



The Economic and Social Health of the Cairngorms National Park

A large, abstract graphic at the bottom of the page consists of several overlapping, semi-transparent geometric shapes in shades of blue and grey, creating a layered, crystalline effect. The shapes are arranged in a way that suggests depth and movement.

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The comment and opinions expressed in this report are those of the authors and may not represent the considered view of the Cairngorms National Park Authority, Scottish Enterprise or Highlands & Islands Enterprise.

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2 Executive Summary

This report was commissioned by the Cairngorms National Park Authority and describes the economic and social baseline of the communities in and around the Cairngorms National Park, based on data available at the beginning of 2010.

An earlier study was carried out in 2002, before designation in 2003, and before the Park's boundaries were known. This study updates and substantially extends that one, and is based on the 'new' boundaries of the Park – the Park as originally designated, plus Highland Perthshire.

The report identifies and analyses local economic trends and compares these with the national picture. In doing so, it seeks to examine the impact that National Park status has had on the region's economy, since its designation. It also identifies opportunities for economic strengthening and seeks to understand barriers to achieving the Park Authority's strategic objectives. Ways of monitoring future performance are also considered.

Table 1 Summary of key indicators

Summary indicators			
Population	16,333 in 2001	17,188 in 2007	
Mean age (years)	42.4 male	45.0 female	
Natural change (2001-2007)	143 births	200 deaths	
Net annual migration (2001 - 2007)	-52 age 16-19	+258 for all other ages	
Gross Value Added* 2006 by cluster (£ million)	115.3	Tourism	40.0
	10.8	Forest products	18.8
	4.3	Information & media	71.3
	15.9	Other products	62.4
	60.1	Public services	398.8
Employment (2008)	8,950	Employed in the Park	2,000
	161	Unemployed (end 2009, SA)**	1,089
	1,496	In-commuters	1,789
Household incomes (2006) (£ million)	207.6	Wages and salaries (inc NIC)	48.3
	50	Dividends, private pensions	33.0
	95.6	Housing capital gain	434.5
Earnings (£ per year)	£18,370	Ave earnings per employee	74%
			Scottish average
House prices (£ Dec 2008)	£205,000	Average (mean)	130%
			Scottish average
Connections	7,734	A9 Kingussie, vehicles/day	163,320
			All train stations in Park passenger journeys in 2008

*Gross value added (GVA) is the difference between output and intermediate consumption for any given sector/industry. That is the difference between the value of goods and services produced and the cost of raw materials and other inputs which are used up in production. It is an alternative indicator of Gross Domestic Product (GDP) for use at a regional level, and whilst its use at sub-regional level is more limited, it is the best available indicator.

** Seasonally adjusted

People and demographics

The Cairngorms National Park is one of the most sparsely populated parts of the United Kingdom and is currently home to some 17,200 individuals. The Park's population is already on average much older than elsewhere in Scotland, and continued ageing creates both challenges and opportunities for providers of public and private services. Like all of rural Scotland, the area is experiencing large scale out-migration of older teenagers in pursuit of education and of a wider range of opportunities.

However there are also encouraging indicators of the demographic state of the Cairngorms. The overall population of the Park has increased almost 5 per cent since designation, and projections suggest it will reach 20,000 by 2040. Currently more than 250 more people come to the Park than leave each year, with most of these new residents being of working age (ranging from their twenties to their fifties). Few other rural areas can demonstrate an attraction to those in their twenties.

No definitive conclusion can be reached on whether designation in itself has enhanced the demographic pull of the area, or whether the new status simply came at a time when employment opportunities were improving and quality of place was becoming more important for people. Nevertheless, there is some evidence, shown in the report, which suggests that similar areas outwith the National Park designated area have grown more slowly.

Jobs and unemployment

There are a total of 11,500 people economically active in the Park. Of these, 9,000 are employed, around 2,000 are self employed (a very large proportion by national standards), 200 are unemployed and the balance are full time students.

The number of jobs available in the Cairngorms has risen over the past 25 years. Since Park designation, numbers have increased by around 1,000.

Two thirds of all jobs are in private sector services, including retailing and tourism. One in six are employed in the public sector (a smaller share than national averages), whilst goods-producing industries, such as manufacturing, agriculture and construction, also account for one job in six. Over the past ten years most of the expansion in jobs has taken place in tourism related industries, with some in financial and business services. This last category includes call centres.

Most people who live in the Park also work within its boundaries. It is estimated that around 1,800 Park residents work elsewhere, mainly in and around the cities of Inverness and Aberdeen. Remoteness from these large centres of population means that the Cairngorms has not, and is unlikely to become, a dormitory suburb.

About 1,500 jobs in the Park are filled by in-commuters, many of whom come from the Inverness area or from areas just outwith the Park's boundaries.

Despite recent increases due to the recession, unemployment levels in the Park are at an historically low level, and are at a rate much lower than Scottish national averages. Currently around 200 individuals are without work (a rate of 2 per cent), compared to a peak of 1,000 during the late 1980s and 300 at Park designation in 2003.

In the past the Cairngorms has had a highly seasonal employment pattern, thanks largely to the effects of the tourism industry. The amplitude of this seasonality has declined dramatically over the past ten years.

The Park's economy

The structure of the Cairngorms economy is highly unusual, with a distinctive mix of industries contributing to the area's creation of wealth. Compared to elsewhere in the country, whisky production, forest products (specifically sawmilling, harvesting and forest stewardship) and agriculture (notably estates and conservation bodies) are particularly distinctive, and the area includes the most tourism-focused parts of Scotland.

Overall, economic activity in the Park creates value added (GVA) of over £400 million.

A number of clusters of competitive industries in the Park are identified. These are tourism, whisky and drinks, forestry, food and agriculture, publishing and music, other production and manufacturing, home ownership and construction, public administration, health and education, and other services.

The mountains draw tourists, and tourism, including accommodation, catering and visitor attractions, accounts for almost 30 per cent of all value added created in the Park (£115 million). This is a higher proportion than any other part of Scotland. The majority of Scotland's winter sports take place in the Park at three main centres, and this significantly increases the value delivered by tourism-oriented assets.

There are 7,500 homes in the Park, with a combined value of more than £1.5 billion. The wealth created in the home ownership and the construction sector, rapidly expanding until recently at least, accounts for 18 per cent (£71 million) of the Park total GVA.

Lacking large government or local government offices, or major healthcare and postsecondary education facilities, the Park has traditionally had a small public sector. However, the economic importance of public services to the Park has risen considerably in recent years, and they currently account for £60 million of Park GVA (15 per cent of the total).

Land-based industries are an important generator of wealth for the Park, and an important employer of the Park's residents. Food and agriculture provide a living for 900 people, collectively generating £40 million of value added

per annum. The importance of the whisky and drinks cluster is shrinking – now providing employment for around 100 and value added of £20 million – but it is still an important part of local culture and heritage and of the tourism offering.

The forest and forest products cluster is growing in importance and diversity as the plantations mature, and it now contributes £11 million (3 per cent) of the Park's total value added.

Most businesses operating in the Park are small – over two thirds of workplaces in the Park have fewer than five staff, and the number of workplaces in the Park is now over 1,000 – a rise of 13 per cent since designation.

The Cairngorms is also home to a small number of significant manufacturing operations. Their main trade links are usually with organisations outwith the Park and they tend to either be long established organisations which have diversified into new fields or they have located in the area thanks to the high quality natural environment. Together businesses in this production and manufacturing cluster account for £16 million of value added, and a part of this has been tied to offshore oil and is developing other energy businesses.

There is evidence that the region is becoming an attractive base for relatively footloose sophisticated industries. In the study a cluster of creative, media and knowledge based businesses is identified. This contributes an estimated £4 million of value added to the Cairngorms economy each year.

Connectivity

The Cairngorm Mountains are at the geographical heart of the Cairngorms National Park. However, they also form a physical barrier to transport and physical communications between communities within the Park's boundaries. It is a barrier on which any public or private initiatives can have only a minor effect.

The main north-south artery of the Highlands, the A9, and the Highland railway line, run up and down the side of the Park, and join it to major transport nodes such as airports.

The sparsely populated nature of the permanent population, along with the physical challenges of the landscape means that connectivity and access to services can be challenging. Indeed, within the Park's boundaries are found some of the most geographically remote communities found anywhere in Scotland, as measured by the Scottish Index of Multiple Deprivation. Telecommunications meet basic standards, but wireless coverage and the penetration and bandwidth of wired communications are on the agenda for improvement.

The seasonal nature of tourism traffic can place strains on the local infrastructure, but it can also help to improve the viability of services which are then available to both local residents and visitors.

Incomes, wealth and wellbeing

Residents of the Park have a combined spending power of £435 million. 40 per cent of this is from local employees working locally and up to 20 per cent from the capital gain on housing. Self-employment income accounts for an above-average 10 cent of all spending power, with investment income providing over 10 per cent.

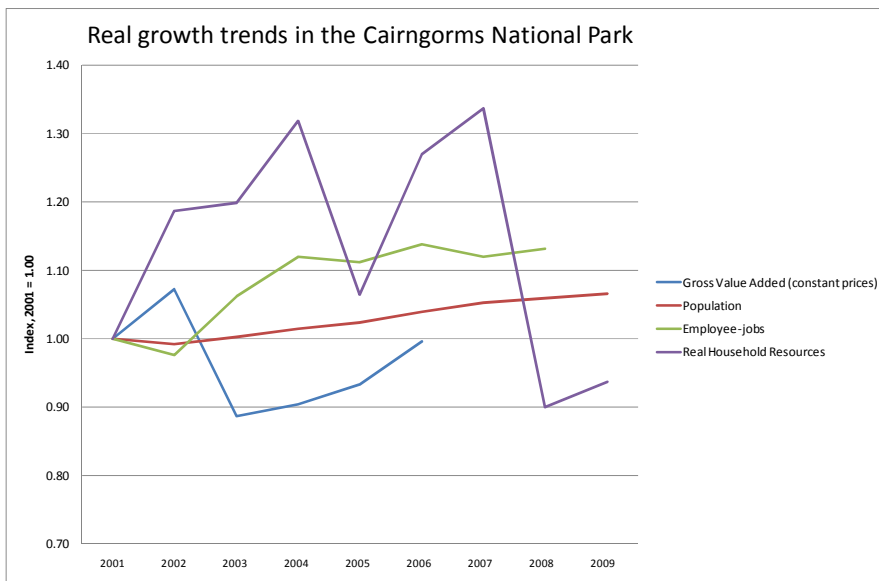
Apart from state pensions, benefit claims are below the national average across the Park, particularly so in Deeside.

In general the Park's residents enjoy a high standard of economic wellbeing with only isolated pockets of deprivation evident. The health of residents is generally good, significantly better than average, and crime is broadly low.

Is the Park healthy from a social and economic point of view? And if so, has its designation as a National Park contributed to that health?

The 'drift' of the key economic indicators for the Park is upwards, as Figure 1 clearly shows.

Figure 1 A community on a rising trend



The economy of the Park is small, and not very diverse, so great stability cannot be expected. The only substantial negative movements in Figure 1 are the reduction in GVA from 2002 to 2003, which was entirely a result of worsening fortunes in the whisky industry, and the falls in household resources in 2005 and 2008, which were due to sluggish house prices. These are both the consequence of international trends, for which the Park can be neither praised nor blamed.

3 Study remit and report structure



Sluggan Bridge

This is a report on a study commissioned by the Cairngorms National Park Authority to:

- Update the economic baseline information for the Park area and, where appropriate, the surrounding area and compare it with the original baseline carried out in 2002.
- Identify and analyse trends in economic activity in and around the Park and explore how they compare with the trends in the Scottish economy as a whole.
- Analyse the impact that National Park status has had on the economy of the Park and the surrounding area.
- Identify opportunities for strengthening the local economy that have yet to be fully exploited and barriers to achieving the strategic objectives of the Park that are directly influenced by the economy.
- Recommend a longer term approach to regularly monitor the Park's economic performance and progress.

The data uncovered during the study and the results of the analysis are presented in this report in twelve chapters and four appendices:

- One chapter offering a review of the people of the Park, including trends in population and migration (Chapter 4).
- Two chapters giving an overview of work in the Park, including employment (Chapter 5) and unemployment (Chapter 6).
- Four chapters presenting an analysis of the economy of the Park, including a sectoral breakdown of gross value added (Chapter 7); a discussion of the 'cluster' structure in which local businesses and other activities interact (Chapter 8); a discussion around connectivity within and from the Park (Chapter 9), some financial evidence on incomes and wealth (Chapter 10), and a discussion of social wellbeing and deprivation (Chapter 11).
- A chapter on how the future socio-economic development of the Park can be tracked, and how it can be influenced (Chapter 12).

Figure 2 The Park's historic and future boundaries

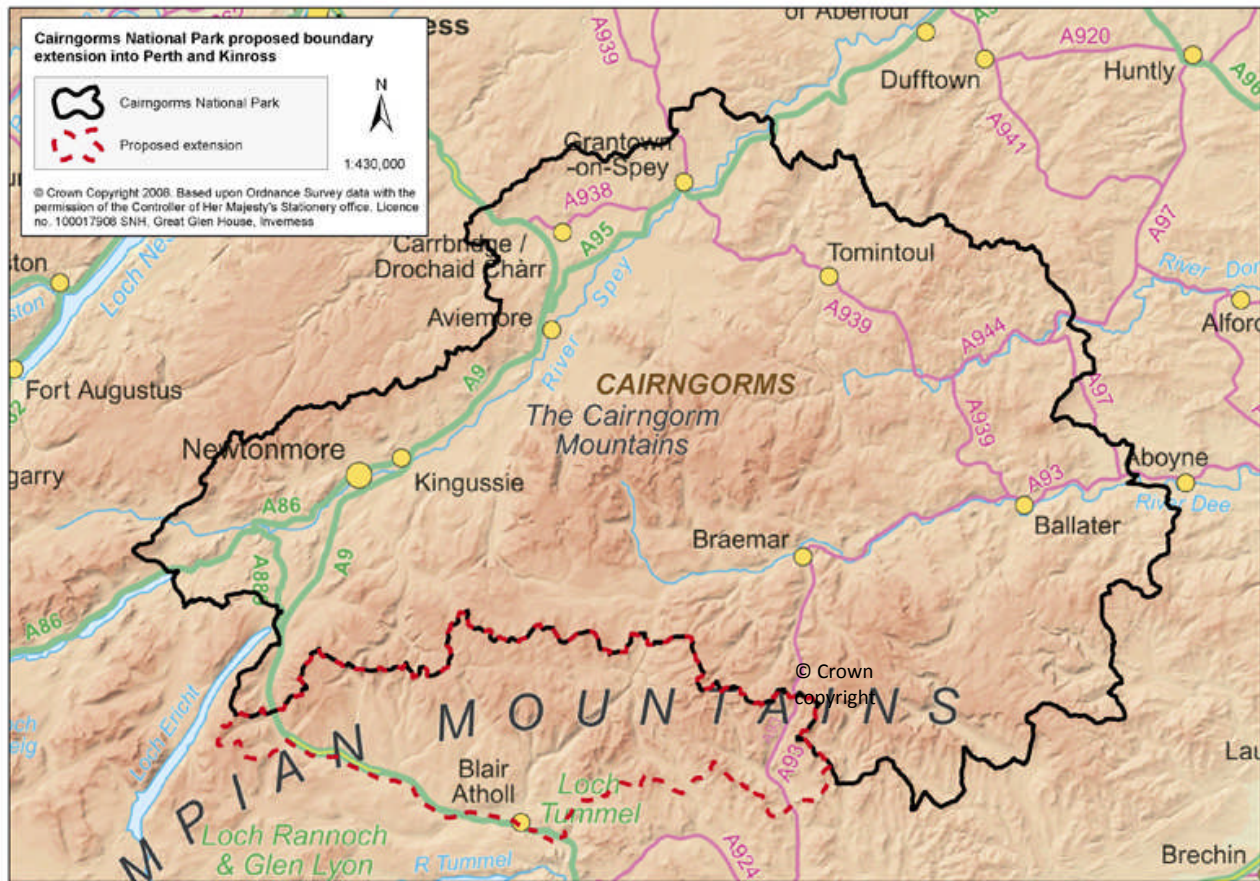


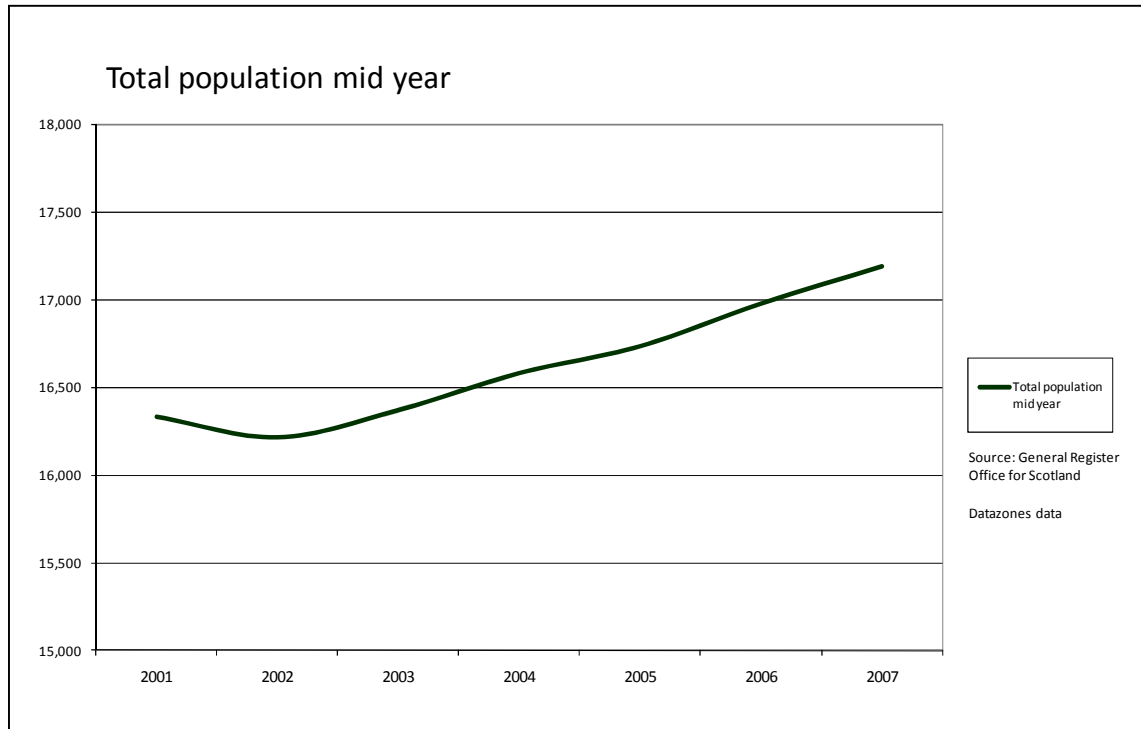
Figure 2 shows the area addressed. In principle, this report reviews the area of the enlarged Park, although for practical reasons data has often had to be analysed on areas which correspond closely but not exactly to this ideal.

The body of the report is followed by appendices setting out details of the administrative geography used for statistical analysis, examining the relevance of the original (2002) baseline study, commenting on the model currently in place for monitoring tourism, and outlining the DREAM® models which have been used to add detail to, update and extend official sources.

4 People in the Cairngorms National Park

From 16,400 at the time of the original Park designation, the total population living within the expected new boundaries of the Cairngorms National Park had risen by 4.9 per cent to 17,200 by 2007 (see Figure 3). In mid 2007 this consisted of 8,850 females and 8,350 males.

Figure 3 A rising population trend



Park people are much older, on average, than the Scottish population as a whole. The mean ages were 45.0 and 42.4 for females and males respectively, about 3.8 years older than Scottish norms. The median age of the females was 47.0 years, and of the males 45.0 years, about 6.0 years older than the Scottish average. Thus not only are people in the Park generally older than the norm, but it contains an important number of the very oldest people.

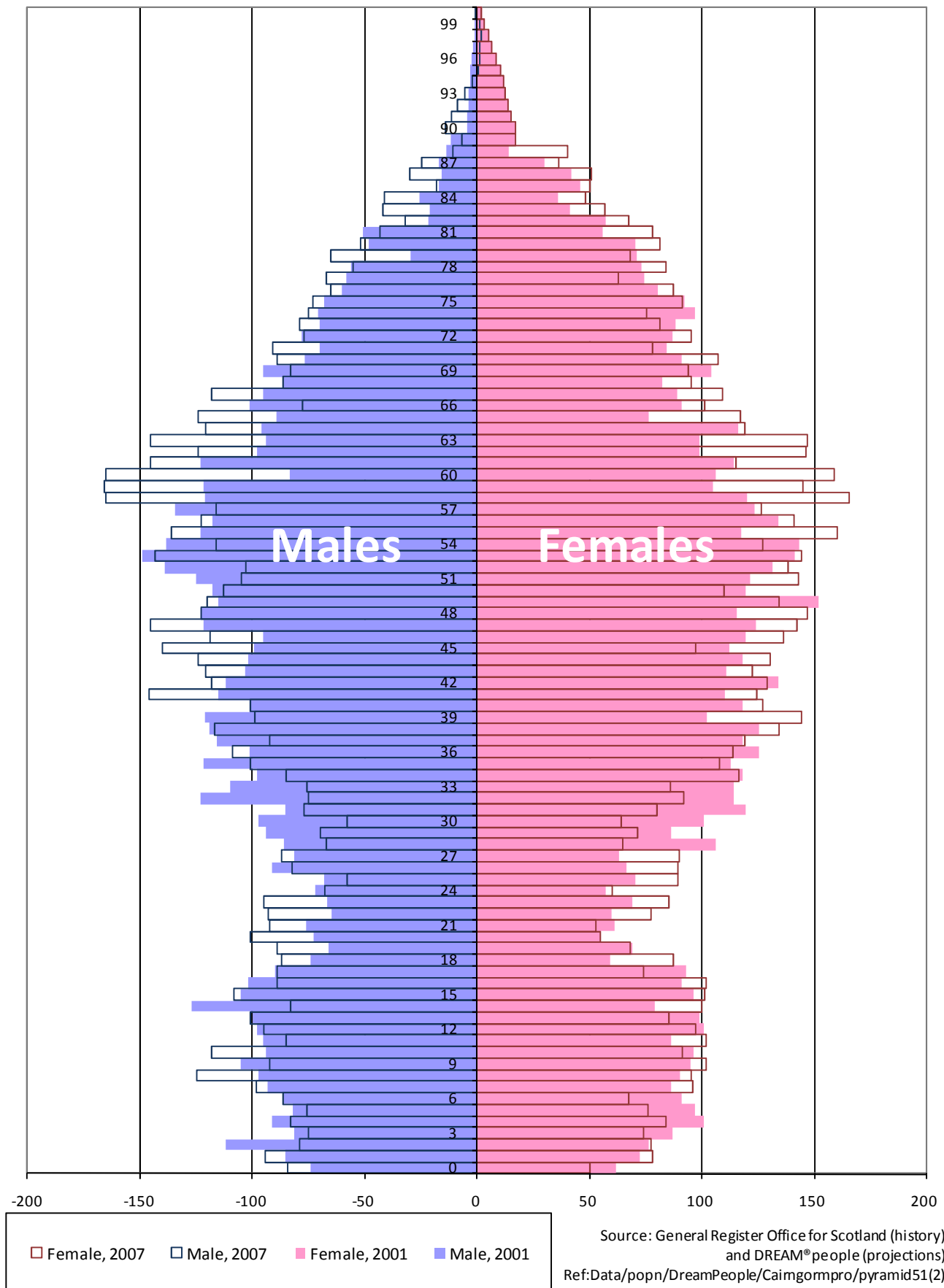
Like many parts of rural Scotland, the Cairngorms area has traditionally suffered from an out-migration of late teenagers and twenty-year-olds. The result is a population age profile with a very narrow 'waist' of people in their twenties (see Figure 4).

Whilst the Park's population is growing, it is also continuing to get older. Most of the increase in recent years (between 2001 and 2007), has been of people in their sixties. However, there has also been some movement amongst younger age groups. For example, the region is now home to more residents in their forties, suggesting that families with children who are nearing the end of their time at school are being drawn to the region.

In addition, there is evidence in Figure 4 that the size of the 18 to 25 age group has increased over recent years. This inflow of young people appears to consist primarily of many who want to work (especially from the new accession countries of the EU, and especially in the hospitality industries) and may also include some who are relocating to take advantage of the growing leisure and outdoor recreation opportunities.

Figure 4 Population distribution: 2001 - 2007

Age distribution - Cairngorms National Park Recent trends 2001 to 2007



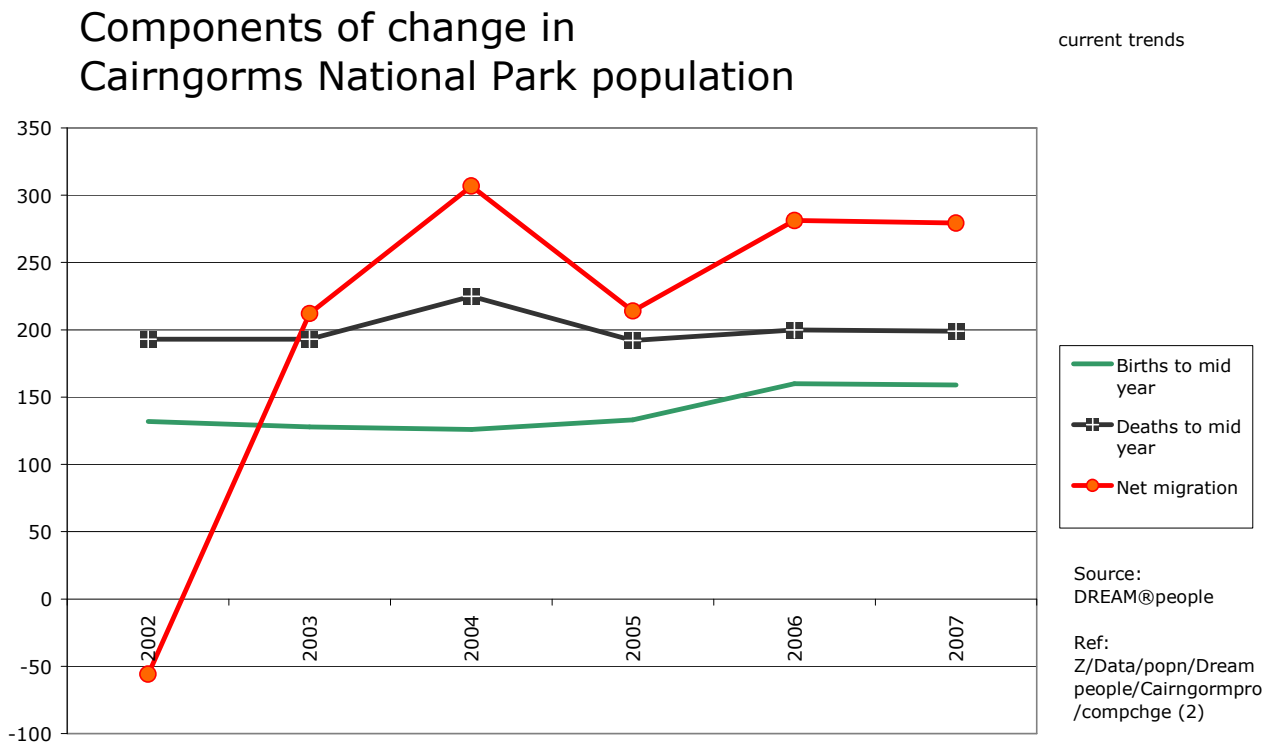
4.1 Births and deaths

Population change comes about as a result of three factors: the birth rate, the death rate, and migration.

The number of deaths in the Park has been relatively steady at between 190 and 225 each year. This death rate is rather low, about 84 per cent, after adjusting for age, compared to the Scottish average.

Birth rates are close to the Scottish average in relation to the population of childbearing age. The number of births has also been stable at between 125 and 160 each year, thus giving a 'natural' rate of population decline of some 65 individuals per year. In the 12 months to June 2002 this was increased by net out-migration, but Figure 5 shows that since designation of the Park there has been a net inflow of between 200 and 310 people each year.

Figure 5 Components of population change



4.2 Migration

One of the most sensitive and revealing barometers of socio-economic health is the pattern of migration. The box presents a quotation from Michael Ignatieff, philosopher and politician, writing about the emigration of his mother's family from Scotland in historic times. The converse is that when people begin to *arrive* in a place, it is a sign that a country has begun to live, because they think that life is *there*. Does that apply to the National Park today?

In 2001-2002, before the Park was set up, the Cairngorms area suffered net out-migration, with 56 more people choosing to leave the area than decided to move to the area.

In subsequent years, the direction of net migration has changed and now the Park enjoys annual net in-migration of around 260 people (see Figure 5). Between 2003 and 2007 the Park has attracted 1,000 more residents than it has lost to out-migration.

As we have seen, a net inflow of 65 people is required each year simply to hold the population steady. The fact that the inflow is much higher is a clear sign that, all things considered, people find the Park a desirable place to live.

The Park Authority has the ability to influence migration flows in many ways. Its environmental powers and activities are a strong influence on the desirability and amenity of the area. It can influence the availability of

A country begins to die when people think life is elsewhere and begin to leave

Michael Ignatieff
True Patriot Love, 2009

employment, economic opportunity, and education, and it can directly control aspects of housing supply through its planning policies and decisions.

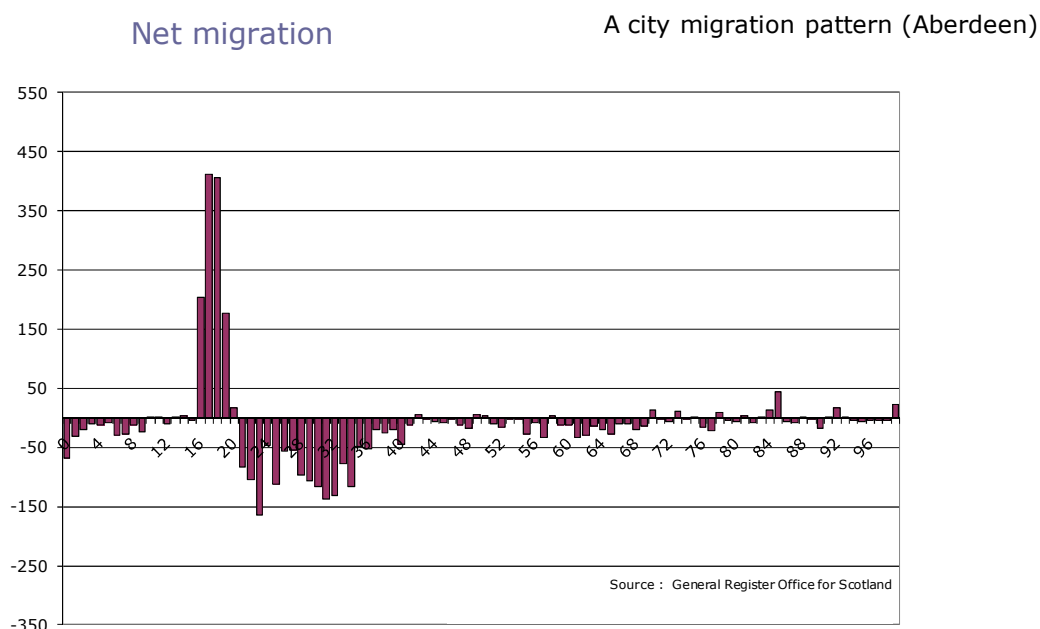
In some ways the patterns of migration into the Cairngorms reflect more general patterns found broadly across Scotland, especially rural Scotland, and some other countries. But in other ways they are highly distinctive, and the patterns of special features merit attention. They can best be examined by looking at the age pattern of migration. To see why the Park is special we need to look first at the age pattern of rural and urban net migration in Scotland.

4.3 Background: Scottish migration patterns broken down by age

The officially-published data on population levels and migration presents it only in broad age groups: however to examine the Park's situation it is necessary to consider it for single-year age cohorts. We have obtained the age distribution of population in single years throughout Scotland by means of a special request to the General Register Office for Scotland, and using a proprietary model¹ we have broken down the year-by-year changes into age-specific migration flows, after taking account of births and deaths. It is helpful to understand how the Park differs from general patterns, so in this section we bring out some key characteristics of Scottish migration patterns.

Across Scotland's council areas, two broad age patterns of migration can be found. In the cities there is out-migration across all age groups except for people in their late teens, who in-migrate in massive numbers (see the example of Aberdeen in Figure 6).

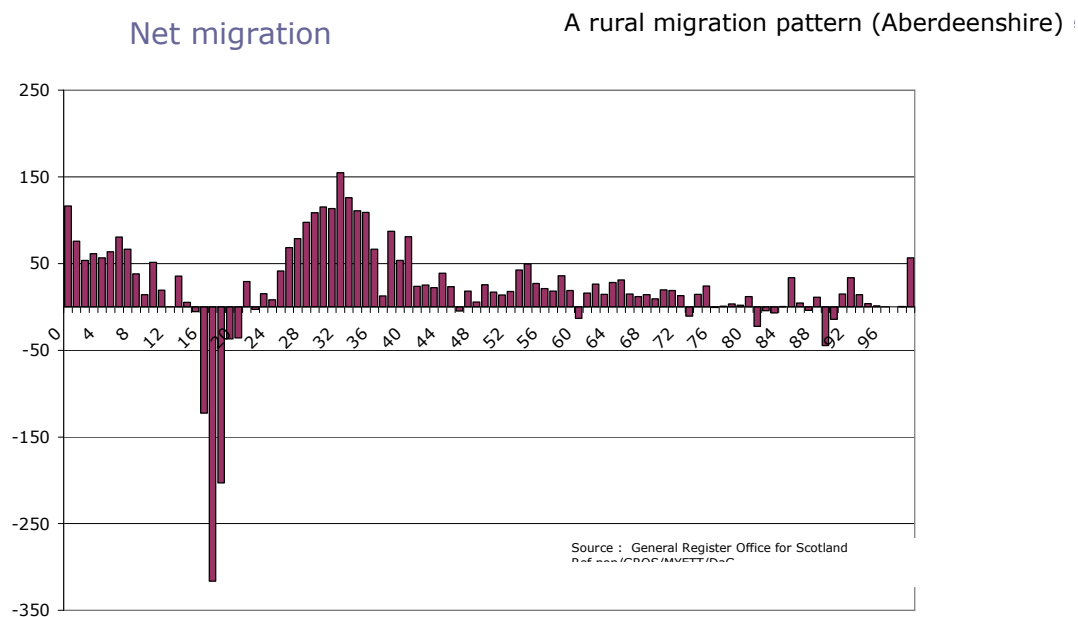
Figure 6 Net migration in the city of Aberdeen



In rural areas, however, the opposite is the case: there is in-migration across all age groups, except that people aged 17 to 20 go to the cities (see the example of Aberdeenshire in Figure 7).

¹ The DREAM@people model. The registered trademark DREAM®, Detailed Regional Economic Accounting Model, is the property of Cogent Strategies International Ltd.

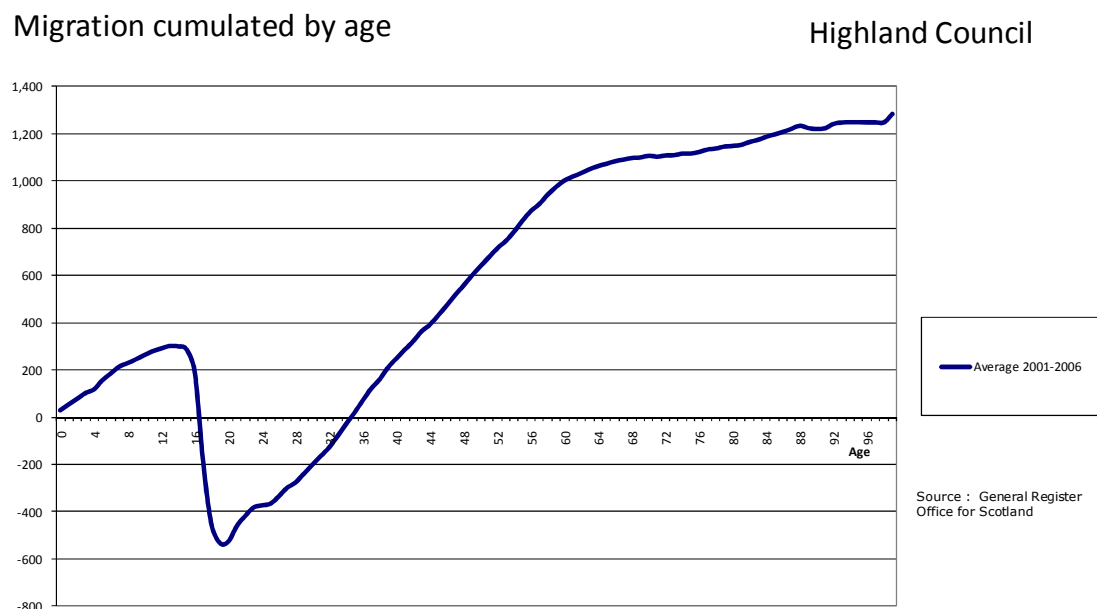
Figure 7 Net migration in Aberdeenshire



This contrasting situation has not always been so stark: the difference has built up over the past twenty years, as the national proportion of young people going to college and university has grown from around 20 per cent to around 50 per cent.

The migration characteristics of an area show up best if net migration is plotted cumulatively by age, starting from zero. This has been done for the Highland Council area in Figure 8. In age ranges where the curve slopes upwards (/) there is net in-migration. In those age ranges where it slopes downwards (\) there is net out-migration. The steeper the curve, the higher the rate. Where there is a corner in the curve the rate of net migration changes. Where there is a peak or a valley the net direction of migration changes.

Figure 8 Cumulative net migration in Highland



Such analysis is prepared in the DREAM® people model for all the council areas in Scotland over many years, typically 25. For the years since the 2001 Census it can be prepared for any geography, such as the Park’s, which can be described in terms of statistical datazones.

The typical patterns of city and rural migration are clearly shown in Figure 9, for cities, and Figure 10, for rural areas. In effect, the city and country charts are upside-down versions of each other. The cities gain substantial numbers of

teenagers (students) and those in their early 20s, before a gradual drop off into middle age and retirement. By contrast, rural areas lose a significant proportion of their teenagers, who they then pull back through adulthood.

Figure 9 Cumulative net migration in Scotland's cities

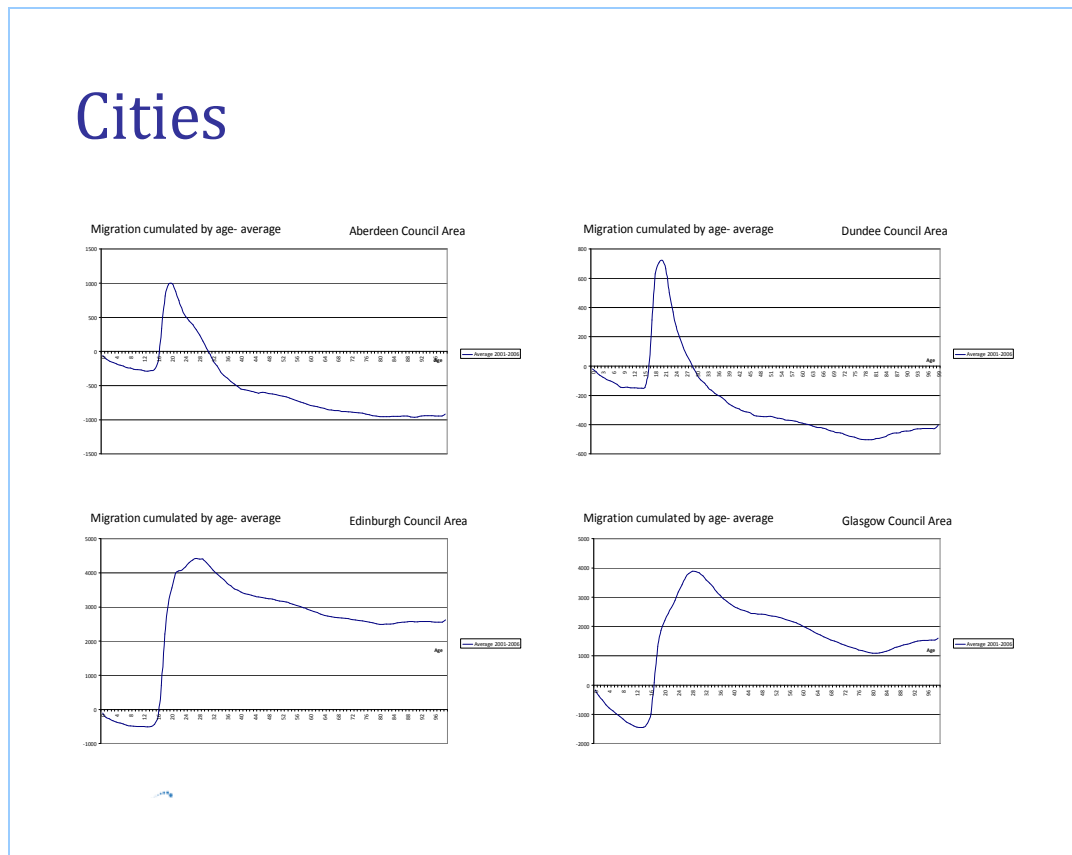
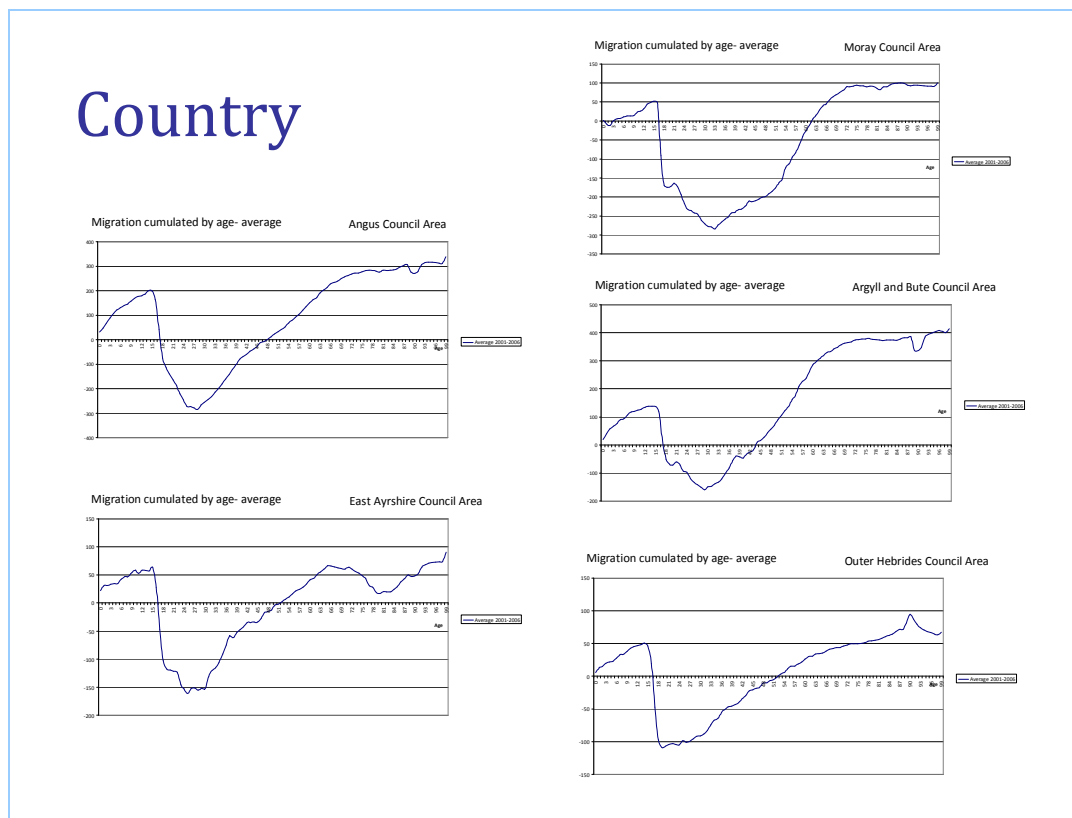


Figure 10 Cumulative net migration in rural Scotland

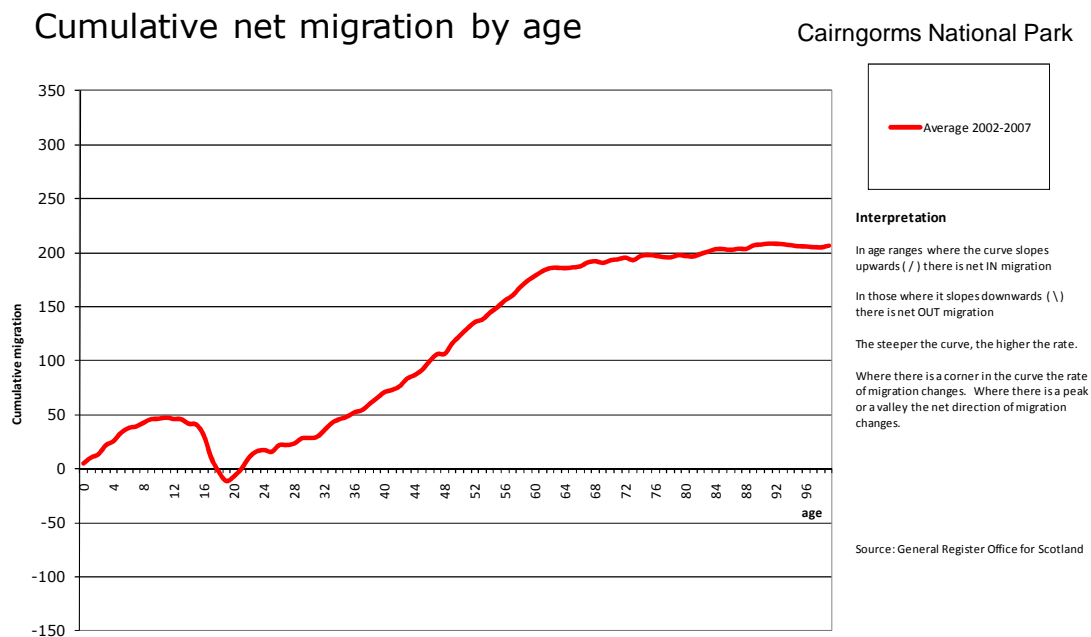


Over the past 20 years there have been no exceptions in Scotland to the rule that cities show net out-migration through the great majority of the human life cycle, and rural areas show net in-migration. Although there are no geographic exceptions, there is one hugely important exception in terms of the life cycle. Amongst 17-20 year olds, the university cities of Edinburgh, Glasgow, Dundee, Aberdeen, St Andrews and Stirling all have net in-migration, whereas everywhere else has out-migration. In the case of Edinburgh, and latterly Glasgow, in-migration around age 20 is enough to offset the out-migration that occurs over the rest of the life cycle.

4.4 The age pattern of Park net migration

The average age pattern of Park migration over the six year period from 2002 to 2007 is presented in Figure 11, and broadly follows the rural stereotype, but with some special features.

Figure 11 Cumulative net migration in the Cairngorms National Park



Child migration is usually related to housing types, general amenity, and school provision, as well as the ‘normal’ factors including jobs that cause parents to move. Overall, the number of children moving into the Cairngorms is about 80 per cent of the number of parent-age adults moving in, compared with a figure of 50 to 60 per cent found in most other rural areas. This strongly suggests that the Park is seen as an attractive environment by young families.

However, there are suggestive differences amongst children of different age groups. In the National Park area there is substantial in-migration of pre-school children, suggesting that housing and amenity in particular are generally positive. For primary age children there is very little in-migration whilst for secondary school children there is net out-migration, and this accelerates in later secondary school. This pattern is very unusual in Scotland. We can only speculate on possible causes. Could there be issues with the perceptions of secondary schools? This seems unlikely since the area has some of the higher performing secondary schools in Scotland. Could it be related to geographic factors, like relatively long journeys to school, in sometimes wintry conditions? Could it be the result of social norms and income levels that affect the take up of boarding schools? We were not able to find existing evidence on this issue, and a special inquiry would be needed.

Out-migration from the Cairngorms to go to college or university is substantial, and at a rather higher rate than found in most mainland rural areas. This probably reflects the fact that the area’s schools are good, allowing a high proportion of youngsters access to higher education, but the area lacks locally-based further education provision.

Adult in-migration begins at the very early age of 20. In other rural areas there is rarely significant in-migration until the late twenties or even thirties. This is almost certainly related to the availability of tourism employment, but we speculate it may also be connected, to an extent, to the presence of activity sports as a lifestyle option favoured by young adults.

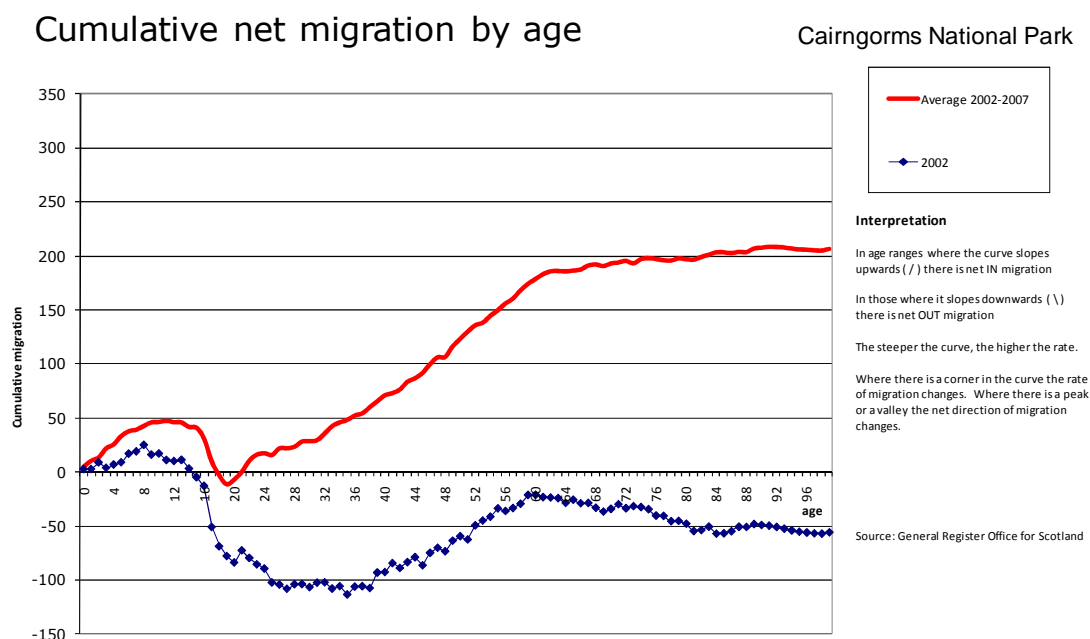
On average, a net figure of almost 200 adults aged from 20 to 60 have moved into the Cairngorms each year. It should be recognised, as discussed in more detail below in sections 5 and 6, that over the period for which we have migration data the number of jobs has increased by about 250 per year, and that unemployment, already low, has fallen by about 30 per year.

After age 60 there is no net migration. As well as property and income issues, this may be influenced by the availability of health services and other amenities locally. The low population density and relatively sparse public transport network may also be factors.

In addition to the overall amount of migration changing from year to year, so does the age-migration pattern. Because there is a distinct ‘moving season’ it makes sense to look at the individual annual patterns.

In 2002 there was net out-migration of 56, compared with average net in-migration of 206 over the six year period as a whole (see Figure 12)

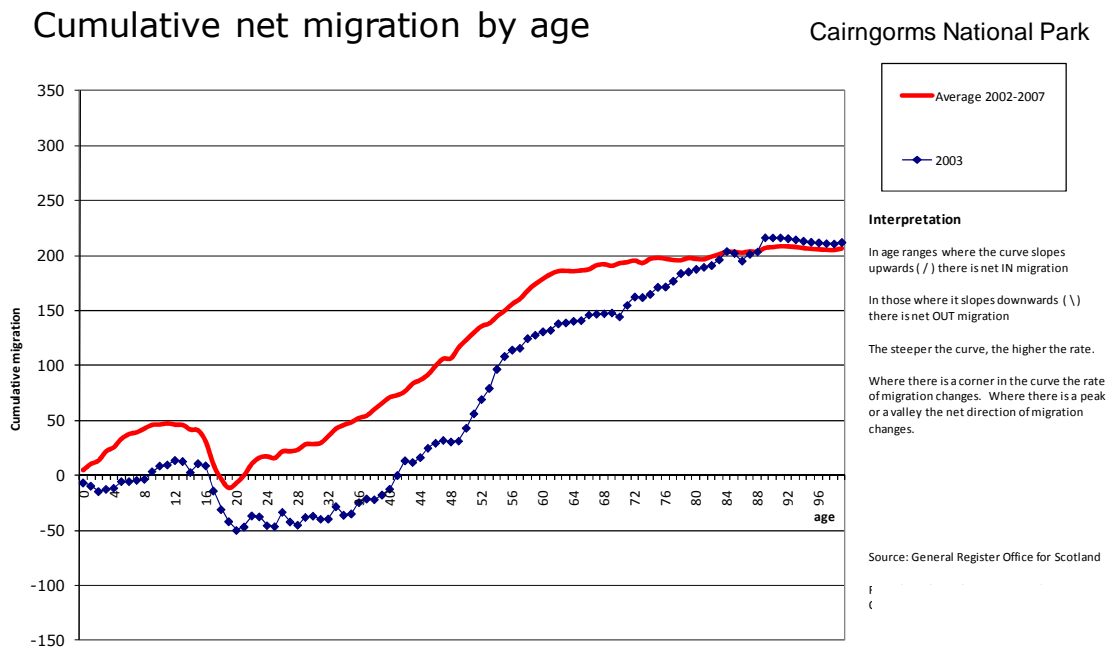
Figure 12 Cumulative net migration in the Cairngorms National Park (2002)



About half of this difference of 262 is due to a generally lower rate of attraction and / or retention through all ages. The other half is caused by the radically different behaviour by young adults. For the 12 months to mid 2002 there was a net out-migration of young adults up to 25 years old. In addition, there was no evidence of a net flow of people either in or out from that age up to the late thirties. Only when individuals were entering their forties did they start to move into the Park in greater numbers.

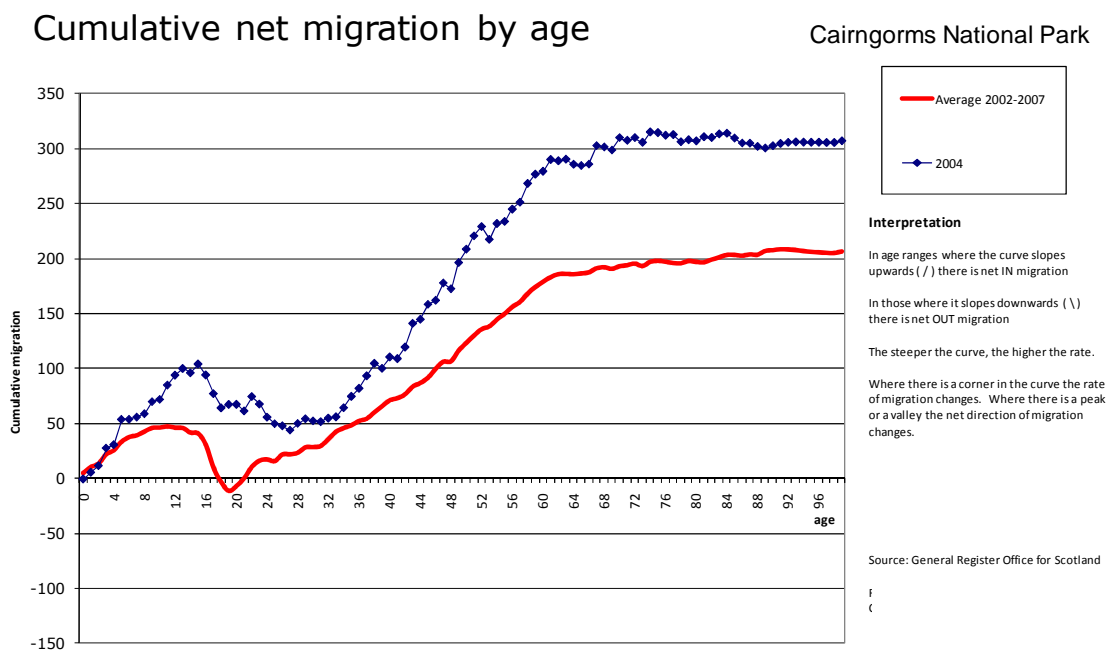
Between mid-2002 and the middle of 2003, as the formal establishment of the Park in September 2003 approached, there was a reduction in the difference between the annual and period averages. As Figure 12 Cumulative net migration in the Cairngorms National Park (2002) shows, children and people in their twenties stayed in balance, and there was a dramatic move in of people in their fifties.

Figure 13 Cumulative net migration in the Cairngorms National Park (2003)



By 2004 the general move-in covered people in their thirties and forties, including many parents, bringing net immigration to 212 overall (see Figure 14). There was, however, still a net loss of people in their twenties.

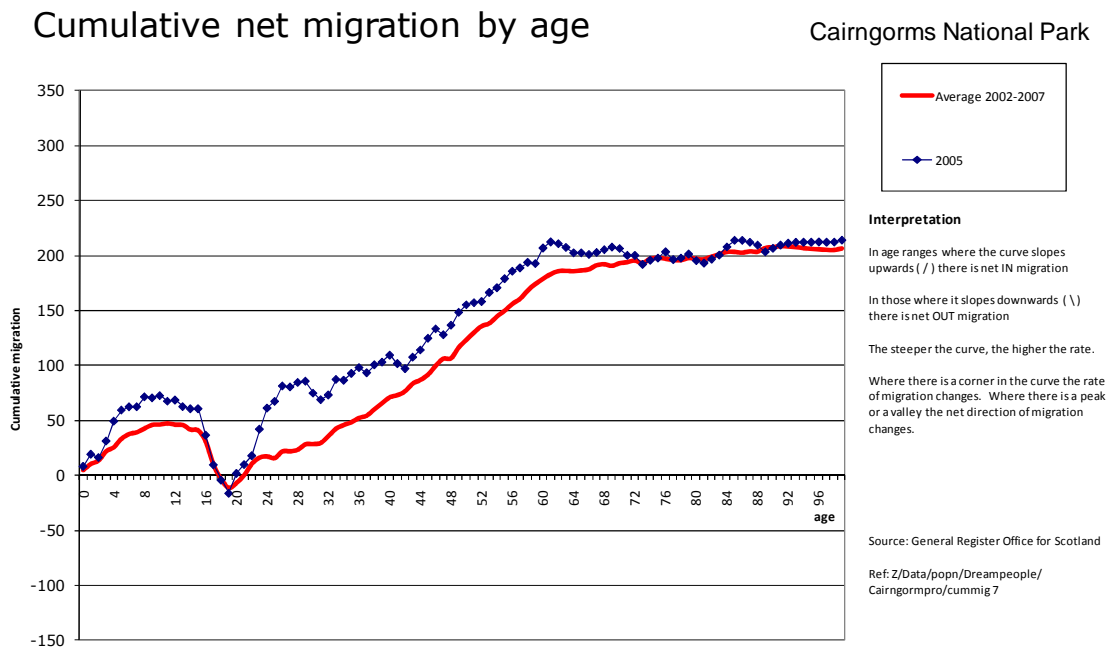
Figure 14 Cumulative net migration in the Cairngorms National Park (2004)



In 2005 the 'average' pattern asserted itself, as shown in Figure 15.

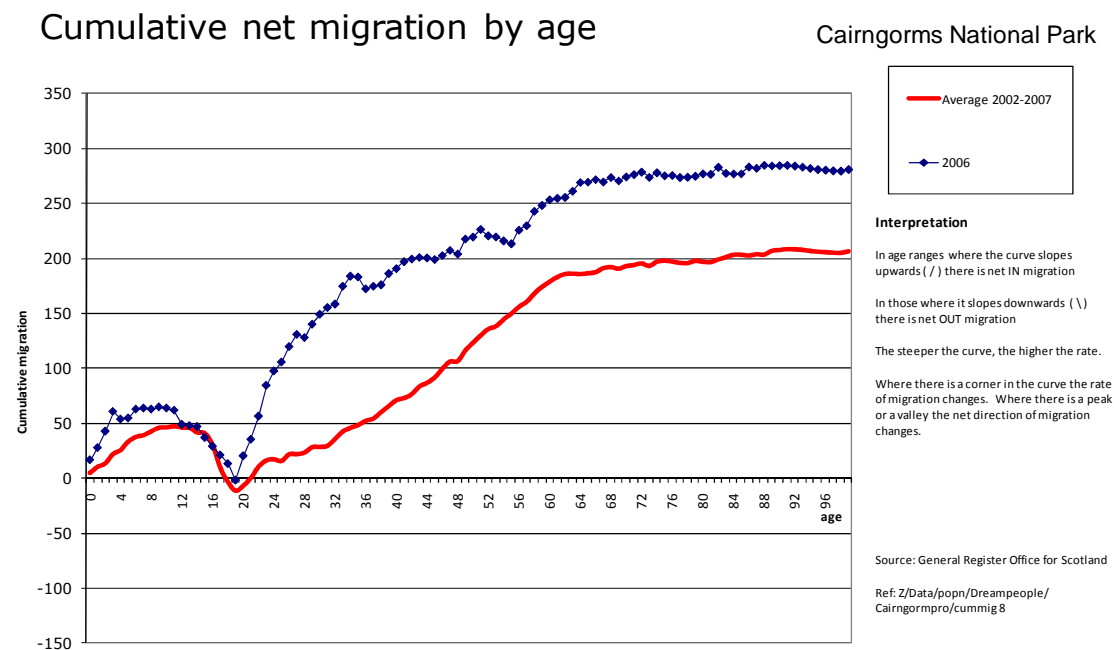
The only significant variation to the pattern was a surge of 80 or so in-migrants aged 20 to 26. It is very likely that these included people from the so-called 'A8' accession countries, such as Poland, Lithuania and the Czech Republic following the introduction of the free movement of workers when these countries entered the European Union.

Figure 15 Cumulative net migration in the Cairngorms National Park (2005)



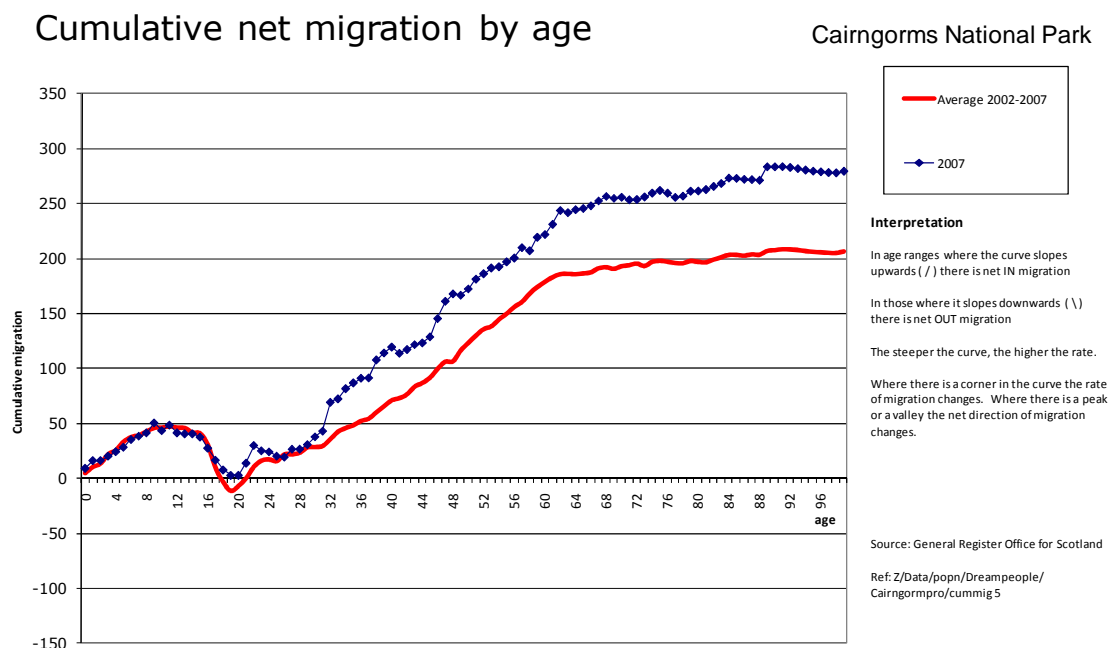
The trend of the in-migration of young foreign workers continued in 2006. Along with more young children than normal, there were 281 net incomers during that year 2006 (see Figure 16). However, the number of secondary age children leaving was particularly large during that time.

Figure 16 Cumulative net migration in the Cairngorms National Park (2006)



In 2007 the number of working age people was more or less normal, with a minor below-average number of people in their twenties and young children. It has been suggested there may have been capacity issues - jobs, housing or school places may have been unusually full after the preceding two boom years for this group.

Figure 17 Cumulative net migration in the Cairngorms National Park (2007)



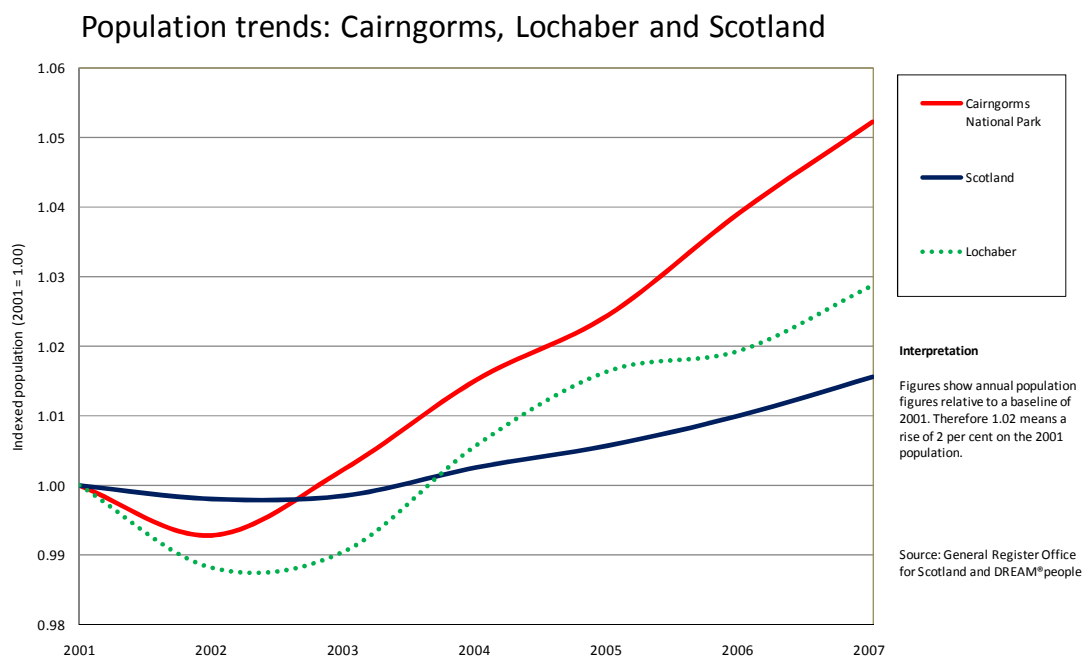
Certainly since the Park was established, many people have moved in. The little evidence we have of migration before the Park suggests that in those days fewer people came to the area.

It is important to avoid the risk of false attribution. Just because something happens after designation does not imply that it was caused by designation. However, there is at least the beginning of a case that the establishment of the Park have coincided with people finding the Cairngorms a better place to live and work. The consequence is that the Cairngorms’ population has grown faster than elsewhere. Scotland.

Since designation the Park’s population has grown by over 5 per cent (see Figure 18). This is three times the rate for Scotland as a whole (1.7 per cent) and almost double the increase in Lochaber (2.9 per cent), an area which is geographically and economically similar to the Cairngorms, but which does not fall within the boundaries of a National Park².

² For a selection of indicators throughout this report a comparison has been made between the performance of the Cairngorms and Lochaber – two of Scotland’s sparsely populated mountainous areas where both summer and winter tourism is a key driver.

Figure 18 Population growth in the Cairngorms and comparison areas



4.5 Population projections

Formally this baseline study is intended to review the current state of the Park, but the analysis of population trends above leads so directly into projections that it is appropriate to contribute some comments to the development planning process.

The projections outlined below are based on one of the suite of DREAM® models used throughout this report, DREAM®people. This model produces results which differ in detail, but not in principle or dramatically in method, from the official projections of population produced by the General Register Office for Scotland (GROS).

Table 2 shows the results of the projections for the Cairngorms using the two alternative models.

Table 2 Projected population for the Cairngorms National Park

Age ranges / year	DREAM®people projections				General Register Office for Scotland projections	
	2006	2007	2031	2051	2007	2031
0-15	2 877	2 857	2 818	2 762	2 720	3 180
16-59	9 382	9 408	8 989	9 155	9 490	10 430
60+	4 717	4 923	7 780	8 451	3 830	5 380
Total population	16 976	17 188	19 587	20 368	16 040	18 990
	Difference from DREAM®people projection				-936	-597

Source: DREAM®people and General Register Office for Scotland

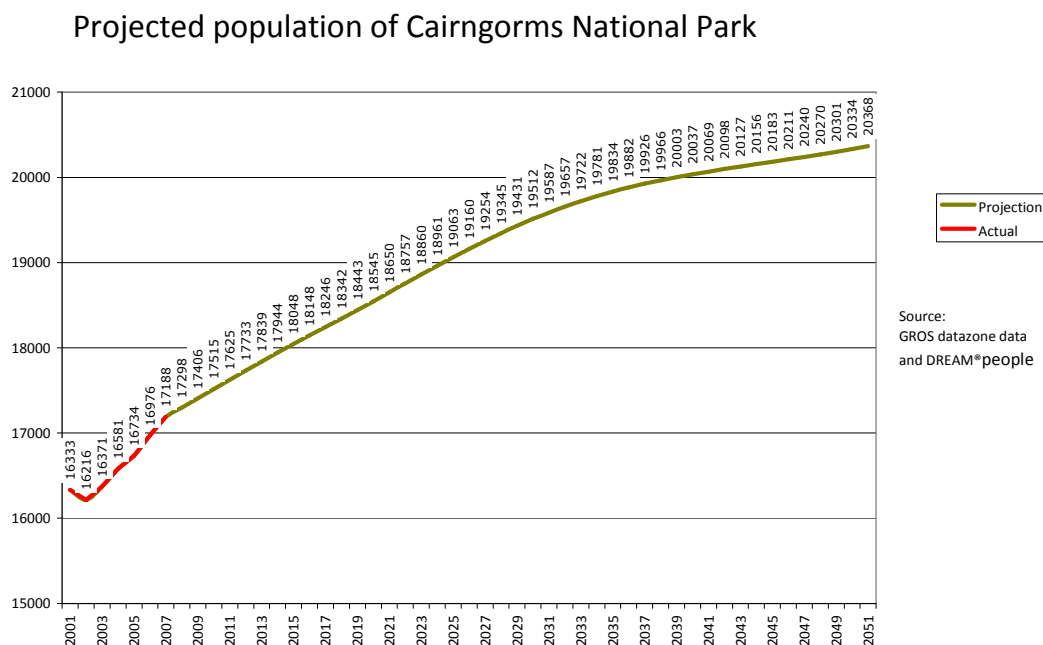
The main differences between the two projections are that the DREAM®people estimates start from 2007 actual figures instead of 2006, they cover a slightly wider area to allow for the probable expansion of the Park, they consider a wider range of future dates, and they look more closely at the structure of migration.

GROS make one simple migration projection, in absolute number terms, and then divides it up between ages. Within DREAM®people a number of different migration projections are made for different groups, usually in terms of rates. The GROS projection is net in-migration of 150 people per year (after 2011), while DREAM®people starts at 168 and rises over 20 years to 186 per year.

With an excess of deaths over births within the Park each year of round 60, if it evolves at the rates established so far this century, the Park’s population will grow by about 100 people per year at the outset, but with growth decelerating to around 30 per year in mid-century.

As Figure 19 shows, this will take the total number of inhabitants from current levels of around 17,200 to a near-plateau of around 20,200 by 2045.

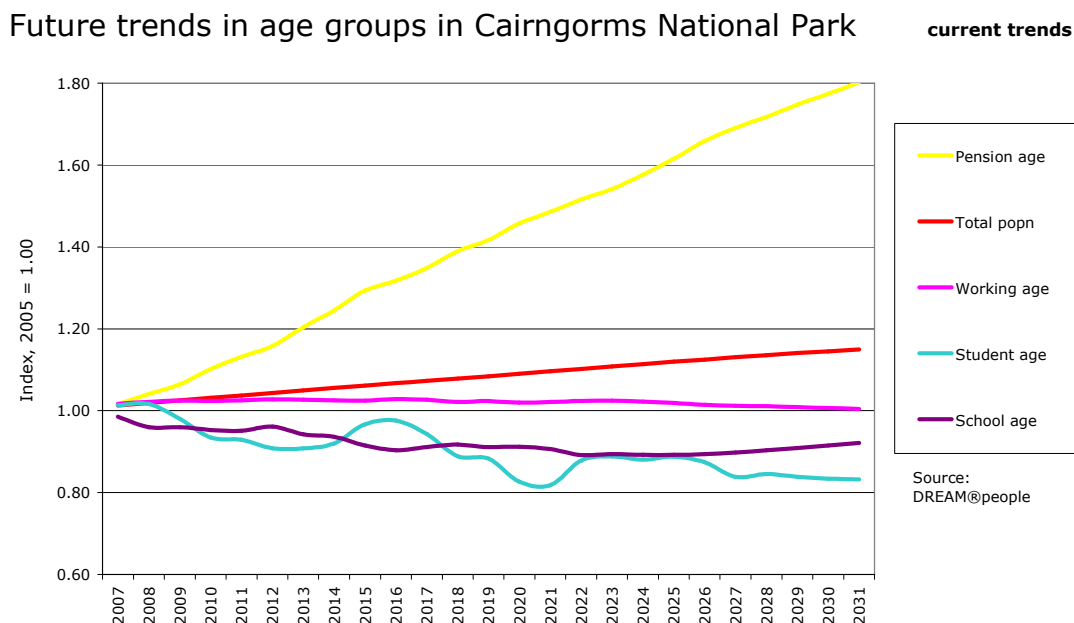
Figure 19 Population of the Cairngorms National Park



It is important to note that this is a projection of recent trends and is far from a considered forecast. Like most current population projections, it contains a significant degree of ageing because older people are surviving longer and younger people are having fewer children.

Figure 20 shows the growth of different key age groups, of which the ‘pension age’ group is by far the fastest. Although the whole world needs to concern itself with the issue of ageing populations (see, for example, The Economist special supplement on 27 June 2009), the issue is not particularly severe in the Cairngorms according to these projections. A chart similar to Figure 20 for Scotland, and on the same structural assumptions, would show the ‘Pension age’ index rising to 1.57 (i.e. a 57 per cent rise) rather than 1.80 (an increase of 80 per cent), but the working age index only going to 1.00 compared to 1.10. It is noteworthy that ‘ageing’ is less of an issue in the GROS projections, but this is likely to be because the model GROS uses is relatively inflexible when it comes to the age of migrants.

Figure 20 Future population trends in the Cairngorms National Park

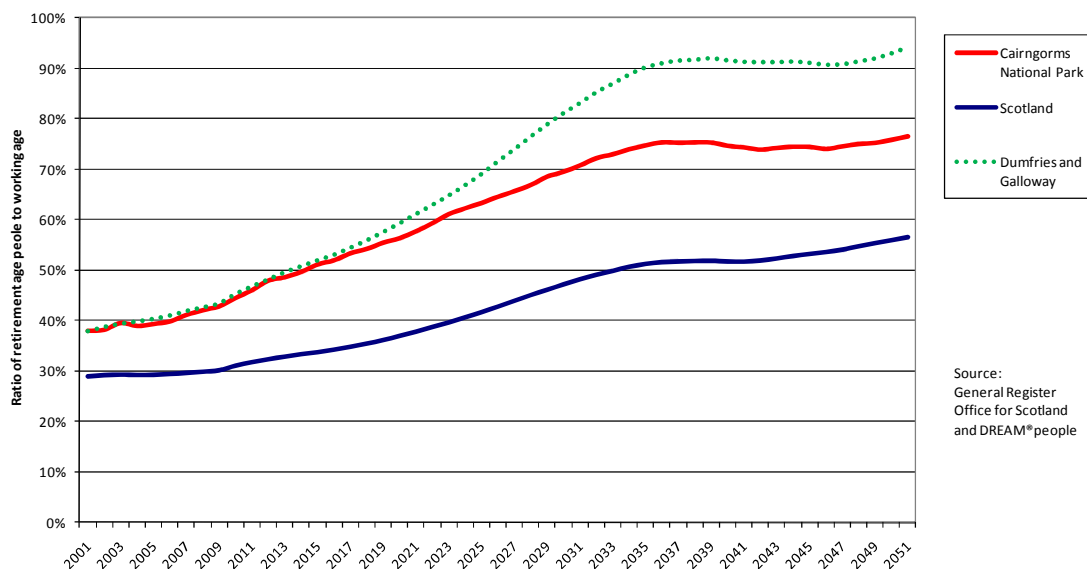


The ratio of older people to those of working age is defined as ‘age dependency’. Currently the Cairngorms area has a higher degree of age-dependency than Scotland as a whole, at least in statistical terms. The dependency is projected to rise at a slightly faster rate than the national figure. However, compared to at least one other rural area which today is similarly placed to the Park (Dumfries and Galloway) the rate of increase in dependency will be much lower (see Figure 21).

Figure 21 Age dependency in the Cairngorms National Park

Age dependency

- less of a problem in the Park than some other rural areas



The difference arises because the net influx of young adults starts really early in the Park, at 21, rather than around 30, which is commonly the case in rural Scotland. Consequently, the 2051 age distribution for the Park, compared with the 2006 one (see Figure 22 overleaf), is much less extreme than some other regions.

The demographic projections lead directly into household projections, but these are considered below in section 8.7 Home ownership and construction.

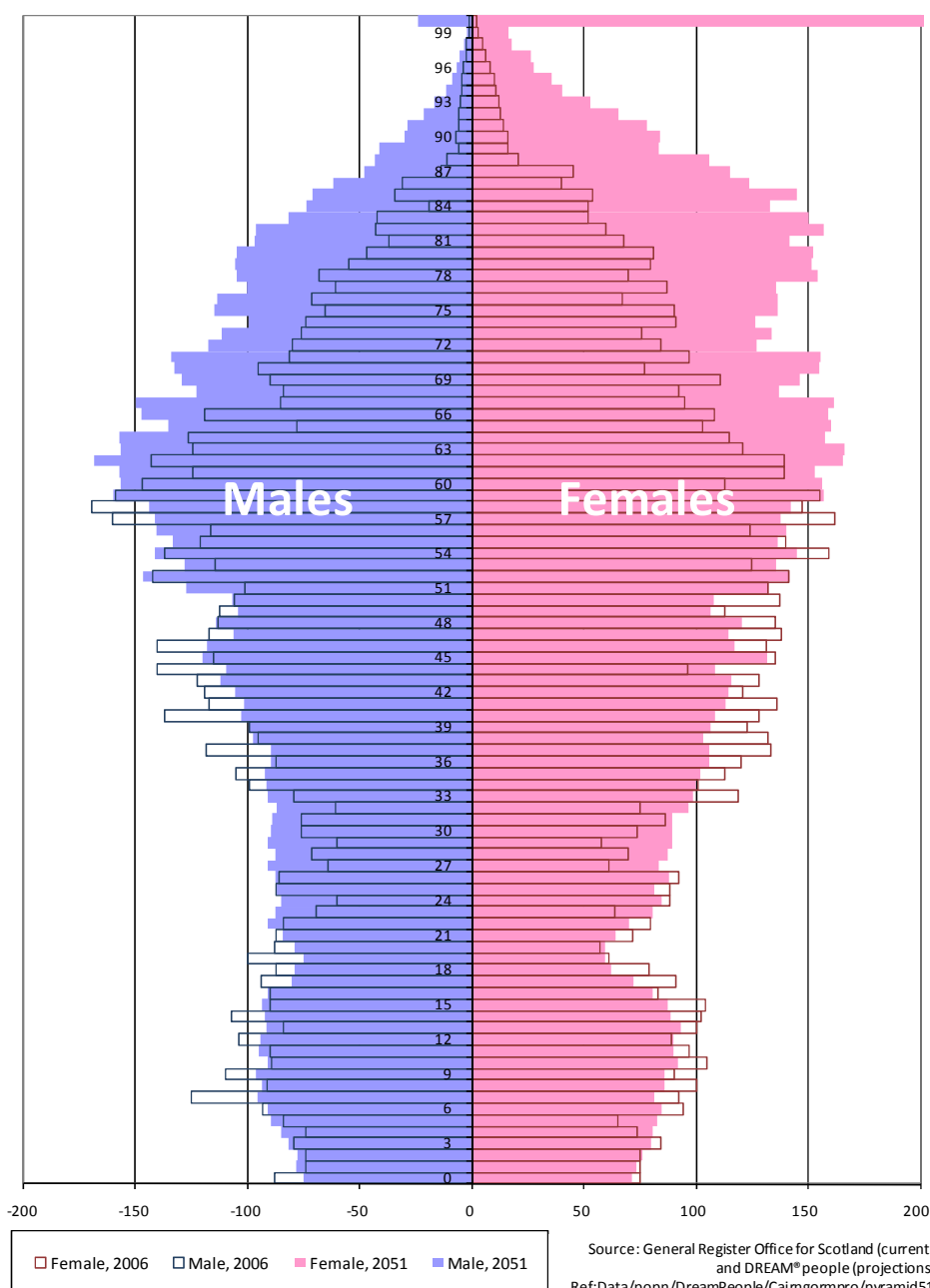
4.6 Implications of the demographic conditions

The Cairngorms National Park has a unique demographic situation. The population is significantly older than the Scottish average, but this is common in rural areas. What is less common is that the area is projected to retain and in some cases increase the population of young people in the area. The attraction of the area for those in their twenties and thirties is likely to be largely driven by the quality of place and the employment opportunities which exist in tourism-related industries. This position has improved since the designation of the Park.

Although positive, current trends in the Park population do not seem likely to present issues for the Park environment or the development of services to local people which should be considered particularly concerning. Nevertheless some aspects of an ageing and slowly growing population may be harder for public and private services to handle in the Park than they would be in a city or larger town environment.

Figure 22 Current and future population distribution

Age distribution - Cairngorms National Park Future trends 2006 to 2051



5 Work in the Park

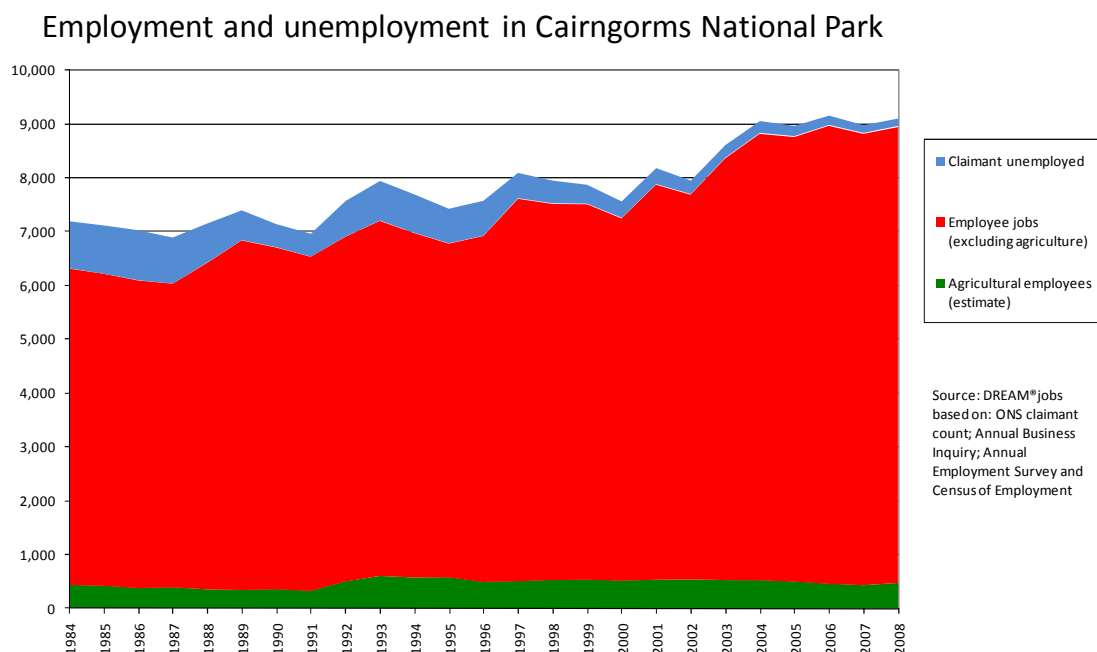


Ballater golf course

This chapter and the following one provide an overview of the employment and unemployment conditions in the Cairngorms National Park. In all there are about 11,500 people economically active in the Park.

The available official statistics suggest that a gradual rise in the number of employees in the Park over the past 25 years was followed by a quickening in the early years of the new millennium³, and then stability in recent years (see Figure 23). There are now just under 9,000 employees working in the Park.

Figure 23 Employment and unemployment



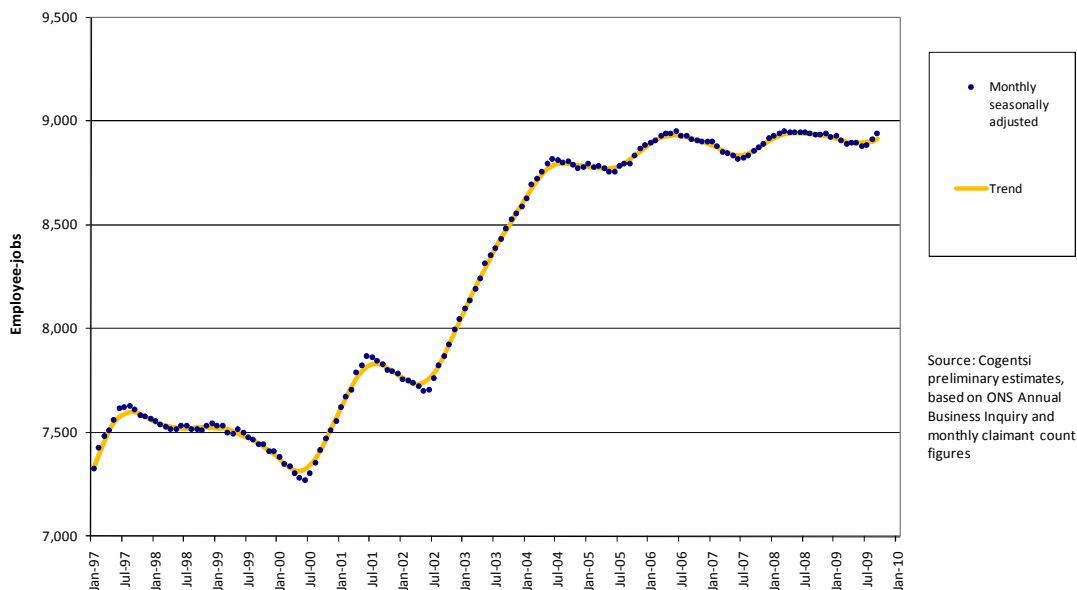
The chart does not show self employment which, apart from agriculture, cannot be reliably tracked over time for small areas. Updating from the 2001 Census of Population in line with national trends, we estimate there are about 2,000 self-employed people in the Park, including 520 who are farmers and members of their families working on the farm. There are about 350 full time students not counted as employed or self-employed.

Monthly estimates show the most concerted rise in employee numbers within the Park in recent years occurred between early 2002 and mid 2004 (see Figure 24). It is, however, important to note that these are estimates only.

³ There is a marked increase in employees in employment between 2002 and 2004. Part of this is, we believe, a result of increased recruitment of Central European nationals to the hospitality industries (from the European Union's new Accession countries). Other Scottish regions with a large tourism sector have also show an influx of young workers from this source. The influx locally may have been significantly supplemented by the reopening of the MacDonald Highland Resort in Aviemore.

Figure 24 Estimated monthly employment

Recent employment trends in the Park

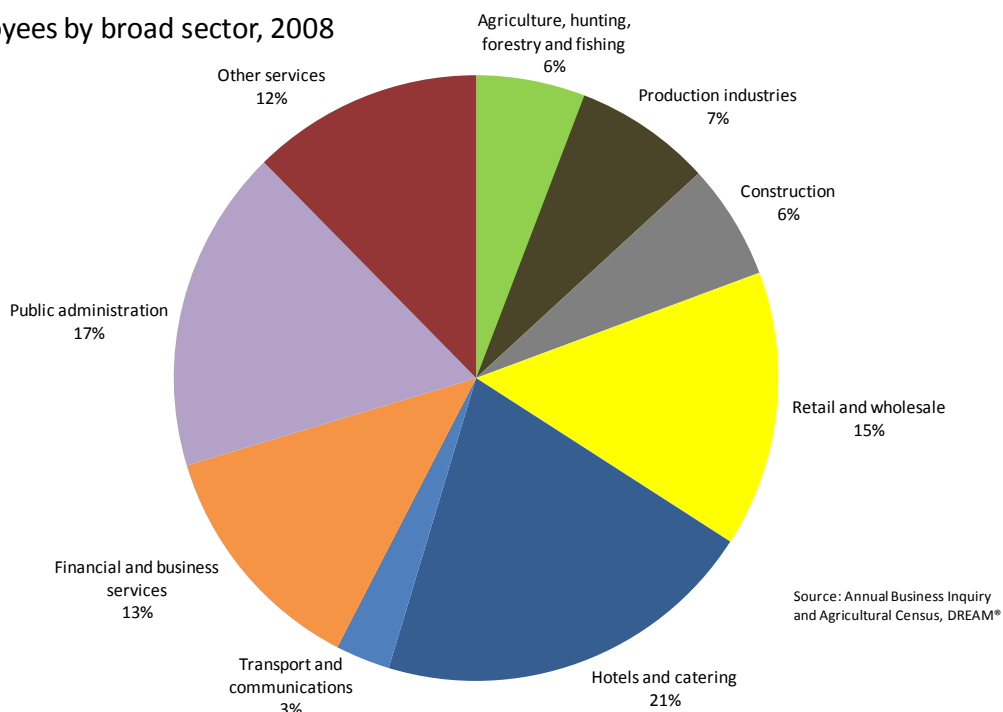


5.1 Employee jobs

The main data source for the number of employees in a region is the Annual Business Inquiry, which is a census of large employers and a sample survey of small employers. The latest results available for the Cairngorms National Park, relating to the 2008 survey, are shown in Figure 25⁴.

Figure 25 Employees by sector

Employees by broad sector, 2008

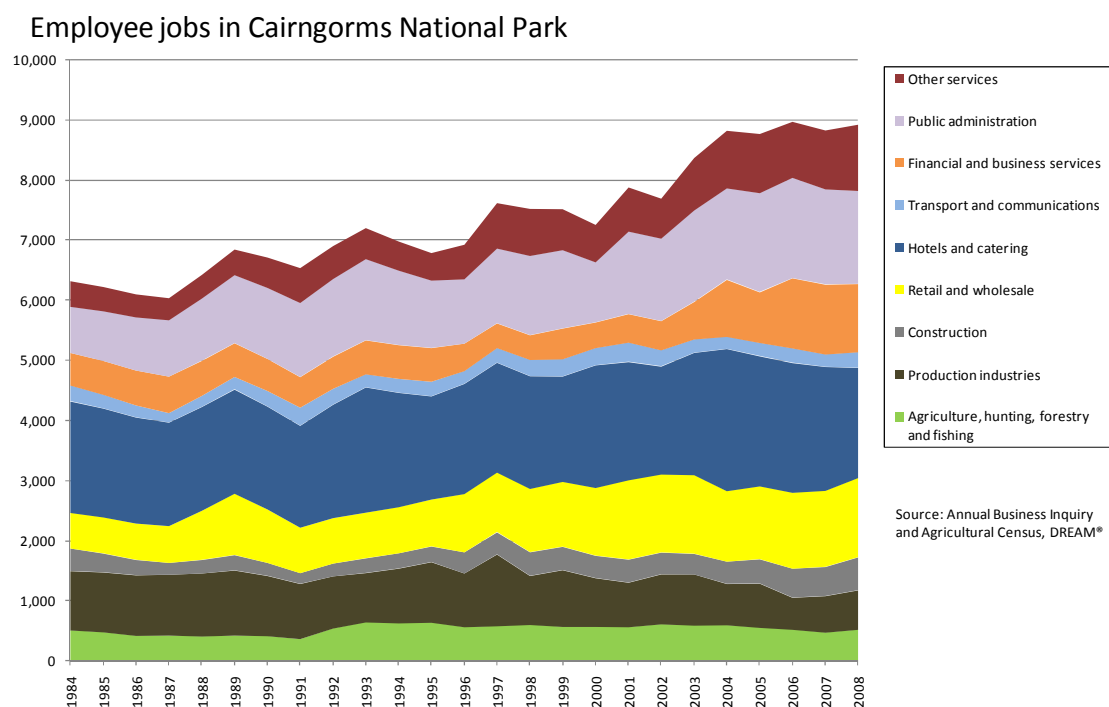


⁴ The boundaries used for the National Park are built up from local authority wards (CAS 2003 wards). A list of wards and a map showing the boundaries used is shown in section 13.3 - Economic data: employment and GVA.

Two thirds of the jobs in the Park are in private sector services, and the remainder divided evenly between public services and goods-producing industries, in which we include construction and agriculture. Across the Park, tourism related activities, such as distributive trades, hotels and restaurants account for a sizeable proportion of employees.

Much of the expansion in employment since the turn of the millennium has taken place in the private service sector with retailing growing steadily and the numbers employed in hotels and catering expanding in 2003 to make it one of the largest sectors in the Park (see Figure 26). Financial and business services (including call centres allocated to 'administrative and support services) have also grown substantially in recent years to account for around 1,000 staff. Other sectors to have increased their number of employees in recent years include public administration and 'other services', which includes leisure services.

Figure 26 Employee jobs



As employment has been rising, unemployment has been going down. The lowest monthly figure in recent years has been less than a tenth of the figure reached at the peak of the 1980s recession. The issue of unemployment is dealt with in more detail in section 6.

5.2 Commuting

Commuting is one respect in which the Cairngorms differs from Scotland's other National Park. The Park is too far from major centres of employment for commuting out to be a very large scale phenomenon. At Loch Lomond and the Trossachs there is a great deal of commuting to Glasgow, its suburbs and satellite towns, and to Stirling. But even with improved connectivity there is very little chance of the Cairngorms National Park becoming a dormitory suburb to any significant extent.

Nevertheless, within the Park the range of employment opportunities which are not tied to visitors, the land, or local services is only limited, and so people with special skills who want to live in the Park may need to travel to work. Correspondingly, the Park does not have so many jobs that it attracts commuters in from long distances, but nevertheless there are small communities and isolated residences around the Park, but outwith its boundaries. For these surrounding residents the Park offers the best job prospects available.

In journeys to work there are some local flows in both directions across Park boundaries – for example people live near Forres and work in Grantown, or vice versa, or Newtonmore to Pitlochry. These are relatively small and tend to balance out. The major flows are to and from Inverness and Aberdeen, as regional economic capitals, and to an extent into Moray and Aberdeenshire. The Park can usefully be divided into two main labour markets, one to the west and northwest of the Park, and the other Deeside.

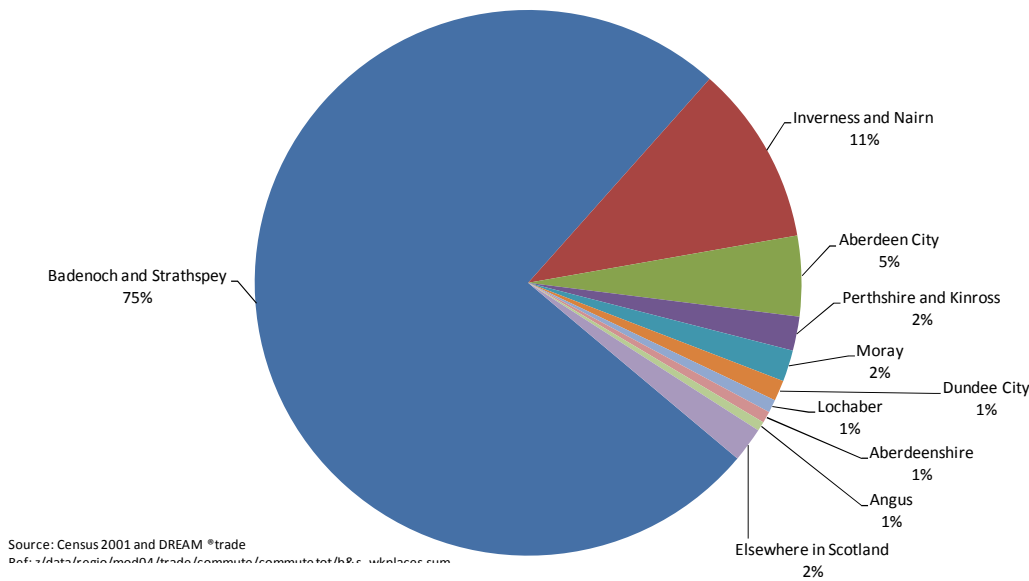
Past commuting patterns

Estimates for 2001 from the west of the Park (that is, for Badenoch and Strathspey) were that it had 1,408 in-commuters and 1,269 out-commuters, representing about a quarter of the labour market. Figure 27 shows the place of work of residents of Badenoch and Strathspey, including the quarter or so who leave the area for their employment each day.

At the time of the Census in 2001, the Inverness area attracted about 600 Cairngorms residents, a number which is likely to have increased as employment in Inverness has grown substantially (by 13 per cent) and improvements in road and rail transport have made commuting easier. In addition, the Census showed approximately 100 commuters to each of Moray and Perthshire, and 250 to Aberdeen. It is likely that several of the latter continued through Aberdeen to offshore work in the oil industry.

Figure 27 Commuting patterns from Badenoch and Strathspey

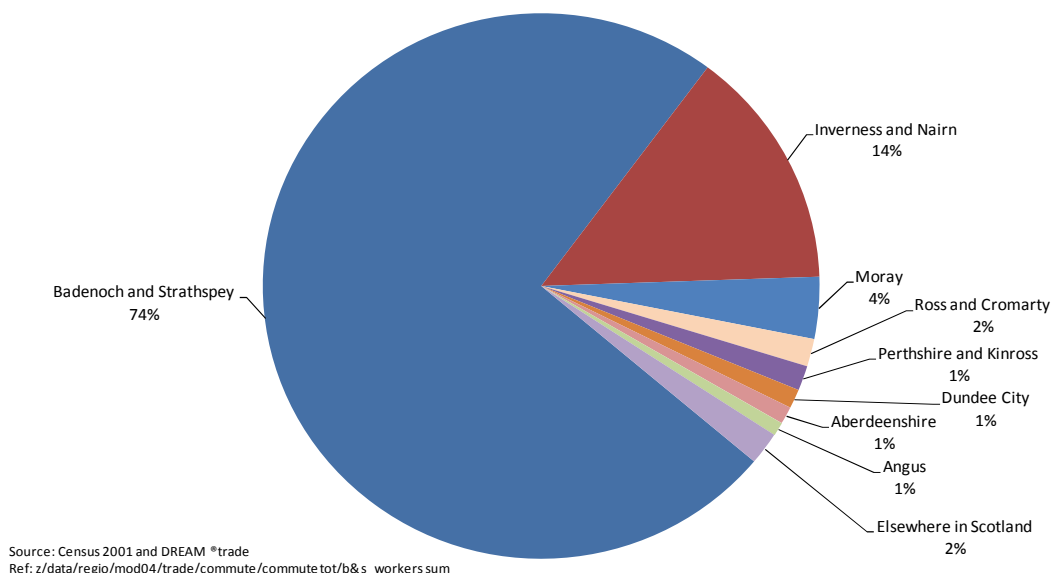
Place of work of Badenoch and Strathspey residents, 2001



Three quarters of those who work in Badenoch and Strathspey also live in the area, as shown by Figure 28. Of those who regularly commute into the area, more than half come from the Inverness area with a small number from Moray. Only a handful commute in from the south.

Figure 28 Residence of people working in Badenoch and Strathspey

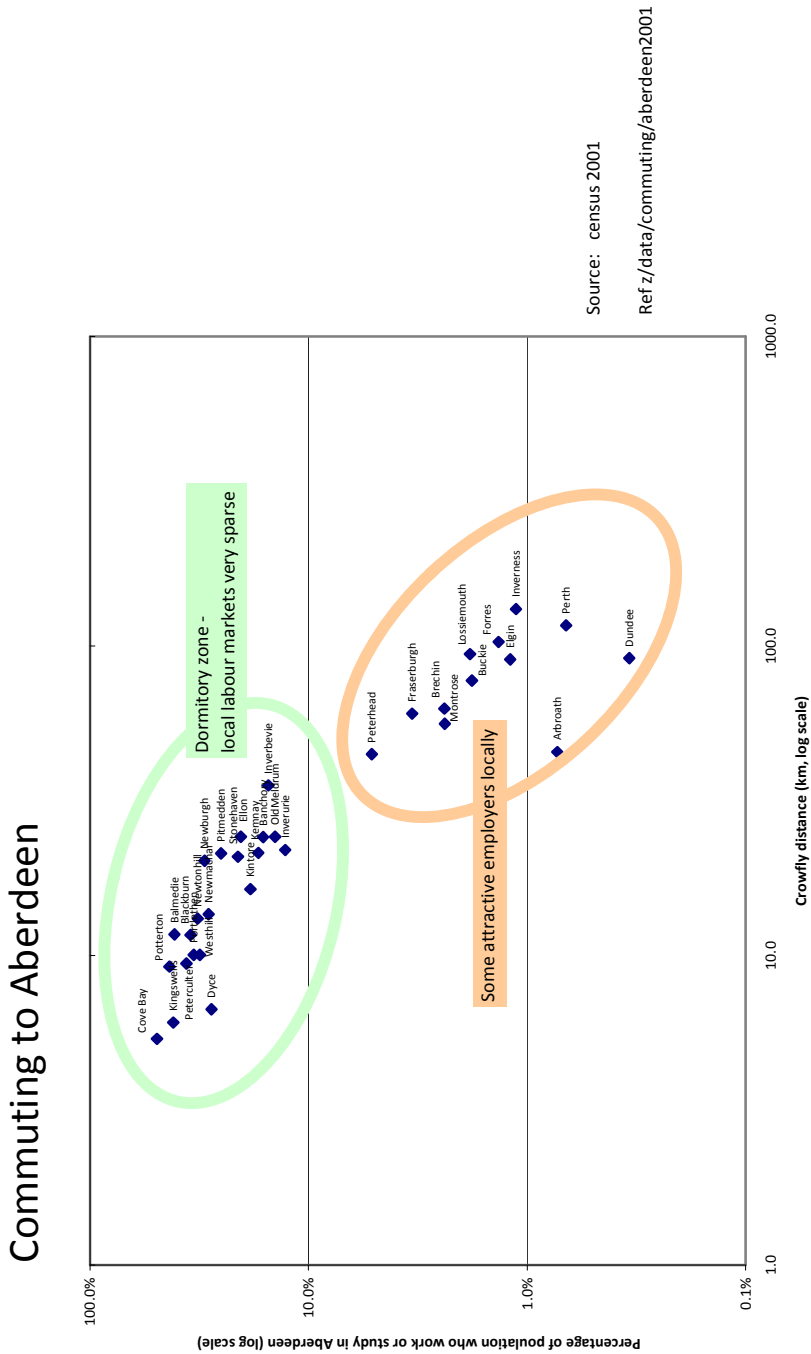
Place of residence of Badenoch and Strathspey workers, 2001



The 2001 census of population figures can also be used to provide an estimate of the level of commuting around the eastern area of the Park around Deeside and Glenlivet.

As a small town, Ballater’s economy is relatively narrow. Nevertheless it is 67 kilometres or 82 minutes by road from Aberdeen, a distance which places it on the edge of the normal catchment area for commuting. Figure 29 shows how the propensity to commute to Aberdeen depends primarily on how far away it is, but also on the range of other workplaces available. Conceptually Deeside falls into the green-ringed area - Aberdeenshire settlements which do not have a substantial diverse employment base of their own.

Figure 29 The Park lies outwith the Aberdeen commuting zone



Ballater is the same distance from Aberdeen as Fraserburgh, which sends about 3.4 per cent of its population to work in the city. However, the local labour market in western Deeside is much smaller than on the north east coast. Banchory, which is less than half the distance from Aberdeen of Ballater, sends 16 per cent of its population to work in the city. Taking a figure of seven per cent, we would estimate that about 100 people are likely to commute from Ballater and 50 from other places to the north and east of the Park, based on the trade-off between distance and commuting numbers found in Aberdeenshire. Inflows are likely to be much smaller, probably of the order of 50 individuals.

Current estimates of commuting

The calculations above for the numbers of in and out commuters are based on the 2001 Census of Population, which is the only authoritative source of data on commuting. However the Census is now nine years old, and many issues highly relevant to commuting have changed.

Taking into account the growth and ageing of population, and shifts in employment and unemployment across north east Scotland, an updated estimate of commuting flows has been prepared.

Between 2001 and 2008 it is estimated that the total number of Cairngorms residents who leave the Park to work has risen by more than a quarter (26 per cent) (see Table 3). Over the same period, the number of adults living in the Park has increased by a much more modest 7 per cent although the number of working residents has increased by some 17 per cent. This is thanks to a considerable tightening of the labour market resulting in the number of local residents unemployed or otherwise not working falling by almost a quarter (23 per cent).

Table 3 Estimated level of out-commuting

Place of work of Cairngorms National Park residents									
Year	Cairngorms National Park	Aberdeen	Inverness	Work elsewhere	Unemployed	Not working	Total residents	Total working residents	Total out-commuters
2001	6479	350	600	470	294	2192	10385	7899	1420
2008	7425	440	709	640	136	1737	11086	9213	1789
Change 2001 to 2008	15%	26%	18%	36%	-54%	-21%	7%	17%	26%

Source: DREAM®job, cogentsi

The main factors driving the projections are the burgeoning of employment in Aberdeenshire, Moray and Perthshire, which is enticing increasing numbers of Park residents to work in their areas. At the same time, the growth of the population of Inverness has provided greater opportunities for those who live in the Park.

The numbers commuting into the Park to work is also predicted to have increased, but only by a small amount (7 per cent) and at a much lower rate than the increase in the size of the workforce (see Table 4). In other words, a smaller proportion of the Cairngorms workforce is now predicted to live out with the Park compared to in 2001.

Table 4 Estimated level of in-commuting

Place of residence of workers in Cairngorms National Park						
Year	Cairngorms National Park	Aberdeen	Inverness	Live elsewhere	Total workers	Total in-commuters
2001	6479	100	850	450	7879	1400
2008	7425	102	995	399	8921	1496
Change 2001 to 2008	15%	2%	17%	-11%	13%	7%

Source: DREAM®job, cogentsi

Indeed, practically all of the extra in-commuters to the Park are predicted to come from Inverness. Much of the expansion of the Highland capital has taken place in the east and south of the city – conveniently located for the A9 south into the Park.

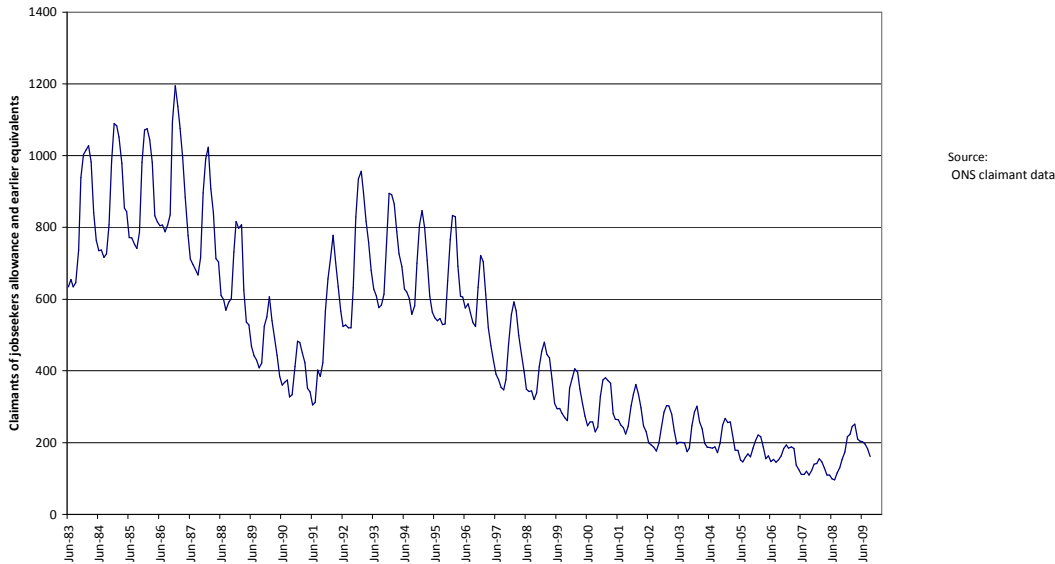
It is important to stress that this analysis is only an estimate of what is likely to have happened, taking into account the changes that have occurred. They are not the type of authoritative figures which are provided by the Census. The model used to deduce these figures is summarised in section 16.3.

6 Unemployment

The number of unemployed claimants living in the Park is currently 160, having touched 250 in spring 2009. Historically this figure has been well above 1,000, but in mid 2008, even after the recession had started, it was below 100 (see Figure 30). To understand the patterns we must separate out seasonal patterns and the long term shifts.

Figure 30 Claimant count

Unemployed claimants 1983-2009

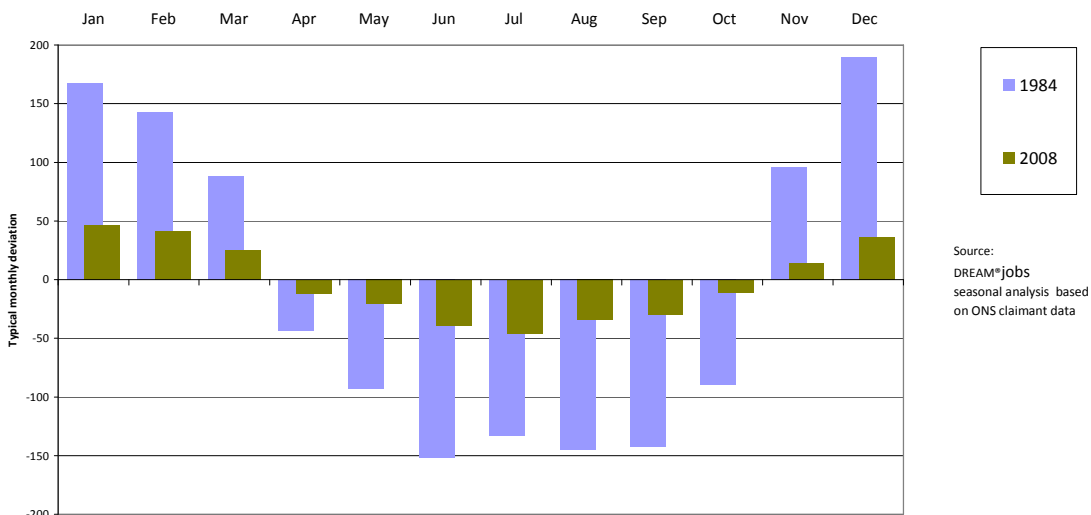


6.1 Seasonal patterns

Analysis suggests that the seasonal pattern of unemployment in the Park has shifted over the years. A quarter of a century ago, in 1984, the seasonal peak in unemployment was in December, but now is in January (see Figure 31). The seasonal trough is now in July, coinciding with Scottish school and public holidays, when it used to be spread across June to September.

Figure 31 Seasonal factors in unemployment

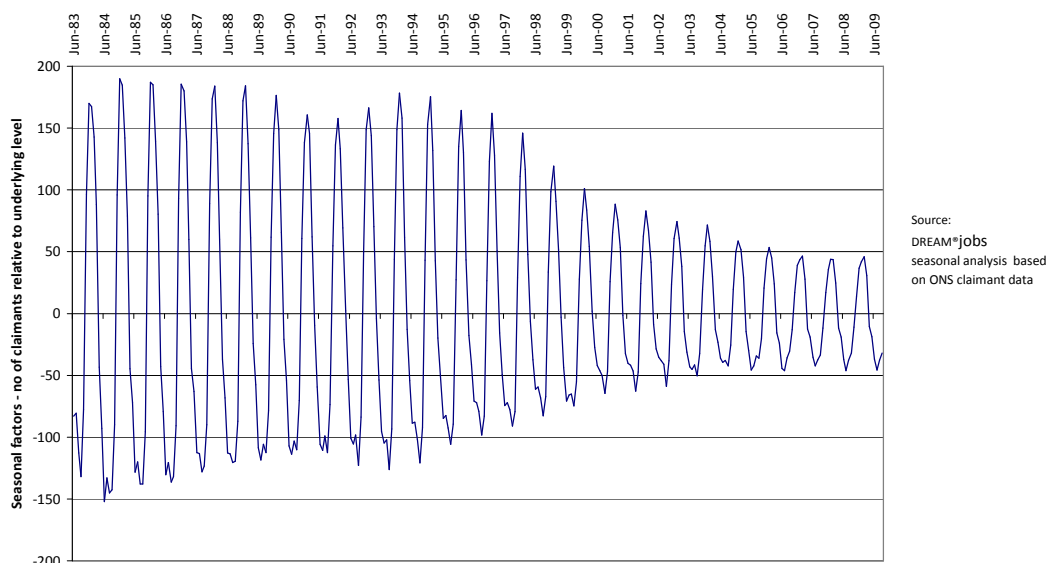
Seasonal factors in claimant unemployment have diminished and shifted over the years



However the decrease in amplitude is far more striking than the shift in timing. The seasonal swing from peak to trough used to amount to 350, in a labour market of 7,000. Now it has shrunk to 90, in a labour market of 9,000 (see Figure 32)

Figure 32 Seasonal pattern of unemployment

The seasonal pattern of unemployment



Although composed of changes in labour supply, labour demand, and benefit eligibility, this is at least *prima facie* evidence of a substantial strategic victory for the tourism industry. It is evidence that winter sports and attempts to spread the season have had some success, as well as the practice of hiring non-residents for seasonal jobs. These are real and locally specific factors, but they work on top of some limited national and general effects, including measures by successive governments which have reduced the number of unemployed people, reduced the benefit eligibility of those people, and sometimes massaged the figures cosmetically. Nevertheless, the elimination of four fifths of the seasonal variation in unemployment must be more than cosmetics.

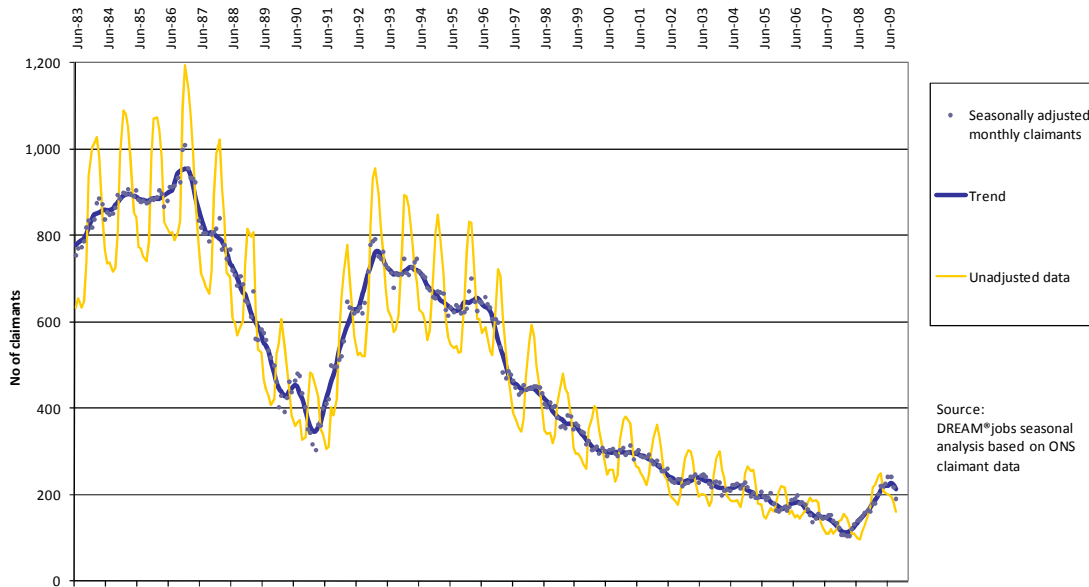
6.2 Long term trends

The long term development of the labour market emerges clearly once the repetitive seasonal patterns have been removed from the data.

The 1980s recession started in most of Scotland around September 1979, and Cairngorms unemployment reached its peak for that recession in December 1986 (see Figure 33).

Figure 33 Unemployment levels over the past quarter century

Unemployed claimants 1983-2009

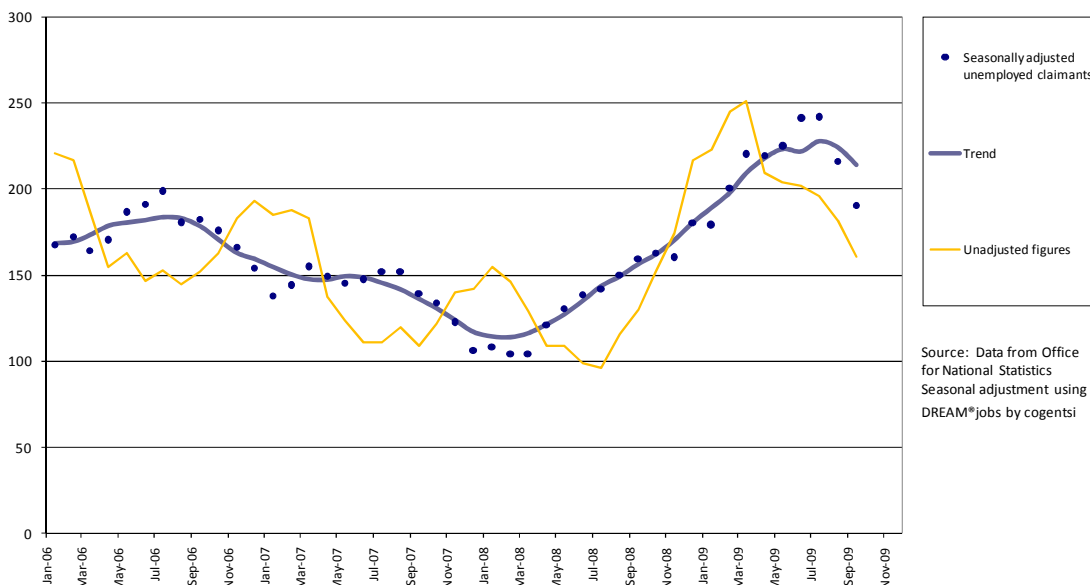


For Scotland (but not for the UK) the economic downswing was more than three times as long and three times as deep as a typical post-war recession. In the Cairngorms it was not quite as deep, but significantly longer. The recovery, as far as it went, lasted until February 1991, and then there was a sharp worsening of unemployment until December 1992. Thereafter things got better reasonably steadily until the present recession started, in Cairngorms unemployment terms, in March 2008.

Monthly figures are shown up to September 2009 in Figure 34. They suggest the recession continued to get worse at the rate of about two jobs per week until July 2009, but the position improved substantially, by 50 jobs over and above the normal seasonal pattern, in the following two months. It will be some months before one can be certain that a downward trend in unemployment has emerged.

Figure 34 Unemployment now rising in the recession

Park unemployment trends in the recession



It is worth pointing out that, at the moment, long term unemployment is not a problem simply because a year ago there were less than a hundred people unemployed. If the recovery continues it will not be a major issue, but if the recession resumes it may become a problem. Nevertheless, the numbers are likely to remain relatively low and this can lend itself to quite a focused practical response. While long term numbers remain relatively low it is realistic for

public agencies to develop approaches that can actively contact and support all affected individuals. This would be entirely consistent with the partnership focus of Workforce Plus. This can be linked with micro-business recruitment approaches as so successfully developed in north west Wales under the Sole Trader Initiative and later transferred successfully to the North West Highlands as Recruit Sutherland.

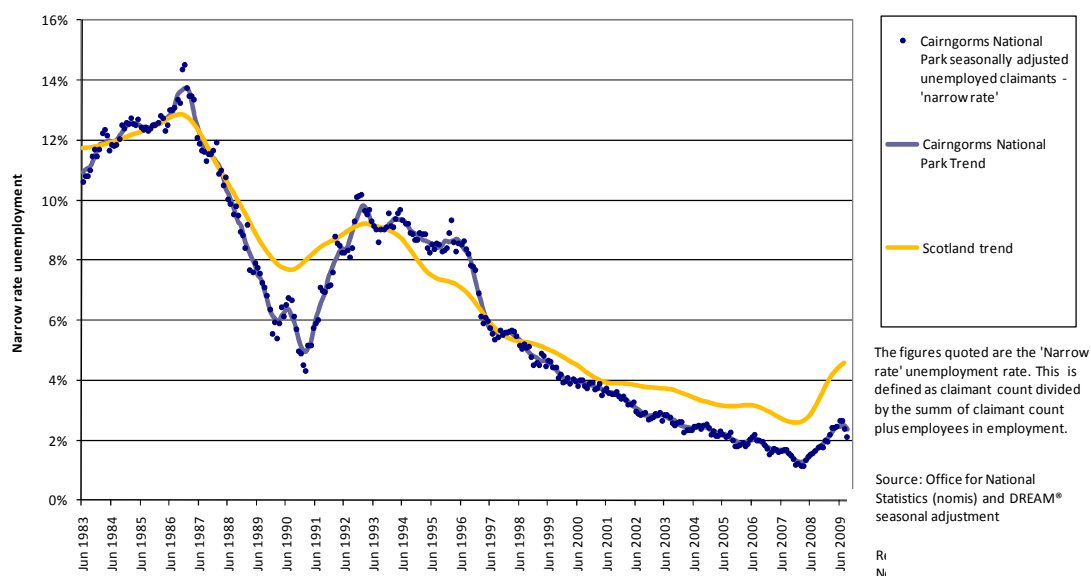
6.3 Comparisons with elsewhere

It is helpful to set the Cairngorms labour market in its wider economic environment. Except for the four years from 1993 to 1997, unemployment rates have been significantly lower in the Park than across Scotland as a whole (see Figure 35).

Figure 35 Unemployment: Cairngorms versus Scotland

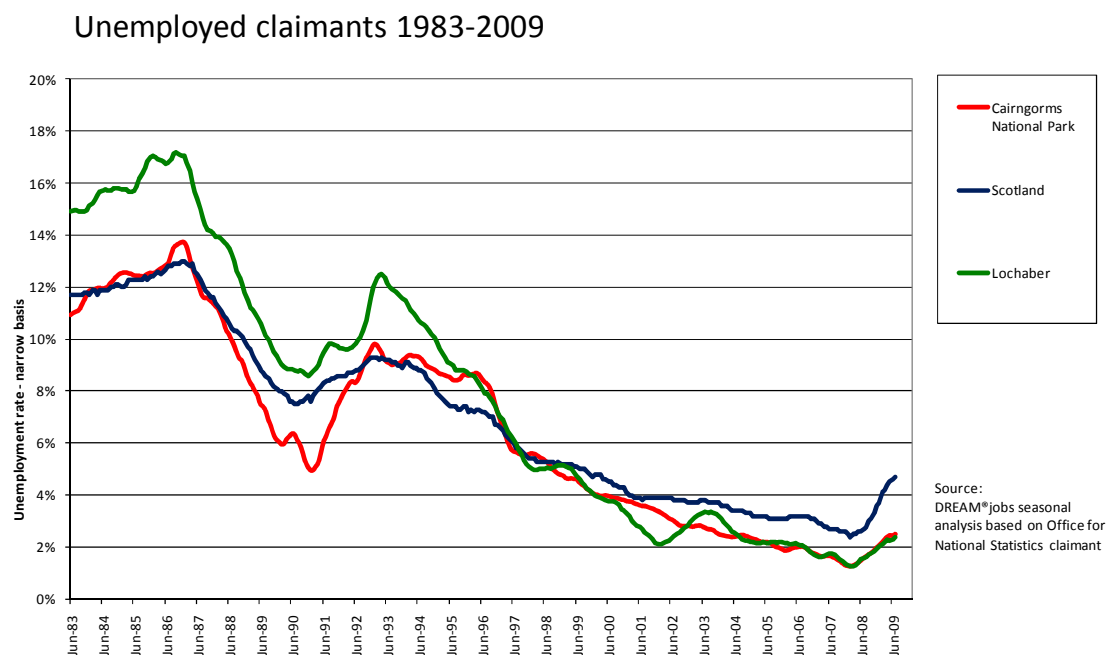
The changing labour market

- Cairngorms unemployment trends versus Scotland



However, the Cairngorms is not the only rural area to outperform the country in terms of reducing levels of unemployment. In many ways Lochaber can be considered a comparator for the Park. The Nevis Range mountain resort facility at Aonach Mor first developed as a winter ski resort in 1989. The unemployment rate in Lochaber prior to the development was much higher than the Scottish average. For example, in 1983, it was 30 per cent above the national rate (see Figure 36). At that time the rate in the Cairngorms National Park broadly matched the Scottish average.

Figure 36 Unemployment: Cairngorms versus comparator areas



During the late 1980s and early 1990s, Lochaber closed the unemployment gap with both the Cairngorms and Scotland, such that by 1997 the gap had disappeared all together. This coincided with the development of skiing and mountain biking facilities in Lochaber, and in the short term the competition may not have been good for the Cairngorms economy.

Since 1997 the unemployment rates in both the Cairngorms National Park and Lochaber have fallen progressively below the Scottish average rate. By July 2009, the rates in both the Cairngorms (2.5 per cent) and Lochaber (2.4 per cent) were almost half of the Scottish national rate (of 4.7 per cent).

Low unemployment rates in the Park can be associated with the greater availability of part time and temporary jobs, and a high level of self employment. It is also probably the case that when unemployment is a problem, for individual or for more general reasons, people living in country areas and small towns are more likely to move to the larger towns and cities looking for work than vice versa. It also is sometimes argued that rural people accept lower wages and so ‘price themselves into work’.

Deprivation related to employment

The Scottish Index of Multiple Deprivation provides a measure of employment deprivation for each of the Park’s 25 datazones and is based primarily on evidence from the benefits system. It combines the proportion of the working age population in receipt of a number of employment related benefits, including: those who have been in the Claimant Count register for over 12 months; those in receipt of Incapacity Benefit; those receiving Severe Disablement Allowance; and participants in the Compulsory New Deal scheme.

In general the proportion of people reliant on benefits is considerably lower in the Cairngorms National Park than in many other parts of Scotland. Table 5 indicates that across the Park, the level of employment deprivation is much lower than elsewhere in the country. The main centres of populations in Badenoch and Strathspey along with the most rural areas of Deeside and the Angus Glens have the greatest evidence of employment deprivation. However, none of the Park’s 25 datazones is ranked as amongst Scotland’s 50 per cent most employment-deprived areas.

Table 5 Employment deprivation across the Park

Data zone	Locality	Area	Employment domain rank
S01003754	Aviemore town (centre)	Badenoch and Strathspey	3261
S01003772	Grantown on Spey hinterland (west)	Badenoch and Strathspey	3687
S01003755	Aviemore town (west)	Badenoch and Strathspey	3827
S01003749	Kingussie town (north)	Badenoch and Strathspey	3876
S01000708	Glen Isla	Angus Glens	4125
S01000710	Glen Clova	Angus Glens	4157
S01000360	Strathdon	Deeside	4213
S01000303	Ballater hinterland	Deeside	4323
S01003760	Carrbridge	Badenoch and Strathspey	4675
S01003750	Kingussie hinterland (north)	Badenoch and Strathspey	4741
S01003767	Grantown on Spey town (north)	Badenoch and Strathspey	4744
S01000316	Ballater town (north)	Deeside	4850
S01003764	Grantown on Spey town (south)	Badenoch and Strathspey	4862
S01003759	Boat of Garten	Badenoch and Strathspey	4968
S01004233	Tomintoul	Moray	4987
S01003766	Grantown on Spey town (centre)	Badenoch and Strathspey	4990
S01003756	Nethy Bridge	Badenoch and Strathspey	5136
S01003751	Aviemore east / Glenmore	Badenoch and Strathspey	5151
S01003747	Newtonmore town	Badenoch and Strathspey	5275
S01000312	Ballater town (south)	Deeside	5340
S01005147	Blair Atholl	Highland Perthshire	5411
S01003771	Grantown on Spey hinterland (east)	Badenoch and Strathspey	5421
S01003748	Kingussie town (south)	Badenoch and Strathspey	5542
S01003743	Laggan / Dalwhinnie	Badenoch and Strathspey	5610
S01000301	Braemar	Deeside	6190

Legend

Ranking *	Level of deprivation
1 up to 1301	Much greater than Scottish average
1302 up to 2602	Slightly greater than Scottish average
2603 up to 3903	Around Scottish average
3904 up to 5204	Slightly less than Scottish average
5205 up to 6505	Much less than Scottish average

* Ranking is out of 6505 datazones in Scotland

Source: Scottish Index of Multiple Deprivation 2009, Scottish Government. Ref: P240/SIMD/deprivation/SIMD2009_employtab

Deprivation related to education and skills

Poor access to education, skills or training can damage an individual's chances of improving her or his quality of life through employment. As well as the employment measure (above) the Scottish Index of Multiple Deprivation (SIMD) also uses a number of indicators to measure the current and potential future levels of skills and training and provide a guide to education and skills deprivation. The indicators used include:

- School pupil absences
- Pupil performance on SQA at stage 4
- Working age people with no qualifications
- 17-21 year olds enrolling into higher education
- 16-18 year olds not in education, employment or training

Table 6 summarises the performance of the Park's localities compared to the other communities in Scotland. This indicates that the neighbourhoods in the Cairngorms National Park predominantly fall into the middle categories of education and skills deprivation. The highest levels of skills and education deprivation within the Park are found in Aviemore, and none of them are amongst the most deprived areas in Scotland. Some of the most rural areas, including in and around Kingussie, the Angus Glens and Upper Deeside, enjoy the lowest levels of education and skills deprivation.

Table 6 Skills and education-related deprivation

Data zone	Locality	Area	Education, skills and training domain rank
S01003754	Aviemore town (centre)	Badenoch and Strathspey	2241
S01003764	Grantown on Spey town (south)	Badenoch and Strathspey	2356
S01003755	Aviemore town (west)	Badenoch and Strathspey	2683
S01003751	Aviemore east / Glenmore	Badenoch and Strathspey	3279
S01000303	Ballater hinterland	Deeside	3342
S01003756	Nethy Bridge	Badenoch and Strathspey	3492
S01003759	Boat of Garten	Badenoch and Strathspey	3526
S01003749	Kingussie town (north)	Badenoch and Strathspey	3556
S01005147	Blair Atholl	Highland Perthshire	3659
S01003766	Grantown on Spey town (centre)	Badenoch and Strathspey	3735
S01003771	Grantown on Spey hinterland (east)	Badenoch and Strathspey	3770
S01003747	Newtonmore town	Badenoch and Strathspey	3789
S01003767	Grantown on Spey town (north)	Badenoch and Strathspey	3900
S01000316	Ballater town (north)	Deeside	3924
S01004233	Tomintoul	Moray	4016
S01003743	Laggan / Dalwhinnie	Badenoch and Strathspey	4073
S01000710	Glen Clova	Angus Glens	4212
S01000312	Ballater town (south)	Deeside	4217
S01000360	Strathdon	Deeside	4230
S01003760	Carrbridge	Badenoch and Strathspey	4292
S01003772	Grantown on Spey hinterland (west)	Badenoch and Strathspey	4344
S01000301	Braemar	Deeside	4615
S01003750	Kingussie hinterland (north)	Badenoch and Strathspey	5026
S01000708	Glen Isla	Angus Glens	5367
S01003748	Kingussie town (south)	Badenoch and Strathspey	5750

Legend

Ranking *	Level of deprivation
1 up to 1301	Much greater than Scottish average
1302 up to 2602	Slightly greater than Scottish average
2603 up to 3903	Around Scottish average
3904 up to 5204	Slightly less than Scottish average
5205 up to 6505	Much less than Scottish average

* Ranking is out of 6505 datazones in Scotland

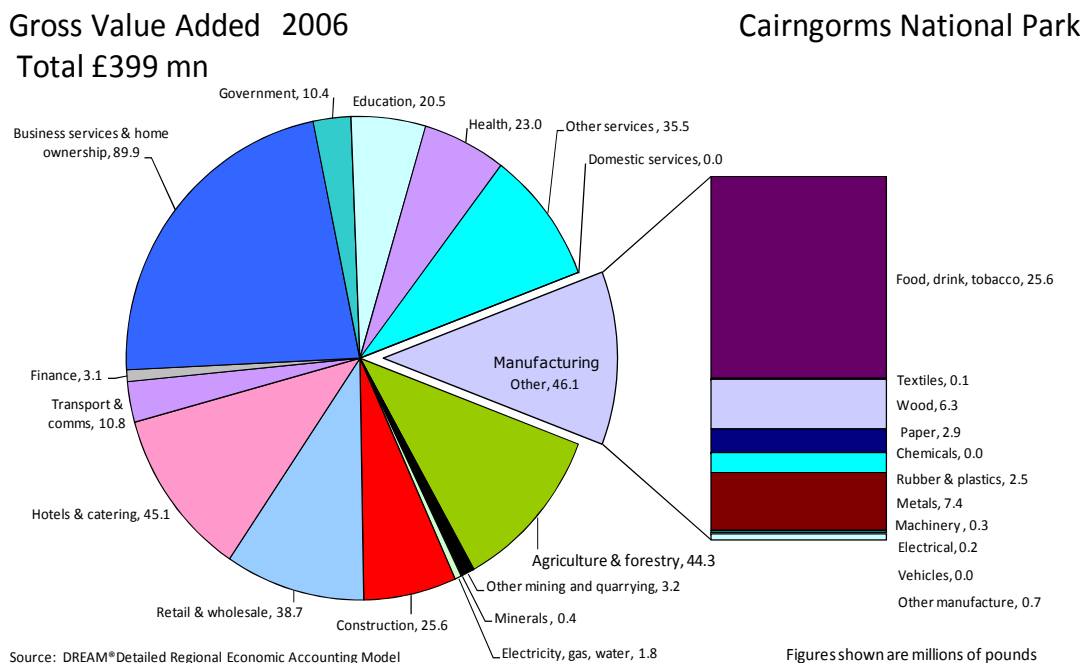
Source: Scottish Index of Multiple Deprivation 2009, Scottish Government.

7 Sectoral structure of the Cairngorms economy

The structure of the Cairngorms economy is highly unusual. The Gross Value Added (GVA) (sometimes called GDP) of economic activity in the Park is £399m per year. This represents 0.031 per cent of the GVA of the UK economy.

The largest activity grouping, business services and home ownership, accounts for more than a fifth of the total, as shown in Figure 37. Activities which are driven by the tourism, including hotels, catering and retailing account for a second fifth of the total. Government activities, including health and education generate wealth of over £50m each year

Figure 37 GVA structure



The most distinctive sectors in the Park (on this rather broad industrial classification) are farming (including forestry, fish farming and game keeping), and the whisky and wood industries. Whisky is the economically largest and by far the most distinctive part of food and drink – but other food and drink sectors are also significant.

7.1 Sectoral specialisation

The extent to which the Park's industrial structure is unusual can be identified using a technique known as *saliency analysis*. This entails the comparison of the Park with a reference region (usually Scotland, Great Britain or the United Kingdom). Saliency can be applied to any indicator of activity, but in this report is mostly used to compare industrial gross value added (the value of sales less the cost of inputs), or employment.

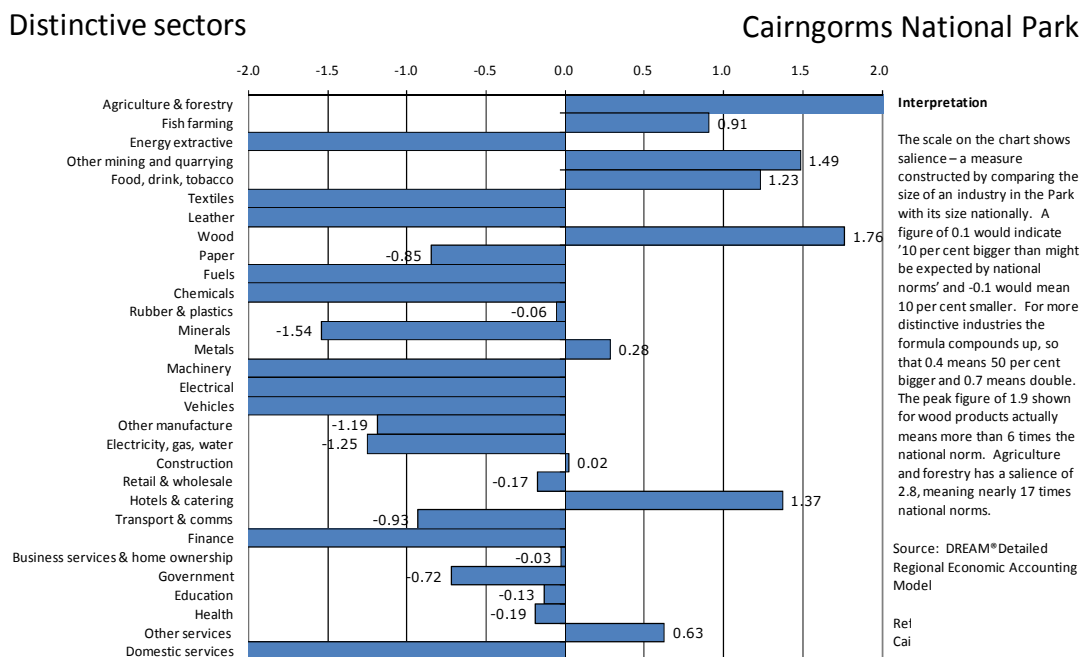
Saliency is commonly presented in a bar chart, with a bar for each activity. A positive saliency for the Park means that the amount of activity in the Park is proportionately greater than in the reference region. For value added, and usually also for employment, this is an indicator of competitive strength. A negative bar indicates less activity and a competitive weakness for that particular industrial sector. Of course, some sectors are not present at all in the Park.

Figure 38 categorises activities into one of 30 industries and provides a saliency measure of each for the Park's economy. The scale used in the chart is logarithmic so that a distance of 0.01 on the scale indicates a 1 per cent higher level of output, 0.10 a 10 per cent higher level, and so on. Because of compounding, a distance of 0.70 on the saliency scale indicates approximately double the output level of the reference, and a saliency of 1.00 means an output level 172 per cent higher than the reference.⁵

⁵ The saliency of the wood industries' GVA, for example is calculated in Figure 38 as the natural logarithm of (the share of wood industries in total Park GVA divided by the share of wood industries in UK GVA). The brackets indicate that the division must be done before taking logarithms.

This chart indicates that agriculture and forestry is the most distinctive sector. With a salience value of 2.8 it is 17 times more important to the Cairngorms National Park economy than agriculture and forestry is to the UK economy as a whole. The wood sector is also highly distinctive, as is mining and quarrying and hotels and catering.

Figure 38 Salient sectors in the Park economy

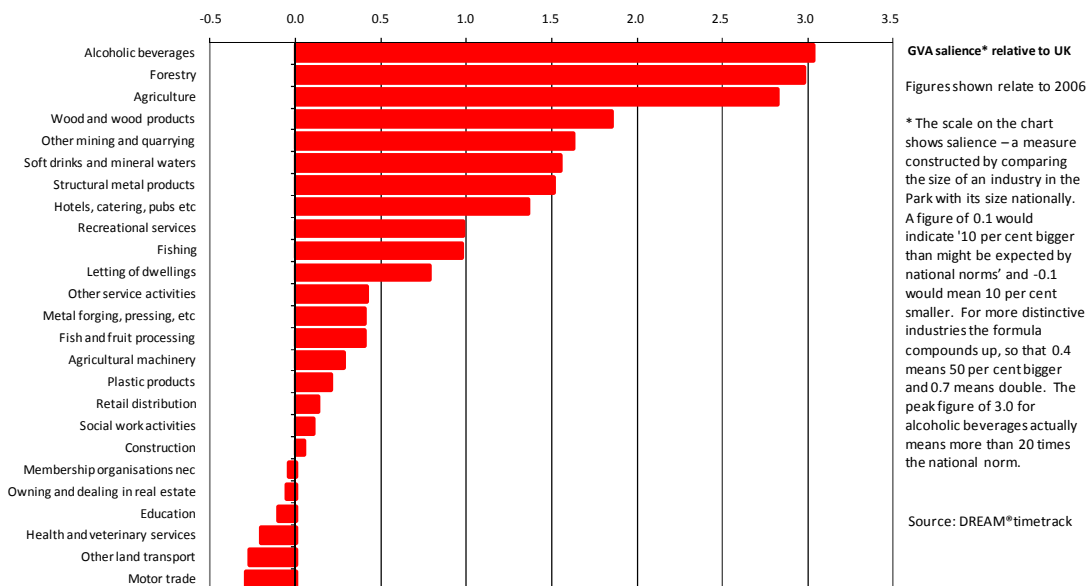


However, very specific activities and industries, such as home ownership and distilling tend to get be lost in the wider sectoral groupings when the economy is split into only 30 industries. Consequently it is helpful to use a finer industrial split of 123 industries instead of the 30. As shown in Figure 39, where the industries have been sorted by salience, only 19 out of the 123 industries are over-represented in the Park compared to national averages. Of these, eleven have a salience greater than 0.7 showing that they are contributing more than double a 'normal' amount to the economy. This analysis suggests that whilst the Park's economy has some key strengths, it is reliant on a narrow industrial base.

An alternative way of presenting the same calculation is as the natural logarithm of (the share of the Park in UK wood industries *divided by* the share of the Park in the UK economy). Thus where a Park industry is bigger than 0.031 per cent of the UK total, it has a positive salience, and where it is smaller the salience is negative.

Figure 39 Distinctive industries by gross value added

Distinctive industries in the Park



It is apparent that strength is often found in ‘groups’ of related industries - so called industrial clusters. For example, forestry and wood products are similarly strong as are whisky and mineral water. In the first case the industries are directly linked in a supply chain, whereas in the second they are in effect parallel products, with commonalities of processing, distribution, marketing and ownership, but without direct connections between products. Other grouped industries, such as the tourism cluster, can be seen in hotels and catering, recreational services, other services, letting of dwellings, and in the fact that retailing is a third bigger than the community itself would justify. These relationships are considered in considerably more detail in Section 8 from page 50.

Figure 38 and Figure 39 show the salience of wealth created, GVA, as a measure of distinctiveness. However, it is possible to draw out an interesting and even more detailed picture of distinctiveness if we use the salience of employment. This is because employment statistics are available at a 513-industry level of detail, compared to the 123 industry details for GVA⁶. This not only highlights the clustered nature of the Park economy but brings out some important features within the clusters. However it must be borne in mind that whereas salient wealth creation is a fairly clear-cut indicator of a competitive industry, salient employment may not be so decisive: indeed in principle a high level of employment in extreme cases can indicate that an industry is feather-bedding employees, and so is **uncompetitive**. However there are no obvious industries in the Park which fall into this perverse category.

On this very fine classification estates and conservation bodies are the most distinctive industries found in the Cairngorms, followed by spirit distilling by the whisky companies. Mineral extraction is important, and the three most distinctive elements of the forest products cluster appear as sawmilling, as harvesting and planting contractors, and as forest stewardship, in that order. The extensive use of contracting in agriculture is brought out.

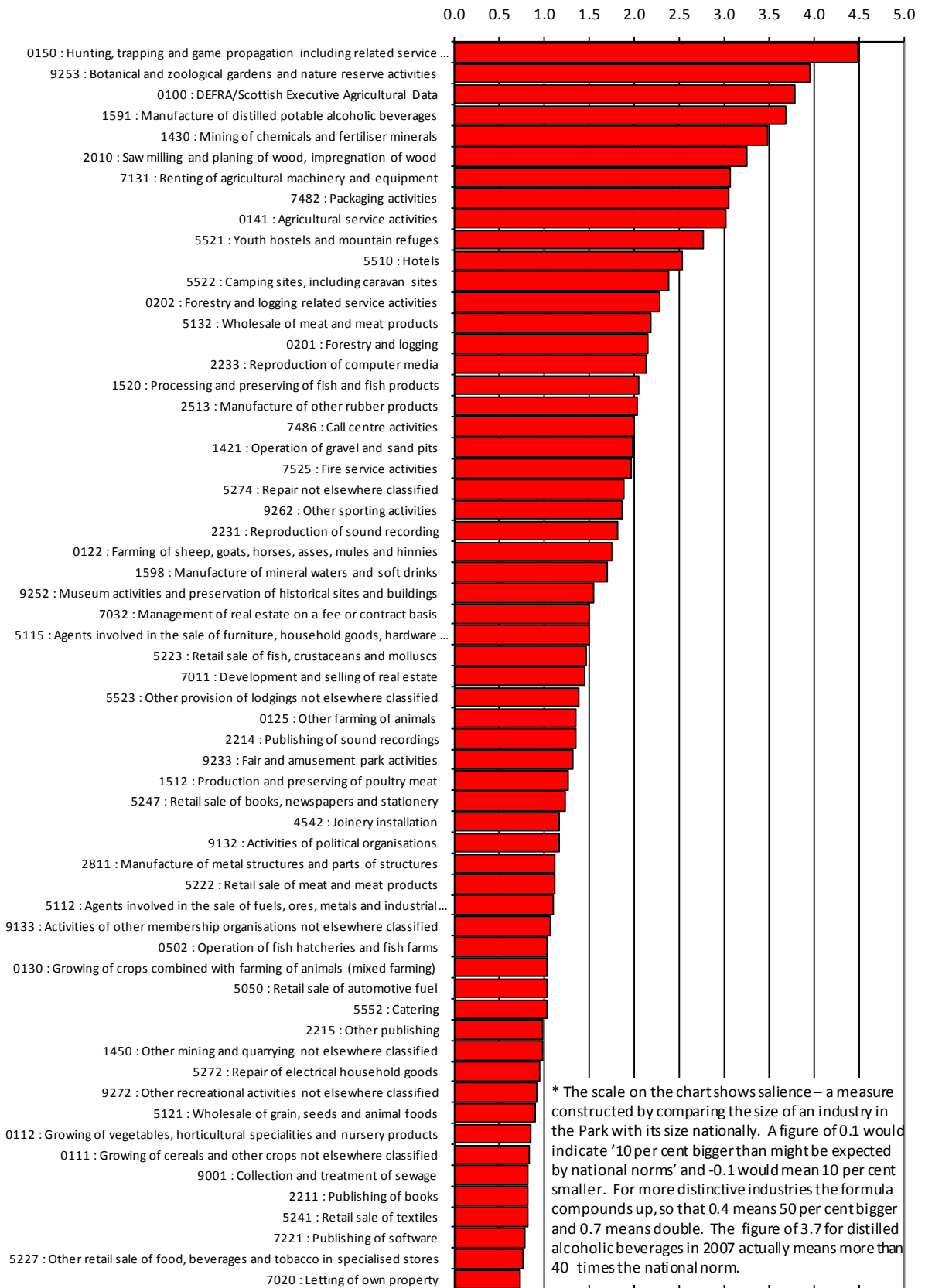
⁶ Four digits of the Standard Industrial Classification (2007 edition). Many of the actual employment figures at this level cannot be published, to preserve the confidentiality of the employer, but the overall structural conclusions can be presented.

Figure 40

Distinctive industries by employment

Employment salience in the Park

Employment salience* relative to Great Britain

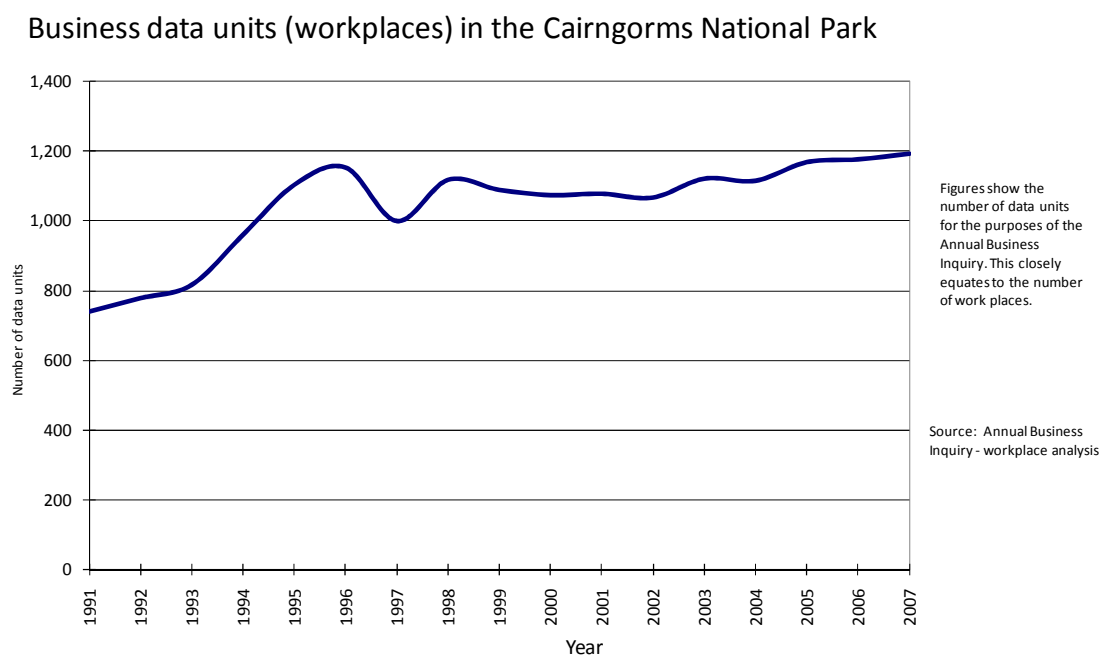


7.2 The company base

The number of businesses operating within the Park has been on a modest upward trend in recent years (see Figure 41). Strictly speaking the numbers quoted in the chart are not individual business, but are data units for the purposes of the Annual Business Inquiry. These closely equate to places of work, so for example, a supermarket with a chain in both Aviemore and Ballater would be treated as two data units, rather than one.

Since the Park's inception there has been steady year on year growth in the number of workplaces. In 2003 there were 1,066 data units. Net additions up to 2007 amounted to 125 – a rise of more than 11 per cent, or almost 3 per cent per annum.

Figure 41 A slow upward trend in the number of businesses

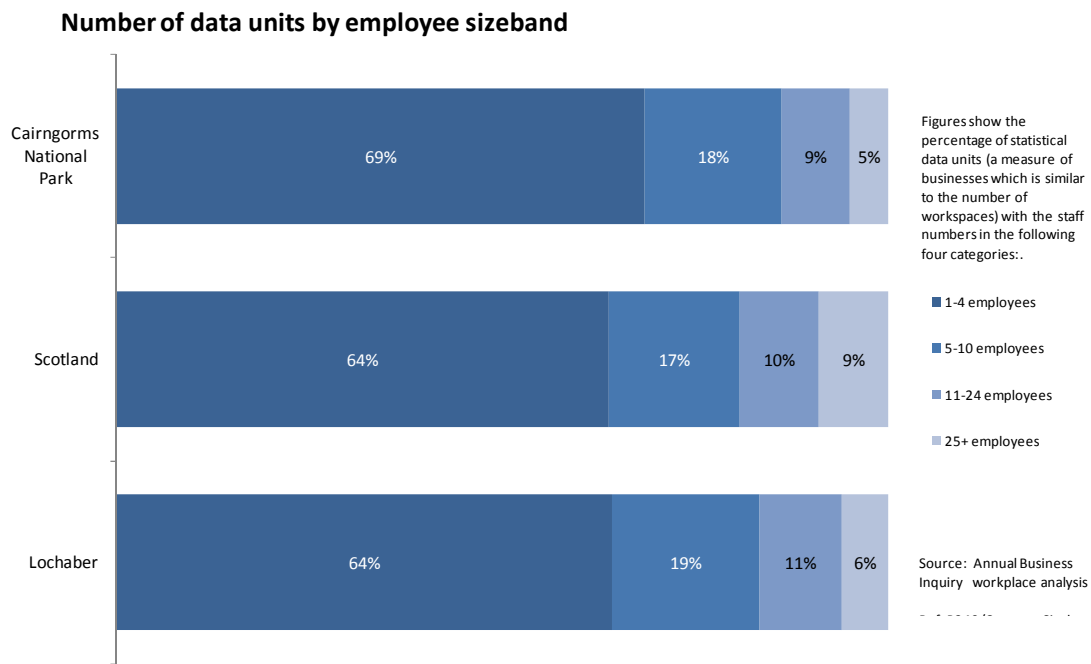


As in all parts of the country, most businesses which operate within the Park are small – employing fewer than five staff. More than two thirds (69 per cent) of all data units in the Park have fewer than five staff (see Figure 42). In fact this number is an under estimate since the Annual Business Inquiry figures exclude farms, practically all of which will have no more than four employees.

Compared to Scotland as a whole, the work places within the Park tend to be smaller. Only 14 per cent of the Park's data units (about one in seven) have more than ten employees. The equivalent figure for Scotland is 19 per cent, or almost one in five. Even the distribution in Lochaber, an area similar to the Cairngorms, has more than one in six of its workplaces with at least ten members of staff.

Amongst the larger workplaces, with at least 25 members of staff, the Cairngorms is particularly under-represented. One in ten of Scotland's workplaces have more than 25 staff, a figure which is almost double the rate in the Cairngorms.

Figure 42 **Size distribution of workplaces**



8 Clusters of related industrial and economic activities

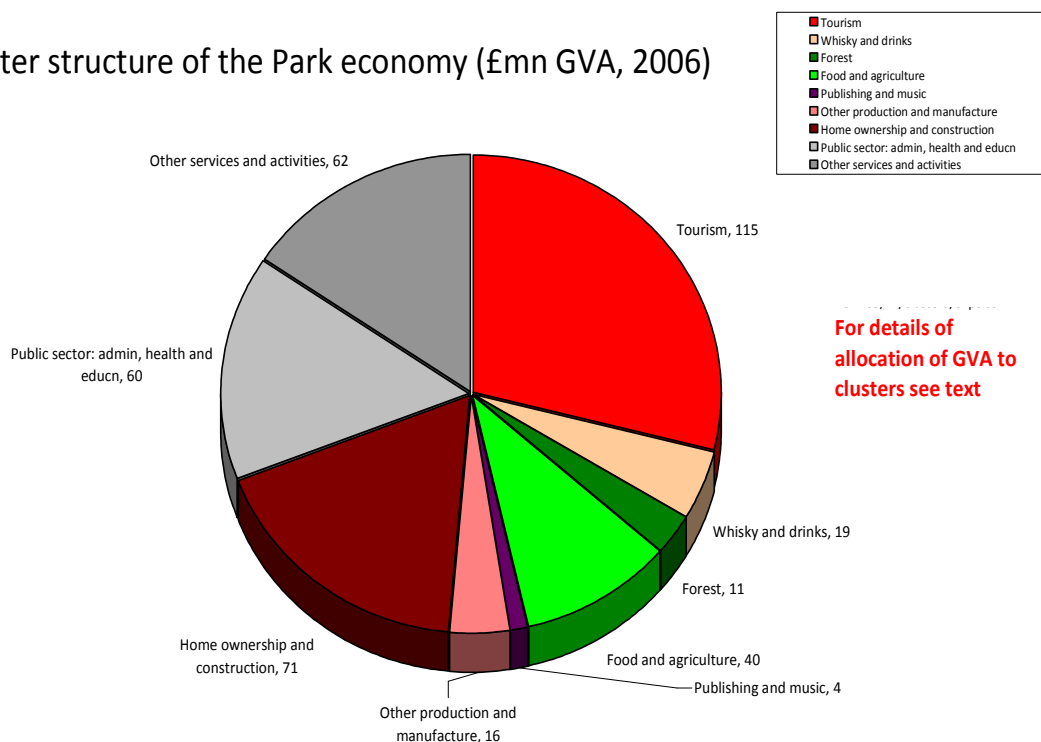
A cluster is not just a statistical idea but an economic concept - a group of activities, industries and organisations whose linkages and interrelationships enhance performance and competitive advantage. It is often helpful to use the more economic and socially-oriented idea of a cluster of related activities than the statistically-oriented one of industrial sectors.

The clustered structure of the Park economy is one of its main features. About half of the value added is created in five clusters, all of which earn substantial revenues from non-residents. The other half of the economy mainly serves Park inhabitants, although it also includes some 'exporting' industries which appear to be relatively self-standing. They have strong linkages in a *regional* and *national* context, for example to North Sea oil, but are not obviously parts of *local* clusters.

Clusters overlap – for example forest tourism activities are part of both the forest cluster and the tourism cluster, and distilleries with visitor centres likewise belong to the two clusters of drinks and tourism. To avoid double counting, for Figure 43 covering the entire park economy, all 'overlapping' value added has been divided up between its two or three clusters, so that the total GVA adds up to the Park GVA. This means that the figures shown against each cluster should be considered a 'minimum' figure for the GVA created in that cluster.

Figure 43 Allocation of Park GVA to clusters⁷

Cluster structure of the Park economy (£mn GVA, 2006)



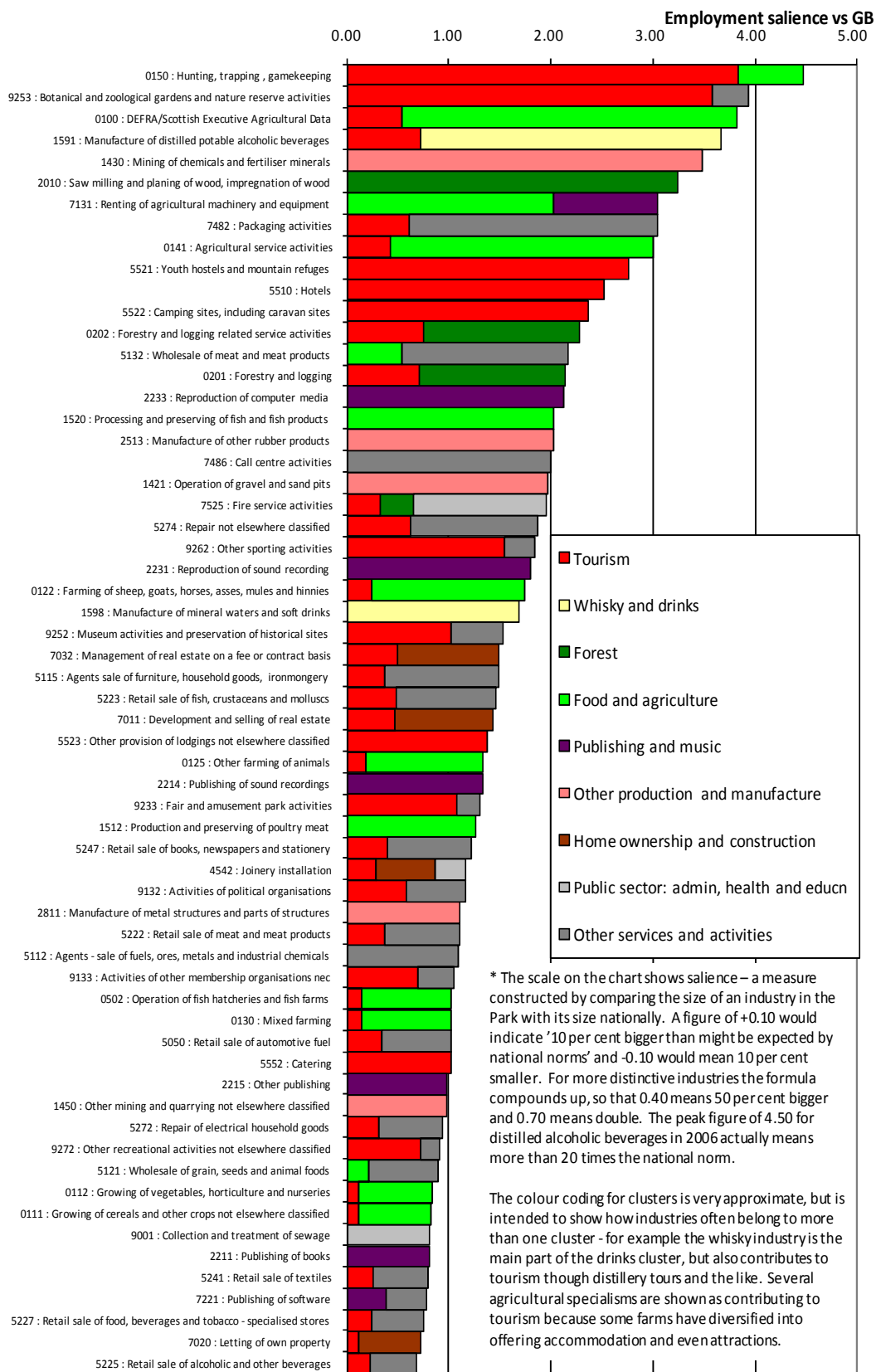
It is useful to look at it in these nine sections:

- The tourism cluster
- The whisky and drinks cluster
- The forest cluster
- The cluster of other food and agriculture
- Information and creative industries, especially publishing and music
- Other production and manufacturing industries
- Home ownership and construction
- The public sector: administration, health and education
- Other industries and activities

In Figure 44 we present industry salience in a way designed to bring out the cluster structure. The length of an industry bar indicates how distinctive an industry is (in exactly the same way as in Figure 40 for employment), but we have shaded the bars according to cluster membership. The chart shows clearly how important tourism and agriculture are in making the Park a 'special place' in economic terms. Thus the predominance of red shows how 'special' a place the Park is from the viewpoint of tourism employment, and the dark and light green show the role of wood products and food/farming in making it special.

The overlapping nature of the Park's clusters would be considered very positive by cluster practitioners: it is frequently asserted that growth and creativity occur as the result of cluster synergy.

Figure 44 Cluster membership of most salient industries



Source: ONS and Cogentsi calculations

8.1 The tourism cluster

Tourism in the National Park earns more than £100m in Gross Value Added and employs about 3,600 people. It thus represents approaching a third of the Park economy. Indeed, our analysis indicates that Badenoch and Strathspey is the most tourism-intensive area in Scotland, and that in proportion to its population it has the strongest 'tourism

balance of payments' of any district in the United Kingdom – including archetypal resorts such as Blackpool and Brighton.

The bulk of the jobs, and the value added, are in providing accommodation and serving food and drink. Hotels are by far the largest employer, but on the accommodation side hostels, camping and bed and breakfast establishments are also much larger than the national norm. Restaurants and bars are significant employers. Leisure and recreation is the second largest statistical category, and the one where most visitor attractions appear.

General retailing is fully up-to-size within the Park, but several categories of shop are exceptionally well-represented: hardware (which includes many fancy goods, souvenirs, and gifts) and clothing. Broadly we have included the excess GVA and employment from these retailers, over and above the norms appropriate to a population of the Park's size and income level, as part of the tourism cluster.

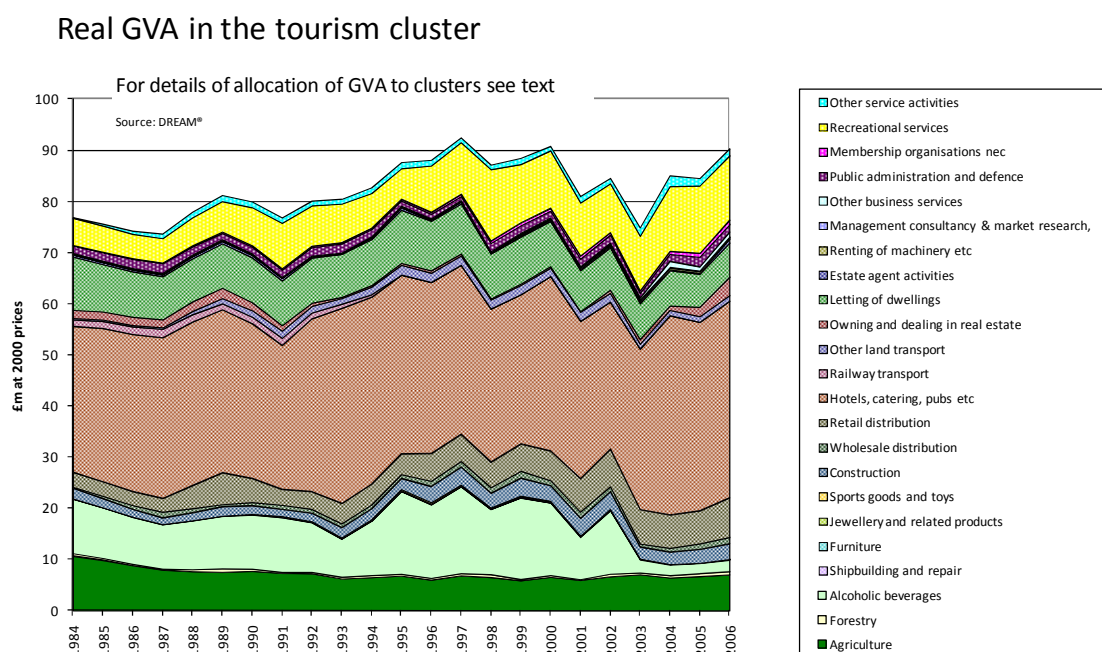
A first assessment indicates that of the 197 industries which exist in the Park⁸, 74 have some relationship to tourism.

This includes not only those sectors which are predominantly tourism related, such as accommodation or visitor attractions, but also others for whom tourists and the tourism industry is an important generator of employment and wealth. An example would be various building trades, where a proportion of construction and building maintenance is linked to tourism development, including visitor attractions, accommodation and the public realm.

Figure 45 shows the growth of real GVA in the tourism cluster, from a 1990s plateau at about £60m, there was a significant step up around the time of designation, to about £90m per annum. It is worth noting that 'Real' GVA here means GVA measured at prices ruling in the year 2000. Prices in 2009 are about 27 per cent higher than that, so 2006 GVA in today's money is about £115m.

The upward step arose mainly from an increase in hotel and catering employment, partly associated with the last major redevelopment at the Aviemore Highland Resort

Figure 45 Tourism cluster gross value added



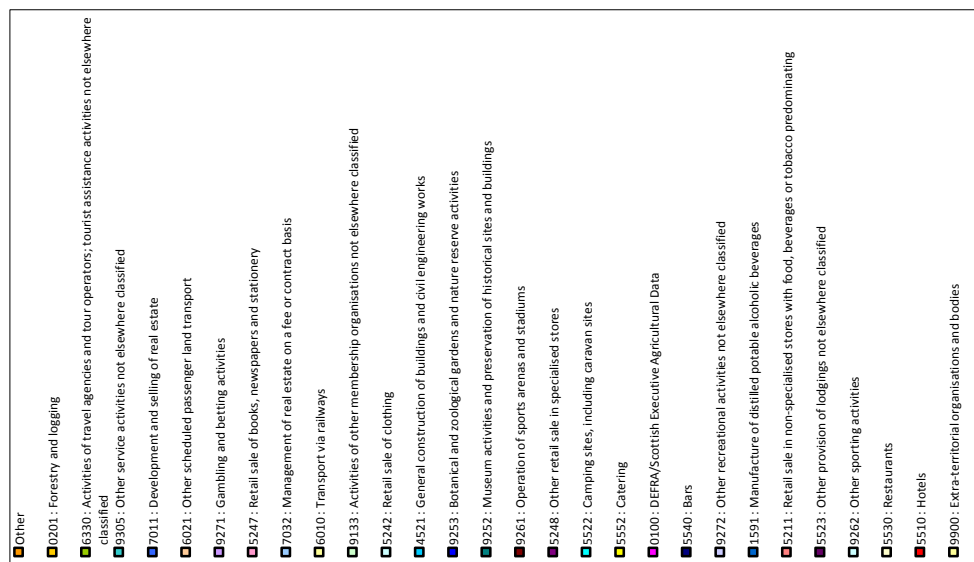
Employment in the tourism cluster is estimated to have peaked at more than 3,500 in 2004. It has contracted slightly in recent years and is currently around 3,000 (see Figure 46). However, this is still significantly more than the 2,500 or so who were employed in the cluster between the mid 1980s and mid 1990s i.e. well before Park designation.

⁸ Using the SIC classification of all 515 industries

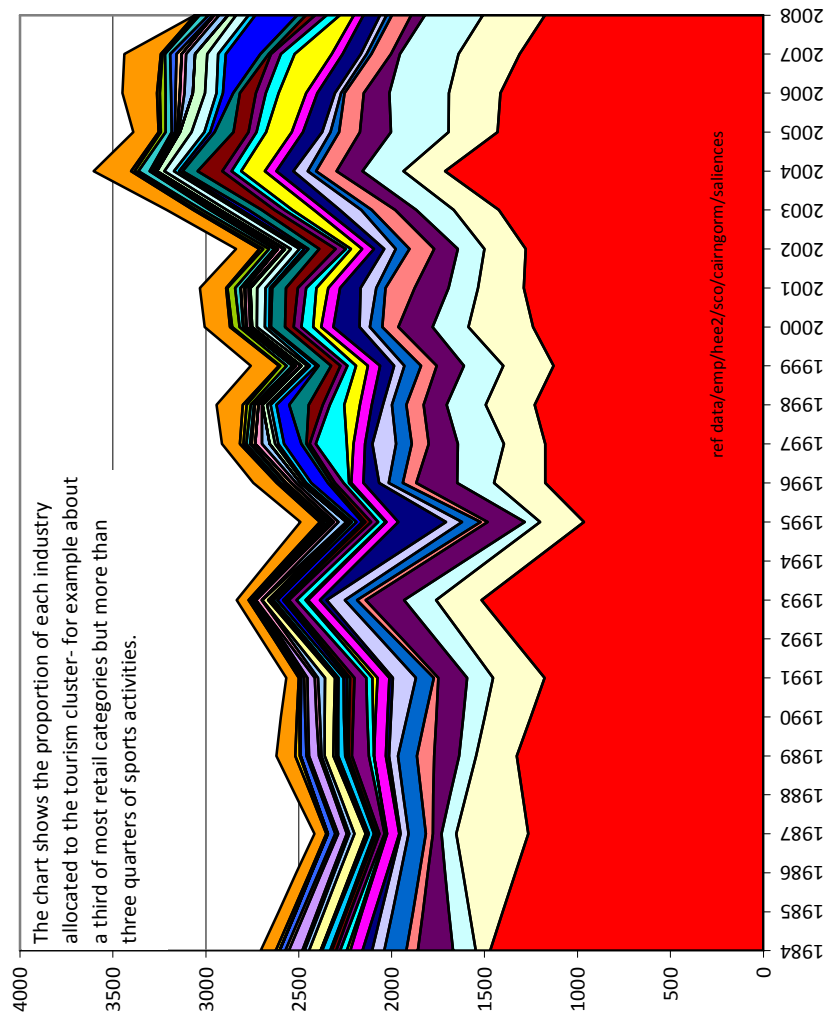
Hotels and restaurants make up about half of the employment in the tourism cluster. It is quite clear that the other industries that contribute to the tourist experience are truly a cluster of disparate activities including visitor attractions, outdoor activities, retailing and transport.

The destination management organisations that have been established to develop the cluster have both determined to be 'inclusive' of a range of operations, and this is plainly in the interests of the Park economy.

Figure 46 Tourism cluster employment



Tourism cluster employment in the Park



Visitor attractions



Highland Folk Museum and Landmark Forest Adventure Park

Since the inauguration of the Park, some 29 visitor attractions have been covered in VisitScotland's Visitor Attraction Monitor, compiled by the Moffat Centre for Tourism Research. A further 13 attractions are in the 'Halo' area surrounding the Park. The Monitor in principle is confined to 'tourism attractions', defined by VisitScotland to exclude sporting and cultural attractions, so that skiers, snowboarders, mountain bikers and those attending the theatre or events such as music festivals are not counted in the Monitor.

Not every attraction's figures are published every year, and the Monitor respects any requests for confidentiality that the attractions may make. Despite these caveats, it can be estimated that approximately 1.2 million visits are made to attractions within the current Park boundary each year, and a further 0.4 million to those in the 'halo' area (in which the Perthshire attractions near the A9 feature strongly). As Table 7 shows, the most visited attractions are the Landmark Forest Adventure Park at Carrbridge, Blair Castle near Blair Atholl and three attractions near Aviemore: CairnGorm Mountain Railway; the Rothiemurchus Estate; and Glenmore Forest Park Visitor Centre. Each of these has exceeded 100,000 visitors in recent years. Many of the Park's attractions focus either on the history, the landscape or the culture of the region. Approximately 15 per cent of visits are to distilleries, including three in the Park, one on the boundary, and three in the halo area.

Table 7 Visits to attractions in and around the Cairngorms National Park

Visitor attraction	Local Authority	Park / Halo	2002	2003	2004	2005	2006	2007	2008
Landmark Forest Adventure Park, Carrbridge	Highland	Park					134,000	140,600	
CairnGorm Mountain Railway (excluding skiers)	Highland	Park	168,777	187,015	161,360	162,702	156,354	149,699	145,154
Blair Castle	Perthshire	Park	131,941	131,609	140,688	135,330	147,660		
Rothiemurchus Estate	Highland	Park		34,000	54,490			110,834	106,561
Glenmore Forest Park Visitor Centre	Highland	Park	89,517	90,014	92,000	96,658	102,233	105,143	68,752
Speyside Heather Centre, Dulnain Bridge	Highland	Park		62,550	64,379	72,980	70,702	75,559	
Balmoral Estates	Aberdeenshire	Park	77,012	69,500	65,000	65,000	64,000	60,000	
Highland Wildlife Park, Kingussie	Highland	Park	62,933	64,627	63,511	65,874	67,000	62,676	78,683
Strathspey Steam Railway	Highland	Park		52,263	56,287		49,145	61,586	
Loch Muick & Lochnagar Wildlife Reserve	Aberdeenshire	Park					48,494	48,441	48,654
Reveck Estate, Grantown	Highland	Park	36,000	36,500	35,000	35,000	40,000	30,000	30,000
Loch Garten Osprey Centre	Highland	Park				33,048	35,604	31,259	
Glenshee Ski Centre	Angus / Aberdeenshire	Park				36,300	42,000	9,463	
Blair Athol Distillery, Pitlochry	Perthshire	Park	33,000			32,000	33,000	37,491	
Dalwhinnie Distillery	Highland	Park	24,805	25,485	24,576		18,993	19,942	
Highland Folk Museum, Newtonmore	Highland	Park		19,273	17,873	17,494	16,780	36,904	32,322
Highland Folk Museum, Kingussie	Highland	Park	35,871	15,563	14,257	6,628	7,401	13,878	
Watermill & Tearoom, Blair Athol	Perthshire	Park		10,000	22,660	31,333	27,874	30,537	35,000
Cairngorm Reindeer Centre	Highland	Park	18,414	17,480	18,455	18,484	17,918	19,357	21,361
Royal Lochnagar Distillery Visitor centre	Aberdeenshire	Park	11,300	11,027	11,244	11,561	8,547	9,864	8,079
Braemar Castle	Aberdeenshire	Park	13,461	14,227	12,402				
Tomintoul Museum and Visitor Centre	Aberdeenshire	Park	12,718	14,488	11,122	12,999	12,887	13,228	10,214
RSPB Insh Marshes	Highland	Park	12,000	12,000	12,000	12,000	11,400	10,000	12,422
Inshriach Nursery	Highland	Park				18,000	20,000	23,500	22,850
Working Sheepdogs, Kingussie	Highland	Park	6,380						
Corgarriff Castle, Strathdon	Aberdeenshire	Park	4,874	4,885	5,055	3,241	4,121	5,705	4,304
Auchgourish Gardens, Boat of Garten	Highland	Park	4,850	3,930	4,220	5,670	5,027	2,300	2,200
Clan Macpherson Museum, Newtonmore	Highland	Park		3,740	4,172	4,061	3,455	4,164	4,188
Atholl Country Life Museum, Blair Atholl	Perthshire	Park	1,080	1,734	1,663	1,703	1,682	2,126	2,353
Glenlivet Distillery	Moray	Halo		39,949	45,191	45,730	44,241	47,867	44,500
Edradour Distillery, Pitlochry	Perthshire	Halo	88,699	94,716	100,826	97,082	88,885	95,291	87,910
Scottish & Southern Visitor Centre	Perthshire	Halo		61,975	56,300	56,921	49,302	46,023	47,334
Crathes Castle	Aberdeenshire	Halo	89,138	91,701	84,491	76,802	64,108	61,422	52,240
Tomatin Distillery	Highland	Halo	33,698	30,729	28,749	30,613	28,866	21,772	21,146
Drum Castle, Banchory	Aberdeenshire	Halo	37,000	27,640	25,371	25,896	18,663	22,946	18,170
Glenfarclas Distillery	Aberdeenshire	Halo	13,400	10,516	10,668	10,274	10,933	9,345	9,314
Kirriemuir Gateway to the Glens Museum	Angus	Halo					9,553	9,820	9,952
Edzell Castle, Brechin	Angus	Halo	6,857	7,119	8,362			7,816	7,109
Barrie's Birthplace	Angus	Halo	4,604	4,541	5,116	6,247	5,167	6,202	5,381
World Horse Welfare	Aberdeenshire	Halo		4,500	4,500	5,000	5,500	7,000	7,000
Banchory Museum	Aberdeenshire	Halo	4,757	5,108	4,648	4,538	2,931	3,731	3,598
Kirriemuir Camera Obscura	Angus	Halo	4,627			4,713	4,263	4,255	4,207
Estimated total visitations			1,720,000	1,626,000	1,638,000	1,668,000	1,654,000	1,685,000	1,590,000
Percentage change			9.0%	-5.6%	0.7%	1.8%	-0.8%	1.9%	-5.8%

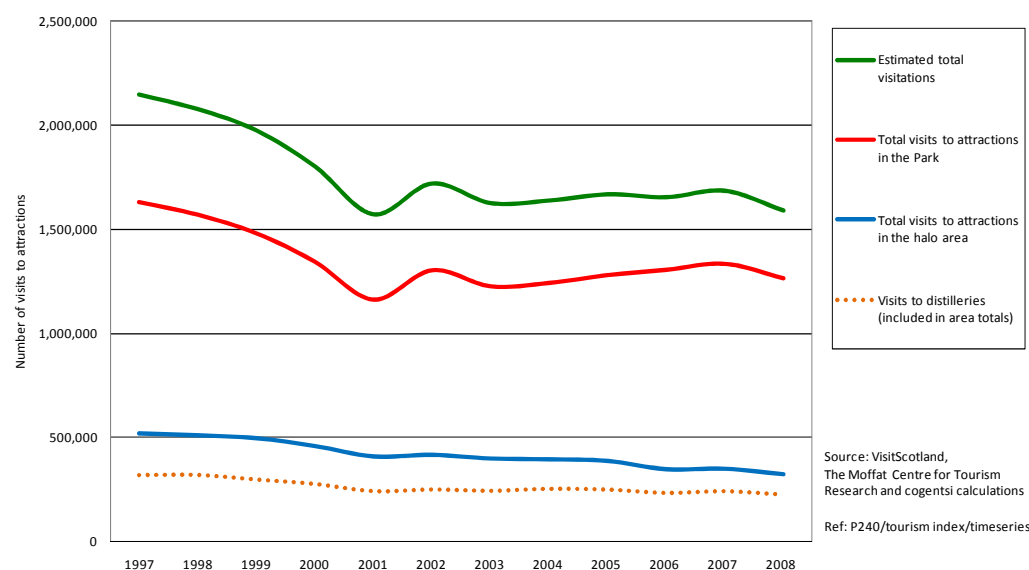
Source: VisitScotland / Moffat Centre Visitor Attraction Monitor

Ref: P240/tourism index/table

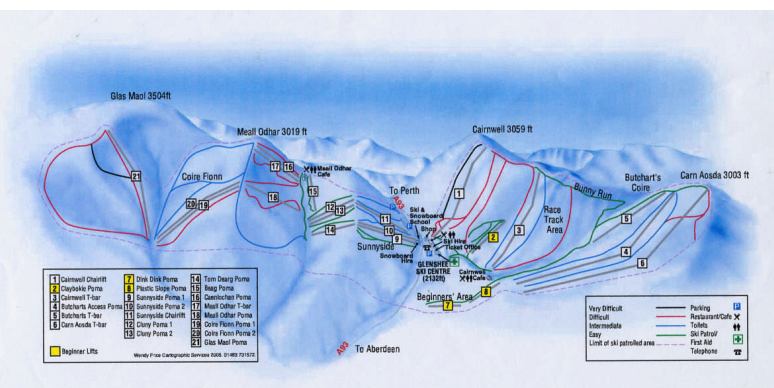
Since the Park's inception the number of visits has been relatively flat, as the last line of Table 7 shows. The apparent decline in the late nineties, shown in Figure 47, may be a result of changes in the method by which visitors are recorded at one of the major attractions.

Figure 47 Visitor attraction trends

Trend in visits to attractions in and around the Cairngorms



Winter sports



CairnGorm Mountain Railway and the piste map of Glenshee

The Park contains three of the five Scottish downhill ski centres (CairnGorm, the Lecht and Glenshee). Between them they attract about four out of every five people who go skiing (or snowboarding, etc) in Scotland (see Table 8).

Aviemore (CairnGorm) opened its first chairlift in 1961 and now has the 2 kilometre long funicular railway and 13 other lifts. It is the largest of all the Scottish downhill resorts, accounting for half of all skiers to the Park. Over the year the funicular carries more non-skiers than skiers and snowboarders, and vies with the Landmark Adventure Park as the most popular single visitor attraction in the Park for non-skiers. The Lecht and Glenshee are more compact but have 15 and 23 lifts respectively.

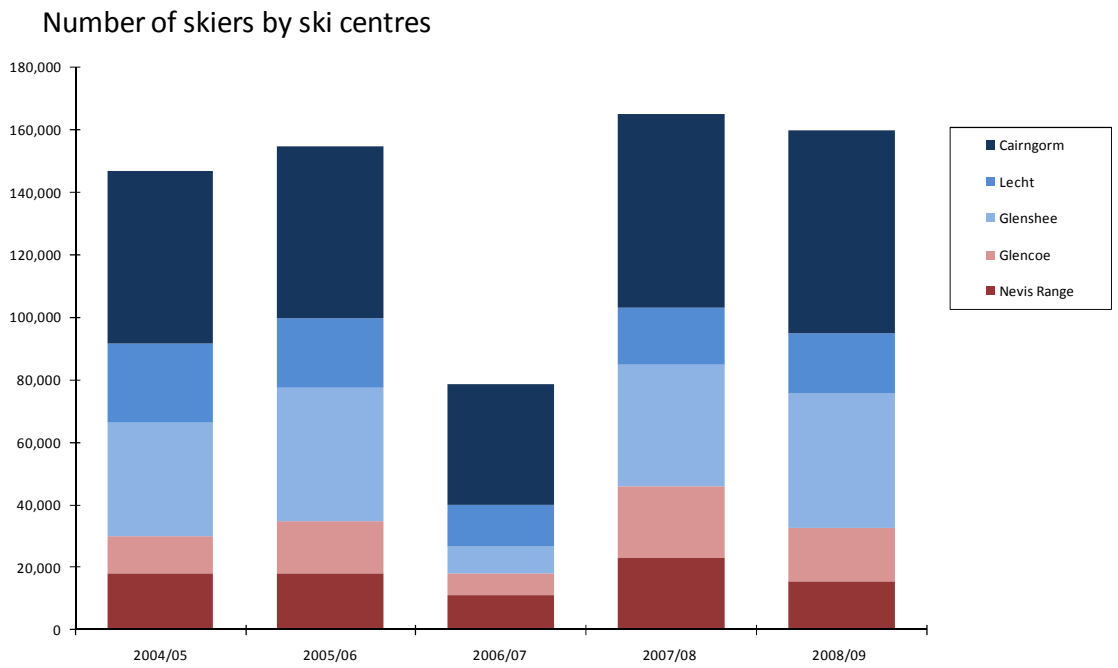
Table 8 Skier days at Scotland's five ski resorts

Season	Cairngorm	Glenshee	Lecht	Nevis Range	Glencoe	All Cairngorms centres	All Scottish centres	Cairngorms share of Scottish total
2004/05	55,586	36,000	25,252	18,338	12,000	116,838	147,176	79%
2005/06	55,000	42,460	22,303	18,430	16,623	119,763	154,816	77%
2006/07	38,553	8,521	13,200	11,149	7,300	60,274	78,723	77%
2007/08	62,000	39,007	18,061	23,021	23,000	119,068	165,089	72%
2008/09	65,000	43,000	19,110	15,876	16,899	127,110	159,885	80%
Average	55,200	33,800	19,600	17,400	15,200	108,600	141,100	77%
Share of Scottish skiers	39%	24%	14%	12%	11%	77%	100%	
Standard deviation	10,242	14,410	4,550	4,328	5,882		35,512	
Coefficient variation	19%	43%	23%	25%	39%		25%	

Ref: P240/skier numbers all areas 0509/table

In an average winter the three Cairngorms resorts attract a total of 120,000 skiers. Winter sports thus make up about one tenth of the tourism visitors to the Park. However, the experience of the winter of 2007 shows how vulnerable Scottish resorts are to mild weather, particularly the lower centres (see Figure 48). During that season, when the Braemar weather centre (located at a height of 327 metres) recorded no temperatures below freezing, the number of skier days in the Park fell to about half of recent levels. Glenshee suffered an 80 per cent fall on the previous year with numbers to the Lecht contracting by 40 per cent and a fall of 30 per cent at CairnGorm.

Figure 48 Trends in Scottish skier days



Tourism in a Scottish perspective

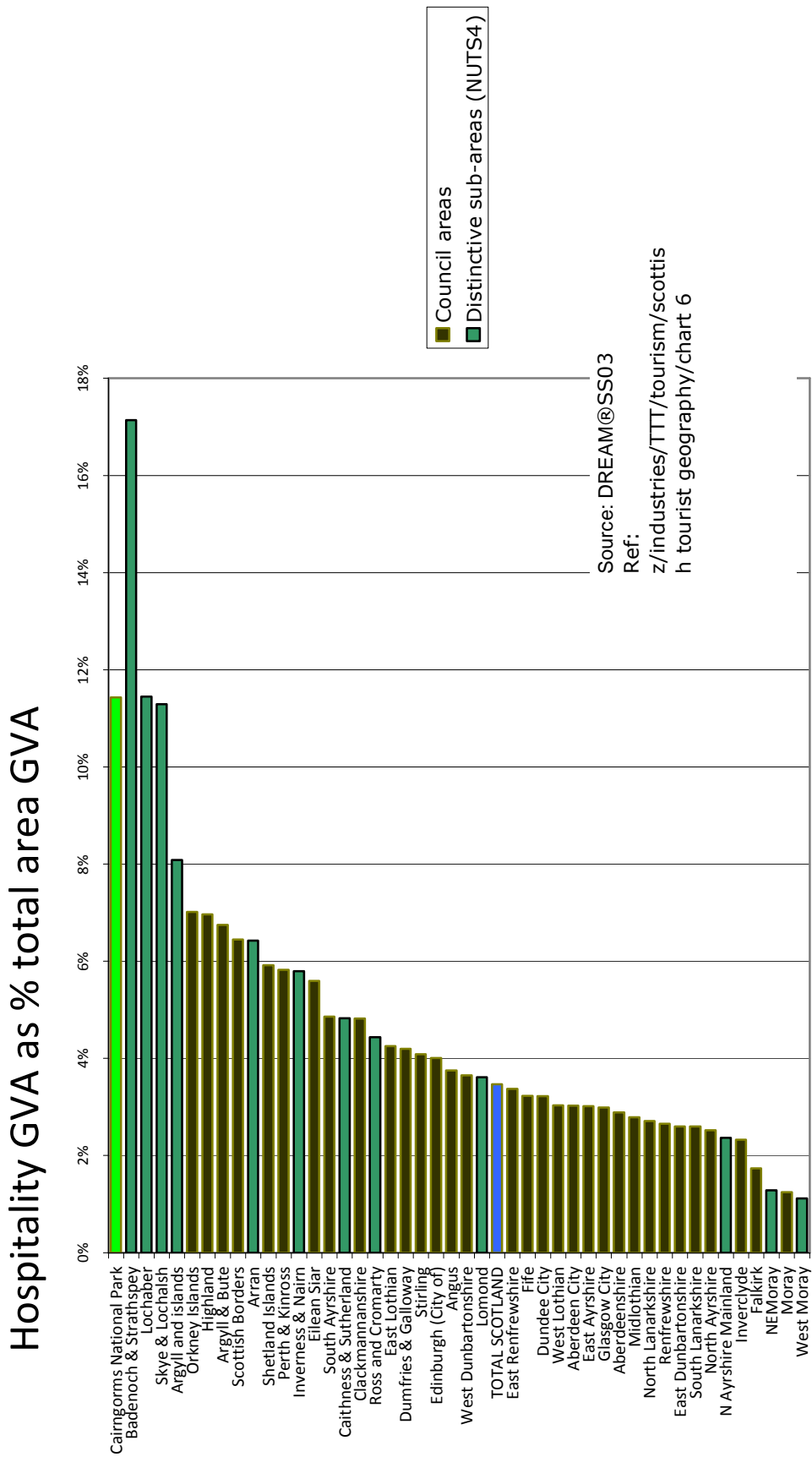


Loch Garten

In Badenoch and Strathspey the National Park contains the most tourist-intensive parts of the Scottish economy, but Moray as a council area is somewhere that is statistically less tourist-intensive, at least when measured in terms of hotels and restaurants. Aviemore dominates the picture, and as a result the Park as an entity has a much higher tourism intensity than any Council area in Scotland.

Figure 49

Hospitality intensity of Scottish areas



The tourism business

Producing a full estimate of visitor numbers, overnight stays and expenditure is beyond the scope of the present study. However a detailed estimate was made for 2005 spending in individual Council areas across Scotland, and this showed the unusually high importance of tourism in areas in and around the Park.

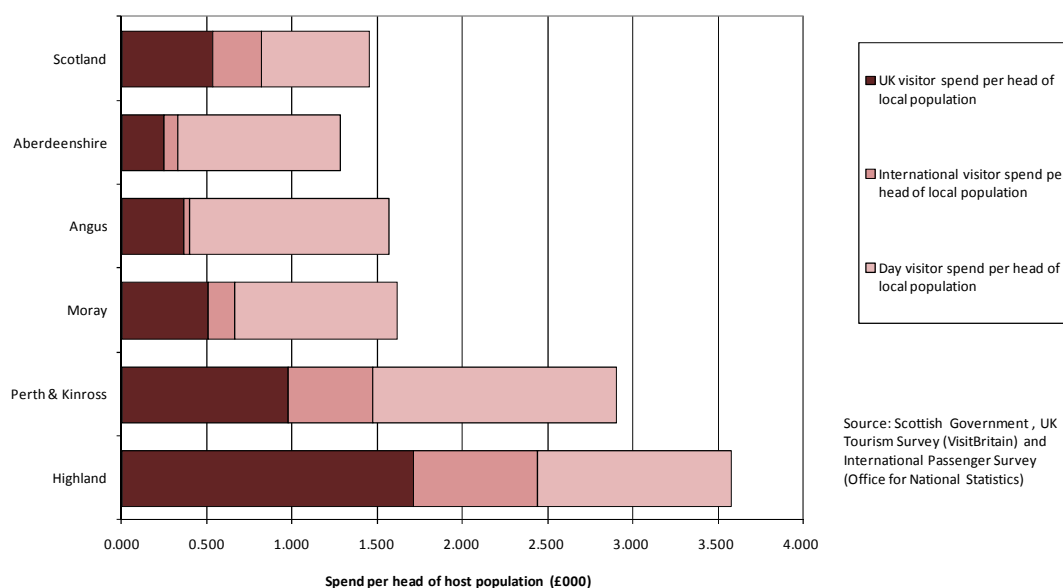
Across Scotland, tourism expenditure is almost £1,500 per resident. However, as Figure 50 shows, tourism expenditure in Perth and Kinross is twice the national figure, at almost £3,000 per local resident whilst the figure for Highland is even higher at over £3,500.

Elsewhere, both Angus and Moray have tourism revenue which is marginally higher than the national average, while the figure in Aberdeenshire is marginally lower.

However, these figures are likely to understate the spend intensity within the Park boundaries. In all probability the figure for the Park as a single unit would be well above the £3,500 rate for Highland, possibly around £5000 based on the size of the hospitality sector, but further research and modelling would be necessary to ascertain this.

Figure 50 Visitor spend intensity by Council areas around the Park

Visitor spend intensity



STEAM data

Global Tourism Solutions (UK) Ltd makes a regular estimate of Park tourism business using their STEAM model. This uses accommodation counts and structural details of the local tourism economy, coupled with occupancy surveys, to generate estimates of tourism revenue and employment. A summary of recent output from STEAM is shown in Table 9.

Table 9 Chained STEAM estimates

Revenue by Category of Visitor (£'s millions at 2008 prices)	2002	2003	2004	2005	2006	2007	2008	6-year change
Serviced Accommodation	129	135	124	116	106	118	113	-12%
Non-Serviced Accommodation	55	53	43	44	41	41	40	-28%
Visiting Friends & Relatives	2	2	2	2	2	2	2	-15%
Day Visitors	34	34	34	32	32	32	31	-9%
TOTAL	220	225	203	195	181	193	186	-16%
Tourist Days								
(Thousands)								
Serviced Accommodation	1159	1172	1109	1086	1017	1100	1060	-9%
Non-Serviced Accommodation	1367	1271	1064	1098	1057	1121	1068	-22%
Visiting Friends & Relatives	88	88	82	82	85	87	86	-3%
Day Visitors	776	780	819	804	839	835	797	3%
TOTAL	3390	3311	3075	3070	2998	3143	3011	-11%
Tourist Numbers								
(Thousands)								
Serviced Accommodation	666	590	562	562	487	477	495	-26%
Non-Serviced Accommodation	211	195	180	185	167	171	170	-19%
Visiting Friends & Relatives	19	19	18	18	19	19	19	-2%
Day Visitors	776	780	819	804	839	835	797	3%
TOTAL	1672	1584	1579	1569	1512	1503	1481	-11%

Source: STEAM, Global Tourism Solutions

Ref: P240/steam/cnp whole park indices 20091123/sheet 1

Detailed measurement of the rest of the economy carried out for this study clearly shows that the employment figures that have been reported in STEAM are much higher than they should be, probably more than double the correct number. Some of the expenditure figures reported in STEAM, on the other hand, seem low. These issues are discussed at length in Appendix 3: 'STEAM' tourism data.

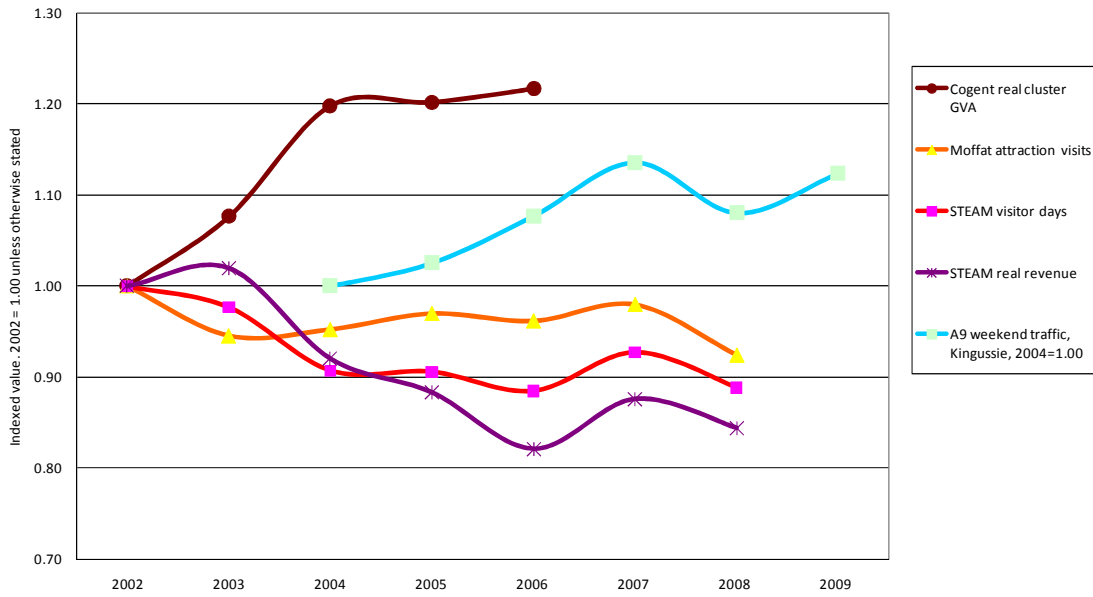
Although it would be prudent to dismiss the level of tourism employment suggested for the Park by STEAM, the model's methodology is consistent from year to year, and therefore the trends shown in the model's output may be a guide to developments in the tourism industries, when taken alongside other figures such as the employment and GVA estimates here, and the data on attractions from the VisitScotland / Moffat Centre Attraction Monitor.

STEAM suggests that the number of visitors has been falling at a rate of two per cent per year since 2002, and the amount each spends (in real terms) by about one per cent per year. The mix has also changed, with self catering falling much faster than serviced accommodation. Stay length in serviced accommodation has risen from 1.7 to 2.1 days.

These figures tell a rather different story from the Attraction Monitor, the real GVA estimates based on Office for National Statistics data, and the road traffic at Kingussie. As Figure 51 shows, the Attraction Monitor suggests a broadly constant level of visits to established attractions, while the rise in real GVA indicated by DREAM and the road traffic indicators would suggest that spending is increasing.

Figure 51 Trends in tourism - STEAM vs other indicators

Indices of real activity in Cairngorms tourism



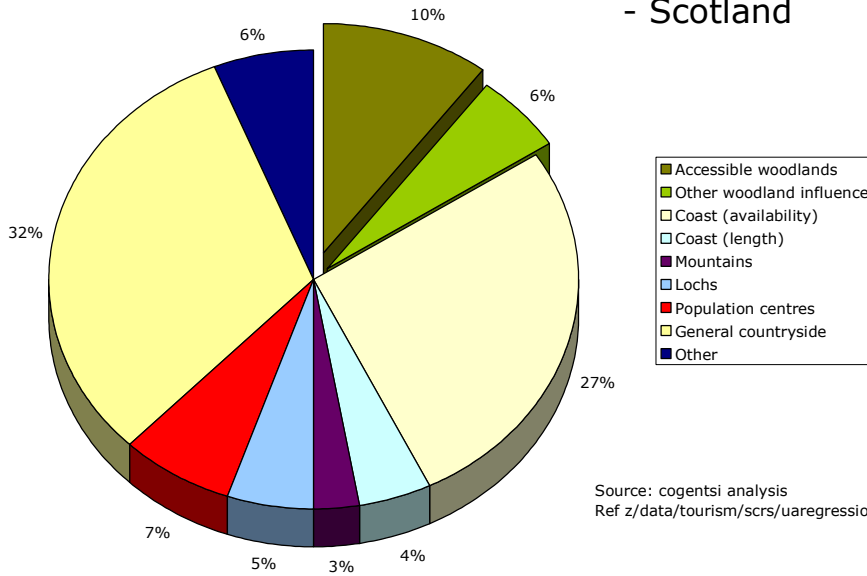
If visitor numbers have really been falling as STEAM suggests, while employment and other costs have been going up, we would expect considerably worse financial conditions than have actually been the case. It would appear that the trend suggested by STEAM, as well as the level, should be treated with caution.

Recreation trips

On what basis do people choose the destination for their leisure trips? What features do they seek out? Using the Scottish Recreational Survey (ScRS) conducted for Scottish Natural Heritage and the Forestry Commission, Cogentsi has modelled how different physical features play a role in attracting Scottish recreational visits to each Council area. For the five council areas contributing to the Park boundaries (Highland, Angus, Aberdeenshire, Moray and Perth and Kinross), the role of mountains is very clearly much greater even than it is for Scotland as a whole (see Figure 52).

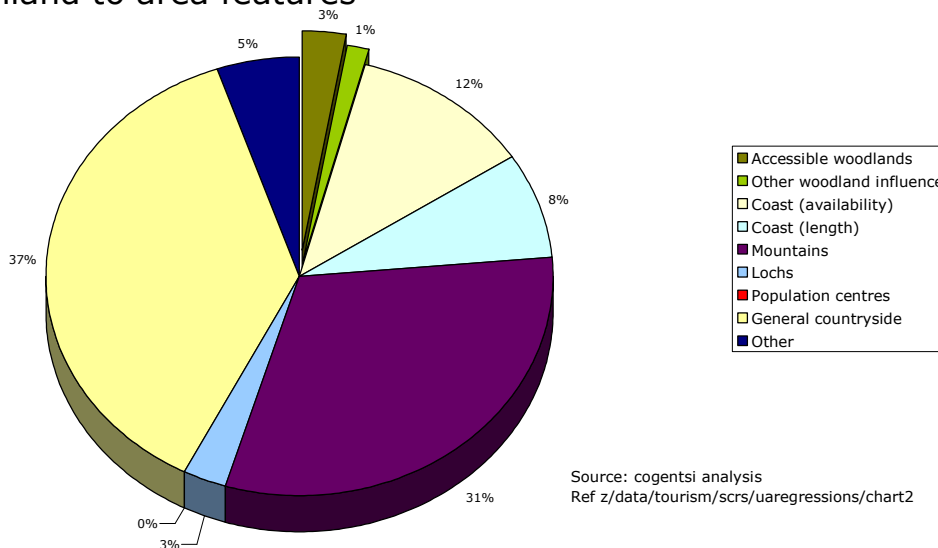
Figure 52 Role of area features in attracting visitors

Attribution of ScRS recreation trips to area features - Scotland



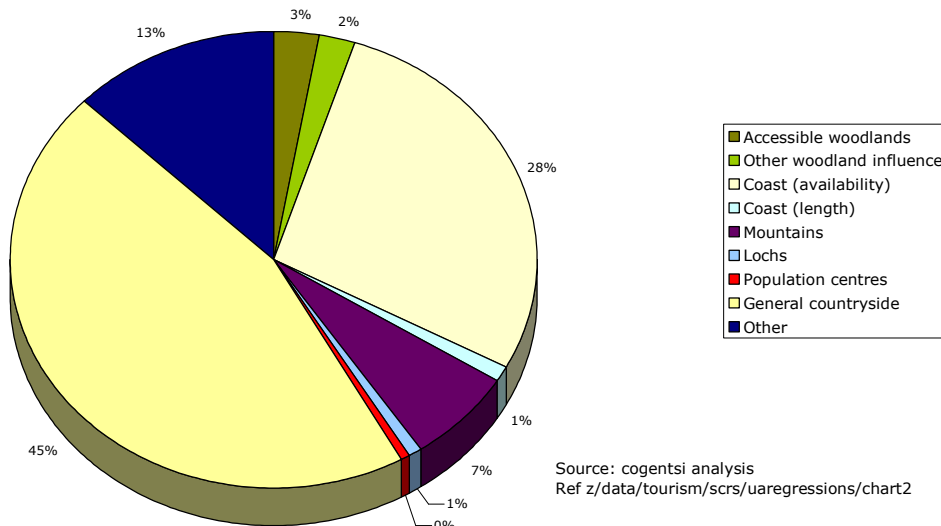
Source: cogentsi analysis
Ref z/data/tourism/scrs/uaregressions/chart2

Attribution of ScRS recreation trips to Highland to area features

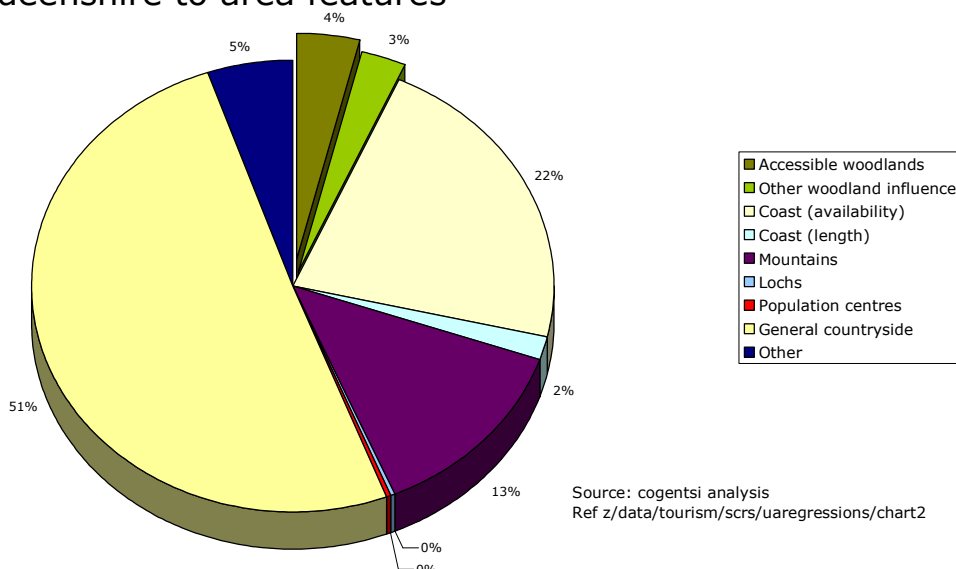


Source: cogentsi analysis
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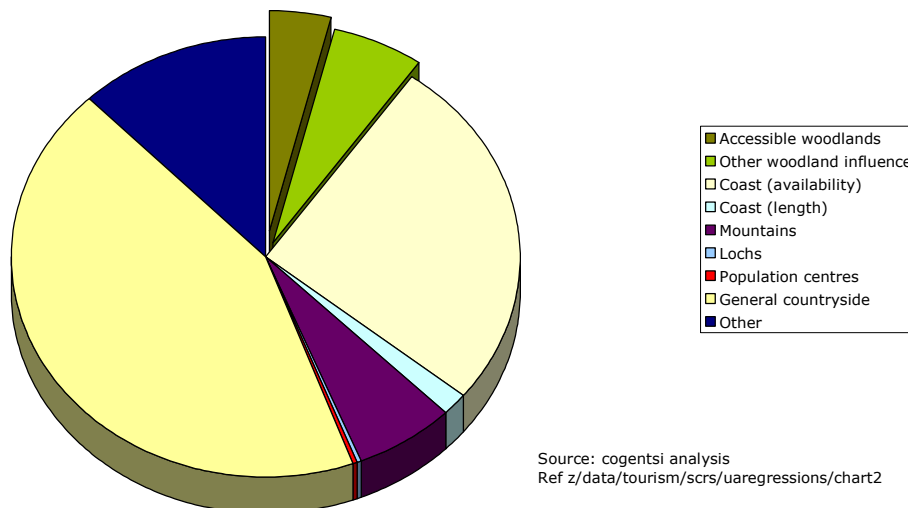
Attribution of ScRS recreation trips to Angus to area features



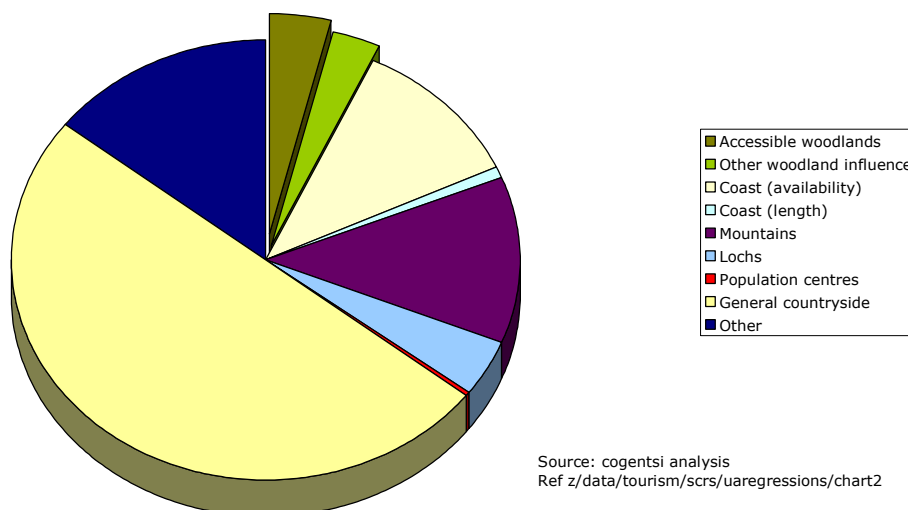
Attribution of ScRS recreation trips to Aberdeenshire to area features



Attribution of ScRS recreation trips to Moray to area features



Attribution of ScRS recreation trips to Perth & Kinross to area features



The countryside in its widest sense is a crucial attractor of visitors. It is what the visitor might term the pull of the 'great outdoors'. However, the role of the Park's mountains is clearly the most distinctive feature of its tourism offering – hardly a surprise, but a useful quantification of why people come. Forests play a very significant role in the Park, but not as great in relative terms as in other less mountainous areas such as Argyll and Galloway. Coastlines and the 'buzz' of major population centres of course play no role at all in the Cairngorm's attractiveness to visitors. Since the coasts and the cities draw 38 per cent of Scotland's visitors, this makes it all the more remarkable that the Park houses Scotland's most popular destination.

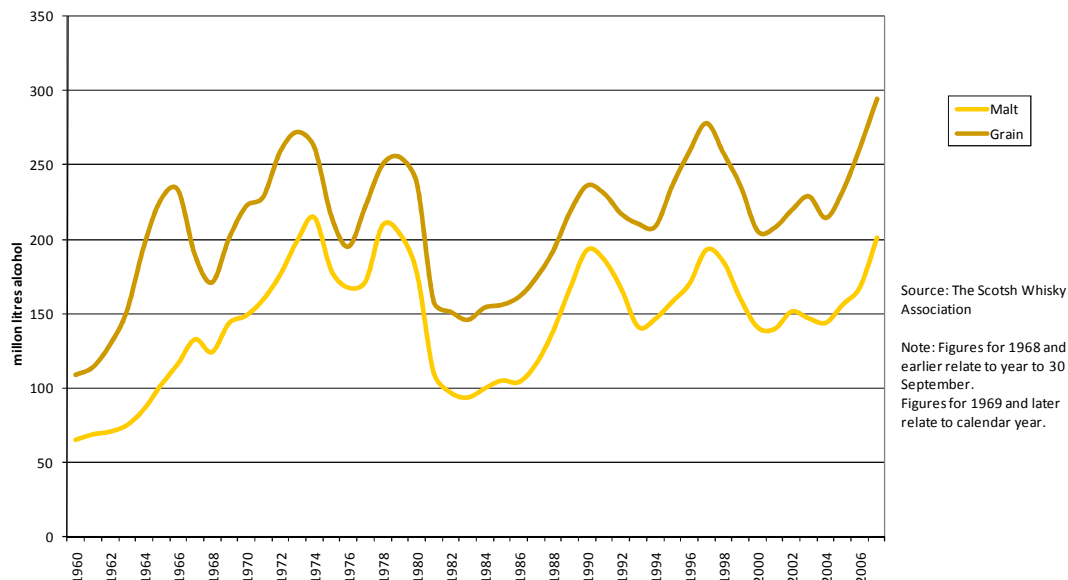
8.2 The whisky cluster

The Cairngorms National Park and its hinterland is home to one of the most famous whisky producing regions in Scotland and the World – Speyside. This grew from the original barley crops in the region and it is still the case that barley is the main crop in Cairngorms agriculture.

Over the past half century, national whisky production has grown from 173 million litres of alcohol to 495 million, a sustained average growth rate of 2.2 per cent per year. Of this current production, 40 per cent is malt production and 60 per cent is the production of grain whisky (see Figure 53).

Figure 53 **Scotch whisky production**

Scotch whisky production since the 1960s

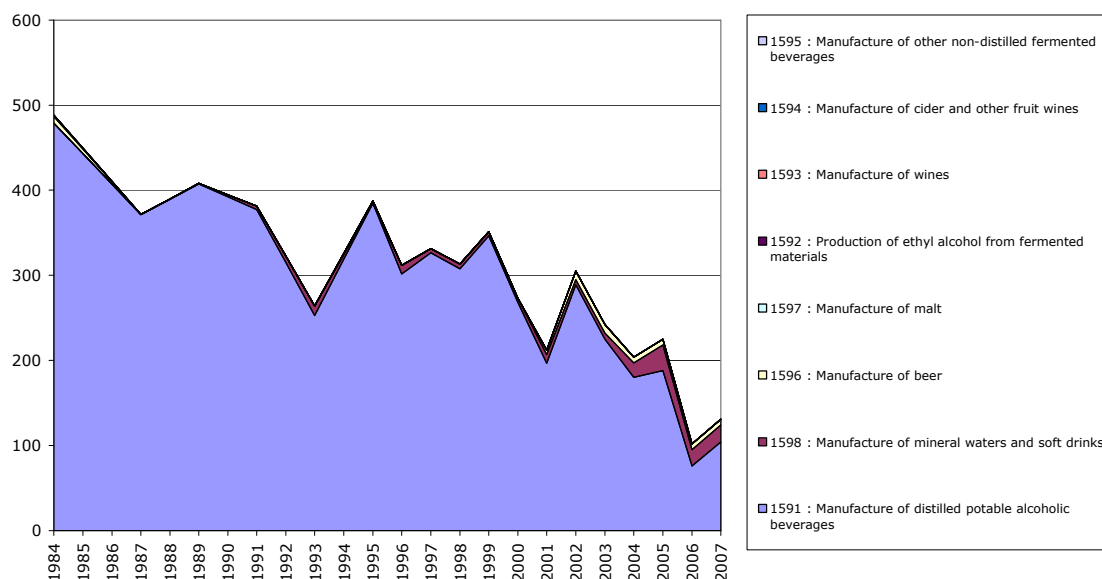


However, over recent years the importance of whisky manufacturing to the economy of the Cairngorms National Park has lessened. Since the designation of the Park the numbers employed in the whisky cluster have fallen from 300 to a little over 100 (see Figure 54). This continues a long term trend - 25 years ago almost 500 residents of what is now the Park made their living from whisky.

Much of this contraction in local employment can be put down to increased mechanisation and remote monitoring and control within the manufacturing process so that large distilleries can now be run with only a handful of staff.

Figure 54 **Cairngorms drink sector employment**

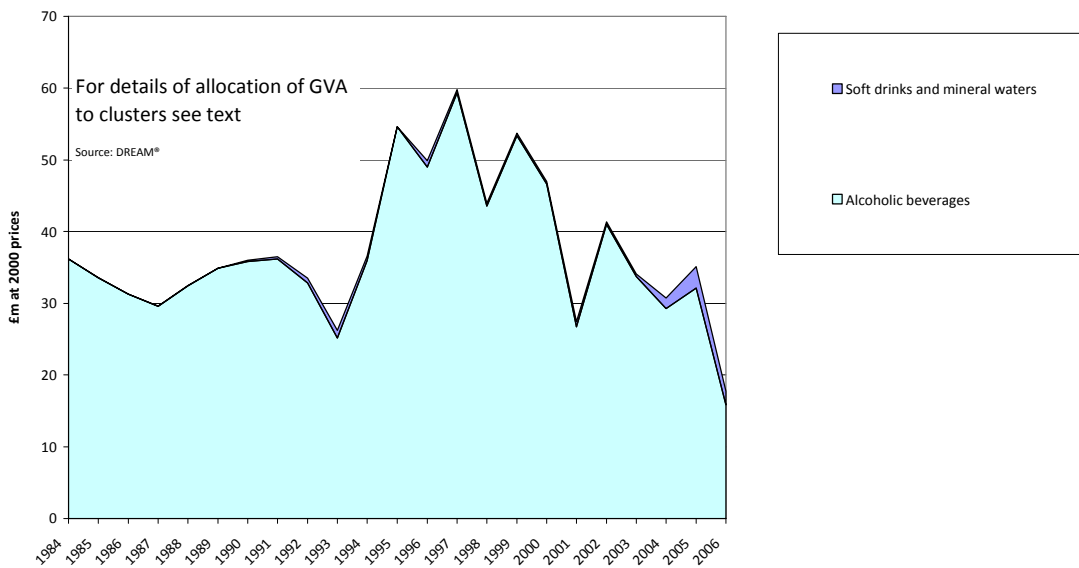
Whisky and drinks sector employment



In addition, the value which the whisky cluster adds to the local economy also appears to be waning. From a peak of over £50m in the late 1990s and £40m when the Park was designated, the latest data (relating to 2006) suggests that whisky now contributes only £20m of gross value added to the Cairngorms economy (see Figure 55).

Figure 55 Alcoholic beverage sector gross value added

Real GVA in the whisky and drinks cluster



Whilst much of the whisky industry in and around the Park has always been linked to the actual manufacturing process, elsewhere in Scotland there are large numbers employed in other aspects of the industry, such as bottling and marketing. Over the past 35 years the long term trend in the cluster has been for a declining headcount. However, most of this decline took place during the 1980s and over the past ten years numbers employed have remained largely stable (at least until the reductions in the numbers employed in bottling were announced in the summer of 2009). The trends are shown in Figure 56.

Figure 56 Scottish employment trends in distilling

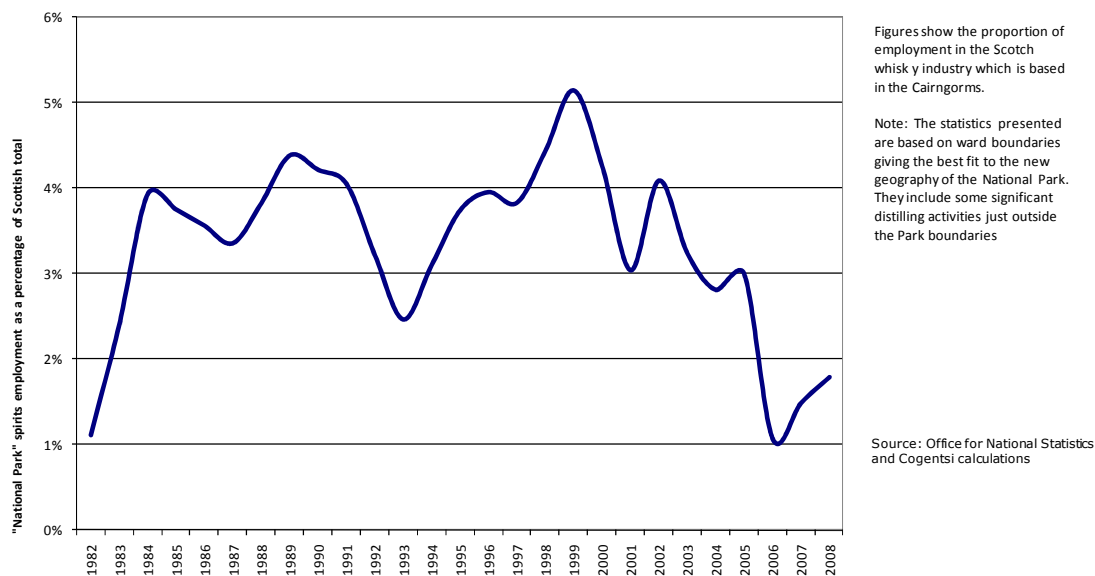
Scottish distilling employment 1971-2008



The effect of this is that, at least according to official statistics, the Park’s share of Scotch whisky employment has declined over the past decade – from a peak of five per cent in the late 1990s to 1.8 per cent (see Figure 57).

Figure 57 Proportion of Scotch whisky jobs in the Cairngorms

Cairngorm's share of Scotch whisky jobs: a downward slide?



Despite this rather downbeat assessment of the cluster it is important to note that whisky distilling still plays an important part in many towns and villages in and around the Park. Distillery visits remain a significant attraction, and the product’s image and culture is considered a vital element of the area’s tourism branding.

8.3 The forest cluster



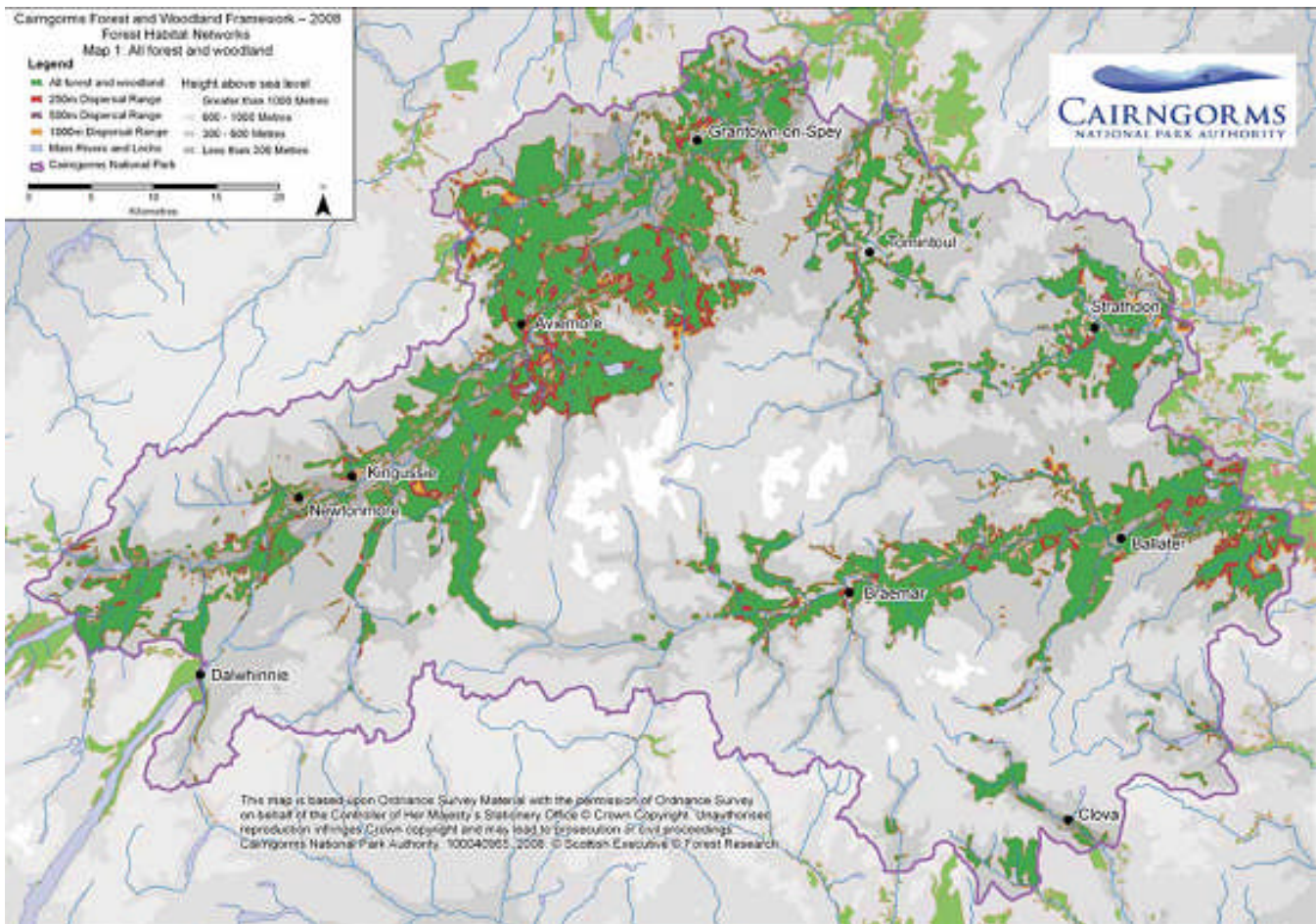
Forestry within the landscape of the Cairngorms National Park

Although plantations of spruce, pine and larch are the most prevalent, natural woodlands in the Cairngorms include the most extensive tracts of Caledonian pine forest in the UK and the best examples in Scotland of montane willow scrub, aspen and bog woodland.

Natural woodland cover peaked about 600 years ago, but then fell, reaching about eight per cent in the mid 17th century as land was brought into cultivation. There was something of an hiatus until the decline accelerated as the industrial revolution took hold from the mid 18th century, so that there was little usable timber left by the mid 19th century.

It was the First World War that emphasised the strategic importance of timber in the technology of the time, with naval uses still of some importance but a burgeoning demand for pit props as coal production took off.

The severe strategic shortfall led to the establishment of the Forestry Commission, with the acquisition of land and extensive planting in the 1920s.



The saplings that grew into today's cluster of forest industries in and around the Cairngorms were planted long before the establishment of the National Park. As well as the expansion of Forestry Commission estates, private landowners were encouraged to devote their property to forestry in perpetuity by the 'Dedication Scheme' from 1947 to 1981, and the Thatcher government continued a level of grants and subsidies to planting up to 1986. The Park, containing significant land not readily suited to agriculture, had many plantations intended for timber production, frequently Sitka Spruce. Coverage was up to about 17 per cent of the land by 1988. The intensity and style of planting was not always found aesthetically pleasing, and the dense forests were designed for wood production and not

recreation, as for example in the picture of Strathdon. The plantations did, however, provide a burgeoning supply of feedstock for forest-based industry, which expanded significantly from the early 1980s to the mid 1990s, and now contributes almost three per cent of the gross value added generated within the Park.

Forest planting in more recent years has included more deciduous species (at national level, up from two per cent of planting in 1971 to 42 per cent in 2007), and in general the pattern of planting has provided better access so that the forests contribute substantially to the tourist offering of the Park.

Figure 58 Forest sector gross value added

Real GVA in the forest cluster

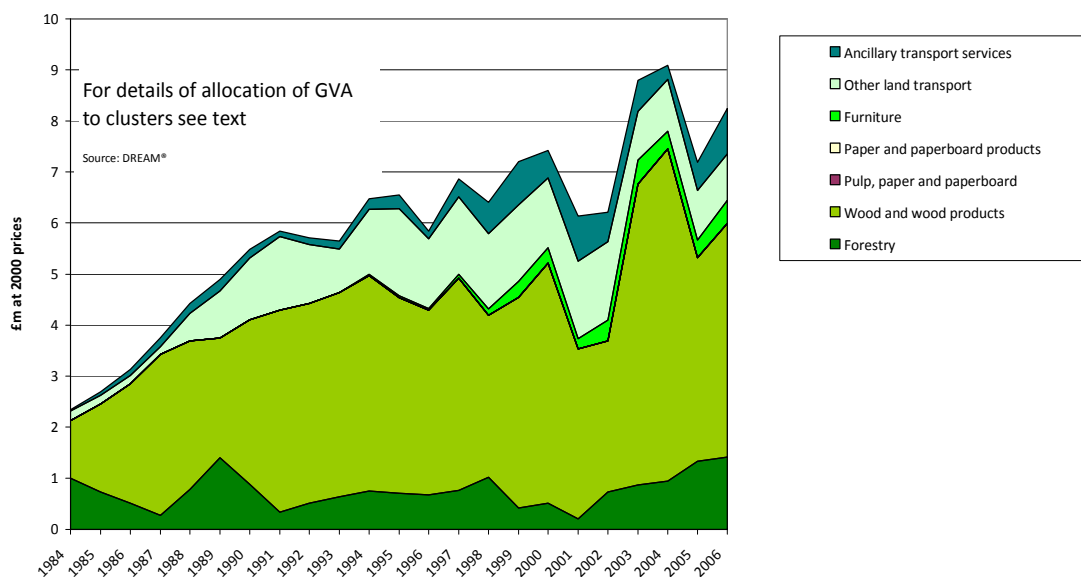
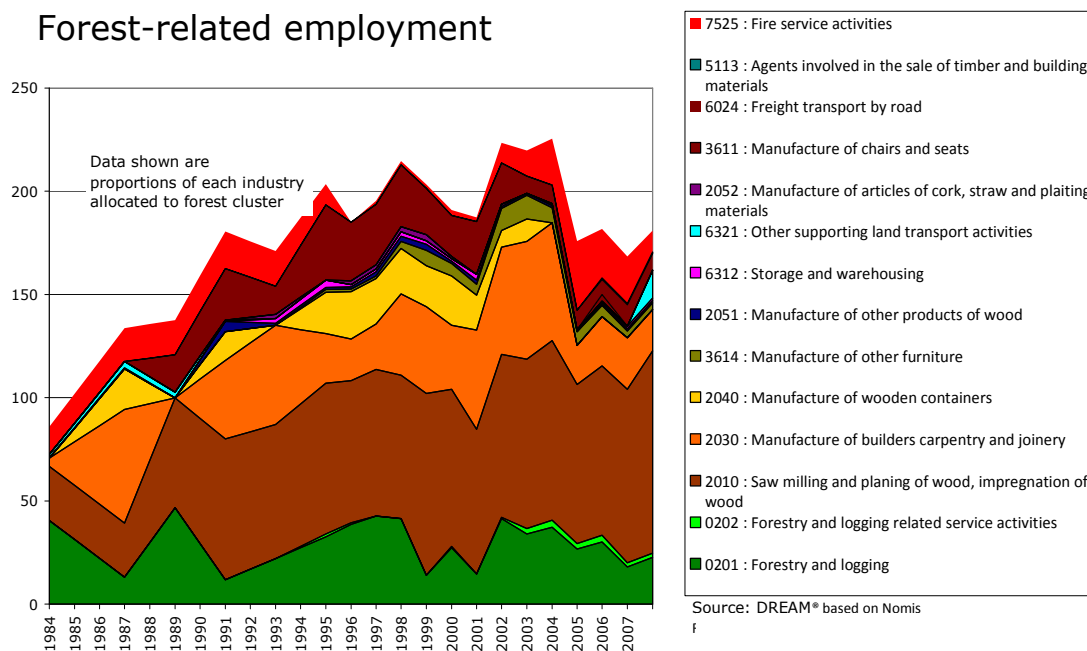


Figure 59 Forest sector employment

Forest-related employment



It is clear that in terms of economic importance by far the largest parts of the forest sector in the Park are primary sawmills and joinery manufacture. There are some signs in the statistics of business evolution in the forest cluster as some of the tree plantations have matured – for example there has been some shift in wood products from making pallets to builders’ joinery, requiring higher quality timber to start with, and more sophisticated skills and equipment.

Forestry itself is not shown as of such great economic importance. This is in part a result of the general weakness of timber prices which has pertained since the early 1990s, and of the fact that the primary timber industry is only partially market-motivated. To a substantial extent it responds to subsidies and grants which are not accounted as part of GVA, and are offered as part of public policy to motivate what are necessarily very long term investments in land preparation, planting and maintenance.

Competitiveness and industry structure

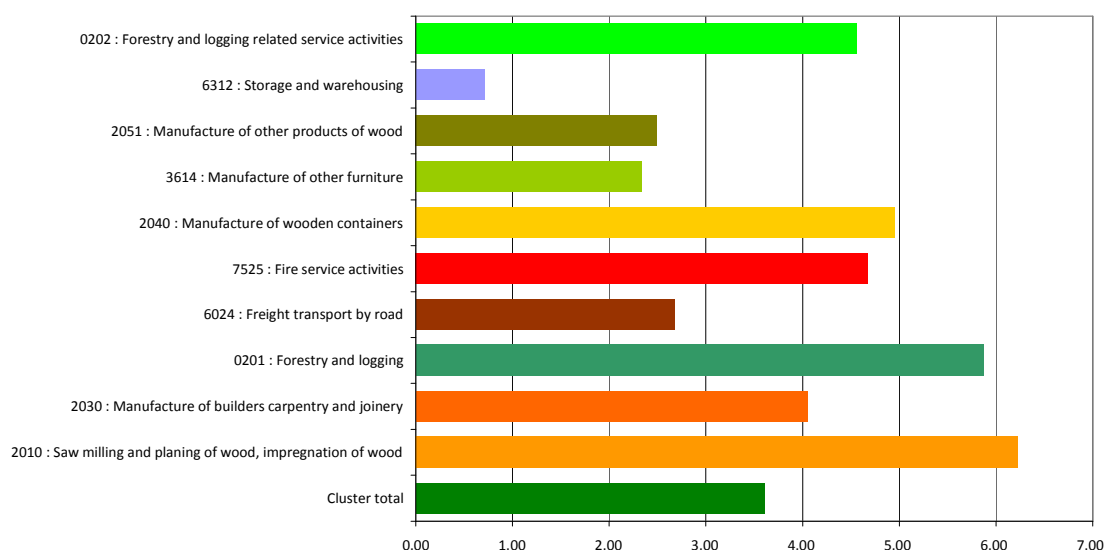
The forest cluster in the Park has a salience of 3.6, indicating that it employs almost 40 times ($e^{3.6}$) as many people as forest-related industries normally do in a community of this size.

Across the country the forest product industry includes large scale paper and board mills which would be unlikely to find a place in the Park.

However the region has a very significant presence in a range of forest industries, with two industries - saw milling and forestry and logging - particularly well represented (see Figure 60). One sector which is shown as particularly large in relative terms is forestry contractors registered in the Park, but in fact the number of people recorded as employed is not large (but unfortunately statistically confidential). This is an informal sector and businesses in it overlap with those in agricultural contracting. Forest operations employ a significant amount of labour-only subcontracting, and use is made of gang labour with nationally and internationally recruited teams. The informality tends to lead to the suspicion that it may play a larger part in the real economy than the statistics reveal.

Figure 60 Distinctive components of the Cairngorms forestry cluster

Salience of forest cluster employment

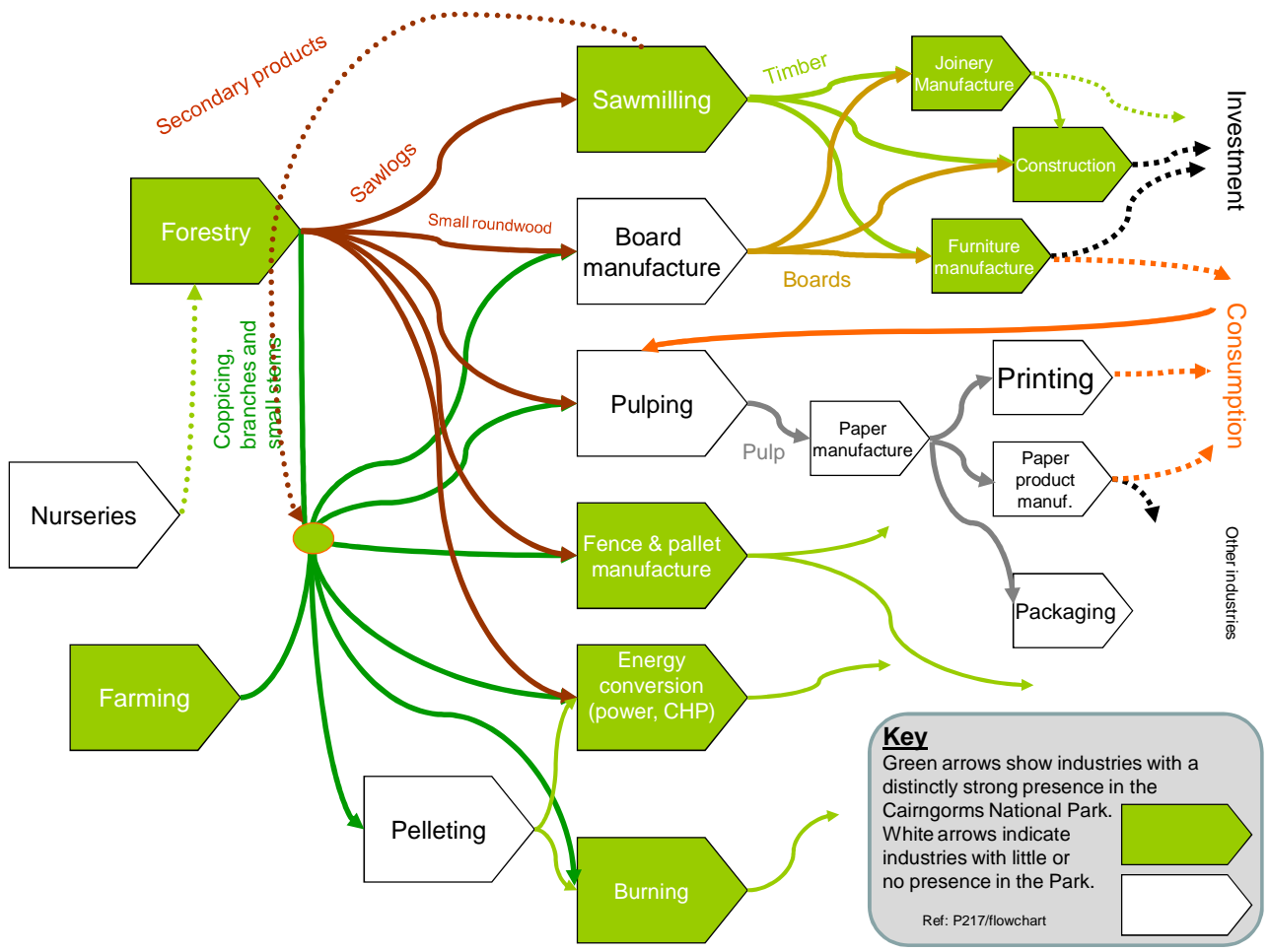


Each of the industries within the forestry cluster plays its own part in the supply chain. Figure 61 indicates those which are relatively well represented within the Park (shown as green arrows) and those which have little or no representation within the area (shown in white).

Three of the non-shaded industries are close at hand – forest nurseries exist in Forres, Fochabers and Rhynie for example, Norbord manufacture ‘Sterling’ oriented strandboard at Inverness, and Arbuthnott produce wood pellets in Kincardineshire.

Only the paper chain is missing from the value chain for the Park’s forests, although the furniture industry is not proportionately as large as other industries in the cluster

Figure 61 Forest cluster flowchart



The fact it already has a very strong presence is not to say the forest cluster cannot be strengthened – more added value furniture, for example, might offer employment at a variety of scales, and the Park’s construction industry could make further use of locally indigenous materials and develop its own vernacular architecture, as has happened in other timber-rich areas.

Principal businesses



BSW sawmill site at Boat of Garten

The largest single employer in the cluster, **BSW Timber** operates a sawmill at Boat of Garten. The firm is based in the Scottish Borders, and has recently (November 2009) consolidated its position as the largest sawmilling business in Britain by buying Howie Forest Products. The firm now has a 25 to 30 per cent share of timber production from

British coniferous forests. With seven sawmills in the UK and one in Latvia, BSW produces around 900,000 cubic metres of sawn timber products per year. The company produces its timber decking in Latvia, with other timber products being produced in the UK. The business has a turnover in excess of £120 million and employs approaching 800 staff between the UK and Latvian operations. Local employment is about 70. Annual timber input at the 5 hectare site in Boat of Garten is 80,000 cubic metres of roundwood and the mill produces 50,000 cubic metres of sawn timber.

There is also a sizeable product sawmill operated by Russwood at Newtonmore, focusing on larch products and a proprietary heat treatment for architectural spruce. These have been included in striking designs for the new visitor centre at Culloden, The Kitchen restaurant in Inverness, and the headquarters of the Loch Lomond and the Trossachs National Park Authority in Balloch.

There are significant sawmills just outwith the Park boundaries, both in Aberdeenshire and in Moray, and several smaller ones which will all draw on Park timber.

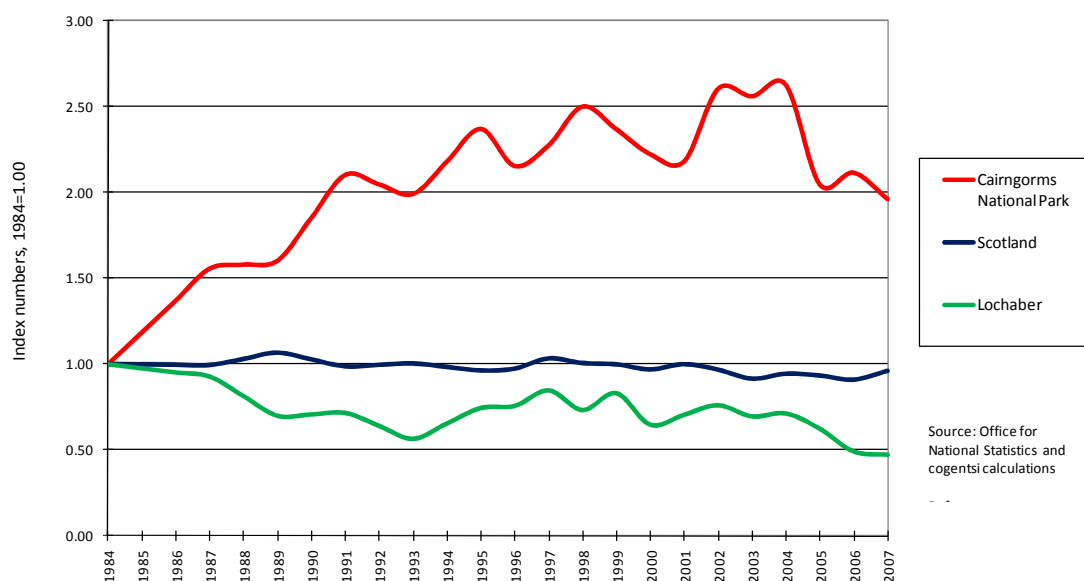
Comparisons

Trends in employment in the forest industries have been more positive in the Cairngorms than either Scotland or Lochaber, as shown in Figure 62. This is partly the result of factory closures elsewhere, such as the Wiggins Teape factory in Lochaber, and of productivity growth across the sector.

Nationally small sawmills have been closing to be replaced by higher technology facilities serving a much wider catchment area and producing more standardised products. In 1992, 1,492 businesses in Great Britain were classed as sawmills. By 2004 this figure had fallen to 861. Fewer and fewer sawmills have been serving more and more customers. In contrast the number of builders' joinery establishments across the country has risen from 3,699 in 1992 to 5,407 by 2004.

Figure 62 Employment trends in forestry – Cairngorms and comparators

Employment change in the forestry cluster



8.4 The cluster of other food, drink and agriculture



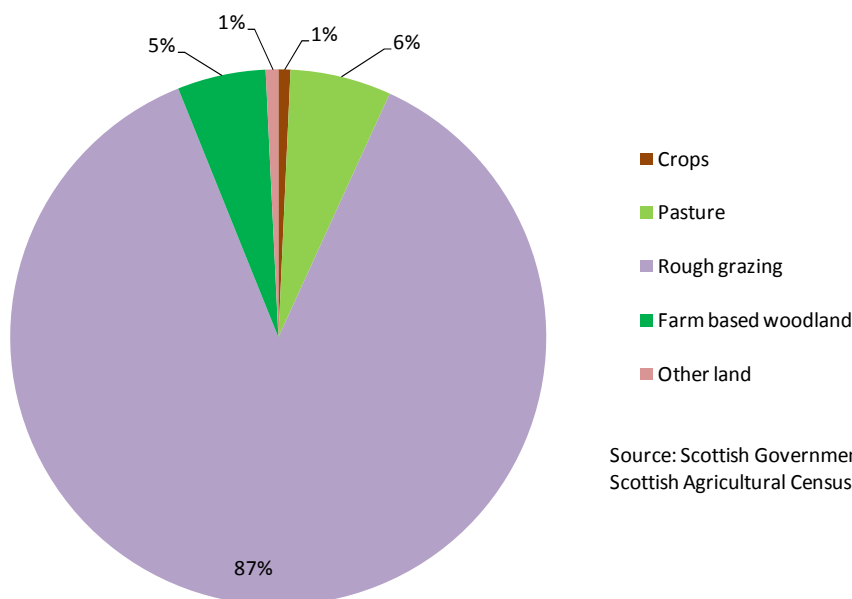
Silaging in the Cairngorms National Park

There are currently (according to the 2008 Agricultural Census) a total of 464,000 hectares of farmland in the Cairngorms National Park. This is split into 700 agricultural units⁹, although employment data would suggest that there are only around 350 individual farm businesses.

Although according to Shaw and Thompson (2006) 70 per cent of the land in the Park is 'in agricultural use', the bulk of agricultural land in the Park is classed as rough grazing (see Figure 63). Currently 87 per cent of all agricultural land has this classification, with a further six per cent being under improved pasture. Less than one per cent of the Park's agricultural land is cropped (other than for silage / hay, which is classed as pasture). Barley is the most common crop grown in the Park.

Figure 63 Agricultural land use

Agricultural land use in the Cairngorms National Park



Source: Scottish Government -
Scottish Agricultural Census 2008

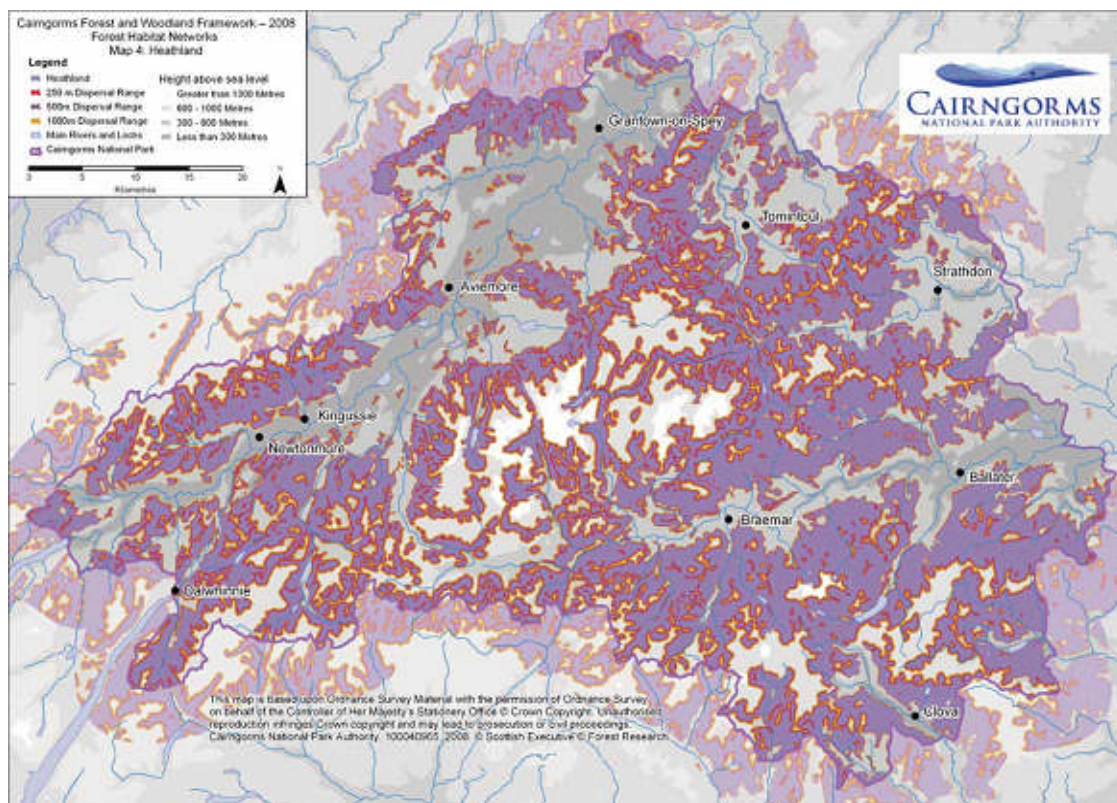
Although they make up a very small proportion of the total agricultural land, there has been a dramatic change in minority land uses in recent times. The amount of land which is cropped has almost halved over the past 25 years, from over 6,000 hectares in the early 1980s to 3,100 hectares in 2008. Since the Park was designated in 2002, 700 hectares of farmland have been removed from the cropping rotation. This reflects the fact that crop growing on less favoured land is increasingly difficult for farmers to justify financially. Subsidy regimes now place more emphasis on protection of the environment and less on food production and the investment in machinery to harvest crops (or more likely payments to contractors) can be prohibitive for those with only small areas to harvest.

⁹ Note that it is common now for a number of agricultural units to be operated together as a single farming enterprise as a result of the merger of neighbouring farms over the years.

By contrast, the area of farm-based woodland has risen dramatically (although admittedly from a very small base). Over the past 25 years its extent has risen fivefold, and by 35 per cent since the Park's designation. Almost as much farmland is now in woodland as is in improved and rotational pasture. The increased use of woodfuel (if oil prices remain high) make it likely that this will increase, in part as woodland proper and to an extent in short-rotation coppicing.

Figure 64 shows the distribution of the poorest agricultural land – the heathland. Whilst the highest hill tops are not classed as agricultural land, practically all the improved farmland is found in the valley bottoms, with the bulk along the banks of the Dee and the Spey.

Figure 64 Heathland / rough grazing in the Cairngorms National Park



Most farms in the Cairngorms National Park are involved in the production of beef and lamb, with an emphasis on external (as opposed to internal) and extensive (rather than intensive) methods of production. In 2008 there were 240 agricultural units with a total of 128,000 sheep and 112,000 lambs. In addition, a total of 235 units were involved in beef production, with a total of 31,000 head of cattle.

By contrast the more intensive forms of agriculture are less prevalent in the Park. Pig production is concentrated at a few sites, with 12 units having a total of 4,300 animals. 86 units are involved in poultry production, the vast majority of which house laying or breeding stock. There is very little broiler production.

Dairying is also not a major farming activity in the Park. In 2008 twelve local farm units had a total of 300 head, and in some cases several farm units were consolidated for operation as a single farm.

Excluding poultry and pigs, whose numbers fluctuate widely from year to year, the number of livestock in the Park has fallen since the designation of the Park. With the bulk of these animals outside for some or all of the year, recent trends indicate that cattle and sheep numbers are falling (see Figure 65). The most dramatic fall is in the dairy sector, where numbers have fallen by almost half between 2003 and 2008.

The fall in the headcount for beef cattle and sheep is less dramatic, but nevertheless there is a downward trend. In the early 1980s there were over 40,000 head of beef cattle in the Park, some 10,000 more than there are today. Between 2003 and 2008 numbers have fallen by around 2,000 or eight per cent.

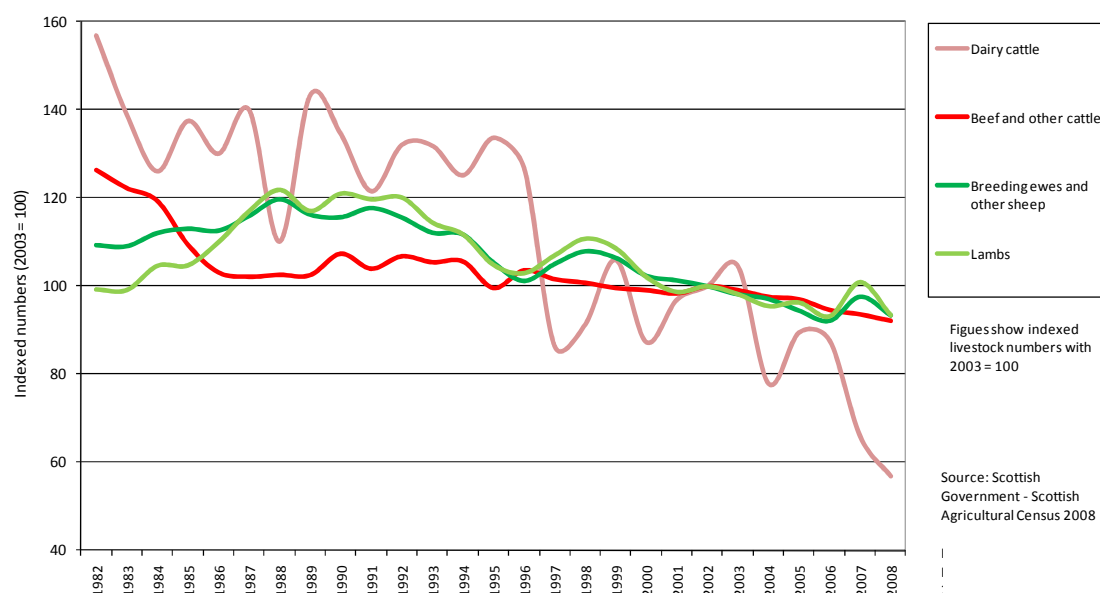


A tranquil farming landscape at Balnaan

Sheep numbers and lamb production have also declined. There are around 30,000 fewer sheep and 30,000 fewer lambs in the Park now than at their recent peak in the late 1980s. Between 2003 and 2008 both sheep and lamb numbers have fallen by more than 6 per cent. This is likely to have been caused by the combination of low prices and the shift from production subsidies to the single farm payment.

Figure 65 Livestock number trends

Trends in livestock numbers in the Cairngorms National Park



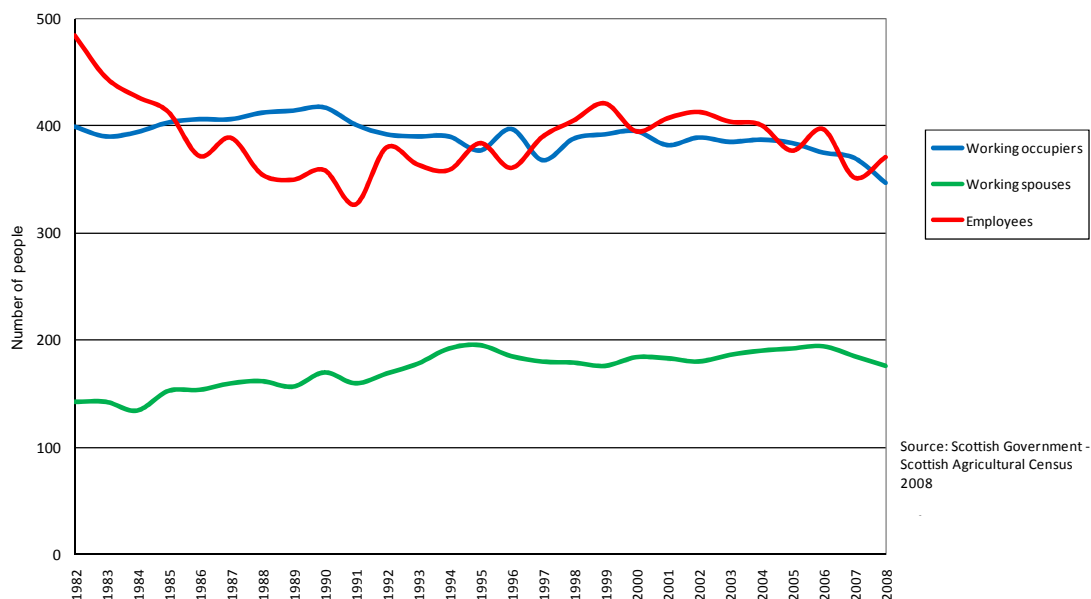
Employment in the cluster

Around 900 people earn their income from the Park's farms. 350 of these individuals are working occupiers, with a further 180 being spouses. Around 370 individuals are employed by the Park's farmers.

Over the past 25 years the number of working occupiers has remained largely stable, although indications are that in the last five years there has been a downward trend resulting in 10 per cent fewer working occupiers now than when the park was designated. The use of family labour has risen by a quarter since the early 1980s (see Figure 66) although most of this growth took place in the 1980s and early 1990s. There was a dramatic decline in the number of employees in the 1980s to a low of 330 in 1991 when agriculture faced particularly difficult times. Following a recovery during the 1990s, over the past ten years the number of employees has taken a downward trend once more.

Figure 66 Numbers of people earning a living from agriculture

Individuals working in agriculture in Cairngorms National Park



One cause and consequence of the shrinking of the typical holding to ‘farmer plus spouse’ or ‘farmer plus spouse plus one employee’ has been the growth of agricultural contracting. This in turn is tied up with the advance of technology, as over the decades specialised machines have been developed whose capacity, even in a limited season, is far greater than the size of a single farm. About 120 people in the Park work in ‘agricultural services’.

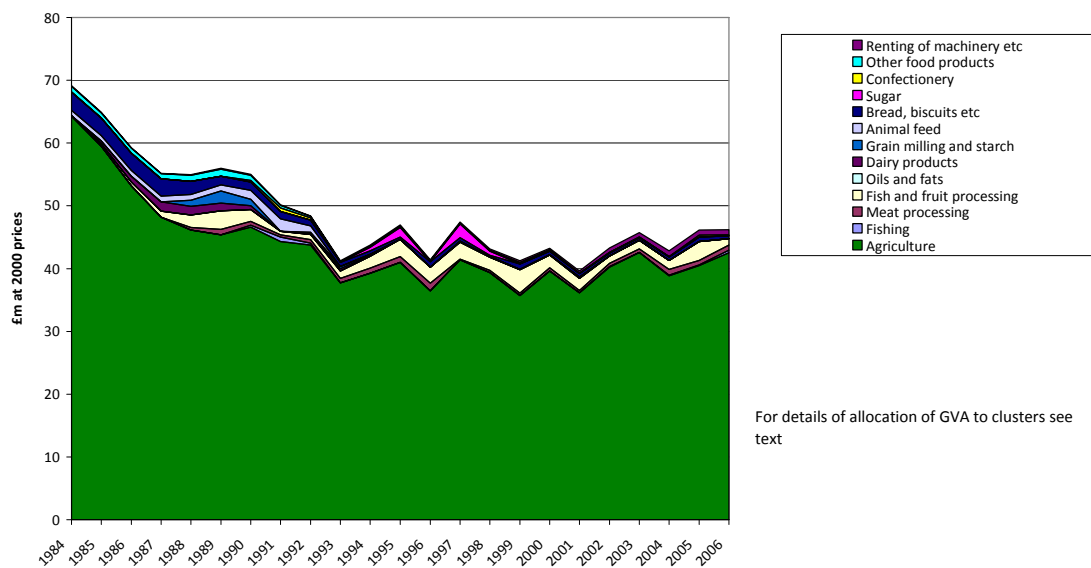
Economic value of agriculture

Agriculture contributes around £42m in added value to the Cairngorms economy each year (see Figure 67). In so-called ‘real terms’ this is a rise of around 20 per cent on the equivalent figure 10 years ago, but in fact prices have declined (until very recently) so the agricultural share of total GVA measured in ‘money of the day’ has contracted.

Food processing adds an additional £3m of GVA. There appears to have been substantial bakery activity 25 years ago, which disappeared in the late 1980s, but we have no information on this.

Figure 67 Other areas of the agriculture, food and drink sectors gross value added

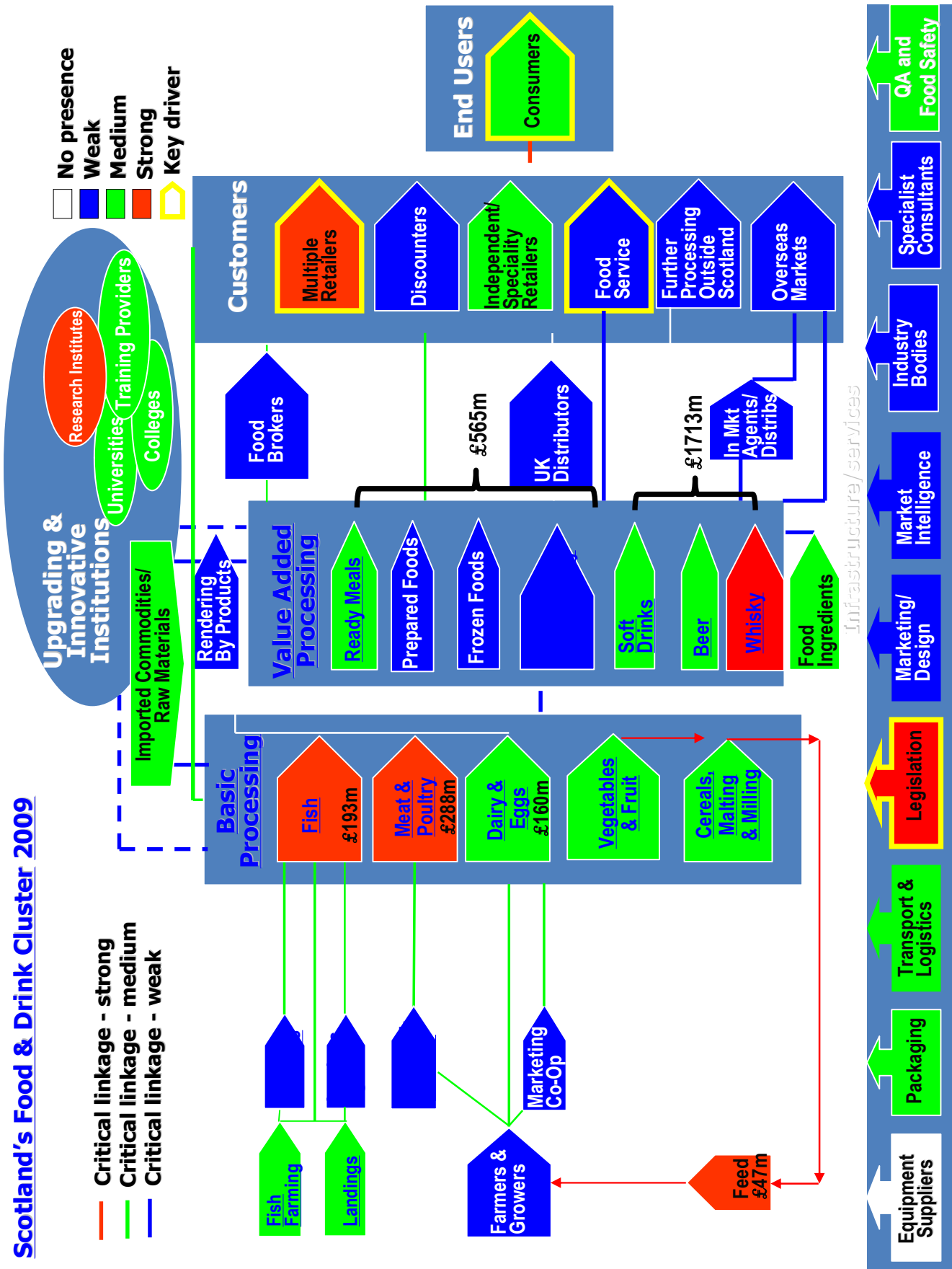
Real GVA in the food and agriculture cluster



Food and drink in a cluster perspective

Figure 68 shows an assessment of the structure of the Scottish food and drinks industry in cluster terms, prepared by Food and Drink Scotland.

Figure 68 Scotland's food and drink cluster – structure, strengths and weaknesses

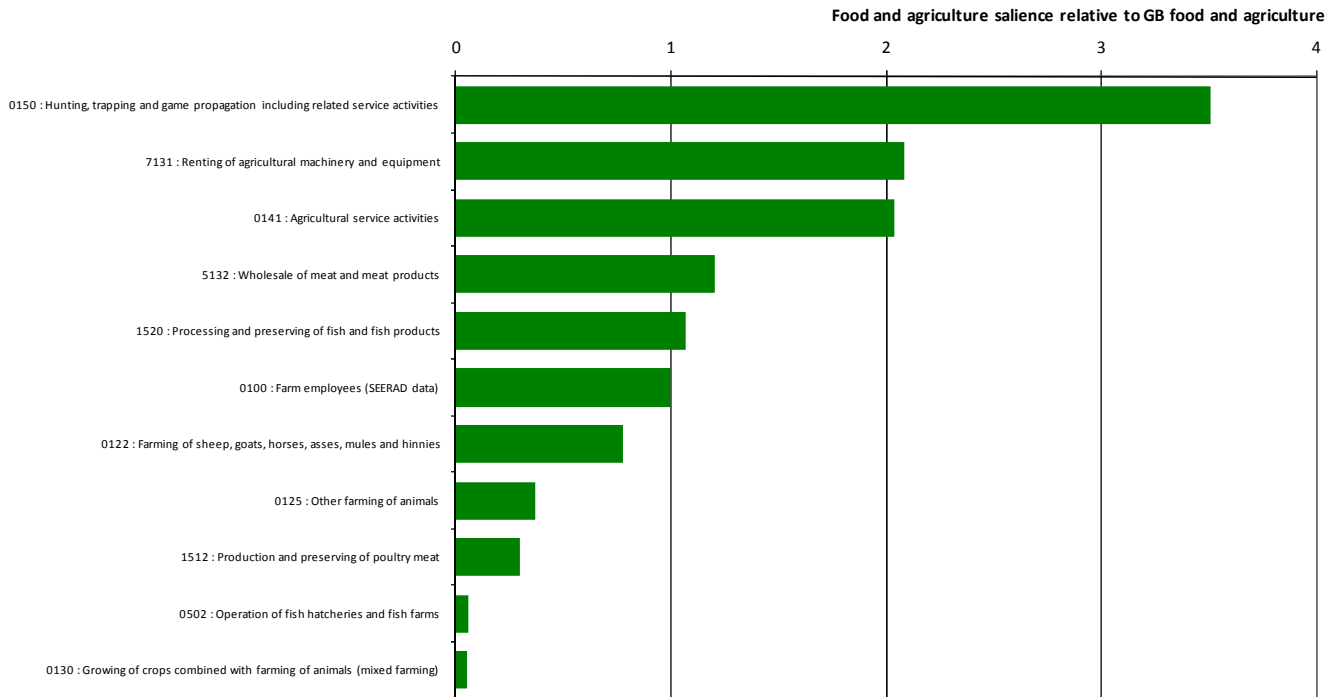


However, the food and agriculture sector within the Cairngorms National Park is quite distinctive compared to Britain as a whole. The most distinctive feature is the importance on hunting and other game sports, as illustrated in Figure 69. This is discussed in more detail in the next section.

The chart also highlights the strength of the sector at the beginning of the food chain – in both primary production i.e. agriculture itself and the *initial* processing of fish, meat and poultry.

Figure 69 The distinctiveness of the local food and agriculture cluster

Distinctive industries in the food and agriculture cluster



Source: Z:\data\emp\HEE2\Cairngorm\saliences\foodagricul

Country sports and estates

This most distinctive aspect of the Cairngorms food and agriculture economy is linked to tourism and to property ownership, and perhaps for this reason defies measurement by official surveys. It is very difficult to gauge exactly the value of country sports to the economy of the Cairngorms.

Red deer and roe deer stalking, grouse and pheasant shooting and salmon fishing are significant employers in the National Park. The number of people officially recorded by the Annual Business Inquiry as employed specifically in the game propagation and hunting industries is fewer than 10, while those recorded as ‘managing real estate’ oscillates between 40 and 140 in different years of the Inquiry. Surveys of landowners in the Cairngorms Partnership area (Cairngorms Partnership, 2003) indicated that field sports including red and roe deer stalking, high and low ground shooting and fishing, across 46 landowning businesses directly employed up to 77 full-time equivalents between 1998 and 2002. Grouse moors of 92,000 hectares yielded annual bags ranging from 5,000 to 1,000 brace, and the annual deer cull was around 5,000. Owners consider it unlikely that these figures have changed dramatically over the last decade.

The upper reaches of the Spey, the Dee and the Esks fall within the Park, and the Tummell/Tay are close to the Perthshire extension. There are a significant number of lochs stocked for fishing. In a Scottish perspective angling is economically very important, with estimated expenditure nationally in 2003 of £112m. A 2004 study¹⁰ found that some of the highest-spending visitors, particularly overseas fishers seeking salmon and trout, fish in localities in and around the Park. Therefore a significant part of the net additional effect of angling on the Scottish economy is likely

¹⁰ The Economic Impact of Game and Coarse Angling SEERAD (Glasgow Caledonian University and cogentsi, 2004) <http://www.scotland.gov.uk/Publications/2004/03/19079/34369>

to arise locally. Across the country this totalled £105m on sales (gross output), £48m on income (GVA) and 2,800 jobs (direct, indirect and induced. Of the total national impact about one third arose in the Highlands (including Moray) and one quarter in Aberdeenshire, and these might suggest GVA in the range £2-5m and several dozen direct jobs in fishing alone. Catches have been rising, with nearly 6000 Salmon recorded for the Dee in 2009, against an average of 4000 from 2005 to 2008.

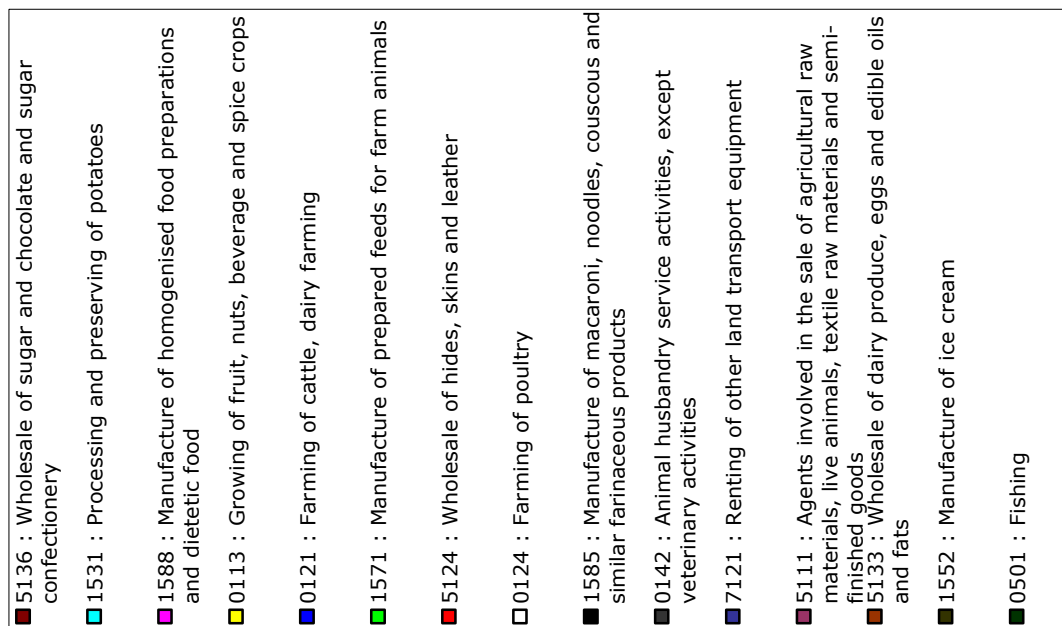
Estate owners and managers take a flexible approach to marketing, and it is suggested that the expenditure *associated with* country sports has grown in significance in recent years. Those who take part are accompanied by friends and families who undertake other visitor activities, there are increasing number of high value commercial participants¹¹.

To provide a full picture of the economic value of country sports and related food production to the National Park it would be necessary to conduct a separate survey requiring substantial co-operation from estate owners and visitors.

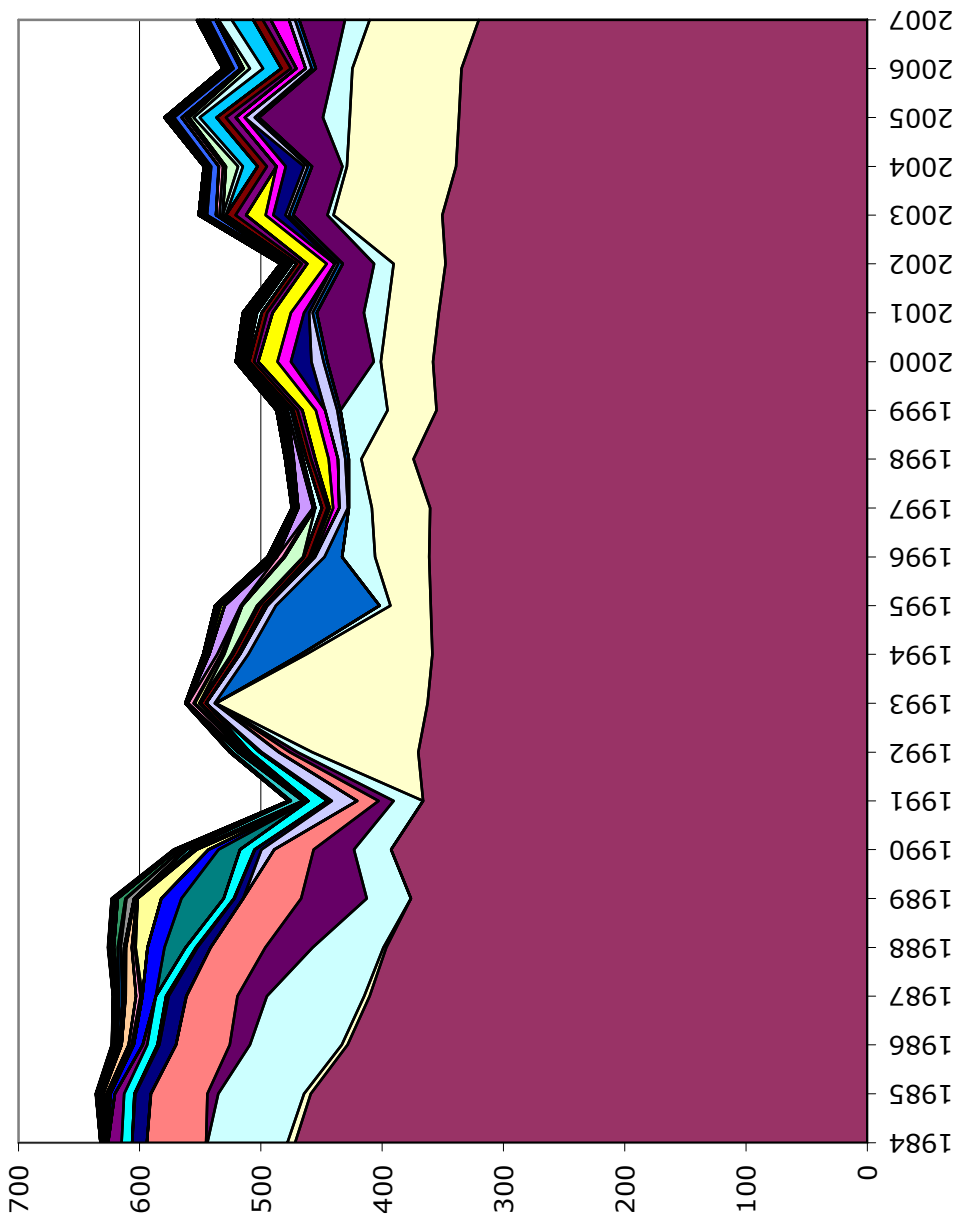
¹¹ Expenditure of these people, and indeed of the sportsmen and women themselves, is in principle already accounted for in the tourism cluster, although there will remain issues about the ability to reflect specialised activities with the sample size affordable for national surveys.

Figure 70

Other areas of the agriculture, food and drink sectors' employment



Food and agricultural sector employment

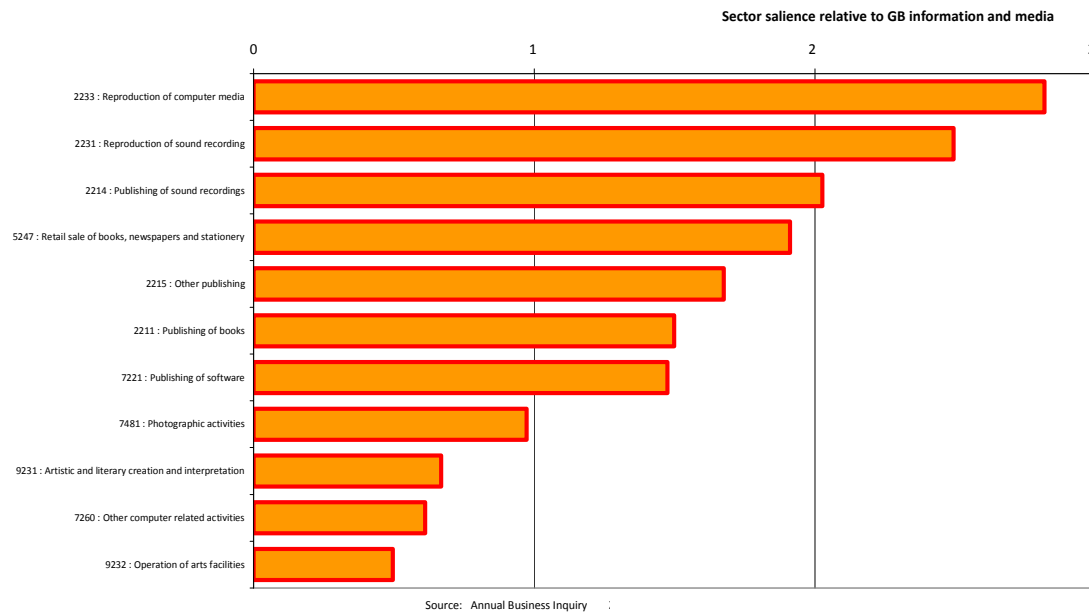


8.5 Creative, media and knowledge-based industries

Although relatively small, the development over the past decade of a cluster of businesses involved in publishing may be of some cultural importance in due course, and represents one of the Park's footholds in the Scottish Key Sector of creative industries. Out of a total of 34 industry codes related to information and entertainment, 15 are not present in the Park. Of those that are, a significant number are in the areas of music and publishing, leading to a local presence, relative to the area's population, which is much greater than the national average (see Figure 71).

Figure 71 Corporate creativity within the information industries

Distinctive industries within the infomedia sector



The creative cluster is only a fraction of the size of some of the Park's main industries, such as tourism and agriculture. However, as Figure 72 indicates, it has grown from practically nothing twenty years ago to employ 90 people and generate wealth of £4m per annum, and hence is a valuable addition to the economy of the Park.

Figure 72 Media sector gross value added trends

Real GVA in the publishing and music cluster

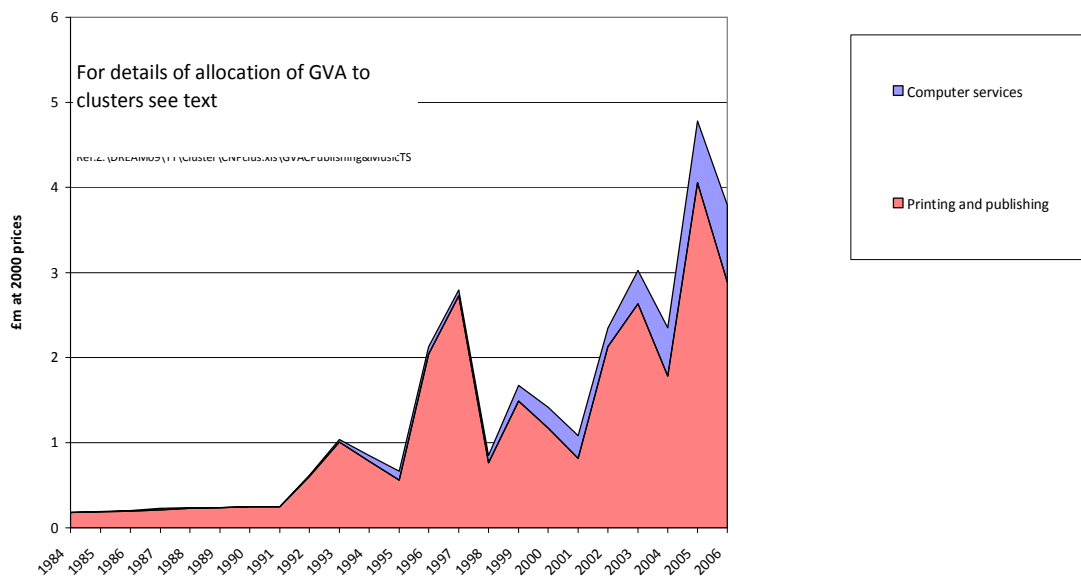
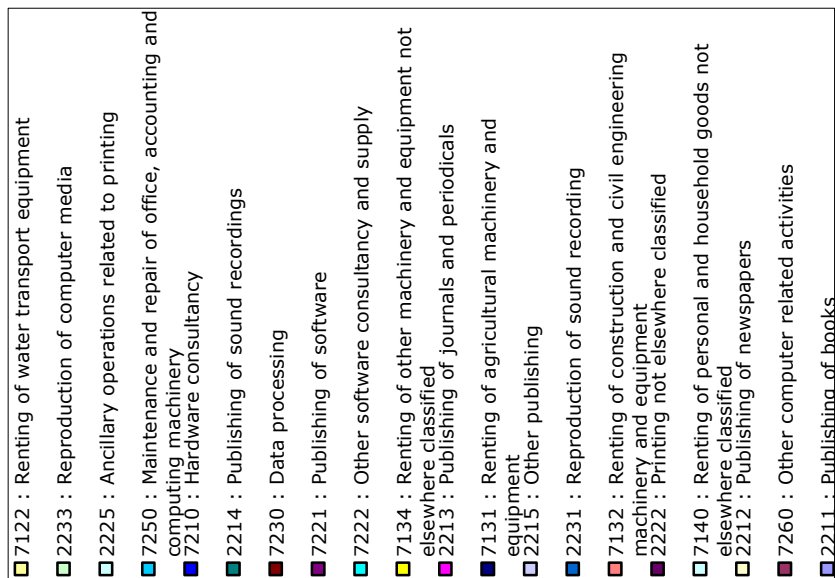


Figure 73

Media sector employment

Publishing and music sector employment



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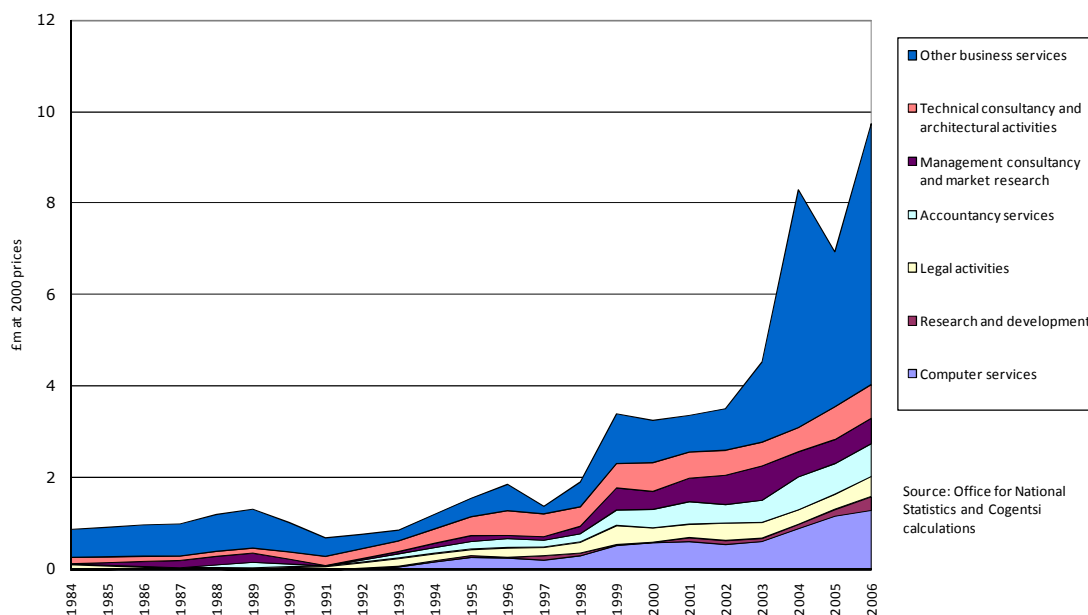
An example of, the activities of Spartan Press at Laggan focus on the publishing and distribution of classical music, but they also print and reproduce short runs of music and CDs. Their main competitors are very large corporate publishers, such as Music Sales and EMI, as well as traditional music publishers doing things in similar fields (e.g. Boosey & Hawkes, A&C Black, Schott etc). They are a significant element in quite a wide field of small independent music presses, which includes other educational organisations that publish their own material, alone or in partnership (such as ABRSM, OUP, CUP and other university presses). Assuming they are broadly commensurate with their wider UK equivalents in terms of turnover and employment, they are a sizeable business in Park terms.



Recent years have shown a significant increase in the growth of local knowledge-based and information-related industries, as telecommunications have improved (see Figure 74).

Figure 74 GVA in other knowledge based service and creative industries

GVA in knowledge based service industries



These figures include a contact centre in Aviemore, operated by Stirlingshire based HERO tsc, who also operate a number of contact centres elsewhere in the UK and Asia. A number of these facilities have developed in communities across the north of Scotland, including BT in Alness and Thurso and Vertex in Dingwall and Forres. In relatively low-wage economies such as the Cairngorms they perform a very valuable function in balancing the labour market.



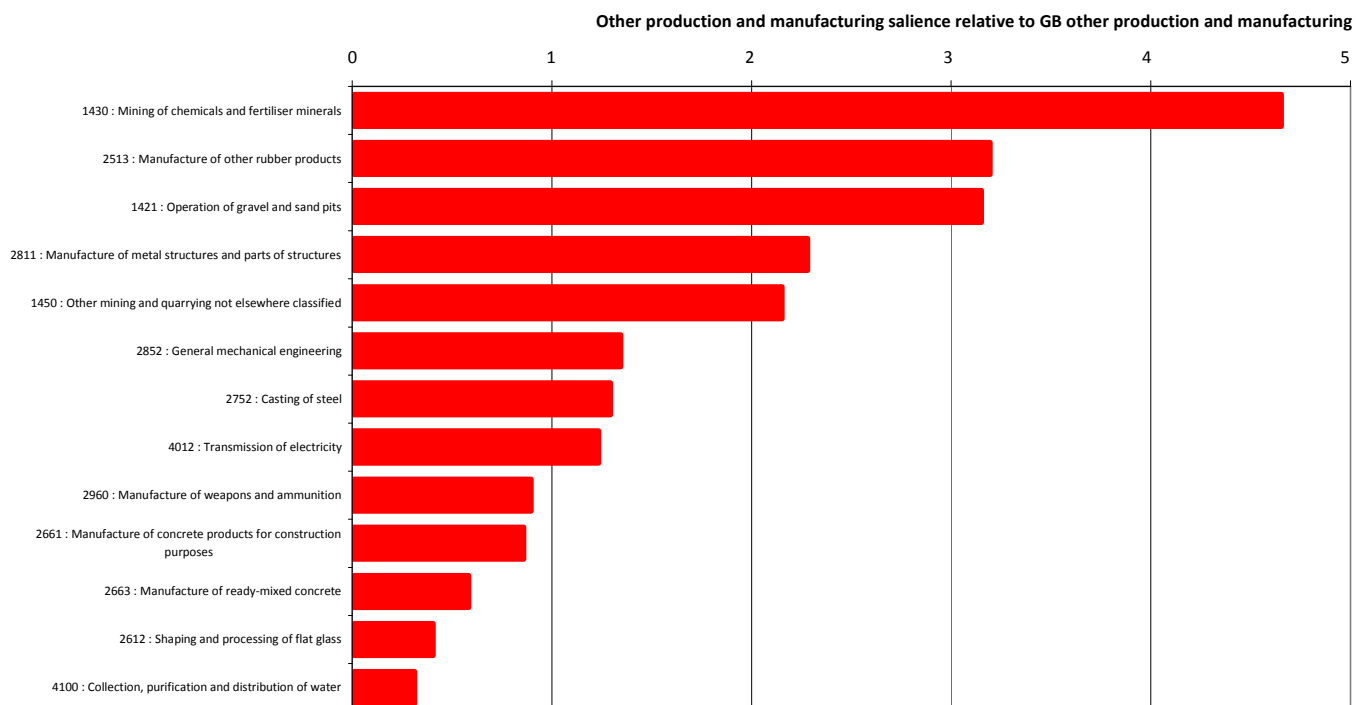
HERO tsc call centre in Aviemore

8.6 Other production and manufacturing industries

There are a small number of significant manufacturing operations in the Park. Figure 75 shows some of the other distinctive production and manufacturing industries in the Park.

Figure 75 Distinctive industries in the other production and manufacturing cluster

Other production and manufacturing cluster



Those which are most distinctive, relative to national norms, are in mineral extraction of various forms. Historically there was iron ore extracted at the Lecht from 1730, smelted at Nethy Bridge, and although closed, in 1841 the mine was reopened to extract manganese ore for use in Newcastle in the bleach trade (Shaw and Thompson). A number of rare and unusual minerals occur in the Cairngorms, including lithium-bearing zinwaldite, semi precious quartz known as Cairngorm Crystal (near Loch Avon), and rare combined ores containing more than one rare metal.

Several of the cluster's other local members are connected with the North Sea oil market, providing equipment and structures for offshore installation. It might be considered that these firms have located in a place where logistically and from a management point of view they are able to access industry centres in and around Aberdeen, but from a labour market point of view they are in a less competitive labour market. However it is noteworthy that McKellar's engineering fabricators have found it necessary to open a design office in Dyce, near Aberdeen and its airport.

Nevertheless Grantown-on-Spey remains the company's main production facility and head office. From a modest beginning in premises rented from the RAF, it has developed a 10-hectare purpose-built facility consisting of a 1,400 square metre fabrication shop and a 500 square metre machine shop, with office space, stores, stock yard and assembly area. Grantown also houses the firm's production, MRP, engineering, draughting function and have office accommodation for client inspectors and engineers. When the large scale construction yards at Ardersier closed in the early 1990s, the company successfully reoriented itself to cater for the growing subsea engineering sector.

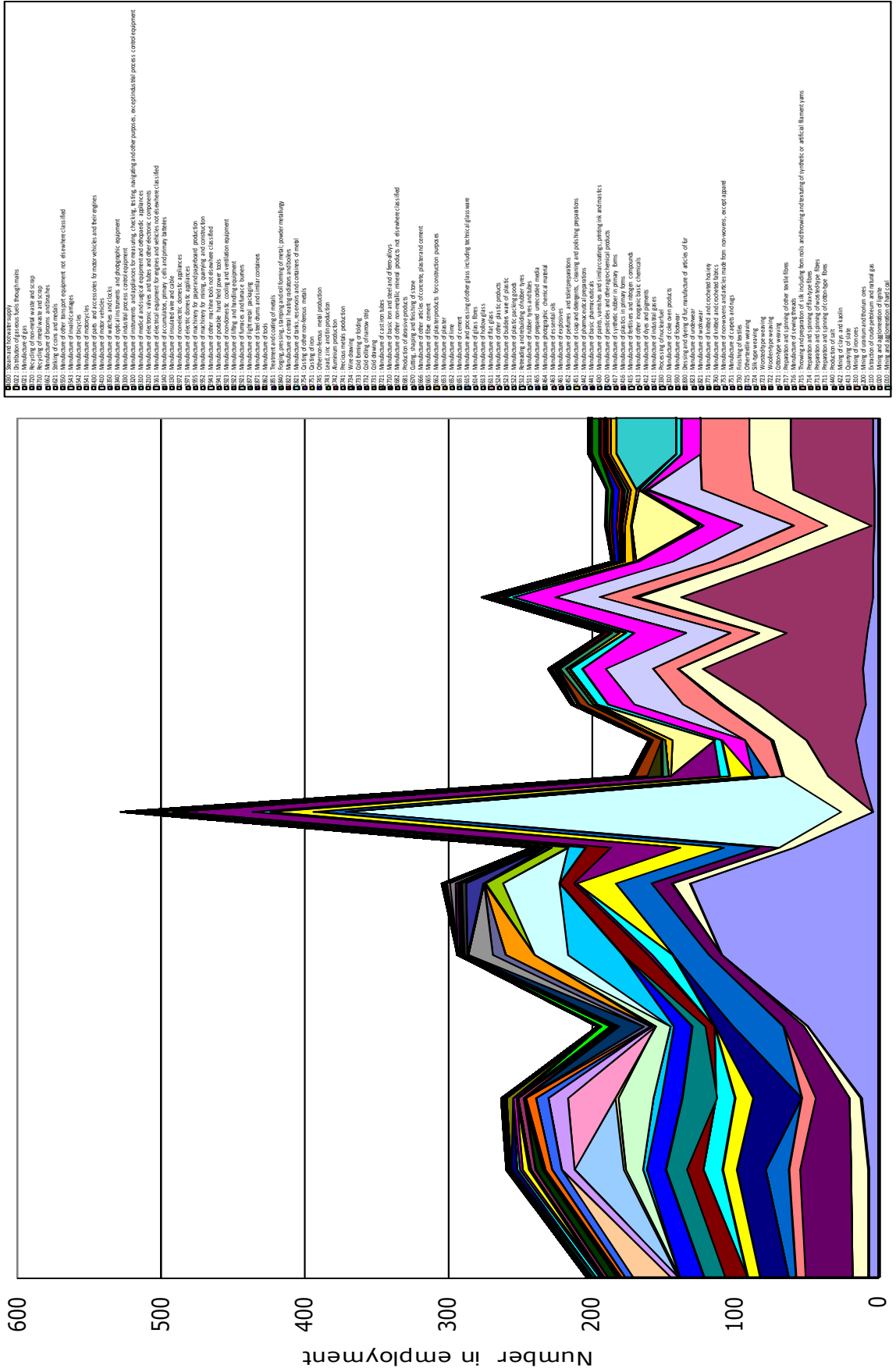
Another example of a company in this sector is Hydrasun of Aviemore, an operation which was once 'Aviemore Engineering'. The factory is now part of a large group specialising in hydraulics and hoses for oil exploitation, particularly in offshore provinces (see picture).

Some of the projects are occasionally short-lived, leading to considerable fluctuations in both wealth generated and numbers employed within the cluster. Figure 76 and **Error! Reference source not found.** indicate that currently companies in the cluster employ 200 people and annually generate over £10m of wealth for the Park's



Figure 76 Other areas of the manufacturing and production sectors, employment

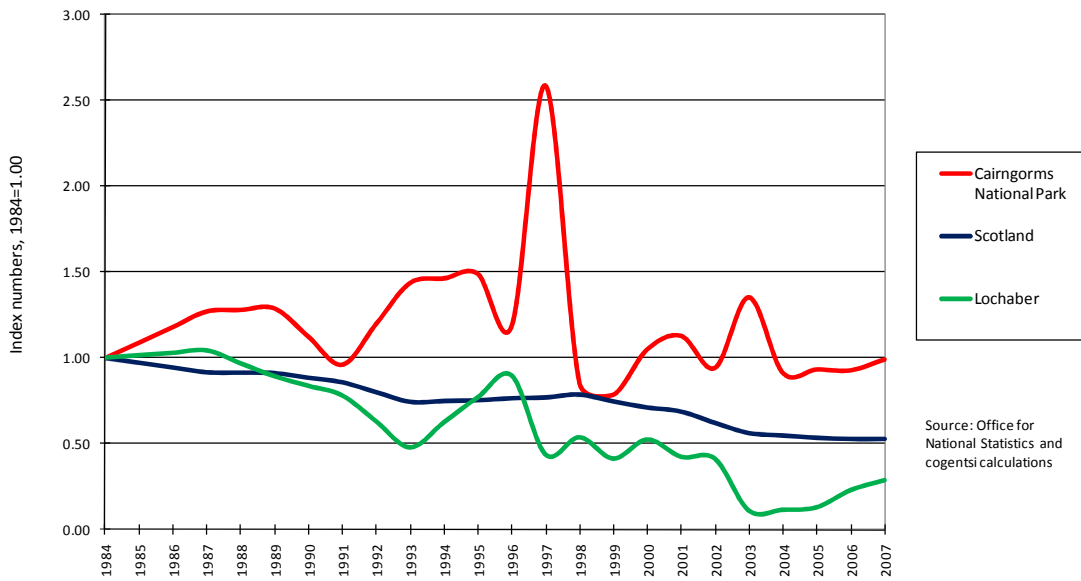
Other production and manufacturing sector employment



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Figure 777 Other areas of the manufacturing and production sectors' gross value added

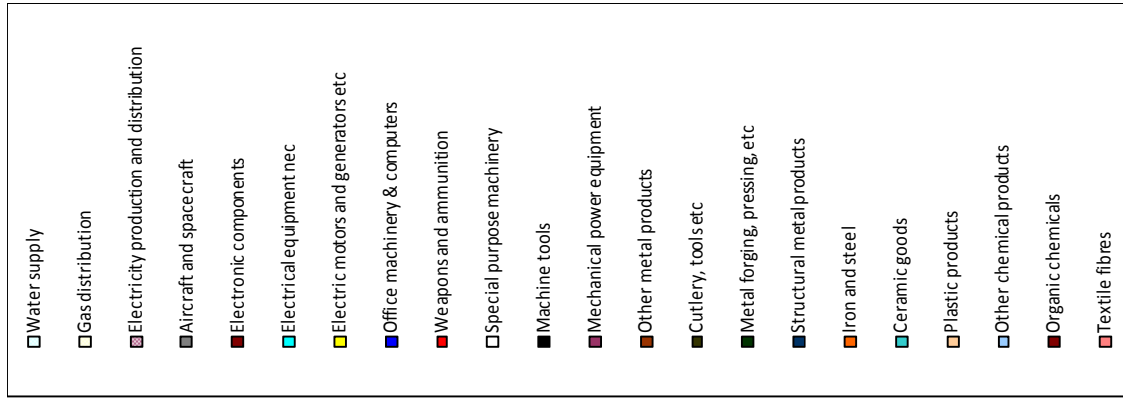
Employment change in other production and manufacturing



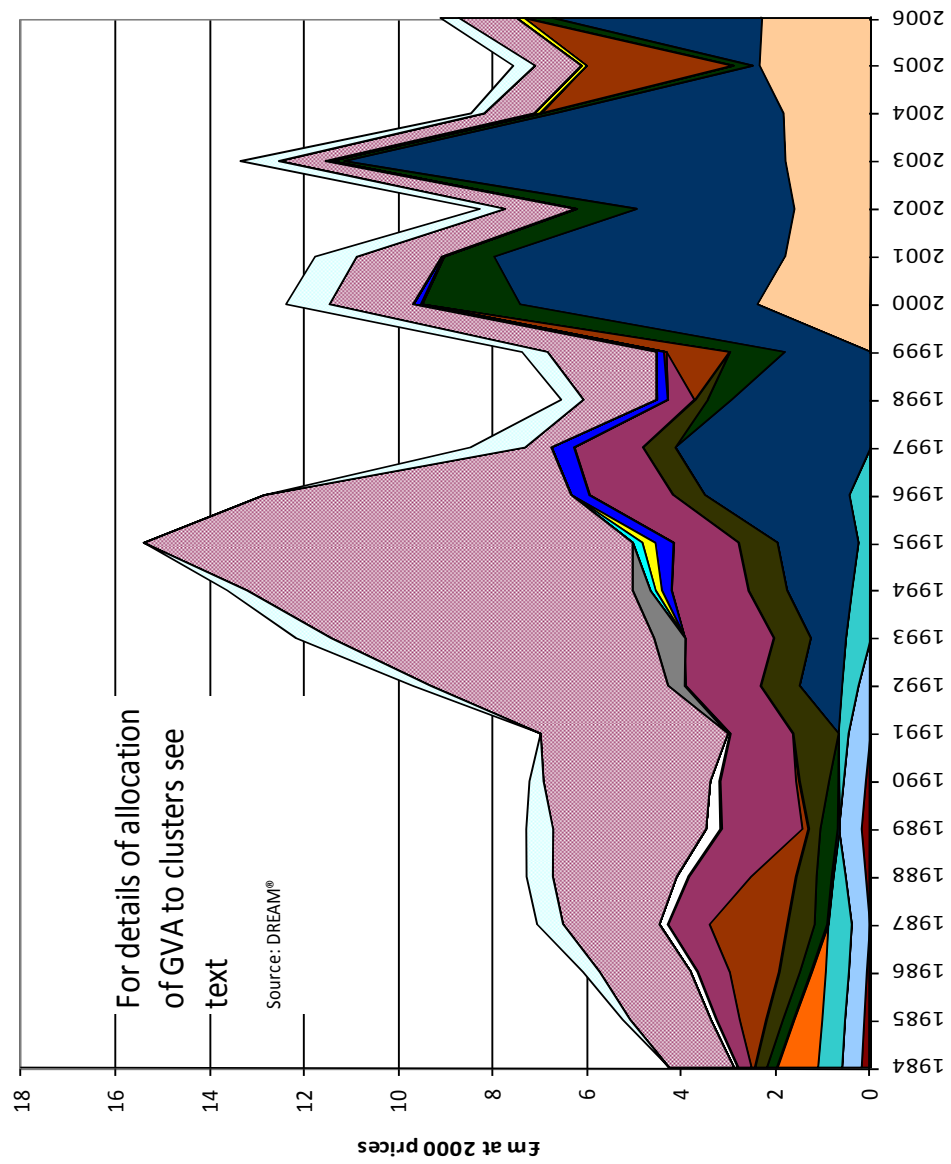
Despite these fluctuations manufacturing and production industries employment within the Park has been maintained over the past two decades. As Figure 78 shows, this compares favourably with the situation nationally where the number of jobs has halved, and with Lochaber where employment is now only a third of the level it was in the mid to late 1980s.

Figure 78

Employment trends in the other production and manufacturing industries cluster



Real GVA in the other production and manufacturing cluster



8.7 Home ownership and construction

The great majority, more than three-quarters, of the economic benefit derived from the cluster of economic activities associated with building comes from the ownership of homes. In economic terms this is accounted as the 'letting of dwellings', even if most of what goes on is a purely notional transaction: owner occupiers 'letting' a house to themselves. The total of all housing rents, actual and notional, paid in the Park is about £60m, of which as much as £10m may be second homes: only Millport in the Cumbraes and Elie in Fife have a higher proportion of second homes than Aviemore, according to the 2001 Census. The expansion of the Park in recent years has generated a doubling in the size of the construction industry, as shown in Figure 79.

Figure 79 Home ownership and construction gross value added

Real GVA in the home ownership and construction cluster

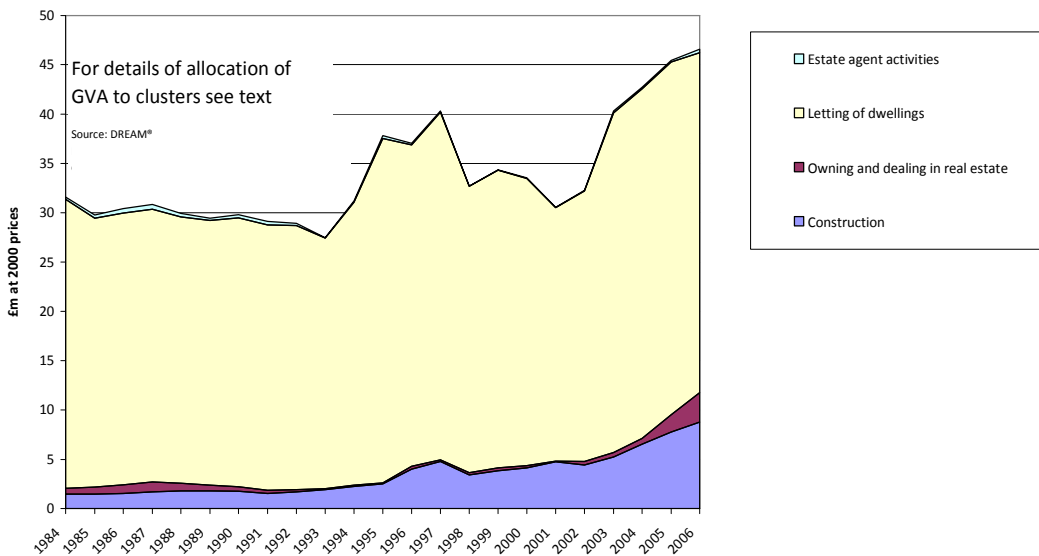
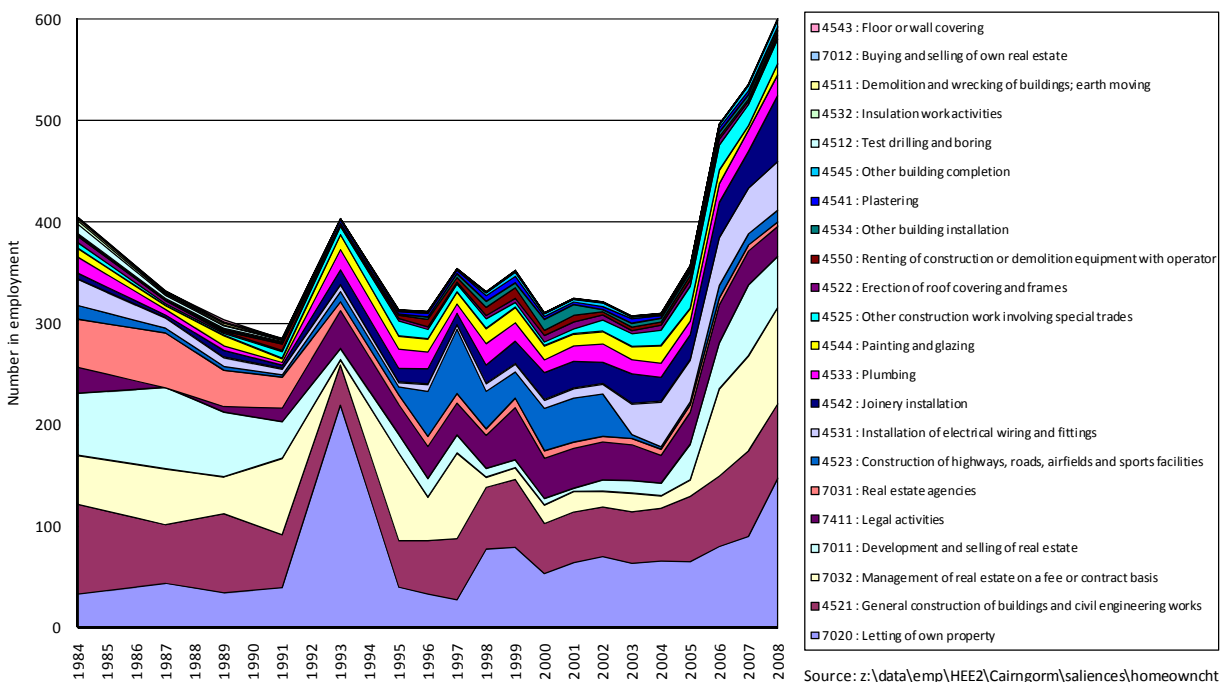


Figure 80 Home ownership and construction employment

Home ownership and construction sector employment





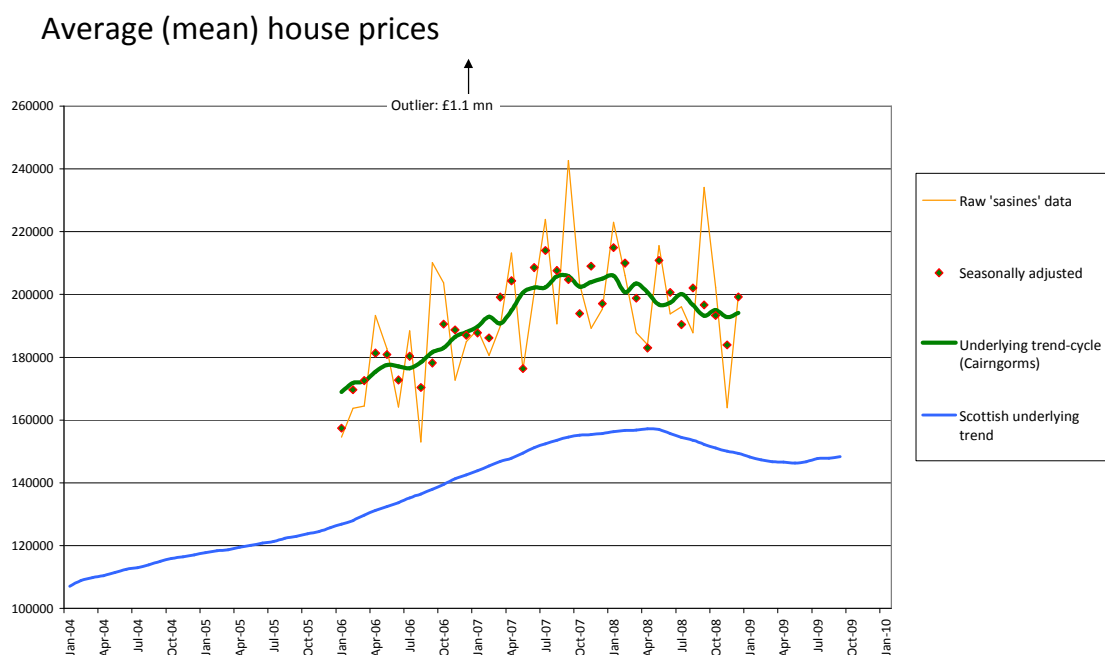
The housing market

There are more than 7,500 homes in the National Park area, with a value of more than £1.5 bn. Living in the National Park is seen as attractive and, for many people, a long-term commitment. This makes houses in the Cairngorms about a third more expensive, and market turnover normally rather slower than in Scotland as a whole. In terms of both house prices and transaction volume, the housing market in the National Park went into the recent recession about six to nine months earlier than Scotland as a whole.

The median value of houses sold in the Cairngorms National Park grew by seven per cent over the period January 2006 to December 2008¹². In December 2008 a 'typical' house in the Park cost £158,000. However, because there are a small number of much more expensive houses changing hands, the *average* (mean) price was significantly higher, £205,000

Figure 81 shows the overall house prices trend in the Cairngorms National Park and the individual monthly house prices, both with and without seasonal adjustment¹³. It indicates a modest upward trend in prices until the summer of 2007, when prices started to fall, but more slowly than the rate experienced elsewhere in Britain in 2008. It is also clear that the monthly figures are quite erratic, which is primarily a consequence of the small number of transactions each month – between 20 and 50.

Figure 81 House prices peaked in August 2007



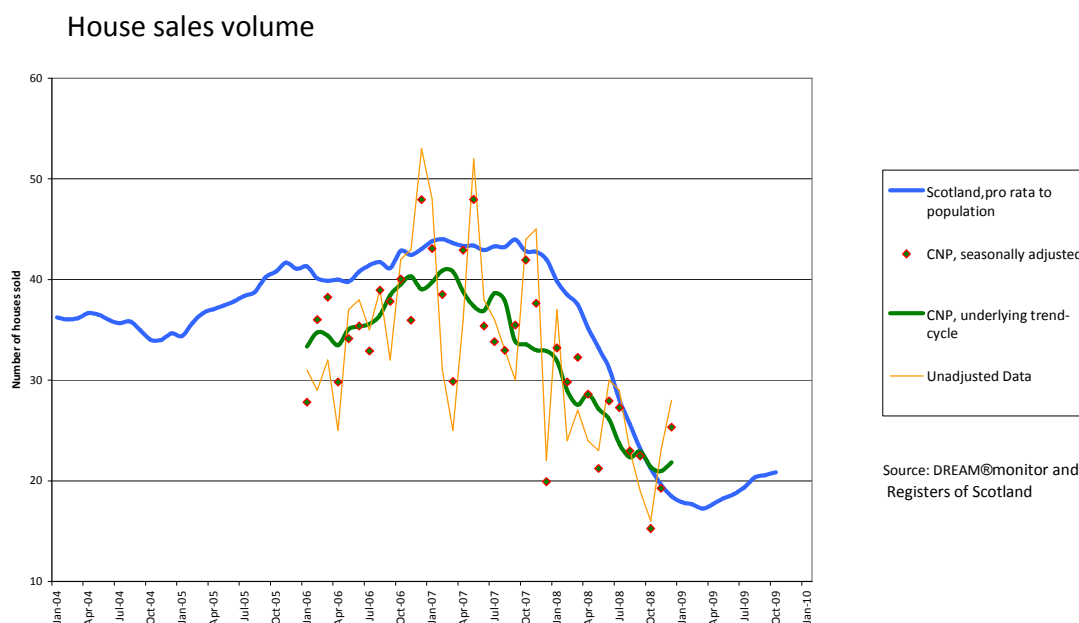
The number of housing transactions completed in the Park fell from 436 in 2006 and 440 in 2007 to 303 in 2008 – that is, by almost one third year-on-year. This reflects the movement across Scotland and the UK, but is less extreme than in parts of the country where property markets are considered newsworthy. Although less extreme, it is

¹² The median price is the middle of the price range for all houses that changed hands that month: half sold for more than the median, and half sold for less. The mean price, on the other hand, is calculated by adding up all the sales values, and dividing by the number of transactions. We have excluded four groups of transactions: those that appear to be gifts (eg changing hands for £1), those identified as being 'right to buy' sales, any others where there appears to be an error in the database, and some where the house value was several £million, and so distorted the mean.

¹³ The CNPA receives the raw data from Registers of Scotland, for whole years and with a lag. At some small expense, it would be possible to commission a monthly or quarterly update.

notable that the fall-off in volume began six to nine months earlier than the national fall-off, and also that the fall-off in volume is proportionally much greater than the fall in prices.

Figure 82 In 2008 the housing market was less active than hitherto



It appears that more than a third of housing transactions represent the formation of a new household, typically a new build but sometimes a conversion.

Table 10 The housing market

Housing market transactions and values

	2006	2007	2008
Mean House price (£000)	179.7	199.5	199.5
Number of transactions	436	440	303
Value of market turnover (£mn)	78.3	87.8	60.5
No of households	7350	7519	7632
Value of occupied stock 'marked to market' (£mn)	1320.7	1500.2	1522.7
Increase in households as % transactions	32%	38%	37%

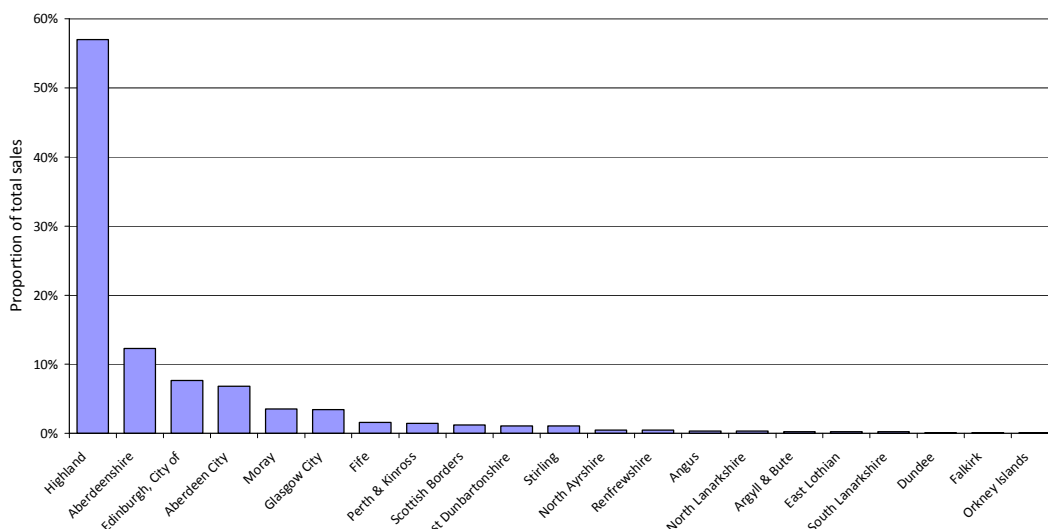
Sources: Registers of Scotland and General Register Office of Scotland

The majority of people buying houses in the Cairngorms National Park are from the Highland Council Area (see Figure 83) and many from Aberdeenshire. Unfortunately it is not possible to distinguish from the published statistics how many of these are internal moves within the Park, and how many are outsiders moving in¹⁴. Around one in six homes in the area are purchased by people from major Scottish cities, most notably Edinburgh and Aberdeen. These are places with exceptionally high housing prices themselves, and high incomes. There are likely to be a number of second home purchases within the total, and also an element of 'equity release', with people cashing in capital gains on city houses and buying within the National Park, whether for retirement reasons or otherwise.

¹⁴ This distinction could be drawn if special tabulations were commissioned from Registers of Scotland.

Figure 83 Where house buyers come from

Origin location of house buyers in the Cairngorms National Park



Based on 821 sales

Housing quality

Poor quality or inadequate housing can considerably lower the quality of life for its residents. The Scottish Index of Multiple Deprivation has used the number of people living in overcrowded accommodation and the numbers in households with no central heating as a measure of those suffering from housing deprivation. However, unfortunately there is no fresh data source since the Census in 2001, so the data predates the establishment of the Park.

It indicates that whilst there were no large concentrations of very poor housing, there was a sizeable proportion of the population living in housing which is below the norm for other parts of Scotland. At the time of the survey, a quarter (six) of the Park’s 25 datazones suffered a level of housing deprivation which placed them amongst the 40 per cent of Scotland’s localities which suffer greatest from housing deprivation (see Table 11).

The highest levels of housing deprivation were found in some of the more rural parts of the Park, particularly in Deeside and in Aviemore. Housing in the other settlements, by contrast, was more likely to be meeting reasonable minimum standards.

Table 11 Housing deprivation by locality

Data zone	Locality	Area	Housing domain rank
S01000312	Ballater town (south)	Deeside	2079
S01003755	Aviemore town (west)	Badenoch and Strathspey	2106
S01003750	Kingussie hinterland (north)	Badenoch and Strathspey	2136
S01000360	Strathdon	Deeside	2253
S01000303	Ballater hinterland	Deeside	2472
S01003754	Aviemore town (centre)	Badenoch and Strathspey	2550
S01003759	Boat of Garten	Badenoch and Strathspey	2679
S01005147	Blair Atholl	Highland Perthshire	2842
S01000710	Glen Clova	Angus Glens	3077
S01003766	Grantown on Spey town (centre)	Badenoch and Strathspey	3386
S01003743	Laggan / Dalwhinnie	Badenoch and Strathspey	3440
S01003756	Nethy Bridge	Badenoch and Strathspey	3492
S01004233	Tomintoul	Moray	3518
S01003772	Grantown on Spey hinterland (west)	Badenoch and Strathspey	3662
S01003751	Aviemore east / Glenmore	Badenoch and Strathspey	3687
S01003760	Carrbridge	Badenoch and Strathspey	3814
S01003771	Grantown on Spey hinterland (east)	Badenoch and Strathspey	4402
S01000301	Braemar	Deeside	4580
S01003748	Kingussie town (south)	Badenoch and Strathspey	4594
S01003747	Newtonmore town	Badenoch and Strathspey	4605
S01000708	Glen Isla	Angus Glens	4626
S01003764	Grantown on Spey town (south)	Badenoch and Strathspey	4873
S01003767	Grantown on Spey town (north)	Badenoch and Strathspey	4945
S01003749	Kingussie town (north)	Badenoch and Strathspey	5411
S01000316	Ballater town (north)	Deeside	5467

Legend

Ranking *	Level of deprivation
1 up to 1301	Much greater than Scottish average
1302 up to 2602	Slightly greater than Scottish average
2603 up to 3903	Around Scottish average
3904 up to 5204	Slightly less than Scottish average
5205 up to 6505	Much less than Scottish average

* Ranking is out of 6505 datazones in Scotland

Source: Scottish Index of Multiple Deprivation 2009, Scottish Government. Ref: P240/SIMD/deprivation/SIMD2009 housingtab

Housing affordability

The affordability of houses for people who want to, or are needed to, work in rural areas is frequently an issue. Figure 81 indicates that house prices in the Cairngorms are fairly consistently one third higher than the Scottish average. Later in this report, in Section 10.1, it is estimated that average earnings are less than three quarters of the Scottish norm. The consequence of this situation is that, on a simple calculation, for locally employed people houses are less than half as affordable in the Cairngorms as the Scottish average.

8.8 Public services: administration, health and education

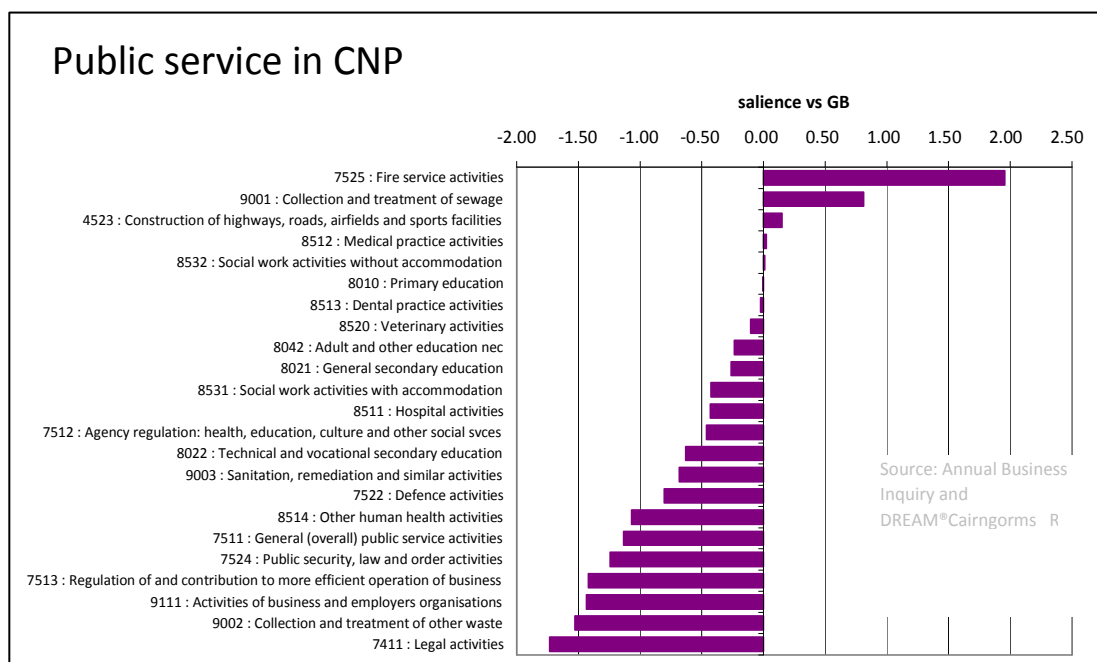
The Park has no significant centre of public administration, so the overall scale of public sector employment is very low. About 1,700 people are employed in public services.

In absolute terms the largest identified public sector employers are those providing very local personal services to less-mobile people: primary schools and health centres, with over 300 employees each. In comparative terms the fire services are by far the largest public services – paid volunteers counting as part-time employees – so the 12 stations dictated by the geography, the forests and other significant features each record around 12 employees. This is about seven times as many as would be normal for a community with this many people.

We have also included sewage collection and disposal as a public service, and it is over-represented by more than 100 per cent in the Park in employment terms, because dealing with non-connected sewage systems is much more labour-intensive than with connected systems. Infrastructure construction, whether under direct public control or simply as a key part of public spending, is over-represented slightly in terms of GB norms. However, although relatively big, neither sewage nor infrastructure-building employs more than two dozen people.

Regular medical practices, front line social services, primary education and dentists all employ numbers in line with national (GB) norms, somewhat surprisingly given the older-than-average age structure, and the geographical pressures on schooling which tend to reduce class size. Other public services are smaller-than-normal, and sometimes significantly so. Adult and secondary education, residential care, and hospital/clinic facilities employ between half and two thirds normal levels, and technical and tertiary education less than half. Locally, the other areas of the public sector in the Park employ fewer than a quarter of the norm for a community of this size.

Figure 84 A small and highly unusual public sector in the National Park

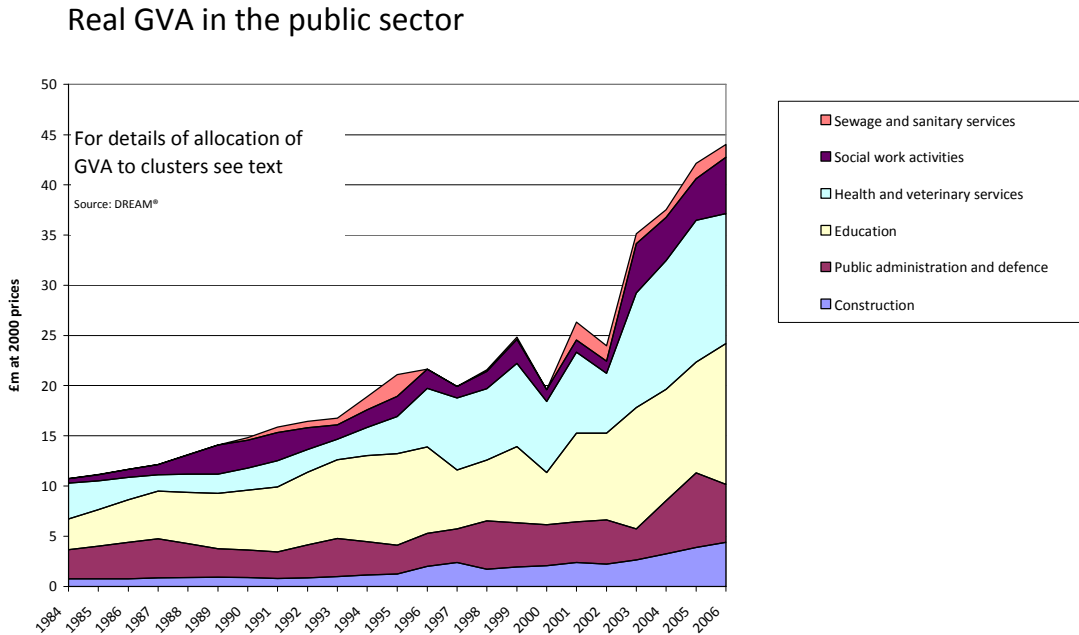


From an employment point of view the small size of the public sector means there are fewer jobs for highly qualified professionals. From a provision point of view the consequence is that for some public services Park residents are required to travel, normally to Inverness or Aberdeen, or to move away. The difficulty of access to these services is reflected in the one domain where the area is relatively deprived by Scottish norms – geographic access (see page

112). As well as the well documented youth out-migration, this is likely to be a factor in the net out-migration found amongst the over-70s.

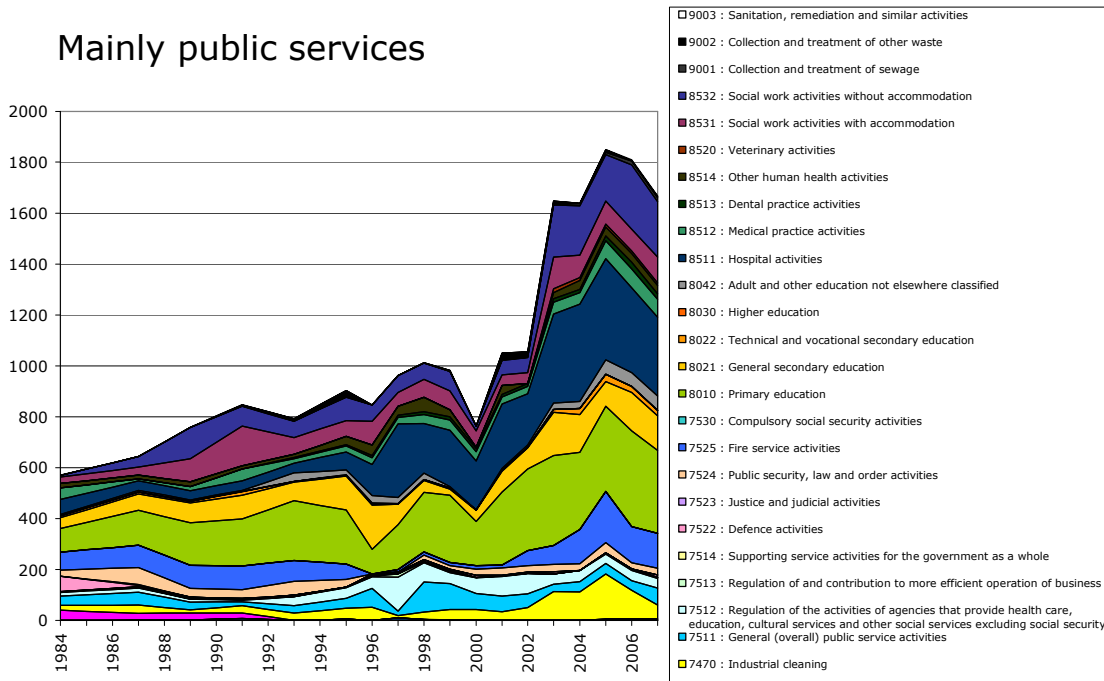
In assessing public sector GVA we have made some allowance for public sector investment by including a proportion (a quarter) of the construction industry's output. On this basis public sector GVA is currently running at about 16 per cent of the total GVA created in the Park.

Figure 85 Public sector gross value added



Employment has been added up on a strictly sectoral basis, and works out at about 19 per cent of employee-jobs. This includes a substantial number of part-timers.

Figure 86 Public sector employment

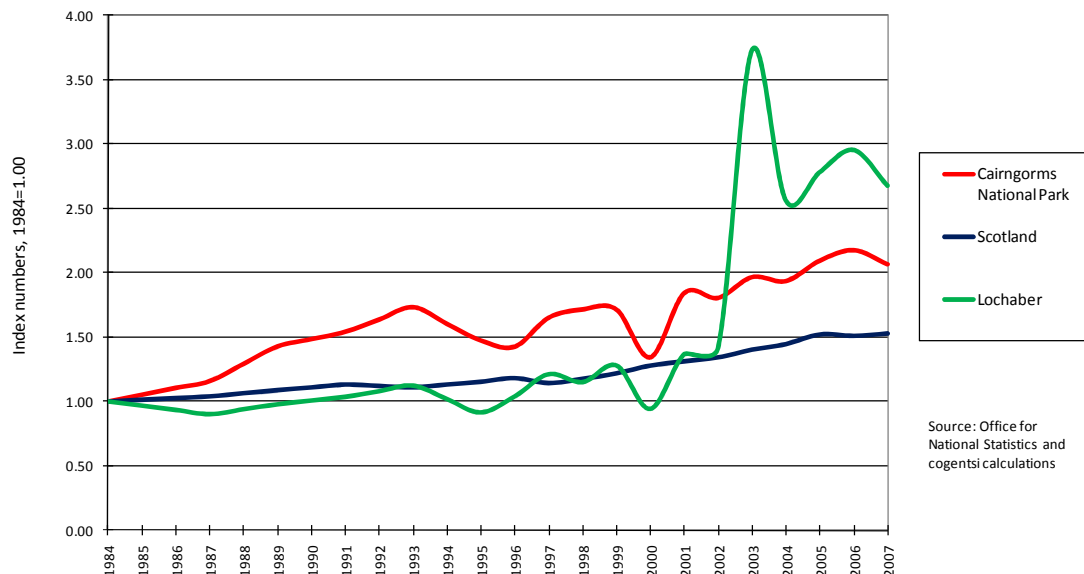


Over a generation there has been significant growth in the public sector in the Park, as part of a long term upward trend, as shown in Figure 87.

Nevertheless the public share of the economy, as measured by the level of public sector employment and GVA, remains very low by Scottish standards, and doubly so if account is taken of the special situation of the fire services.

Figure 87 Faster growth in public sector employment

Employment change in public administration



8.9 The ‘domestic’ economy of the Park – local private sector services and retailing

The Park contains three significant retail centres, Aviemore in the west, Grantown-on Spey to the north, and Ballater in the west.

Of these, only Grantown has ready comparators in other Scottish regions, with its broad stone built main street, several outlets geared for the trade that passes along the main road and tourist-trapping tearooms, but also a selection of specialised shops appropriate to a rural centre, and convenience stores and supermarkets.

Ballater is a retail centre By Royal Appointment, with a significant number of shops pitching their offering at a level designed to maintain their Royal Warrant. Some outlets aspiring to attain a Royal Warrant, and compete with those that have one, whilst a few others have opted for distinct bargain-oriented affordable marketing.

One shudders to think what Aviemore would be like without the A9 as a bypass. At busy times the road and pavements through the centre are crowded both with locals and visitors. They are served by about 60 outlets, with a floor area of about 10,000 square metres. Although in terms of population Aviemore itself is only one twentieth the size of Inverness, itself a thriving regional shopping centre, in terms of shopping it is between one sixth and one tenth the size. Recreational shops, particularly sports goods, are by far the most distinctive element of Aviemore’s offering.

9 Connectivity

9.1 Internal geography

The Cairngorm Mountains are at the geographical heart of the Cairngorms National Park. However, they also form a physical barrier to transport and communication between communities within the Park's boundaries. Transport routes run inside the north west, north east and south east boundaries of the Park. There are no vehicle routes across the Park and none along the south west boundary. Figure 88 is a map of the Park with the main road and rail links marked.

Figure 88 Transport links within the National Park



9.2 Road connections

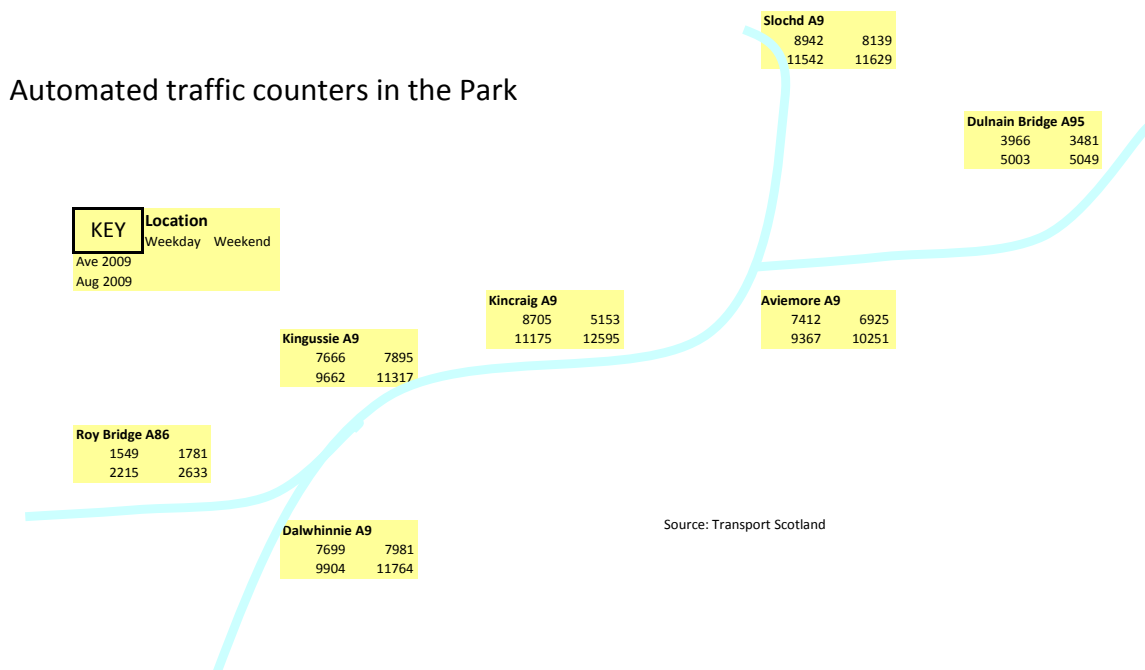


Point of entry marker, Glenlivet

There are two main road access routes into the Park – the A9 and the A93.

The A9 is the main access to the west of the Park, from Inverness and the north and from Perth and the south. Most of the main centres of population in the west of the Park are located along the route of the A9 (although all of the actual settlements are now bypassed). Travel time from Aviemore to Inverness along the A9 is around 45 minutes. Travel time from Aviemore to Perth is 2 hours¹⁵.

Figure 89 Traffic counts in the west of the Park

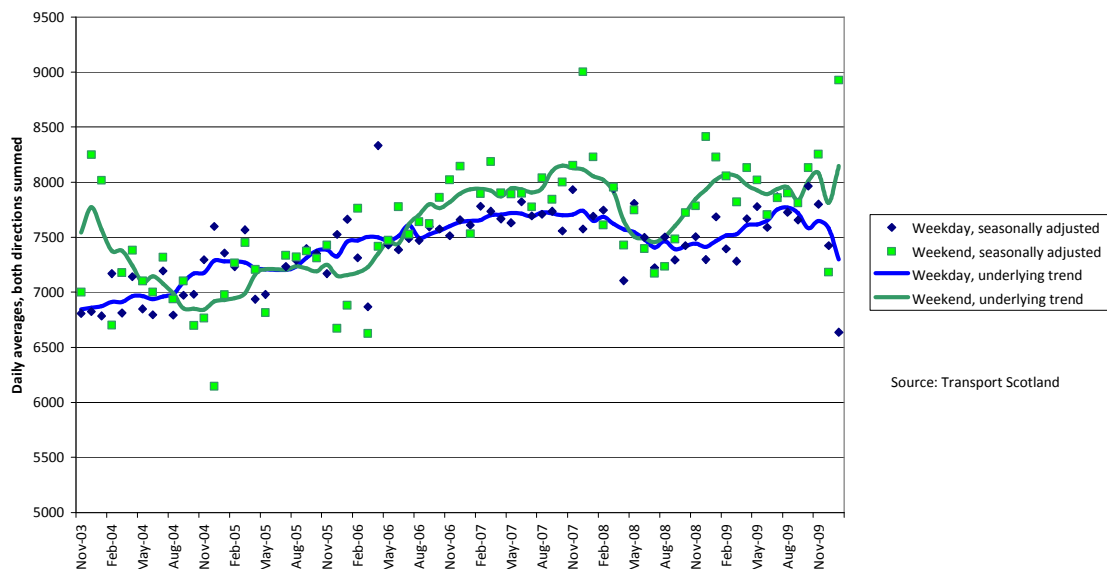


¹⁵ Source: AA Route Planner

Based on traffic count statistics for the Kingussie area, currently about 7,700 vehicles pass up and down the A9, as shown in Figure 90. This represents an increase of 15 per cent at the time of designation, when the daily flow was 6,700 vehicles. Weekend traffic is, on average over the year, about 500 vehicles per day more than weekend traffic. August is the seasonal peak.

Figure 90 Increasing traffic on the A9

Traffic on the A9 at Kingussie

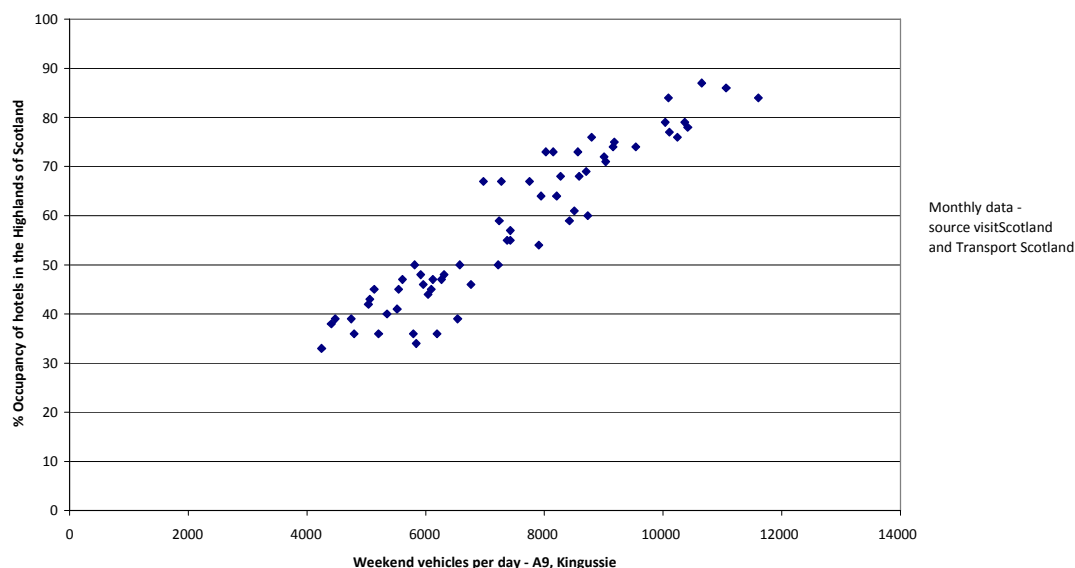


Months of particularly good or bad weather affecting traffic flows can be picked out from the chart. This is most striking is January 2010, where heavy snow reduced weekday traffic by 15 per cent. This is a large figure when one considers it an average over an entire month, and has been boosted by weekend traffic (presumably for winter sports), by a similar amount.

The link between tourism and traffic flows is very clear indeed, and underlines the role of the Park as a gateway to the Highlands. When weekend traffic at Kingussie approaches 12,000 vehicles per day, it's a sure sign that hotel occupancy across the Highlands is approaching 90 per cent. When flows are down to 4,000 vehicles per day, hotels are only 40 per cent full.

Figure 91 Traffic flows and hotel beds

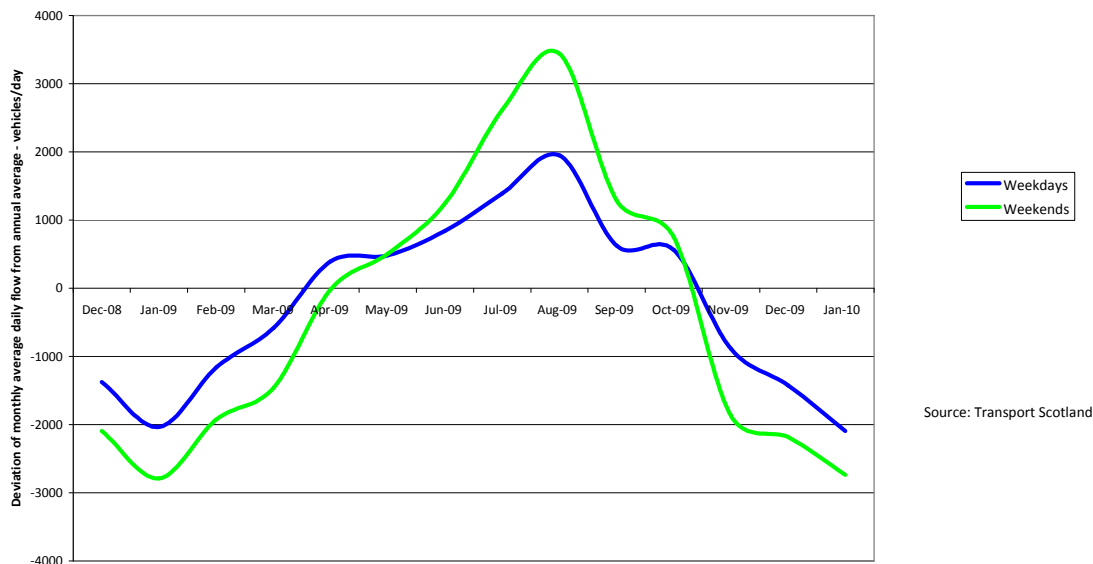
The A9 - barometer of the Highland holiday trade



Linked to the tourism factor, the regular seasonal swings are very large indeed, as indicated by the data in Figure 92. For weekdays the difference between August traffic and January traffic is 4,000 vehicles per day (i.e. from 5,500 to 9,500 vehicles per day, at current traffic levels). For weekends the swing is even larger, at 6,300, from 5,200 in January to 11,500 in August. Thus summer tourism more than doubles weekend traffic on the A9 – although it must be recognised that these are not all Park visitors – these counts include seasonal flows covering much of the Highlands.

Figure 92 Traffic flows double in the summer

Seasonal patterns in A9 Kingussie traffic - 2009



Although the A9 traffic is largely through traffic, the schematic map (Figure 89) indicates significant numbers of vehicles turning off the trunk road A9 to go through Kingussie and through Aviemore. A rough estimate for August would be 1,400 per day at Kingussie and 2,300 at Aviemore, and these will be under-estimates as they exclude those who exit and re-enter the trunk road at the same junction.

In the east, the A93 road is the main route into and out of the Park. This links Braemar and Ballater with Aberdeen and Perth. Ballater to Perth takes two hours to travel by car whilst Ballater to Aberdeen is 80 minutes by road.

There is only one automated traffic counter in the east of the Park whose results are reported, at Millhead/Tarland. This counter records about 150 vehicles per day.

The main road link between the west, centre and east of the Park is the A939 which runs from Ballater to Grantown on Spey, where it meets the A95, continuing thence itself to Forres in Moray. The A97 links the Donside area with Huntly and Alford. The Angus Glens do not have any direct road links to the rest of the National Park.

9.3 Bus and coach services

Long distance intercity coach services operate along the A9 calling at various communities in the west of the Park, offering limited stop services to and from Inverness to the north and Perth, Edinburgh and Glasgow to the south.

There are also regular bus services operating along the A93 to and from Aberdeen. This offers an hourly service between Ballater and Aberdeen and a two hourly service between Braemar and Aberdeen.

The majority of other bus services are less frequent, and tend to be focused around schools services and day time services.

9.4 Rail services

There are five railway stations within the boundaries of the National Park. From north to south these are Carrbridge, Aviemore, Kingussie, Newtonmore and Dalwhinnie. These stations are all located on the Highland line, running from

Perth to Inverness, and are served by First ScotRail day services. Aviemore, Kingussie, Newtonmore and Dalwhinnie are also served by the Caledonian overnight sleeper service between London and Inverness whilst a day time link to and from London is provided by East Coast. This service stops at Aviemore and Kingussie.

Currently 22 passenger train services (11 northbound and 11 southbound) run along the main line during any 24 hour period (excluding Sundays), all of which stop at Aviemore. A total of 20 trains (10 each way) stop at Kingussie and 11 stop at Newtonmore (five northbound and six southbound). Dalwhinnie and Carrbridge each receive a total of 10 trains each day.

Table 12 shows the number of passengers using each of the stations for the year ending 31st March 2008 and compares it with 2004/5. It indicates that all stations have enjoyed an increase in patronage over recent years, with an overall increase in passenger numbers of 12 per cent between 2004/05 and 2007/08. Recent developments have sought to increase the attractiveness of train travel for commuting between stations in the area. In December 2005, as part of the 'Invernet' initiative¹⁶ to provide a suburban rail network for Inverness, additional services were introduced on routes between the Highland capital and Kingussie, Aviemore and Carrbridge.

Table 12 Passengers at Cairngorms railway stations

Station	Standard priced tickets	Reduced price tickets	Season tickets	Total	% change on 2004/05
Aviemore	54,538	58,765	2,128	115,431	43%
Kingussie	21,558	10,608	1,250	33,416	51%
Newtonmore	5,110	1,882	68	7,060	31%
Carrbridge	3,062	2,216	160	5,438	185%
Dalwhinnie	1,279	696	0	1,975	22%
Cairngorms total				163,320	12%

Passenger numbers are a sum of the number of journeys starting at the station, and the number terminating at the station based on ticket sales for year to 31st March

Source: Office for Rail Regulation

There is also a seasonal tourism based service, the Strathspey Steam Railway, which runs during the summer and around Christmas, from Aviemore to Broomhill near Grantown on Spey, using restored steam engines. The line originally continued to Forres, connecting with the Inverness-Aberdeen line there. It was closed in 1965 but reopened by enthusiasts in 1978. There continue to be campaigns to reopen the remainder.



Strathspey steam railway

There are no train stations remaining open in the Deeside or Angus Glens areas of the Park. Ballater was, however, once the terminus on a branch from Aberdeen, and the station building is currently used as a Tourism Information Centre with Royal connections that include not only Queen Victoria but the Tsar of Russia. A preservation society, the Royal Deeside Railway, has opened a short length of track near Milton of Crathes (outwith the Park boundary) and runs trains on Sundays in the summer. Apart from the nearest stations to Deeside is at Aberdeen while the Angus Glens' main local station is at Dundee. The closest train stations to the Moray area of the Park are Forres, Keith and Elgin on the Inverness to Aberdeen line.

9.5 Air links

There are no airports within the Cairngorms National Park. The nearest airports are at Inverness, Aberdeen and Dundee.

¹⁶ www.invernet.info

Inverness Airport is located north west of the National Park. Travel time is around one hour from both Grantown on Spey and Aviemore¹⁷. Inverness Airport acts as a hub for Highlands and Islands services, including to and from Stornoway, Sumburgh, Benbecula and Kirkwall. It also has links to many of the main centres of population across the UK, including Edinburgh, London (Gatwick and Luton), Birmingham, Manchester, Belfast City airport and Bristol¹⁸.

Aberdeen (Dyce) airport is located about 50 km to the east of the National Park. Travel time is around two hours from Braemar and 70 minutes from Ballater. Aberdeen has air links to most main UK airports including Belfast, Birmingham, Bristol, Durham Tees Valley, East Midlands, Exeter, Humberside, Kirkwall, Leeds Bradford, Liverpool, London Gatwick, London Heathrow, London Luton, Manchester, Newcastle, Norwich, Southampton, Stornoway, Sumburgh and Wick. It also has a number of international links, including to Norway (Bergen and Stavanger), Denmark (Copenhagen and Esbjerg), Ireland (Dublin), the Netherlands (Amsterdam and Groningen) and France (Paris Charles de Gaulle)¹⁹.

Dundee airport offers a more limited service, with scheduled routes to Belfast City airport, London City airport and Birmingham²⁰. The airport is located around one hour from the Angus Glens.

By road Edinburgh Airport is about three hours from Aviemore, and Glasgow Airport three and a half.

9.6 Telecommunications

In 2001 only 43 per cent of Scotland had broadband connectivity, but as a result of Government initiatives and the programmes of the Enterprise networks this has now risen to 99 percent. Businesses, communities and individual subscribers within the Park have been provided with access under the 'Broadband for Scotland' initiative and the 'Broadband Reach' project. However broadband speeds rarely exceed 0.5Mbits/s (compared with a UK average of 4.1 Mbits/s), due to distance from the exchange and the activation technology used in small exchanges.

There are many parts of the Park where the topography defeats even 2G mobile coverage, and there is no access to 3G in the Park.

Connections to sparsely populated areas are not as viable commercially as connections in towns, and telecommunications policy is a 'reserved matter' under the control of the Westminster Government which has newly made commitments to draconian expenditure cuts. There are currently questions, therefore, as to how quickly plans to extend broadband and mobile coverage will be realised.

¹⁷ Source: AA route planner

¹⁸ Source: Highlands and Islands Airport Authority, Winter 2010 schedule services

¹⁹ Source: BAA www.aberdeenairport.com

²⁰ Source: Highlands and Islands Airport Authority

10 Incomes and wealth in the Park



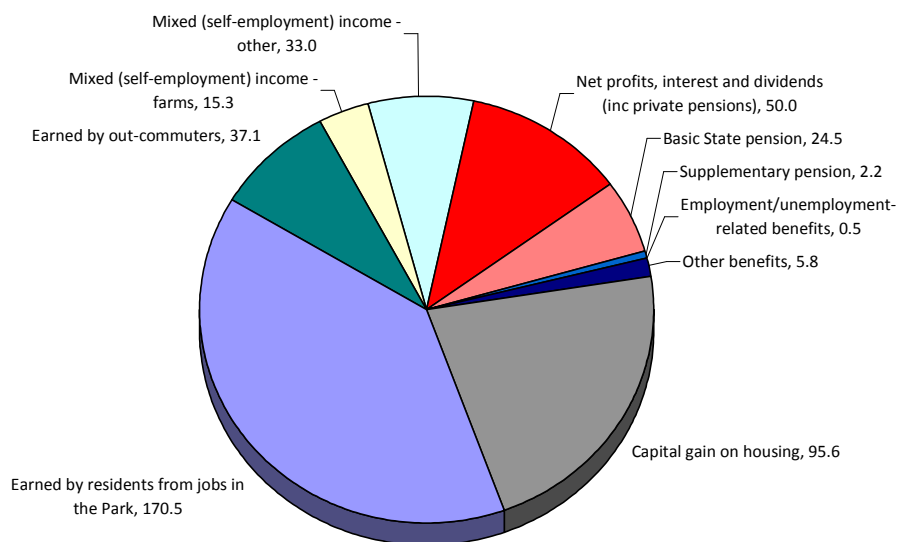
Creating wealth on the park: farming at Broomhill

The financial resources available to Park residents come from a wide range of sources. Their own earnings are the largest element, some paid by an employer within or outwith the Park, some earned through self-employment, in which agriculture figures strongly. A large proportion are returns on residents' assets, either their financial assets in terms of shares, deposits, insurance policies or pension rights, or their real assets, notably their homes. Others are benefits, some paid as a result of statutory rights and accumulated contributions, others based on need.

Broadly, the Park might be classified as 'income light, asset heavy', in that wage levels are relatively low, and the proportion of people working is not high, whilst the significant number of older residents means that several have accumulated wealth. This gives rise to the overall pattern of resources shown in Figure 93.

Figure 93 Sources of household spending power 2006

Gross Household Resources in the Park 2006 - £435 mn



Source: DREAM® and cogentsi estimates

Ref P240/incomescnp/chart1

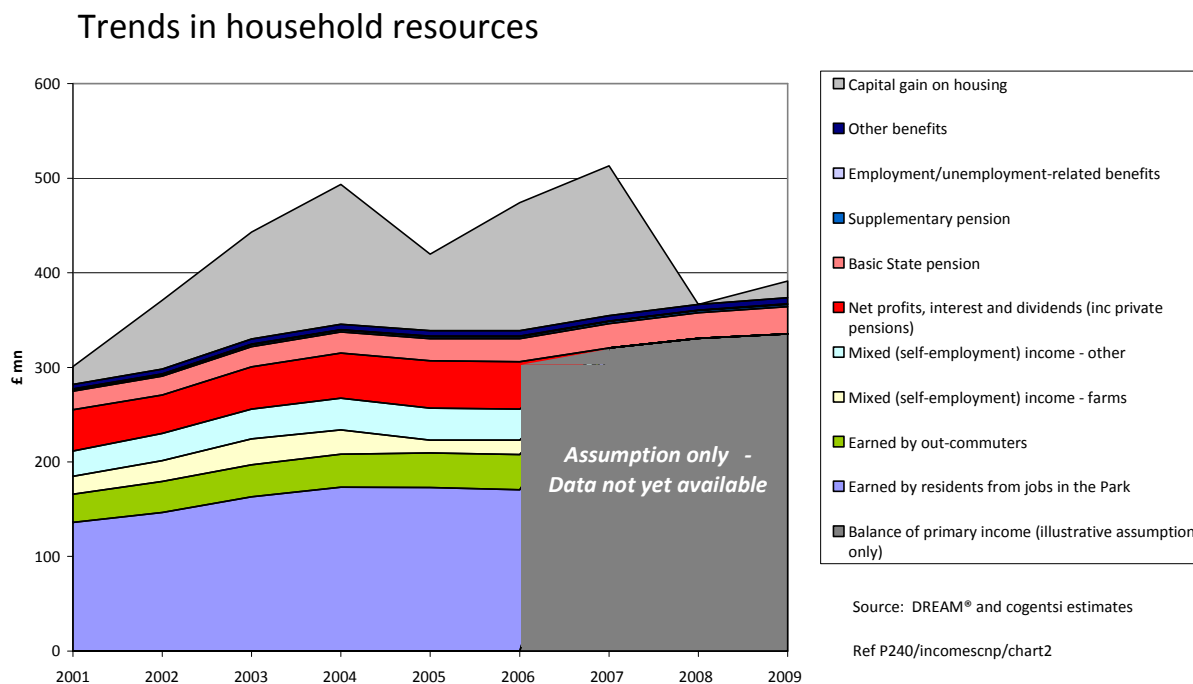
Thus in 2006 wages and salaries (including employers' NIC) made up slightly less than half of Park residents' financial resources, with self-employment incomes bringing the figure up to 60 per cent. Pensions and investment income made up between a sixth and a fifth, and the capital gains from rising house prices a similar amount, in that particular year.

Individual components of resources change from year to year, and to give some idea of the components of these changes over the period since designation, estimates have been made for the period from 2001 to 2009.

The 2008 and 2009 figures for earnings shown in Figure 94 are purely illustrative, since there are no regional accounts for these years yet. However, it is helpful to show how the fluctuations in the housing market have affected the finances of residents in the current recession.

Shifts in house prices are by far the most volatile factor, but it is noteworthy that earned incomes grow in a stop-start manner that is far from even, and that at times farm incomes have declined.

Figure 94 Trends in household resources



Source: DREAM® and cogentsi estimates
Ref P240/incomescnp/chart2

Table 14 Financial trends for Park households

Estimated Household Resources in Cairngorm National Park

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Employment income for work in the Park	166.4	180.1	198.0	209.3	209.1	205.7			
less paid to in-commuters	30.5	33.5	35.0	36.0	36.2	35.2			
Earned by residents from jobs in the Park	135.9	146.7	163.0	173.3	172.9	170.5			
Earned by out-commuters	30.1	32.8	33.9	34.9	36.8	37.1			
Employment income (inc NIC) of Park residents	166.1	179.5	196.9	208.2	209.7	207.6			
Mixed (self-employment) income - farms	18.9	21.8	27.4	25.7	13.5	15.3			
Mixed (self-employment) income - other	26.5	28.7	31.5	33.6	33.5	33.0			
Profits interest and dividends received	55.3	53.3	58.8	62.3	64.3	64.0			
Profits interest dividends paid	11.5	12.6	14.0	14.6	14.0	14.0			
Net profits, interest and dividends (inc private pensions)	43.8	40.7	44.8	47.7	50.3	50.0			
Balance of primary Income	255.2	270.7	300.6	315.1	307.1	305.9			
Basic State pension	19.5	19.9	21.4	22.2	23.2	24.5	25.6	27.0	28.5
Supplementary pension	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.5
Employment/unemployment-related benefits	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.7
Other benefits	4.8	5.3	5.6	5.7	5.8	5.8	6.0	6.0	6.2
Gross secondary income	26.7	27.6	29.4	30.5	31.5	32.9	34.3	35.9	38.0
Capital gain on housing	18.9	72.7	112.7	147.9	81.1	135.2	158.2	0.0	17.6
Estimated gross resources	300.8	370.9	442.7	493.4	419.7	473.9	513.0	366.4	391.0

10.1 Earnings from employment

There are no official data available for earnings in the National Park. However, there is plenty of evidence that earnings are well below the Scottish and UK averages.

In the five Council Areas that will contribute to the enlarged Park, only Aberdeenshire is close to the Scottish mean income, as shown in Table 15. However, the shire figures will be heavily influenced by high earners living near and working in or near the city of Aberdeen, which is by far the best-paying Council area in Scotland. Therefore, Aberdeenshire residents who are actually living within the Park are likely to have smaller incomes more in line with the figures for other parts of the Park.

Table 15 Weekly earnings distribution in selected Council areas, Scotland and the UK

Earnings levels and distributions 2007

	Mean	Percentiles											
		Scotland	10	20	25	30	40	Median	60	70	75	80	90
United Kingdom	452	106%	115	198	230	260	315	441	525	575	634	815	815
Scotland	426	100%	120	196	226	252	306	360	425	506	554	608	757
Aberdeenshire	419	98%	94	167	204	231	299	352	421	514	549	608	768 est
Angus	355	83%	89	140	180	213	270	319	371	445	507	548	652 est
Highland	384	90%	112	180	209	227	265	311	378	455	498	534	699 est
Moray	359	84%	137	191	203	217	270	300	364	419	480	540	672 est
Perth & Kinross	396	93%	125	211	233	251	302	344	400	479	519	595	730 est

Source: Annual Survey of Hours and Earnings (and cogentsi for District 90 percentiles)

The likelihood is that the distribution of earnings for Park residents is closer to the Moray and Angus figures than it is to Highland and Perthshire, because both the industrial and urban structure in the Park is much closer to the first two districts. Indeed, we have strong evidence that it is likely to be below the Moray and Angus figures.

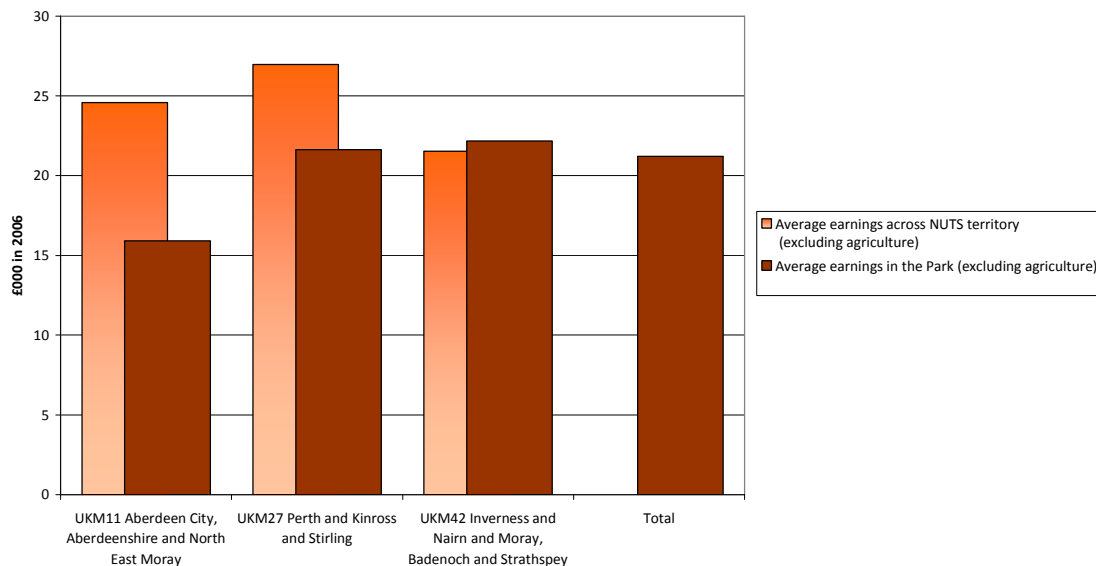
To aid understanding of the incomes of local residents, the earnings by industry in each of the contributing NUTS²¹ areas have been calculated. With the exception of utilities and distilling, the Park tends to focus on the lower paying industries, notably the hospitality industries and retailing. Using these estimates of employee compensation industry-by-industry, annual earnings levels per head for Park residents for 2006 are estimated at significantly lower levels than the contributing areas. One factor behind this is the relatively light representation of the public sector in the Park’s economy. Since they pay according to national scales, public authorities in rural areas tend to be amongst the better payers.

Average annual compensation of (non-agricultural) employees in the Park in 2006 was estimated at £18,370, which is 74 per cent of the Scottish average of £24,840.

The total sum of employee compensation (including pension and national insurance contributions), excluding agriculture, was estimated at £156m in 2006. The addition of agriculture would bring it to £163m.

Figure 95 Earnings in the Park are lower than the contributing districts

Park industries are at the low end of the earnings scale



²¹ 'NUTS' is the standard statistical geography of the European Union. The (enlarged) Park consists of part of four of Scotland's 23 NUTS3 areas – but the part of Angus and Dundee is entirely agricultural, so is omitted from the Chart.

10.2 Earned income from commuting

Section 5.2 estimated that about 1,800 people live in the Park but commute to work outside it. Their incomes will be slightly higher than local people's: at the time of the Census an estimate reconciled across Scotland was that out-commuters from Badenoch and Strathspey earned approximately £18,000. Five years later in 2006 this would have been equivalent to £21,000, so an estimated commuting income of £37m is appropriate. Similarly, an estimated £35m is paid to the 1,500 people who commute into the Park.

10.3 Self employment income

Our estimate in Section 5.1 was that there are about 2,000 people self employed in the Park, about 500 of them in agriculture and many of the rest in service industries including hospitality and retailing. Commensurate with the £42m value added estimated from Park agriculture, of which £22m is paid out to compensate employees, self-employed earnings of the farm occupiers of some £15m might be expected²².

In most of Scotland self employment incomes are about 16 per cent, in total, of the amount of employment incomes. In the Highlands and Islands this figure rises to 22 per cent. The proportion of people self employed in the Park is slightly above that in the Highlands and Islands, sufficient to support an estimate of 25 per cent of employment income. This would imply earnings (strictly speaking 'mixed income') of £33m for the remaining 1,500 people, or £22,000 per person. Bearing in mind that this includes those working both long and short hours, it would seem commensurate with the earnings level estimated above in section 10.1.

10.4 Property Income

Property income is the income that Park residents receive from the assets that they own – essentially profits, interest, dividend and rents. It normally represents a return on savings, and thus tends to accrue to people who have had high incomes and are older, and also to people who have 'downsized', moving from areas of high property prices. According to the Scottish Household Survey, people in Aberdeenshire, Perthshire and the Highlands all have significantly more savings than the Scottish average, and according to the UK Regional Accounts people in North East Scotland and the Highlands and Islands have higher property income in relation to their earned income. Nevertheless Park residents would appear not to be as affluent in these terms as the inhabitants of the more genteel suburbs of East Renfrewshire, East Dunbartonshire, Midlothian, Helensburgh and Bridge of Don. Taking into account the age structure of the Park, property income is estimated at 25 per cent of the total of earned income in 2006, or £64m.

10.5 Benefits

Benefits are themselves a significant part of household incomes, and because several are means-tested, benefit take-up is a valuable guide to the income levels of the residents of the Park. Some benefits are targeted at those of working age whilst others are major components of the incomes of the retired.

Working age benefits

Benefits paid to those of working age include:

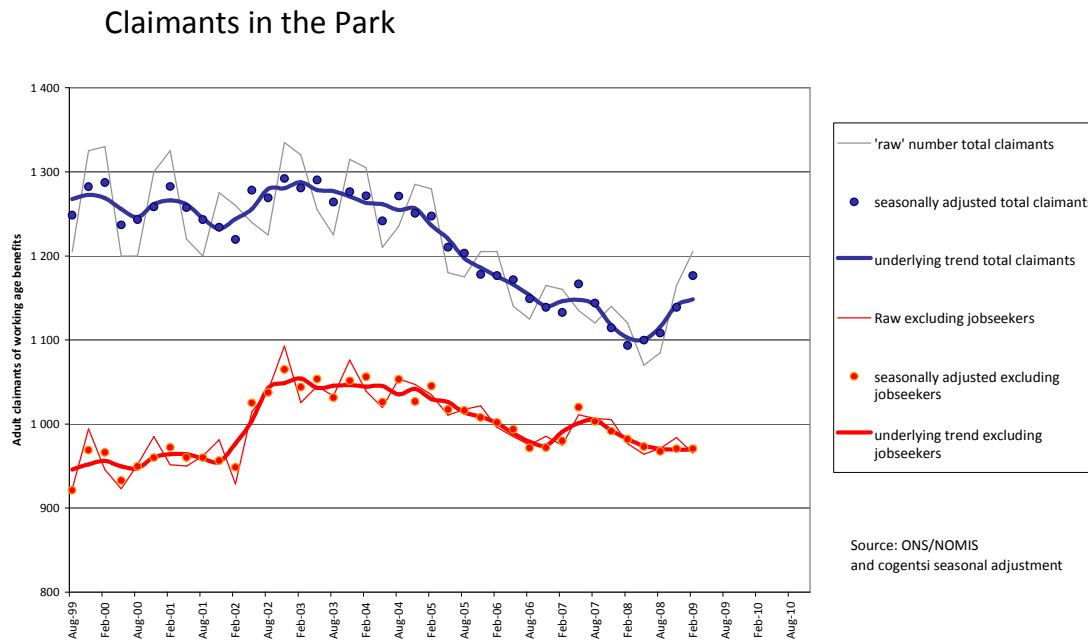
- Income support (IS), which is paid to those who don't have enough money to live on and can't be available for full-time work due to their circumstances, such as being a lone parent, registered sick or disabled, or caring for someone who is sick or elderly.
- Incapacity benefit (IB), which is paid to those who cannot work because of illness or disability. (The Employment and Support Allowance replaced Incapacity Benefit and Income Support paid on incapacity grounds for new customers in October 2008).
- Jobseeker's Allowance (JSA), which is paid to those who are unemployed and actively seeking work.

²² To make a more detailed estimate a close survey of farm ownership and farm incomes would be required.

- Disability Living Allowance (DLA), which is paid to those who need help with personal care or have walking difficulties because of a physical or mental disability.

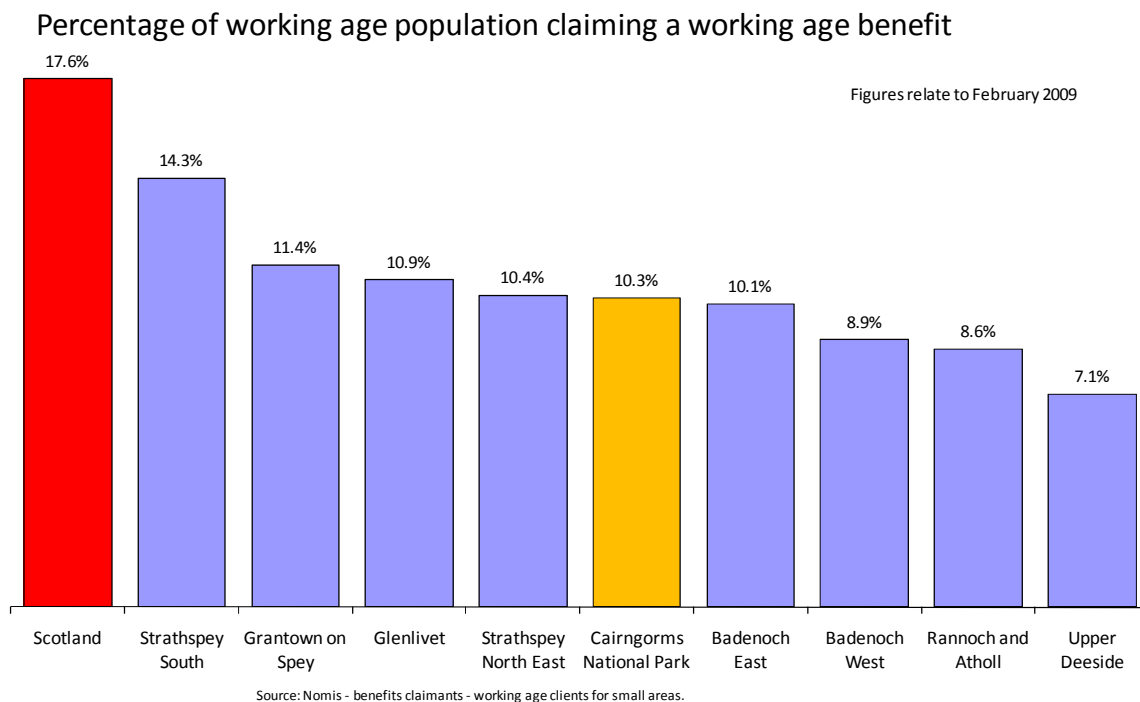
The latest available data (relating to February 2009) indicates that 1,200 Park residents are in receipt of some sort of working age benefit (see Figure 96). Since the Park was designated, the numbers in receipt of benefits other than Jobseeker’s allowance remained steady, at around 1,000. The number eligible for Jobseeker’s Allowance in 2009 was 222.

Figure 96 Benefits claims follow employment cycle



Currently a considerably smaller proportion of those of working age and living in the Park claim benefits compared to elsewhere in Scotland (see Figure 97). Only one in ten of working age residents in the Cairngorms claim a benefit compared to more than one in six across the country.

Figure 97 Working age benefits take up



Within the Park, the Aviemore area (Strathspey South ward) has the greatest proportion of its working age population on benefits with one in seven in receipt. This, however is still lower than the Scottish average. The lowest rates of claimant are found in Deeside, where only one in 14 residents of working age receives a benefit.

This is likely to reflect the different employment opportunities which are available across the Park. Whilst Aviemore’s jobs market is dominated by relatively low paid employment opportunities in the tourism sector, workers living in Deeside benefit from access to higher paid oil and industrial-related jobs in Aberdeen.

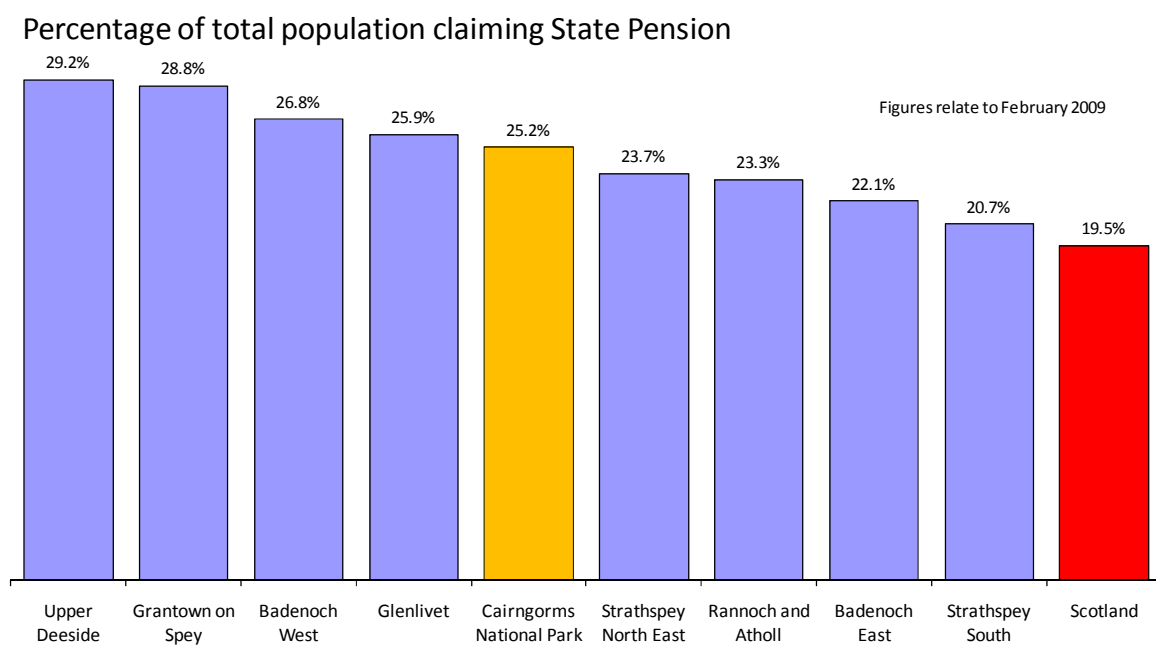
The current rates of benefit are just below £60 per week for Jobseeker’s Allowance, just below £80 per week for income support, and just below £100 per week for incapacity benefit. Working age benefits are therefore estimated at £7m per year.

State Pension

The Cairngorms has a population distribution which is older than many other parts of the country. It is therefore to be expected that a greater proportion of the population will be in receipt of the State Pension. The latest data suggests that whereas fewer than one in five (19.5 per cent) of the Scottish population receive the State Pension, more than one in four (25.4 per cent) of Cairngorms residents do so. This represents a total of 4,985 claimants (as at February 2009).

When it comes to age-related benefits the converse is the case. All eight of the wards which make up the Cairngorms National Park area have a greater proportion of their residents in receipt of the State Pension than the Scottish average. The lowest eligibility is in the Speyside South ward (the Aviemore area), where the rate is only slightly above the Scottish average. The Aviemore area has a sizeable younger population working in tourism and call centre operations and local services.

Figure 98 Pensions take up



Source: Nomis - benefit claimants - state pension for small areas. Ref: Z:/projects/P240 Cairngorms Economic Baseline/Benefits/PensionsChart

The average weekly payment for State Pension is £110 per week, so State Pension payments in the Cairngorms National Park amount to £28m per year.

Pension Credit

However, the State Pension is a universal benefit and hence relates only to the age of a population. The Pension Credit, on the other hand, is an income-related benefit which provides a minimum guaranteed income for those over 60 years old.

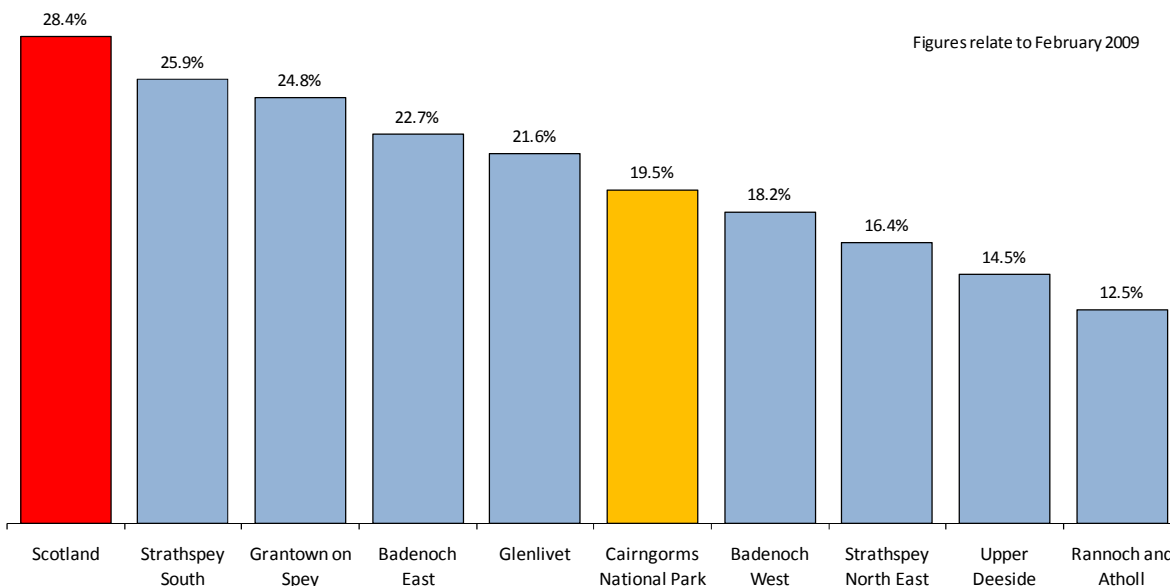
Across Scotland more than 28 per cent of pensioners receive this benefit, but it goes to fewer than 20 per cent in the Cairngorms (see Figure 99). This suggests that a greater proportion of the pensioners living in the Cairngorms are in

a position to supplement their State Pension income from other sources, such as a private or occupational pension or from other savings and investments.

Within the Park, Deeside and Highland Perthshire (Rannoch and Atholl ward) have the lowest level of take up of the Pension Credit. Here around one in seven pensioners are in receipt of the income supplement. Pensioners living in the Aviemore and Granttown on Spey areas are those more likely to be in receipt of the Pensions Credit amongst Park residents. Around one in four of pensioners in these areas receive the benefit.

Figure 99 Pension Credit take up

Percentage of state pension recipients claiming Pension Credit



Source: Nomis - benefit claimants - pension credits for small areas.

The analysis of benefits take up suggests a local resident base which is generally wealthier than the national average, and hence less dependent on income-based benefits. Within the Park this wealth is most evident in Deeside and Highland Perthshire, but less so in the Aviemore area.

The average rate of payout of pension credits is £53 per week across Scotland, but only about £50 in the Council areas that contribute to the Park. Thus with almost 1,000 recipients in the Park, the total annual receipt is almost £3m.

10.6 Income distribution and deprivation

To measure the level of income deprivation across the country, the SIMD tracks the prevalence of a range of other non-work benefits and associates them not only with people in the labour force, but with others. These include statistics on households that are reliant on Income Support, households reliant on Jobseeker’s Allowance, households in receipt of Tax Credits, and pensioners receiving Guaranteed Pension Credit. Thus it broadly allows us to compare the benefits data presented in Section 10.5 with the national range, and particularly with national problem areas.

The data indicates that there is little evidence of widespread extremes in the level of income deprivation experienced by householders in the Cairngorms (see Table 16). Compared to elsewhere in Scotland, few households suffer from high levels of income deprivation. Only one of the Park’s 25 datazones (Aviemore town centre) falls into the 40 per cent of most income deprived datazones in Scotland and only three are in the 50 per cent most deprived zones. Conversely there are few areas where there is a concentration of low levels of income deprivation, with indications that parts of Deeside have amongst the lowest levels of take-up of income related benefits.

It must be stressed that an absence of concentrated income deprivation is exactly what it says. It is not in itself evidence of high incomes, or even a sign that there are no people suffering income deprivation: just that they are not locally concentrated.

Table 16 Income deprivation indicators

Data zone	Locality	Area	SIMD income domain rank
S01003754	Aviemore town (centre)	Badenoch and Strathspey	2515
S01004233	Tomintoul	Moray	2875
S01003755	Aviemore town (west)	Badenoch and Strathspey	3212
S01003766	Grantown on Spey town (centre)	Badenoch and Strathspey	3262
S01003749	Kingussie town (north)	Badenoch and Strathspey	3362
S01003764	Grantown on Spey town (south)	Badenoch and Strathspey	3484
S01003767	Grantown on Spey town (north)	Badenoch and Strathspey	3709
S01003756	Nethy Bridge	Badenoch and Strathspey	3774
S01000316	Ballater town (north)	Deeside	3818
S01000710	Glen Clova	Angus Glens	3827
S01003748	Kingussie town (south)	Badenoch and Strathspey	3907
S01003759	Boat of Garten	Badenoch and Strathspey	4098
S01000360	Strathdon	Deeside	4232
S01003772	Grantown on Spey hinterland (west)	Badenoch and Strathspey	4405
S01003743	Laggan / Dalwhinnie	Badenoch and Strathspey	4424
S01005147	Blair Atholl	Highland Perthshire	4450
S01000312	Ballater town (south)	Deeside	4661
S01003760	Carrbridge	Badenoch and Strathspey	4771
S01003747	Newtonmore town	Badenoch and Strathspey	4782
S01003750	Kingussie hinterland (north)	Badenoch and Strathspey	4808
S01000708	Glen Isla	Angus Glens	4850
S01000303	Ballater hinterland	Deeside	4962
S01003771	Grantown on Spey hinterland (east)	Badenoch and Strathspey	5028
S01000301	Braemar	Deeside	5464
S01003751	Aviemore east / Glenmore	Badenoch and Strathspey	5600

Legend

Ranking *	Level of deprivation
1 up to 1301	Much greater than Scottish average
1302 up to 2602	Slightly greater than Scottish average
2603 up to 3903	Around Scottish average
3904 up to 5204	Slightly less than Scottish average
5205 up to 6505	Much less than Scottish average

* Ranking is out of 6505 datazones in Scotland

Source: Scottish Index of Multiple Deprivation 2009, Scottish Government.

10.7 Capital gains

Rising house prices are a source of economic confidence, and falling prices are harbingers of uncertainty. In Section 10.1 the value of the houses in the National Park 'marked to market' was estimated at £1.5bn.

Between 2006 and 2007, the value of the increase in house prices in the National Park was £180m, considerably more than the amount earned in wages. Between 2007 and 2008 it was only £20m, and in 2009 it was almost certainly negative.

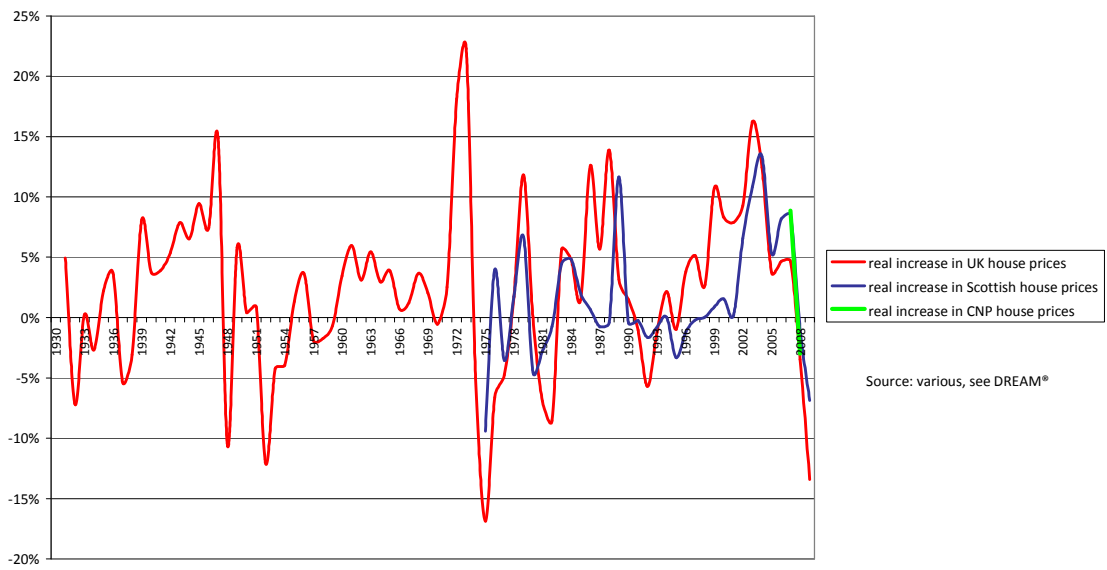
How much can an increase in property values be counted on? At present people are only too aware that values can go down as well as up, but over the long term house prices have shown a tendency to rise, and usually somewhat faster than general inflation. However, while this is quoted as a universal truth in UK newspapers and broadcasts, it has not been the case in Scotland to any very great extent. Although on average over thirty five years Scottish house prices have risen about 1.5 per cent per year faster than general inflation, what has actually happened has been a minimal difference, averaging 0.5 per cent, until about 2002, followed by a difference of 12 per cent per year until 2008:

Figure 100 shows UK, Scottish and National Park house price indices relative to general inflation, in each case for the longest period for which we have data. The conclusions suggested are:

1. UK house prices do rise faster than inflation, but very erratically, and their oscillations are not affected in any simple way by major recessions or even by wars.
2. Scottish house prices are slightly less erratic, but do not rise as fast as UK ones. Except for the occasional single year, they have only significantly exceeded general inflation since 2001.
3. For the short time span for which data is available, prices in the National Park run parallel to, but above, Scottish prices.

Figure 100 House price increases relative to general inflation

House price increases in real terms



The chart makes it clear that ‘average long term behaviour’ in the housing market is hard to discern. If economic policy is successful in holding general inflation to three per cent then we might expect Scottish house prices to rise on average by a little less than five per cent per year, and the Park’s housing stock to appreciate by £70m in money terms.

11 Social wellbeing



An example of the high quality natural environment in the Cairngorms National Park: Loch Pityoulish

The focus of official wellbeing data is on deprivation, but it also allows some conclusions to be drawn about the status of those who are not amongst Scotland's most deprived.

The Scottish Index of Multiple Deprivation (SIMD) is an official tool developed and used by the Scottish Government. It helps to identify small areas with populations which have a concentration of characteristics associated with deprivation. The current release, the 2009 SIMD released on 29 October 2009, is based on 37 indicators in seven domains. These seven domains are:

- Current income
- Employment
- Health
- Education, Skills and Training
- Housing
- Geographic access to services
- Crime

For the purposes of the SIMD analysis, Scotland is split into 6505 areas or data zones, with an average population of 750 – 800 people. The Cairngorms National Park includes 25 of these data zones. Each zone is ranked on the basis of its performance in terms of individual domains, and in terms of its overall performance, taking all the indicators into account. Generally the lower the ranking the more deprived the area. Thus, the most deprived zone in Scotland (Barrowfield/Parkhead in the east end of Glasgow) has a ranking of 1, while the least deprived area ranks as 6505.

The overall rankings are based on a weighted average of each of the seven domains. The most significant contributors to the multiple deprivation ranking are the income and employment domains, each accounting for 28 per cent of the overall weighting. Health and education each contribute 14 per cent while geographic access to services accounts for nine per cent of the final score. The least significant measures are crime and housing, which contribute just five per cent and two per cent respectively. Housing has been down rated because the data available is out-of-date.

The overall multiple deprivation ranking for each of the Park's 25 data zones, along with the rankings for each of the individual domains is shown in Table 17. It is evident from this that there are no areas of Cairngorms National Park with high levels of multiple deprivation. Only three of the Park's datazones - two in Aviemore town and the area in and around Tomintoul – are ranked in the more deprived half of Scottish areas. All parts of the Park are in the top three least deprived quintiles.

Table 17 Multiple deprivation indicators for the Cairngorms National Park

Data zone	Locality	Area	Overall SIMD	Domain and SIMD weighting						
				Current income	Employment	Health	Education, skills and training	Housing	Geographic access	Crime
				28%	28%	14%	14%	2%	9%	5%
S01003754	Aviemore town (centre)	Badenoch and Strathspey	2927	2515	3261	3048	2241	2550	3810	1999
S01004233	Tomintoul	Moray	3035	2875	4987	4606	4016	3518		2439
S01003755	Aviemore town (west)	Badenoch and Strathspey	3138	3212	3827	3522	2683	2106	3188	378
S01000710	Glen Clova	Angus Glens	3272	3827	4157	5564	4212	3077	32	5688
S01003756	Nethy Bridge	Badenoch and Strathspey	3593	3774	5136	4738	3492	3440	162	5457
S01003743	Laggan / Dalwhinnie	Badenoch and Strathspey	3670	4424	5610	4546	4073	3440	95	2458
S01000360	Strathdon	Deeside	3709	4232	4213	5799	4230	2253	144	6305
S01003759	Boat of Garten	Badenoch and Strathspey	3725	4098	4968	5426	3526	2679	310	2160
S01003750	Kingussie hinterland (north)	Badenoch and Strathspey	3766	4808	4741	5064	5026	2136	157	1714
S01000708	Glen Isla	Angus Glens	3803	4850	4125	5363	5367	4626	56	5877
S01003766	Grantown on Spey town (centre)	Badenoch and Strathspey	3808	3262	4990	1657	3735	3386	4992	2095
S01005147	Blair Atholl	Highland Perthshire	3941	4450	4471	5698	3659	2842	134	5119
S01003772	Grantown on Spey hinterland (west)	Badenoch and Strathspey	3982	4405	3687	5000	4344	3662	467	5396
S01003764	Grantown on Spey town (south)	Badenoch and Strathspey	4014	3484	4862	3666	2356	4873	2486	4881
S01000303	Ballater hinterland	Deeside	4144	4962	4323	5000	3342	2472	474	4484
S01003749	Kingussie town (north)	Badenoch and Strathspey	4201	3362	3876	3726	3556	5411	4995	3941
S01003751	Aviemore east / Glenmore	Badenoch and Strathspey	4286	5600	5151	5225	3279	3687	522	1763
S01003760	Carrbridge	Badenoch and Strathspey	4370	4771	4675	5668	4292	3814	541	3881
S01003771	Grantown on Spey hinterland (east)	Badenoch and Strathspey	4474	5028	5421	5000	3770	4402	328	4349
S01003767	Grantown on Spey town (north)	Badenoch and Strathspey	4712	3709	4744	3729	3900	4945	6307	2973
S01003747	Newtonmore town	Badenoch and Strathspey	4816	4782	5275	4328	3789	4605	1657	4964
S01000316	Ballater town (north)	Deeside	4891	3818	4850	3969	3924	5467	6038	4138
S01000301	Braemar	Deeside	5125	5464	6190	6461	4615	4580	648	3046
S01000312	Ballater town (south)	Deeside	5170	4661	5340	4734	4217	2079	4788	2683
S01003748	Kingussie town (south)	Badenoch and Strathspey		3907			5116	4594		2096

Source: Scottish Index of Multiple Deprivation 2009, Scottish Government. Ref: F240/SIMD/deprivation/SIMD2009 tabvals

* Ranking is out of 6505 datazones in Scotland

Legend

Ranking * 1 up to 1301 1302 up to 2602 2603 up to 3903 3904 up to 5204 5205 up to 6505

Level of deprivation: More deprived Less deprived



Glen Isla in the Angus Glens

However, an examination of the various characteristics which make up the multiple deprivation ranking indicates evidence of some deprivation in the Park. This is most noticeable for the geographic access domain, which essentially measures the travel time to core services (a doctor's surgery, a petrol station, a post office, a primary school and a supermarket). On this measure most of the Park (15 out of the 25 zones) falls into the 20 per cent most geographically deprived areas of Scotland. Indeed, three zones along the southern edge of the Park (in the Angus Glens and Highland Perthshire) are classed amongst the most geographically deprived one per cent of areas in

Scotland.

The other measure on which the Park shows some evidence of deprivation is housing. Six zones, all in the Deeside or Aviemore areas, are in the 40 per cent most housing-deprived areas in Scotland. In Deeside, this is likely to reflect the high proportion of older, more traditional housing stock, where the modern amenities such as double glazing and central heating are less common. In the Aviemore area the measure is likely to reflect some of the poorer quality housing built in the 1960s and 70s, and possibly the occupation of accommodation which was not intended to be a permanent residence.

The deprivation measures where the Park performs best are in health and in employment. 80 per cent of the Park's zones are in the 40 per cent least health-deprived areas of Scotland, indicating that ill health is less prevalent and mortality lower in the Park than in most of Scotland. Health deprivation is particularly low in Deeside, the Angus Glens and the rural areas of Badenoch and Strathspey.

Employment deprivation is based on the number of people not involved in the labour market, and the evidence for it is based on levels of take-up of a basket of benefits. It is also low across most of the Park. The zones in and around Aviemore are the only ones where employment deprivation dips to around the Scottish average.

This pattern is not considerably different from other parts of rural Scotland. In most rural areas the primary focus of deprivation, as measured by the SIMD method, is the geographical access domain. There is often also some evidence of housing deprivation but usually relatively little evidence of deprivation in the areas of health, employment or crime.

The rather mixed picture on education and skills deprivation which is evident in the Park suggests the area is rather underperforming compared to some other parts of rural Scotland. The low levels of income deprivation, particularly in Deeside, is typical of scenic rural areas within commuting distance of major centres of population (in this case Aberdeen). People living in these areas often rely on commuting for work, and so those unable to command adequate wages will move closer to where the jobs are.

Deprivation related to income, employment, education/skills and housing have been dealt with above in relevant sections of this report. The three remaining domains of health, geographic access and crime are discussed below.

11.1 Health

Residents of the Cairngorms National Park are generally much healthier than the Scottish population as a whole.

The Scottish Index of Multiple Deprivation (SIMD) uses a number of indicators to measure the health of the population across Scotland's 6,505 datazones. It incorporates the following indicators:

- Standardised Mortality Ratio
- Hospital episodes related to alcohol use
- Hospital episodes related to drug use
- Comparative Illness Factor
- Emergency admissions to hospital
- Estimated proportion of population being prescribed drugs for anxiety, depression or psychosis
- Proportion of live singleton births of low birth weight

Table 18 shows that 11 (over 40 per cent) of the Park's datazones are in the 20 per cent of areas with the lowest levels of health deprivation in Scotland. Only in part of Granttown is there any significant concentration of poor health.

Table 18 Health deprivation

Data zone	Locality	Area	Health domain rank
S01003766	Grantown on Spey town (centre)	Badenoch and Strathspey	1657
S01003754	Aviemore town (centre)	Badenoch and Strathspey	3048
S01003755	Aviemore town (west)	Badenoch and Strathspey	3522
S01003764	Grantown on Spey town (south)	Badenoch and Strathspey	3666
S01003749	Kingussie town (north)	Badenoch and Strathspey	3726
S01003767	Grantown on Spey town (north)	Badenoch and Strathspey	3729
S01000316	Ballater town (north)	Deeside	3969
S01003747	Newtonmore town	Badenoch and Strathspey	4328
S01003743	Laggan / Dalwhinnie	Badenoch and Strathspey	4546
S01004233	Tomintoul	Moray	4606
S01000312	Ballater town (south)	Deeside	4734
S01003756	Nethy Bridge	Badenoch and Strathspey	4738
S01003750	Kingussie hinterland (north)	Badenoch and Strathspey	5064
S01003748	Kingussie town (south)	Badenoch and Strathspey	5116
S01003751	Aviemore east / Glenmore	Badenoch and Strathspey	5225
S01000708	Glen Isla	Angus Glens	5363
S01003759	Boat of Garten	Badenoch and Strathspey	5426
S01000710	Glen Clova	Angus Glens	5564
S01003760	Carrbridge	Badenoch and Strathspey	5668
S01005147	Blair Atholl	Highland Perthshire	5698
S01003772	Grantown on Spey hinterland (west)	Badenoch and Strathspey	5740
S01000360	Strathdon	Deeside	5799
S01003771	Grantown on Spey hinterland (east)	Badenoch and Strathspey	6106
S01000303	Ballater hinterland	Deeside	6110
S01000301	Braemar	Deeside	6461

Legend

Ranking *	Level of deprivation
1 up to 1301	Much greater than Scottish average
1302 up to 2602	Slightly greater than Scottish average
2603 up to 3903	Around Scottish average
3904 up to 5204	Slightly less than Scottish average
5205 up to 6505	Much less than Scottish average

* Ranking is out of 6505 datazones in Scotland

Source: Scottish Index of Multiple Deprivation 2009, Scottish Government.

11.2 Crime

The level of recorded crime in the Park is broadly in line with Scottish averages. Levels are predominantly higher in the north and west of the Park, particularly along the A9 corridor, whilst the southernmost areas of the Park have recorded crime levels which are generally below those of a typical Scottish locality.

The Scottish Index of Multiple Deprivation (SIMD) includes a measure of the level of crime for each of the Park's 25 datazones (the statistical building block for Scotland, consisting of areas of typically 750 to 800 residents). This measures the prevalence of various types of criminal activity including crimes of violence, dishonesty, vandalism, drug offences and minor assault. In the current release, published in October 2009 and using crime statistics relating to the year ending April 2008, only one of the Park's datazones (Aviemore town west) is ranked amongst Scotland's 20 per cent worst areas for criminal activity (see Table 19) – in fact it ranks at about the sixth percentile. Strathdon, on the other hand, has very low crime and is on the 97th percentile.

Table 19 Crime by locality

Data zone	Locality	Area	Crime domain rank
S01003755	Aviemore town (west)	Badenoch and Strathspey	378
S01003750	Kingussie hinterland (north)	Badenoch and Strathspey	1714
S01003751	Aviemore east / Glenmore	Badenoch and Strathspey	1763
S01003754	Aviemore town (centre)	Badenoch and Strathspey	1999
S01003766	Grantown on Spey town (centre)	Badenoch and Strathspey	2095
S01003748	Kingussie town (south)	Badenoch and Strathspey	2096
S01003759	Boat of Garten	Badenoch and Strathspey	2160
S01004233	Tomintoul	Moray	2439
S01003743	Laggan / Dalwhinnie	Badenoch and Strathspey	2458
S01000312	Ballater town (south)	Deeside	2683
S01003767	Grantown on Spey town (north)	Badenoch and Strathspey	2973
S01000301	Braemar	Deeside	3046
S01003760	Carrbridge	Badenoch and Strathspey	3881
S01003749	Kingussie town (north)	Badenoch and Strathspey	3941
S01000316	Ballater town (north)	Deeside	4138
S01003771	Grantown on Spey hinterland (east)	Badenoch and Strathspey	4349
S01000303	Ballater hinterland	Deeside	4484
S01003764	Grantown on Spey town (south)	Badenoch and Strathspey	4881
S01003747	Newtonmore town	Badenoch and Strathspey	4964
S01005147	Blair Atholl	Highland Perthshire	5119
S01003772	Grantown on Spey hinterland (west)	Badenoch and Strathspey	5396
S01003756	Nethy Bridge	Badenoch and Strathspey	5457
S01000710	Glen Clova	Angus Glens	5688
S01000708	Glen Isla	Angus Glens	5877
S01000360	Strathdon	Deeside	6305

Legend

Ranking *	Level of deprivation
1 up to 1301	Much greater than Scottish average
1302 up to 2602	Slightly greater than Scottish average
2603 up to 3903	Around Scottish average
3904 up to 5204	Slightly less than Scottish average
5205 up to 6505	Much less than Scottish average

* Ranking is out of 6505 datazones in Scotland

Source: Scottish Index of Multiple Deprivation 2009, Scottish Government.

12 Monitoring and shaping the future



Ruthven Barracks

12.1 Monitoring the future

In order to understand how the Cairngorms National Park area is performing economically, socially and culturally it will be necessary to maintain an up to date record of socio-economic indicators. Almost all of the indicators used in this report are based on regular official publications, but many have been further processed either to identify the specific Park content, or to add more detail for analysis, or to bring them up to date.

Frequency of monitoring and reporting documents

The consultants suggest that a note on the state of the Park economy should be prepared quarterly. A fuller annual report on social and economic health could update many of the indicators, and be summarised for the Authority's own reporting procedures. It should not be of excessive length, but should contain as many quantitative updates as can readily be included, and it may be an appropriate document in which to identify economic issues that are important to the Park and merit further separate investigation.

What is important is that both these reports focus on the Park in itself: a report, for example, that simply summarises trends for each of the contributing local authorities would be worse than useless, because the purpose of designation is to recognise and enhance the Park's *differences from* other areas in Scotland.

We think it unlikely that a full report on the scale of this one would be justified more frequently than every three years or so, unless there were dramatic changes in policy or circumstances.

The following section considers the data sources and processing requirements of a number of the key areas of socio-economic interest.

Population

Official data from the General Register Office provides total figures and births and deaths by datazone. However there are no official migration figures published below the level of Health Boards, and the official population projections which are available are limited. Some processing using DREAM[®] people was required to provide the analysis of migration on an annual basis, and DREAM[®] people was also used as a model for projection.

Employment

Subject to maintaining a valid License from the Chancellor of the Exchequer, the Cairngorms National Park Authority can for its own purposes obtain all the Annual Business Inquiry data used. Agricultural Census data is available from the Scottish Government.

Unemployment

The unadjusted claimant count figures can be downloaded on a monthly basis from Nomis, the ONS statistical system. Seasonal adjustment was carried out using DREAM[®]monitor.

Economy

Gross Value Added is the best summary measure of economic activity (although it has well-recognised shortcomings) and can be reconciled and compared with the UK national and regional accounts or the accounts for any other country in the world. However, there are no official estimates for the Park and the GVA figures available from official sources are based on combinations of entire Council areas, containing a much coarser industrial breakdown (six sectors in all), and are only available up to 2006. Partial GVA figures are published at Council Area level by the Scottish Government, but these omit the financial sector and some of the public sector. Furthermore, they have not been reconciled to the National Accounts. In other work we have found very large discrepancies between the partial (ABI-based) GVA figures, especially for tourism, and the balanced national accounts version²³.

The GVA figures presented in the report have been derived from the DREAM[®]model of the UK economy. They are fully compatible and consistent with all officially published figures which are available. Competitive privately-estimated figures are available, but as far as we are aware they are not consistent and do not show anything like as much detail, either in geographic terms or in terms of identifying business sectors and other economic activities.

House Prices

The so-called 'Sasines' data is already provided to the Authority by the Register Office on an annual basis. For a small fee the Office will provide them on a monthly basis, enabling booms and slumps to be better tracked. However, sensible tracking requires the seasonal factors to be taken into account, and we have used DREAM[®]monitor to do this.

Deprivation

The Scottish Index of Multiple Deprivation quoted here is the 2006 version, which was the latest available at the time the study was conducted. The 2009 version of the SIMD has been published shortly before this report, and would allow some updating. Several variables that contribute to the SIMD can be updated annually, but this requires some data collection and processing.

Tourism

There are difficulties in tracking tourism at a local level. In its conception the STEAM model was a brave and path-breaking way of addressing these, and it collects and processes data in an ingenious way. However the figures that in practice have been reported are at variance

²³ For example, a discrepancy of 40 per cent in Northern Ireland

with the actual characteristics of the economy of the Cairngorms National Park. Either the STEAM model needs to be recalibrated to obtain a better fit to the National Park, or an alternative source of data and monitoring procedures needs to be found. The continued use of STEAM is misleading and likely to be counter to the best interests of the Park, tourism businesses, tourists and residents.

Seasonal adjustment

The only two official monthly indicators that are available for the Scottish economy cover unemployment (claimants) and housing transactions, and these are also available at Park level. However short term movements in both of them are usually dominated by large seasonal swings, and so for monitoring purposes the raw data must be seasonally adjusted. The usual methodologies for doing this are known as X11 and X12, and derive from the US Bureau of the Census. However their application to unemployment in particular is not straightforward, because unemployment represents the difference between those seeking work and those able to find it.

Road traffic

Although they would require the construction of a simple model to interpret them, and this is not a trivial statistical task, the road traffic statistics collected by Transport Scotland could potentially feed regular assessments of the Park's economy. The Park Authority could also approach Transport Scotland with a view to the main roads to the east and south of the Park being fitted with automated traffic counters.

12.2 Shaping the future

Of course, it is possible to do more than simply track the performance of indicators in the future. The work of public agencies, such as the Cairngorms National Park Authority and others, as well as the actions of private businesses and communities can help shape the economic future of the Cairngorms National Park.

In reviewing the social and economic characteristics of the Park it is possible to identify a range of appropriate interventions which could help to enhance the future economic performance of the Park and contribute to the community. These suggestions are amongst those made by the consultants and should not be interpreted as representing either the policy or even the deliberations of the Authority.

People

The most malleable aspect of population growth is migration, and the main motivators of migration are jobs, housing and education.

Jobs are dealt with below, on the labour supply side under that heading and on the labour demand side under 'economy'.

Housing is to a significant extent within the sphere of influence of the Park Authority with its statutory role in Planning. The high price level of housing is incontrovertible evidence that the pressure of demand, in the long run, exceeds the supply that has recently been authorised. Population can be expected to grow to the extent that the Authority allows it to.

Education is the prerogative of the Councils, and of the Scottish Government directly and through its Funding Council. The limited in-migration of children of school age suggests that an enhanced role for educational provision and an explicit matching of housing types and school

provision could form a valuable part of Development Planning. The absence of a secondary school in Aviemore, at the centre of the largest absolute growth in population and housing provision, is a conditioning influence on the shape of the community, and one that the Park Authority might keep under review with Highland Council.

Furthermore, education is an appropriate target for future investment activity in the Park. This could include both further and higher education, probably under the auspices of the University of the Highlands and Islands for Higher Education, and its constituent colleges. Sensibly this will focus on the environmental and other features that are fundamental to the Park. These are inherently so attractive for some aspects of research and teaching in a variety of disciplines that the Park could also be a locus of collaboration between UHI and other universities, British and foreign, and thus help UHI to become established within global academia. School education may also be an area for investment, whether through renewed interest in outdoor education and environmental education centres for short visits (not necessarily just from Scottish schools) but also for longer term facilities for specialised and private schools (again, not necessarily only Scottish ones).

An important aspect of migration is its contribution to the diversity of the community. Of particular importance in this regard is foreign in migration, notably the recent inflow from new member states of the EU. This also has a significant impact on keeping the age profile of the community relatively young. The evolution of European labour markets means that in many parts of Britain, and other countries, the recent influx of in-migrants may be beginning to reverse, as the native economies of migrants begin to gather speed. Social partners in the Park may wish to monitor return emigration, and perhaps to consider how they want to hang on to, or replace, potential returners.

Jobs

The relatively low long term unemployment rate lends itself to a focused partnership approach along the lines developed in Workforce Plus and drawing on the experience gained in the Full Employment Areas, which sought to provide a personalised service for every unemployed person in a defined area.

The predominance of very small businesses lends itself to recruitment-focused approaches to business development, and in rural areas elsewhere, recruitment based approaches to micro business growth have created significant numbers of local jobs in similar rural areas. For example, the Sole Trader Initiative in north west Wales created 800 new jobs over a five year period – 75 per cent of which went to long term unemployed people. This approach was subsequently transferred to Sutherland and it may be worth considering its development in the Cairngorms National Park.

The Park's small share of public sector employment in Scotland has been noted. The Authority and its partners may wish to consider whether they wish to attract 'back office' jobs from the public services, whether from England, Scotland's central belt, Aberdeen, Perth or Inverness.

Economy

The sectoral and cluster analysis described earlier provides a powerful basis for both the identification of the key strands of an economic development approach the National Park Authority's 'fourth objective' and specifically a focus for inward investment activity, notably in terms of building on current cluster strengths.

The consultants' view is that the tested methodology of a cluster audit leading on to an action plan is the appropriate methodology to take this forward. Every cluster's and every territory's

situation is different, and the most suitable approach is different in every case. Some of the elements that may be included are

Table 20 a cluster-based economic development process

Process stage	Key questions	Current state
Cluster identification	What are the key actual and potential clusters in the Park? What currently links them together?	Completed
Cluster definition and mapping	What makes up this cluster? What is its spread in terms of activity and location? What companies are involved and how and where is their behaviour determined?	Largely completed
Cluster strength and benchmarking	What are the global performance standards for clusters of this sort? What foundations are those built on? How do we rate on that scale? How might we improve? What would better performance yield in sales, profits, and jobs?	Significant progress, based on frameworks established elsewhere – eg Scottish Food, Forestry Commission, cogentsi
Cluster learning	What’s relevant that our cluster members know least about? What’s the best place or way to learn? How do we capture and how and how much do we disseminate that knowledge?	To be addressed: current knowledge is scant
Cluster animation and coalition building	How do the interests of cluster members align, and how do they diverge? What ideas and people will most engender enthusiasm? How do we generate trust where we need it within a cluster? What are the right places for cooperation and what for competition?	
Cluster agendas	What are the sources of creativity in our cluster?	Knowledge is scant
Cluster governance:	Do we need to organise our cluster, and if so how?	To be addressed, although significant progress has been made in tourism.
Cluster prioritisation	How does our cluster choose which tasks to address first? Which are the most urgent, important, and achievable? How do the CNPA and partners decide which clusters to focus on when people and resources are limited?	To be addressed

Process stage	Key questions	Current state
Cluster upgrading	What are the components of our local innovation system? How do they fit into the innovation system for these industries worldwide?	Partially addressed from a local viewpoint, but global knowledge limited to frameworks established elsewhere – eg Scottish Food, Forestry Commission, cogentsi

Particular clusters

A properly structured and prioritised economic agenda requires a consistent design process similar to that outlined above. Nevertheless, in the course of the work for this report a number of specific initiatives suggested themselves.

Scottish Development International (SDI) is currently dealing with a range of major **tourism-related** investment projects elsewhere in Scotland and it is clear from the data presented in this report that the area has some appealing assets for both residents and visitors. There may be scope to further realise this potential, strengthening local jobs and income through a focused inward investment effort. It may be worth exploring the scope for developing such an approach with SDI. If this was taken forward it would need to be part of the wider strategic approach to the National Park Authority's 'fourth objective'.

The reduction in employment is in part connected with other trends in the **whisky industry**, inter larger fewer companies (tending to move jobs to London) while 'boutique' distilleries launch new brands, with many headquarters function in the distilleries. A strategy for bending and exploiting these trends could be of substantial benefit to Speyside.

The **food industry** cluster map shows primarily strengths on the left hand side – primary inputs. Non-urban fine dining and regional cookery outlets would strengthen the right hand side and might encourage specialised food processors to fill the gap.

13 Appendix 1: Boundaries and statistical areas used in the analysis of the Cairngorms National Park

13.1 Boundaries

Several issues arise in considering the boundaries for a baseline assessment of the National Park.

- The original baseline assessment had to be carried out before the Park boundaries were set, and indeed may be seen as contributing to the original setting of those boundaries. It therefore necessarily covered a much larger area than the Park itself.
- There is the much smaller area which was originally designated as the Park.
- There was then the larger area, primarily adding Highland Perthshire, which is the new boundary of the National Park.

Alongside these changes on the ground, which are based on topographical, administrative and political (small p) reasons, there have also been statistical developments and changes.

The most important of these has been the availability of detailed information on a small area basis from Census 2001. Secondly, alongside this, economic and employment information, which is normally available to some extent at ward level, has been subject to changes in those wards as promulgated for political reasons by the Boundary Commission. Thirdly, using modelling techniques, it is possible to obtain much finer estimates for economic variables in quite small areas, bringing down to ward level some statistics which previously would not have been available even at a Scottish level.

Nevertheless, even with new data and advanced modelling techniques it is not possible to exactly provide economic statistics following the Park boundaries and so we have used 'best-fit' methods. This appendix shows the best-fit methods for:

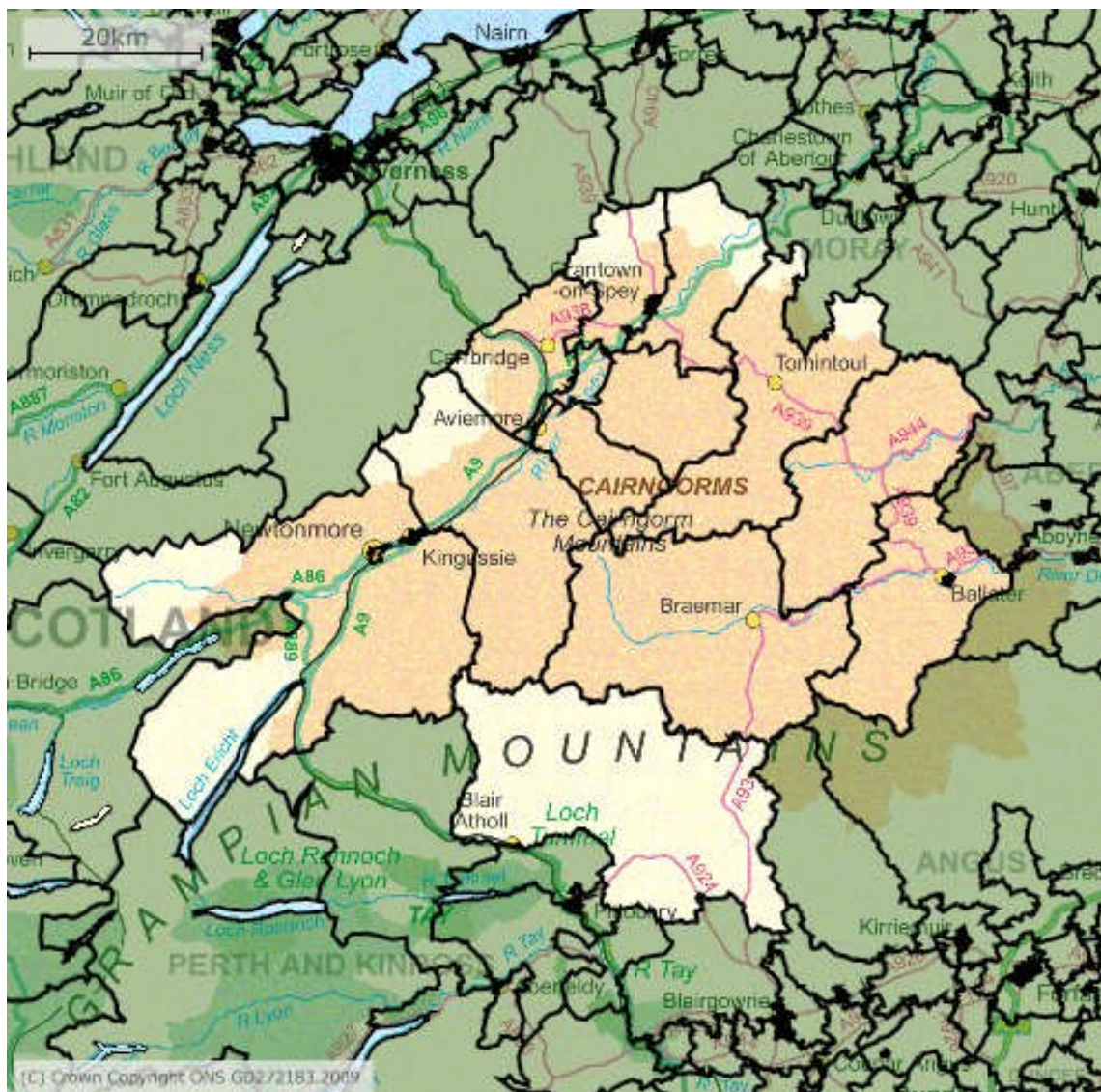
1. the demographic statistics;
2. the economic and employment statistics: and
3. the agricultural statistics

13.2 Demographics

When analysing the population and demographics of the Cairngorms National Park Scottish Data Zones a fine approximation can be used. Scottish Data Zones are based on groups of 2001 Census output areas and each Scottish Data Zone has a population of between 500 and 1,000. All demographic charts in this study have been based on the Scottish Data Zones shown below. A map of the resultant area is shown in Figure 101:

S01000301	S01000303	S01000312	S01000316	S01000360	S01004233
S01005147	S01003743	S01003747	S01003748	S01003749	S01003750
S01003751	S01003754	S01003755	S01003756	S01003759	S01003760
S01003764	S01003766	S01003767	S01003771	S01003772	

Figure 101 Data zone map

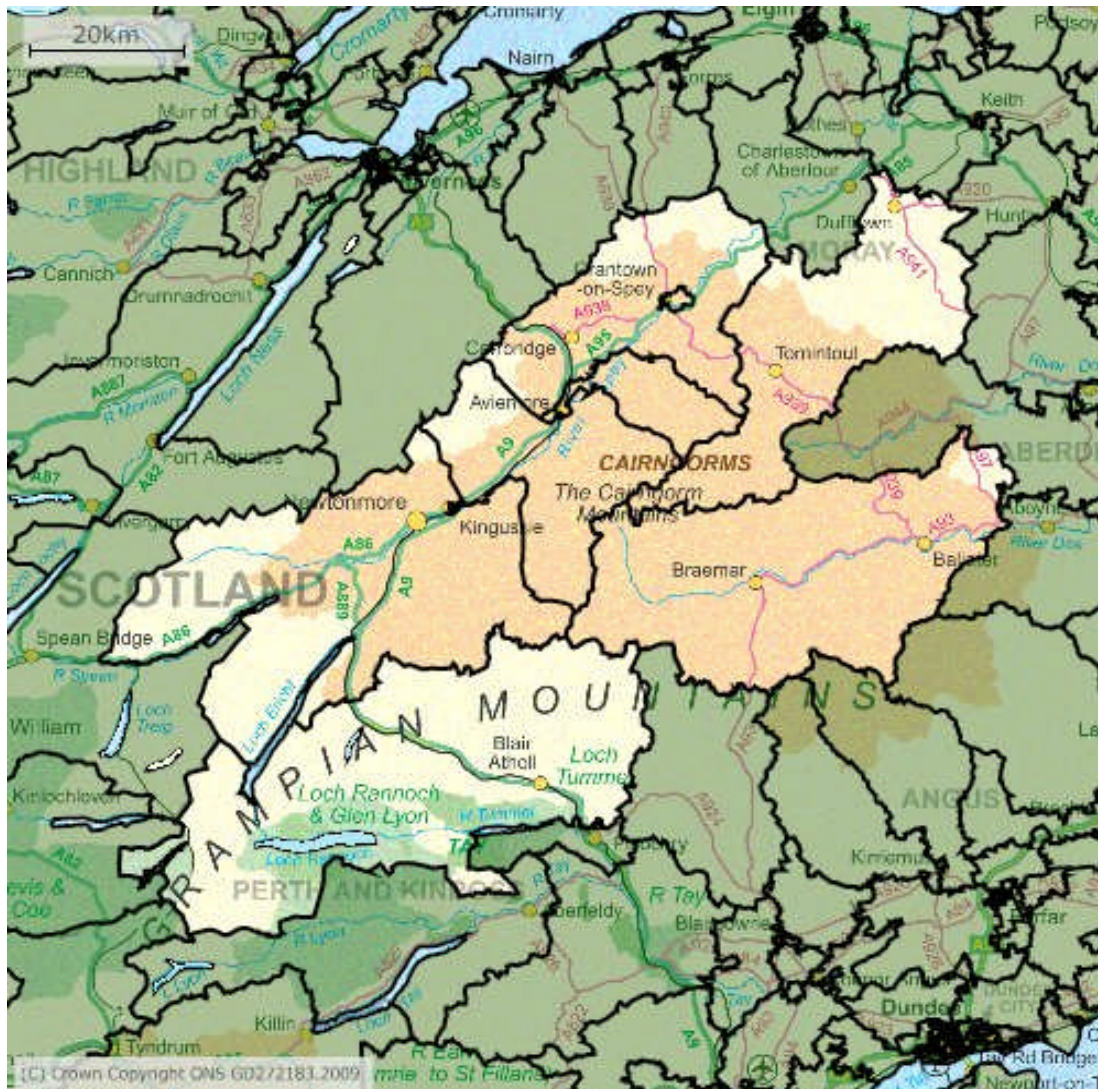


13.3 Economic data: employment and GVA

For economic data since 2003 the main boundary of the Cairngorms National Park has been formed using 2003 CAS Wards. 2003 CAS Wards are based on a best-fit approximation of 2001 electoral wards in terms of Census Areas, and are the second smallest area for which data can be obtained. The 2003 CAS Wards used for this study are shown below and a map of the respective area is shown in Figure 102.

- | | |
|--------------------------|------------------------------|
| 02C53: Upper Deeside | 18C71: Strathspey North East |
| 18C69: Badenoch East | 18C70: Strathspey South |
| 18C68: Badenoch West | 25C01: Rannoch and Atholl |
| 18C72: Granttown on Spey | 21C26: Glenlivet |

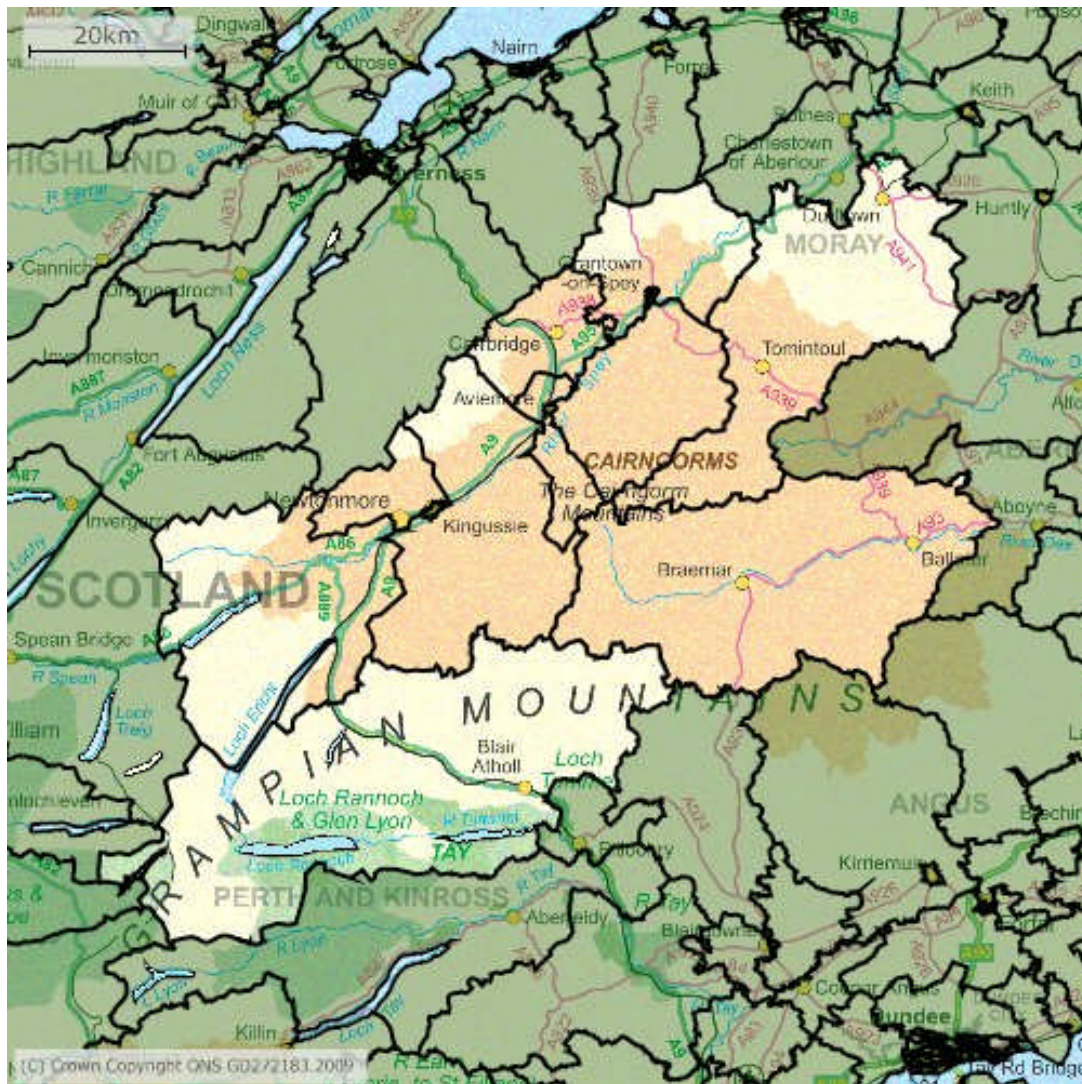
Figure 102 2003 CAS ward map



For data prior to 2003, 1991 Frozen Wards and 1981 Frozen Wards are used. These earlier wards do not directly correspond to 2003 CAS Wards but bear a close relationship. The 1991 Frozen Wards and the 1981 Frozen Wards used for this study are listed below and a map of the resultant area is shown in Figure 103.

73UD12 Rannoch and Atholl	71UB05 Badenoch and Strathspey No 5
72UF18 Glenlivet	71UB06 Badenoch and Strathspey No 6
72UE01 Upper Deeside	71UB07 Badenoch and Strathspey No 6a
71UB01 Badenoch and Strathspey No 1	71UB08 Badenoch and Strathspey No 7
71UB02 Badenoch and Strathspey No 2	71UB09 Badenoch and Strathspey No 8
71UB03 Badenoch and Strathspey No 3	71UB10 Badenoch and Strathspey No 9
71UB04 Badenoch and Strathspey No 4	71UB11 Badenoch and Strathspey No 10

Figure 103 1991 & 1981 frozen ward map



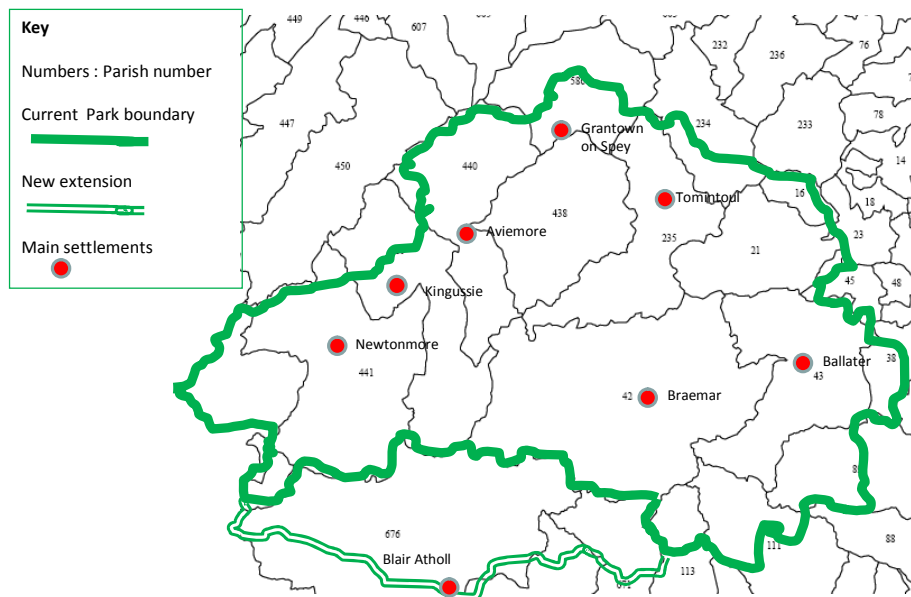
13.4 Agricultural data

Agricultural employment and land use data is published from the Agricultural Division of the Scottish Government, formerly SEERAD (Scottish Executive Environment and Rural Affairs Department). The information is taken from the Scottish Agricultural Census. The Scottish Agricultural Census uses different regional areas than other organisations and makes its measurements in SEERAD Agricultural Parishes.

For this study the SEERAD Agricultural Parishes used to approximate the Park are listed below. Figure 104 maps these areas.

440 Duthil	113 Glenisla	111 Cortachy & Clova
586 Cromdale	42 Crathine & Braemar	676 Blair Atholl
16 Glenbuchat	439 Alvie	671 Kirkmichael
21 Strathdon	441 Kingussie	38 Aboyne & Glen Tanar
43 Glenmuick Tullich & Glengairn	438 Abernethy	234 Inveravon
	235 Kirkmichael	89 Lochlee

Figure 104 Map of agricultural parishes in the Cairngorms area



13.5 The Park ‘halo’

The influence of the Park does not stop at the Park’s boundaries. In a number of places in the report it has been helpful to include information on a wider area. This has been done on an ad hoc basis. Bearing in mind that the enterprise networks have a particular interest in their

respective parts of the halo, additional information will be included in the Economic Atlas and Audit for the Inner Moray Firth area of Highlands and Islands Enterprise, and in a special appendix for Scottish Enterprise.

14 Appendix 2: Comparison with the earlier baseline study

An original intention of this study had been to compare the current state of the Park with that set out in the report *Economic Baseline for the Cairngorms National Park and surrounding area*, commissioned by the two Enterprise networks from SQW, Segal Quince Wicksteed in April 2003. Since the 2002 study was carried out before the boundary of the Park was finally confirmed, it was recognised that it would be necessary to adjust the data to take account of this. It is also necessary to take account of the planned extension to the Park boundary to the south. This exercise has been formally carried out, but is of very limited value for a number of reasons.

The first is that most of the original study was based on an area defined by postcodes, so that the boundaries were not just wider, but very much wider than the actual Park. They covered more than three times the actual population of the designated area and almost twice the employment. When an official population estimate was made for the area actually designated, then SQW did produce an addendum, but the adjustments made were rather over-simplified. For most items the figures in the addendum were prepared simply by taking 32.7 per cent of the figure in the original report. They did not, therefore, take account of the fact that the Park differs significantly from the surrounding areas – for example SQW's revised employment estimates were far lower than the actual Park employment.

This issue became even more extreme for some variables in the body of the report because SQW were not able to source local data and so took data for the contributing council areas as typical of the Park. Since in most cases the Park represents the most mountainous and most sparsely populated parts of the relevant Council areas, and contains no coastline, this again generated figures that do not represent the Park. (In the case of Highland, where the Park may be more typical of 'average' landscape, the Council area figures are of course affected by the inclusion of Inverness).

As set out in Appendix 1, in many places in this report we have been able to make a much better approximation of the actual Park boundaries, using an area defined by statistical datazones, which much more closely approximates the actual designated boundaries. Where that has not been possible we have used local authority ward boundaries, and although these are not as good as datazones they are far better than the postcode areas used by SQW.

Figure 105 Key indicators from SQW report

	SQW Original	SQW Addendum	2003 actual/ best estimate	2007 actual/ best estimate
Population	51 882	16 973	15 774	16 558
Employment (male)	7 034	2 301	3 553	4 101
Employment (female)	8 102	2 651	4 404	4 430
Total employment (see notes)	15 134	4 951	7 957	8 532
% of population under 25	28%	28%	25%	25%
Number of businesses sic (see notes)	2 075	810	1 120	1 191
Total claimants unemployed for over six months	609	199	46	39
FTE employment (see notes)	10 671	3 631	4 594	5 414
Average turnover	£363	£413	574	597
Total output £mn (see notes)	750	335	643	711
Value added £m (see notes)	362	161	293	316

5

Notes: What in the SQW report is designated 'employment' appears to refer to non-farm employees. The corresponding figures for 2003 and 2007 are shown. In addition there were 409 people who were employees on farms in 2003, and about 1,300 self-employed people (in all industries).

The meaning and source of the SQW count of 'businesses' is unclear. The 2003 and 2007 figures shown are for statistical data units, which are essentially workplaces. Several workplaces may be part of the same business, and many are not businesses at all.

The figure in the final column for GVA and Gross Output refers to 2006, and the average figures for turnover shown are calculated by dividing the figures shown in the table.

It can be seen that none of the SQW figures, except for their revised population estimate which was taken from the Scottish Government after designation, are at all close to the actual or best estimate figures at the time of designation. In every case the discrepancy in the SQW figures far exceeds any plausible trend or change since designation. Even in the case of the population figure, the trend it would suggest from 2003 to 2007 is in the opposite direction to the trends shown over this period by Scottish Government figures prepared on a consistent boundary basis.

Historical perspective has therefore been provided, in most cases, by tracking the statistical data for the Park back through the date of designation, so that our data includes the data that SQW would have reported, if they had used datazones and wards or had made more finely tuned assumptions.

Conclusions

There is no significant benefit from attempting to compare current best estimates of the Park economy with the statistical data presented in the SQW report.

The absence of regular monitoring has meant that the discrepancy between the SQW report and the actual Park figures had gone largely unremarked, and this may have led to a number of misconceptions about the Park.

If it is desired to monitor the future economic development of the Park, it is of the greatest importance to set up a continuous monitoring system with regular reporting.

15 Appendix 3: 'STEAM' tourism data

Global Tourism Solutions (UK) Ltd makes a regular estimate of Park tourism businesses using their STEAM model. This uses accommodation counts and structural details of the local tourism economy, coupled with occupancy surveys, to generate estimates of tourism revenue and employment.

The employment figures reported in STEAM are plainly much higher than they should be. For example, STEAM reported 3109 full time equivalent direct jobs directly supported by the accommodation and food and drink purchases of tourists in 2007, but in 2007 there were only 1660 full time equivalent jobs in the entire hotel, restaurant and catering sector. The STEAM report specifically states that it covers only visitor spending, but some at least of those FTE jobs would have been engaged in non-tourist roles, such as serving local residents in the hotels, restaurants, and take-aways, or providing services to businesses. Similarly, STEAM says that 618 FTE transport jobs were supported directly by tourism spending, when there are only 130 FTE transport jobs in the whole of the Park, and a fifth of those are concerned with road freight. (There are also 140 jobs in the motor trade, more than half of which are likely to be serving tourists and which STEAM may count as 'transport'. Nevertheless the STEAM estimate must be three times the actual figure or more).

The STEAM report also suggests that 11.4 per cent of visitor spending is covered by VAT. It makes no mention of excise duties on drink and motor fuel, both of which products are normally significant elements of tourism outlays. Taking these into account, our detailed studies of tourism impacts in the Highlands and Perth and Kinross^[1] suggest about 20 per cent more should have been deducted to allow for indirect taxes.

On the other hand STEAM includes only 280 FTE jobs in recreation, which is the category that covers not only the winter sports, country sports and adventure activities, but also more passive services and attractions such as museums and visitor centres. There has been substantial investment in these attractions and amenities, from both the public and the private sector, including the ski and biking facilities and the funicular railway. As a result there are actually some 590 FTE recreational services jobs in the Park, apart from those employees included in farms, the estates or retailing (such as bike and ski hire from shops) or employed in local government and agencies. The recreational services industry alone is about 2.4 times as big in the Park as in an average community, and in an average community some of it would be serving tourists, so we think it is likely that at least 60 per cent of the recreational services jobs are tourism-related. There has also been significant public investment in the infrastructure to serve them, such as the ski roads. To underestimate the employment supported by attractions is a serious matter, but the fact is that the figure must be at least half as big again as the STEAM estimate.

Another cause for concern is the very high number of bedspaces reported in STEAM, a total of 13,900, of which 11,200 are in Badenoch and Strathspey. In the previous project mentioned above we identified 3,400 bedspaces in Badenoch and Strathspey, based on addresses and data supplied by VisitScotland from its databases. While it is appreciated that VisitScotland coverage is not complete, we believe that with the presence of significant national chains which are all covered by VisitScotland, it is likely to be rather more than the level of one third suggested by the STEAM figures. While VisitScotland would be amongst the first to acknowledge that its figures are an underestimate of the accommodation available, the STEAM figures appear far too high.

Some of the expenditure figures reported in STEAM, on the other hand, seem low. £15m is said to be spent by visitors on shopping, which is less than a tenth of the retail turnover in the Park. In value added terms the Park's retail sector is 20 per cent or more bigger than normal for a community of this size, and some of the higher-margin businesses such as clothing, sports equipment and fancy goods are more than twice as big. We would therefore expect the benefits that shops draw from tourists to be at least double the figure in the STEAM report.

It would require a special study to make a proper estimate of the tourism economy in the Park. On total tourism spend there is limited other data to compare with, but STEAM estimates about £100m direct spending by tourists in Badenoch and Strathspey in 2008. Our 2005 estimate for the district, prepared for the Scottish Government and Forestry Commission in conjunction with updating the UN-standard tourism satellite accounts, is £150m.

Crucially, STEAM reports tourism spend in 2008 of £186m generating 5,261 FTE jobs, or £35,300 per job. There were only 7,200 FTE jobs in the Park, in all industries and services and in the public sector. While recognising that the tourism industries are important, it is absurd to suggest that they cover such a great majority of jobs in the Park. The average turnover for businesses in the Park in 2008, including gross retail sales, was £120,000 per full time employee. Thus even though we believe that due to 'swings and roundabouts' effects the total STEAM tourism spend figures are not too far out, the STEAM model is exaggerating the benefit to the local economy by a factor of more than three. Furthermore, the 'swings and roundabouts' issue is an important one which cannot be set aside, because the disposition of tourism spending dictates what sort of investments will yield a return, and which ones will not.

Another potential issue arises from the multipliers used to estimate the indirect and induced effects. Based on our own studies of tourism in Scotland we would not demur too strongly from the actual values used, but we note from the documentation that the figures used in STEAM are taken from the so-called 'Surrey' study of Scottish tourism multipliers. Professor Gibson, our principal investigator, commissioned and managed this study on behalf of the Scottish Development Agency and the Scottish Office in 1991, when it was based on original data collection and the latest official statistics available then, which covered 1979. Although that work was, for the time, ground-breaking, the structure of the Scottish economy has changed substantially in the past 30 years, and it would not be difficult for STEAM to use much more recent data.

However, although we must dismiss the level of tourism employment suggested for the Park by STEAM, the GTS model methodology is consistent from year to year, and therefore it was suggested that the trends shown in the STEAM reports may be a guide to tourism developments. However, in the case of the Cairngorms, STEAM points to a decline in visitor numbers from before designation to the present, and an even steeper decline in real revenues, shown in Figure 51 above. However all other indicators, including employment in the hospitality industries, estimates of real GVA from DREAM®, visits to Park attractions, and traffic on the A9 all point to a real increase in tourism over these years, as does the subjective experience of the DMO.

16 Appendix 4: the DREAM® models

This report has made extensive use of the DREAM® models to expand the limited data which is available for small areas. DREAM® stands for Detailed Regional Economic Accounting Models, and it is a system designed to bring to localities some of the analysis that is normally only done at national level. Three models have been used.

16.1 DREAM®

The DREAM® *Detailed Regional Economic Accounting Model* owes some of its authority to the fact that it is fully reconciled with the United Kingdom national accounts, and reconciled as much as possible with all other sources of local and industrial economic data. In practical terms this means that it is constrained to fit the UK regional accounts industrial totals for the NUTS3 territories which are contained in the Cairngorms National Park, namely:

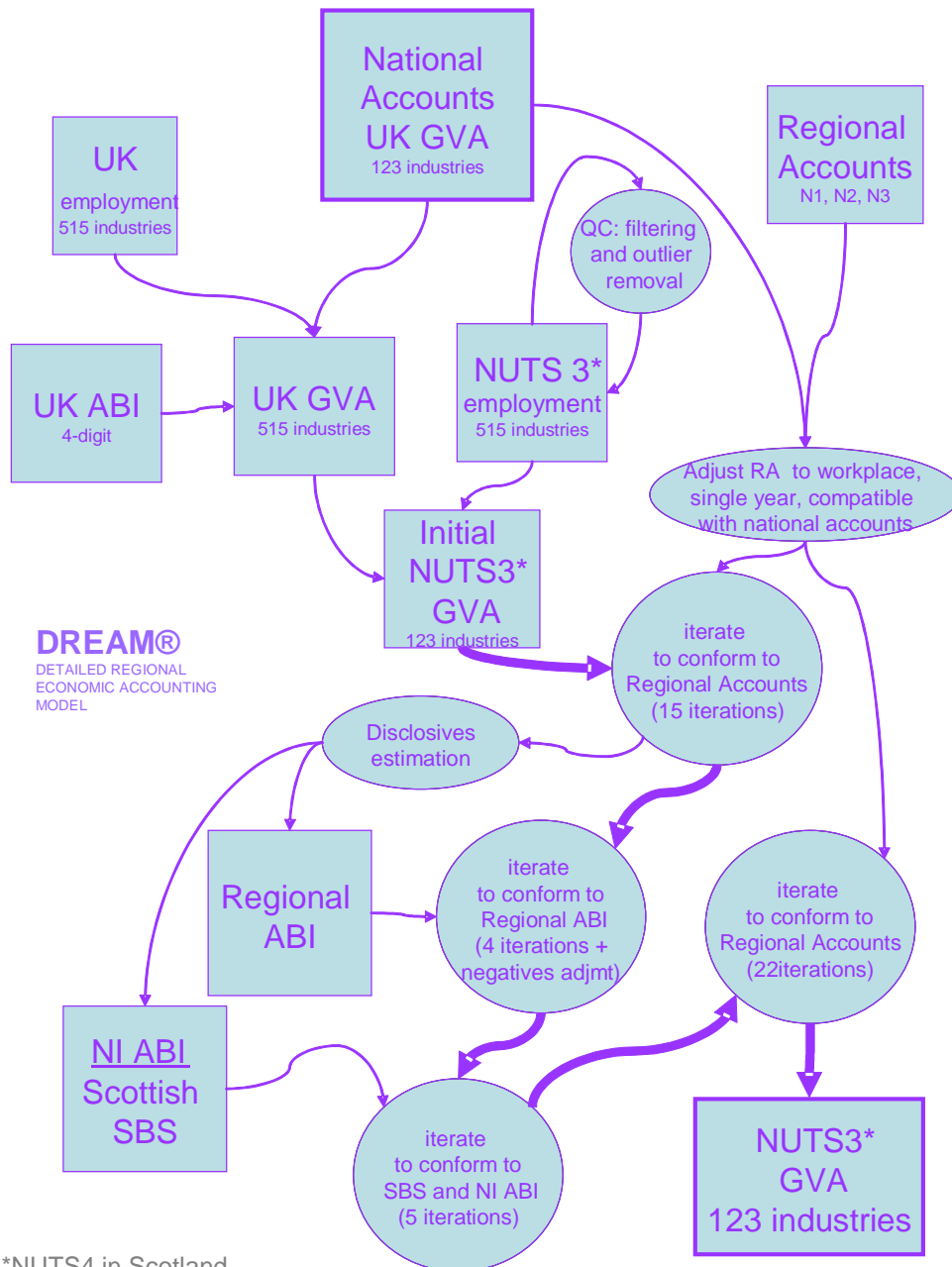
- UKM11 Aberdeen City, Aberdeenshire and North East Moray
- UKM21 Angus and Dundee City
- UKM27 Perth and Kinross and Stirling
- UKM42 Inverness and Nairn and Moray, Badenoch and Strathspey

It is also constrained, as far as is possible, to Scottish Business Statistics for Council Areas, which are based on the Annual Business Inquiry. The constraining process for GVA is iterative as shown in Figure 106. The main data sources relied on in the GVA estimation for DREAM®, not all of which are shown in the diagram, are:

- Census of Employment – Northern Ireland
- Census of Population and Annual Population Survey
- Commissioned workplace tabulations from UK Regional Accounts
- International Passenger Survey
- Midyear population estimates (based on birth and death registrations and the NHS Central Register)
- Northern Ireland ABI (not the same as GB ABI)
- Registers of Scotland (Sasines) and Land Registry House Price data
- Scottish Agricultural Statistics
- Scottish Annual Business Statistics
- UK Annual Business Inquiry – Financial
- UK Annual Business Inquiry – workplace and employment
- UK Farm Accounts
- UK National Accounts – Blue Book, various tables
- UK Regional Accounts at NUTS 1, NUTS 2 and NUTS 3 levels
- UK Supply and Use Tables
- UK Tourism Survey

Below the level of NUTS3 the principal basis for dividing up GVA is employment at ward level.

Figure 106 Estimation schema for NUTS3 / NUTS4 GVA



*NUTS4 in Scotland

A similar procedure was used to estimate earnings, with data from the Annual Survey of Hours and Earnings playing a similar role in that to the Annual Business Inquiry above. Again, it is reconciled so that employee compensation across the UK is consistent with the National and Regional Accounts.

16.2 DREAM® people – demographic analysis and projections

Whereas the overall DREAM® model focuses on adding geographic, industrial and economic detail to historic data, and updating it to the present, DREAM® people is used to present and

analyse demographic data which in its crude form is readily available, but can be hard to make sense of. It then builds on this analysis to project forward into the future.

Making a demographic projection involves making assumptions about how people will behave and how they will make major life-forming decisions. DREAM®people does this in a similar way to official demographic models: in some places it is simpler, and in other cases it is more subtle: most importantly it can be controlled by the user.

Scope	All people, ages 0-99 plus '100 and over'. DREAM®people projects ahead one-year at a time from the latest available mid-year population estimate (2007) and continues into the future without time limit.
Geography and time	DREAM®people for the enlarged Park is based on 23 statistical datazones. The recent official projection (GROS 2008) started in 2006 and had only 22 datazones, to correspond to the existing Park boundaries.
Births	Birth rates reflect regional differentials and national trends in fertility, applied to the local population of child-bearing age.
Deaths	Deaths reflect national trends in mortality rates through age 99, adjusted by the age-specific mortality ratio for the Cairngorms.
Migration total	Migration is estimated as the sum of five identified flows as indicated below. In all cases we have used the rates from 2002 to 2007 as the main influence on our future assumptions, but we note below what we would expect to be the main causal factors behind these rates.
Migration by age	<ol style="list-style-type: none"> 1. Bellwether migration of early career 21 to 33 olds. Our judgement is that such rates are normally based primarily on the labour market including wage levels. An influx from new EU states has been important. 2. Prime working migration of 34 to 49 year olds. The rates at which young families move is normally considered to be based on labour markets and housing. 3. 50 to 67 'end career' migration. This takes place at rates based mainly on housing markets especially equity release. 4. 0 to 15 year old child migration is based on prime migration (category 2, and local family size (which may depend on the housing stock). 5. Student age migration takes place at rates based on the age participation index for higher education, and to some extent employment. The pattern of movements across the country depends directly on the provision of higher education facilities.
Household formation	The expected number of households is based on the age and gender mix of the population. National rates, and officially-expected trends in those rates, are applied. The results are then adjusted to take account of differences between the Cairngorms and national averages over the past five years.

16.3 DREAM[®]job – method for commuting estimates

DREAM[®]job is a comprehensive system for examining work and worklessness in an area, and the relationships of that area with the residents and workplaces in surrounding areas. It measures and projects jobs and skills gaps and labour supply and demand.

The part of the DREAM[®]job model that has been used in this audit is the commuting estimates. These add finer geographic detail to commuting data which can readily be obtained from the Census 2001 for Council areas, and update it to take account of shifts in residence and employment.

Although in principle small-area to small-area commuting data is available from the Census, it would be prohibitively expensive and time consuming to use this data 'from the bottom up'. Instead the DREAM[®]job system constructs a gravity model of all commuting flows between Scottish local authorities. The parameters from this model link the number of jobs at the destination workplace and the number of employed residents at the origin to the distance between them. Those local authorities consisting of more than one NUTS4 area are then subdivided and the distance parameter used to estimate individual commuting flows.

Having used this method to expand from 32 x 32 council areas to 40 x 40 NUTS4 areas, we update the working age population and the number of jobs in each area, and produce an estimated updated commuting flow, after taking account of unemployment and changes in workforce participation. The technique applied is the RAS matrix adjustment technique familiar to input output modellers and social accountants.

17 Appendix 5: cycle of information availability

The following table shows the publication cycles for the main official statistical sources drawn upon in this economic audit. Few of these statistics are available to Park level, and Park estimates have been made for this report using the DREAM® Detailed Regional Economic Accounting Model. The table is therefore followed by some paragraphs to explain the DREAM® updating cycle.

Table 21 Publication cycle for official statistics

Data	Published by	Normal publication schedule	Park level official data?	NOMIS/ SCOTSTAT?	DREAM® update?
Agricultural Employment, holdings and activities	Scottish Agricultural Census - June	October year t	Parishes on application		
Claimant unemployment	ONS JSA Claimant Count via Nomis	Third Wednesday of following month	Wards		Monthly, DREAM® monitor, seasonally adjusted
Commuting/ Distance to Work	Census of Population	Census year + 2			Annual estimate, year t+1
Economic Activity (employment) Rates/ Economic Inactivity Rates, including self employment	Annual Population Survey	Quarterly seven months after quarter end	Council areas, sample errors significant	N	To Park level (based on wards)
Education Attainment	Annual Population Survey	Quarterly seven months after quarter end	Council areas, sample errors significant	N	
Employees/ Business Units	Annual Business Inquiry (ABI)	December year t+1	Wards	N, to Licence Holders	January To Park level (based on wards)
Employment by Occupation	Quarterly seven months after quarter end	Quarterly seven months after quarter end	Council areas, sample errors significant		By industry sector and Council area, nine months after quarter end.

Data	Published by	Normal publication schedule	Park level official data?	NOMIS/ SCOTSTAT?	DREAM® update?
Further Education Awards(Academic year t-1:t)	Scottish Funding Council	January year t+1			
GVA	ONS Regional Accounts	December, year t+1	Council area only, 6 industries		To Park level September, year t+1, 123 industries
GVA (ABI estimates)	Scottish Annual Business Statistics (NOT consistent with National/ Regional Accounts)	August, Year t+3	Council areas only	S	Park level, by industry
GVA (Volume Index)	Scottish Government	Four months after quarter end	Scotland	S	DREAM® monitor Monthly, to Park level, , two months after month end
Hours and Earnings	Annual Survey of Hours and Earnings (ASHE), April	November year t	Council areas, sample errors significant	N	To Park level (based on wards and industries)
House prices	Registers of Scotland	Week 1 of following month	Yes, on subscription		Monthly, DREAM® monitor, seasonally adjusted
House sales	Registers of Scotland	Week 1 of following month	Yes, on subscription		Monthly, DREAM® monitor, seasonally adjusted
Household income	ONS Regional Accounts	October, year t+1	Council areas only		Park level, January t+2

Data	Published by	Normal publication schedule	Park level official data?	NOMIS/ SCOTSTAT?	DREAM® update?
ILO Unemployment	Annual Population Survey	Quarterly seven months after quarter end	Council areas, sample errors significant	N	To Park level (based on wards) To Park level (based on wards)
Jobs Density	ONS via Nomis	April, year t+2	Council areas		
Mid year Population Estimates Scotland – council areas	GROS (General Register Office for Scotland)	April, year t+1	Approx 10 months later	S	May, year t+1
Mid-2008 Population Estimates for Settlements and Localities in Scotland	GROS (General Register Office for Scotland)	March, year t+2		S	May, year t+1
Mid-year-based Population Projections	GROS (General Register Office for Scotland)	February, base year +2	Council areas. Park ca 6 months later	S	May, year t+1
Mortality	GROS (General Register Office for Scotland)	September year t+1	Council area. Datazones later	S	
National Insurance Registrations	Department of Work and Pensions	Quarterly five months after quarter-end	Council areas only	N	
New Business Start Ups	Committee of Scottish Clearing Banks	Three months after quarter-end	Council areas		Not in DREAM
Notified Vacancies	Jobcentre Plus via Nomis	Third Wednesday of following month			Monthly, DREAM® monitor, seasonally adjusted
Profits & investment	ONS National Accounts	August, year t+1	UK level only, by industry		Park level, by industry

Data	Published by	Normal publication schedule	Park level official data?	NOMIS/ SCOTSTAT?	DREAM® update?
School Leaver Destinations	Scottish Government: Destination of Leavers from Scottish Schools (Academic year t-1:t)	November/ December year t			
Secondary School Examination Results	SQA Examination results in Scottish Schools (Academic year t-1:t)	November year t	By school		
VAT Registered Businesses	Dept for Business, Innovation and Skills- VAT registrations/ deregistrations by industry	December , year t+1	Council areas	N	January
Volume and Value of Landings	SEGRAD/ DEFRA Sea Fisheries Statistics	September year t+1	Ports		

The updating schedule for the cogentsi DREAM® models available to Park level consists of Monthly updates in the DREAM® monitor system: unemployment (seasonally adjusted), housing transactions (price and volume, seasonally adjusted) GVA index.

DREAM® model portfolio updates scheduled for January, May and September. These updates are contingent on official statistics being published to schedule, particularly the Annual Business Inquiry (Parts 1 and 2), the National Accounts (including the Supply and Use Tables), and the Regional Accounts. Delays in the publication of official data can make it sensible to defer a DREAM® update, and this is at cogentsi's discretion.