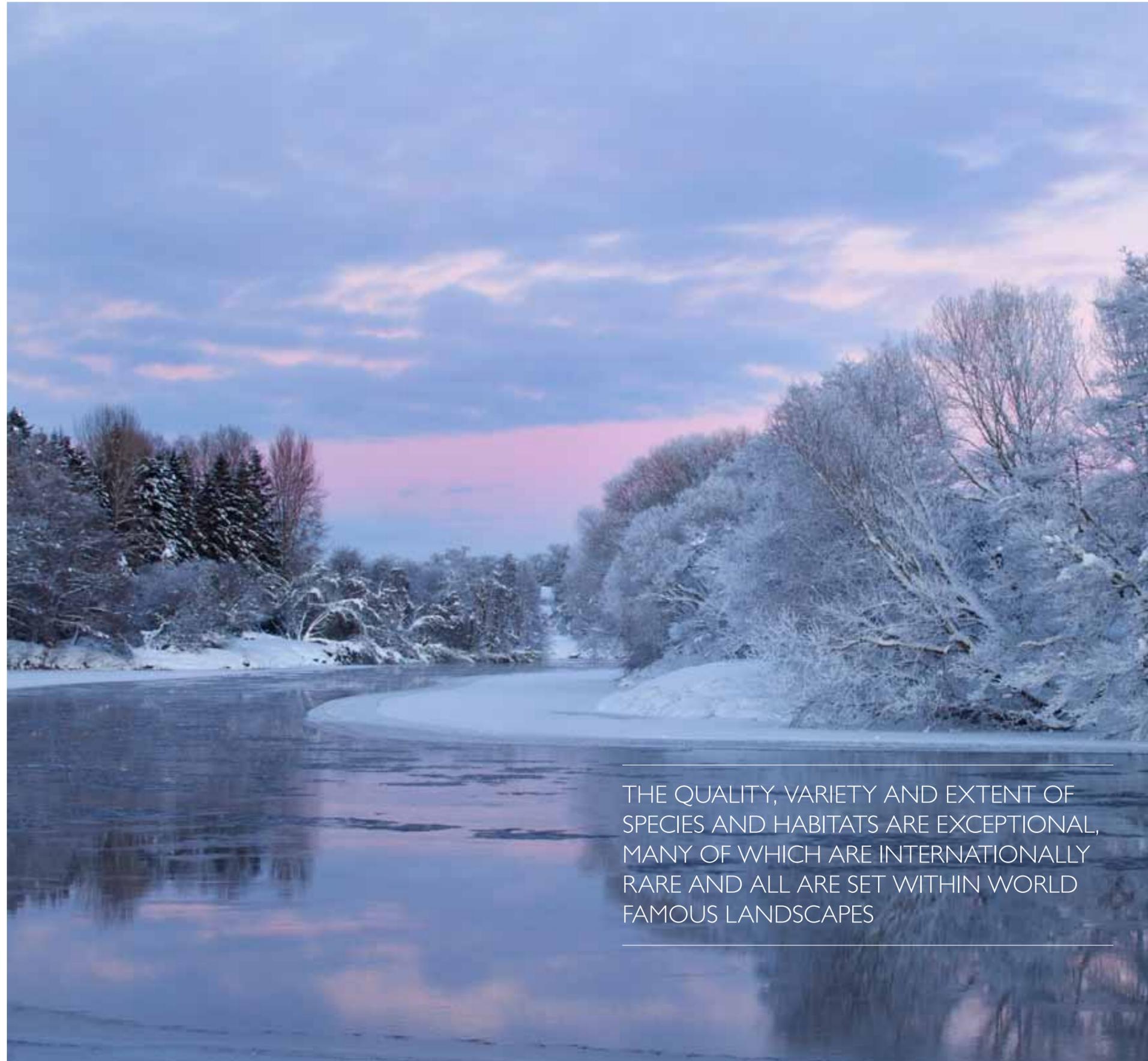
Cairngorms Nature – the next steps

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 Action Plan describes where we want to be in five years, the partnership will get us there.

This Cairngorms Nature Action Plan (CNAP) builds on the foundations laid by the Cairngorms Local Biodiversity Action Plan (CLBAP) 2002 – 2012. The CLBAP described in some detail the habitats and species in the National Park, their local, national and international significance and outlined key threats, issues and opportunities. It guided work in the National Park for over ten years and delivered considerable biodiversity gains. Many of the issues and opportunities highlighted in developing and delivering the CLBAP have been continued into the work of the Cairngorms Nature Action Plan.

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 valuable 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 is not meant to represent all those who are doing work in the area.

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



THE QUALITY, VARIETY AND EXTENT OF SPECIES AND HABITATS ARE EXCEPTIONAL, MANY OF WHICH ARE INTERNATIONALLY RARE AND ALL ARE SET WITHIN WORLD FAMOUS LANDSCAPES



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

LAND MANAGEMENT	
2013	2063
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, encouraging the recovery of those that have been in decline.

FORESTS AND WOODS	
2013	2063
<p>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 ancient floodplain forest in the UK; and some of the largest remaining stands of Aspen.</p> <p>The woodlands 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 by deer.</p>	<p>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, like the once critically endangered but now flourishing capercaillie.</p> <p>They are made up almost entirely of 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>

WETLANDS, WET GRASSLANDS AND FRESHWATER	
2013	2063
<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. 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 help prevent damaging flood events in the Park and further downstream. Natural processes in river catchments do not affect 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>

MONTANE	
2013	2063
<p>The Cairngorms plateau is 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 specialist species.</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>Climate change threatens many of our rarest and most fragile species.</p>	<p>The plateau supports 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 continue to enjoy responsibly. A network of sensitively managed paths in popular areas protects fragile soils and rare species.</p> <p>The National Park is a focus for research into the effects of climate change, and a range of mitigation and adaptation trials and approaches are under-way.</p>

MOORLANDS	
2013	2063
<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. Small, isolated patches of montane scrub are some of the finest remnants of a habitat that has virtually disappeared in the UK.</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 of 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 have structural diversity and link habitats together sympathetically. A natural transition from woodland to montane scrub to upland heath is developing throughout the National Park.</p> <p>Raptor persecution ended decades ago and a full complement of native raptors lives and breeds across the National Park.</p> <p>Productive grouse moors and high-quality stalking remains a mainstay of life, 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 contributions it makes to ecosystem services are widely recognised.</p>

GRASSLAND AND FARMLAND	
2013	2063
<p>Farmland and grassland in the National Park have often 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 demand for higher output systems of farming than in the past, impacting on grassland biodiversity.</p> <p>Some grasslands and river banks support many rare plants, invertebrates and fungi.</p>	<p>A patchwork of productive land uses 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 and does not impact on profitability.</p> <p>High-quality grasslands support a healthy range of nationally and locally important species.</p>

PEOPLE	
2013	2063
<p>Some residents place a high value on their surroundings and are keen to get involved in discussions about how to manage them. 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 motivated by the landscapes and wildlife. Wildlife watching is a burgeoning tourism industry that complements the already substantial sporting and recreational offerings.</p> <p>Opportunities for non-residents to volunteer or contribute in some way are site and organisation-specific and relatively small scale.</p>	<p>People who live in the National Park are proud of the nature around them and are more widely involved in its management.</p> <p>Land-based and tourism businesses thrive by looking after the environments they rely on; and contribute to conservation and enhancement of biodiversity. Visitors respect the landscapes and wildlife they come to see and want to contribute to protecting them.</p>

<p>People working in the Cairngorms National Park will have easy access to the latest knowledge, thinking and research and use it to realise further biodiversity benefits; to deal with the effects and impacts of climate change; and to tackle the threats posed by invasive species.</p> <p>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; policy makers and practitioners will have access to current information and advice via a centralised database.</p>	<p>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. Designated sites will act as key nodes within wider integrated habitat networks.</p> <p>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 negative impacts upon the effective functioning of ecosystems.</p>
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3. STRATEGY

Cairngorms Nature

Cairngorms Nature is a partnership for people and organisations to 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 - positive change for biodiversity in the Park.

The partnership is informal, open to all. Any individual or organisation is welcome. Being a partner is simply about contributing to the delivery of the Action Plan. 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:

Cairngorms National Park Authority
Community Development Officer
Dee Fisheries Trust
Forestry Commission Scotland
National Farmers Union Scotland
National Trust for Scotland
Royal Society for the Protection of Birds
Scottish Land and Estates
Scottish Gamekeepers' Association
Scottish Natural Heritage

The objectives and functions of Cairngorms Nature Strategy Group are to provide strategic leadership of Cairngorms Nature to make a measurable difference to biodiversity in the Cairngorms National Park; to inspire and provide support to individual and community involvement in local conservation projects; and to co-ordinate and maintain an overview of progress in biodiversity management across the whole National Park.

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. 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, urgent needs 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 Scotland 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, support, and provide opportunities for people to realise the benefits from, and help to look after, nature



Woodlands and Wetlands

The importance for concerted effort on woodlands and wetlands has been highlighted through extensive consultation with key partners as part of developing the Cairngorms 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

Some issues not encompassed by other areas of habitat and species work in the Action Plan have been identified as needing immediate and direct action. As well as the focused 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 a 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 focused 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.

The habitat actions are likely to bring benefits for many of these species. However, some species are in need of urgent conservation action and have very specific management needs. From this long list the 26 species listed were selected for focused action over the next five years of this action plan:

SPECIES	LATIN NAME	GROUP
Wildcat	<i>Felis silvestris</i>	mammal
Mountain hare	<i>Lepus timidus</i>	mammal
Red squirrel	<i>Sciurus vulgaris</i>	mammal
Golden eagle	<i>Aquila chrysaetos</i>	bird
Capercaillie	<i>Tetrao urogallus</i>	bird
Lapwing	<i>Vanellus vanellus</i>	bird
Small dark yellow underwing	<i>Anarta cordigera</i>	invertebrate
Mining bee	<i>Andrena marginata</i>	invertebrate
Pine hoverfly	<i>Blera fallax</i>	invertebrate
Pearl bordered fritillary	<i>Boloria euphrosyne</i>	invertebrate
Northern February red stonefly	<i>Brachyptera putata</i>	invertebrate
Northern damselfly	<i>Coenagrion hastulatum</i>	invertebrate
Kentish glory	<i>Endronis versicolora</i>	invertebrate
Dark bordered beauty	<i>Epione vespertaria</i>	invertebrate
Freshwater pearl mussel	<i>Margaritifera</i>	invertebrate
Violet oil beetle	<i>Meloe violaceus</i>	invertebrate
Northern silver stiletto fly	<i>Spiriverpa lunulata</i>	invertebrate
Wood ants (4 species)		invertebrate
Alpine blue sow thistle	<i>Cicerbita alpina</i>	vascular plant
Twinflower	<i>Linnaea borealis</i>	vascular plant
One flowered wintergreen	<i>Moneses uniflora</i>	vascular plant
Tufted saxifrage	<i>Saxifraga cespitosa</i>	vascular plant
Green shield moss	<i>Buxbaumia viridis</i>	bryophyte
Scarlet splash	<i>Cytidia salicina</i>	fungi
Crimson waxcap	<i>Hygrocybe punicea</i>	fungi
Powdered sunshine lichen	<i>Vulpicida pinastri</i>	lichen

Involving people

The interactions between people and nature play crucial roles in the way nature is valued. It is therefore vitally important to engage people with the natural world, for the health and wellbeing benefits that this brings, to support their spirit of inquiry, and to empower them to have a say in decisions about their environment, reflecting national strategies and policies, the National Park Partnership Plan and 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 (CNPPP)

The CNPPP identifies the direction and priorities to which partners agree to direct their effort and resources in the National Park. 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 and proposed development plan set out the policies against which planning applications are assessed. Both specifically refer to the CLBAP and the CNAP. As an iteration of the CLBAP, the CNAP is a material consideration that will add weight to the existing legislation that protects habitat and species. It is expected that the Action Plan will be considered by the planning authority 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. Designated sites, and the national target of 80 per cent in favourable condition by 2016, play a crucial role in delivering the CNAP. These sites have been designated to protect their qualifying features, which can be habitats or species. Natura sites are a network of protected areas – Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

Water Framework Directive

The Water Framework Directive (WFD) is a piece of EU legislation which aims to improve and protect the water environment on a catchment scale. The WFD requires the production of River Basin Management Plans (RBMPs) covering all types of water body.

Climate Change Act

The Climate Change 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 succeeded the UK Biodiversity Action Plan (UK BAP). Much of the work previously carried out under the UK BAP is now focused at a country level. All UK BAP species found in Scotland are on the Scottish Biodiversity List.

Scottish Biodiversity Strategy – The 2020 Challenge

The (draft) Scottish Biodiversity Strategy '2020 Challenge for Scotland's Biodiversity' is Scotland's response to the EU'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 and managing biodiversity in the wider environment, not just protecting specific sites or species. The Cairngorms Nature Action Plan is a means to fulfil this act.

Scotland's Wild Deer: a National Approach

This 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.

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. Public sector bodies are expected to take a leading role by utilising its principles in managing their own land; developing and implementing plans and strategies; and promoting partnership working.

Scotland Rural Development Programme

Funding opportunities identified in the 2014-2020 programme will have a significant impact on the delivery of parts of the Cairngorms Nature Action Plan. 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.

ACTION

All partners seek to influence changes in policies to support delivery of the CNAP; notably expansion and enhancement of woodlands and wetlands/ wet grasslands in suitable areas



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 that 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, recorders, national recording schemes and local Biological Record Centres.

As a principle, Cairngorms Nature will focus efforts on co-ordinating research, surveying and monitoring that will directly help deliver actions and monitor progress. Key research actions are listed here. Specific 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, Biological Record Centres, LA's
Progress recommendations in the CNP species restoration report	CNPA, SNH
Compile a CNP rare species dataset to inform land management	CNPA, Plantlife, RBGE, Buglife, SNH
Promote the National Park as a key area for monitoring climate change impacts on montane habitats and species	CNPA, SNH
Include Cairngorms Nature research needs in the Cairngorms National Park Partnership Plan research strategy, notably on climate change	CNPA

3.4 BIO-SECURITY

Non-native species, pathogens and diseases could, and in some cases already do, have a considerable impact upon the nature of the Cairngorms and subsequently on a range of environment-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, or 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.

Dothistroma, red band needle blight, is of considerable concern in the Caledonian pinewoods of the Park and may impact on aspirations for connectivity as planting next to existing pinewoods is discouraged in order to prevent spread of the disease.

It is crucial that we consider bio-security implicitly in the delivery of all actions and continue to survey, monitor and support eradication programmes.



BIO-SECURITY ACTIONS	
ACTION	KEY PARTNERS
Promote understanding of issues relating to non-native species and the remedial measures that can be taken at a local and landscape level	SNH, FCS, SEPA
Support new and existing eradication and prevention programmes with direct relevance to the Cairngorms National Park	CNPA, CMPs, SEPA, SNH, RAFTS
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 that many are steps towards outcomes that will be achieved after decades of sustained effort. However, it is 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. 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 per cent of Scotland's land mass, yet contains nearly 25 per cent of the entire Scottish resource of native woodlands. Associated with these woodlands are a number of species found nowhere else in Great Britain.

The forests and woodlands of the Park are a major asset because of the multiple benefits their management delivers, ranging from biodiversity to marketable timber, wood fuel, recreation, tourism and carbon sequestration. Overall, a large-scale mosaic of different woodland types will deliver a valuable mix of benefits for biodiversity, economic land-use, climate change mitigation, recreation and landscape.

Woodland expansion is identified in the National Park Partnership Plan as a high-level outcome we, collectively, want to achieve by 2017; as such it is an important focus for the work of partners in the National Park. In promoting woodland expansion, it is vital to recognise that all land-uses and habitat types must, and will, be considered in any proposals.

Habitats included under this category are Caledonian pinewoods (UKBAP) & conifer plantations (local priority), upland birchwoods – incorporating aspen 'woodlands'– (UKBAP), upland oak (UKBAP) and wet woodland (UKBAP).

Caledonian pinewoods

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 they cover less than 1 per cent of their former range.

Native pinewoods are disproportionately valuable for biodiversity and comprise a characteristic plant, fungal and animal community that includes many rare and uncommon species found nowhere else. This includes the critically endangered capercaillie, found almost exclusively in Caledonian pinewoods.

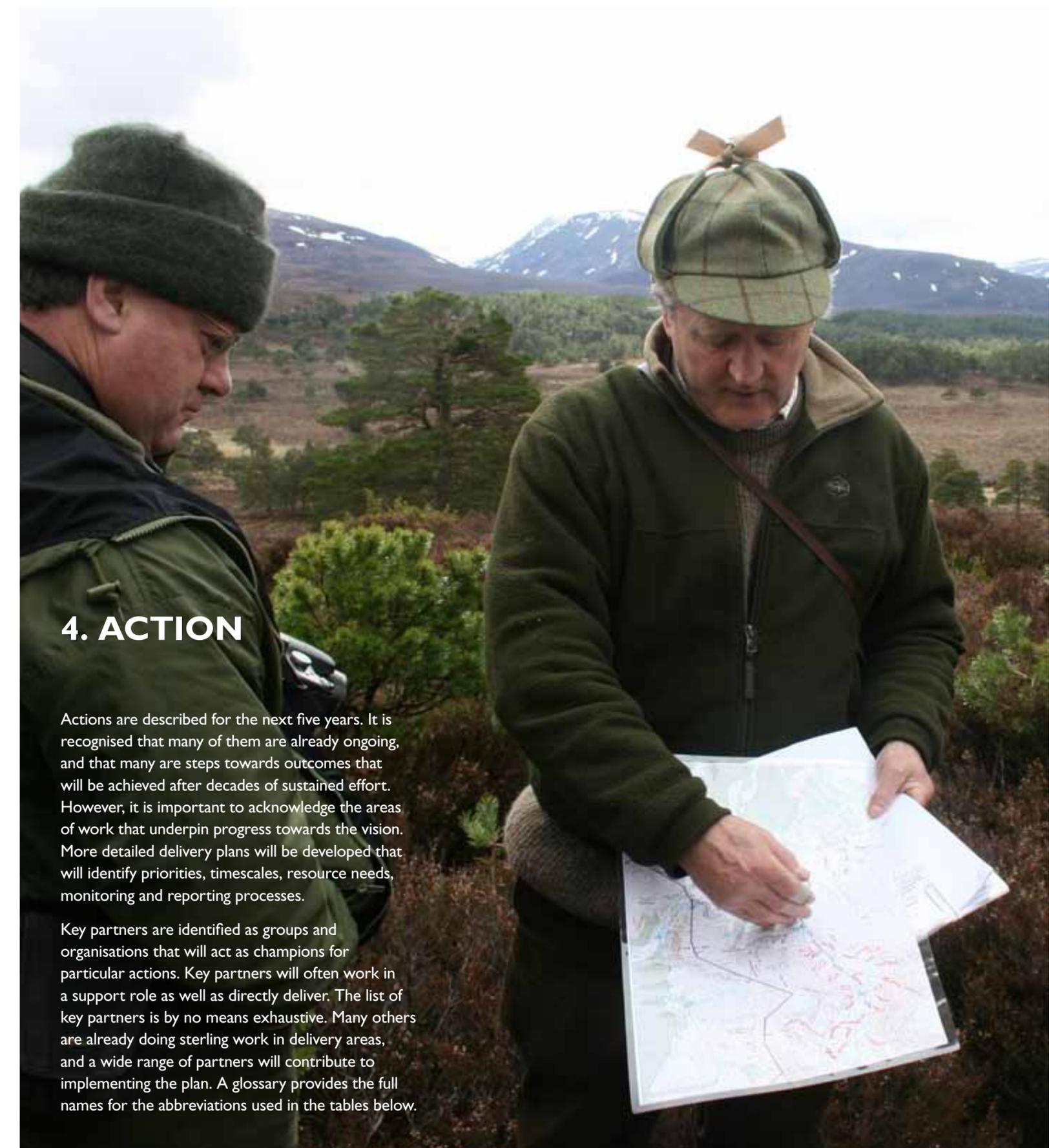
The pinewoods are, however, at threat from habitat loss, lack of regeneration, impoverished field layer, fragmentation, limited deadwood and poor structural diversity. The original pine woodlands would have contained varying amounts of birch and other broadleaved trees with an important understory of 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 also enhance the existing habitat to halt the decline, and encourage the growth, of species of extremely high conservation value.

Conifer plantations

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 per cent of the total woodland resource in the Cairngorms, 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.

Birch and aspen woodland

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 the 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. Retaining deadwood and old trees is 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, which 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; 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 require targeted management to encourage regeneration and increase the deadwood resource.

Wet & riparian woodland

Wet and bog woodlands occur on poorly-drained or seasonally wet soils, usually with alder, birch and willows as the predominant tree species, but sometimes 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

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 mostly the result of historical planting. Lack of regeneration, poor structural diversity and grazing pressure has reduced their biodiversity value.

TARGETS						
INDICATOR	MILESTONES (Cumulative)					KEY MONITORING PARTNER
	2014	2015	2016	2017	2018	
New native woodland (ha)	500	1000	2000	3500	5000	FCS, CNPA
New native woodland adjacent to existing resource (ha)	100	200	300	600	1000	FCS, CNPA
Designated woodland features in favourable condition (%)	80				95	SNH
Woodland under Woodland Improvement Grants (ha)		250		1000	2000	FCS
Woodlands (> 5ha) certified (%)					75	FCS
PAWS under restoration (%)					30	FCS
Number of new aspen stands		20			50	HAG
By 2018 there will be no reduction in the populations of key species						as per specific actions



AREA OF WORK	ACTION	KEY PARTNERS	WHAT
Planning and promoting strategic opportunity	1.1 Identify strategic expansion and enhancement areas	CNPA, SNH, FCS	1.1(a) Conduct spatial targeting exercise to identify strategic and priority areas for expansion and enhancement of different woodland types, taking into account other habitats, open ground, designated sites/features, landscape and land use
		CNPA, SNH, FCS	1.1(b) Create, and maintain, an inventory of woodlands with high biodiversity value
		CDAG, SNH, NTS	1.1(c) Review deer management plans and burning regimes in strategic areas to enable expansion and enhancement
	1.2 Encourage and support delivery	SLE, CNPA, SNH, FCS, SEPA, WTS, NFUS, CMP's, CONFOR, ICF	1.2(a) Promote opportunities and encourage land managers to consider woodland expansion and enhancement in priority and strategic areas
		CNPA, FCS	1.2(b) Establish external funding opportunities for native woodland creation and enhancement, in addition to the SRDP scheme
		FCS, SNH, WTS, CNPA	1.2(c) Support land managers in making funding applications
		CNPA, SNH, FCS, SEPA, LA's	1.2(d) Encourage strategic expansion and enhancement, provide advice and guidance as part of forest plan and woodland grant scheme consultations
		FCS, HB, HAG, RSPB, Coille Alba	1.2(e) Support conservation nurseries in making available indigenous planting stock from local sites, particularly montane scrub species
		SNH, SG, FCS, SLE, NFUS	1.2(f) Raise awareness and provide advice to land managers on disease threats to woodlands
		CDAG, SLE, SNH, CNPA, WES, NTS	1.2(g) Promote natural regeneration, with suitable deer management, as an important method to enable new woodland establishment

AREA OF WORK	ACTION	KEY PARTNERS	WHAT
Expanding woodlands and improving connectivity	1.3 Caledonian pine	SNH, FCS, RSPB	1.3(a) Increase the connectivity of core capercaillie habitat and expand into areas of quiet recreation
	1.4 Wet and riparian	Fisheries Trusts, SEPA, WTS, CMP's, RAFTS, NTS	1.4(a) Plant riparian woods in upper river catchments, ensuring new schemes do not impact on designated features or important riparian grassland
	1.5 Birch and Aspen	HAG, CMP's, SNH, Coille Alba	1.5(a) Promote aspen conservation and work with landowners to link existing aspen stands, particularly in riparian areas
Improving biodiversity value	1.6 Encourage land managers to actively implement good forestry practice guidelines	FCS, CNPA, SLE, NFUS, CONFOR, ICF	1.6(a) Promote UKWAS certification and recommended in-forest management via advice, consultations, site visits, training, events and amongst members
		SNH, FCS, RSPB, NTS	1.6(b) Showcase NNRs and the NFE as exemplars of forest management, in particular encouraging a diverse field layer, creating deadwood, managing rides and open areas, enrichment planting, retaining veteran trees, enhancing wet areas
		CNPA, FCS	1.6(c) Work with and support land agents in developing forest plans that maximise enhancement opportunities
		CNPA, FCS	1.6(d) Produce Cairngorms National Park specific guidance to complement the existing national resource
		NFUS, FCS, RSPB, SNH, NTS	1.6(e) Trial cattle grazing in woodlands (for appropriate site conditions) to investigate feasibility, establish and share good practice

AREA OF WORK	ACTION	KEY PARTNERS	WHAT
	1.7 Conifer plantation	FCS, CNPA, SNH, LA's, SEPA	1.7(a) Promote the restoration of Plantations on Ancient Woodland Sites as part of forest plan consultations and continue ongoing restoration on all FCS conifer plantations
		CNPA, FCS, CONFOR, ICF	1.7(b) Encourage and provide advice and guidance on continuous forest cover via workshops, demonstration projects and events
		RSPB, SNH, FCS, CNPA, SLE, NTS, CONFOR, ICF	1.7(c) Promote stand restructuring and thinning to create a mosaic of different densities and structures
	1.8 Bog and wet woodland	SNH, FCS, NTS, RSPB	1.8(a) Identify sites for creating or expanding bog and wet woods
		SNH, FCS, NTS, RSPB	1.8(b) Block drains, re-wet areas and remove non-native conifers
	1.9 Birch and aspen	Coille Alba, CNPA	1.9(a) Encourage and advise land managers to manage birchwoods for aspen enhancement
		FCS, RSPB, NTS, CDAG	1.9(b) Review grazing management in high nature value areas to encourage vigorous birch and aspen regeneration and a diverse field layer



KEY SPECIES FOR FOCUSED ACTION		
1.10 Capercaillie <i>Tetrao urogallus</i>	RSPB, SNH, FCS	1.10(a) Identify the effects of different land management practices. Implement current and evolving best practice habitat management recommendations
	CNPA, RSPB, SNH, FCS	1.10(b) Produce visitor management strategy and guidance for managing recreation in core capercaillie habitat to minimise disturbance impacts
	GWCT, SGA, FCS, RSPB	1.10(c) Improve fox and crow control by targeting hubs around existing capercaillie strongholds and investigate the influence of pine martens on productivity
1.11 Scottish wildcat <i>Felis silvestris</i>	RZSS, CNPA	1.11(a) Implement the Scottish Wildcat Conservation Action Group plan
1.12 Twinflower <i>Linnaea borealis</i>	CRPP, NTS, Plantlife, FRA	1.12(a) Establish new management trials, monitor existing trials and disseminate results
	CRPP, NTS, Plantlife, ranger services	1.12(b) Undertake rolling programme of monitoring sites on a 3-5 year rotation
	CRPP, NTS, Plantlife	1.12(c) Identify sites and implement translocation trials
1.13 One flowered wintergreen <i>Moneses uniflora</i>	RBGE, BSBI Plantlife, CRPP	1.13(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	CRPP, Plantlife	1.13(b) Provide site-specific habitat management advice to individual land managers
	CRPP, FRA, Plantlife	1.13(c) Establish and monitor habitat management trials and experimental translocations if appropriate

KEY SPECIES FOR FOCUSED ACTION		
1.14 Green shield moss <i>Buxbaumia viridis</i>	Plantlife, BSBI, RSPB, CRPP, BBS	1.14(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	RSPB, SNH, NTS, FCS, Plantlife	1.14(b) Actively manage for deadwood creation in sheltered, humid areas
1.15 Pine hoverfly <i>Blera fallax</i>	Malloch Society, FCS, RSPB	1.15(a) Monitor populations at known and recently created sites
	RSPB, FCS, Malloch Society, AWT	1.15(b) Create artificial breeding habitat, deadwood and promote the retention of veteran trees at current and suitable adjacent sites
	Malloch Society, RZZS, RSPB	1.15(c) Continue captive breeding programme and augment new populations with captive-bred larvae
1.16 Pearl bordered fritillary <i>Boloria euphrosyne</i>	BCS, FCS, SNH	1.16(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	BCS	1.16(b) Provide site-specific habitat management advice to individual land managers
	SNH, FCS, RSPB, BCS	1.16(c) Undertake habitat management at existing sites and create new habitat adjacent to existing populations
1.17 Dark bordered beauty <i>Epione vespertaria</i>	BCS, RSPB, Ranger services	1.17(a) Monitor current populations at selected sites annually
	BCS, RSPB, HAG	1.17(b) Undertake management to enhance conditions for suckering aspen and create new habitat next to existing populations
	BCS, RSPB, HAG	1.17(c) Investigate opportunities for translocations

KEY SPECIES FOR FOCUSED ACTION		
1.18 Kentish glory <i>Endromis versicolora</i>	BCS, SNH, RSPB, NTS	1.18(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	BCS, SNH, Coille Alba	1.18(b) Liaise with land managers to encourage management for regenerating birch to support current and expanding populations
	BCS, FCS, SNH, RSPB	1.18(c) Undertake habitat management at current sites and create habitat next to existing sites
1.19 Wood ants group <i>Formica aquilonia</i> <i>Formica lugubris</i> <i>Formica exsecta</i> <i>Formicoxenus nitidulus</i>	UK Woodant Group	1.19(a) Produce a standardised monitoring protocol for wood ants
	UK Woodant Group, RSPB, NTS, FCS	1.19(b) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	UK Wood Ant Group	1.19(c) Identify key sites and provide site-specific habitat management advice to individual land managers
	FCS, NTS, SNH, RSPB	1.19(d) 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 forests 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 *Sciurus carolinensis*.



IN HOT WATER

Broadleaved riparian woodlands provide essential benefits to much more than the obvious species that are regularly seen using them. The links between the trees along the river banks and the biodiversity in the water are 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 and much more planting needs to be done.

ACTION

Reduce the impact of climate change on water temperature by creating riparian woodlands along 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 per cent in the last 10 years.

Wetland and wet grassland habitats in the Cairngorms National Park have been considerably reduced by drainage and changes in land use. Many sites are 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 traditional farming systems. Almost all areas are grazed and some areas are cut for hay. Inundated pastures or meadows with ditches that maintain the water levels contain seasonal water-filled hollows and permanent ponds with tall fen species such as reeds. They are not extensive in the National Park, often in low-lying poorly drained areas of fields where 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 people living downstream. 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 the high quality of their freshwater habitats. The main rivers in the National Park are internationally famous for the fishing they offer, and pure water is essential to 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 preventive action is vital.

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



TARGETS						
INDICATOR	MILESTONES (Cumulative)					KEY MONITORING PARTNER
	2014	2015	2016	2017	2018	
Area of new wetland (ha)			10		25	CNPA, SRUC , SEPA
Length of drains with improved water level management (km)	1		3		5	RSPB, CNPA, SRUC
Number of new wader feeding areas that follow best practice	10		30		50	RSPB, CNPA, SRUC
New ponds created to benefit biodiversity			25		50	CNPA
By 2018 there will be no decrease in the populations of key species						as per specific actions

AREA OF WORK	ACTION	KEY PARTNERS	WHAT
Enhancing and increasing wet grassland habitat	2.1 Support farmers and land managers to conserve populations of breeding waders	RSPB, CNPA, SNH, SRUC	2.1(a) Write an action plan for the Strathspey Wetland and Wader initiative (SWWI)
		RSPB, CNPA, SRUC	2.1(b) Deliver targeted PR campaign to raise awareness of the value of wet grasslands among land managers and local communities
		SRUC, agricultural agents	2.1(c) Promote wader/wetland focused management when advising and developing funding applications
		NFUS, SLE	2.1(d) Promote wader and wet grassland friendly practices to members
		RSPB, CNPA, SNH	2.1(e) Develop and write an action plan for a wetland and wader initiative in Strathdon and Glenlivet
		RSPB, NTS	2.1(f) Identify, through survey, important wader areas in upper Deeside, Angus glens and Highland Perthshire
		CNPA, land agents	2.1(g) Support land managers with advice about funding options for wetland and wet grassland creation
		RSPB, CNPA, SRUC, land agents and advisors	2.1(h) Deliver a programme of events to demonstrate good practice
2.2 Improve and restore wet grassland through positive conservation action		RSPB, CNPA, SRUC	2.2(a) Work directly with land managers to draw up farm plans and create new wader feeding areas
		RSPB, CNPA, SRUC, SEPA, CMPs Fisheries Board	2.2(b) Work directly with land managers to reinstate water sources to improve the biodiversity value of wet grassland

AREA OF WORK	ACTION	KEY PARTNERS	WHAT
		RSPB, NTS	2.2(c) Remove scrub and coarse vegetation to improve sward condition with rush topping machinery and other methods of wader-friendly management
		SEPA, SNH, RSPB, Fisheries Board, CNPA, SRUC, SLE, NTS	2.2(d) Support and be an active partner in partnerships such as Catchment Management Groups, Futurescapes and Strathspey Wetlands and Waders Initiative
Increasing and protecting wetland habitats	2.3 Create new wetland areas	SEPA, RSPB, CMPs	2.3(a) Identify potential new wetland sites or sites now lost that can be restored
		CNPA, LA's	2.3(b) Create wetland and sustainable urban drainage schemes, as mitigation or compensation work
		SEPA	2.3(c) Encourage and fund opportunities for improving wetland areas and restoring areas lost to historic drainage
	2.4 Protect existing wetland areas	CNPA, LA's	2.4(a) Protect wetland sites from development pressure, hydrological and management change
	2.5 Demonstrate sustainable flood management via the restoration of a natural flooding regime	CMPs, RSPB, LA's, NTS	2.5(a) Reinstate/naturalise new sections of previously modified burns
		CMPs, RSPB, LA's	2.5(b) Ensure that coarse woody debris in burns is maintained and reinstated where it will improve river diversity
		SEPA	2.5(c) Identify where woodland management can be used as part of natural flood management
		CMP's, SEPA, LA's	2.5(d) Develop Sustainable Flood Management demonstration projects and promote the benefits of such work to communities downstream
		RSPB, CMP's	2.5(e) Develop and trial innovative floodplain restoration projects, taking account of designated features and potential pollution risks

AREA OF WORK	ACTION	KEY PARTNERS	WHAT
Maintain status and increase area of freshwater habitat.	2.6 Continue to support river management to maintain and improve good ecological status of all water bodies	SEPA	2.6(a) Improve water bodies so that they meet the SEPA description of 'good ecological status'
		SEPA	2.6(b) Explore potential and initiate trials for woodland management to help reduce runoff, soil erosion, and sediment delivery from agricultural land
		CNPA, SEPA, SNH, Fisheries Trusts, LA's	2.6(c) Ensure that in-stream developments and abstractions do not impact on 'good ecological status' and important species
	2.7 Create new freshwater habitats	PCT, ARG UK	2.7(a) Extend the 'Create a million ponds' project into the National Park
		CNPA, SRUC	2.7(b) Encourage pond creation as part of Farm Visits Project



KEY SPECIES FOR FOCUSED ACTION		
2.8 Lapwing <i>Vanellus vanellus</i>	RSPB	2.8(a) Continue to monitor populations and investigate reasons for decline
	RSPB, CNPA, SAC, NFUS	2.8(b) Provide advice and training to land managers and agricultural agents on appropriate grazing and land management for breeding lapwing
2.9 Scarlet splash fungus <i>Cytidia salicina</i>	local fungus groups, RSPB, CNPA	2.9(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	Fisheries Trusts, CMPs, SRUC	2.9(b) Provide site-specific habitat management advice to individual land managers
2.10 Northern damselfly <i>Coenagrion hastulatum</i>	BDS, Buglife, CNPA	2.10(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	RSPB, SNH, FCS, BDS, SRUC	2.10(b) Maintain sympathetic management practices at known sites and enhance where necessary
	FCS, RSPB, Froglife, PCT, ARG UK	2.10(c) Create new ponds within 1km of known breeding sites
2.11 Northern silver-stiletto fly <i>Spiriverpa lunulata</i>	CNPA, SEPA, Buglife	2.11(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	Buglife, Fishery Trusts, CMPs, SEPA, SRUC	2.11(b) Provide site-specific habitat management advice to individual land managers
	SEPA, CNPA	2.11(c) Take account of the requirements of this species in response to applications for flood prevention works, water abstraction, or sand/gravel extraction from rivers

KEY SPECIES FOR FOCUSED ACTION		
2.12 Freshwater pearl mussel <i>Margaritifera margaritifera</i>	SNH, PAWS, RAFTS, Fishery Trusts, LIFE+ project	2.12(a) Continue to raise awareness of the species' protected status and the impacts of wildlife crime
	SNH	2.12(b) Monitor reintroduction sites and augment populations if necessary
	SEPA, CMPs	2.12(c) Through CMP and RBMP processes, initiate action to reduce erosion and limit the sediment input to water courses
	SNH, Fisheries Trusts, SEPA	2.12(d) Research and promote best practice control methods for Ranunculus species
2.13 Northern February red stonefly <i>Brachyptera putata</i>	CNPA	2.12(e) Survey the River Avon to determine if there are suitable sites for a reintroduction project
	Buglife, Fishery Trusts, SEPA	2.13(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	Buglife, Fisheries Trusts, SRUC, CMPs	2.13(b) Provide site-specific habitat management advice to individual land managers
	SEPA, CNPA	2.13(c) Take account of this species in response to applications on riparian planting, river engineering, waste water discharge consents and sand/gravel extraction

ECOSYSTEM ENGINEERS

Beavers are well known for their ability to influence their surrounding landscape, introducing greater variety into watercourses by adapting small streams and ditches into broader, deeper watercourses and ponds through damming. This is beneficial for a range of plants, invertebrates, fish, amphibians, birds, and mammals. Beavers 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. In addition, a population is now established on the River Tay catchment.

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

ACTION

Further explore the potential for, and the implications of, either a trial or full reintroduction of Eurasian Beaver *Castor fiber* in river catchments in the Cairngorms National Park.



HIGH NATURE VALUE (HNV) FARMING

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

ACTION

Support HNV Farming and the mixed farming system of grasslands (inbye, rushy pasture, hay and silage), wetlands and arable cropping.



ANCIENT WETLAND DANCERS

The common crane is one of the most ancient bird species on Earth and 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 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 crane, with its enchanting trumpeting call, 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 for Common Crane *Grus grus*.

4.3 OTHER HABITATS

Montane and moorland

The Cairngorms are widely considered to be one of the most spectacular mountain areas in Britain. They are recognised nationally and internationally for the quality of their 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 regularly promote responsible behaviour as per the rights and responsibilities outlined in the Scottish Outdoor Access Code.

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 with dwarf shrub vegetation above the tree line. The majority of these communities result from human activities: woodland clearance, the prevention of natural tree regeneration by burning and grazing, and 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. As moorland covers approximately half of the National Park, this maintenance of this cultural landscape for hunting has dramatic effects not just on the biodiversity of the Park, but also on the economy and the social fabric.

Blanket bog is extensive across the National Park, which supports the highest tracts of montane bog in Britain. It is the second most extensive habitat type, after upland heath, with which it often occurs 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 forms 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 fundamental to bringing designated upland sites into favourable condition.

Montane 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 (usually dwarf willows, juniper and birches), 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, montane scrub 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 grows at 550 to 650 metres. This and other fragments in the National Park offer some of the best opportunities to demonstrate landscape-scale restoration of the UK's rarest and most threatened of native habitat types.

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, and are also important for species that particularly use edge habitats.

Overgrazing and burning is a significant threat to the integrity of montane and moorland habitats and species. Sustainable deer management impacts on many of the actions and targets. Deer Management Groups will be key partners in many cases.

Grassland

Generally, the farmland and grassland habitats in the Cairngorms have been managed in a less intensive manner than similar areas elsewhere in the UK. 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. 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 with Calaminarian grassland pockets on natural serpentine debris.

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

TARGETS						
INDICATOR	MILESTONES (Cumulative)					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
Area of new montane scrub (ha)		50	200		300	HB, FCS
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	65			70		SNH
By 2018 there will be no decrease in the populations of key species						as per specific actions

AREA OF WORK	ACTION	KEY PARTNERS	WHAT
Enhancing the quality of moorland and montane habitats	3.1 Restore and enhance blanket bog habitats	SNH, SLE, CDAG	3.1(a) Promote peatland restoration, identify sites and restore habitat, including areas with historic moorland drains
		SNH, SLE, SGA, BASC, NTS	3.1(b) Promote the adoption of, and adherence to, the Muirburn Code and the importance of avoiding moorland drainage
		SNH, SLE, CDAG	3.1(c) Showcase examples of best practice moorland management
		CNPA, SNH	3.1(d) Source climate change/carbon funding to support restoration
	3.2 Montane scrub	FCS, CNPA, SNH, HB, RSPB, CDAG, NTS	3.2(a) Establish a landscape-scale montane scrub project, taking account of designated sites and features
		SNH, CNPA, SLE, CDAG, NTS	3.2(b) Promote and support the creation and restoration of montane scrub in suitable areas
	3.3 Restore the full community of raptor species	SLE, SGA	3.3(a) Trial innovative techniques to increase raptor populations
		Police Service, SLE, SGA, BASC	3.3(b) Raise awareness and understanding, provide advice and training on wildlife legislation
		Police service	3.3(c) Monitor wildlife crime in the National Park
		CNPA, SNH, SLE, SGA, RSPB	3.3(d) Support collaboration to reduce conflicts in species and wildlife management

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AREA OF WORK	ACTION	KEY PARTNERS	WHAT
Enhancing Identifying and protecting important sites	3.4 Identify key moorland, montane and grassland sites for biodiversity	NTS, BCS, RSPB, CNPA	3.4(a) Audit and map Arctostaphylos heath
		SNH, Plantlife	3.4(b) Audit and assess the condition of Calaminarian grasslands
		RSPB, CNPA, SRUC	3.4(c) Research the importance of uplands to wader species, particularly curlew
		BCS, Buglife	3.4(d) Initiate research on rare upland invertebrates, with a focus on Diptera, Lepidoptera and Beetle species
		Plantlife, CNPA	3.4(e) Audit, assess and map key grassland sites
	3.5 Encourage and support management that conserves important montane, moorland and grassland sites	CNPA, SNH, CDAG, SLE, SRUC	3.5(a) Provide advice and guidance on favourable grazing and burning regimes on important sites for montane, moorland and grassland biodiversity
		NTS, SRUC	3.5(b) Conduct a feasibility study for an on-demand, roving livestock herd/flock to encourage the retention of open areas



KEY SPECIES FOR FOCUSED ACTION		
3.6 Golden eagle <i>Aquila chrysaetos</i>	RSPB, CNPA, HFW, SNH	3.6(a) Continue and expand Raptor Track project to gather data, raise awareness and understanding, and provide advice and guidance for land managers
	SLE, SGA, SNH	3.6(b) Work with moorland managers to manage mountain hare populations for the benefit of golden eagle
	SGA, SLE, CDAG, SNH	3.6(c) Leave deer carcasses or remains out on the hill
3.7 Alpine blue sow thistle <i>Cicerbita alpina</i>	RBGE, CRPP, BSBI	3.7(a) Find out more about status and requirements via surveys, monitoring and research (specifically to identify constraints on seed production) to inform land management practices
	CRPP, SNH	3.7(b) Provide site-specific habitat management advice to individual land managers
	RBGE, CRPP, SNH	3.7(c) Reinforce current populations and introduce (or reintroduce) the species at new sites
3.8 Tufted saxifrage <i>Saxifraga cespitosa</i>	RBGE, CRPP, Plantlife	3.8(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	CRPP	3.8(b) Provide site-specific habitat management advice to individual land managers
	RBGE, CRPP, Plantlife	3.8(c) If appropriate, collect seed and grow plants ex-situ to provide stock for reinforcing existing population and creating new populations at historic sites

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KEY SPECIES FOR FOCUSED ACTION		
3.9 Powdered sunshine lichen <i>Vulpicida pinastri</i>	CRRP, BSBI, BLS	3.9(a) Identify and monitor key areas, search for new sites and identify opportunities for translocation
	FCS, RSPB, NTS, Plantlife	3.9(b) Enhance and expand areas of juniper scrub
	CRRP, Plantlife	3.9(c) Provide site-specific habitat management advice to individual land managers
3.10 Small dark yellow underwing <i>Anarta cordigera</i>	BCS	3.10(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	BCS, CNPA, SLE	3.10(b) Establish demonstration projects and share best practice
3.11 Mining bee <i>Andrena marginata</i>	Hymettus, Buglife	3.11(a) Find out more about status and requirements via surveys, monitoring and research to inform land management practices
	Hymettus, SRUC, CNPA	3.11(b) Provide site-specific habitat management advice to individual land managers
3.12 Violet oil beetle <i>Meloe violaceus</i>	Buglife	3.12(a) Find out more about status and requirements via surveys, monitoring and research (particularly regarding the host solitary bee species) to inform land management practices
	Buglife, Rangers	3.12(b) Develop identification skills and identify potential habitat through work with volunteers
	Buglife, SRUC, Hymettus	3.12(c) Provide site-specific habitat management advice to individual land managers

BIRDS OF THE BUSH

Ring ouzels are in severe decline in the UK (over 50 per cent population loss in the last 25 years) and have experienced a very marked contraction in range. In Scotland, they are generally found in open heather moorland. In Scandinavia the same subspecies breeds in a mosaic of montane scrub with patches of grass and rocks, a common habitat that supports a rich biodiversity.

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 centuries of management with grazing and fire. This natural transition zone is, for most people, 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.

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

ACTION

Create montane and juniper scrub to help support species like ring ouzel *Turdus torquatus*



UNDERNEATH OUR FEET

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. While the fungi only reveal themselves briefly each year, when the mushrooms appear like the tips of icebergs, the mycelia are vital parts of 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 management needs of Crimson waxcap *Hygrocybe punicea*.



HARE TODAY, GONE TOMORROW?

The iconic Scottish mountain hare, 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. Populations of mountain hares can fluctuate dramatically, making it very difficult to assess their conservation status.

Mountain hares are widely regarded as tick vectors and are controlled on grouse moors throughout the National Park. It is important that we monitor hare numbers to ensure their status as one of our most loved and distinctive montane species continues.

ACTION

Determine current status and distribution, and monitor populations of Scottish mountain hare *Lepus timidus*.

4.4 INVOLVING PEOPLE

The National Park is an attractive place: around 17,000 people permanently live here and 1.3 million people visit every year. The relationships people have with the landscapes in which they live, work and recreate 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 developing understanding and getting more involved with our natural heritage and the ways 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 the outdoors, 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 managed in the catchment upstream; food resources depend on clean water and productive soils; and the carbon released as a result of our activities affects 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. Paid and un-paid researchers, recorders and enthusiasts already do a huge amount of good work. We would like to see this supported and developed, complementing a wide range of opportunities for people to contribute.

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

Citizen science

Within the UK, there is a long and rich tradition of scientific discovery by unpaid volunteers 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 focused 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
- Naturalists

And in communicating the following messages:

- The Cairngorms National Park is an outstanding place for biodiversity. It is nationally and internationally significant and 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 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 real and positive differences 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)					KEY MONITORING PARTNER
	2014	2015	2016	2017	2018	
Number of volunteer days per year spent caring for nature in the National Park	1500		2000		3000	CNPA, regional volunteer co-ordinators, ranger services
Number of communities directly involved with the management of their local natural heritage	1	2	4	6	8	CNPA, LA's, CDO

AREA OF WORK	ACTION	KEY PARTNERS	WHAT
Inspiring and engaging	4.1 Create, support and celebrate a network of ambassadors	CNPA	4.1(a) Develop and implement a stakeholder engagement plan
		CNPA	4.1(b) Produce and manage a communications toolkit with supporting resources
		CBP	4.1(c) Develop and roll-out 'Make it Yours' - a programme of training and support for NP based businesses
		CNPA, SLE, CBP	4.1(d) Host annual awards ceremony championing positive work
		CNPA, FCS, SNH, SLE, RSPB, NFUS, NTS	4.1(e) Deliver biennial Celebrating Cairngorms Nature partnership event
	4.2 Communicate the significance of, the benefits derived from and the work being done to protect and enhance nature in CNP	CNPA	4.2(a) Develop and maintain a Cairngorms Nature website and social media
		SLE, ranger services	4.2(b) Improve public understanding and perception of estates and of what estate management can deliver in terms of biodiversity
		CNPA, RSPB, SNH, FCS, NTS, SLE, BCS, DFT, ranger services	4.2(c) Joint-brand and position activities and projects relevant to Cairngorms Nature
	4.3 Further develop work with young people	CNPA, RSPB, SNH, WTS, FCS, LA's, NTS	4.3(a) Work with schools to actively involve young people in experiencing and conserving the biodiversity of the National Park
		JMA, Junior Rangers, Ranger services, NTS	4.3(b) Include Cairngorms Nature information in programmes of activity

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AREA OF WORK	ACTION	KEY PARTNERS	WHAT
	4.4 Recognise, support and strengthen the role of key visitor attractions and wildlife tourism operators	CNPA, NTS	4.3(c) Promote and support skills development within volunteering opportunities
		CNPA, CBP	4.4(a) Provide training, knowledge and support on the biodiversity of the Park
		CNPA, CBP, WS	4.4(b) Produce a code of conduct for responsible wildlife watching
		SNH	4.4(c) Promote NNR's as flagships for finding out about Cairngorms nature
Providing opportunities	4.5 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, LA's, NTS	4.5(a) Work with communities to assess the significance and desired benefits from local natural heritage assets
		CNPA, CDO, FCS, RSPB, LA's, community planning officers	4.5(b) Facilitate communities to develop management plans for local wildlife sites with other stakeholders including land managers and estate workers
		CNPA, CDO, Land Managers, RSPB, NTS	4.5(c) Facilitate awareness raising, communication and consultation on land management plans between communities and local land managers
		CNPA, CDO, LA's, NTS, community planning officers	4.5(d) Work with communities on improving biodiversity within settlements and new developments

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AREA OF WORK	ACTION	KEY PARTNERS	WHAT
	4.6 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, SNH, Plantlife	4.6(a) Create volunteering hubs and co-ordinate promotion and access to volunteering opportunities and campaigns
		CDO, Rangers, Local Record Centres, Plantlife	4.6(b) Highlight and encourage volunteer participation in biological recording schemes
		CNPA, SNH, Local record centres	4.6(c) Support local and regional naturalist groups and biological recording schemes with training and advice
		CNPA, CBP	4.6(d) Investigate and pursue options for a visitor payback scheme that includes options for caring for nature
		CNPA, FCS, RSPB, NTS, SNH, Plantlife	4.6(e) 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 further 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 and volunteers were a fundamental part of that success, monitoring, reporting mink activity and checking for footprints on the mink rafts.

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

ARK UK	Amphibian and Reptile Groups UK	JMA	John Muir Award
AWT	Anagach Wood Trust	LA	Local Authority
BAP	Biodiversity Action Plan	NFUS	National Farmers Union Scotland
BASC	British Association for Shooting and Conservation	NTS	National Trust for Scotland
BBS	British Bryological Society	NFE	National Forest Estate
BCS	Butterfly Conservation Scotland	NNR	National Nature Reserve
BDS	British Dragonfly Society	PAWS	Plantations on Ancient Woodland Sites
BLS	British Lichen Society	PAWS	Partnership for action Against Wildlife Crime Scotland
BSBI	Botanical Society for the British Isles	PCT	Pond Conservation Trust
CBP	Cairngorms Business Partnership	RAFTS	Rivers And Fisheries Trusts Scotland
CDAG	Cairngorms Deer Advisory Group	RAMSAR	Convention on Wetlands of international importance
CDO	Community Development Officer	RBGE	Royal Botanic Garden Edinburgh
CEH	Centre for Ecology & Hydrology	RBMP	River Basin Management Plan
CLBAP	Cairngorms Local Biodiversity Action Plan	RSPB	Royal Society for the Protection of Birds
CMP	Catchment Management Partnership	RZSS	Royal Zoological Society Scotland
CNAP	Cairngorms Nature Action Plan	SAC	Special Area of Conservation
CNPA	Cairngorms National Park Authority	SEPA	Scottish Environment Protection Agency
CONFOR	Confor: promoting forestry and wood	SG	Scottish Government
CRPP	Cairngorms Rare Plants Project	SGA	Scottish Gamekeepers Association
DFT	Dee Fisheries Trust	SLE	Scottish Land and Estates
EU	European Union	SNH	Scottish Natural Heritage
FCS	Forestry Commission Scotland	SPA	Special Protected Area
FR	Forest Research	SRDP	Scotland Rural Development Programme
GWCT	Game and Wildlife Conservation Trust	SRUC	Scotland's Rural College
HAG	Highland Aspen Group	SSSI	Site of Special Scientific Interest
HB	Highland Birchwoods	SWWI	Strathspey Wetlands and Waders Initiative
HFW	Highland Foundation for Wildlife	UHI	University of the Highlands & Islands
HNV	High Nature Value	WES	Wildlife Estates Scotland
ICF	Institute of Chartered Foresters	WFD	Water Framework Directive
JHI	James Hutton Institute	WS	Wild Scotland
		WTS	Woodland Trust Scotland
		UKBAP	United Kingdom Biodiversity Action Plan
		UKWAS	United Kingdom Woodland Assurance Scheme

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Cairngorms National Park Authority
14 The Square
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Email: enquiries@cairngorms.co.uk
Tel: 01479 873535
Fax: 01479 873527

www.cairngorms.co.uk

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