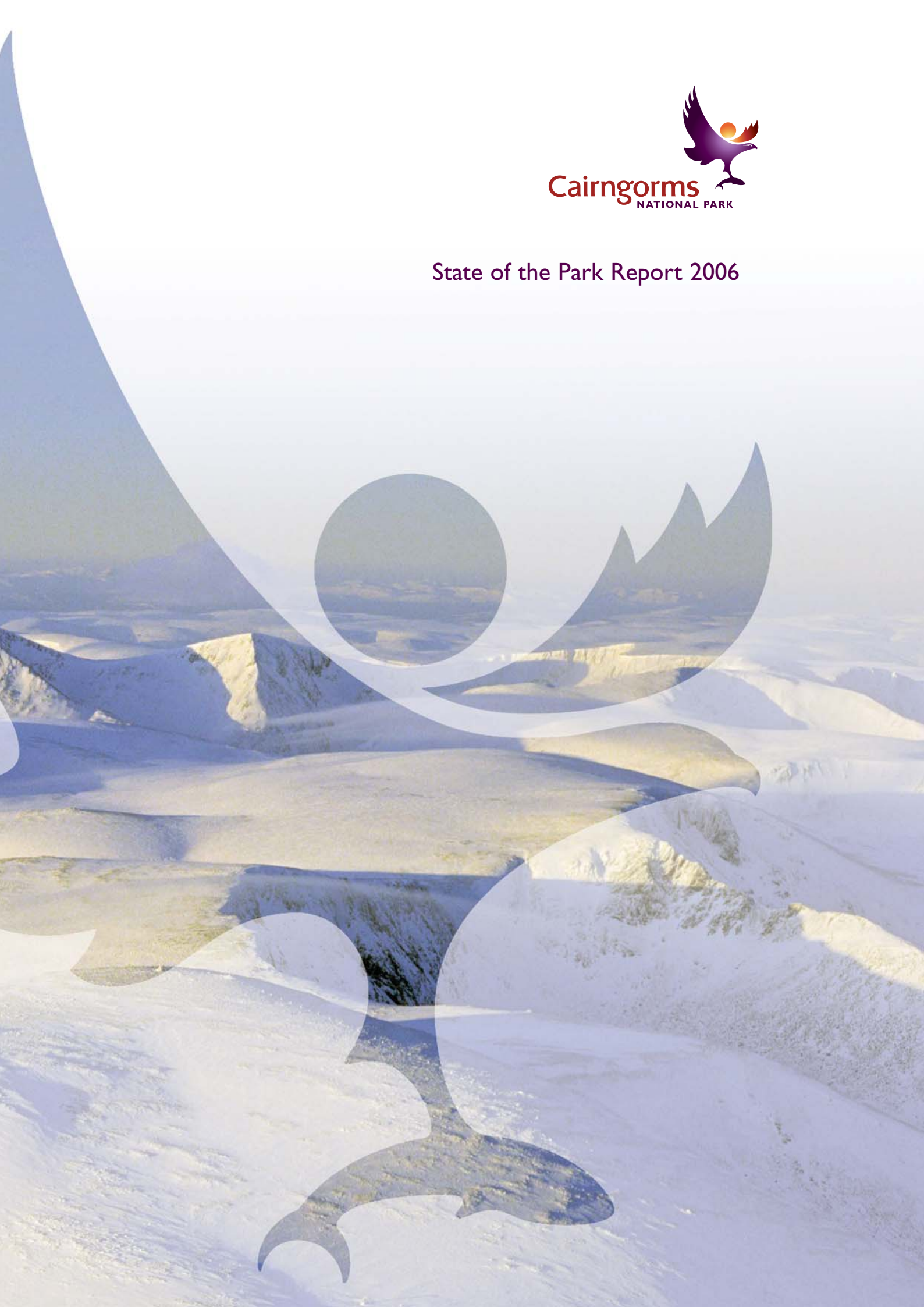




State of the Park Report 2006



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Front cover photo: David Gowans.

FOREWORD

State of the Park Report:

Sound planning is based on good evidence, identifying what we know, and also what we do not yet understand. This publication brings together for the first time all our current knowledge about the Cairngorms National Park and has informed development of our first National Park Plan. It covers all aspects of life in the Park, from its habitats and species, through to the characteristics of local communities, the local economy and outdoor recreation.

This is an important publication, not only for the Cairngorms National Park Authority as we seek to co-ordinate the management of the Park for the nation, but also for anyone with an interest in the Park. It is a first step in gaining a more complete picture of just why this part of Scotland is so important.

From this basis, we can now begin to fill some of the gaps in our knowledge that it has highlighted; so that when we come to review our Park Plan in five years, we can do so on the basis of an increased understanding of the Park.



Andrew Thin
Convener
Cairngorms National Park Authority
March 2006



Aithisg air Cor na Pàirce:

Tha deagh phlanadh stèidhichte air deagh fhianais, a' comharrachadh nan rudan is aithne dhuinn, agus cuideachd nan rudan nach eil sinn fhathast a' tuigsinn. Tha am foillseachadh seo a' toirt còmhla airson a' chiad uair gach fiosrachadh a tha againn mu Phàirc Nàiseanta a' Mhonaidh Ruaidh a chaidh a chleachdadh ann an dealbh a' chiad Phlana againn airson na Pàirce Nàiseanta. Tha e a' gabhail a-steach gach nì a bhuineas do bheatha sa Phàirc, bho a h-àrainnean agus gnèithean, gu feartan nan coimhearsnachdan ionadail, an eaconamaidh ionadail agus cur-seachadan a-muigh.

'S e foillseachadh cudromach a tha an seo, chan ann a-mhàin do Ùghdarras Pàirc Nàiseanta a' Mhonaidh Ruaidh nuair a tha sinn a' feuchainn ri rianachd na Pàirce a cho-òrdanachadh don dùthaich, ach cuideachd do dhuine sam bith le ùidh sa Phàirc. 'S e a' chiad cheum ann a bhith a' faighinn dealbh nas coileanta air dìreach carson a tha an ceàrn seo de dh'Alba cho cudromach.

Bhon stèidh seo, faodaidh sinn tòiseachadh a' lìonadh cuid de na beàrnan a tha e air a chomharrachadh; gus nuair a bhios sinn a' dèanamh ath-sgrùdadh air Plana na Pàirce againn ann an còig bliadhna, gum bi sinn ga dhèanamh le barrachd tuigse mun Phàirc.

Andrew Thin
Neach-gairm
Ùghdarras Pàirc Nàiseanta a' Mhonaidh Ruaidh
Am Màrt 2006

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I. INTRODUCTION





I. INTRODUCTION

I.1 The Cairngorms National Park

The Cairngorms National Park is the second National Park to be designated in Scotland. It was established in 2003, following the earlier designation of Loch Lomond and the Trossachs in 2002. The new legislation, the National Parks (Scotland) Act 2000, creates National Parks that are tailored to Scottish circumstances and distinct from National Parks elsewhere.

Areas designated as a National Park in Scotland must satisfy three conditions:

- That the area is of outstanding national importance because of its natural heritage, or the combination of its natural and cultural heritage;
- That the area has a distinctive character and a coherent identity;
- That designating the area as a National Park will meet the special needs of the area.

The National Parks (Scotland) Act 2000 also sets out four aims for Scottish National Parks:

- To conserve and enhance the natural and cultural heritage of the area;
- To promote the sustainable use of natural resources of the area;
- To promote understanding and enjoyment (including enjoyment in the form of recreation) of the special qualities of the area by the public;
- To promote the sustainable social and economic development of the area's communities.

The Park is a national asset for Scotland and the UK. It is an area that has long been considered a special place for its natural and cultural heritage, as a place to live, work and visit. The Park lies in the central highlands of Scotland and is centred on the large massif of the Cairngorm Mountains, a unique area of high ground in the UK.

The Park is easily accessible from many areas of Scotland and has good communications from the major centres of population surrounding the Park, including Inverness, Aberdeen, Dundee and Perth.

I.2 The State of the Park Report

This is the first State of the Park Report prepared for the Cairngorms National Park. Its purpose is to draw together existing information on the current state of the resources in the Park. It provides a baseline to inform development of the Park Plan and other work within the Park. It will also provide a baseline for future monitoring of change in the Park.

The scope of information about resources in the Park is very wide. This report aims to provide information on the resources most relevant to the aims of the Park (see section 1.1). The report is therefore divided into four chapters:

- **Natural Resources;**
- **Cultural Resources;**
- **Visitor and Recreation Resources;**
- **Socio-Economic Resources.**

Each chapter is supported by a technical annex which presents a more detailed review of the information. While the report chapters provide an overview for the general reader, those with specialist interest may wish to refer to the annexes. The annexes are available in electronic form and can be downloaded from www.cairngorms.co.uk or supplied by the Cairngorms National Park Authority on request.

Within each chapter the report identifies, where possible, the scope of the resource in the Cairngorms; its relative importance in local, national or international contexts; its current condition; and relevant trends and observations.

There are a number of themes that cut across the division of the four chapters, reflecting the links between the resources of the Park. For example, landscape is both a natural and cultural resource, and underpins much of the attraction to visitors, in turn supporting much of the tourism industry and local economy. The relevant aspects of each resource are therefore covered in the appropriate section, with cross-reference to others.

1.3 How the State of the Park Report has been prepared

The report has been prepared by the Cairngorms National Park Authority based on research carried out by a consortium of consultants led by the Rural Development Company, in conjunction with Fraser Associates and Northern Ecological Services. The aim of their research was to draw together existing sources of information about the Park and to highlight areas where there is currently a lack of information. The technical annexes of the

cultural, visitor and recreation and socio-economic resources present their research in full.

The technical annex of the natural resources chapter has been written by Scottish Natural Heritage, drawing on a review of research in the Cairngorms over recent years. This work is also published separately by The Stationery Office as a book called 'The Nature of the Cairngorms: Diversity in a Changing Environment'.

1.4 Consultation on the Draft State of the Park Report

As this is the first State of the Park Report for the Cairngorms National Park, it is important to ensure that the information presented is as full and accurate as possible. Therefore the report was prepared as a draft and circulated for comment from July to September 2005. The draft report was publicly available to everyone, and comments were actively sought from



I. INTRODUCTION...cont

organisations and individuals with particular expertise or information. The responses to the draft helped add to the report and finalise it for publication. A list of public bodies consulted at this stage is given in Appendix I.

I.5 Limitations of the Report

Although there is a wealth of data on some aspects of the Park, others are less well researched or documented. The complex administrative boundaries of different organisations also present a significant challenge to collating data tailored to the Park area. The new geography of the Park boundary does not match the boundaries of existing data sets, many of which are held by local authority area or other regional divides.

Where possible, data has been manipulated to match the Park area as closely as possible. In some cases, however, it is not currently possible

to identify statistics or information relating to the whole Park area. Part of the purpose of the report is to identify these limitations, which can be addressed through a future programme of research and data collation.

The Cairngorms National Park Authority will therefore work with others to identify and address priorities for research in the next five years. These will help to provide a fuller picture of the state of the Park. Some of the main information gaps are identified in each section.

I.6 Review and Monitoring of the State of the Park

This first State of the Park Report provides a basis on which to build knowledge of the resources in the Park over the years ahead. The State of the Park Report will be reviewed and updated on a five-yearly basis, thereby helping to inform the five-yearly review of the Park Plan.



2. NATURAL RESOURCES



Photo: Neil McIntyre.

2. NATURAL RESOURCES

2.1 Introduction

This chapter presents information on the state of the natural heritage of the National Park. This is an area in which there has been much work done and, in comparison to some areas, a relatively large amount of data is available. However, there remain areas and subjects in which little research has been carried out, which are also highlighted here.

This chapter is based largely on the natural heritage review carried out by Scottish Natural Heritage, drawing on research in the Cairngorms over the last decade. It seeks to bring together the most accurate and recent information. The technical annex accompanying this chapter has been written by Scottish Natural Heritage and will also be published separately by The Stationary Office as 'The Nature of the Cairngorms: Diversity in a Changing Environment'.

Throughout this chapter, information is provided where possible at the scale of the National Park boundary. However, much of the information collected on the natural heritage has covered the wider Cairngorms area, extending beyond the boundary of the Park. Where this is the only data available, it is provided here with reference to its scale beyond the Park boundary, as it is the best indication of the state of the resources in the Park.

2.2 The Area

The distinctive natural heritage of the Cairngorms is underpinned by some key characteristics that determine the environment. In particular, conditions are shaped by the climate, geology and geomorphology, which shape the ground and determine the composition of soils. The landscape, partly the product of these basic conditions and partly the product of human influence and management, sets a broad context for the habitats, species and our own understanding and enjoyment of the area.

2.2.1 Geology, Landforms and Soils

The Cairngorms area contains internationally and nationally important geology and landforms. These provide an insight into the long-term processes of landscape evolution and climate change that have shaped the area we have come to know and value today. The rich geological record of the Cairngorms is recognised by its inclusion in the UK Tentative List of World Heritage sites and by 30 sites listed in the Geological Conservation Review. This identifies sites of importance that are representative of key earth science features in Britain.

Formation of the Cairngorms

The story of the Cairngorms that we know today begins over 400 million years ago when two ancient continents collided and pushed sediments upwards into a huge mountain chain that is now completely eroded away. The continental collisions also melted rock deep in the earth's crust, which cooled and solidified several kilometres below the surface, forming igneous intrusions (granite). These gradually moved towards the surface, and the overlying softer rocks were weathered away to expose the granite. There are many geological faults in the area, but few, if any, appear active today.



Photo: David Gowans.

The current form of the Cairngorms results from erosion about 50 million years ago. Subsequent weathering and erosion removed weaker rock and formed the major glens and straths in their current locations. Much of the landscape was therefore in place before the ice age period, about 2.5 million years ago. Many glacial episodes then followed, separated by short inter-glacials.

The last ice sheet was in retreat 15,000 years ago when the climate warmed, interrupted by a short, cold episode between about 12,700 and 11,500 years ago (the Loch Lomond Readvance). Thereafter, the climate warmed rapidly at the start of the current inter-glacial period.

Geology

The landscape of the central Cairngorms massif is the outstanding feature of international importance in the Cairngorms area. Features of national importance include occurrences of rare minerals, and sites with metamorphosed sedimentary rocks, and igneous intrusions. There are four groups of igneous intrusions and examples of each are present in the National Park.

Some rare and unusual minerals occur in the Cairngorms. Cairngorm Crystal (smoky quartz) has been found in a number of areas, including Loch Avon. The Loch Avon area is also a nationally important locality for the occurrence

of blue topaz and rare minor minerals within the granite. To the south east of Tomintoul, the Lecht Mine is a former commercial iron mine.

Landforms

The Cairngorm Mountains include a wide assemblage of landforms dating from different stages in the landscape's evolution. These include features of pre-glacial times such as the tors and deeply weathered rock on the summits in addition to features of glacial erosion. These include troughs such as Avon and Einich, corries, breached watersheds such as the Lairig Ghru and effects on drainage patterns. There are also important features of river processes including alluvial fans and meanders.

Patterns of climate change and vegetation development during the last 15,000 years are recorded in the sediments, plant remains and pollen grains preserved in loch basins and peat bogs. Such records provide an historical perspective on past environmental changes, such as the pattern of expansion and decline of the native pine forest, the spread of blanket bog, and increasing human impacts on the landscape, including acidification from atmospheric pollution over the last 100 years.

The Cairngorms area also has many landforms not formally designated. These include substantial thicknesses of deeply weathered bedrock, watershed breaches, shallow corries, large roches moutonnées, glacial and glaciofluvial deposits, small-scale meltwater channels, 'hummocky' moraines and terraces, solifluction features, ploughing boulders, postglacial slope modification and large-scale rock slope failures.



Photo: David Gowans.

2. NATURAL RESOURCES...cont

A number of recent activities and changes are known to affect the geology and geomorphology of the area including commercial afforestation and natural tree regeneration, footpath erosion, an increase in off-track vehicle use, overgrazing, river engineering for flood protection, fisheries management and local gravel extraction, debris flows, and local damage from mineral collecting.

Beyond the Cairngorms massif, there has been no systematic inventory or mapping of landforms and surface deposits or monitoring (apart from on Sites of Special Scientific Interest) of the state of geological and geomorphological features, nor of any changes arising as a result of natural processes and human activities and how the landscape is changing.

Soils

The Park contains a large area of rare, undisturbed soils. Only about 2 per cent of the land area is cultivated, with a further 4 per cent of the land under improved grassland.

Many soil properties are derived from superficial deposits and the underlying solid geology. Most glens and straths have been in-filled with sand and gravel deposits, whereas the hills are covered by a relatively thin stony layer. Where this is sufficiently thick, various types of montane soils have developed. Elsewhere, only screes and ranker soils (under 10 centimetres deep) are present.

Natural soil-forming factors have favoured three principal soil groups – podzols, (50 per cent of the soils in the Park), alpine and sub-alpine soils at high altitudes (18 per cent of the soils above about 550 metres above sea level), and peat, where conditions are wetter, the ground is poorly drained and there is a slow rate of decomposition of dead vegetation (13 per cent of the soils). Soils where the soil drainage is disrupted, or 'gleyed', form 4 per cent of the soils in the Park.

There has been no systematic national assessment of soils against established criteria. No sites in Scotland are designated for their soil characteristics, but by supporting rare habitats on existing designated sites, soils are given some indirect protection. Eight Sites of Special Scientific Interest in the Park are considered to have soils of international importance, and 12 have soils of national significance.

Trends and Observations

- There is little systematic information on current trends in the geological features, landforms and soils of the Cairngorms;
- No sites in the Park are designated for soils, and soil condition is not monitored systematically;
- Commercial afforestation and natural tree regeneration; footpath erosion; off-road vehicle use; overgrazing and peat erosion have affected soils in the Cairngorms;
- Climate change and atmospheric pollution could affect soils directly and indirectly.

Monitoring

Site Condition Monitoring is carried out in Sites of Special Scientific Interest, but this is focused on the vegetation communities rather than the geological interests. There is no existing, consistent monitoring of the state of geological features.

2.2.2 Climate

The climate of Scotland as a whole is influenced by predominantly westerly depressions alternating with less frequent settled periods. A range of factors, including topography, latitude and altitude, affects these weather systems at a more local level.

The Cairngorms massif is located at latitude 57°N, with its easterly position resulting in a climate that is less oceanic, and therefore drier, than the west of Scotland. The mountains exert a noticeable 'rain shadow' effect that reduces



the amount of rainfall on the eastern side of the country. Within the Park, due to the variations in altitude, the weather on the Cairngorms plateau is often very different from that in the straths.

Temperature

The coldest months are January and February. The lowest temperatures occur well inland, often in valleys. For instance, the average temperature in Braemar in January ranges from a maximum of 3.7° Centigrade to a minimum of -2.5° Centigrade, with a mean of 0.6° Centigrade (1931-1960). Measurements taken at the Cairngorm Chairlift (at 663 metres above sea level) between 1980 and 1998 show July and August were usually the warmest months (average minimum and maximum range from 8.1° Centigrade to 15° Centigrade).

Precipitation

In the Cairngorms annual precipitation on the summits is over 2,250 millimetres, but below 900 millimetres in the Spey and Dee valleys, although these figures vary greatly between years. Deeside is in the 'rain shadow' of the Cairngorms and therefore generally drier. Unusually, the driest month in Strathspey is recorded as February or March, but on Deeside it is July.

Precipitation which falls as rain at low levels may fall as snow over higher ground. The average annual number of days with lying snow (at least 50 per cent cover) has been estimated as 60 days on low ground in the Cairngorms and up to 200 days on the summits.

Wind

Wind direction and speed are influenced by individual weather systems, and the prevailing winds in the Cairngorms are from the south west. Gales are common on the plateau. The strongest gusts recorded annually on Cairngorm were between 177 kilometres per hour and 275 kilometres per hour (1979-1987).

Cloud and Sunshine

Cloud cover is greatest in mountainous areas. Mean daily sunshine figures reach a maximum in May or June and are at their lowest in December.

Growing Season

The Cairngorms massif is at latitude 57°N, resulting in a large difference between summer and winter day length and sunlight. The potential growing season decreases by 11-20 days for every 100 metre rise in altitude.

Frost Heave

The freezing and thawing of frost in the ground can have a significant impact on soil structure and the stability of slopes. Greater fluctuations in temperature increase the frequency of freezing and thawing of the ground.

Trends and Observations

- In Scotland, there is evidence of small climatic changes taking place between 1964 and 1993. Little equivalent data specific to the Cairngorms is available;
- A decrease in annual rainfall in the Cairngorms of around 10-15 per cent in the summer half-year and an increase of 5-10 per cent in the winter half-year (data from 1941-70 and 1961-90);
- In Scotland, a decrease in snowfall duration has been observed at 400-500 metres above sea level, but with smaller differences above 600 metres in recent years. The number of snow patches lying throughout the year has decreased significantly.

2. NATURAL RESOURCES...cont

Monitoring

The UK Meteorological Office collects data on weather from a network of land surface observation stations. It is available through The British Atmospheric Data Centre. Automatic weather stations are positioned in the Allt a'Mharcaidh catchment (575 metres above sea level, and at 750 metres since 1999), Cairngorm (at 914 metres), Cairnwell (at 933 metres), Braemar (at 339 metres) and Balmoral (at 283 metres).

The Environmental Change Network site in the Allt a' Mharcaidh catchment simultaneously records climatic, pollutant and management data and biological, physical and chemical responses.

2.2.3 Landscape

The geology, landforms and land-uses have, over time, created a diverse landscape that gives the Park a distinctive character unlike any other in Scotland. The Cairngorms landscape is valued in many ways, as an economic, social, spiritual, community, environmental and cultural resource. Landscape forms the backdrop to living and working in the area, and is a key attraction to visitors. It derives from the relationships between people and place and between past and present, and will continue to evolve in response to natural processes and the changes in the way the land is managed. The historic environment is considered in more detail in the Cultural Resources chapter.

The processes that have shaped today's landscape and how we perceive it have acted over many millions of years. They result from interactions between the physical and natural environment (geological processes, soils, climate, flora and fauna) and social and cultural factors (land-use, settlement, enclosure, human activities). Relatively recent events, since the last glaciation (10,000-11,000 years ago), have added new layers to the existing landforms and shaped what we now value in the Cairngorms.

There is an important distinction between the physical landscape of a place, which can be described relatively objectively, and the conceptual landscape value of a scene which is determined by people's feelings and perception and is therefore more subjective.

Landscape Character of the Cairngorms

Research in 1996 and 1999 identified the following landscape character types:

- Plateaux – the largest tracts of high ground in Britain, distinctive in their large-scale, smooth tops with weathered tors, corries and wildness;
- Uplands and glens – expansive and open heather-dominated hills, blanket bog and grassland, dissected by open glens and passes;
- Straths – associated with major rivers with extensive forests, farm land, floodplains and designed landscapes.

The effect of glaciation on the Cairngorms is more dramatic than anywhere else in Britain because of the high relief and sharp incision of the plateau by corries and troughs. An exceptional combination of circumstances, including altitude and climate exposing the summits to extreme wind and frost processes, has helped preserve the ancient glacial and pre-glacial landscape elements of the Cairngorms.

Landscape Character Assessment can describe the physical landscape types, but it is not able to capture the more subjective aspects of the way in which people experience and value landscape.

Landscape Experience

Despite a general desire to protect and enhance the Cairngorms, there is often a lack of information on what particular elements of today's landscape are important to visitors and residents. Recent studies have attempted to gauge attitudes to landscape, but currently there is no consistent structured approach.

Recent market research has identified the Cairngorms features or experiences that are attractive to visitors (who may have included local residents on a day out). In 2002 most of the features liked by visitors coming to the Cairngorms related in some general way to the physical and conceptual landscape of the area.

The visually attractive landscape mosaics that are characteristic of the Cairngorms are also

important for numerous animals and plants, including a quarter of the UK's most threatened species. Many important habitats for these rare species contribute greatly to the character of the Cairngorms. For example, native Scots pine trees and woodlands set against a backdrop of heather moorlands and montane grasslands are an iconic symbol of the area.

Table 2.2.3: Top 12 features most liked by visitors to the Cairngorms area

| <i>Cairngorms features identified by visitors</i> | <i>Percentage of respondents</i> |
|---|----------------------------------|
| Beautiful views and scenery/spectacular | 46% |
| The hills/wide spaces, rugged mountains | 27% |
| Peacefulness and easy-going pace of life | 25% |
| The trees and colours of the landscape | 13% |
| The wildlife, plants and animals | 11% |
| Nice walks, good hill-walking | 11% |
| Fresh, clean unspoilt area | 11% |
| Friendly people | 9% |
| Picturesque, very beautiful place | 9% |
| Lots of things/activities to do | 9% |
| Large, open spaces without seeing anyone | 7% |
| The water, lochs and waterfalls | 6% |

Source: Cairngorms National Park Visitor Survey 2004.



2. NATURAL RESOURCES...cont

Tranquillity

Many people identify qualities of tranquillity with their experience of the landscape. For example, 25 per cent of visitors identified 'peacefulness' as an attractive feature of the Cairngorms in the Cairngorms National Park Visitor Survey. The notion of tranquillity relates to places that are sufficiently far away from visual or noise intrusion to be considered unspoilt by urban influences. It is subjective and based on the emotional state and experience of the individual, occurring in landscapes at a series of different scales.

The qualities of landscape and sense of place that attract people to the Park are vulnerable to the cumulative impacts of developments, and smaller changes that individually may seem of little importance but lead to incremental change, that together pose a long-term threat to local character and perceptions of tranquillity.

Intangible qualities in remote rural areas include solitude, space, scenery, clear night skies, and sounds of nature. Such qualities are increasingly rare and important to the visitor experience in the Cairngorms.

It is becoming increasingly difficult to find areas where our view of the night sky is unaffected by illumination, but much of the National Park still provides this opportunity. Light levels are partly a function of population density and expanses of land with low population levels are some of the few remaining areas where light pollution is minimal. The Cairngorms offer opportunities for night sky viewing and experiences like watching the aurora (Northern Lights).

National Scenic Areas

There are two National Scenic Areas in the Park – the Cairngorm Mountains, and Deeside and

Lochnagar. These include the central mountain massifs and some of the main straths and glens. There are also a number of local authority landscape designations.

Trends and Observations

- Work has been carried out and is underway to restore high altitude vehicle tracks;
- Landscape research increasingly emphasises the involvement of people and qualitative methods in planning and managing landscapes;
- Pressure for new housing has increased significantly in recent years, requiring greater emphasis on landscape capacity and design.

Monitoring

Landscape monitoring is carried out at individual sites and through some natural heritage grant schemes. However, there is no consistent framework for monitoring landscape change across the Park.

2.2.4 Land-Use

With approximately 570 farm holdings covering over 70 per cent of the Cairngorms area, agriculture has a significant influence on the landscape and natural heritage of the National Park. By far the most extensive use of land is rough grazing and moorland management, which together shape much of the upland areas below the high plateaux. In the straths, livestock farming on improved grassland and some limited arable cropping are predominant.

Although many people automatically think of farms as the conventional agricultural land holding, crofting is a significant form of land-use in the west and north of the Park. There are 105 crofts in the area between Grantown and Laggan, as well as seven 'common grazings'.

Table 2.2.4a: Land-use cover in the Cairngorms

Source: Land Cover Map 2000.

| Land Use Type | Percentage Cover |
|-----------------------|------------------|
| Upland heath and bog | 44% |
| Montane area | 25% |
| Woodland | 12%* |
| Grassland | 12% |
| Enclosed Farmland | 5% |
| Built and other cover | 2% |

* More recent surveys estimate woodland cover at 17 per cent.

Much of the character of the uplands in the Park is the result of management for red grouse and red deer, two of the principal sporting species. Approximately 42 per cent of the area is covered by heather moorland, although some of the area has been lost to an expansion of rough grazing.

Woodland is also a significant land-use in the Park, covering approximately 12 per cent of the area including both semi-natural and plantation woodlands. Table 2.2.4b shows the type of woodland cover in 1988 (from Scottish Semi-Natural Woodland Inventory). Woodland cover has since expanded by 2 per cent between 1991 and 2003.

Table 2.2.4b: Woodland types in the National Park

Source: Scottish Natural Heritage 2006

| Woodland Type | | Area (Hectares) |
|---------------|---------|-----------------|
| Semi-natural | Ancient | 15,153 |
| | Total | 36,274 |
| Mixed | Ancient | 2,019 |
| | Total | 4,651 |
| Plantation | Ancient | 14,454 |
| | Total | 34,219 |
| All woodland | Ancient | 31,629 |
| | Total | 75,202 |

2. NATURAL RESOURCES...cont

A significant area of land is managed primarily for nature conservation. This includes whole landholdings managed by Non-Governmental Organisations including Royal Society for the Protection of Birds (Abernethy and Insh Marshes) and the National Trust for Scotland (Mar Lodge). Land within private ownership is also managed for nature conservation in places, including sites within agri-environment grant schemes.

There are a number of government schemes designed to encourage land managers to protect and enhance the natural heritage, including the Cairngorm Straths Environmentally Sensitive Area, now closed, and the more recent Rural Stewardship Scheme. The Environmentally Sensitive Area scheme attracted 90 per cent uptake by managers before it closed to new entrants, and by 2003 there were 43 Rural



Stewardship Schemes covering 63,000 hectares within the Cairngorms. These are two of the main mechanisms through which land managers can care for the habitats and species detailed in this chapter:

More information about the current state of the agricultural sector is contained in the Socio-Economic Resources chapter and the habitats associated with farmland, moorland and woodland are discussed in later sections of this chapter:

Trends and Observations

- Woodland cover has expanded across the Cairngorms area from 11 per cent in 1946 to 17 per cent in 1988;
- Blanket mire decreased between 1940 and 1980, largely through drainage and tree planting;
- Heather moorland decreased between 1940 and 1980.

Monitoring

The Macaulay Land Use Research Institute monitor and map land cover change. Some data has also been available through the National Countryside Monitoring Scheme.

2.2.5 Nature Conservation Designations

Thirty-nine per cent of the Park area is designated for nature conservation, summarised in the following table:

Table 2.2.5a: Number of designated nature conservation sites

| <i>Designation</i> | <i>Number of Sites</i> |
|--------------------------------------|------------------------|
| Special Area of Conservation | 19 |
| Special Protection Area | 12 |
| Ramsar Sites | 3 |
| Sites of Special Scientific Interest | 46 |
| National Nature Reserve | 6 |
| Geological Conservation Review | 30 |

Source: Scottish Natural Heritage 2006

European and International Designations

There are 19 Special Areas of Conservation in the Park and 12 Special Protection Areas. Together these sites form the Natura 2000 network which derives from the 1992 European Council Habitats and Species Directive and the 1979 European Council Wild Birds Directive. Special Areas of Conservation are sites that best represent the

range and variety of habitats and non-bird species in the European Union. Special Protection Areas represent the most important habitats for rare and migratory birds within the European Union.

There are also three Ramsar Sites, a designation of globally important wetlands classified under the Ramsar Convention.

Table 2.2.5b: International designated sites

| <i>Special Areas of Conservation</i> | <i>Special Protection Areas</i> | <i>Ramsar Sites</i> |
|--------------------------------------|---------------------------------|---------------------------|
| Ballochbuie | Abernethy Forest | Cairngorm Lochs |
| Cairngorms | Ballochbuie | Muir of Dinnet |
| Coyles of Muick | Craigmore Wood | River Spey – Insh Marshes |
| Creag nan Gamhainn | Cairngorms | |
| Dinnet Oakwood | Loch Vaa | |
| Green Hill of Strathdon | Lochnagar | |
| Insh Marshes | Muir of Dinnet | |
| Ladder Hills | River Spey – Insh Marshes | |
| Morrone Birkwood | Glen Tanar | |
| Morven and Mullachdubh | Caenlochan | |
| Muir of Dinnet | Creag Meagaidh | |
| Glen Tanar | Drumochter Hills | |
| Caenlochan | Kinveachy Forest | |
| Creag Meagaidh | | |
| Drumochter Hills | | |
| Kinveachy Forest | | |
| Monadliath | | |
| River South Esk | | |
| River Spey | | |

Source: Scottish Natural Heritage 2006

European Protected Species

The following species are protected under the

Conservation (Natural Habitats, &c.) Regulations 1994 accompanying the Habitats Directive:

Table 2.2.5c: European protected species

| <i>Common Name</i> | <i>Scientific Name</i> |
|-------------------------------|--------------------------|
| Horseshoe Bats (all species) | Rhinolophidae |
| Typical Bats (all species) | Vespertilionidae |
| Wild Cat | Felis silvestris |
| Dormouse | Muscardinus avellanarius |
| Great Crested (or Warty) Newt | Triturus cristatus |
| Common Otter | Lutra lutra |

Source: Scottish Natural Heritage 2006

2. NATURAL RESOURCES...cont

Statutory National Designations

The Park has 46 Sites of Special Scientific Interest which are representative of the best examples of the UK's flora, fauna, geological or physiographical features. It also includes six National Nature Reserves. These are examples of the most important natural and semi-natural ecosystems in the UK and are managed for conservation, scientific study and public understanding.

Non-Statutory National Designations

The Park contains 30 Geological Conservation Review Sites. These are identified by Scottish Natural Heritage as being of national or international importance due to their geology, paleontology, mineralogy or geomorphology.

There is one Biogenetic Reserve at Muir of Dinnet. This is part of a European network of 'living laboratories', representative of various types of natural environment found in Europe.

2.2.6 Information Gaps – The Area

- Effects of climate change in the Park;
- Landscape change over time;
- Condition of geological features of interest;
- Condition of soils.

2.3 Habitats

2.3.1 Introduction

The Cairngorms has an important and unique habitat resource, whether viewed from a local, national or international perspective. There are four broad habitats in the Cairngorms:

- **Woodland;**
- **Wetland and Water;**
- **Farmland and Grassland;**
- **Upland and Mountain.**

Within these broad categories there are many different types of individual habitat. A large proportion of these habitats is listed as particularly important under national and international conservation designations. For some habitats, such as montane and native pinewoods, the Cairngorms holds a large share of the total UK resource. More than a quarter of the UK's most threatened, declining and rare species find a home in these habitats and for many, the Cairngorms holds a significant proportion of the UK population and range. In a few cases, it holds the entire population.





To many people the intrinsic value of the Cairngorms comprises the wide variety of good quality habitats and interesting species in such a relatively small geographic area. This proximity is important as habitats do not exist in isolation, but form mosaics with one another, creating rich edge habitats and networks.

2.3.2 Woodland

The term woodland can be used to describe all tree cover in the Cairngorms. It can be classified broadly according to predominant tree species, whether planted or self-sown, and by tree age and woodland site antiquity.

The woodlands of the Cairngorms are of national and international importance because they contain some of the largest remaining areas of semi-natural woodland habitats in the UK. In 1988 woodland accounted for 17 per cent of the Cairngorms area (a proportion similar to the whole of Scotland). The Cairngorms contains almost 12.5 per cent of the country's semi-natural woodland, but only 5.6 per cent of its plantation woodland. Its Caledonian pine woodlands form the greatest total area and some of the largest individual areas of Caledonian pine in Scotland. Native tree species comprise 79 per cent of the Cairngorms woodlands, and in recent years there has been a deliberate shift towards planting or regenerating native tree species in the Park.

The current extent, distribution, size and composition of woodlands have largely been determined by historical human activities. These include woodland clearance, planting, and prevention of natural tree regeneration by burning and grazing. Much attention has centered on the

ecological importance of the larger stands of trees as the only instances where natural processes can support a continuity of key micro-habitats (such as dead wood). However, recent discoveries (for example on aspen) have demonstrated the outstanding biodiversity importance of some small woodland stands and lone wayside trees for bryophytes, lichens and invertebrates.

The Cairngorms woodlands are concentrated in the main straths, below 600 metres elevation. As a result there are almost no woodland habitat links between different catchments. The historic loss of native woodland habitats has largely been halted or reversed in recent years, with the woodland habitat generally in a better state of management than at any time in recent history. However, there are areas of specific concern and some native woodland types have not fared so well and need particular targeted attention.

Native Pine Forest

The Cairngorms area represents the core of the distribution of native pinewoods, self-sown woodlands of great antiquity. Most (13,258 hectares) lie within the Forestry Commission's Caledonian Pinewood Inventory. These sites are considered to be remnants of the original Caledonian pine forest, which comprises relict, indigenous forests of Scots pine and associated birch and juniper woodlands.

Strathspey and Badenoch hold the largest area of native pine woodland in the Cairngorms, while most native pine woodlands in Deeside are smaller and more fragmented. Most remnant pine woodlands are well below the natural tree line and have been studied and mapped in detail. Planted conifer woodlands occur on the lower ground in most of the Cairngorm straths. Much of the planted conifer woodland is Scots pine (but not necessarily of local provenance), which produces seed that can give rise to self-sown woodlands resembling native Caledonian pine

2. NATURAL RESOURCES...cont

woodlands. To preserve the distinctive genotypes, so-called 'buffer zones' have been created around native Caledonian pine woodlands (those listed in the Inventory).

The native Caledonian pine woodlands are of disproportionate importance for biodiversity. They occur on infertile, strongly leached podzolic soils and do not support a large diversity of animals and plants compared with more fertile habitats. However, they possess a characteristic plant and animal community, which includes many rare, uncommon and highly distinctive species.

In the UK, native pine woodlands occur only in Scotland. The Park is very important for this habitat, holding between 60 per cent to 80 per cent of the UK total (depending upon definitions used). The significance of the remaining woodlands is reflected in the many conservation designations associated with the largest and most important sites.

Oak/Birch Woodland

This is the dominant type of broad-leaved woodland in the Cairngorms, as it is across upland Scotland in general. In 1998 the Cairngorms area encompassed circa 17,110 hectares of oak/birch woodland. Although oak is widely distributed in the UK, oak dominated woodlands are relatively uncommon in the Cairngorms. Most are found in Deeside, some in Strathspey and others in the Angus Glens.

Most oak/birch woodlands are dominated by downy and silver birch, the former more common on wetter soils. Birch woodland is found throughout the Cairngorms, with extensive semi-natural woodlands in Strathspey, Deeside, Donside and the Angus Glens. A range of structural conditions are desirable within birch woodlands to provide appropriate habitats for many specialist species. These conditions include the presence of deadwood and contiguous mosaics of open space, regeneration thicket stages, mature and veteran trees.

Felling and under-planting with non-native conifer species was extensive from the 1950s to the 1980s, and conifers have now shaded out birch wood features in many cases. The historical loss of old birch woodland in the Cairngorms has generally ceased, with an increase in the overall area of managed birch. However, some stands have been greatly damaged and destroyed by heavy selective felling.

Aspen Woodland

Although aspen is a widely distributed species in Great Britain, only 160 hectares of aspen woodland remains, mainly as pure woodland stands in north and east Scotland. Some of the largest remaining stands occur in the Cairngorms straths, with Strathspey and Deeside holding particularly important sites. The large aspen stands of the Scottish Highlands are a remnant of the ancient boreal woodlands that colonised the area after the end of the last glaciation. The reproduction of aspen in Scotland is mainly by vegetative root suckers leading to large areas of clones if grazing pressure is low. Aspen often grows with hazel on better soils, for example along the rivers Dee, Avon and Spey.

A community of saproxylic species associated with aspen are so localised in their distribution that their presence can be regarded as indicators of woodlands of international importance. The diverse saproxylic insect fauna has strong similarities with semi-natural forests found in Scandinavian countries, Finland and Russia.

Bog Woodland

Scattered trees can occur across the surface of a bog as open woodland, without the loss of bog species. Although pine is the most frequent tree species, birch or willow may also occur. The trees are widely-spaced, slow-growing and stunted and may be of considerable age (up to 350 years). The Cairngorms hold the largest extent of bog woodland in Scotland.

Juniper Woodland and Montane Scrub

Juniper often occurs as low scrub on heathland or acidic grassland. It may also form a clear woodland canopy, often with downy birch and rowan, and sometimes in Caledonian pinewoods. Creag Fhiaclach, in Strathspey, has the most natural altitudinal tree-line in the UK, and much of it is comprised of stunted Scots pine and juniper, giving way at higher altitudes to alpine juniper scrub. Montane scrub also occurs in the Cairngorms in small patches. The largest continuous stand is about 0.5 hectares in extent. Grazing has reduced and restricted its occurrence from most areas.

Plantations

Large-scale forestry was introduced in the early 18th century and planting continued through the 19th and 20th centuries. Most planted forests are primarily of exotic species (spruce, fir, larch and pine). Even when Scots pine is present, the stand structure is usually very different from that of native pinewoods. Most plantations are even-aged and have a less diverse flora and fauna than native pinewoods. Young commercial plantations tend to have low natural heritage value, but some older plantations support scarce or endangered species.

Trends and Observations

- Between 1991 and 2003, new woodland was established over 2 per cent of the Park, comprising 3,126 hectares of broadleaves and 4,718 hectares of conifers.

Monitoring

The Forestry Commission Scotland monitors existing woodlands and new plantings across the Park.

2.3.3 Wetland and Water

The water resource includes all permanent, open water bodies; essentially the lochs, rivers and burns located within the Park. Wetlands are seasonally or permanently flooded, vegetated areas and would have once been more numerous and extensive in the Cairngorms than they are today. Less than 0.5 per cent of the Cairngorms are classified as wetland. Nevertheless, there is still a great variety of healthy wetland and water habitats in the area.

The Park's rivers and lochs are of great importance locally, nationally and internationally. They have numerous national and international conservation designations for their biodiversity and high quality of freshwater habitats. Compared with other water bodies in the UK and Europe, the freshwaters of the Cairngorms have a high degree of naturalness and are largely in good condition. Most of the area's water is considered to be of excellent quality. Many of these freshwaters are internationally recognised for their important habitats and species, and are used as a benchmark against which others are judged.



Photo: Neil McIntyre.

2. NATURAL RESOURCES...cont

There is continual movement of water through the wetlands, burns, rivers and lochs of the area, so the wetland habitats do not exist in isolation from one another. Typically, burns flow into rivers, which on flat ground have wetlands. These often drain into larger standing waters such as lochs. The natural basis of all wetlands is the catchment. While some of the smaller catchments lie fully within the Park, the lower catchments of all the larger rivers lie outside the Park boundary. Consequently, the water resource cannot be properly considered without considering the entire catchment.

Lochs and Lochans

The Park contains 23 lochs. This figure does not include smaller water bodies such as lochans and peat pools, which provide important habitats for a wide variety of specialist aquatic flora and fauna. The characteristics of Cairngorms lochs vary greatly in terms of basin shape (including scoured depressions, kettleholes and high corrie lochans), chemistry, nutrient status and thermal regime. In total, standing waters account for 20 square kilometres (0.01 per cent) of the Park area, but contribute disproportionately to the Park's biodiversity.

Standing waters are usually classified according to their nutrient status and this can change naturally over time. There are four main nutrient classes of standing water that are used widely. These are oligotrophic (nutrient poor), eutrophic (nutrient rich), mesotrophic (nutrient intermediate) and dystrophic (peaty, highly acidic, with low levels of oxygen). Some gradations between these types occur. The majority of lochs in the Park drain from resistant rocks such as granite and are therefore oligotrophic and naturally acidic. There are approximately ten mesotrophic lochs in the wider Cairngorms area and several small dystrophic peaty lochans.

Rivers and Burns

The rivers draining the Cairngorms are among the largest in Scotland and include the Dee, Don, Spey, and North and South Esk. They all drain

towards the North Sea (except for artificial catchment transfers to the Laggan system). The Park includes 3,362 kilometres of river habitat.

In their natural state rivers are dynamic systems, continually modifying their form. Few rivers in the UK are unmodified by humans, for example, by flood defence structures or impoundments. Those which are least modified are a very valuable resource. The plant and animal assemblages of rivers and burns vary according to their geographical area, underlying geology and water quality. The rivers in the Cairngorms are generally oligotrophic, with good water quality, and are relatively unaffected by human influences compared with many rivers outside the area.

The mosaic of features found in Cairngorms rivers and burns supports a diverse range of plants and animals. For example, riffles and pools support threatened aquatic species; and exposed sediments such as shingle beds and sand bars are important for a range of invertebrates, notably ground beetles, spiders and craneflies. Marginal and bankside vegetation supports an array of wild flowers and animals and often provides a wildlife corridor link between fragmented habitat patches. The swiftly-moving, upland, nutrient poor rivers support a wide range of mosses and liverworts but relatively few species of higher plants. Generally, the invertebrate fauna is dominated by stoneflies, mayflies and caddisflies, supporting important populations of salmonid fish.

Wetlands

Various types of wetland occur in the Park including fens, marshes, swamps and reedbeds. Some sites, such as the Insh Marshes, are internationally important for their animal and plant communities. Water levels and active management, such as grazing, largely determine the composition of these Cairngorms wetlands. Fens, marshes, swamps and reedbeds are localised and often fragmented. Most sites show integration of the five wetland types.

Fens are peatlands which receive water and nutrients from a ground source as well as from aerial precipitation, which means they are minerotrophic. Groundwater lies close to the surface throughout the year. Fens can be subdivided into two main types, topogenous (water movement vertical) and soligenous (water movement lateral). They can be further sub-divided whether they are acidic/poor (predominantly upland) or calcareous/rich (predominantly lowland). Fens are generally more species rich than swamps and have short vegetation, which can be rich and varied. Up to 550 species of higher plants, a third of the UK's native plant species, are associated with fens across the country.

The UK is thought to have a large proportion of the fen surviving in the European Union. Throughout Europe fen vegetation has declined dramatically over the past century. Fen is rare in the Cairngorms area and the most important area, found at the Insh Marshes, is the largest continuous, intact 'poor fen' habitat in the UK. Despite being classified as 'poor fen', the Insh Marshes have a very diverse flora and fauna.

Swamps usually have taller vegetation than fens, dominated by one or two larger plant species. Water table levels are usually at or above that of the vegetation for most of the year. Fen and swamp habitats often occur together and may integrate, but can also be found separately. Both often grade into open water and sometimes occur in association with reedbeds.

Marsh is an ill-defined term but usually refers to vegetation occurring on mineral soil which has the water table close to the surface for most of the year.

Reedbeds are wetlands dominated by Phragmites reeds, where the water table is at or above the ground level for most of the year. There are few reedbeds in the Park and most of these are very small. A total area of circa 52 hectares, accounting

for circa 4 per cent of the Scottish total and 1 per cent of the UK total, lies in the Cairngorms. The distribution of reedbeds shows that some sites are found in Strathspey and middle Deeside, but otherwise are outside the southern boundary of the National Park.

Trends and Observations

- Water quality across the Park is generally good;
- Some eutrophication and acidification occurs;
- Many lowland wetlands have been drained;
- Increased management of wetlands through agri-environment schemes.

Monitoring

Scotland's watercourses and wetlands are monitored to make sure they reach 'good ecological status'. This is currently undertaken by the Scottish Environment Protection Agency and now follows guidance outlined in the European Union Water Framework Directive. Acidification is monitored through the UK Acid Waters Monitoring Network, which has two sites in the Cairngorms – Allt a'Mharcaidh and Lochnagar.

2.3.4 Farmland and Grassland

Agriculture has been practised for thousands of years in the Cairngorms. The physical environment largely limits and determines the range of farming activities that can be undertaken in the area. These constraints include climate, topography, soil conditions and remoteness from markets. Consequently large parts of the Cairngorms area are not farmed intensively, and the number of agricultural holdings in the area is smaller than most comparable sized areas in the UK. Nevertheless, agriculture is highly significant, both to the economy and the environment of the area. In 2002 it accounted for 5 per cent of direct employment and involved over 70 per cent of the land. Changes to the agricultural management have profound implications for natural habitats and landscapes.

2. NATURAL RESOURCES...cont

Livestock dominates agricultural land-use, particularly in the upland/hill areas, with the majority of farms specialising in sheep or sheep and cattle rough grazing. Grassland is therefore the most common farmland habitat. The type of grassland habitat is largely determined by the soil type and farm management regime. Most have been re-seeded or modified through the use of fertilisers, lime and selective herbicides, and many have been modified by mowing practices, for example silage and hay.

Arable Land

Arable land is quite rare, comprising approximately 1 per cent of the Park area and tends to be found in the straths and lower glens. Farming has changed considerably in recent years with a decline in the number of upland farms and crofts through consolidation of holdings and changes to other land-uses such as woodland. Successive national agricultural policies have encouraged the increased use of silage, a reduction in mixed farming, and a move towards intensification and specialisation. This has resulted in a decline in cultivated and cropped land, an increase in permanent grassland and a switch to forestry on moorland and to a lesser extent on fields.

Spring barley is the main cereal crop, with smaller areas of oats and winter barley. Fodder crops such as turnips, swedes, rape, kale and cabbage are also grown for feeding stock. Several declining seed-eating bird species are associated with this habitat and the recent reduction in the overall area of cropped land is arguably the most significant change affecting species relying on arable land for a significant part of their winter diet.

Grassland

Grassland provides habitats for a range of species. These include resident and migratory birds, mammals, invertebrates, fungi and plants, many of which depend upon the continuing traditional or modern farming methods for their survival. Generally, the farmland and grassland habitats in the Cairngorms have been managed in a less intensive manner than many other areas in the UK. From the nature conservation perspective, many traditionally managed farmland habitats mimic the natural grasslands that were once part of the area. Consequently, many of these areas are important or exceptional because of their historical human management, not in spite of it. For example, the grasslands of Badenoch and Strathspey are one of the most important breeding sites for farmland waders on mainland UK.



There are approximately 30,000 hectares of improved grassland within the Park. Unimproved, species rich grasslands, such as calcareous grassland, are also present. Many of these have been traditionally managed, without agricultural 'improvements' such as re-seeding or the application of fertilisers and herbicides.

Boundary Features

Drystone dykes are the most common form of boundary features (not including fences) in the Park, particularly in Deeside. Although many dykes are in a poor state of repair in terms of holding stock, their value as a wildlife habitat and corridor remains significant. They provide a habitat for flowering plants, ferns, mosses and lichens. They also provide food, shelter and breeding sites for a range of invertebrates, reptiles, birds and mammals.

Trends and Observations

- The Common Agricultural Policy has resulted in intensification and specialisation of agricultural production. The single biggest trend has been away from mixed farming towards monoculture production, with the resultant losses of habitats;
- Sheep numbers (and grazing pressure) increased during the 1980s-1990s and 1990-2003. This may change with policy reform and have a knock-on effect on grassland communities;
- Land abandonment is likely to be happening already and is predicted to increase under the Common Agricultural Policy reform.

Monitoring

The Scottish Executive Environment and Rural Affairs Department monitors farmland use through the agricultural census, and land cover is monitored over a longer period of time in land cover mapping.

2.3.5 Upland and Mountain

The Park has the largest area of high ground and most extensive tracts of montane habitats above the natural tree-line in the UK. Much of this is in a very good condition. It includes the main plateau and summits with their associated corries, rocky cliffs, crags, boulder fields, scree slopes and higher parts of some glens and passes. The habitats found in this zone include rush, sedge and lichen rich heaths, snow-bed communities and mossy springs associated with snow melt.

The altitude, steepness of terrain, poor infertile soils and harsh climate has favoured extensive areas of dwarf-shrub heath, dominated by heather between 250 to 900 metres above sea level. On the wind-clipped ridges and summits, some of the UK's best examples of lichen rich heaths occur:

The largest and highest tracts of blanket bog also extend into the montane area and are widespread throughout the Park. The high altitude, rocky habitats (outcrops, crevices, scree) are important for many alpine plant species, particularly where base rich outcrops occur. In these areas, base-rich plant communities dominate including montane willow scrub, grasslands, dwarf-herb communities and base-rich mossy flushes. The Cairngorms is also one of only two areas in Scotland with serpentine rock and associated vegetation and it occurs at a range of altitudes.

The Cairngorms woodlands are concentrated in the main river valley areas, almost all of which lies below 600 metres elevation. As a result, there are practically no woodland habitat links between different catchments and very little montane scrub. Consequently, natural tree-lines are exceedingly rare and fragmented, with the best example at Creag Fhiaclach, Strathspey. Montane scrub is therefore the rarest and most threatened habitat in the Cairngorms. It is so impoverished that many people do not realise that the tree-line woodland habitat is missing from the Cairngorms high hills.

2. NATURAL RESOURCES...cont

Montane

Montane habitats are found in areas above the natural tree level (variable, but approximately 600 metres above sea level). These alpine and sub-alpine plant communities represent some of the most natural and undisturbed habitats in the UK. The montane zone comprises many different kinds of habitat supporting a wide range of specialist plant and animal communities. It consists mainly of high plateaux, with steep sided corries, rocky cliffs, crags, boulder fields and scree slopes. The vegetation is particularly influenced by factors such as exposure, snow cover and soil type/depth. These montane habitats include high altitude instances of common heath communities, which occur across an altitudinal gradient, moss-heaths, grasslands, dwarf-shrub heaths, late snow patches, rock ledges, scree slopes, nutrient poor lochs and montane willow scrub.

More than half of the Cairngorms montane zone above 600 metres above sea level comprises other broad habitat types, mainly upland heath (heather moorland), blanket bog and some poor acid grassland. The montane zone includes four of the five highest mountains in the UK. Outside the main Cairngorms plateau, there are large tracts of montane habitat in the south of the Cairngorms

area, from the Monadhliath and Drumochter hills in the west to the Ladder Hills and Angus Glens in the east. Differences in defining the montane habitat make it difficult to ascertain the exact proportion of UK montane habitat in the Park. Nevertheless, the land above 600 metres above sea level represents a significant proportion of the UK total and the area is generally considered to be the most important montane area in the UK and one of the most important in a European context as well.

Upland Heath/Heather Moorland

Upland heath and heather moorland are terms that are regularly used to describe the same habitat – an upland landscape dominated with vegetation containing at least 25 per cent dwarf-shrub heaths. It lies below the montane zone and above the upper edge of enclosed agricultural land. Upland heath in favourable condition is typically dominated by a range of dwarf-shrubs such as ling and bell heather, blueberry and crowberry. It is usually found in areas with relatively high precipitation, on nutrient poor acid soils.

Upland heath occurs regularly throughout the British uplands and is the most extensive habitat type in the Cairngorms area, frequently in mosaics



Photo: David Gowans.

with peatland/blanket bog. It occurs to a greater or lesser extent in most one kilometre squares in the Cairngorms area throughout Deeside, Donside, Strathspey and the Angus Glens. This habitat and its associated species are of international conservation significance, being largely confined to the UK and western seaboard of Europe.

The management of heather moorland in the Cairngorms is largely focused on two species: red grouse and red deer. Globally, heather moorland is virtually confined to Britain and Ireland, where large areas are principally managed through muirburn (rotational burning) and grazing for agriculture, fieldsports and amenity interests.

Blanket Bog

Blanket bog is a globally restricted peatland habitat confined to cool, wet, typically oceanic climates. It is, however, one of the most extensive semi-natural habitat types in upland Britain. Peat thickness is very variable, with 0.5 to 3.0 metres being typical, and in excess of five metres thick not unusual. Blanket bog is very widespread in the Cairngorms area, except for lower ground areas in the east. It is the second most extensive habitat type in the area, after upland heath. Blanket bog grades into wet upland heath forming extensive heathland/peatland mosaics. The largest expanses of blanket bog are found in the Monadhliath, the Drumochter hills, the hills of Angus, the Ladder hills and large areas of Deeside.

The typical blanket bog vegetation includes heather, cross-leaved heath, deer grass, cotton grass and several species of Sphagnum moss. The blanket bog bird assemblage is rather species poor, but does have very high densities of breeding species such as dunlin and golden plover. The relative proportions of each of these species vary across Scotland from west to east, with altitude, topography, peat thickness and rainfall. Thick peat can even develop, and blanket bog with it, in areas of low precipitation and relatively high sunshine if drainage is impeded by topography and/or the development of impervious soil layers.

In recent years there has been a growing recognition of the role of peat in storing/absorbing carbon and for that reason, being important in terms of climate change. While blanket bog covers extensive areas of the Park, peat accumulates very slowly under conditions of water-logging and is consequently colonised slowly by many species. Thus, once any damage or exploitation happens, this habitat is very difficult and slow to restore due to the timescales involved. Therefore this sensitive habitat cannot be created or restored like others.

Trends and Observations

- Climate change may alter the conditions suited to upland plant communities;
- Over-grazing by sheep and deer has prevented tree and scrub regeneration in some upland areas;
- There has been an increase in development pressure for infrastructure in the uplands.

Monitoring

The Allt a' Mharcaidh catchment on the west side of the Cairngorms, is an Environmental Change Network site. Monitoring of the vegetation and plant species occurs at intervals, with the aim of building up a long-term dataset. Scottish Natural Heritage monitors the condition of vegetation in the Park's designated sites.

2.3.6 Information Gaps – Habitats

- Pattern of habitat networks.



2. NATURAL RESOURCES...cont

2.4 Animals

Animals are usually divided into two groups, vertebrates (with backbones) and invertebrates (without backbones). As elsewhere, vertebrates in the Cairngorms have received more attention and are better known than the invertebrates. In this chapter, the vertebrates are divided into mammals, birds, reptiles and amphibians, and fish.

Table 2.4: Approximate number of animal species known in the Cairngorms

| <i>Invertebrates</i> | <i>Mammals</i> | <i>Birds</i> | <i>Reptiles and Amphibians</i> | <i>Fish</i> |
|----------------------|----------------|----------------------------------|--------------------------------|-------------|
| 1,000's | 37 | 235 recorded, circa 150 breed | 7 | 24 |

Source: Scottish Natural Heritage 2006

Although most of these species are native to the Cairngorms, an increasing proportion of the area's fauna is made up of non-native species that have been introduced deliberately or have escaped accidentally. For several of these alien introductions it is not known whether the species has established self-maintaining populations.

2.4.1 Mammals

Of the 37 wild mammal species in the Cairngorms, 27 are native. The quality of the information available on their distribution, dispersal and numbers in the Park is variable. For most mammals there is good distributional data, but there is a lack of information on numbers and trends in populations for all but the most studied species (such as red deer).

The large-scale of different habitats in the Park provides important areas for a number of mammals. Pinewood species like red squirrel, pine marten, and red deer tend to have good populations in Rothiemurchus, Abernethy, Ballochbuie and Glen Tanar. Wetland and water mammals like otter and water voles are present in all the main Cairngorms catchments (Spey, Dee, Don, Esk), but water voles only survive in some of the headwaters and tributaries where the predatory non-native American mink is absent or present only in low numbers.

The Cairngorms are home to two mammal species classed as globally threatened: the otter, classed as vulnerable; and the red squirrel classed as near-threatened. An additional four species are listed as nationally threatened (soprano pipistrelle bat, common pipistrelle bat, brown hare and water vole). Wildcat is now regarded as probably the most threatened native British mammal, but it was not included in the national threat assessment in 1995.

Deer are a major resource in the Park. Grazing by deer can help to maintain important open habitats and, indirectly, the species that depend on these habitats. However, the pattern of range use of large numbers of deer can and does have negative impacts on the natural environment. Deer are commonly managed by estates for sporting and land management objectives. They also contribute to local tourism and provide a significant input to the local economy.

Red deer are the most important deer species present, because of their widespread distribution and numbers in the Cairngorms, their large body size and herding behaviour, and their impact on natural heritage features. There are few herds of truly wild-grazing animals left in Europe and the herds of red deer present in the Cairngorms are one of few opportunities visitors have of seeing such a spectacle.

Mountain hares are found throughout the Park, where they are naturally widespread on moorlands. The status of the following species present in the Cairngorms is unclear: hedgehog, mole, common shrew, pygmy shrew, water shrew, Natterer's bat, Daubenton's bat, soprano pipistrelle bat, common pipistrelle bat, Nathusias's pipistrelle bat, brown long-eared bat, bank vole, field vole, wood mouse, brown rat, house mouse, fox, stoat, weasel, American mink, feral cat and feral goat.

Trends and Observations

- Red squirrels historically declined and recovered as a result of woodland expansion. The Cairngorms is now considered to be one to the most important 'core' areas for red squirrels in the UK;
- Grey squirrels are increasing in the UK and are expanding along Deeside, Donside, along the Aberdeenshire coast and up the Tay catchment;
- Badgers are common in the Cairngorms, and there appears to have been little change in numbers in the Cairngorms during the 1980s when they were studied;
- Otters are widespread and now present on almost all Cairngorms water bodies;
- Rabbit populations fluctuate dramatically and can be common in some areas and absent from areas they were formerly present. Myxomatosis and other diseases/viruses are thought to be responsible for such fluctuations;
- Wildcats have recovered their range in the Cairngorms since becoming extinct in Deeside in 1918. Inter-breeding with domestic and feral cats now threatens the genetic integrity of the remaining populations;
- Pine marten have recovered their range in Badenoch and Strathspey and most recently have begun recolonising upper Deeside;
- Red and roe deer numbers vary over the Park, and populations in some areas show an annual increase, some a slight decrease and others no substantial change between 1993



Photo: Neil McIntyre.

- and 2000. Sika deer appear to be expanding their range towards and into the Park;
- Water voles have declined from the main stems of all rivers, to such an extent that they are now present only in the upper tributaries of the Spey, Dee, Esk and possibly the Don. This decline continues;
- Nationally bats have declined in recent years, but it is unclear if this is happening in the Cairngorms. The loss of old trees, development of steadings and old buildings has been implicated in the nationwide bat decline.

Monitoring

Monitoring of mammal populations has tended to focus on a few species of direct economic importance, such as red deer, and those of conservation concern. Much work is currently being undertaken and planned for red squirrels in the north of Scotland and the Cairngorms woodlands in particular. It is likely that both volunteer and professional recording of red squirrels will increase in the area as the species continues to decline nationally. Monitoring of designated interest species, such as otters on the rivers Dee and Spey Natura sites, takes place regularly.

2. NATURAL RESOURCES...cont

2.4.2 Birds

The Cairngorms are truly exceptional for their bird life. The altitudinal range and diversity of good quality habitats, from high Arctic tundra, boreal pine forests, northern wetlands, rivers and lochs to managed heather moorlands and traditionally managed farmland, means that there are a tremendous number of niches for breeding and wintering species within a relatively small area. As a consequence, many populations of the Cairngorms bird species are of national and international importance. One species of particular note is Britain's only endemic bird, the Scottish crossbill, which is closely associated with Deeside, Badenoch and Strathspey.

Up-to-date data on the distribution, dispersal and numbers of birds in the Park is often relatively

good because of the high level of interest and research carried out by both professionals and amateurs. Some groups of birds, such as breeding raptors and wintering wildfowl, are well studied by dedicated groups of volunteers.

Many birds use more than one habitat, for example ospreys nest in trees and woodland, but feed on lochs and rivers. Therefore, it is important to recognise that it may be the proximity of different habitats that is vital to some of the Park's special birds.

The Park is nationally important for at least 23 bird species. These are listed by habitat in Table 2.4.2. In addition, there are also a number of rare, often edge of range species that occasionally breed in the Park.

Table 2.4.2: Bird species for which the National Park is considered nationally important

| <i>Lochs, Rivers and Wetlands</i> | <i>Woodland and Scrub</i> | <i>Farmland</i> | <i>Moorland</i> | <i>Montane</i> |
|-----------------------------------|---------------------------|----------------------|-----------------|------------------|
| Slavonian grebe | Capercaillie | Breeding waders e.g. | Hen harrier | Ptarmigan |
| Whooper swan | Black grouse | Lapwing, Curlew, | Golden eagle | Purple sandpiper |
| Wigeon | Crested tit | Redshank, Snipe & | Merlin | Dotterel |
| Goldeneye | Scottish crossbill | Oystercatcher | Peregrine | Snow bunting |
| Spotted crane | | | Ring ousel | |
| Osprey | | | Common gull | |
| Green sandpiper | | | Twite* | |
| Wood sandpiper | | | | |
| Greenshank | | | | |

* *Important breeding population suspected, but not confirmed on moorlands.*
 Source: Scottish Natural Heritage 2006.



Photo: Neil McIntyre.

Woodland Birds

The woodlands of the Cairngorms hold nationally important populations of two grouse species: capercaillie and black grouse. Both of these have recently suffered substantial declines across the country. The Park still holds relatively large populations of these declining species. A high proportion of Britain's capercaillie now reside in the Cairngorms and recent intensive conservation efforts with land managers have seen an apparent halt to species decline.

Two genetically distinct songbirds occur in the Park's woodlands. Crested tits are found in the pinewoods of Badenoch and Strathspey and parts of Morayshire and are an endemic race. The Scottish crossbill is found in conifer woodlands across the Park. The most numerous woodland bird is the chaffinch which is present in all woodlands.

Mountain and Moorland Birds

The mountains and moorlands of the Park are home to nationally and internationally important populations of raptors (birds of prey). Economically important populations of red grouse drive the management of many moorland areas, which also hold significant populations of breeding twite, ring ousel and common gulls. The most numerous moorland bird is the meadow pipit, which is present on all but the highest mountains in the Park.

The high tops are home to relatively few birds, which include the ptarmigan, snow bunting, dotterel and purple sandpiper.

Wetland and Water Birds

The clean freshwaters of the Park hold nationally important breeding populations of several rare species. Badenoch and Strathspey holds most of the UK's breeding goldeneye. This charismatic, hole-nesting duck has begun to breed in Deeside and appears set for further expansion in the eastern Cairngorms. The lochs of Badenoch and Strathspey are home in the summer months to

several breeding pairs of Slavonian grebes, a rare British breeder.

The osprey, once extinct in Britain, first re-colonised the Cairngorms in the 1950s before expanding to the rest of mainland Scotland and now England and Wales. This conservation success story is strongly linked with the area, providing an economic boost through tourism. A handful of greenshank, green and wood sandpipers and red throated divers breed on wetlands and lochans in the Park.

The cold winter weather in the Cairngorms means that water bodies can be frozen for many weeks or months making them unavailable to water birds. Consequently, the area is not renowned for its wintering wildfowl, although nationally important numbers of whooper swans occur on the Insh Marshes. The Cairngorms rivers hold nationally important populations of goldeneye and goosanders in the winter, but these birds range throughout whole river catchments and so cannot be simply looked at as solely 'Cairngorms' populations.



Photo: David Gowans.

2. NATURAL RESOURCES...cont

Farmland Birds

The traditionally managed livestock grassland of Badenoch and Strathspey supports one of the densest concentrations of breeding waders (lapwing, redshank, curlew, oystercatcher and snipe) in mainland Britain. The farmland is important for breeding waders because of livestock management practices.

Increased specialisation has resulted in a huge decrease in the area of arable land grown for cereals and root crops. There has been a decrease in associated farmland birds. Recent work has highlighted the importance of even relatively small arable areas for seed-eating birds such as finches and buntings. For example, a single Strathspey farm holds one of the highest counts ever of the declining twite, which moves off the moorland during the winter.

Trends and Observations

- There is no recent trend data for most bird species in the Cairngorms. However, it would appear that many populations of the common resident species are stable and that some of the migrant species, such as spotted flycatcher, ring ousel, are perhaps in decline. This matches national trends, perhaps due to problems at wintering or migratory sites;
- Woodland grouse (capercaillie and black grouse) have declined nationally during the 1990s. In the case of capercaillie its decline appears to have been halted, perhaps as a result of intensive conservation management of pine forests within its range;
- The population trends of most other pinewood species are poorly known, but are likely to increase as recent native woodland expansion begins to mature;
- While populations of some raptor species, such as buzzard, are on the increase, others like the hen harrier are severely limited by illegal killing;
- There is good information and data on several wetland and water birds, with some in

favourable condition, such as goldeneye, and others fluctuating significantly between years, such as Slavonian grebe and spotted crane;

- Trends in wild bird populations form one of the Quality of Life headline indicators published annually by the UK Government.

Monitoring

Monitoring of bird populations has tended to focus on a few species of particular conservation interest/concern, such as capercaillie and Slavonian grebe. Volunteer raptor study groups monitor breeding raptors across the Park on an annual basis. The British Trust for Ornithology monitors some bird populations regularly, for example through annual surveys of wetland birds. Recently a swift nest survey has been undertaken in the Park. Fieldwork for the North East Scotland Bird Atlas is currently underway, but recording is focused on Morayshire and Aberdeenshire. Monitoring of species of interest takes place regularly in designated sites.

2.4.3 Reptiles and Amphibians

The Park has good widespread habitats for reptiles and amphibians. South east facing slopes and undisturbed habitat provide appropriate basking and hibernating sites for reptiles, and the relative lack of pollution of water bodies provide suitable breeding sites for amphibians. The remoteness of much of the area, the variety of habitats (altitude range 150 metres-1,200 metres above sea level) and the lack of disturbance suit species such as the adder.

Eight native amphibian and reptile species are found in the Cairngorms, three reptiles and five amphibians. There has been little systematic research or survey work on amphibians and reptiles in the Cairngorms.

Reptiles

The slow-worm is the rarest of Scotland's three reptile species and has been recorded from only a few places in the Cairngorms. The population of



common or viviparous lizard is small at the UK level, but important at the Scottish level and is probably under-recorded. It has been recorded from Badenoch and Strathspey, Deeside, Donside and the upper Angus Glens. Adders have been recorded in most of the Cairngorms area except the high tops. Along the Dee, some adder habitat has been lost to building and development, but it is still relatively common, for example at Muir of Dinnet.

Amphibians

The great crested newt is the rarest Scottish amphibian and has been recorded at only two authenticated sites in Strathspey. Palmate newt, common frog and common toad are relatively common and widespread from lowland burns and lochs to upland burns and wet flushes.

Trends and Observations

- There is no reliable trend data for amphibians and reptiles in the Cairngorms;
- Nationally, amphibians and reptiles have declined;
- The expansion of forestry since the 1950s may have benefited reptile and amphibian populations;
- Anecdotal questionnaire surveys of adder and slow-worm sightings in Scotland suggest that populations have declined slightly, but remained stable in the Cairngorms. There is no quantifiable data to verify this.

Monitoring

Local volunteer groups were recently established to monitor the status of reptiles and amphibians in the Cairngorms. In 2005 a national adder recording initiative was launched and is likely to result in more records of this species from sites in the Cairngorms. The Highland Biological Recording Group is surveying sites for smooth newts.

2.4.4 Fish

The excellent quality waters of the Park are suitable for a range of fish species. Fish are naturally widespread in the Cairngorms, occurring in almost all running waters and many lochs and lochans, including the highest altitude water bodies with fish in Britain. Relatively few fish colonised the Cairngorms area naturally from the sea when the ice cap melted 13,000-15,000 years ago.

Twenty four species of fish are known to be present within the Cairngorms, of which only seven or eight are native. Species of particular conservation value are Atlantic salmon, Arctic charr, brook lamprey, river lamprey and sea lamprey. Most research and survey work has concentrated on species of economic importance.

Atlantic salmon are relatively widespread throughout the Park and are present in each of the river systems that drain the Cairngorms. Rivers notable for the size and diversity of their



Atlantic salmon populations are the Spey, Dee, Don, North Esk and South Esk. They contributed 44 per cent of the Scottish Atlantic salmon rod-catch and 36 per cent of the UK total during 2002. Atlantic salmon are not restricted to rivers and burns and are known to occur in a number of lochs within the Park.

2. NATURAL RESOURCES...cont

Brook lamprey are present in the River Don and its tributaries, the North Esk, the South Esk, the Spey and its tributaries, as well as many smaller burns. It is also highly likely that brook lamprey are present in the River Isla and in other tributaries of the Tay which extend into the Cairngorms area. River lamprey have been recorded in all of the major systems present in the Cairngorms area. The inability of these fish to ascend physical obstacles, such as waterfalls, may, however, restrict their distribution to the lower reaches of these catchments.

Sea lamprey are known to ascend the rivers Spey, Don, North Esk, South Esk and Tay, although again the distance travelled upstream is strongly dependent on the presence of in-stream barriers. It is unlikely that adult sea lamprey are able to penetrate the river systems of the Don and Tay as far inland as the Park.

The Arctic charr is an ice age relict fish that inhabits several high altitude lochs in the Cairngorms and Loch Insh on the River Spey. The Arctic charr populations of the Cairngorms have been isolated for so long that they have become genetically distinct and are unique.

There is a wide variety of forms of trout, differing in appearance, average size and migratory tendencies. Brown trout are almost ubiquitous throughout the wider Cairngorms area and are located within almost every burn and loch. One population is known to exist at an altitude of 843 metres above sea level in Dubh Lochan on Beinn a' Bhuird, possibly the highest altitude in Britain at which a self-sustaining population of fish exists. In areas of a river catchment where productivity is low and access to and from the sea is assured, brown trout may have adapted to smolt and become sea trout. The rivers Spey, North and South Esk are particularly well known for their sea trout.

The once common eel is now thought to be one of the fastest declining vertebrates in Britain.

Local Fishery Board biologists have noticed a dramatic decrease in the number of eels, when sampling rivers and burns in the Park. Important in their own right, eels are also an important component of the aquatic food-web. Detailed studies in Deeside identified eels as the main food item of otters. Thus, the loss of eels will have significant impacts on species like otters, which may have to switch food items or decline alongside its main prey.

In recent years there has been a tendency to artificially stock lochs and other water bodies with non-native fish for angling and ornamental purposes. Many non-native species are now present in the Cairngorms (Table 2.4.4), but it is unclear whether their populations are self-sustaining or not.

Table 2.4.4: The breeding status of non-native fish present in the Cairngorms

| <i>Non-native species</i> | <i>Breeding status</i> |
|---------------------------|------------------------|
| Minnow | Breeding |
| Dace | Uncertain |
| Perch | Breeding |
| Stone loach | Uncertain |
| Common/mirror carp | Uncertain |
| Crucian carp | Uncertain |
| Tench | Breeding suspected |
| Common bream | Uncertain |
| Golden orfe | Uncertain |
| Rudd | Breeding |
| Roach | Breeding |
| Dace | Uncertain |
| Rainbow trout | Uncertain |
| Asp | Uncertain |
| Brook trout | Uncertain |
| Pike* | Breeding |

Source: Scottish Natural Heritage 2006

* *Status as a native or non-native species in the Cairngorms uncertain. Pike has been introduced to several water bodies, but present in Scotland since at least 1790.*

Trends and Observations

- There are few reliable sets of trend data published for fish in the Cairngorms, other than economically important species such as salmon. Data on other species, such as eels (of conservation concern), has been collected but not analysed or published;
- There has been a steady increase in the number of non-native fish species in the Cairngorms and the number of water bodies in which they are present;
- Historical catch records, available since 1952, have shown that the number of Atlantic salmon caught annually increased until the 1960s, and has declined steadily since the mid-1970s. In rivers originating in the Cairngorms area, it is the decline in catches of multi-winter sea fish, such as spring Atlantic salmon, that have caused most concern.

Monitoring

Monitoring of fish species has tended to focus on a few species of economic interest, such as trout and salmon. Nevertheless, data on additional ecologically important species such as eels has been collected. Specific pieces of research have been undertaken on Arctic charr, and recently work has begun to monitor the presence and status of non-native fish in the Park.

2.4.5 Invertebrates

The Cairngorms is one of the most important areas for invertebrates in the UK, with a significant number of northern, boreal and montane species. However, there are also isolated populations of species that have their centres of population further south in the UK, resulting in an exceptionally high level of invertebrate biodiversity. Nevertheless, the poor state of knowledge of invertebrate populations means that their true status in the Park has yet to be properly assessed.

Although invertebrates are among the least known of all animals and current knowledge is biased in favour of groups such as insects, over 350 invertebrate species considered to be rare and/or of national importance have been found in the Cairngorms. A summary of the numbers of rare insects found in the Cairngorms is provided in Table 2.4.5a and the habitats where they occur in Table 2.4.5b



Table 2.4.5a: Numbers of rare insects known to be present in the Cairngorms

| Order | No. of rare species |
|---|---------------------|
| Diptera – true flies | 105 |
| Coleoptera – beetles and weevils | 97 |
| Lepidoptera – butterflies and moths | 30 |
| Hemiptera – aphids, bugs and grasshoppers | 9 |
| Hymenoptera – bees, wasps and ants | 15 |
| Odonata – dragonflies and damselflies | 3 |
| Trichoptera – caddisflies | 2 |
| Ephemeroptera – mayflies | 1 |
| Plecoptera – stoneflies | 1 |

Source: Scottish Natural Heritage 2006

2. NATURAL RESOURCES...cont

Table 2.4.5b: Habitats of rare insects known to be present in the Cairngorms

| <i>Habitat</i> | <i>No. of rare species</i> |
|------------------|----------------------------|
| Montane | 54 |
| Wetlands | 68 |
| Grasslands | 29 |
| Heathlands | 31 |
| Woodlands – pine | 36 |
| birch | 13 |
| aspen | 10 |
| other | 70 |
| Overall | 129 |

Source: Scottish Natural Heritage 2006

The number of insect species present in the Cairngorms is difficult to evaluate. Some groups and geographic areas have been studied more thoroughly than others, making meaningful comparisons difficult. Most information on invertebrates has not been obtained systematically, but is the result of ad-hoc collecting by amateur biologists during visits to the area or as a result of a specific study of one group of species in one particular area. Consequently, the recording of invertebrates in the Cairngorms would benefit from the development of appropriate survey techniques.

The Cairngorms is rich in insects and much is waiting to be recorded or discovered. For example, 387 species of butterflies and moths alone have been recorded in the Cairngorms National Nature Reserve. In the pinewoods around Loch Garten 868 species of beetle were discovered, and in 2005 a new species of wolf spider was discovered in Abernethy Forest.

One of the key features of these montane and northern species is that many take more than one year to complete their larval growth and development due to the cool, short, summer season. Many populations have also been isolated by geography and climate and as a consequence, have evolved into distinctive races and forms.

The recording of non-insect invertebrates is at best patchy and so for most species little

information is available. If it is, the wider context of the populations in UK terms is difficult to determine, although for some it is known to be significant. For example, the globally threatened freshwater pearl mussel is present in the rivers Spey, Dee and South Esk in internationally important numbers and has been the subject of detailed studies across the Park and Scotland. There are at least 64 endangered or critically endangered invertebrate species apparently confined to the Park.

Trends and Observations

- There is no recent trend data for almost all invertebrates in the Cairngorms;
- Distribution data for 23 butterflies in the Park may be extracted from UK-wide surveys and compared over two study periods: 1970-1982 and 1995-1999. Some species, such as the large heath, showed a decrease in their range. Others, like the small pearl-bordered fritillary, showed an increase in range, while species like the small blue and the pearl-bordered fritillary, showed little change;
- Increased recording effort by volunteers is resulting in new sites for many moth and butterfly species, such as mountain ringlet butterfly and netted mountain moth.

Monitoring

Outside designated sites with invertebrates as a noted feature, little systematic monitoring takes place. Some national monitoring schemes have

been developed for charismatic species like butterflies, but for most invertebrate species, anecdotal recording by amateurs is the only monitoring presently happening. The Highland Biological Recording Group has been recording the status and distribution of bees for 15 years and a new bee Atlas is expected soon. The Scottish Executive and bee-keeping groups are monitoring the spread of the varroa parasite, which is present next to and possibly now within the Park.

2.4.6 Information Gaps – Animals

- Trend data for most birds, reptiles and a amphibians, fish and invertebrates;
- Distribution data for many species, particularly those not valued as part of economic activity;
- Population and breeding status for many species.

2.5 Plants

2.5.1 Bryophytes

The Cairngorms has a large and important bryophyte flora (mosses and liverworts). The extensive area, diversity of habitats and altitudinal/climatic range in the Park provide niches for almost two thirds of the UK's bryophytes. However, knowledge on the ecology, distribution and status of bryophytes in the Park is severely limited, with much still to discover.

The Park is set in one of the most 'continental' parts of Scotland and, compared with the renowned bryophyte flora of the Atlantic seaboard, has a lower number of bryophytes present. However, some 103 nationally rare species and 154 nationally scarce species have been recorded in the Park. Most of these are arctic-alpine or boreal-montane species, which have a very limited range in the UK.

The most important Cairngorms bryophyte areas in terms of the proportion of UK populations are those with late snow-lie, where patches of snow

persist into July. The limited snow-free period is considered too short for most flowering plants to persist, reducing competition in favour of specialist bryophytes. As with flowering plants, the longest lists of rare bryophytes come from exposures of calcareous or base rich rock at moderate to high altitude. Consequently, these important areas are confined to the few base rich areas in the Park.

A number of dry acid rock species are present throughout the Park. Favoured sites are large areas of block scree, associated with crag and other areas of broken rock. Upland peat-dominated areas with mires hold a range of sphagnum species. The large areas of native woodland have a well-developed ground flora, which contains an abundance, if not a great variety, of bryophytes. The native pinewoods have an interesting moss flora, including nationally rare species such as the green shield-moss. However, Cairngorms aspen stands have perhaps the greatest variety of interesting species, including several rare ones, some of which were thought to be very rare or extinct until recent work within the Park rediscovered them (such as blunt-leaved bristle-moss and aspen bristle-moss).



Photo: Jimmy Mitchell.



Photo: Neil McIntyre.

2. NATURAL RESOURCES...cont

Trends and Observations

- The baseline data required for assessing trends is not available for bryophyte species;
- Historical assessments indicate that several species have been lost from the Cairngorms since the middle part of the 19th century;
- The distribution patterns of some rare species in the Cairngorms reflect the pattern of survey effort, rather than a true distribution;
- Comparisons of snow bed bryophyte communities between 1989 and 1999 showed no evidence of gross change, either in extent or species composition.

Monitoring

Outside designated sites with bryophytes as a noted feature, little systematic monitoring takes place. Some national monitoring is now taking place for protected and Biodiversity Action Plan species. Recently work has begun to assess the status of protected Wildlife and Countryside Act (Section 8) and Biodiversity Action Plan Priority species.

2.5.2 Lichens

The Cairngorms has a rich, diverse and important lichen community, which forms an important component of many ecosystems. Lichens are often considered indicators of good environmental conditions, including habitat quality, clean air and water. As with bryophytes, the diversity of habitats and the altitudinal/climatic range in the Park provides niches for approximately half of Britain's lichens. However, knowledge of these lower plants is severely limited with much still waiting to be discovered.

The Park is set in one of the most 'continental' parts of the UK and so, compared with the renowned oceanic lichen flora of western Scotland, there are fewer lichen species. The total number of lichen species recorded from Britain and Ireland is around 1,750. Eighty five have over 50 per cent of their UK range within the Cairngorms area, and 35 are known in Britain only from the Cairngorms. Of 400 taxa with at least

10 per cent of their UK distribution in the area, over 180 are nationally rare and over 350 are nationally scarce species. These rare lichens are composed of arctic-alpine or boreal-montane species, which have a very limited range in the UK.

Very few areas in the Cairngorms have had their lichen flora investigated thoroughly. Of those species described as internationally or nationally important in the Park area, all have been recorded in fewer than five areas. Almost 75 per cent of the species have been recorded only once.

The northern edge of the Cairngorms and the mid-alpine heaths of the eastern Cairngorms are nationally important areas of alpine heath for lichens. Elsewhere, the lichen vegetation of alpine heaths is largely unremarkable, consisting mostly of widespread species. The most important habitats for lichens are native pinewoods, deciduous woodlands, sub-alpine and low alpine heaths, areas of base rich mica-schist and areas of late snow-lie. The late snow-lie habitat is rich in uncommon lichen species. The lichen vegetation of native pinewoods in Strathspey has been more thoroughly investigated than Deeside. Deciduous woods on Deeside have not been surveyed, but some of Strathspey's birch and aspen woods have been.



Photo: Jimmy Mitchell.

Trends and Observations

- Trends in the abundance or range of lichen species are difficult to assess, due to a lack of baseline data;
- Recent work has begun to assess the status of lichen communities in designated sites, where lichens are a noted feature, but it has not been carried out long enough to report on any historical changes;
- The distribution patterns of many rare species in the Cairngorms reflect the pattern of survey effort, rather than true distribution.

Monitoring

There are currently no active lichen research programmes at UK universities and all professional survey work is carried out on an occasional contract basis. Outside designated sites, what little survey work that there is, has been carried out by amateurs, most of whom do not publish their findings. Such work also tends to concentrate on single species, rather than on lichen assemblages. Some national monitoring is now taking place for protected and Biodiversity Action Plan species.

2.5.3 Fungi

The Park has an important fungal community, but it is probably the plant group on which there is least data in the area. Fungi play a crucial role in recycling animal and plant material and live in symbiosis with many higher plants. The fruiting

bodies themselves are undoubtedly an important part of biodiversity, visually attractive and a source of shelter and nourishment for a wide range of organisms from invertebrates to mammals. Little serious fungal survey work has been undertaken in Scotland, so limited comment can be made about the importance of the Cairngorms fungi in a national or international context. To compound this, there is a lack of expertise to undertake fieldwork and to identify important species.

Fungi are found throughout the area, and the limited work done to date suggests that semi-natural pine woodland within the Cairngorms supports the largest number of interesting or important fungal species. Semi-natural pine forest supports at least 87 species listed in the Provisional British Red Data List and a further 34 species either rarely recorded in Scotland or recently recorded for the first time. However, compared with similar areas elsewhere in Europe, wood-decomposing fungi are under-represented in Scottish pine forests, due to lack of fallen and standing dead wood. Birch and aspen woodlands are also home to many scarce species.

The high mountain plateaux contain populations of arctic-alpine species, including 29 species of conservation concern. For slime moulds (myxomycetes), 21 snowline species (2 globally rare) are recorded. Sixty species are known from the Alps, and the differences may be associated with the removal of high-level montane forest and scrub in Scotland. The snowline myxomycetes would be particularly vulnerable to climate change, as they require a minimum of three months of snow-lie to become established.

Old, semi-improved grasslands are an important habitat in Scotland as a whole. There are 32 grassland fungi species of conservation concern in the Cairngorms with waxcaps being perhaps the rarest and most well known. Based on a recent assessment of their unfavourable status across Europe, it is likely that some Cairngorms grassland sites are significant in European terms.



Photo: Jimmy Mitchell.

2. NATURAL RESOURCES...cont

Some species are thought to be of global significance, but the lack of much work done elsewhere makes it difficult to put comparisons of fungal importance into a broader context. Many fungi grow in association with a host plant or tree and are therefore bound to particular habitats. The management of these habitats can influence fungal diversity dramatically, but it is often unclear in what way. Patterns of fungal diversity and community composition are mostly unexplained by the variables measured.

The fruiting body of mycorrhizal fungi only appears occasionally, and for the rest of the year (or several years) there may be no outward sign that a particular species is present. Under such circumstances, it is better to manage or conserve a habitat, rather than try to 'protect' a single fungal species. It is believed that many fruiting bodies appear as a result of stress, which may not always be a good sign.

Trends and Observations

- Baseline data, necessary for illustrating trends in population or range size, is not available for fungi. It seems likely that new species and new sites for rare species will be found, as focused fungal surveys gradually expand our knowledge to reflect true distribution patterns;
- Recent work has begun to assess the status of some rare fungi, particularly in designated sites. Without exception, it is clear that under-recording is a significant issue.

Monitoring

Most of the Park has not been surveyed for fungi and professional survey work is carried out on an occasional contract basis. In order to provide useful baseline information, consistent monitoring procedures need to be developed. Some national monitoring is now taking place for Biodiversity Action Plan and other threatened species.

2.5.4 Vascular Plants

Vascular plants are complex plants with conductive tissue, which means they can grow to larger sizes and support themselves more than lower plants. By virtue of the latitude, climate, altitude and varied landforms, the Cairngorms is the second richest area in Britain for scarce boreal and arctic-alpine vascular plants. For many vascular plants there is good 'presence or absence' distributional data in the Cairngorms, but a distinct lack of data on numbers or trends in plant populations for all but the most studied of rare species.

Although one in five of the Cairngorms vascular plant species are rare, relatively few have their British centre of distribution here. This is because most rare mountain plant species are not found on granite (the bulk of the Cairngorms), but on other rock types, which produce richer soils for plants. The vegetation of the Cairngorms strongly reflects its wide altitudinal range, diversity of glacial and peri-glacial landforms and its underlying geology. One legacy of the last glaciation is that Scotland has an impoverished native flora.

Of the 1,117 vascular plant species native to Scotland, almost three quarters (73 per cent) have been recorded in the Cairngorms area, along with 213 non-native species. The flora of the Cairngorm Mountains themselves is numerically low, comprising about 280 vascular plant species in all.

Woodland Vascular Plants

Historically, most of the land below the treeline in the Cairngorms was occupied by downy birch, Scots pine and rowan. Other scarcer species such as alder, oak and aspen were, and still are, an important component of native woodland areas in the Park. The understorey of these native woodlands is often dominated by heather or blueberry heath or by juniper scrub. Rarities such as creeping lady's-tresses, one-flowered wintergreen and twinflower are mostly found in pinewoods.



Mountain and Moorland Vascular Plants

Prostrate heath, dwarf heath, grass and moss heaths and rock and scree communities dominate the alpine or mountain vegetation in the Cairngorms. Blanket bog occurs on flatter areas and is dominated by species poor vascular plant (heather and grass) and moss plant communities. Destruction of original forest cover and muirburn created the moorland habitat present today at middle to low altitudes. Various species of grass and sedge, such as deer grass and stiff sedge, dominate some heathland areas, alongside the familiar heather and crowberry communities.

Heather-dominated heath communities also occur above the treeline (but in a dwarf form), and these tend to be replaced by other dominant species such as moor matgrass, blueberry and bog wortleberry, alongside deer grass and rushes in wetter areas. Above the limit of heather, exposure and snow-lie determine the occurrence of species. In the high altitude bare rock and rock debris dominated areas alpine species occupy various niches. Three-leaved rush, least willow, dwarf cudweed, moss campion, mountain avens, rock sedge, yellow mountain saxifrage and hermaphrodite crowberry occur. Wet flushes and calcareous intrusions may hold rarities such as alpine milk vetch, alpine saw-wort, alpine meadow-rue, alpine cinquefoil, yellow mountain saxifrage, mossy saxifrage and starry saxifrage.

Wetlands and Water Vascular Plants

There are few still water bodies of any size in the Park that support rich vascular plant communities. Marsh clubmoss, slender pondweed and spring quillwort are notable rare species found in open water and on a few loch shores in the Cairngorms. Non-native ranunculus has become established in the River Spey and now is causing problems for angling interests and threatened freshwater pearl mussels.

Various types of wetlands occur in the Park including fens, marshes, swamps and reedbeds. Some sites, such as the Insh Marshes, are internationally important for their vascular plant communities. Water levels and active management, such as grazing, largely determine the vegetation composition of these Cairngorms wetlands. At least a third of the UK's native vascular plants are associated with fens and other wetland habitats. Some wetland habitats are less species rich and tend to be dominated by one or two plant species, such as reedbeds dominated by Phragmites reeds.

Farmland and Grassland Vascular Plants

The grasslands that have formed in the deforested lowland areas are largely composed of small, relatively unpalatable species. The large palatable species, such as globeflower, melancholy thistle, wood cranes-bill, blue alpine sow-thistle and wild

2. NATURAL RESOURCES...cont

angelica, have mostly been pushed back to steep areas or cliff where richer soils are present, but grazing animals are not. Unimproved hay meadows are rare, but important fragments do occur alongside fenced rivers and burns. Grazing pressure and nutrient status are the dominant factors affecting grassland communities in the Park.

Rare plants occur in a wide variety of vegetation types, including woodland, mires, heaths, grasslands but particularly alpine habitats above the treeline (including cliffs and rocky outcrops), where they are usually confined to small discrete locations.

Trends and Observations

- There is no reliable published information on trends in higher plant populations in the Cairngorms. The two national plant atlases provide a valuable picture of the distribution and trends nationally, but they are not accurate at the local level because of missing data.

Monitoring

Half of the Park has been mapped using the National Vegetation Classification scheme. Approximately a quarter of these National Vegetation Classification mapped areas lie above the treeline, where most rare species occur. Locations of nationally rare plants have been collated and used to review their status in 1995-1997 by surveying all known sites to set a baseline against which future trends could be evaluated. Outside designated sites, what little survey work that there is has been carried out by amateurs, most of whom do not publish their findings. Some national monitoring takes place for nationally rare and Biodiversity Action Plan species.

2.5.5 Information Gaps – Plants

- Baseline data for bryophytes, lichens and fungi;
- Higher plant population trends.



3. CULTURAL RESOURCES



Photo: David Gowans.

3. CULTURAL RESOURCES

3.1 Introduction

The cultural resources of the Park include a wide range of physical as well as less tangible resources. They all reflect the past and current lives of people living in and enjoying the area.

Culture and cultural heritage is essentially about the relationship between people and place in the Cairngorms over time. People and place continue to interact to create the rich cultural resource that ranges from the landscape and built environment to the artefacts and traditions of local communities.

The National Parks (Scotland) Act 2000 defines cultural heritage to include 'structures and other remains resulting from human activity of all periods, language, traditions, ways of life and the historic, artistic and literary associations of people, places and landscapes'.



To reflect these diverse cultural interests, this chapter is divided into four broad sections, which in practice include a degree of overlap:

- The Historic Environment;
- The Built Environment;
- Culture and Traditions;
- Material Resources.

While there is a general awareness of many sites or features of cultural heritage interest,

there is little systematic identification and recording across the Park. The information presented in this chapter draws together the best available data, but it also highlights the need for more audit work to develop a fuller picture of the cultural resources of the Park.

3.2 The Historic Environment

The Natural Resources chapter of this report identifies the physical characteristics of the landscape and its role in shaping the identity of the Park. The landscape is also shaped by the cultural history of the area and the interactions of people and land-use. The landscape provides a context in which to consider the cultural heritage of the Park. It contains a record of land-uses, settlement history, built heritage and social development; and it influences our understanding and experience of the cultural heritage of the Cairngorms.

This section considers the activities that have shaped the working landscape of the Cairngorms which we see today, and considers some of the traditional skills and products associated with the land.

3.2.1 Historic Landscapes

Landscape Character

The unique and special character of the area derives from the combination of the wild land character of the plateaux and mountains; the mix of upland management by large sporting estates and lowland agriculture; the extensive woodland mosaic; and the distinctive vernacular building traditions of the 19th century.

Historic Land-Use Assessment

'The Historic Landscapes' of the Cairngorms, published in 2001, is based on the Historic Land Use Assessment undertaken by the Royal Commission on the Ancient and Historical Monuments of Scotland and Historic Scotland. This report identifies general patterns of land-use

at various historical periods; indicates the relationship between land-use change and the distribution of archaeological monuments; outlines the history of settlement in the area; and discusses the human influences shaping the landscape from the earliest time to the present.

Historic Landscape Development

The historic development of the landscape and the surviving heritage can be grouped into three main periods: prehistoric monuments; pre-improvement remains mostly of the 17th and 18th centuries; and improvement remains, spanning the late 19th century to the present.

The Prehistoric Landscape

Prehistoric monuments survive largely beyond the fringes of the pre-improvement and improvement landscape and represent the period of highest density of settlement within the Park. Evidence of Mesolithic hunter gatherers of 5,000BC has been recorded in Upper Deeside; later Neolithic ritual and funerary monuments, such as chambered cairns and stone circles, have survived on some of the low-lying ground; as well as some cup and ring markings on boulders.

Photo: David Gowans.



In the Bronze Age, 2,000BC, burial monuments were built as large round cairns and evidence of settlement in the form of hut circles became more common. This building tradition is thought

to have continued until the early centuries AD. Surrounding stone clearance heaps and field banks provide some of the earliest evidence of cultivation. From about 700BC a range of settlements occurred alongside hut circles, suggesting a hierarchy of sites that lasted through the Iron Age to the middle of the first millennium AD. The enclosures included timber stockades, the majority of which are only visible as crop-marks but also included the fort at Dun-da-lamh, Laggan.

Little is known about settlement during the first millennium AD, but surveys and excavations have established that some buildings of a sub-rectangular plan date to the 7th and 11th centuries. Cemeteries have been discovered as both earthworks and crop-marks, as well as sculpted stones.

Pre-Improvement Landscape

The agricultural improvements swept away a system of multiple tenancy farms, within which houses were usually clustered together in townships, with ridged field systems, sometimes bounded by a head dyke and grazing grounds beyond.

The remains of these field systems and settlements are generally sited along the floors and sides of the main valleys and are the most extensive archaeological remains in the Park. They survive best in areas used for rough grazing during the improving period. The scatter of sites at higher altitudes is largely shieling huts and associated with summer grazing. This pattern reflects a peak in the rural population which declined in the 19th century with changing patterns of employment, land-use and increasing industrialisation.

While Pre-improvement remains survive in niches created by subsequent land-use regimes, medieval rural settlement appears to have been located in areas which have been most intensively

3. CULTURAL RESOURCES...cont

used. Little evidence survives beyond the ruins of castles, towers and churches associated with this period, although further research could reveal more information.

Landscape of Improvement

The present character of the Park's landscape was largely established during the late 18th and 19th centuries. In the agricultural areas regular fields were laid out, farms amalgamated into larger units and steadings replaced. New cropping regimes, underground drainage and liming were introduced to increase yields. Shelter belts and decorative clumps of trees were planted adjacent to policies created around grand houses. In the upland areas, settlements were depopulated to make way for sheepwalks and shooting estates. The general character of rural settlements, farm steadings, cottages, estate buildings and planned villages was established. Stone was increasingly used and distinctive architectural features came to characterise the locality or estate. The expansion of the railway enabled local markets to develop as well as supporting the growth of the tourism market and the building of large hotels.

Contemporary Landscape and Land-use

The current pattern of land-use was established during the Improvement period of the mid-18th to mid-19th centuries. It can be characterised in three zones: a lowland zone comprising settlements, enclosed arable farming and grazing; an upland zone of moorland and rough pasture; and an intermediate zone of woodland and forestry.

The lowland zone has been the most intensely occupied and cultivated of the three, leaving fewer traces of earlier cultures. The full extent of the archaeology beneath the ground surface is not known, although aerial photography and excavations continue to reveal some of this resource.

The uplands were never intensely cultivated, and their current use for grazing and sport has preserved the relatively small evidence of earlier periods and peoples. While there is little evidence of human impact on the highest ground because of the altitude, isolated finds indicate that early people travelled through and hunted in the Park area at least 7,000 years ago. The distribution of shieling huts over 800 metres in altitude also demonstrates that this upland zone continued to be significant in the post-medieval period.

Trends and Observations

- The historic landscape has been vulnerable to insensitive development pressures and management, including some forestry and agriculture practices;
- There is currently no statutory protection for historic landscapes;
- Little information is available about the condition of the historic landscape, and there are no mechanisms for monitoring its status and identifying landscapes and features at risk;
- There is increasing recognition of the opportunity to increase public awareness of the significance of historic landscapes through education, interpretation and actively involving residents and visitors;
- Increasing interest in integrating policies and practices aimed at protecting and enhancing the natural and cultural heritage including historic landscapes with land management practices and incentives.

Monitoring

The Royal Commission on Ancient and Historical Monuments in Scotland, Historic Scotland and Scottish Natural Heritage have been developing approaches to historic landscape assessment. There is not yet any full assessment or ongoing monitoring of the historic landscape of the Park.

3.2.2 Designed Landscapes and Gardens

Gardens and designed landscapes form a relatively small part of the Park's landscape. The majority of the designed landscapes identified within the Park are country house grounds and policies. Components include woodlands, parklands, meadows, water features, glass houses, pinetums, kitchen gardens, formal gardens, avenues, drives and approaches, architectural features, statuary and vistas.

'The Inventory of Gardens and Designed Landscapes in Scotland', published by the predecessor bodies to Historic Scotland and Scottish Natural Heritage in 1987, lists nine gardens and designed landscapes in the Park. Within the Aberdeenshire area of the Park there are four entries (Balmoral Castle, Candacraig House, Glen Tanar and Invercauld). In the Highland area there are five entries (Aultmore, Castle Grant, Doune of Rothiemurchus, Inshriach Nursery and Kinrara). With the exception of Inshriach Nursery, which is a specimen nursery, all the other Inventory gardens and designed landscapes in the Park relate to country houses. Some were designed by professional designers and architects, others by owners and amateurs. A number of the country house gardens and policies in the Park show evidence of several layers of landscape relating to different periods of development.

While all the Inventory sites are in private ownership, several are open to the public on certain days or by appointment, either through

Scotland's Gardens Scheme, or through separate arrangement.

Trends and Observations

- The condition of the gardens is usually closely entwined with the condition of the main house;
- Multiple ownership can hinder a co-ordinated approach to the management of a unified landscape design;
- Disease, particularly in the elm population (for example the avenues of golden elms at Aultmore), is a significant problem.

Monitoring

There is no regular framework for monitoring the condition of designed landscapes and gardens.

3.2.3 Land Ownership and Management

The working landscape that we see today largely reflects changes which arose as a result of the Agricultural Improvements in the late 18th and early 19th centuries and the development of large sporting estates. These had a profound influence on land tenure and management, which moved away from community-based forms of tenure and management to larger scale farming and from a focus on subsistence to productivity to feed growing populations. More recent policy to deliver food security and now current European policy has continued to influence land ownership and management. The pattern of land ownership and tenure in the Park area is distinctive to Highland Scotland. A significant proportion of the land is owned by



3. CULTURAL RESOURCES...cont

large estates with interests including agriculture, woodlands and sport. This is reflected in the extensive moorland and rough grazing. Crofting continues in Badenoch and Strathspey where records show there to be 105 crofts in total. Their average size of 40 hectares is much larger than the crofting units further north and west in Scotland. They are largely owner occupied (70 per cent compared with the crofting average of 20 per cent) and are often held in conjunction with other owner occupied or tenanted farmland. The area only has a small number of common grazings, and as such few of the current occupiers work on a collective community or traditional township basis.

Recent developments in land ownership have seen an increasing role for conservation charities and organisations, some of which have purchased large estates such as Mar Lodge and Abernethy. There is also an increasing trend towards community involvement and ownership of land following the Scottish Executive's Land Reform agenda.

Trends and Observations

- Estates and farms have diversified their activities into recreation, tourism and conservation sectors;
- Livestock farming continues to predominate;
- Farms have increased farm size and traditional farm buildings have deteriorated or been converted to other uses;
- Changes in farm support such as the Single Farm Payment are likely to see shifts in management and ownership patterns emerge;
- Crofting has become restricted both in numbers and distribution.

Monitoring

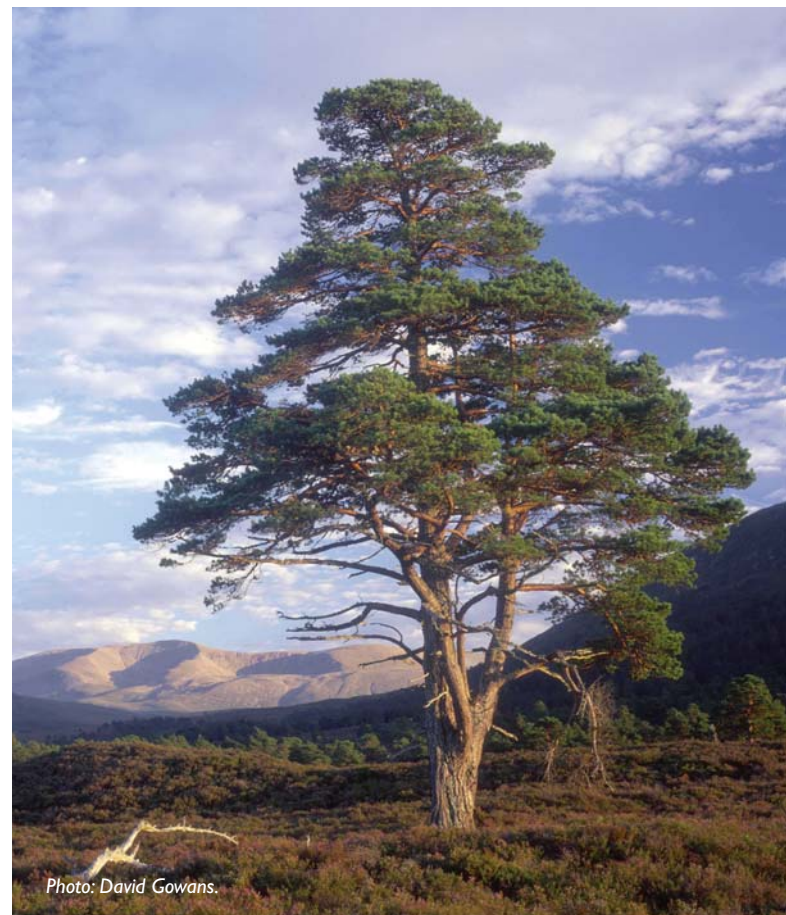
Land-use may be addressed through the annual agricultural census or the land cover map series. Field boundaries can also be monitored through the land cover map series. Buildings can be monitored through Historic Scotland, and archaeological

sites by local authority archaeological services and the Royal Commission on Ancient and Historical Monuments in Scotland.

3.2.4 Forestry and Woodland

Human involvement in woodlands has developed over time alongside agriculture and the associated settlements. From early time areas were cleared for cultivation in the valley bottoms, with trees also providing timber for housing and fuel. There is evidence of sustainable management practices and skills being developed as part of an integrated approach to land management involving a regulated system of grazing and woodland husbandry.

By the mid-20th century, woodland cover in the Cairngorms had reached its lowest level with the extensive felling caused by the two world wars. The need for reforestation was recognised by governments, the Forestry Commission and landowners. Extensive reforestation, principally through planting, took place in the 40 year period



up to 1990. Species were planted according to soil type, with the more productive non-native species such as Sitka spruce and larch on the better land in the south of the Park, and Scots pine in the poorer soils of Deeside and Strathspey.

Historical impacts of woodland development on archaeological sites and historic buildings are recognised, with their contribution to the wider cultural heritage and historic landscape. Modern and historic woodland activity is interpreted at a number of sites in the Park area such as the Forest Enterprise centre at Glenmore, the Royal Society for the Protection of Birds centre at Abernethy and the Highland Folk Museum near Newtonmore.

Trends and Observations

- There has been an increasing recognition of multi-functional forestry, following the focus on timber production in the early 20th century;
- There are increasing opportunities for community ownership and involvement in woodlands.

Monitoring

The monitoring of forestry and woodlands is the responsibility of the Forestry Commission Scotland and Scottish Natural Heritage. Geographical Information System datasets and the land cover map series (which was designed to provide detailed information about the habitats and landscape features of the UK countryside) are of value.

3.2.5 Sporting Management

Game has been hunted in the Cairngorms since prehistoric times with archaeological evidence dating back 7,000 years. There is documentary evidence of large-scale hunting from the 12th century onwards. Deer stalking and game bird shooting have long been an important element of the culture and economy of the Cairngorms,

together with fishing, particularly for salmon.

A number of factors combined in the first half on the 19th century to result in the development of the fieldsports culture which continues today. Lairds and wealthy sporting tenants built or upgraded mansions, castles and shooting lodges such as Mar Lodge, Invermark, Balmoral and Invercauld. The status associated with this type of sport for members of the late



Photo: David Gowans.

19th century elite encouraged participation.

This fashion was reinforced by the purchase of the Deeside estate of Balmoral by Queen Victoria and Prince Albert following their 1848 holiday there. Thus, the heyday of the sporting estates in the Cairngorms came into being with their defining contribution to much of the landscape and land-based culture of the Cairngorms.

Sporting estates remain important to the economy, environment and culture of the Park today. The Game Conservancy Trust estimates that there are 44 sporting estates with at least two sporting activities in the Park, with between 80 and 90 per cent of the Park having some form of sporting interest.

3. CULTURAL RESOURCES...cont

Trends and Observations

- Sport has continued to be a major influence on the landscape and culture of estates;
- Sport has become more accessible to a greater part of the population and is no longer as dominated by lengthy leases of large beats or shoots;
- There is now greater opportunity for individuals to take part in sport, including fishing or shooting by the day, the rod or gun.

Monitoring

Monitoring of fieldsports is the responsibility of the respective national organisations. In particular the Deer Commission for Scotland and the Game Conservancy Trust hold valuable data. Individual estates also monitor numbers of game and fishing stocks.

3.2.6 Food and Drink

The area's food production potential is limited by the soils, climate and terrain. While agricultural production is livestock oriented, with a limited range of finished saleable product of local origin, good quality meat is a particular feature of the area.

A survey undertaken in 2004 identified 21 food and drink processors who are based in the Park area. These included seven butchers and six distilleries, but also a brewery, fish farm, game dealer, smoke house, sweet manufacturer and two mineral water bottlers. Most sell directly to the public.



Photo: Highlands and Islands Enterprise.

Over the last 25 years there has been a significant increase in the worldwide interest and market for single malt whiskies. With Speyside said to be home to more than half of Scotland's distilleries, whisky production is strong in the Cairngorms area. There are currently seven whisky distilleries operating in the Park, a number of which are of world renown as good quality single malts, while others contribute to premium blended whiskies.

Trends and Observations

- There is an increasing interest amongst Cairngorms visitors and food producers in local or indigenous food and drink products;
- Over the last 25 years there has been a significant increase in worldwide interest in and the market for single malt whiskies.

Monitoring

There is no standard monitoring undertaken in this area.

3.2.7 Traditional Land-based Skills

There is a range of traditional skills that have been key to the development of the historic landscape, such as dyking and thatching, but which in recent years have declined. Dyking and thatching both have considerable historical relevance to the Cairngorms, and have professional registers of qualified practitioners. At present there is only one professionally qualified dyker listed in the Park and no thatcher.

Industry lead-bodies, when considering the development of a rural skills Scottish Vocational Qualification focusing on the new skills and specialisations in countryside management, conclude that there is little provision of these skills locally. Additional specialist training would need to be introduced.

Voluntary conservation bodies such as the British Trust for Conservation Volunteers are



heavily involved in rural skills through their conservation work. They list 170 organisations with whom they are involved in Scotland, although only two of these are in the Park.

Trends and Observations

- Modern technology has meant that many of the traditional rural skills have become lost, and the associated knowledge has been forgotten;
- There is limited or niche market demand, which in many cases is now constrained by the cost and availability of craftsmen with knowledge of traditional rural skills.

Monitoring

The monitoring of land-based and construction skills are the responsibility of the Sector Skills Councils responsible for land-based and construction skills, Lantra and Construction Industry Training Board respectively.

3.2.8 Information Gaps – Historic Environment

- Cultural Heritage audit;
- Historic Environment audit;
- Historic Landscape Assessment.

3.3 The Built Environment

3.3.1 Introduction

This section considers the built heritage, including archaeology, buildings with their associated gardens and settings, and settlements.

The full extent of the historical physical resource within the Park has never been quantified. The National Monuments Record of Scotland holds information relating to some 4,778 individual sites within the Park as at February 2005, but this is unlikely to represent the total number of structures. These records are not all derived from comprehensive area surveys, and the figures include monuments, archaeology, and other structures. Most sites remain outside the various statutory systems that have been set up to protect the most important elements, but many are still significant.

This section devotes more space to statutory sites because more is known about their number and condition. Some elements, such as historic field patterns, cannot be easily quantified and protection through designation is unlikely to be appropriate. Further research is required to identify and record non-statutory sites.

Table 3.3.1a: Historic built environment – national records in Park

| Designation | Former Tourist Board Areas | | | Total |
|--------------------------------------|----------------------------|------------------|-----------------------|--------------|
| | Aberdeen and Grampian | Angus and Dundee | Highlands of Scotland | |
| Listed Buildings | 247 | 18 | 159 | 424 |
| Scheduled Ancient Monuments | 31 | 2 | 27 | 60 |
| Gardens and Designed Landscapes | 4 | 0 | 5 | 9 |
| National Monument Record of Scotland | 2,824 | 235 | 1,719 | 4,778 |
| Total | 3,106 | 255 | 1,910 | 5,271 |

Source: Historic Scotland and The Royal Commission on Ancient and Historical Monuments in Scotland 2005.

3. CULTURAL RESOURCES...cont

Table 3.3.1b: Historic built environment – data sources

| Resource | Data Source |
|---|--|
| Listed Buildings | Historic Scotland |
| Scheduled Ancient Monuments | Historic Scotland |
| Gardens and Designed Landscapes | Historic Scotland / Scottish Natural Heritage |
| Buildings at Risk | Scottish Civic Trust (on behalf of Historic Scotland) |
| Sites and Monuments Record (Aberdeenshire, Angus and Moray) | Archaeology Service, Aberdeenshire Council |
| Sites and Monuments Record (Highland) | Archaeology Unit, Planning and Development Service, Highland Council |
| National Monuments Record of Scotland | Royal Commission on the Ancient and Historical Monuments of Scotland |

3.3.2 Archaeological Sites and Scheduled Ancient Monuments

A large and diverse range of archaeological evidence for past human activity survives within the Park. The vast majority of this legacy remains unrecorded in any detail, and the potential for future discoveries is enormous.

The distribution of recorded sites shows that settlement has concentrated in the major glens and straths. This lower-lying ground is also more subject to change as the result of 18th-19th century settlement patterns, 'Improvement' forestry and farming methods and modern crops and mechanisation. Therefore the potential for upstanding archaeology here is less.

The higher areas of rough grazing and managed moorland provide better conditions for archaeological survival. However, fewer structures are likely to have been built here in the first place. Relatively few structures have been discovered from the pre-mediaeval period. However, there is a widespread distribution of artefacts across all zones of the Park, from prehistoric stone tools in the lowland areas to flint arrowheads on the Cairngorm plateau. Mesolithic evidence was found recently at Mar Lodge Estate, indicating at least 7,000 years of use of the mountains for hunting.

Scheduled Ancient Monuments

Scheduled Ancient Monuments are nationally important sites, buildings and other features of artificial construction. There are 60 Scheduled Ancient Monuments recorded within the Park covering six of the seven periods recorded (there are no Roman remains). They include three examples of chambered burial cairns and associated stone circles thought to be late Neolithic; examples of prehistoric domestic and defensive remains such as the unusually massive ramparts of Dun-da-lamh Fort near Dalwhinnie; Pictish remains such as the 8th century Loch Kinnord Pictish Stone; and industrial remains such as the mid-19th century ironstone mine-crushing mill at the Well of Lecht.

All Scheduled Ancient Monuments are assessed against a standard of national importance. A number of the finest examples of Scheduled Ancient Monuments in the Park are in the care of Scottish Ministers. These include:

- Corgarff Castle – a tower house built as a hunting-lodge in the mid-16th century in a



wild and remote location to the south of the River Don and converted into a Hanoverian garrison in 1748;

- Glenbuchat Castle – a ruined Z-plan tower built by John Gordon in 1590 as a mock-military country house;
- Bridge of Dee, Invercauld – a remarkable 6-arch, hump-backed, rubble bridge built in 1752 by military engineer Major Edward Caulfield to link Blairgowrie with Corgarff and Inverness;
- Ruthven Barracks, by Kingussie – prominently sited on an artificially scarped hill guarding the flat floor of the Spey valley, this is the best preserved of the four infantry barracks built by the Hanoverian government after the Jacobite rising of 1715 and is also a listed building.

Trends and Observations

- Apart from natural decay, one of the main threats to the archaeology is new development in the form of housing and roads;
- Erosion caused by increased visitor numbers and associated recreational activities may have a severe and detrimental impact on some sites;
- Disturbance from land management activities including forestry is also a threat, particularly where the archaeological interest is unknown or unrecorded.

Monitoring

All Scheduled Ancient Monuments are visited as part of a rolling programme of condition monitoring by Historic Scotland, undertaken on a three to five year frequency.

3.3.3 Built Heritage – Architectural and Historical Interest

The Park contains 424 buildings which are protected through the listing system and The Royal Commission on Ancient and Historical Monuments holds 1,409 records for architectural sites.



The two national bodies responsible for the recording and protection of the built heritage, The Royal Commission for Ancient and Historical Monuments and Historic Scotland, hold a significant number of site records in relation to the Park. However, these records are likely to represent a fraction of the overall number of historic building sites, and there are limitations to the consistency and quality of the data held. Similarly local authorities' Sites and Monuments Records hold a variety of site information.

Types of Building

The Royal Commission for Ancient and Historic Monuments and Historic Scotland are working together on a joint approach to the classification of architectural records and listed building types. High quality examples of some of the principal building types are located in the Park:

- **Residential** – Castle Grant, a 15th-16th century tower house enlarged and re-cast as a severe classical mansion for Sir Ludovick Grant by the architect John Adam in 1765;
- **Religion** – Roman Catholic Church of Our Lady of Perpetual Succour, Chapelton, Braes of Glenlivet, built by Edinburgh architect John Kinross for the Marquis of Bute in 1896-1897;
- **Funerary** – Mitchell-Forbes Mausoleum, Strathdon Parish Church, 1829, probably by the Aberdeen architect Archibald Simpson for Mary Forbes, wife of Daniel Mitchell;

3. CULTURAL RESOURCES...cont

- **Public** – Speyside Home, The Square, Granttown-on-Spey, an orphanage of 1824 endowed by Lady Grant of Monymusk;
- **Farming/Fishing** – Ballantruan, Kirkmichael, Moray, a mid-18th century farmhouse, notable for its panelled interior;
- **Defence** – Ruthven Barracks near Kingussie, constructed after the 1715 Jacobite rebellion to house Hanoverian soldiers;
- **Industrial** – Dalwhinnie Distillery and Bonded Warehouse, circa 1890, with pagoda-roofed malt kilns typical of architect Charles Doig;
- **Transport and Communications** – Broomhill Bridge over the River Spey near Nethy Bridge, built in 1894 by the Kingussie engineer J Alexander Mackenzie, is described by Historic Scotland as the finest surviving timber bridge in Scotland.

Numbers of Buildings

In the Park 424 buildings or structures of special architectural or historic interest are protected under the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997. The lists of listed buildings are compiled and maintained by Historic Scotland on behalf of Scottish Ministers and administered by the local planning authorities. There are over 47,000 listings throughout Scotland.

Building Characteristics and Styles

The area covered by the Park is large, and the distinctive building traditions and settlement distribution were frequently determined by local conditions of geology (materials) and land-use. While it is not possible to detail every local characteristic throughout the whole area, some general trends are apparent.

A large proportion of structures relate to farming and land-use activity. The agricultural improvement of the mid to late 18th and 19th centuries consequently had a significant impact including the enclosure of fields; provision of



Photo: Paul Tomkins, VisitScotland/Scottish Viewpoint.

drainage; amalgamation of smaller farms; construction of new farmhouses and steadings; improved communication routes to carry produce; depopulation of large areas to create sheepwalks and hunting/shooting estates; new planned settlements, enlarged or replacement churches; and enlargement or replacement of old tower houses with new mansions. Such was the impact of the Improvement era that very few structures of pre-18th century date survive, apart from some of the major houses such as Muchrach, Braemar and Abergeldie Castles.

Classical country houses on the Anglo-Dutch model of plain piend (or hipped) roofed boxes are relatively rare within the Park, but the largest and most 'elegantly austere' is the four-storey, ashlar-fronted north block at Castle Grant, designed by John Adam in 1753. Forty years later, Adam's brothers, Robert and James designed Balavil House (near Kingussie) in a more sophisticated classical style for the author James Macpherson.

Until the late 19th century, the transportation of heavy building materials over long distances was difficult and expensive. Consequently local materials, such as earth, granite and quartz, have been widely used, even in the grandest of buildings. Wood was widely available, and many structures including game larders and seasonal workers cottages, such as Mar Lodge and the station at Ballater (1886), were faced in timber. Throughout the area, rustic tree-trunks have often been used to picturesque effect as supports for porches, overhanging roofs, verandahs, and balconies. Following the installation of the

prefabricated ballroom at Balmoral (purchased by Prince Albert after the Great Exhibition), corrugated-iron also gained in popularity. Recreations of 19th century, vernacular, thatched cottages can be found at the Highland Folk Park in Kingussie.

The purchase of the Balmoral Estate by Queen Victoria and Prince Albert in 1852, and the subsequent arrival of the railway, had a major impact on the whole area, heralding the age of tourism and the sporting estate. The romantic Balmoral style spread through neighbouring

estates, such as Invercauld, where the old house was remodelled with crowstepped gables and pepperpot towers in 1875. At a more modest scale, the villas of Braemar and Ballater also adopted baronial characteristics, together with hotels, shooting lodges, entrance lodges, banks and police stations.

There is a need for improved understanding and recording of the distinctive characteristics and styles across the Park to inform future material and skill requirements and contribute to design guidance.

Table 3.3.3a: Number of listed buildings in the National Park

| Category | Former Tourist Board Areas | | | Total |
|--------------|----------------------------|------------------|-----------------------|------------|
| | Aberdeen and Grampian | Angus and Dundee | Highlands of Scotland | |
| Category A | 16 | 1 | 14 | 31 |
| Category B | 121 | 6 | 88 | 215 |
| Category C | 110 | 11 | 57 | 178 |
| Total | 247 | 18 | 159 | 424 |

Source: Historic Scotland 2005.

Listing Categories and Examples

Listed Buildings are divided into three categories to identify the level of importance of an individual property. These are described by Historic Scotland as:

Category A: Buildings of national or international importance.

For example: Aultmore House and garden pavilions, terrace walls and walled garden at Nethy Bridge. Built from 1912-1914, the house was designed in the late 17th century classical style and was furnished with every modern convenience of its day.

Category B: Buildings of regional or more than local importance.

For example: Tomintoul Parish Church. Designed by Thomas Telford in 1826, this building has been altered significantly, and the alterations reduce the interest to Category B.

Category C(S): Buildings of local importance.

For example: 127 and 129 High Street, Grantown-on-Spey. This pair of modest cottages, dating from around 1800, is listed for their contribution to the overall plan of Grantown, laid out by the local laird, Sir Ludovick Grant in 1765.

Buildings At Risk

The Scottish Civic Trust maintains a database of Buildings at Risk on behalf of Historic Scotland. 'At risk' is defined as:

- Vacant with no identified new use;
- Suffering from neglect and/or poor maintenance;
- Suffering from structural problems;
- Fire damaged;
- Unsecured;
- Open to the elements;
- Threatened with demolition.

3. CULTURAL RESOURCES...cont

Table 3.3.3b: Buildings at risk in the National Park

| Former Tourist Board Area | Name | Listed | Degree of Risk |
|---------------------------------|--|----------|----------------|
| Aberdeen and Grampian Highlands | Great North of Scotland Omnibus Depot, Braemar; | B | Low |
| | Aberarder Free Church, Knockan; | C(S) | Low |
| | Derry (shooting) Lodge, Mar Lodge; | C(S) | Low |
| | Victoria (entrance) Lodge, Mar Lodge. | B | Low |
| Angus and Dundee | None | | |
| Highlands of Scotland | 127-129 High Street, Grantown-on-Spey; | C(S) | Low |
| | Braeruthven, near Ruthven Barracks, Kingussie; | Unlisted | Moderate |
| | Croft Cottage, Blaragie, Laggan, near Newtonmore; | Unlisted | High |
| | Garvamore Barracks, Garva Bridge, near Newtonmore; | A | Minimal |
| | Gladstone House, Castle Road, Grantown-on-Spey; | C(S) | Moderate |
| | Glenballoch, near Newtonmore; | Unlisted | Moderate |
| | Glenbanchor, near Newtonmore; | Unlisted | High |
| | House and kennels, Glen Tromie, near Kingussie; | Unlisted | Low |
| | Upper Tullochgrue Farm Steading, near Aviemore. | Unlisted | Moderate |

Source: Scottish Civic Trust 2005.

Trends and Observations

- The use of modern farm practices and machinery has led to the abandonment of a great many 19th century farm steadings and associated vernacular buildings, many of which are not statutorily protected;
- Improvements in access to remote areas have made the more remote shooting lodges less necessary, and a number of these are also under threat;
- Apart from natural decay and dereliction, development pressures constitute a further threat to the historic buildings of the Park.

Monitoring

The condition of listed buildings is monitored by Historic Scotland. 'Buildings at Risk' are monitored by the Scottish Civic Trust, although there is at present no comprehensive system of recording and monitoring for buildings at risk.

3.3.4 Built Heritage – Settlements and Conservation Areas

Settlements in the area consist mainly of hamlets, villages and small towns of up to 2,400 adults. Aviemore, Ballater (planned 1770), Braemar, Grantown-on-Spey (planned 1765), Kingussie (planned 1799) and Newtonmore are the largest settlements in the Park. Of these, Grantown, Ballater, Inverey and Braemar are designated conservation areas.

Trends and Observations

- Quite minor changes, such as changes in glazing or replacement/repair of features in non-traditional materials, can have a cumulative and permanently damaging effect on the quality, appearance, performance and value of the historic building stock in historic settlements;

- New development is not always of the highest design quality, and incremental erosion of the character of an area can take place through poor infill.

Monitoring

Conservation Areas are monitored through the local planning authorities.

3.3.5 Military Buildings and Battlefields

The Park contains a network of castles and barracks with associated roads designed to control the Jacobites in the 18th century as well as battlefields of significance. Several regiments are historically associated with the area.

The Cairngorms military barracks, such as Ruthven and Garvamore, and castles, such as Corgarff, formed part of a network stretching across the Highlands with its centre at Fort George. The network as a whole has international significance as a unique example of an 18th century military control structure over a potentially rebellious area.

The main regiments of historical importance include the Seaforth, Cameron and Gordon Highlanders. In 1994 the Gordon Highlanders

were amalgamated with the Queen's Own Highlanders (Seaforth and Camerons) to become a new regiment for the north of Scotland – The Highlanders (Seaforth, Gordons and Camerons).

Significant battles of the area include: Culblean (1335); Invernahavon (1370); Glenlivet (1594); Cromdale (1690).

Trends and Observations

- Very few stretches of military road are in their original condition, while the military barracks are now in a ruinous state.

Monitoring

There is no standard monitoring undertaken in this area.

3.3.6 Roads, Railways and Drove Roads

The development of villages and towns brought connecting routes and tracks. These formed the basic infrastructure for the transport of animals and trade. They also allowed the cultural assimilation of highland and lowland people as well as the deployment of military personnel. Through the course of time, many of these ancient paths, tracks, drove and military roads have become the template for the roads and



Photo: Highlands and Islands Enterprise.

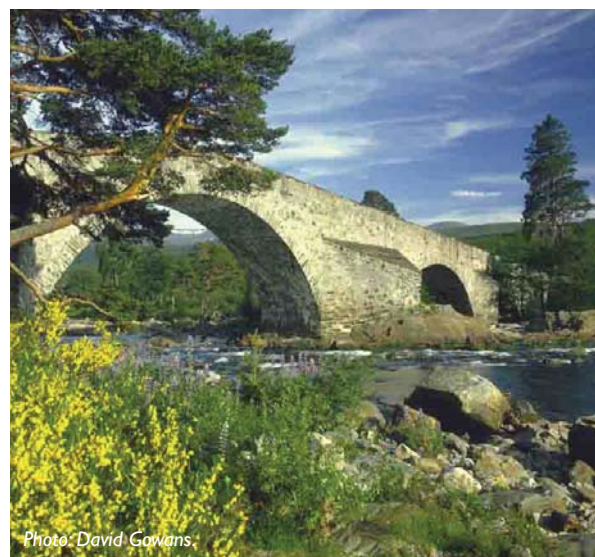


Photo: David Gowans.

3. CULTURAL RESOURCES...cont

railways that we travel on today, while others have been allowed to revert to their natural state and are difficult to see in the modern landscape.

Little information exists about the condition and distribution of roads until 1617 when the Scottish Parliament made the justices of the peace responsible for maintenance of the highways which connected villages and townships. Main routes north of the Tay were said to be impassable by wheeled vehicles in the mid-17th century, and local routes were focused on travel across or between estates.

Traditionally used to drive cattle to markets, drove roads are today more commonly used by long distance walkers. Drove roads commonly used include Lairig Ghru, Lairig an Laoigh, Fungle Road, Firmouth Road and the Capel Mounth. While modern roads tend to skirt around the massif, a number of drove roads, such as the Lairig Ghru and the Lairig an Laoigh, cut through the central massif.

In practical terms it is difficult to distinguish military roads from other roads, as many routes had multiple uses. Some are now the routes of modern roads. Very few stretches of military road are in their original condition. The best example is to be found in the Corrieyairack Pass, where the original construction details can still be clearly seen.

Bridge-building has been fundamental to the accessibility of the area, and this is another of the principal legacies of the Improvement period. There is a particularly rich legacy of military and other mid-18th century masonry bridges including: Sluggan Bridge over the River Dulnain (General Wade, 1729-1730); Old Spey Bridge (1754); Gairnshiel Bridge over the River Gairn (1750) and Old Invercauld Bridge over the River Dee (1753).

The introduction of rail travel to the Cairngorms area in the mid-19th century improved the comfort and speed of travel to such an extent it opened up the area as a fashionable holiday destination. Over the following century rail travel was to prove a vital and popular form of transport within rural areas and was of high social and economic value. However, with the construction of modern-day roads and the increasing use of other forms of transport, a number of these were closed as a result of the Beeching cuts. The Inverness to Perth railway line remains well-used, with several stations along the route.

Trends and Observations

- Some modern roads follow routes previously marked by drove roads and military roads;
- Railway lines which were previously closed, such as The Royal Deeside Line and The Strathspey Railway, have been redeveloped as visitor attractions;
- Former drove roads are now popular walking routes.

Monitoring

There is no standard monitoring of the condition of drove roads.

3.3.7 Information Gaps – The Built Environment

- Survey of non-statutory sites;
- Audit of local building styles and characteristics;
- Comprehensive audit of buildings at risk;
- Condition of designed landscapes and gardens.

3.4 Culture and Traditions

3.4.1 Introduction

By the nature of its geography, centred on a mountain massif, the Park is a meeting point of several cultural traditions influencing language,

folklore and the arts. At times the mountains have acted as a barrier, resulting in significant differences in areas of the Park. However, historical transport routes tended to connect east and west, rather than our present-day north-south focus. This created important links for trade, community contact and cultural interaction.

The resulting diverse cultures reflect the influence of broader areas beyond the Park boundary, as well as the more local influences of the mountains. Many sources of information and data are not available at a Park level or rest outside the Park.

3.4.2 Language

Several dialects of Gaelic were formerly spoken throughout the Park area. This has changed over time, principally in response to external influences with English, Scots and Doric becoming predominant.

The 2001 Census data showed that within the Park, 290 people spoke Gaelic; 649 were able to speak, read or write Gaelic; and 805 people were able to speak, read, write or understand Gaelic. It also showed that the trend of Gaelic decline has almost halved by comparison with the decline of the previous decade of 1981-1991.

Currently Gaelic is taught at Newtonmore Primary School and Kingussie High School. In 2004/5, some 29 primary school children spoke Gaelic, and there were 11 fluent speakers attending the High School. Highland Council records show that there were five speakers registered at Partner Centres, but no Gaelic speakers attending nursery.

The use of Gaelic is therefore very limited and the language must be considered to be at risk in the Park area. Its social value is high in terms of the distinctive heritage of the area, and there are clear links to the promotion of the area's gaelic heritage in the tourism sector.

In a broader cultural context, the influence of Gaelic extends beyond those who speak, read, write or understand the language. This is particularly evident in the number of Gaelic place names throughout the area.

There are other local language traditions within the Park, particularly Doric in the north eastern part of the Park. However, while there are questions about Gaelic in the Census, there are no questions about other local language or dialects. There is therefore little available data regarding these dialects which are of relevance to the Park.

The Doric Festival, which has run for 12 years, is a programme of events in Aberdeenshire (but outside the Park) that celebrates the singing, dancing and story-telling traditions of the North East of Scotland.

Trends and Observations

- By 1850 English was the preferred language of the young, and by 1870 only the very old conversed in Gaelic;
- By early 1840s almost all the indigenous people in Braemar spoke in English;
- Rate of decline in Gaelic speakers reducing.

Monitoring

Other than the decennial Census question there is no standard monitoring.



3. CULTURAL RESOURCES...cont

3.4.3 Folklore Sites and Tales

There is no definitive list of folklore sites and tales relating to the Cairngorms, and information about the resource is therefore dispersed and diffuse. Known sites of interest include holy wells such as those at Inverallan, Kinrara, Chapleton of Deishar Auchnahannet. Notable trees include Craobh an Oir (Tree of the Gold) in the Forest of Mar, and Craobh na Croiche (the Gallows Tree) of Inverey. Well-known folk tales include the Big Grey Man of Ben MacDhui, The Gallows Tree, The Ghost's Testimony and the Magic Bible.

Trends and Observations

- With the ongoing Gaelic revival and increasing popularity of cultural festivals such as Fèis Spè, it appears that folklore and traditional tales and beliefs are becoming better identified and recorded, and therefore increasingly appreciated.

Monitoring

Cairngorms folklore and the distribution of folklore-related sites are not recorded on any systematic basis.



Photo: Paul Tomkins, VisitScotland/Scottish Viewpoint.

3.4.4 Dress

The kilt and its predecessors were once an everyday item of clothing and are still strongly identified with the area, particularly through the Royal Deeside connection.



Photo: David Gowans.

There is no separate or distinctive style of dress associated with the Cairngorms. However, Highland Dress is popular at Highland Games and Gatherings and other social occasions throughout the Park.

Trends and Observations

- The Cairngorms area played a significant role in the formalising of Highland Dress and as such this may be regarded as of national social significance. There is, however, no data with regard to current trends or condition of the resource.

Monitoring

There is no basis for monitoring dress.

3.4.5 Music and Dance

The Park area has made a significant contribution to the development and popularisation of aspects of traditional Scottish music and dance.

Dating back to the 11th or 12th century, the Highland dances of Scotland tended to be highly athletic male celebratory dances of triumph or joy, or warrior dances performed over swords and spiked shield. Today, Highland dance is an important element of the traditional Highland Games throughout the area.

While music and dance are popular at the regional Highland Games throughout the summer, there appear to be few traditional music or dance clubs. The most notable contribution from the Cairngorms area to the tradition of country dancing is the Strathspey. This slow style of dance, with its characteristic 'dotted' rhythm, is uniquely Scottish, and emerged around the middle of the 18th century. There is a growth in festivals and events linked with traditional music and dance, and a number of organisations involved in their support and promotion.

James Scott Skinner (1843-1927) was a prominent figure in Scottish traditional music. Born in the village of Arbeadie in the parish of Banchory-Ternan he became known as the Strathspey King and took the art of Scottish fiddle music to a wider audience and gained much recognition through his playing and his compositions. Credited with publishing some 600 compositions including The Cairngorms Series, Scott Skinner was an exponent of Strathspeys and Reels.

Trends and Observations

- There is no definitive list of music or dance clubs within the Park area, and it has therefore not been possible to identify the extent or the current situation of the resource;
- Traditional music and dance is currently popular at Highland Games and Gatherings.

Monitoring

While there is no formal monitoring of the resource, a number of festivals have been established throughout the Park area.

3.4.6 Games and Sport

The terrain of the Park offers many opportunities for a variety of outdoor games and sport. The area is a popular destination for hillwalkers,

climbers, mountain bikers, as well as those involved in Highland Games, shinty and curling. This section addresses the cultural significance of games and sport, while their relevance to the visitor experience is addressed in the Visitor and Recreation Resources chapter.

Highland Gatherings and Games

These have a long history within the Park. Banned following the Jacobite rebellion of 1745, they were resurrected during the reign of Queen Victoria and are of high social significance as part of the cultural heritage of the Cairngorms. Throughout the summer Gatherings and Games take place across the Park on different weekends. They contribute seasonally to the tourism product of the area and are of moderate economic significance. In an attempt to ensure the next generation of Highland Games' competitors, a junior version of the Braemar Gathering took place for the first time in July 2005.



Shinty

Although now played across Scotland, shinty's roots lie in Badenoch with records going back to the 18th century. Of the 35 shinty teams which are in existence throughout Scotland, three teams are based in the Park at Kingussie, Kincaig and Newtonmore. Since the inception of the game, both Kingussie and Newtonmore have dominated the sport, and it is therefore of high social significance in that area.

3. CULTURAL RESOURCES...cont

In an attempt to reduce the number of match call-offs as a result of bad weather, the Camanachd Association has recently moved to a summer season. It is also hoped that the change will allow greater participation levels, thereby sustaining the number of new players involved in the game. The Camanachd Association has introduced a development programme which concentrates on introducing shinty in local primary schools and creating under 12, under 14 and under 17 levels.

Curling

Although once popular with estate and farm workers, the traditional sport of curling has faced significant decline over the last 50 years with the reduction in the number of farm and other rural workers and the onset of milder winters (and thereby lack of frozen lochs or outdoor curling ponds). There are currently three curling clubs within the Park at Braemar, Carrbridge and Newtonmore.

Hillwalking

With five peaks above 4,000 feet, the Park is a popular destination for walkers of all standards, both residents and visitors to the Park. The Visitor and Recreation Resources chapter contains more detail on outdoor access.

Snowsports

Three of the five Scottish ski centres offering formal skiing and other snowsport activities are based within the Park at Cairngorm, Glenshee and The Lecht. The number of downhill skiers in the Cairngorms area has declined substantially since the late 1980s.

Trends and Observations

- Highland Gatherings and Games remain popular, attracting locals and visitors alike. The need for a new generation of young competitors has been identified;

- Shinty is also seeking to increase participation particularly amongst the young;
- Curling is restricted by the availability of indoor ice.

Monitoring

Participating levels are recorded by the governing bodies of each of the sports, and individual ski centres record the number of ski passes sold.

3.4.7 Crafts

This section considers traditional handcrafts that are relevant to the area and modern craft producers located in the Park. These local craft traditions relate principally to spinning and weaving, while modern crafts are more varied and less derivative of the area.

There was formerly a strong home-working tradition of spinning and weaving in the area, with 1760-1780 seeing the development of spinning machines – the 'jenny', the water frame and finally the 'mule' of Samuel Crompton. The period to 1850 saw a steep increase in handweavers to accommodate the glut of yarn, together with strong resistance to the development of power looms which only gained ascendancy after 1850 in the Highlands. The carder and dyer of wool could also usefully employ his water source for the washing and shrinking (or 'waulking') of woven cloth. Washing and drying tasks were happily relinquished to a local mill, spinning and weaving were guarded in their home setting, but inevitably factories came to encompass all trades.

From 1850 onwards the small Highland mills took in machines and working practices from England which would provide a relatively stable trade for a few generations – until the 1930s, the local mills were widespread and viable. This viability was often reliant on the dual income

derived from farming alongside the mill work and a strong pattern of self-sufficiency. Some small Highland mills grew into large 'vertical' concerns, incorporating all aspects of manufacture. By the 1930s, small mills were dwindling and by the 1950s, very few remained.

There appears to be little or no record of current activity locally or with the relevant craft guilds. There are six craft businesses listed on the Craftscotland website that are located within the Park. These businesses provide a flavour of the range of current activity in the area, including hand-crafted dolls houses, jewellery and pottery. More research is needed to establish the levels of current craft activity across the Park.



Photo: CNPA.

Trends and Observations

- Available data suggests that activity levels in traditional handcrafts such as spinning and weaving are low, while commercial level activity appears to be absent;
- A small number of modern craft businesses are active in the Park area.

Monitoring

Craftscotland has a database of craft producers by area. The Grampian Guild of Weavers, Spinners and Dyers and the Highland Guild of Weavers, Spinners and Dyers maintain membership records.

3.4.8 Gemstone, Pearls and Precious Metals

The Cairngorm area has a history of metalworking and jewellery-making using indigenous resources, particularly the Cairngorm semi-precious gemstone and the freshwater pearl.

In the 17th, 18th and 19th centuries, lead, iron and silver was mined or prospected for in various parts of the Park with few people succeeding. Digging for the Cairngorm stone was popular on Lochnagar and the Cairngorms in the 19th century, and precious stones are recorded in 1795. 'Smoky Quartz' is a traditional gem in the area and was at one time found in the Cairngorms. It ranges from the lightest to darkest of greys, but when it is yellow brown in colour it is called a 'Cairngorm' and is generally faceted and set in jewellery. It has been used in traditional jewellery such as Sgian Dubhs, dirks and brooches.

Scotland is still home to over half the world's stocks of freshwater pearl mussels. At one time freshwater pearl mussels were to be found in as many as 160 Scottish rivers. Today, as a result of a combination of factors, the mussels are in danger of becoming extinct and their locations are closely guarded. The rivers Dee, Spey and South Esk are important habitats for the freshwater pearl mussel.

The modern social value of the Cairngorm stone lies principally in its link to Highland dress, which is of moderate significance. The value of freshwater pearl mussels today is principally environmental.

3. CULTURAL RESOURCES...cont

Trends and Observations

- Surface deposits of the semi-precious 'Cairngorm' are now largely worked out, and local producers of jewellery now use imported stone;
- Pearl mussels are protected.

Monitoring

There is no monitoring of the production of jewellery.

3.4.9 Information Gaps – Culture and Traditions

- Audit of local events celebrating culture and traditions;
- Audit of craft producers;
- Status of languages other than Gaelic;
- Recording of local folklore.

3.5 Material Resources

3.5.1 Introduction

Within the Park material resources are sited at the various museums, heritage and interpretation centres and libraries. They include works such as literature and poetry, written materials, maps and digital and oral materials.

Some relevant material resources outside the Park are held in national collections, and it is not known how much of the overall resource is held in private collections. The location and collections of material resources need further research.

3.5.2 Museums, Heritage and Interpretation Centres and Libraries

The many museums, heritage and interpretation centres and libraries throughout the area include significant local collections. Together they represent the rich diversity of the social and cultural heritage of the area.

There are currently five museums within the Park registered with the Scottish Museums Council. There are a smaller number of museums which are not registered with the Scottish Museums Council.

Many of the museums, such as the Highland Fold Museum, have elements of education and interpretation built into their design, layout and material available. A number of museums on the periphery of the Park, such as The Retreat in Glen Esk, hold collections of significant and direct relevance.

Local public libraries in the Park can be found in Aviemore, Ballater, Grantown-on-Spey, Kingussie and Newtonmore, while mobile library services operate throughout the Angus Glens, Badenoch, Braemar and Strathspey areas. These contain a selection of written materials which have direct reference to the Cairngorms area.

Other libraries which contain manuscripts, archival indexes, maps and photographs pertaining to the Cairngorms include Inverness Public Library, National Library of Scotland, University of Aberdeen (Special Collections and Archives), Robert Gordon University and the University of St Andrews Library.

Trends and Observations

- Museums in the public sector are not thought to be at risk; however, there are significant risks to some museums in the private sector which depend on volunteers and visitor numbers for their sustainability.

Monitoring

There is no systematic monitoring of these resources.

3.5.3 Literature and Poetry

There is a wealth of literary works relating to the Cairngorms area, some of which are regarded to be of national significance.

Significant literary works include:

- James MacPherson, Poet and Translator (1736-1796). Born in Ruthven, a teacher and tutor who tried to make his name as a poet. Published 'Fragments of Ancient Poetry' and his main works, Fingal and Temora, which purported to be pre-Christian verse translations and were subject to controversy. He became an historian and government propagandist in London before returning in later life to Deeside. Of national significance;
- Elizabeth Grant of Rothiemurchus (1797-1885). The daughter of a landed gentleman who owned large estates near Aviemore, Elizabeth Grant wrote an account, for her family, of the first 33 years of her life. Entitled 'Memoirs of a Highland Lady', it provided insights into life on Rothiemurchus Estate in the early 19th century. Of national cultural significance;
- Lord Byron (1788-1824). As a child, Lord Byron lived for a short time on a farm just off the South Deeside Road to the east of Ballater. It appears that his stay had a profound effect on him and his work as local landmarks feature prominently in several of his poems. The best known of these in this context is 'Dark Lochnagar'. Regarded as being of national or international significance.

Other literary works regarded as being of national significance include:

- The Big Grey Man of Ben Macdhui – Affleck Grey;
- Legends of the Cairngorms – Affleck Grey;
- In the Shadow of Cairngorm – Rev Dr W. Forsyth (1900);

- The Old Man of Lochnagar – HRH The Prince of Wales (1991);
- Gaelic in Strathspey – Neil McGregor (private publication, extract from Transactions of The Gaelic Society of Inverness Vol 59 1995).

Trends and Observations

- There is no data with regard to trends or condition of the literary resource.

Monitoring

There is no formal monitoring in this area.

3.5.4 Written Records

Although there is a considerable body of written material pertaining to the Park, much of this is held in collections outside the area.

The National Archives of Scotland is the main archive for sources of Scottish history. It holds records spanning the 12th to the 21st centuries, encompassing most aspects of Scottish life. However, it is not known how many of these records relate to the people of the Cairngorms.

Other collections are held by Aberdeenshire and Highland Councils, the University of Aberdeen, the National Library of Scotland, The National Register of Archives (Scotland) and the Royal Commission on the Ancient and Historical Monuments of Scotland. It is not known how many of these records relate to the people of the Cairngorms.

Trends and Observations

- There is no data with regard to trends or condition of the resource.

Monitoring

There is no definitive list of written records or monitoring of the state of these resources.

3. CULTURAL RESOURCES...cont

3.5.5 Maps, Digital and Oral Records

The mapping of counties began in the 1760s when new detailed maps were created across Scotland. A number of factors motivated the interest in mapping including advances in agricultural practices, the enclosure of common land and political stability. There is a wealth of material available relating to the Park area. The value, importance and significance varies on a case by case basis. The extent of the resource is not fully established, with much material thought to be in private hands.

Historical maps of significance include those by Timothy Pont in the late 16th century and Robert Gordon in the mid-17th century which refer directly to the Cairngorms area, military maps of the 18th century and Ordnance Survey maps. Other maps of interest include the Topographical and Military Map of the Counties of Aberdeen, Banff and Kincardine by James Robertson in 1822. Historical maps can also be used to identify past settlement and infrastructure patterns and sources of traditional building materials such as quarry sites.

The origins of Ordnance Survey maps can be traced back to the years following the failure of the Jacobite uprising at Culloden in 1746 when General William Roy was given the task of making a survey of the Highlands. The largest map collection in Scotland is held by the National Library of Scotland. Included in their collections are Ordnance Survey Maps of Counties and Regions of Scotland, Military Maps of Scotland

and Ordnance Survey Town Plans 1847-1895. Ordnance Survey has one of the largest collections of historical mapping in Great Britain.

Digital recordings have allowed researchers to hear and see recordings of testimonies and events, although there does not appear to be a large number of collections directly relevant to the Cairngorms. The most noteworthy is the oral testimony which was collected from 70 informants through the Badenoch Local History Project in the early 1980s. Additional miscellaneous recordings relate to specific topics including the railway, Kingussie Station and the First World War. These recordings are housed at the Highland Folk Museum.

Trends and Observations

- With recent developments in information and communications technology, it has become increasingly easy for materials to be viewed by large numbers of people. This has revolutionised the way in which archivists and researchers conduct their work.

Monitoring

There is no systematic monitoring of these resources.

3.5.6 Information Gaps – Material Resources

- Material resources held in private collections;
- Recording of literary and written resources.

4. VISITOR AND RECREATION RESOURCES



4. VISITOR AND RECREATION RESOURCES

4.1 Introduction

The attractiveness of the Park as a visitor destination lies in the blend of outstanding natural beauty and the rich natural and cultural heritage of the area. The Cairngorms has a scenic quality distinct from that of the rest of Scotland. The diversity of habitats and landforms and the variety of heritage create a wide range of opportunities for outdoor recreation.

This chapter sets out information currently available about the visitors to the Park and the facilities available to them during their stay. It acknowledges the contribution that visitors make to the natural, cultural, social and economic resources within the Park and their impact on them.

This chapter is arranged into nine sections:

- Data Sources;
- Visitor Numbers and Characteristics;
- Visitor Attractions and Locations;
- Recreational Activities and Networks;
- Visitor Facilities and Information Centres;
- Outdoor Access;
- Access for All;
- Ranger Services;
- Information and Interpretation.

4.2 Data Sources

4.2.1 Basis of Data Collection

The number of data sources on visitor numbers in the UK and Scotland is considerable, and the challenge lies in identifying data specific to the Park. Currently, the only data available on a Park-wide basis is the Cairngorms National Park Visitor Survey of 2003/4 and the Scottish Tourism Economic Activity Monitor (STEAM) report for 2004. All other data prior to this depends on manipulation and analysis of non-specific datasets. In general, data on visitor numbers and resources is somewhat fragmented, may not always be consistent, and resolution at Park level is frequently not possible.



With effect from 1 April 2005 there has been a re-organisation of Area Tourist Boards in Scotland. This has reshaped the Area Tourist Boards into 14 Network Offices integrated with the national tourism body, VisitScotland. Each Network Office is directly accountable to VisitScotland and will have responsibility for the delivery of the national tourism strategy in its area. There have been no changes made to the numbers or boundaries of former Area Tourist Board areas. The data used in this study is shown at former Area Tourist Board level, that being the structure in place at the time of collection.

4.2.2 National Statistics

At a national level, the UK Research Liaison Group produces a wide variety of tourism statistics for the UK, primarily the UK Tourism Survey which is published, along with other data, on the internet at www.staruk.org.uk

At a Scottish level VisitScotland compiles and co-ordinates Scottish statistics and publishes them through a website called www.scotexchange.net Scottish Natural Heritage also carries out a Scottish Recreation Survey, measuring levels of participation in walking in the countryside, as well as participation in a number of other open-air recreational activities (see www.snh.org.uk for 2003/04 findings).

These statistics allow identification of trends at a national and regional level, but it is not possible to disaggregate them to a Park level.

4.2.3 Tourism in Scotland

The annual report 'Tourism in Scotland', published by VisitScotland, collates figures estimating the tourism value and volume in Scotland and breaks the information down to former Area Tourist Board or Network Office level. There are three Network Offices operating within the Park; Aberdeen, Dundee and Inverness.

4.2.4 Visitor Attraction Monitor

The 'Visitor Attraction Monitor' collates information on the numbers of people who visit participating visitor attractions in Scotland and is compiled by the Moffat Centre for Travel and Tourism Business Development, Glasgow Caledonian University. It is published on behalf of VisitScotland. An annual report in 2003 provided data on 723 visitor attractions, 19 of which were within the Park.

4.2.5 Visitor Surveys

Visitor surveys have been undertaken over the last 12 years and provide a broad indication of the number of visitors to the Cairngorms area. Caution must be taken when working with outputs from the various surveys, however, as each has used different formats, sampling or surveying methods, and all have been carried out within different timeframes.

The Cairngorms National Park Visitor Survey 2003/4 is the only survey to date which has collected information specifically from the defined Park area. The survey's aim was to establish a baseline dataset, and it is envisaged

that the survey will be carried out on a two-yearly cycle from now on to update the baseline information. This will enable the gathering of trend data and the measurement of change to deepen analysis and understanding of the Park. Building on the Cairngorms National Park Visitor Survey, annual STEAM surveys have also been commissioned up to 2007.

4.2.6 People and Traffic Counters

In addition to the visitor surveys there are also a number of people and traffic counters in use within the Park. These are mainly operated by Scottish Natural Heritage, the Forestry Commission and a number of estates including Mar Lodge, Rothiemurchus, Cairngorm and Invercauld. The reliability of the data varies between different counters, making it difficult to establish long-term, aggregated trends using data originating from automatic people counters in the Cairngorms.

Estimates or counts for the number of vehicles entering the Park exist for all roads into the Park.

4.3 Visitor Numbers and Characteristics

Visitors to the Park are predominately from Scotland, travel in parties of two adults, and two thirds of them are staying away from home overnight. They are generally older, with 56 per cent over 45 compared with the Scottish average of 44 per cent. The Park attracts a higher than average number of overseas

Photo: David Gowans.



4. VISITOR AND RECREATION RESOURCES...cont

visitors, and compared with the national 'Tourism in Scotland' Survey the visitors appear to be relatively affluent.

The visitor profile does vary, however, depending on the reason for visiting. Visitors taking part in more active pursuits tend to be younger, male and are more likely to be from other parts of the UK.

4.3.1 Visitor Numbers and Spend

Until relatively recently the Cairngorms National Park Authority has only been able to estimate visitor numbers. However, a mechanism is now in place which will allow interpretation of existing data to generate figures more specific to the Park. This is being undertaken through a tourism economic activity model called STEAM (Scottish Tourism Economic Activity Monitor), developed by Global Tourism Solutions.

In 2003 it was estimated that the Park might attract as many as 1.2 million visitors, generating around £240 million a year, but the geographical area used for this research was much greater than the Park. At the Park level, draft STEAM figures for 2003 gave a total visitor figure of 1.4 million and a total visitor spend of £154 million. Visitor numbers dropped very slightly in 2004, but visitor spend rose to £161 million.



Table 4.3.1: Visitor statistics – numeric summary of STEAM report 2004

| <i>Total Revenue by District (£s millions)</i> | 2004 | 2003 | % Change |
|--|---------------|---------------|----------|
| Badenoch and Strathspey Area | 127.68 | 125.67 | 2 |
| Rest of the Park | 32.96 | 28.75 | 15 |
| Total | 160.64 | 154.42 | 4 |

| <i>Analysis by Sector of Expenditure (£s millions)</i> | | | |
|--|---------------|---------------|----------|
| Accommodation | 35.97 | 34.08 | 6 |
| Food and Drink | 23.30 | 22.66 | 3 |
| Recreation | 9.30 | 9.05 | 3 |
| Shopping | 12.93 | 12.62 | 2 |
| Transport | 23.07 | 22.22 | 4 |
| Indirect Expenditure | 37.78 | 36.18 | 4 |
| VAT | 18.30 | 17.61 | 4 |
| Total | 160.64 | 154.42 | 4 |

| <i>Revenue by Category of Visitor (£s millions)</i> | | | |
|---|---------------|---------------|----------|
| Serviced Accommodation | 97.63 | 94.96 | 3 |
| Non-serviced Accommodation | 32.62 | 27.78 | 17 |
| Visiting Friends and Relatives | 1.86 | 1.72 | 8 |
| Day Visitors | 28.54 | 29.97 | -5 |
| Total | 160.64 | 154.42 | 4 |

| <i>Tourist Days (Thousands)</i> | | | |
|---------------------------------|-----------------|-----------------|----------|
| Serviced Accommodation | 1,035.89 | 980.05 | 6 |
| Non-serviced Accommodation | 1,086.25 | 909.45 | 19 |
| Visiting Friends and Relatives | 92.28 | 85.92 | 7 |
| Day Visitors | 850.96 | 894.09 | -5 |
| Total | 3,065.39 | 2,869.52 | 7 |

| <i>Tourist Numbers (Thousands)</i> | | | |
|------------------------------------|-----------------|-----------------|-----------|
| Serviced Accommodation | 387.39 | 369.02 | 5 |
| Non-serviced Accommodation | 149.75 | 137.92 | 9 |
| Visiting Friends and Relatives | 20.18 | 18.92 | 7 |
| Day Visitors | 850.96 | 894.09 | -5 |
| Total | 1,408.28 | 1,419.95 | -1 |

| <i>Sectors in which Employment is supported (Full-time Equivalents)</i> | | | |
|---|--------------|--------------|----------|
| Accommodation | 2,254 | 2,234 | 1 |
| Food and Drink | 690 | 671 | 3 |
| Recreation | 274 | 267 | 3 |
| Shopping | 369 | 360 | 2 |
| Transport | 587 | 566 | 4 |
| Total Direct Employment | 4,175 | 4,098 | 2 |
| Indirect Employment | 906 | 868 | 4 |
| Total | 5,081 | 4,966 | 2 |

Source: STEAM Report 2004

4.3.2 Visitor Trends

At a national level, overall domestic and overseas visitor trends in the UK have increased by 2.6 per cent over the period from 1995-2003 (UK Tourism Survey and International Passenger Survey). This has been most noticeable in the overseas market, which increased by 5.1 per cent. During the same period there has been a fall in Scottish tourism of up to 8.8 per cent. The figures also indicate that there has been an almost 20 per cent drop in overseas tourists to Scotland.

At a Scottish level, Tourism Scotland 2003 reports that 18.1 million tourists (domestic and overseas) took overnight trips to Scotland, and the annual expenditure was about £4.4 billion. This compares with 2002 when 20.1 million tourists took overnight trips and spent almost £4.5 billion. This indicates a decrease of 10.2

per cent for visitor numbers and a decrease of 2.2 per cent for visitor spend from 2002-2003.

At a Park level, it was estimated in 2003 that the Park would attract 1.2 million visitors annually, generating around £240 million a year. While the Park attracts a higher number of overseas visitors than Scotland as a whole, visitors are predominately from Scotland and travel in parties of two. Fifty six per cent of visitors are over 45. Two thirds stay overnight, with the most popular type of accommodation being hotels and guest houses. The main reasons for visiting were the wide range of outdoor activities, the natural beauty and the rich cultural heritage. The most popular activities were general sightseeing and walking. Visitor attitudes and perceptions of the area were very positive.

4. VISITOR AND RECREATION RESOURCES...cont

The availability, collection and analysis of trend data on visitors to the Park is expected to increase through specific approaches such as repeating or further developing the Cairngorms National Park Visitor Survey and using the data collected to carry out annual STEAM surveys, which will quantify visitor economic activity.

4.3.3 Visitor Profile

Table 4.3.3 shows a summary of key statistics which reflect the profile of visitors coming to the Cairngorms area.

Table 4.3.3: Profile of visitors (%)

| | <i>Cairngorms National Park Visitor Survey 2003/04</i> | <i>Tourism in Scotland 2003</i> | <i>Highland Visitor Survey 2003 (Moray, Badenoch and Strathspey)</i> | <i>Rothiemurchus and Glenmore Recreation Survey 1998/1999</i> | <i>Cairngorm Mountain Recreation Survey 1997/1998</i> |
|---------------------------|--|---------------------------------|--|---|---|
| Origin of Visitors | | | | | |
| Scotland | 58 | 44 | 45 | 58 | 56 |
| Other UK | 28 | 47 | 38 | 31 | 38 |
| Overseas | 15 | 9 | 17 | 11 | 4 |
| Gender | | | | | |
| Male | 52 | n/a | 51 | 54 | n/a |
| Female | 48 | n/a | 49 | 46 | n/a |
| Age | | | | | |
| 16-24 | 8 | 13 | 5 | 8 | 8 |
| 25-44 | 36 | 43 | 39 | 45 | 44 |
| Over 45 | 56 | 44 | 55 | 41 | 48 |
| Number in Party | | | | | |
| One | 16 | n/a | 8 | 11 | 24 |
| Two | 47 | n/a | 51 | 49 | 57 |
| Three or Four | 29 | n/a | 14 | 25 | 21 |
| Five + | 8 | n/a | n/a | 14 | 9 |
| Type of Trip | | | | | |
| Day Visit | 33 | n/a | 16 | 22 | 27 |
| Away from home overnight | 67 | n/a | 84 | 78 | 73 |
| Accommodation Type | | | | | |
| Bed and Breakfast | 15 | 9 | 18 | n/a | n/a |
| Hotel/Guest House | 35 | 33 | 32 | n/a | n/a |
| Self-catering | 16 | 6 | 17 | n/a | n/a |
| Hostel | 3 | 2 | 3 | n/a | n/a |
| Time-Share | 5 | n/a | 7 | n/a | n/a |
| Staying with Friends | 8 | 40 | 14 | n/a | n/a |
| Touring Caravan/Tent | 8 | 8 | 10 | n/a | n/a |
| Other | 2 | 7 | 4 | n/a | n/a |

4.3.4 Accommodation

There is a wide variety of reasons for visitors to come to the Park and a corresponding range of accommodation types on offer. A wide spectrum exists ranging from top-class hotels to bunkhouses and hostels. The highest concentration of accommodation is found in the Badenoch and Strathspey area, which includes Aviemore and the A9 corridor.

Much of the information on accommodation has, in the past, been gathered locally by former Area Tourist Boards and in some cases the Local Enterprise Company. This means that there is not a common basis for data collection, format or timeframe for gathering information on a Park-wide basis. It has not, therefore, been possible to identify trends. Gathering specific data on occupancy levels is a common problem, as this information is understandably viewed by tourism businesses as being commercially sensitive and is commonly provided to national bodies only on the understanding that it remains confidential.

At present there is no definitive list of accommodation providers within the Park which includes those registered with VisitScotland, as well as those which are not. The Cairngorms National Park Authority is in



the process of compiling a Tourist Business Database from a variety of sources including VisitScotland-registered providers, local Visitor Guides, Chamber of Commerce information and local knowledge. Currently the database records 379 accommodation providers within the Park. VisitScotland operates a Quality Assurance Scheme, of which 319 accommodation providers are members within the Park.

The most popular visitor accommodation type in the Park is hotel/guest house. There is a much higher number of visitors staying in bed and breakfast accommodation (15 per cent) than the Scottish average (9 per cent), and a much lower number of visitors staying with friends and relatives (8 per cent) than the Scottish average (40 per cent). This highlights the high level of dependency on commercial accommodation. There is a high percentage of overnight visitors spending all their time in the Cairngorms area, with short breaks of one to four nights being most popular.

Table 4.3.4 shows the number of different types of accommodation within the Cairngorms National Park.

Table 4.3.4: Accommodation supply in the National Park

| Accommodation Type | Total | Former Tourist Board Area | | |
|--------------------------|------------|---------------------------------|------------------|-----------------------|
| | | Aberdeen and Grampian Highlands | Angus and Dundee | Highlands of Scotland |
| Hotel | 84 | 26 | 1 | 57 |
| Guest House | 55 | 9 | 0 | 46 |
| Bed and Breakfast | 102 | 42 | 0 | 60 |
| Self-catering Unit | 97 | 34 | 0 | 63 |
| Hostel | 23 | 6 | 1 | 16 |
| Timeshare | 4 | 1 | 0 | 3 |
| Caravan and Camping Site | 14 | 3 | 0 | 11 |
| Total | 379 | 121 | 2 | 256 |

Source: Cairngorms National Park Authority Tourism Database (2005).

4. VISITOR AND RECREATION RESOURCES...cont

4.3.5 Visitor Attitudes and Perceptions

The attitudes and perceptions of respondents to the Cairngorms National Park Visitor Survey were in general positive, with 85 per cent giving their overall visit to the Cairngorms a rating of 8 out of 10 (1 being low and 10 being high). The visitors indicated that there were plenty of things to see and do in the area, and that the Park was well managed and cared for.

The most appreciated aspects of the Cairngorms area were the beautiful scenery, the mountains and the peaceful easy-going pace of life. There was no perception of there being too many tourists.

There was a high level of awareness (69 per cent) amongst visitors that they were in a National Park, and 88 per cent of these were aware of National Park status prior to arrival. This did not appear to have been a major influence on their decision to come to the area, however, as only 9 per cent stated that National Park status was very important, and 38 per cent said that it was not important at all.

4.3.6 Reasons for Visiting

The reasons for visiting the Park are many and various, but are largely focused on the wide range of outdoor activities, the natural beauty

and the rich cultural heritage which the area has to offer.

Walking is recorded as the most popular reason for visiting the area, with beautiful scenery ranked second. There were variations apparent between the different categories of visitors surveyed, including day trippers, short break and long break. Day trippers were more likely to be visiting for walking rather than for general sightseeing or heritage. Visitors on longer breaks were most likely to include general sightseeing and heritage and least likely to take part in active pursuits.

The surveys highlighted the perception of wildness and tranquillity as a reason for visiting. The Cairngorms area is seen as offering unspoilt landscapes, inaccessible areas and a feeling of peace and solitude.

Table 4.3.6 shows the reasons for visiting given by respondents to the Cairngorms National Park Visitor Survey. The responses given are specific to the Park and are the most recent data available. At present there is no trend data available on reasons for visiting.



Photo: Jimmy Mitchell.

Table 4.3.6: Main reasons for visiting the Park

| Reason given for Visiting* | % of Respondents |
|------------------------------|------------------|
| Walking | 14 |
| Beautiful scenery | 11 |
| Visiting friends/families | 8 |
| Like the area | 8 |
| Been before | 7 |
| Peace and quiet | 4 |
| Never been before | 4 |
| Mountains/Hills | 3 |
| Cairngorm Mountain Railway | 3 |
| Wildlife/Plants | 3 |
| Recommended by a friend | 2 |
| * Based on a survey of 2,837 | |

Source: Cairngorms National Park Visitor Survey (2004).

4.3.7 Activity Intentions

General sightseeing and walking were the most popular activities in the Cairngorms area. Walking was popular across the different categories of visitor, while general sightseeing was particularly popular with people on longer breaks. This may correlate with the fact that almost half of this category of visitor was aged 55 and over and may have been looking for a less active holiday. Active pursuits were most popular with Park residents.

The number of respondents visiting heritage sights within the Cairngorms is low compared

with Scotland as a whole. Heritage was most popular with overseas visitors (33 per cent) and least popular with day trippers (9 per cent). Although the Park’s rural nature may in part be responsible for this, there are nevertheless a number of significant heritage attractions within the Park.

Table 4.3.7 highlights the most popular activities in which respondents took part in or were going to take part in during their trip to the Cairngorms area.

At present there is no trend data available on activity intentions.

Table 4.3.7: Activities undertaken during visit (%)

| Activity* | Total | Resident | Day Trip | Short Break | Long Break | Scottish Average |
|--|-------|----------|----------|-------------|------------|------------------|
| General Sightseeing | 56 | 35 | 29 | 59 | 76 | n/a |
| Walking | 48 | 50 | 43 | 52 | 48 | 33 |
| Heritage in total | 22 | 14 | 9 | 19 | 33 | n/a |
| Museum, art galleries, heritage centres, etc | 12 | 3 | 4 | 9 | 21 | 29 |
| Castles, monuments churches, etc | 15 | 3 | 6 | 13 | 26 | 39 |
| Watching performing arts | 2 | 8 | 0 | 1 | 2 | 16 |
| Active Pursuits | 20 | 35 | ? | 19 | 14 | n/a |

* Based on a survey of 2,500

Source: Cairngorms National Park Visitor Survey and Tourism Scotland (2004).

Trends and Observations

- At present it is difficult to establish trends beyond the extrapolation of national trends, due to the way data has been collected in the past. Trends should become apparent through future National Park visitor surveys.

Monitoring

Visitor numbers and characteristics are monitored by the National Park Authority in conjunction with VisitScotland, Scottish Natural Heritage and other bodies.

4.3.8 Information Gaps – Visitor Numbers and Characteristics

- Trend data on reasons for visiting;
- Trend data on activity intentions.



Photo: Highlands and Islands Enterprise.

4. VISITOR AND RECREATION RESOURCES...cont

4.4 Visitor Attractions and Locations

The definition of a visitor attraction used in this report comes from the Visitor Attraction Monitor, published on behalf of VisitScotland. The Visitor Attraction Monitor is published annually and is the most comprehensive source of trend data available on visitor attractions. In summary, it states that the visitor attraction must be a permanent facility which is open to the public, whose main purpose must be sightseeing and which allows access for entertainment, interest or education.

There is currently no single, comprehensive dataset recording all visitor attractions in the Park area, and many of the attractions are not registered with official bodies. However, some of the larger attractions are members of the

Association of Scottish Visitor Attractions and the Quality Assurance Scheme operated by VisitScotland.

Using a broad range of sources it has been possible to identify 73 visitor attractions within the Park, including sites where entry is free and where an entry fee is paid. The majority of these are based in Highland (44), followed by Aberdeenshire (25) and Angus (4). Nature Reserves, Wetlands and Wildlife Parks are the most numerous attractions in the Park (16), followed by Castles and Forts (11) and Museums and Art Galleries (10).

Table 4.4. provides a summary of visitor attractions in the Cairngorms National Park.

Table 4.4: Summary of visitor attractions in the Park

| Attraction | Former Tourist Board Areas | | | Total |
|--|----------------------------|------------------|-----------------------|-----------|
| | Aberdeen and Grampian | Angus and Dundee | Highlands of Scotland | |
| Castles and Forts | 7 | 1 | 3 | 11 |
| Distilleries, Vineyards and Breweries | 2 | 0 | 5 | 7 |
| Gardens | 3 | 0 | 1 | 4 |
| Heritage and Visitor Centres | 1 | 1 | 6 | 8 |
| Highland Games | 4 | 0 | 3 | 7 |
| Museums and Art Galleries | 3 | 1 | 6 | 10 |
| Nature Reserves, Wetlands and Wildlife Parks | 4 | 1 | 11 | 16 |
| Places of Worship* | 1 | 0 | 0 | 1 |
| Steam and Heritage Railways | 0 | 0 | 1 | 1 |
| Other | 0 | 0 | 8 | 8 |
| Total | 25 | 4 | 44 | 73 |

* Crathie Church

Source: Aberdeen and Grampian Highlands Tourist Board; Angus Council Ranger Service; Cairngorms Countryside Events 2004; Cairngorms National Park Visitor Guide 2004.

4.4.1 Popularity of Attractions

The Cairngorms National Park Visitor Survey is the first attempt to identify the popularity of visitor attractions within the Park, providing baseline data for future monitoring. Consequently it is not possible to establish trends at this time. It appears from the data collected in the survey that 34 per cent of all visitors (rising to 50 per cent of day trippers) did not visit any attractions during their stay. This may be a reflection of the high number of return visitors to the area. Notwithstanding this, 84 per cent of visitors agreed that there was plenty to see and do in the Park.

Table 4.4.1 identifies the top 10 visitor attractions in the Cairngorms area from the 32 different attractions cited in the survey. There were 19 visitor attractions within the Park that contributed to the Visitor Attraction Monitor in 2002 and 2003, allowing year-on-year comparisons to be made. In the period 2002-2003 visitor attraction numbers in Scotland increased by 2.2 per cent and by 4.7 per cent from 2001-2002.

The Visitor Attraction Monitor indicated that overall there had been a year-on-year drop of



Photo: Jimmy Mitchell.

5.6 per cent in the 19 participating visitor attractions within the Park. This may have been skewed by a large drop in two of the visitor attractions, which if omitted, result in an overall increase of 4.2 per cent in visitor numbers for the remaining attractions. By contrast in 2003 there were significant increases in visitors to The Glenlivet Distillery (up 24.6 per cent), Tomintoul Museum and Visitor Centre (up 13.9 per cent) and CairnGorm Mountain Railway (up 10.8 per cent). CairnGorm Mountain shows the largest visitor numbers in the area (from 98,000 in 2000 to 187,015 in 2003), an increase of 90 per cent. It is significant that the funicular was established during this period.

Table 4.4.1: Top 10 most visited attractions in the Park

| Attraction* | % of People Visiting |
|---|----------------------|
| CairnGorm Mountain Railway | 18 |
| Rothiemurchus Visitor Centre | 9 |
| Speyside Heather Centre, Dulnain Bridge | 9 |
| The Lecht | 9 |
| Glenmore Forest Park Visitor Centre | 8 |
| Landmark Visitor Centre | 8 |
| Loch an Eilein, Rothiemurchus | 8 |
| Balmoral | 8 |
| Glen Muick | 7 |
| Highland Folk Museum, Kingussie | 7 |
| * Based on a survey of 2,500 | |

Source: Cairngorms National Park Visitor Survey (2004).

4. VISITOR AND RECREATION RESOURCES...cont

4.4.2 Natural Attractions

The Park is, by its very nature, substantially comprised of natural attractions. In the absence of primary research, a definition of what exactly constitutes a natural attraction of importance to Park visitors in this context is not feasible. It is, however, possible to include a short description of some of the more commonly known natural attractions within the Park.

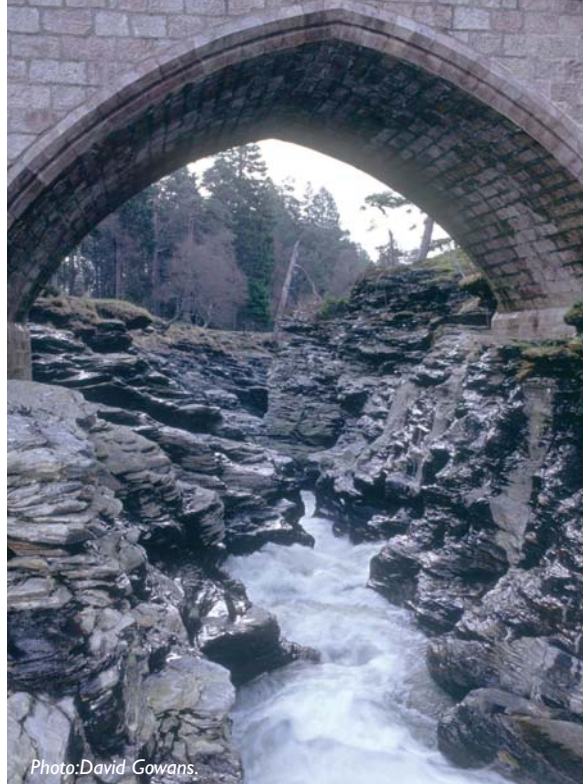


Photo:David Gowans.

Table 4.4.2: Natural attractions in the Park

| Attraction | Description |
|-----------------------|--|
| The Cairngorms | Mountain range with one of the largest granite hill intrusions in the British Isles. Excellent example of glacial erosion. |
| Burn o'Vat | Geological feature created by meltwater during the Ice Age. |
| Corrie Fee | A large, relatively easily accessed corrie, containing beautiful alpine flowers, rare mountain willows clinging to the crags, golden eagles and peregrines. |
| Invercauld | Including The Punch Bowl, a hollow in the rock created by water erosion. |
| Spittal of Glen Muick | Part of the Nature Reserve at Glen Muick, from where it is possible to see the glacier-formed corries of Lochnagar. |
| Muir of Dinnet | An area of moorland and birch forest designated as a National Nature Reserve. Landforms at this site have been formed due to glacier ice melting, eskers and kettle holes. |
| Linn of Dee | A narrow gorge and waterfall on the River Dee. |
| Rothiemurchus Forest | A large area of easily accessed Caledonian pine forest with good examples of montane scrub. |
| Allt Mor | A river walk where a number of geological features are highlighted. |
| Dalnain Bridge | Display of Roches Moutonnées, a type of glaciated rock which has been smoothed and shaped by glacier scouring. |
| River Feshie | Important for river studies in that past and present river systems can be seen through landforms. |
| Farleitter Crag | Highlights some features associated with glaciation such as kettle holes, erratics and roches moutonnées. |
| Abernethy Forest | Encompasses Loch Garten Visitor Centre, famous for ospreys and also a rare Caledonian pine forest. |
| Ryvoan | A narrow pass connecting Glenmore and Abernethy with features including eskers, u-shaped valley, moraines which have been created due to glaciation. |

Trends and Observations

- A substantial proportion of visitors do not visit attractions during their visit;
- Attractions listed in the Visitor Attraction Monitor showed a drop in visitor numbers within the Park in 2002-2003, while in Scotland as a whole numbers rose by 2.2 per cent;
- There is significant polarisation in the performance of listed attractions, with the poorest showing a 57 per cent drop in visitor numbers in the period 2002-2003, while the strongest showed a 25 per cent increase.

Monitoring

Visitor attractions are monitored by the National Park Authority, VisitScotland, Ranger Services and other tourist providers.

4.4.3 Information Gaps – Visitor Attractions and Locations

- Single, comprehensive dataset of all visitor attractions in the Park.

4.5 Recreational Activities and Networks

4.5.1 Activity Types

Research confirms that it is difficult to obtain reliable data on outdoor activities due in part

to the different research methodologies used and a general sparsity of research into this area.

It has not been possible to identify all of the activity providers within the Park as there is no centralised dataset. As with visitor attractions, this is partly due to the low number of businesses registered with official bodies. There are, however, 11 associated members of the Adventure Activities Licensing Authority within the Park, and they are without exception multi-activity providers. Eight of these multi-activity providers have a dual role acting as Outdoor Education Centres.

Using a wide variety of sources including visitor guides, local tourist information and the internet, it is possible to identify up to 70 businesses based within the Park that offer recreational activities. The major activities are described in the following sections. In addition to those described there are a number of golf clubs and pony-trekking businesses.

Table 4.5.1 shows the number of businesses based within the Park offering recreational activities.

Table 4.5.1: Number of businesses based in the Park offering recreation opportunities

| Attraction | Former Tourist Board Areas | | | Total |
|--|----------------------------|------------------|-----------------------|-----------|
| | Aberdeen and Grampian | Angus and Dundee | Highlands of Scotland | |
| Multi-activity providers including watersports | 1 | 0 | 10 | 11 |
| Cycling including off-road | 1 | 0 | 9 | 10 |
| Angling | 3 | 0 | 5 | 8 |
| Golf | 2 | 0 | 7 | 10 |
| Pony-trekking | 2 | 0 | 2 | 4 |
| Skiing/Wintersports | 4 | 0 | 6 | 10 |
| Walking/Mountaineering | 3 | 0 | 6 | 9 |
| Other activities | 1 | 0 | 7 | 8 |
| Total | 17 | 0 | 52 | 70 |

Source: Aberdeen and Grampian Highlands Tourist Board; Angus Council Ranger Service; Cairngorms Countryside Events 2004; Cairngorms National Park Visitor Guide 2004.

4. VISITOR AND RECREATION RESOURCES...cont

The General Household Survey, carried out annually, covers many different topics and has had a section on sport every three to four years. It helps to highlight trends in outdoor activity participation rates. Since 1987 the general trend for participation in one sport (including walking) has shown a small decline. However, the survey indicated that Scotland had the highest participation rates in the country, and it is suggested that this is due to the higher proportions of people walking. Based on annual participation, walking (46 per cent) was the most popular sport, and men were more likely than women to have participated in sport.

VisitScotland has produced an 'Activities Holidays 2003' factsheet which indicates that there were as many as 2.5 million holidays per year in Scotland where 'activity' was the main purpose of the trip. The factsheet reports the top five activities for visitors as walking (18 per cent), visiting heritage sites (14 per cent), watching the performing arts (10 per cent), golfing (9 per cent) and visiting artistic or heritage exhibits (7 per cent).

The average length of stay was four nights and the former Highlands of Scotland Tourist Board area was the most popular destination (21 per cent). The former Aberdeen and Grampian Highlands Tourist Board area attracted 5 per cent of the visitors, and the former Angus and Dundee Tourist Board area attracted 3 per cent. This generated on average £607 million per annum, concentrated over the months July to September (35 per cent). The seasonal spread of activity holidays may be more even in the Park due to the higher levels of wintersports available.

Increases in participation in outdoor recreation have been recorded since the 1950s. This is evidenced by the number of hillwalkers of all abilities completing all 284 Munros, the number of mountain rescues made and the number of hillwalking and mountaineering clubs which have been established.

4.5.2 Hillwalking, Mountaineering, Climbing and Orienteering

With five peaks above 4,000 feet, the Cairngorms has long laid claim to being the 'roof of Scotland'. A popular destination for walkers of all standards, the Cairngorms have something for everyone, from all ability low-level walks to the higher and more technical summits which demand good map-reading and navigational skills.

Within (and in part forming) the Park boundary there are 49 Munros (hills measuring 3,000 feet or over) and 23 Corbetts (hills between 2,500 and 2,999 feet high). Heather moorland accounts for around 45% of the Cairngorms area and is often accessed without the use of paths and tracks. It is a popular means of accessing uplands, high plateaux and summits, particularly Munros.

In the major river valleys and their surrounding areas, lowland and woodland paths and tracks provide links and shortcuts between settlements, as well as opportunities for a wide range of outdoor recreation activities.

Climbing takes place on mountain and lowland crags in both summer and winter. Winter climbing is confined to the upper mountain crags (above 900 metres) in the Cairngorms and to a slightly lower level in the Angus Glens. The Northern Corries of Cairngorm are particularly busy, due to ease of access, car parking and associated facilities at 600 metres and reliability of condition.

The central Cairngorms massif has several bothies, but none are located near to climbing areas, with the exception of Hutchison Memorial Hut in Upper Glen Derry and the very basic Garbh Coire emergency shelter under Braeriach. Howffs exist at Clach Dhian at the foot of Shelter Stone crag and on the access route to Ben A'an and Beinn a'Bhuird. The recently rebuilt Bob Scott's Bothy offers a simple base for climbing parties near Derry Lodge.

The Park is a prime location for orienteering, with The National Orienteering Centre at Glenmore Lodge in Badenoch and Strathspey, providing an opportunity for clubs throughout the UK to train and participate in orienteering. There is a permanent trail orienteering course at Glenmore Forest and a number of permanent and mapped foot orienteering courses at various other locations throughout the Park.

The Park has been home to a number of orienteering events including the World Masters Championships in 2004 and the World Orienteering Championships in 1999. The Scottish Six Day International Orienteering Festival, held once every two years, was held in Strathspey in 1995, Moray in 2003, Deeside in 2005 and is due to be held on Speyside in 2007.

In the Cairngorms National Park Visitor Survey 26 per cent of respondents stated that during their stay they had or would take part in hillwalking, which was most popular with residents at 41 per cent. Climbing/mountaineering was cited by 4 per cent of respondents as an activity they would or had taken part in, again being most popular with residents at 12 per cent. This smaller number of climbers/mountaineers is likely to reflect the remote locations where climbing takes place, and the difficulty in capturing information from this group of visitors. In the Highland Visitors Survey by contrast, 19 per cent of respondents took part in hillwalking and 3 per cent took part in climbing/mountaineering.

It would be almost impossible to ascertain the number of hillwalking, mountaineering and climbing clubs which use the Cairngorms; however, there are 140 clubs in Scotland affiliated to the Mountaineering Council of Scotland, and it is reasonable to assume that the majority of these visit the area. Within the Park 95 accommodation providers participate in the 'Walkers Welcome' Scheme developed by VisitScotland and the Mountaineering Council of

Scotland. The scheme requires accommodation providers to provide certain facilities for walkers, including drying areas, packed lunches and walking information.

4.5.3 Snowsports

Three of the five Scottish ski centres are located in the Park. These are Cairngorm, Glenshee and the Lecht, providing facilities for downhill skiers, snowboarders and telemarkers. Ski-mountaineering, back and cross-country skiing opportunities exist in the areas surrounding the ski centres. There are also three dry ski slopes in the Park at the Lecht, Loch Insh Watersports and the Hilton Craigendarroch Country Club near Ballater. Adaptive equipment and instruction for all disabilities is available at Cairngorm and Glenshee.

Established in 1960, the Cairngorm Ski Centre covers approximately six square kilometres and has capacity for 5,000 to 6,000 skiers. The Glenshee Ski Centre, which was established in 1962, covers an area of 8.1 square kilometres and has capacity for 6,000 skiers, while The Lecht Ski Centre, established in 1977, is the most recent of the ski centres. It is also the smallest, with an area of 1.1 square kilometres and capacity for 2,500 skiers.



Photo: Paul Tomkins, VisitScotland/Scottish Viewpoint.

The number of downhill skiers in the Cairngorms area has declined substantially since the late 1980s. Between 1986 and 1991, the mean number of skier days per annum was 491,393. By contrast, the mean number of skier days per annum between 1995 and 1999 was 265,058, and in 2000/03 the number fell to 205,165.

4. VISITOR AND RECREATION RESOURCES...cont

In the face of declining skier numbers, ski centres have sought to diversify into non-skiing activities, so as to continue operating and retain core staff. The CairnGorm Mountain Railway development with its funicular railway, visitor centre, footpaths and mountain garden is the most popular visitor attraction in the Park with 187,015 visitors in 2003, a 90 per cent increase since 2000. The Glenshee Chairlift Company diversified its activities by opening the Glen Isla Golf Club in nearby Alyth, although there have since been further changes in management. The Lecht has upgraded its visitor facilities and activities and now provides go-karts and quad bikes at the centre's car park during the non-skiing season.

Snowsports provide significant social and economic benefits; however, they can also have local adverse impacts on montane habitats, wildlife and landscape quality. These impacts can include habitat damage and loss, changes to the species composition of habitats, erosion, disturbance to species and effects on landscape and qualities of wildness.

4.5.4 Cycling and Mountain Biking

Cycling is a popular sport in the Park, with 9 per cent of respondents to the Cairngorms National Park Visitor Survey indicating that they have or would take part in the sport during their stay. The Park provides facilities for many different types of cycling, whether it is purpose-built, low-level cycling tracks or the more adventurous mountain biking centre at Laggan. Cycling is one of the top five sports in the UK as a whole, with 19 per cent of the population participating, according to the General Household Survey 2003. This figure has risen slightly since 1987, but follows the overall sports participation trend of peaking in 1996 and reducing in 2002.

Much of the cycling in the Park is road biking carried out on road networks throughout the area. Currently there are no dedicated cycle

lanes on these roads. A number of routes in and around the Park are specifically promoted for cycling through leaflets and waymarking. The Glenlivet and Rothiemurchus estates, in particular, have good networks of off-road trails.

Mountain biking is carried out on the lowland and woodland paths and tracks identified in the Outdoor Access Section (4.7). The WolfTrax facility developed at Strathmashie Forest near Laggan provides challenging blue, red and black routes for mountain bikers. Specialist trails have also recently been developed at Glenmore Lodge.

There are 89 accommodation providers in the Park signed up to the 'Cyclists Welcome Scheme', which ensures that visitors are provided with information on local cycle routes and repair shops, secure bike storage facilities, clothes drying areas, packed lunches and other facilities. In addition, there are 18 cycle hire businesses in the Park, 44 per cent of which are situated in the Aviemore, Inverdrue and Glenmore area.

There are three cycling clubs in the Park and also a number of organisations which take an interest in cycling at a national level. The National Cycle Network is one of the most prominent as it provides a comprehensive network of safe and attractive places to cycle and walk throughout the UK.



National Cycle Network Route 7 runs from Carlisle to Inverness and passes through the Park from Drumochter to Slochd. A recent survey by Sustrans in 2003, which interviewed 119 people over a 48 hour period, indicated that the route was used by cyclists (35 per cent) and pedestrians (61 per cent). It showed that men (45 per cent), women (35 per cent) and children (20 per cent) use the route, and that these trips were for recreation (75 per cent) leisure (3 per cent), utility (11 per cent) and tourism (5 per cent).

In addition to the many advertised walking and cycling routes which are available from estates and local authorities, organisations such as the Forestry Commission offer access to many of their forests. In particular, the Commission promotes Bunzeach, Glenmore Forest, Inshriach Forest and Glen Doll as areas with cycle routes.

4.5.5 Watersports

Water-based recreation is a popular activity carried out on rivers and lochs throughout the Park and includes sailing, swimming, diving, gorge-walking and all forms of paddling/canoeing. Businesses offering water-based recreation opportunities are predominantly based in the Badenoch and Strathspey area, although one business is based in Strathdon, and many businesses based outside the Park organise trips to the area.

Canoeing and kayaking are particularly associated with the watersports centres at Loch Morlich and Loch Insh, where there are hiring and teaching facilities. In the past, boat access has been restricted on some lochs such as Loch Kinord due to environmental sensitivities. The rivers Spey, Dee and Avon and their tributaries also provide a wide range of kayaking opportunities.

The majority of sailing takes place at established locations such as Loch Insh and Loch Morlich.



Photo: Highlands and Islands Enterprise.

Loch Morlich Watersports supplies sailing equipment and instruction for individuals and organisations. Nethy Bridge Outdoor Centre co-funded and utilises the Sailing Club, which provides a centre for local sailors. Visitors to the Forest Enterprise camp-site also use their own dinghies, canoes and wind-surfing equipment on Loch Morlich.

Swimming in the rivers and lochs is popular for a limited period in the warmer summer months. Snorkelling and scuba-diving are known to take place at locations around the Glen Tanar Estate, on the River Dee and at the Linn of Dee, as well as at Loch Morlich and Loch an Eilein.

4.5.6 Angling

Scottish Executive research 'The Economic Impact of Game and Course Angling in Scotland' and the Spey Catchment Management Plan both indicate the economic importance of game fishing in the Cairngorms. However, once again it is difficult to extract data specifically for the Park.

The available data from the Cairngorms National Park Visitor Survey and the Cairngorms National Park Marketing Strategy 2004 suggest that between 3 and 5 per cent of visitors to the Park fish during their visit. Scottish Executive research estimates that 62,100 rod days were taken on the Spey in 2003, with 56,800 on the Dee. Angling-related spend for the Spey was £11.3 million and for the Dee £10.2 million, with a significant proportion accruing within the Park. The area is best known for its salmon angling, which elicits the greatest interest and is of significant economic importance.

4. VISITOR AND RECREATION RESOURCES...cont



Photo: Jimmy Mitchell.

Salmon and sea trout fishing is generally let by the week, with parties of anglers taking a beat on a river with a given number of rods. Such angling is frequently managed in association with other fieldsport activities. The principal salmon and sea trout rivers with nationally significant angling resources in the Park are the Spey, the Dee, the Don, the North Esk and the South Esk. Wild brown trout fishing is available at many sites throughout the Park. The majority of this is available in lochs, although there are notable river stretches, particularly on the Spey and Don. Coarse fishing for species such as pike, perch, roach and eels is a relatively new and undeveloped sport in Scotland, accounting for only 3.5 per cent of angler days in the Highlands. This type of fishing is concentrated in the Aviemore area, with seven locations listed on the 'Coarse Fishing in the Highlands' website.

4.5.7 Shooting and Fieldsports

Many of the estates within the Park and its adjacent area derive significant income from sporting activities, including pheasant and grouse shooting and deer stalking. Red and roe deer stalking is an important sporting activity which has a significant influence on land-use and the landscape, discussed further in the Natural Resources and Cultural Resources chapters of this report.

The Game Conservancy Trust estimates that there are at least 44 sporting estates in the Park, with two sporting interests or more operating as businesses. These estates are likely to employ full-time gamekeepers, stalkers or ghillies. There is a further group of estates with a smaller or single interest. The Game Conservancy Trust estimates that holdings of over 1,000 acres (some 80-90 per cent of the area of the Park) have some form of sporting interest. Shooting is let directly by estates, through land agents, specialist sporting agents and operators and through some accommodation providers. Substantial numbers of overseas visitors come from Europe to the area to shoot. Data on visitor numbers does not appear to be collated and is held by the individual operators.

4.5.8 Horse-riding

Horse-riding is an increasingly popular activity, with an estimated two million riders in the UK (Scottish Tourist Board 2001). In many cases horse riders use the same access routes as walkers and cyclists, particularly in the forests; however, the demand for horse-riding within the Park is not high.

There are no routes within the Park specifically promoted for horse-riding at present. However, the Forestry Commission has plans to implement a network of horse-riding trails adjacent to the mountain-biking trails at



Photo: Paul Tomkins, VisitScotland/Scottish Viewpoint.

Strathmashie Forest. In the meantime, there is significant scope for horse riders to use quiet roads and routes such as forest and upland tracks.

4.5.9 Other Activities

A number of other outdoor access activities also take place across the Park, including dogsledding, hill and road-running, hang-gliding and para-gliding/scending, wildlife and bird-watching and photography.

4.5.10 Clubs

There are a number of sports clubs operating within the Park. According to data held by Sports Councils in each of the local authority areas and the 'Community Development in the Cairngorms' report, there are 29 different interests represented, with a total of 84 different clubs in the Park. They cover interests as diverse as gun clubs to aqua aerobics clubs. The most numerous types of clubs are bowling and golf clubs, of which there are ten of each within the Park.

Trends and Observations

- Participation in one sport (including walking) has shown a small decline since 1987 in the UK;
- Increases in participation in outdoor recreation have been recorded since the 1950s;
- Scotland has the highest participation rates in the country due to a higher proportion of people walking (the most popular sport);
- Walking is the most popular form of activity for those on an activity holiday in Scotland (18 per cent) – this is even more popular with visitors to the Cairngorms (26 per cent);
- Downhill skier numbers in the Cairngorms have declined by over 50 per cent since the late 1980s;
- Ski centres and businesses are increasingly diversifying their activities;
- There is increased specific provision for cyclists in the area;
- The economic importance of fieldsports and game fishing is increasingly recognised, but poorly recorded or quantified.

Monitoring

Governing Councils and interest groups monitor participation in several sports and activities. The National Park Authority, VisitScotland and others also monitor recreation activities.

4.5.11 Information Gaps – Recreation Activities and Networks

- Visitor numbers participating in fieldsports.

4.6 Visitor Facilities and Information Centres

4.6.1 Tourist Information Centres

Tourist Information Centres are an important point of contact between the visitor and the organisations and agencies charged with promoting the Park's activities and attractions.

In total there are nine Tourist Information Centres operating within the Park boundary. Of these, three are open all year (Aviemore, Ballater and Braemar), four are open seasonally (Crathie, Grantown-on-Spey, Kingussie and Tomintoul) and two (Nethy Bridge and Newtonmore) are based in other accommodation (shop and post office respectively).

There are high numbers of people who visit the Cairngorms area on a frequent basis, with 76 per cent of respondents to the Cairngorms National Park Visitor Survey indicating this was not their first trip to the area, and 19 per cent having visited the area more than 20 times in the last five years. This may reduce the need to visit Tourist Information Centres to obtain local information, but also provides a challenge for those marketing the area as to where they can effectively publicise existing and new products and services.

4. VISITOR AND RECREATION RESOURCES...cont

Information on the activities and attractions within the Park is also available at other venues, including accommodation outlets, visitor centres and ranger stations.

4.6.2 Commercial Promotion

Landmark Press produce and distribute tourist information brochures to approximately 330 businesses within the Park. Businesses in Strathspey receive about 60 per cent of these, with businesses on Deeside receiving about 24 per cent, the Angus Glens about 13 per cent and the Glenlivet area 3 per cent.

Tourist information is provided by many tourism businesses and attractions, while a substantial proportion of accommodation providers, including almost all hotels and a large number of guest houses, provide visitor information leaflets.

4.6.3 Community Websites

There are a number of local websites which promote the Park, the culture and heritage of its communities and the activities which take place within its boundary. There is, however, no definitive list of the resource, which is dispersed.

4.6.4 Visitor Information

Information about the Park was seen as being easy to access by 45 per cent of all respondents to the Cairngorms National Park Visitor Survey.

The Cairngorms National Park Visitor Survey recorded 82 per cent of visitors to the area that had made no trips to a Tourist Information Centre during their stay; this peaked at 97 per cent for day trippers. Only 17 per cent intended to visit a Tourist Information Centre at all during their stay. The Rothiemurchus and Glenmore Recreation Survey recorded that 31 per cent of respondents had visited a Tourist Information Centre in the last 12 months, indicating a greater use of Tourist Information Centres.

However, this referred to a much longer time period. It is not clear where visitors are accessing Park information, given the low levels of Tourist Information Centre use and the high information satisfaction rating recorded.

Trends and Observations

- There is no trend data available on the provision of visitor facilities and information within the Park;
- To date the number of Tourist Information Centres has remained reasonably stable. As a result of the restructuring of the Area Tourist Boards and VisitScotland, there may be more changes in the future.

Monitoring

Provision of visitor information and facilities is monitored through VisitScotland, the National Park Authority and use of facilities through visitor surveys.

4.6.5 Information Gaps – Visitor Facilities and Information Centres

- Comprehensive list of community websites;
- Information on where visitors access Park information;
- Trend data on the provision of visitor facilities and information.

4.7 Outdoor Access

The Land Reform (Scotland) Act 2003 ensures that everyone visiting the Park has the right to access most land and water if they behave in a responsible manner, respecting the privacy, safety and livelihoods of others and causing no harm to the environment.

The Park Authority has a duty to uphold the right of outdoor access within the Park, to establish a network of core paths and a Local Access Forum and to promote the Code so that everyone in the Park is aware of their rights and responsibilities.

The work of gathering the relevant information in relation to outdoor access is ongoing. An Outdoor Access Audit has been completed, encompassing audits of supply, demand and policy and highlighting protected and promoted path networks, including Rights of Way. The audit also provides information on access points to popular outdoor destinations, car parks, visitor information points, interpretation boards and picnic sites.

4.7.1 Promoted Paths

A number of path networks and long distance paths have been created within the Park. Some have been established for a long time and have Right of Way status while others, such as those developed by the Eastern Cairngorms Access Project, have been created more recently.

These paths are promoted by landowners and managers, environmental organisations, access organisations such as the Highland Access Project, the Upper Deeside Access Trust and the Eastern Cairngorms Access Project (jointly managed by Upper Deeside Access Trust and Angus Council), Scotways, community-based initiatives and specialist walking websites and clubs.

Throughout the Park there is also a number of promoted long distance routes to suit all levels of ability. Popular examples include The Speyside Way, The Badenoch Way and the Dava Way. There are also a number of projects within the Park area currently underway which will add to the network of promoted paths and



Photo: Jimmy Mitchell.

long distance routes. Promoted trails also exist as private business ventures at a number of locations.

4.7.2 Rights of Way

A record of all rights of way in Scotland is maintained by the Scottish Rights of Way and Access Society and was compiled in conjunction with Scottish Natural Heritage with the co-operation of local authorities. This record is known as the National Catalogue of Rights of Way and places rights of way into one of the following three categories:

- Vindicated – all routes declared legally to be rights of way, with evidence of continued usage;
- Asserted – all routes where the landowner accepts right of way status or where the local authority would take court action to protect the route, if necessary;
- Claimed – routes which meet the required criteria for right of way, but which have not been formally asserted or vindicated.

Table 4.7.2 provides a breakdown of rights of way classifications for the Park area.



Photo: Jimmy Mitchell.



Photo: Jimmy Mitchell.

4. VISITOR AND RECREATION RESOURCES...cont

Table 4.7.2: Summary of rights of way classification in the Park

| <i>Right of Way Classification</i> | <i>No. in Aberdeen-shire</i> | <i>No. in Angus</i> | <i>No. in Highland</i> | <i>No. in Moray</i> | <i>No. in Park</i> | <i>% of all Rights of Way in Park</i> |
|---------------------------------------|------------------------------|---------------------|------------------------|---------------------|--------------------|---------------------------------------|
| Vindicated | 5 | 1 | 0 | 1 | 7 | 4% |
| Asserted | 11 | 0 | 0 | 0 | 11 | 6% |
| Claimed | 36 | 5 | 73 | 81 | 145 | 81% |
| Other Route | 0 | 0 | 0 | 16 | 16 | 9% |
| Total No. of Rights of Way | 52 | 6 | 73 | 48 | 179 | 100% |
| % of all Rights of Way in Park | 29% | 3% | 41% | 27% | 100% | |

Source: Cairngorms National Park Outdoor Access Audit, October 2005

In Scotland there are over 7,500 rights of way recorded, 179 of which lie within the Park.

At present not all rights of way are signposted, although 15,000 signposts have been erected throughout Scotland, with 46 of the rights of way in the Park signposted.

4.7.3 Transport

Transport is addressed as a separate topic in the Socio-Economic chapter of this report. In common with much of rural Scotland, tourism in the Park is highly car-dependent. Only 2 per cent of respondents in the Cairngorms National Park Visitor Survey thought public transport was very good, and 74 per cent said that it had not been applicable. This would correspond with the very high proportion of visitors (83 per cent) who had travelled to the Park by private car. This compares with 87 per cent of visitors in the Loch Lomond and The Trossachs National Park Visitor Survey who travelled to the Park by private car. In Scotland as a whole 65 per cent of tourists from the UK travelled to Scotland by private car.

Once visitors are in the Park area there appears to be good car parking provision, which achieved the highest rating of very good and good (79 per cent) of all the facilities investigated in the Cairngorms National Park Visitor Survey.

There are 112 formal car parking areas within the Park and approximately 45 informal areas. A number of private estates and organisations charge for parking, using the money raised to improve car parking and toilet facilities, as well as developing and maintaining their access networks.

The second most popular mode of transport is private bus/coach, which accounts for 8 per cent of visitors to the Park. There are no records of the number of visitors travelling to the Park by train.

The transport infrastructure within the Park is heavily dependent on trunk roads, particularly the A9. There are good train links in the north of the Park, with mainline trains stopping at Dalwhinnie, Newtonmore, Kingussie, Aviemore and Carrbridge on their way to Inverness. It is different in the south and east of the Park, where Aberdeen provides the nearest rail link to the Braemar and Ballater area.

The bus links to the Park are again stronger in the north of the Park, with regular services on the A9 to and from major UK cities, passing through Glasgow, Edinburgh and Perth. In the south and east of the Park there are good links between major UK cities and Aberdeen. From there more local buses are the means of transport into the Park.

Postbuses are another important form of transport within rural areas. Postbus routes operating in the Park include Ballater to Glenshee; Dalwhinnie to Drumochter; Kirriemuir to Glen Prosen; and Kirriemuir to Glen Clova.

There are several community car and transport schemes operating in the Park. The Angus Transport Forum is a leader in Demand Responsive Transport, offering an example of what can be achieved when all public transportation is co-ordinated.

There are some initiatives to improve cycle carriage on buses in and around the Park. Cycle carriage is available on several routes out of Aberdeen and Inverness.

The National Park's integrated timetable and cycle/walks brochure (May 2005) combines local transport information and suggested routes for cyclists and walkers travelling to the Park from major cities.

The nearest air links are at Inverness and Aberdeen airports, which are both within one hour's drive of the Park.

4.7.4 Outdoor Access Events

The Park is the setting for many types of event. These include competitive sporting competitions such as mountain biking, skiing, telemarking, hill-running and orienteering, but also charity fund-raising events involving mass-participation walks. There is also a number of competitive hill races across the Park, some of which are connected to Highland Games.

A number of walking festivals take place across the Cairngorms from May to October and are publicised in one leaflet for the whole of the Park.

In Badenoch and Strathspey the Aviemore Walking Festival runs for one week during May, with ten different guided walks available each day graded from easy to strenuous. The festival

is in its third year, and walks are led by the various ranger services and other outdoor leaders. The Spirit of Speyside Walking Festival takes place in August and is now in its fourth year. It offers around 20 walks over five days for a range of abilities.

In Deeside, the Ballater, Royal Deeside Walking Week has run every May since 1998 and offers three walks of different grades each day. The Active Aboyne Outdoor Festival takes place in July and offers a range of walks for different abilities.

The Angus Glens Walking Festival has been running for three years and takes place over four days each June. The Blairgowrie and East Perthshire Walking Festival, now in its second year, takes place over six days from the end of September/beginning of October and offers a range of activities from low-level walks to more challenging routes.

Trends and Observations

- There is an increasing focus on countryside access, through legislation (particularly the Land Reform (Scotland) Act 2003) and through specific local initiatives.

Monitoring

The National Park Authority and Local Outdoor Access Forum monitor some aspects of outdoor access supply and demand. Scottish Natural Heritage also monitors outdoor access.

4.8 Access for All

4.8.1 All Abilities Access Survey

Following the Disability Discrimination Act in 1995, the Cairngorms Partnership initiated wide-ranging discussions with local and national bodies concerned with disabled access. In June 2001 The Cairngorms Partnership commissioned Reforesting Scotland's 'Woods for All' project to undertake a piece of work resulting in the All Abilities Access Survey. The survey looked at 15 specific sites in detail, 12 of which are within

4. VISITOR AND RECREATION RESOURCES...cont

the Park boundary. The main findings of this survey are summarised here.

Parking

The quality of parking spaces was important for disabled visitors. The key requirements were that there should be specific spaces for disabled drivers in small and/or busy car parks. Parking spaces needed to be long and wide, with an even surface, where possible.

Buildings and Amenities

Toilets and sheltered seating areas were very important to visitors, and although there was perceived to be a relatively high number of disabled toilets, poor access to them reduced their value. It was suggested that improvements should be made to the design of amenities, for example picnic table design to allow disabled visitors and their carers to use them.

Signage and Information

Most of the sites used waymarking posts and corresponding leaflets, which seemed for the most part effective. The main concerns raised were over-complicated and non-user-friendly leaflets. There were also issues over faint or complicated presentation of text and graphics on interpretation boards. One popular suggestion was tactile waymarking symbols, or possibly even tactile maps. Rangers for guided walks were seen as a valuable resource.

Paths and Access

It was noted during the survey that there was a large difference in the quality and accessibility of paths, due in part to the nature of the terrain, the visitor demand, historic and aesthetic issues and the stage of development of the site. It was suggested that there were a number of improvements that could be made, for example gate type and width. It was noted that every effort should be made to improve access, while ensuring the safety of all visitors.

Trends and Observations

- No specific trends identified.

Monitoring

There is no comprehensive approach to monitoring access for all.

4.9 Ranger Services

The provision of ranger services throughout the Park is complex and is affected by a wide range of issues. The Cairngorms National Park Authority is currently unique among UK National Park Authorities in not directly employing rangers.

There are 13 organisations within the Park employing 26.5 full-time equivalent rangers and delivering a programme of activities which covers the four essential aims of a ranger service as defined by Scottish Natural Heritage, namely:

- Welcoming visitors to the countryside;
- Mediating between the public and land managers;
- Promoting awareness, understanding and responsible use of the countryside;
- Caring for and enhancing natural heritage enjoyed by visitors.

These ranger services appear to provide services to three broad customer groups:

- Land managers;
- Visitors;
- Local Communities.

There are, however, differences in the make-up of each of the services, and in particular, in the remit of the staff. The diverse mechanisms that exist to fund staff, statutory roles and responsibilities of each of the organisations and their lack of uniformity means that co-ordination of ranger services is complex.

Ten services are part-funded by Scottish Natural Heritage through their discretionary grant funding. Four of these are employed by local authorities, four by private estates, one by the National Trust for Scotland and one by a

community group. Of the remaining three services one is managed by the Forestry Commission Scotland, one by Highlands and Islands Enterprise and one is entirely funded by a private estate.

The services work in three geographic groupings:

- Nine services cover defined sites often corresponding to an estate;

- Three services operate over a local authority area;
- One service is community-based.

Eight of the services operate bases or centres that are open to the public and provide visitor information and interpretation.

Table 4.9.1 details the area of operation and funding sources for each of the ranger services operating within the Park.

Table 4.9.1: Ranger Services – areas of operation and funding sources

| <i>Ranger Service</i> | <i>Area of Operation</i> | <i>Funding</i> | <i>Scottish Natural Heritage Discretionary Ranger Grant</i> |
|--|-----------------------------------|--|--|
| Angus Glens | Angus Council | Angus Council Forestry Commission Scotland | Yes |
| Aberdeenshire Council | Aberdeenshire Council | Aberdeenshire Council | Yes |
| Highland Council | Highland Council | Highland Council | Yes |
| Speyside Way | Speyside Way | Moray Council | Yes |
| Forestry Commission Scotland | Forestry Commission Scotland Land | Forestry Commission Scotland | No |
| The National Trust for Scotland (Mar Lodge Estate) | Mar Lodge Estate | The National Trust for Scotland | Yes (part of the national agreement between The National Trust for Scotland and Scottish Natural Heritage) |
| Balmoral Estate | Balmoral Estate | Balmoral Estate | Yes |
| Invercauld Estate | Invercauld Estate | Invercauld Estate | No |
| Glen Tanar | Glen Tanar Estate | Glen Tanar Charitable Estate | Yes |
| Glenlivet Estate | Glenlivet Estate | The Crown Estate | Yes |
| Explore Abernethy | Nethy Bridge | Explore Abernethy Community Group | No |
| Rothiemurchus Estate | Rothiemurchus Estate | Rothiemurchus Estate | Yes (Scottish Natural Heritage grant aid is for agreed outputs, many of which are delivered by the ranger service) |

Due to the wide remit of the local authority rangers, there is technically only a small area of the mountain core of the Park that is not covered by ranger services. However, there is no analysis of the coverage based on customer need.

In addition to ranger services there are a number of wardens and site managers who undertake some of the activities covered by rangers, but do not call themselves rangers. It is unlikely that the public differentiate between these groups.

4. VISITOR AND RECREATION RESOURCES...cont

4.9.1 Information Gaps – Ranger Services

- Analysis of ranger services coverage against customer need.

4.10 Information and Interpretation

As part of its Interpretive Framework, the Cairngorms National Park Authority has identified the need to undertake an audit of all interpretive facilities across the Park. In 1999 the Highland Interpretive Strategy undertook an audit of interpretive facilities, including built items, structures and buildings, but excluding leaflets, books and websites. The audit identified 154 facilities in the Badenoch and Strathspey area of the Park. There is no comparable information available for the rest of the Park.

The recent Cairngorms National Park Authority's Outdoor Access Audit compiled data on waymarking, leaflets and notice boards providing information about promoted paths.

The Cairngorms National Park Authority currently produces with partners a number of Park-wide publications providing information for visitors. These include:

- Visitor Guide;
- Cairngorms Countryside Events;
- Intergrated timetable;
- Gaelic Place Names;
- Walking Festivals Leaflet.

Explore Abernethy is a community initiative working to improve the understanding between land managers and recreational users of the area, while The Crown Estate at Glenlivet has developed a range of interpretive materials. The Mountaineering Council of Scotland has developed a small leaflet entitled 'Where to Go', which aims to raise awareness amongst

walkers and other users of the Scottish countryside of their potential impact on the environment and to inform them of ways of reducing the environmental damage caused by human sanitation. Scotways has also produced a leaflet on hill tracks within the Park.

There are currently nine specialised Outdoor Education Centres throughout the Park which provide a wide range of outdoor activities for individuals and organised groups.

Ranger Services in the Park provide guided walks and are very often the local contact able to offer advice and information to visitors when they are exploring the countryside. There are also a number of organisations involved specifically in the sustainable education elements of recreational and leisure activities. They include The Highland Council, the Forestry Commission, Forest Enterprise, the National Farmers' Union, Scottish Natural Heritage, The Royal Society for the Protection of Birds, The National Trust for Scotland, Highlands and Islands Enterprise and The Mountaineering Council of Scotland. These organisations provide an educational and information service through their presence at agricultural shows and games, by running or helping to fund visitor centres and by providing interpretation boards, signage and visitor guides.

Local estates are also actively involved and provide guided walks, information on flora and fauna, visitor guides, displays, code of conduct for water users, a mountain bike leaflet and map, familiarisation for local tourism businesses and pathfinder packs.

4.10.1 Information Gaps – Information and Interpretation

- Audit of interpretive facilities.

5. SOCIO-ECONOMIC RESOURCES



Photo: Stewart Grant.

5. SOCIO-ECONOMIC RESOURCES

5.1 Introduction

This chapter looks at the current state of the communities and economy of the Park. It is divided into the following sections:

- Population;
- Economy;
- Society;
- Infrastructure;
- Housing.

Data on population, some aspects of the economy and housing is available from the 2001 Census and is capable of close resolution to the Park. The data will not, however, be available in updated form to illustrate trends for a decade.

Some data on the economy is produced annually or more often at ward level, and represents the main opportunity for identifying trends in the medium term. Social health data is developed at ward level on a three to four year basis, and again, will allow medium term trends to be identified.

Relevant trends and monitoring are identified in each section, with comparison to national statistics where possible.

5.2 Population

5.2.1 General

The Park has a small population relative to its area, reflecting the rural character of the region. The population has lower levels of young people, and higher proportions of both older residents and of non-Scottish residents than Scotland as a whole.

The primary source of data on the Park population comes from the 2001 national Census. The Census is carried out every ten years, and the small area statistical data needed to analyse an area such as the Park is produced two or three years later. The next opportunity

to analyse the Park population in relation to the national position will therefore arise in 2012 or 2013.

Population projections provided by the General Register Office for Scotland in December 2005 indicate that if the fertility, mortality and migration of recent years continue within the Park, then:

- The population of the Park will increase by 9 per cent between 2001 and 2025;
- The rate of increase will slow over the projection period;
- The population increase will occur predominantly in the 60+ age groups;
- There will be population decrease in younger age groups;
- Population change will be stimulated by in-migration occurring predominantly in the 40-60 age group, perhaps a reflection that many of those who move to the Park see it as a retirement area;
- The number of households is expected to increase by 19.6 per cent between 2001 and 2016, partly due to an increase in the private household population, but mainly a result of the decrease in the average household size;
- One person households will increase most quickly between 2001 and 2016 (+42.7 per cent) as a result of the increasing elderly population who are most likely to live in such a household;
- The ageing population predicted by these projections will have important planning and policy implications in terms of meeting the needs of an ageing population and encouraging a reduction in the net loss of young adults.

5.2.2 Population Density

The Park is estimated to have a population of some 16,024 people, based on 2001 Census returns. The Park has a much lower population density than Scotland as a whole. Occupying an area of 3,800 square kilometres, or 408,782 hectares, it has a population density of just 0.04 people per hectare. This compares with a Scottish average of 0.65 people per hectare.

5.2.3 Age Distribution

The Park population is more heavily weighted towards the older age groups, 25.8 per cent of the population is 60 years of age or older (20.9 per cent in Scotland as a whole); and 28 per cent is under 25 (31 per cent in Scotland). These figures reflect out-migration by younger people and in-migration of people intending to retire in the Park.

The extreme age profile of Park residents is likely to generate considerable demands for community and social facilities and services from a limited tax base. This has implications for future local government budgets.

5.2.4 Gender

The Park population has broadly the same male-female composition as the Scottish population as a whole, approximately 48 per cent males to 52 per cent females. Females make up a slightly higher percentage of the population in both cases, a fact attributable to greater female longevity.

5.2.5 Ethnic Group

There are two striking characteristics relating to the ethnic composition of the Park population:

- It is overwhelmingly White;
- It contains a very significant 'Other White British' component.

Scotland as a whole has only a 2 per cent non-White population, which is far lower than the corresponding figure for Great Britain. The ethnic composition in the Park is even more extreme, with only one in 200 residents being non-White.

The incidence of 'Other White British' (English, Welsh and Northern Irish) in the Park is two and a half times greater than in the general Scottish population. It accounts for almost one in five residents of the Park. 'Other White' is also proportionately larger than Scotland as a whole.

5.2.6 Occupational Status

Census returns show that the Park population, in comparison to the Scottish average, is more skewed towards the C1 (supervisory, clerical, junior managerial/administrative/professional) and C2 (skilled manual workers) occupational classes, with 50 per cent of the Park population



classified as belonging to these two groups, compared with 41.2 per cent of the Scottish population as a whole.

The Park population has a smaller proportion of workers classified as the highest AB grade. However, the shortfall is perhaps less than might be anticipated, given the relative absence of medium and large employers and limited local demand for specialist services.

The relative proportions of semi-skilled and unskilled workers are around the same as for the Scottish population as a whole. However, the Park does have a lower proportion of individuals in the lowest occupational grade, unemployed or subsisting on other state benefits. This finding is consistent with findings in other rural areas that have not seen the large-scale movement from inactivity into sickness or other benefit that is characteristic of many urban areas in the past decade.

5. SOCIO-ECONOMIC RESOURCES...cont

The occupational make-up of the Park population, combined with a higher than average level of educational attainment, suggests that in common with many other rural areas, a significant number of Park residents may be over-qualified relative to the available work.

5.2.7 Information Gaps – Population

- Forecast demands for community and social facilities and for social services based on projected age profile.

5.3 Economy

5.3.1 General

In addition to the 2001 Census, economic data was collected in the Cairngorms Partnership area in 2003 by the two Enterprise Networks. The Cairngorms National Park Authority has also conducted an economic survey of the effects of tourism within the Park. It is more difficult to relate data from local and national government to the Park, given that the Park falls within four local authority areas.



Photo: Highlands and Islands Enterprise.

The Park population is notably more economically active than the Scottish population as a whole, a characteristic of rural areas, with a high level of self-employment. There is also a higher degree of gender segregation relating to types and sectors of employment within the Park. The economic base of the Park is relatively narrow, with the public sector and tourism-related industries underpinning a broader range of activity. Agriculture and estate-related activity,

such as stalking and shooting, are smaller sectors in terms of economic and employment contributions, but of critical importance to the management of the Park and supporting employment outside the main settlements.

The Census, which is updated every ten years, provides basic data on aspects of economic activity and employment and may be closely tied to the Park area. The Annual Business Inquiry provides an annual picture of employment and economic activity. The administrative boundaries used in the Annual Business Inquiry cut across the Park's boundary and cover a wider geographical area than the Park itself. Agricultural data is drawn from the annual agricultural census – again the administrative boundaries used in its compilation extend beyond the Park. There is no regular published source of data on sporting estates, despite their importance to the Park.

5.3.2 Labour Market Economic Activity

The Park contains a higher proportion of economically active people (70 per cent) than Scotland as a whole (65 per cent), and a higher number of these are self-employed. These findings are typical of rural Scotland, although the level of self-employment is notably high at almost a quarter of those who are working. This compares with just over a tenth in Scotland as a whole.

At just over 50 per cent, the proportion of people working as employees is comparable with that at the Scottish level, but the Park population has a notably higher level of part-time employment.

The proportion of people designated as permanently sick/disabled in the Park is half of that for the Scottish population as a whole, notwithstanding the greater average age of Park residents.



Gender

It appears that a segregation of roles by gender along traditional lines is being sustained in the Park to a greater degree than in the national population, whether due to cultural factors or barriers such as access to childcare services. The number of economically active males outstrips the number of females to a degree which contrasts with national level data.

There is also a striking gender segregation among people with employed status, with the majority of males in full-time employment, whereas female employees are more evenly divided between full and part-time employment. Women are also more likely to be economically inactive in order to look after children and family than men, to a degree which is considerably greater than at national level. Rural isolation leading to lack of access to suitable part-time jobs and the absence of child support could both be contributing factors.

Qualifications

The Park population is slightly better qualified than the Scottish population as a whole. In 2001, 69.3 per cent of people in the Park held some kind of qualification, compared with 66.9 per cent in Scotland as a whole. There is a certain amount of polarisation within those holding qualifications. More of the Park population hold Group 1 ('O' Grade, Standard Grade, SVQ Level 1 or 2) qualifications, and fewer hold Groups 2 ('H' Grade, SVQ Level 3) and 3 (HNC, HND, SVQ Level 4). However, the most striking disparity is between the proportion of the Park population with a Group 4 qualification (first degree, higher degree, professional qualification) and Scotland as a whole. At this level, the Park population has significantly higher educational attainment (22.7 per cent) compared with the Scottish average (19.5 per cent).

Hours Worked

A slightly higher proportion of the Park population works hours that correspond to the definition of part-time working (2001 Census). Within the part-time work category, hours worked are comparable with that of the Scottish population as a whole. For full-time workers within the Park, hours worked tend to be longer than in Scotland as a whole. Almost a quarter of employed residents of the Park work more than 48 hours per week, compared with 15 per cent at the Scottish level.

5.3.3 Industry and Employment Structure

The pattern of employment shown by the 2001 Census reveals an economy which is relatively narrow compared with that for Scotland as a whole. There are a small number of sectors that are over-represented and a larger number where representation is below average.

However, this pattern is common to many rural areas, including much of the Highlands and Islands. A higher proportion of the Park population (5.7 per cent) are employed in the primary industries of agriculture, hunting and forestry, as would be expected in a more rural area. The numbers are still low in absolute terms, although these are areas where self-employment is likely to account for a significant proportion of the total.

Employment in fishing (which includes both freshwater and marine) is low (0.1 per cent), perhaps surprisingly given the role of fishing in the local economy. Again, this may be an area where self-employment plays an important role.

Manufacturing, substantially skewed towards brewing and distilling, is of a similar scale to primary activities and has grown in recent years, counter to the trend at national level.

The Services sector accounts for the largest proportion of jobs.

5. SOCIO-ECONOMIC RESOURCES...cont

Employment in hotels and restaurants in the Park (19.4 per cent) is much higher than in Scotland as a whole (5.7 per cent), reflecting the relative importance of the tourism sector.

Employment in public services, as represented by public administration, education, and health and social work, is significantly lower in the Park (20.1 per cent) than in Scotland as a whole (26.7 per cent). This disparity is likely to reflect the pattern of local government and educational provision in the area surrounding the Park,

which has relatively few of these institutions located within the Park boundary.

The Other employment category has a much higher proportion of respondents within the Park than Scotland as a whole, representing forms of employment not captured by the Standard Industrial Classification. The Other category includes community, social and personal service activities, as well as private households with employed persons.

Table 5.3.3: Employment by sector

| Sector | Park (No.) | Park % | Scotland (No.) | Scotland % | Park Deviation from Scotland (%) |
|--|---------------|-----------|-------------------|---------------|-------------------------------------|
| Agriculture, hunting and forestry | 442 | 5.7 | 48,391 | 2.1 | 3.6 |
| Fishing | 11 | 0.1 | 6,784 | 0.3 | -0.2 |
| Mining and quarrying | 108 | 1.4 | 28,040 | 1.2 | 0.2 |
| Manufacturing | 566 | 7.2 | 299,167 | 13.2 | -6.0 |
| Electricity, gas and water supply | 44 | 0.6 | 22,613 | 1.0 | -0.4 |
| Construction | 629 | 8.0 | 169,144 | 7.5 | 0.5 |
| Wholesale and retail trade, repairs | 983 | 12.6 | 325,398 | 14.4 | -1.8 |
| Hotels and restaurants | 1,515 | 19.4 | 129,798 | 5.7 | 13.7 |
| Transport, storage and communications | 396 | 5.1 | 151,506 | 6.7 | -1.6 |
| Financial intermediaries | 94 | 1.2 | 104,923 | 4.6 | -3.4 |
| Real estate, renting and business activities | 704 | 9.0 | 252,585 | 11.2 | -2.2 |
| Public admin, defence, social security | 320 | 4.1 | 158,064 | 7.0 | -2.9 |
| Education | 489 | 6.3 | 165,074 | 7.3 | -1.0 |
| Health and social work | 758 | 9.7 | 279,720 | 12.4 | -2.7 |
| Other | 765 | 9.8 | 120,074 | 5.3 | 4.5 |

Source: 2001 Census, General Register Office for Scotland.

Seasonality and Pay Rates

Agricultural surveys and the nature of tourism in the Park point towards a high level of seasonal employment in the area. Many residents have more than one job over the course of a year. This has implications for career paths and training needs for residents, and skills gaps for employers.

Traditionally, sectors such as agriculture and tourism have low pay rates and the Park is no exception, with the effect magnified locally due to the over-reliance on these sectors.

Gender Segregation

A high level of gender segregation by sector was identified, considerably more than at national level. Employment in the primary industries of agriculture, hunting, forestry, fishing and mining and quarrying was predominately male. Manufacturing, construction and electricity, and gas and water supply also had a preponderance of male workers. Women formed a higher proportion of workers in the wholesale and retail trade and in the hotels and restaurants sector. Female employment was also greater in public sector employment, as a result of higher numbers of women working in the education and social work sectors.

Trends in Employment by Industry

Between 1998 and 2002, the most significant increases in employment occurred within primary education (188 jobs), secondary education (154 jobs), specialised stores (58 jobs), fire service activities (47 jobs), other provision of lodgings (39 jobs) and other recreational activities (35 jobs).

The role of the public sector in employment growth is striking, with more minor growth attributable to some tourism-related and retailing sub-sectors.

The most significant employment losses in the Park between 1998 and 2002 occurred within hotels with a restaurant (-120 jobs), restaurants (-94 jobs), social work activities (-90 jobs), general public service activities (-69 jobs), catering (-63 jobs) and general construction of buildings (-53 jobs).

The fragility of the tourism industry is reflected in these figures, which show that there were 277 less jobs in the Hotels, Restaurants and Catering sub-sectors. However, there remained 1,278 Hotel jobs in the Park in December 2002, reflecting the continued importance of tourism to the local economy.

Recent tourism economic figures show that tourism employment in the Park sits at around 5,000, with minor fluctuations between 2002 and 2004.

5.3.4 Agriculture

General

The primary source of data on agriculture in Scotland is from the annual agricultural census, compiled by the Scottish Executive Environment and Rural Affairs Department. The agricultural census analyses agricultural production at national level, at 14 regional levels and then at parish level. The Cairngorms National Park is covered by 15 parishes, although six of these have half or more of their area outside the Park.

Structure and Tenure

The Park incorporates some traditionally strong hill and upland farming areas, such as Upper Deeside, Strathspey, Tomintoul and Glenlivet, with climate and soil conditions allowing for cropping in the small areas of better land. This



farming activity is associated with large areas of moorland, which also play an important role in the sporting economy. Much of the land is in the ownership of large estates and is either farmed in-hand or tenanted. Major landowners include private individuals, charities, public agencies, other organisations and The Crown Estate. There are also 105 registered croft holdings in the Park, all within Badenoch and

5. SOCIO-ECONOMIC RESOURCES...cont

Strathspey. Average farm size is relatively high, exceeding 600 hectares, compared with a Scottish average of 122 hectares. It is common, like elsewhere, for owners to take more land into in-hand management so as to consolidate units into larger holdings in response to economic and policy factors.

Although holdings are larger on average than the Scottish norm, productivity is likely to be relatively low as a result of the activities undertaken and their limitations in terms of income generation. The 1998 Scottish Agricultural College Land Use and Economic Activity in Possible National Park Areas study estimated that 30 per cent of the total agricultural output of the area was direct subsidy or market support, and that 86 per cent of this subsidy related to livestock. Both proportions significantly exceed the Scottish average.

Within the Park there is a strong trend towards farming being a part-time occupation. The agricultural census data points to less than 600 people involved in farming within the Park, with just over 300 of these full-time.

Land-use and Agricultural Activity

The principal farm enterprises are normally a mix of beef cows and breeding ewes, with some of the better units able to finish stock as well as produce arable crops. Principal livestock outputs are store calves and lambs, although as in other areas more farmers are now seeking to add value through finishing stock. A small number of farms in the straths grow more substantial areas of crop, such as malting barley for the distilling trade.

Agricultural land-use within the Park is dominated by rough grazing. The small area in crop cultivation is heavily biased towards production of spring barley, likely to be mainly for malting purposes, with the vast majority of the remainder given over to fodder crops.



Photo: Invercauld Estate.

Livestock within the Park is dominated by sheep (189,000) and cattle (28,000), which sustained declines of 15 per cent and 10 per cent respectively between 1990 and 2003, reflecting the employment trend in agriculture. A further striking trend is the 70 per cent growth in the number of horses used for leisure purposes in this period, although the total remained relatively small in absolute terms at just under 300.

More details of the natural and cultural heritage influences of land-use are given in the Natural and Cultural Resources chapters.

5.3.5 Estates

General

The most recent source of information on estates within the Park is the 1999 study on land owners in the Cairngorms Partnership area (a larger area than the Park). While the role of estates in the Cairngorms economy is clearly significant, particularly in the most remote and rural areas of the Park, existing data sources are not able to identify the type and extent of estate-related economic activity. It would require a dedicated research effort to canvass the estates to determine their current economic contribution and future prospects.

Employment

The Cairngorms Partnership Survey identified 422 full-time jobs, and 126 full-time equivalent part-time jobs based on estates. Of these, almost half were linked to fieldsports (red and roe deer stalking, high and low-ground shooting and fishing). While 46 of the respondents were directly involved in fieldsports, the remaining 14 had no employment in this activity because the sporting rights were let or the estate was used predominately for another purpose.

Agricultural employment on in-hand farms was 41 full-time equivalent staff. A total of 238 farms were owned by the respondents, some 111,888 hectares in all. The extent to which farms and land were let was not stated.

No other employment figures were published for other activities such as nature conservation, commerce and tourism, outdoor recreation and access and business management.

It is possible that some of the employment generated by the estates goes to workers who live outside the Park boundary. Some estate-related employment may also be recorded as self-employment.

Investment

Estates are a significant focus of investment and of investment subsidy within the Park. The Cairngorms Partnership Survey reported that in 1998/99 a total of £17.4 million was invested, of which £1.7 million (approximately 10 per cent) was through grant assistance. This investment is distributed across a range of activities including woodlands, fieldsports, community access facilities and housing.

Estate Housing

Survey respondents provided over 1,000 homes during the period 1998/1999. Of these, 263 were tied homes, 235 were within farm tenancies, 434 were let as private residences and 69 were let for other purposes.

Half of the respondents reported a policy of favouring local needs when allocating housing, either to those who worked locally or had local connections. Some tied houses were provided rent-free for employees.

5.3.6 Information Gaps – Economy

- Reason for segregation of roles by gender;
- Reason for gender segregation among employed people in relation to full/part-time work;

- Comprehensive analysis of numbers employed in agriculture, hunting, forestry and fishing;
- Type and extent of estate-related economic activity, employment and investment;
- Employment figures for nature conservation, commerce and tourism, outdoor recreation and access and business management sectors.

5.4 Society

5.4.1 General

The main source of social information covering the Park is the Scottish Index of Multiple Deprivation. Based on earlier work in England and Wales, the Index is an attempt to measure relative deprivation at local level, using a number of measurements of social well-being, including income, employment and education.

Other aspects of society, such as social capital and social infrastructure, are harder to measure, and are not the subject of regularly published analyses.

5.4.2 Measures of Deprivation

In previous years, data for the Scottish Index of Multiple Deprivation was collected at ward level. The Park is covered by the following wards: Glenlivet; Upper Deeside; Donside and Cromar; Kirriemuir West; Kirriemuir East; Brechin North Esk; Grantown-on-Spey; Strathspey North East; Strathspey South; Badenoch West; Badenoch East.

Table 5.4.2 shows the relative ranking of the Park wards in the Scottish context.

Overall, the Scottish Index of Multiple Deprivation suggests that the Park population enjoys a relatively good quality of life, although access to services is less good than in many areas of Scotland.

5. SOCIO-ECONOMIC RESOURCES...cont

Table 5.4.2: Park wards in the Scottish Index of Multiple Deprivation 2003

| Category | Placing |
|--------------------------------|--|
| Income deprivation | Good: top 50% of wards (with exception of Kirriemuir East) |
| Employment | Good: top 50% of wards |
| Education, skills and training | Mixed: 3 out of 11 wards are in the lowest 50%, although none is in the lowest 25% of wards in Scotland |
| Health | Good: all but 2 wards in the best 25% in Scotland |
| Accessibility | Poor: all but 1 ward are in Scotland's worst 25% |
| Overall rating | Good: 3 wards in highest quartile, remainder in second highest quartile |

Source: Scottish Executive Scottish Index of Multiple Deprivation 2003

5.4.3 Social Capital

'Social capital', according to the definition favoured by the Scottish Council for Voluntary Organisations is the "social connections and its attendant norms and trust" that bind society together. As such, this form of capital cannot be directly measured or quantified in an objective fashion.

The Park has a higher number of voluntary organisations per 1,000 people than the Scottish average of 5.08 organisations. There are significant differences between the local authority areas, with Highland having a higher number of organisations than the other three local authority areas. Moray, at 5.44 organisations per 1,000 people, comes closest to the national average. However, these figures primarily relate to larger organisations with charitable status.

The Scottish Council for Voluntary Organisations notes that rural council areas typically have proportionately higher numbers of voluntary organisations than urban areas. The higher number of organisations in Highland may, in part, be a product of a larger council area requiring a larger number of organisations to meet local needs. The total voluntary effort in a council area may not therefore be directly linked to the number of organisations. Voluntary organisations in rural areas tend to receive substantially less funding on average than their urban counterparts, although the reasons for this difference require further exploration.

5.4.4 Social Infrastructure

There is no published data source for physical infrastructure used for community purposes. Facilities may also be in private hands or used on an informal basis, making it harder to identify these structures.

The Park population has relatively few community centres owned directly by local authorities providing social, educational and recreational facilities for the community. However, the Park population may be being served in this regard



by community centres located outside the Park boundary. For example, Tomintoul is served by the Speyside Community Centre located in Aberlour. Village halls also provide similar facilities in many settlements.

Village and town halls are present in almost all the main Park settlements. Village halls have an important role as a focal point for community

activity and access to services. The Park appears to be well served in terms of numbers of village halls, but the condition, adequacy of space and facilities, and security of funding arrangements vary.

The provision of library facilities in the Park is greater, with six of the 13 main settlements having some form of library provision. Outlying areas in the Park may be served by mobile libraries, but these will not provide the physical facilities, including meeting space and internet facilities, that fixed libraries are able to provide.

5.4.5 Childcare

Childcare provision is an important element in enabling families to access employment and educational opportunities, and is particularly important for mothers seeking to re-enter the workforce.

The national ChildcareLink service identifies a range of childcare services in the Park, although this is clearly more developed and formalised in



Photo: Highlands and Islands Enterprise.

some settlements than in others. The data available shows that childminding and nursery provision are the most prominent services, with very limited out-of-school-hours provision. Childminding is increasingly important, but childminders are being lost due to increased regulation. This has led to a larger unregulated market. Further research is required to determine whether existing provision is

adequate to meet needs and how childcare professionals can be better supported.

5.4.6 Young People

There is no published data on the position of young people in the Park and their needs. The four local authorities each have their own approach to identifying and working to meet the needs of young people.

The Dialogue Youth Initiative, supported by the Scottish Executive, operates within each local authority area canvassing young people on issues and needs and will be used in developing appropriate services.

5.4.7 Crime and Community Safety

The Park is covered by the Grampian Police and Northern Constabulary areas, which do not report at a more local level, so data on crime and community safety at a Park level is limited.

The Northern Constabulary area has the most rural population of any police area in Scotland,



Photo: Northern Constabulary.

and the lowest recorded crime rate. The Grampian Police area, which takes in the city of Aberdeen, has the third lowest recorded crime rate of the eight Scottish police areas. This suggests that the crime rate within the Park is also likely to be relatively low.

5. SOCIO-ECONOMIC RESOURCES...cont

Recorded crime is not the sole measure of the impact of crime on society. Not all crimes are reported to or detected by the police, and reporting and detection levels are independent of crime rates. Surveys have shown that the rate of crime experienced by people can be much higher than the level of crime reported.

5.4.8 Information Gaps – Society

- Updated Scottish Index of Multiple Deprivation findings;
- Condition, adequacy of space and facilities, and security of funding arrangements in relation to village halls;
- Whether existing childcare provision is adequate to meet needs and how childcare professionals can be better supported;
- Crime statistics within the Park.

5.5 Infrastructure

5.5.1 General

The Park is relatively well provided with transport links, although communications within the Park are less well-developed. Limited data on road usage is available from the relevant local authorities.

Energy generation, waste disposal, and the recycling of waste largely take place outside the Park.

Housing supply in the Park differs from that of Scotland as a whole, being characterised by a higher level of large, detached properties, more vacant properties and a much higher level of second home and holiday accommodation.

5.5.2 Transport Services

The Park has relatively good transport infrastructure and services compared with many other rural areas of Scotland. Three A class roads connect the Park with Inverness, Central Scotland, Aberdeenshire, and Lowland Perth, Kinross and Angus. Networks of B class roads

provide access to local communities. However, the road link between the Strathspey and Deeside areas is less well-developed. The trunk roads are sometimes subject to local congestion as a result of grouping of Heavy Goods Vehicles



Photo: Stewart Grant.

and caravans impeding the passage of faster traffic, particularly in the summer months. Household ownership of cars and vans is significantly higher within the Park than in Scotland as a whole.

The Inverness-Perth railway line runs through the Park, with stations at Carrbridge, Aviemore, Kingussie, Newtonmore and Dalwhinnie. Of these, Aviemore and Kingussie are regularly served on weekdays and Saturdays, but service at the other stations is more intermittent.

Bus services provide the most extensive form of public transport within the Park and to regional and national destinations. For most of the main settlements bus services provide a viable basis for travel to work for the normal working day in Inverness (from Badenoch and Strathspey) and Aberdeen (from Deeside). The combination of trunk and local services also provides reasonably frequent internal public transport where the main settlements are concerned.

More remote settlements are served more sparsely, considerably so in some cases.

Inter-community bus services are poor when not travelling directly into town hubs such as Aviemore. There is no cross-Park service between Aviemore and Deeside or Braemar to Blairgowrie, or any direct service from the Angus Glens to the rest of the Park. Sunday services on most routes are less frequent.

5.5.3 Telecommunications

Fixed telephony is near universal. Mobile phone coverage is reported to be good in the majority of the Park's major settlements. Coverage outside of the main settlements is much more variable, and reception in much of the Park will depend on the topography at the user's location. Lack of mobile phone reception in areas such as the Angus Glens can further isolate remote rural communities.

Access to broadband internet services via British Telecommunications' telephone lines is improving, with all major settlements expected to have their local exchanges upgraded to handle broadband traffic by 2006. Issues with providing broadband access to remote households may still remain.

5.5.4 Energy

There is no nationally significant energy generation within the Park. Residents obtain their electricity from the National Grid, which in turn draws upon a variety of sources of power generation – nuclear, gas, coal, hydro-electric and wind turbines outside the Park.

There are few examples of renewable energy within the Park, although there are some biomass boilers in use, along with scattered domestic solar and wind turbine systems.

The absence of mains gas for many householders means that Park residents depend on electricity for cooking and heating and/or use of bottled gas or oil, both of which must travel by road.

The growing expense of oil-fired central heating is likely to lead to more demand for other forms of energy generation.

5.5.5 Waste Management and Disposal

Responsibility for waste disposal lies with the four local authorities within which the Park sits. Waste disposal and recycling arrangements vary according to each local authority's management approach and facilities.

In the Park, The Highland Council operates the Granish landfill site, just north of Aviemore. This landfill will take waste from both the Park and the surrounding area. The other local authorities have their landfill sites outside the Park.

Some community waste management initiatives exist. The Real Highland Nappy Campaign is based at Nethy Bridge, Strathspey Waste Action Network is active and there is growing interest from local authorities in providing domestic recycling pick-up. Commercial options remain absent.

5.5.6 Recycling Facilities

The availability of recycling facilities depends on each local authority's approach. For the most part, these facilities serve as collection points for easily recyclable waste, which is then transferred in bulk to be reprocessed. Highland, Aberdeenshire, and Moray Councils operate a number of recyclable waste 'bring' sites within the Park, while Highland and Angus Councils are establishing a kerb-side collection service.

5. SOCIO-ECONOMIC RESOURCES...cont

5.6 Housing

5.6.1 Demographic Background

Based on current analysis of the housing system, it is evident that there are various housing challenges facing the Park in the future. A summary of population projections provided by the General Register Office for Scotland in December 2005 is outlined in section 5.2. Overall projections show a growth in one person households and an ageing population.

5.6.2 Housing Stock and Tenure

The housing system has changed considerably over the past 10 to 15 years. There has been significant growth in the owner occupied sector,

two-fold. Firstly, the demand for second or holiday homes in an attractive rural environment exerts an upward pressure on prices. Secondly, the stock is by definition ineffective in its ability to meet permanent housing demand or need.

Within the occupied stock a relatively high proportion of owner occupiers own their properties outright when compared with the Scottish average. House prices have risen significantly in the owner occupied sector in recent years.

The private rented sector is relatively large and more diverse when compared with other areas of Scotland, with a significant proportion of tied housing, emphasising the link between employment and housing. It may also be viewed as a more permanent housing solution by some households, when examined in the context of the traditional view of the sector as a transient housing solution. At the same time expressed demand for social rented housing tends to indicate that a large number of households in the private rented sector are seeking social rented housing. The ability to influence and ensure that the private rented sector plays an effective role in the Park's housing system is perhaps of more significance within the Park than in many other parts of Scotland.

and a slight decline in the private rented sector (although numerically there has not been much change). This is coupled with a decline in the social rented sector both numerically and as a proportion of all housing stock. This has been primarily due to Right to Buy and a low rate of new build in the affordable housing sector when compared with the private sector.

The overall supply of housing is affected by the significant proportion of the housing stock that is second or holiday homes. Approximately 1,800 homes are in this category, representing just under 20 per cent of the total housing stock. The main impact on the housing system is

The local authority housing sector has declined in both absolute and proportionate terms, whereas the registered social landlord sector has increased slightly. On average, 42 properties have been sold every year through Right to Buy over the past 20 years. The registered social landlord sector has grown over the past 10 to 15 years to meet a wider range of particular needs and now has a more diverse range of tenants in terms of household type. There is a significant level of expressed demand and need through both the local authority housing lists and available homelessness figures.



The total current number of applicants for housing is circa 550-600. The total annual lets are estimated at between 70 and 80 across both the local authority and registered social landlord sectors.

5.6.3 House Prices and Affordability

The estimated mean and median household weekly incomes within the Park are £461 and £391 respectively. In general, these figures are lower than the corresponding ones for the wider local authority areas. The overall threshold entry price to access the housing market is estimated at £83,554 for the Park, which is higher than in the surrounding areas.

The percentage of younger (<35 years) households able to buy a property in the market, based on threshold prices, is estimated at 38 per cent. Analysis shows that, within the Park, affordability is particularly low in the Aviemore area, and also quite low in the Deeside and Tomintoul areas. It is slightly higher in the Grantown and Kingussie areas.

A housing needs analysis shows that the net need per annum is 132 across the Park. This ranges from 10 in the Tomintoul area to 54 in the Aviemore area. This is a fairly large number equivalent to all the current completions projected through the planning system. Numerically, the needs are greatest in the Aviemore area, but relative to the existing number of households they are also proportionately high in Tomintoul.

5.6.4 Housing Development

In recent years house completions have been rising, although these are mainly concentrated in the private sector. Current projections anticipate approximately 115 completions per annum, with a greater proportion of affordable housing within this target. However, significant potential constraints, primarily in the form of infrastructure, have been identified.



Photo: Highlands and Islands Enterprise.

6. APPENDICES

Appendix 1

Public Bodies Consulted

In addition to a number of private organisations and individuals, the following public bodies were consulted on the Draft State of the Park Report:

| | |
|---|---|
| Aberdeenshire Council | Royal Commission on Ancient and Historical Monuments of Scotland |
| Angus Council | Scottish Enterprise Grampian |
| Communities Scotland | Scottish Enterprise Tayside |
| Crofters Commission | Scottish Environment Protection Agency |
| Deer Commission for Scotland | Scottish Executive Environment and Rural Affairs Department |
| Forestry Commission Scotland | Scottish Natural Heritage |
| Highland Council | Scottish Water |
| Highlands and Islands Enterprise | |
| Historic Scotland | |
| Moray Council | |

Appendix 2 – Glossary

NATURAL RESOURCES

| | |
|---|--|
| Acidification | Increased levels of acid in soil and water. |
| Alluvial fans | A fan-shaped deposit formed where a fast flowing stream slows and deposits its sediment, typically at the exit of a valley onto a flatter plain. |
| Alpine and sub-alpine soils | A grouping of sandy and gravelly soils confined to exposed high ground which are subject to wet, very cold climatic conditions. |
| Arctic-alpine | Plants with a distribution that includes the Arctic and more southerly mountain ranges such as the Alps. |
| Blanket bog | An area of blanket mire where the water supply is derived purely from precipitation. |
| Blanket mire | A waterlogged, peatland habitat that develops over gentle slopes in the uplands, in cool areas of high rainfall. This results in very slow rate of decomposition and plant remains accumulate as peat below the living vegetation. |
| Block scree | Debris in the form of boulders that has been eroded from steep slopes or cliff faces. |
| Boreal woodlands | Forests composed mainly of conifers which grow in a belt across northern North America and Eurasia. |
| Breached watersheds/watershed breaches | A glacial valley that cuts across a pre-glacial watershed. The Lairig Ghru is a classic example which breaches the Spey-Dee valley watershed. |
| Bryophytes | A major group of plants that includes mosses, horn worts and liverworts. |
| Calcareous | Describes soil, or grassland growing on soil, which is rich in calcium carbonate. In the Cairngorms, such conditions are commonly associated with outcrops of dolerite and limestone. |
| Caledonian Pinewood Inventory | A database, produced by the Forestry Commission, which maps and describes 84 ancient Scots pine-dominated woodlands in Scotland. |

| | |
|--|---|
| Corridor link/wildlife corridor | A connected habitat which allows movement of animals between areas. |
| Corries | Large circular hollows that are formed by glacial activity, usually on north-east facing mountainsides. |
| Debris flows | The down-slope flow of poorly-sorted sediment such as stones and boulders. |
| Deciduous woodlands | Tree species that do not retain their leaves year-round. |
| Depression | An area of low pressure in the atmosphere. |
| Ecosystems | Communities of organisms and the environments they live in. |
| Eutrophication | Nutrient enrichment of water bodies. |
| Genotypes | The inheritable, genetic code of an organism. |
| Geomorphology | The study of landforms. |
| Glaciofluvial deposits | Material deposited by water from glaciers. |
| Gleyed soils | Clay-rich soils where drainage is disrupted. |
| Hummocky moraines | Deposits from glaciation that form small mounds. |
| Igneous intrusions | Granite rock resulting from the cooling of magma beneath the ground. The resulting rock is very resistant to weathering and is often left upstanding when surrounding rocks are eroded. |
| Impervious soil layers | Soil layers through which water cannot pass. |
| Inter-glacials | The periods of time in between glaciations. |
| Leached soils | Soils which have had most of their soluble content washed away by high levels of precipitation. |
| Low alpine heaths | Heaths that lie immediately above the treeline and are dominated by shrubs such as heather, cowberry and blueberry. |
| Massif | A coherent area of high ground. |
| Meanders | Winding and turning river bends. |
| Meltwater channels | Channels created by the flow of water melting from a glacier. |
| Metamorphosed sedimentary rocks | Rocks that have been subject to change as a result of volcanic or other processes in the time following their original deposition. |
| Minerotrophic fens | Peatlands that receive water and nutrients from ground water as well as from rainfall. |
| Monoculture production | Production of a single species. |
| Montane soils | Soils characteristic of areas above the natural treeline. |
| Mountain/montane habitat | Habitat above the natural treeline. |
| Muirburn | Managed burning of heather as part of a moorland management system. |
| Mycorrhizal fungi | Mushrooms which grow around the roots of plants providing minerals and water from the soil to the host plant in exchange for sugars. |
| Oligotrophic rivers | Rivers which are low in nutrients. |
| Palaeontology | The study of prehistoric animals and plants through the analysis of fossils. |
| Peri-glacial landforms | Ground features that formed on the edge of glaciers or glaciated areas. |
| Ploughing boulders | Large rocks that move down slope through the surrounding soil, leaving a vegetated furrow behind and forming a turf-covered rampart ahead. |
| Podzols/podzolic | Soil type that develops in temperate to cold, moist climates under coniferous or heath vegetation. |
| Precipitation | Rain, mist and snow. |

| | |
|------------------------------|---|
| Ranker soils | Thin, peaty soils in mountainous areas which overlie free-draining, siliceous material. |
| Riffles | Shallow sections of a stream or river where sand and gravel have accumulated to create a faster current with a rougher surface. |
| Roches moutonnées | Rock hills shaped by the passage of ice to give a smooth up-stream side and a steeper, rougher surface on the downstream side. |
| Saproxyllic species | Any species that depend on dead or decaying wood. |
| Scree | Loose rock on a hillside. |
| Solifluction features | Features resulting from movement of soils. |
| Taxon, (plural: Taxa) | A term used to denote any group or rank in the classification of organisms, e.g. class, order, family. |
| Terraces | Surfaces preserved on flood plains from when the river flowed at a higher altitude. |
| Loch Lomond readvance | A short, but cold, climatic period lasting from 10-11,000 years ago when corrie glaciers re-formed in the Cairngorms. |
| Tors | Upstanding rock features, usually granite, from which the surrounding rock has been eroded to leave a skyline feature. |
| Vascular plants | Complex plants with conductive tissue. |

CULTURAL RESOURCES

| | |
|-------------------------------|---|
| Crowstepped gables | Stepped stone gable ends, typical of many buildings in the area. |
| Head Dyke | Dyke (dry stone wall) separating cultivated land from hill land. |
| Iron Age | Chronological period c. 700BC to c.500 AD characterised by the use of iron as the main metal. |
| Liming | Process of applying lime to fields to reduce acidity. |
| Mesolithic | Chronological period c.7000 to 4000BC during which humans hunted and fished. |
| Neolithic | Chronological period c.4000 BC to 2500 BC characterised by the development of agriculture and settlement. |
| Pinetums | Designed plantations of coniferous trees generally specimen trees and exotic species. |
| Policies | The designed park-land surrounding a country house. |
| Ridged field systems | Cultivation on raised ridges. |
| Sculpted stones | Decorated carved symbol stones and cross slabs. |
| Sheepwalks | Area of hill ground used for extensive sheep grazing. |
| Timber stockades | Defensive barrier of stakes placed around a building. |
| Upstanding archaeology | Archaeological remains above ground. |
| Vernacular | Local architectural style in which ordinary houses are built. |
| Waulking | Process of washing and shrinking of locally made cloth. |

VISITOR RESOURCES

| | |
|-------------------------------------|--|
| Back country skiing | Skiing outside the boundaries of a managed ski area. |
| Baseline dataset/information | A value or starting point against which progress is measured. |
| Bothies | An open building used for temporary shelter. |
| Coarse fishing | Fishing for freshwater fish that are not of the salmon family. |
| Corbetts | Hills in Scotland between 2,500 and 2,999 feet in height. |
| Demand responsive transport | Public transport which is co-ordinated to meet demand, rather than fixed timetables. |

| | |
|--------------------------------------|--|
| Erratics | A boulder transported and deposited by a glacier, being different to the bedrock upon which it is sitting. Erratics are useful indicators of patterns of former ice flow. |
| Esker | A long, narrow ridge, often winding, which marks the former location of a glacial tunnel. |
| Green Tourism Business Scheme | VisitScotland's environmental accreditation scheme for Scottish tourism businesses. The scheme helps tourism businesses save money by improving their environmental performance and also helps protect Scotland's environment. |
| Howffs | Shelters used by hillwalkers. |
| Kettle holes | A hollow created when buried blocks of glacier ice melt. |
| Montane scrub | The shrub habitat which forms an understorey within native woodland and continues up through the treeline, where tree species become stunted, and beyond, into the sub-alpine zone. |
| Moraines | Landforms created at the margins of glaciers by the melt-out of debris from the glacier and by the bulldozing action of the ice. |
| Munros | Hills in Scotland over 3,000 feet in height. |
| Promoted paths | Paths which are advertised and managed by land managers, environmental organisations and access organisations. |
| Rights of Way | A route to which the public have an accepted right of access. |
| Tactile maps | Maps incorporating Braille for use by the blind and partially sighted. |
| Tactile waymarking symbols | Waymarking symbols incorporating Braille for use by the blind and partially sighted. |

SOCIO-ECONOMIC RESOURCES

| | |
|--|--|
| Affordable housing | Housing of reasonable quality affordable to people on modest incomes. If the market cannot provide housing in an area which is affordable to people subsidised, affordable housing may need to be made available at a cost below market value. |
| Biomass boilers | Boilers which use renewable fuels, such as wood chips. |
| Direct subsidy | Direct payments to the agriculture industry which are linked to production or rural development. |
| Expressed demand/expressed need | Views of local residents and organisations on the demand or need for housing in an area. |
| House completions | New dwellings completed. |
| Housing needs analysis | Analysis which seeks to understand housing need and which can be carried out to the level of an individual or household over a geographical area or for a specific community of place or interest. |
| Housing stock | The total number of dwellings in a given area. |
| Housing tenure | The legal basis on which a house is occupied, eg owned, rented, etc. |
| In-hand farm management/in-hand farms | Farms managed by owners rather than tenants. |
| Market support | Intervention purchases and import tariffs which affect the accounts for the agriculture industry through their impact on market prices. |
| Mean household weekly income | The sum total of weekly household incomes divided by the number under consideration. |
| Median household weekly income | The midpoint in a range of household weekly incomes. |

| | |
|---|---|
| Owner occupied sector | Housing which is lived in by the owners. |
| Primary industry | Agriculture, hunting and forestry. |
| Private rented housing | Housing for rent provided by private developers or other commercial organisations. |
| Registered Social Landlord | A landlord registered with Communities Scotland and providing housing for let and other associated services, but not trading for profit. The commonest form of registered social landlord in Scotland is a housing association. |
| Right to Buy | Under Right to Buy and now the Modernised Right to Buy scheme, council tenants can buy their home at a price lower than the full market value. |
| Scottish Index of Multiple Deprivation | An attempt to measure relative deprivation at local level, using a number of measurements of social well-being, eg income, employment, education, etc. Since completing the research for this report, the Scottish Index of Multiple Deprivation has been updated and is now based on the small area statistical geography of data zones and on 31 indicators covering specific aspects of deprivation, ie Current Income, Employment, Health, Education, Housing and Access. |
| Social capital | Social connections binding society's institutions, relationships and norms together. |
| Social infrastructure | Physical structures used for community purposes and providing social, educational and recreational facilities. |
| Social rented housing | Housing provided by registered social landlords, local authorities and other social housing providers for general and special needs. |
| Standard Industrial Classification | First introduced into the United Kingdom in 1948 for use in classifying business establishments and other statistical units by type of economic activity. The classification provides a framework and a common structure for the collection, tabulation, presentation and analysis of data. It underpins the collection by the Office for National Statistics of all the United Kingdom's official statistics on business and industry. |
| Store calves | Calves grown slowly to just below their potential, which are then bought and made ready for slaughter by 'Finishers' (see To Finish Stock). |
| Threshold entry price | Point on housing price scale below which you cannot enter the housing market. |
| To finish stock | The feeding of cattle or sheep at a higher rate of growth which increases muscle on the animal and makes it acceptable for slaughter. |



Cairngorms
NATIONAL PARK

Contact Details:

14 The Square Granttown-on-Spey
Moray PH26 3HG Tel: 01479 873535 Fax: 01479 873527
Email: enquiries@cairngorms.co.uk www.cairngorms.co.uk

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