Cairngorms National Park Partnership Plan
2017-2022

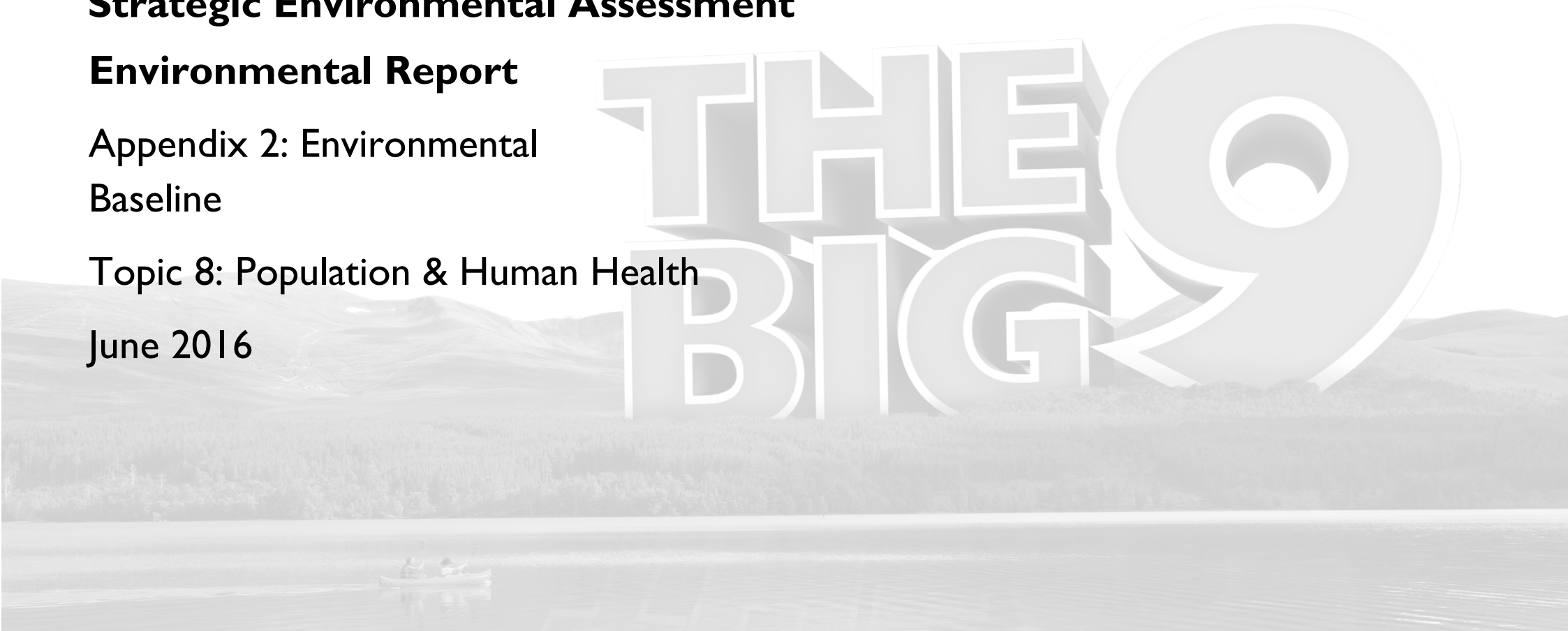
Strategic Environmental Assessment

Environmental Report

Appendix 2: Environmental Baseline

Topic 8: Population & Human Health

June 2016



Topic 8: Population and Human Health

Population

Population statistics within the Cairngorms National Park are calculated using an aggregate of data zones that roughly correspond with its boundary. For full details on how these data zones are collected, see **Appendix 3** (p. 283).

Population and Household

In 2014[14] the estimated population of the National Park was 18,594, with 9,186 males and 9,408 females.

The National Park has a distinctly different population profile to the national (**Figure 137** and **Figure 138**), with a higher proportion of people falling within the 55 to 74 age cohorts. When compared to other rural parts of Scotland, the Cairngorms National Park also has a relatively high proportion of residents

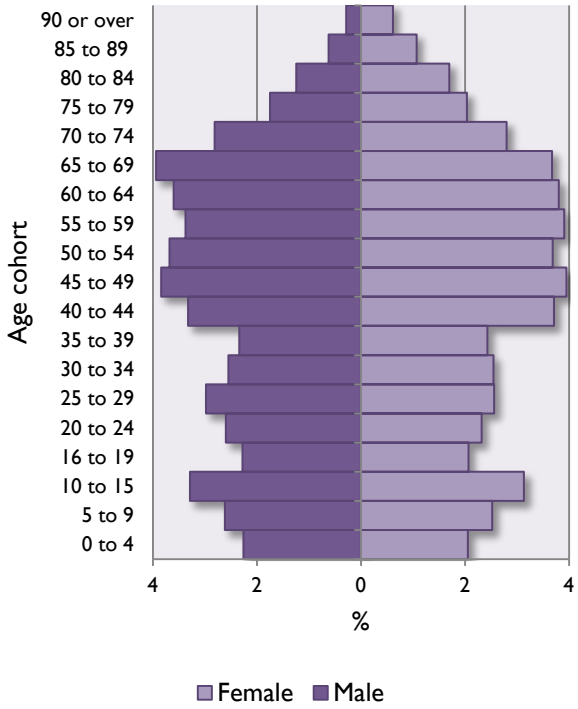


Figure 137 Estimated population profile by age and sex in the Cairngorms National Park in 2014.

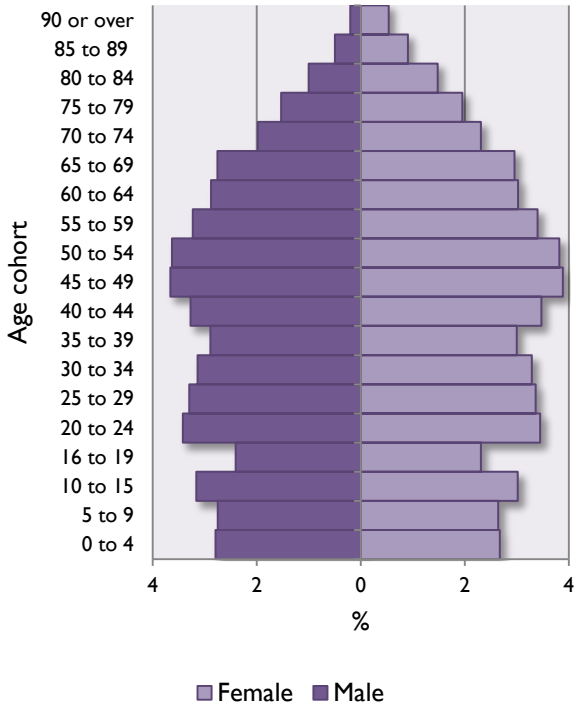


Figure 138 Estimated population profile by age and sex in Scotland in 2014.

Source: www.sns.gov.uk

[14] 2014 Mid-year estimates represent the most recent set of population statistics at a data zone level at time of writing.

within the 10 to 29 age cohorts (see NRS (2014). This is thought to be due to the relatively high number of opportunities for employment in the outdoor and tourism sectors. There is also a spike in the 10 to 15 year cohort, which is replicated across Scotland as a whole.

Although mid-year estimates suggest a slowdown in the rate of growth between 2011 and 2014, during the 21st century[15], the National Park has experienced a significant net increase in its resident population, rising by approximately 2,261 persons (a growth of 13.8%) (**Figure 139**). This growth is well above the overall Scottish rate, which saw a net increase of around 5.6% over the same period.

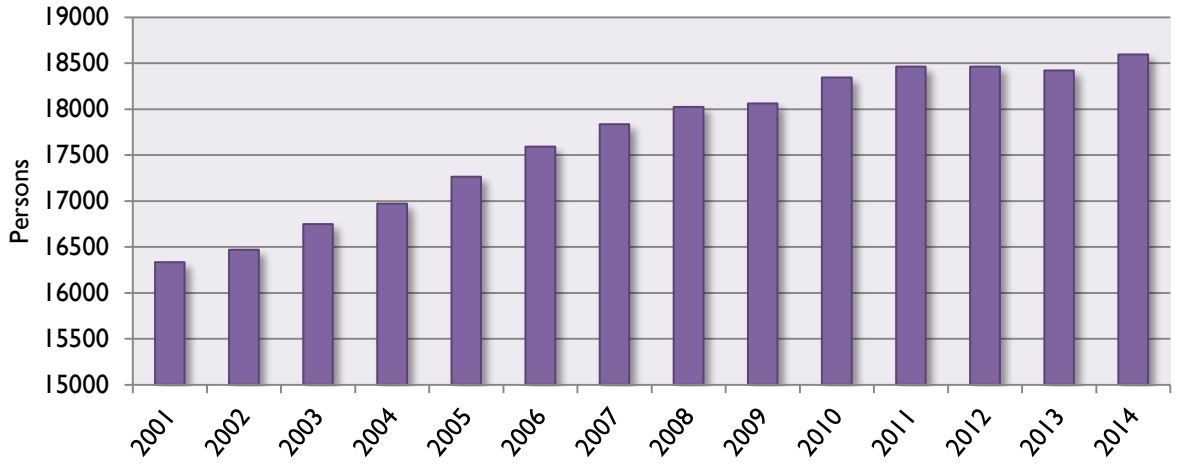


Figure 139 Mid-year estimates of total population for the Cairngorms National Park. Source: www.sns.gov.uk

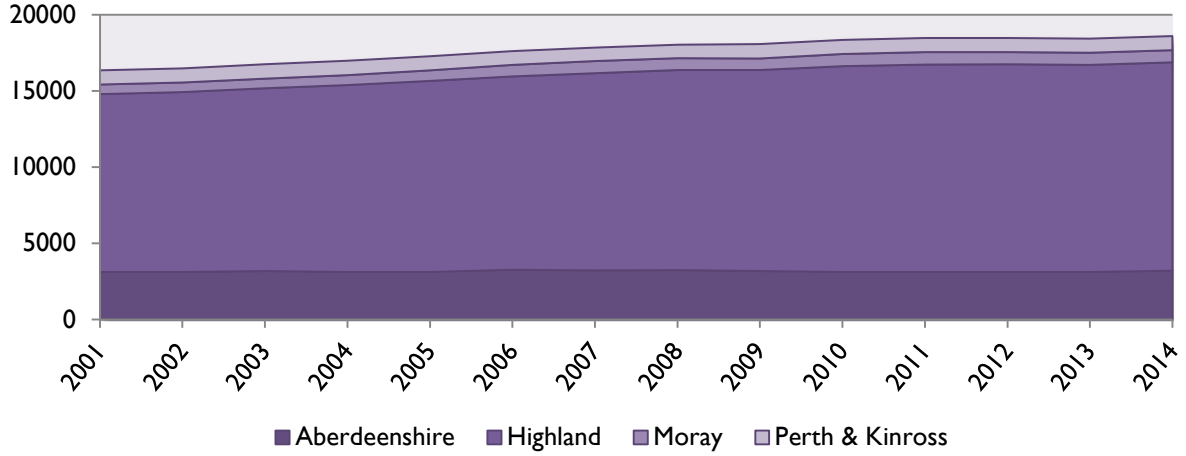


Figure 140 Mid-year estimates of total population for the Cairngorms National Park distributed by Local Authority Area. Source: www.sns.gov.uk

[15] Figures between 2001 and 2009 include people living in the area of Perth and Kinross which did not become part of the National Park until 2010.

This growth has not been evenly distributed throughout the National Park (**Figure 140** and **Figure 141**). Indeed, the overall population in data zones within Aberdeenshire and Perth and Kinross has remained relatively stable.

The greatest increase occurred within Aviemore, which is estimated to have grown by around 1,009 people. Proportionally this represents a growth of around 142%. Most of Badenoch and Strathspey also experienced growth, gaining an estimated 1,014 people. Taken together, this addition of 2,023 persons resulted in the Highland area of the National Park growing by 17.4%.

Although net population change within the National Park has been positive, certain areas experienced a reduction in the population. For example, the population of datazone S01000312, which represents part of Ballter, lost around 93 persons (-14.5%). It is unclear if this represents a genuine trend or is a result of methodical or sampling changes to the mid-year estimate methodology.

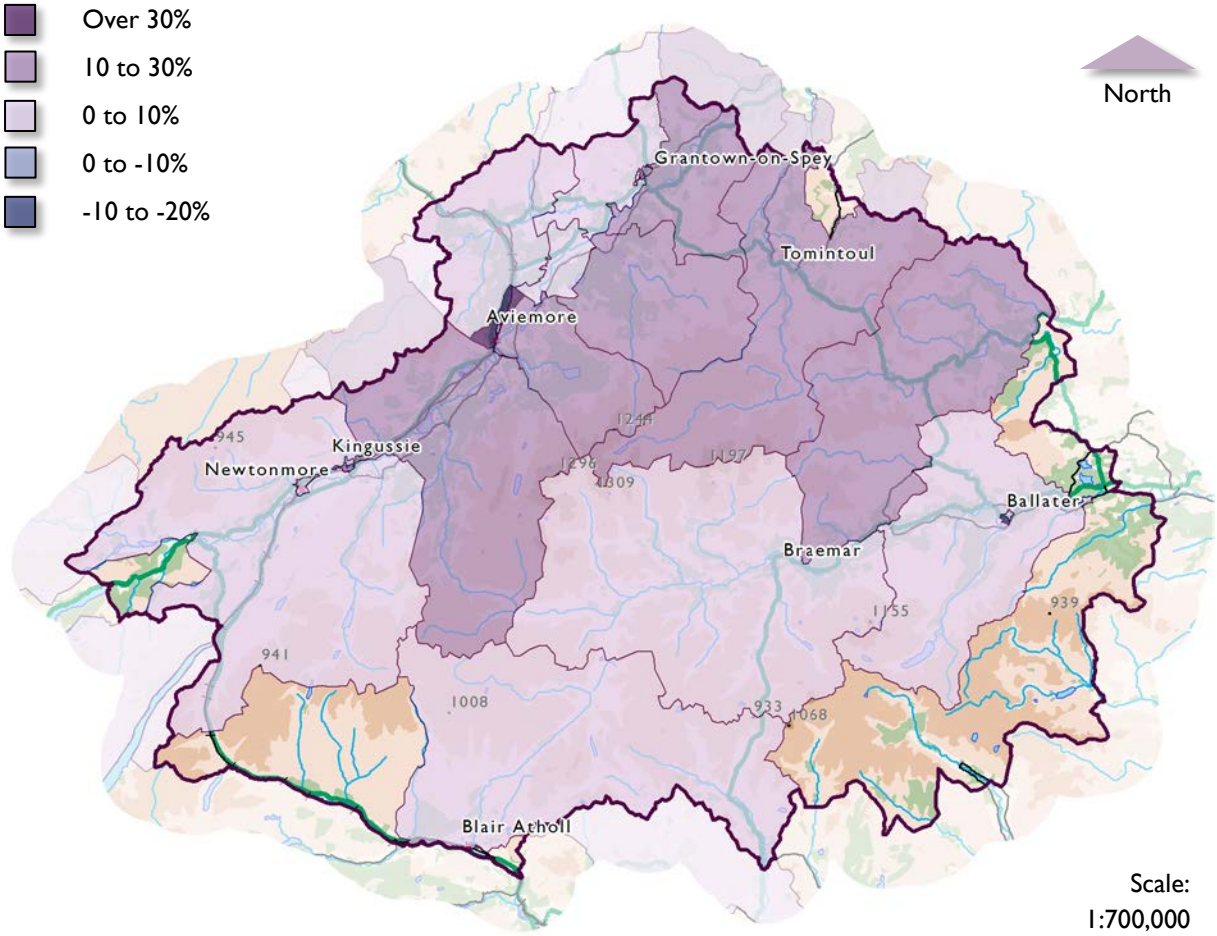


Figure 141 Population change within the Cairngorms National Park between 2001 and 2014 (based on mid-year estimates).

National Park Projections

Population projections for the National Park are produced by National Records of Scotland (NRS), with the most recent being 2012 based projections being published in August 2014 (**Figure 142**).

Population projections are calculations showing what happens under certain assumptions about future fertility, mortality and migration. Household projections also incorporate information on trends of household formation.

The assumptions in NRS' projections continue these past trends in local fertility, mortality, migration and household formation. They do not take account of any future changes that may occur as a result of policy initiatives, social or economic change. They will reflect past policy changes and trends in house building, but they do not incorporate information on planned future policy changes or house building. For example, an area may have had a high level of house building over the last few years, which is now coming to an end, but the projections would show a continuation of the past trends. These projections are not, therefore, forecasts of what the government expects to happen.

It should be noted that in estimating the population of the National Park and calculating its projected growth, NRS does not include data zone S01005147 / S01011981, which is in Perth and Kinross. Population estimates presented in NRS documents therefore differ from those of the CNPA, since the CNPA does include the data zone within its analyses of the National Park's demographic and socio-economic character.

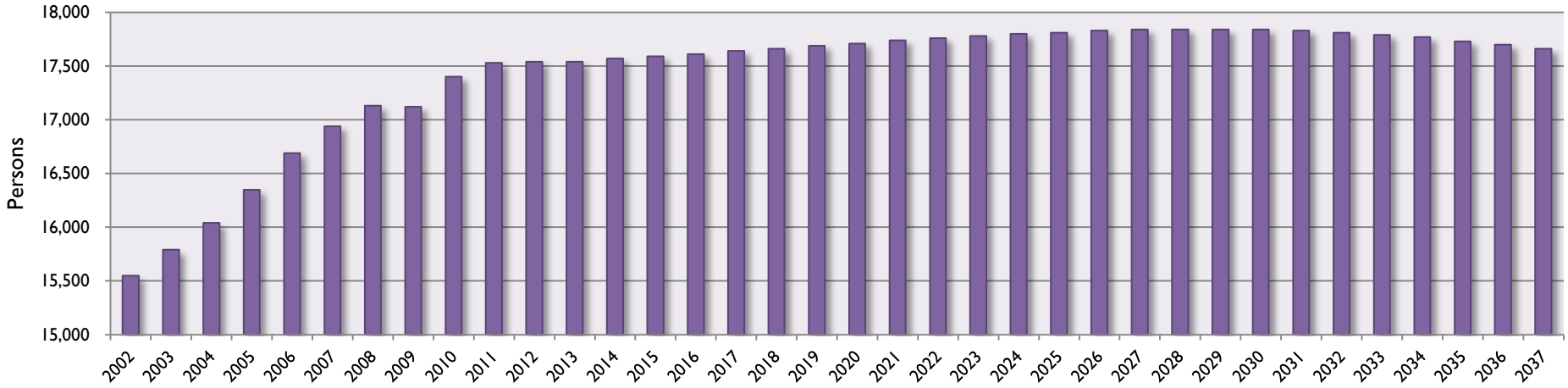


Figure 142 Estimated and projected total population of the National Park, 2002-2037 (NRS, 2014).

This difference does not however result in a significant problem since it is not the headline population that generates a policy response, but the rate and scale at which change occurs. Since data zone S01005147 / S01011981's population was only estimated to be 941 in 2014 and the fact that it saw no statistically significant change over the period of 2001-2014 (an estimated net increase of 16 persons), there is little to suggest that its absence within NRS' calculations would have had a significant impact on the robustness of their projections.

NRS (2014) estimate that between 2012 and 2037, the population of Cairngorms National Park is projected to rise from 17,540 to 17,660 (an increase of around 1%). This is a lower level of growth than experienced previously, however since 2010 a reduction in the rate of growth has occurred and should this represent a future trend then the projection is not unreasonable.

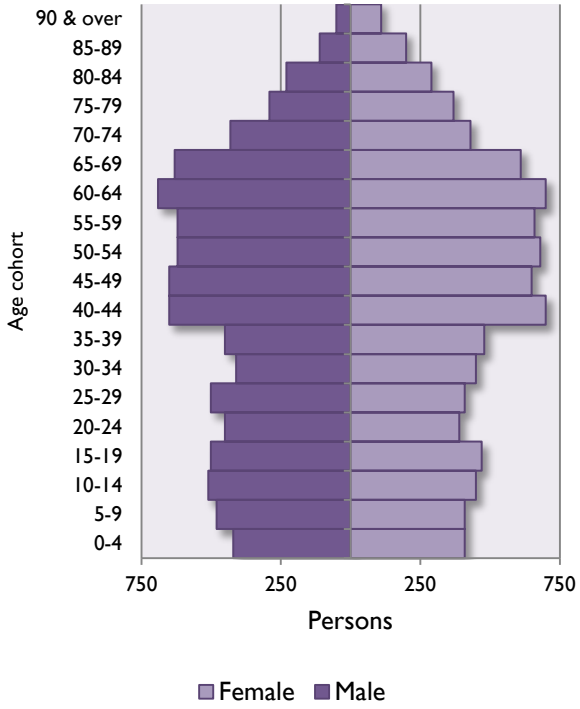


Figure 143 Estimated population profile by age and sex in the Cairngorms National Park in 2012 (NRS, 2014).

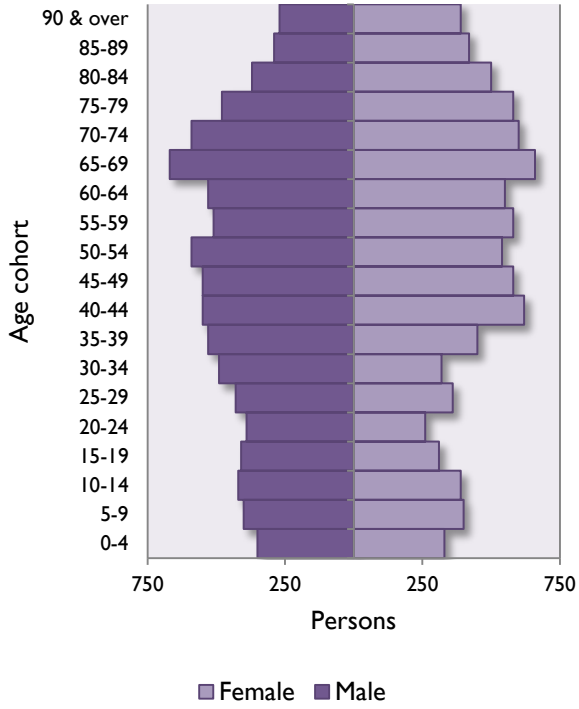


Figure 144 Projected population profile by age and sex in the Cairngorms National Park in 2037 (NRS, 2014).

There is projected to be more deaths than births across the 25 year projection period. Therefore the population increase is due to net immigration to the area, which is assumed to be 50 migrants per year.

NRS (2014) also give an indication of how the age structure of the population might change (**Figure 143** and **Figure 144**). The number of children aged under 16 is projected to decrease by 15% over the projection period from 2,890 in 2012 to 2,460 in 2037. The number of people of working age is projected to decrease from 10,350 in 2012 to 9,910 in 2037, a decrease of 4%.The population of pensionable age is projected to rise by 23% from 4,300 in 2012 to 5,290 in 2037. It's clear that this projected change in population and demographic character will result in an increase in the number of households within the National Park.

NRS (2014) projections suggest that households are set to increase from 7,870 in 2012 to 8,780 in 2037, an increase of 12% (**Table 30** and **Figure 145**).

Table 30 Household projections for the Cairngorms National, by type of household, 2012 to 2037 (NRS, 2014).

Household Type	2012	2017	2022	2027	2032	2037	Average annual change 2012-2037	Overall Change 2012-2037	
1 adult	2,632	2,776	2,937	3,091	3,213	3,314	27	682	26%
2 adults	2,869	3,027	3,125	3,211	3,240	3,212	14	342	12%
1 adult with children	403	428	459	484	503	519	5	116	29%
2+ adults with children	1,420	1,386	1,369	1,337	1,325	1,318	-4	-102	-7%
3+ person all adult	542	529	497	467	438	416	-5	-126	-23%
All households	7,866	8,146	8,387	8,590	8,719	8,779	37	912	12%

Given the limited nature of the projected population growth, it is clear that it does not entirely explain the projected change in the number of households. Indeed, the difference between the household and population projections is due to the trend in more people living alone or in smaller households. In the Cairngorms National Park, the average household size is projected to drop from 2.15 people in 2012 to 1.93 people in 2037 (**Figure 146**).

Sub-council Area Projections

In 2016 the National Records of Scotland published the results of a one-off research project to produce population and household projections for sub-council areas (**Figure 147**).

Additional caution should be taken for sub-council area projections because small areas show more short-term change than larger areas and in the projections, these trends are continued for the length of the projection. As the process of change is cumulative, the reliability of projections decreases over time and for this reason

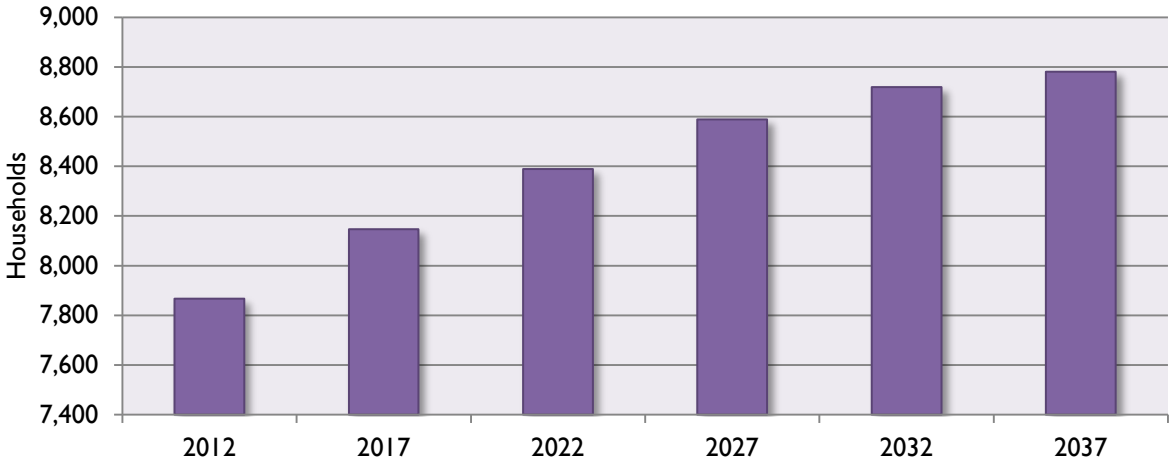


Figure 145 Overall household projections for the Cairngorms National Parks, 2012 to 2037 (NRS, 2014).

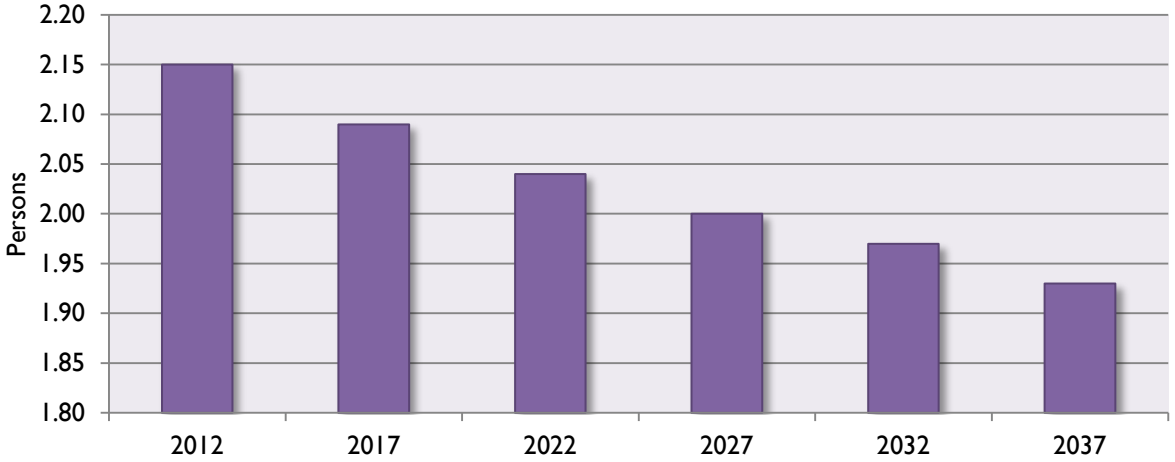


Figure 146 Projected household size for the Cairngorms National Park, 2012 to 2037 (NRS, 2014)

caution should be used when considering these projections in the longer-term.

Therefore, although projections have been prepared to 2037 (25 years ahead), in line with the sub-national projections at council area and National Park level, the main results are reported to 2026. Projections become more uncertain the further ahead they project, especially for smaller areas, as these populations are affected more by the migration assumptions, therefore the results to 2026 are considered more reliable than the longer-term projections and are presented in this report (**Table 31**).

The sub-council areas are not consistent in size, varying from base populations of 2,100 to 79,000; with the average area having a population at mid-2012 of 17,700. The larger areas tend to be in urban areas and the smallest in rural areas.

The only sub-council area that is contiguous with the National Park boundary is Badenoch and Strathspey. Due to the very small populations within them, the other

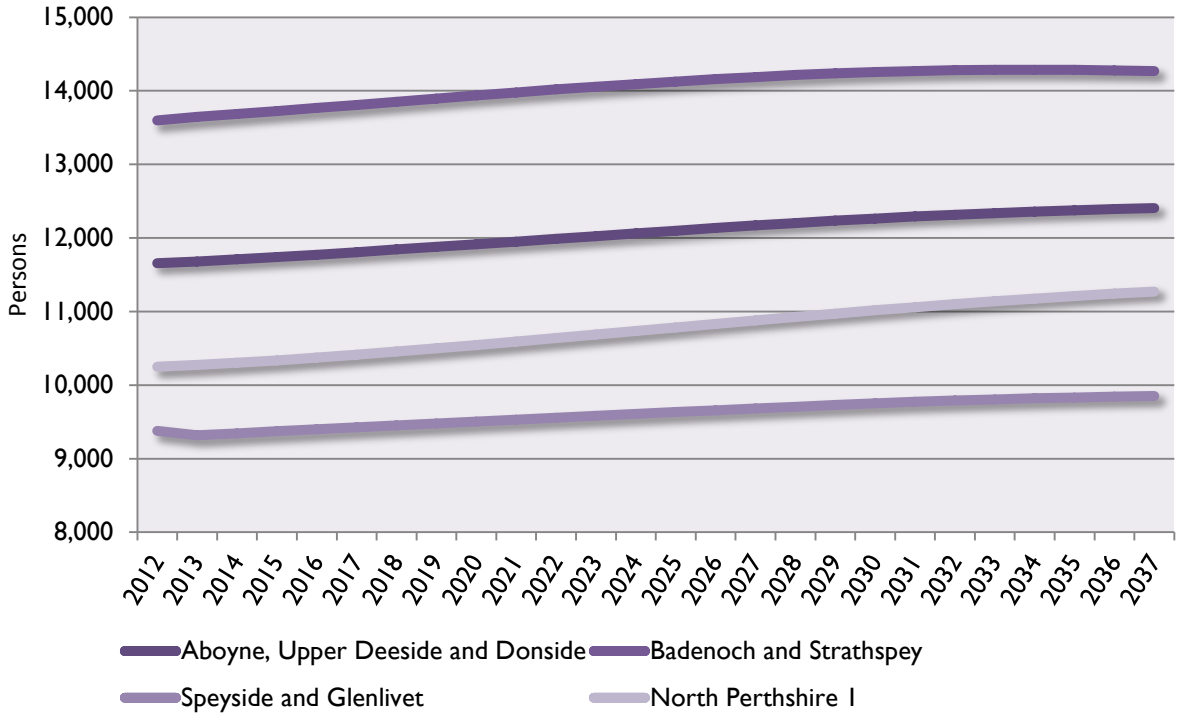


Figure 147 Population projections for sub-council areas within and overlapping the National Park (NRS, 2016).

Table 31 Projected population change for sub-council areas within and overlapping the National Park (NRS, 2016)

Local Authority	Sub-council Area	2012	2026	Change
Aberdeenshire	Aboyne, Upper Deeside and Donside	11,656	12,134	4.1%
Highland	Badenoch and Strathspey	13,597	14,158	4.1%
Moray	Speyside and Glenlivet	9,377	9,657	3.0%
PKC	North Perthshire 1	10,249	10,831	5.7%

local Authority areas of the National Park form part of larger statistical areas:

- The Aberdeenshire part of the National Park forms part of a larger area that includes Aboyne;
- The Moray part of the National Park forms part of a larger are that includes most of Speyside, including Aberlour and Dufftown;
- The Perth & Kinross are of the National Park forms part of a large rural area that includes towns such as Pitlochry and Aberfeldy;
- The Angus part of the National Park forms part of a large rural area that includes Kirriemuir and Dean.

Because the Angus part of the National Park only contains 20 occupied dwellings, the cub-council projections for the area will not be considered within this report.

Figure 147 and **Table 31** indicate that the level of population change will differ between the different sub-council areas. Caution should however be exercised when drawing conclusions about the National Park, particularly when the majority of area's population is located outside the National Park. For example, according to 2012 mid-year estimates only around 27% of Aboyne, Upper Deeside and Donside's, 9% of Speyside and Glenlivet's and 9% of North Perthshire 1's population live within the National Park. It is likely therefore that the projections for these areas are not representative of the National Park's population.

The projections for Badenoch and Strathspey are however useful, since according to the Highland Council (2015), only 97.6% of the area's housing stock is located within the National Park. We may therefore take a closer look at the projections for this area.

NRS (2016) project that between 2012 and 2026 the population of Badenoch will rise from 13,597 to 14,158. The projections also give an indication of how the area's age structure might change (**Figure 148**, **Figure 149** and **Figure 150**). The number of children aged under 16 is projected to decrease by 12% over the projection period from 2,270 in 2012 to 2,001 in 2026. The number of people of working age is projected to decrease from 8,583 in 2012 to 8,538 in 2026, a decrease of 1%.The population of pensionable age is projected to rise by 32% from 2,744 in 2012 to 3,618 in 2026.

Household projections for the sub-council areas are available on the basis of seven household types, based on the number of adults and children living in the household, and sixteen age groups. This is equivalent to the main household projections.

This combination of household types, age groups and areas means that the figures for some individual groups are extremely small. For example, there are very few households in the whole of Scotland which contain one adult aged 75-79 and one child. Therefore, in every sub-council area some combinations of household type and age group have extremely small figures, or zeros.

This information is not considered 'disclosive' as the projections do not refer to individual households. However, recognising that projections for small

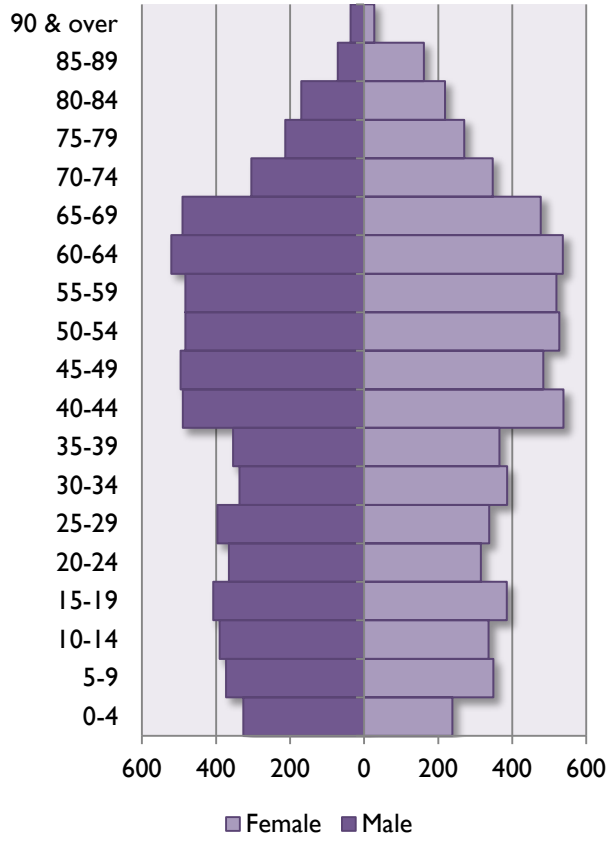


Figure 148 Estimated population profile by age and sex in Badenoch and Strathspey in 2012 (NRS, 2016).

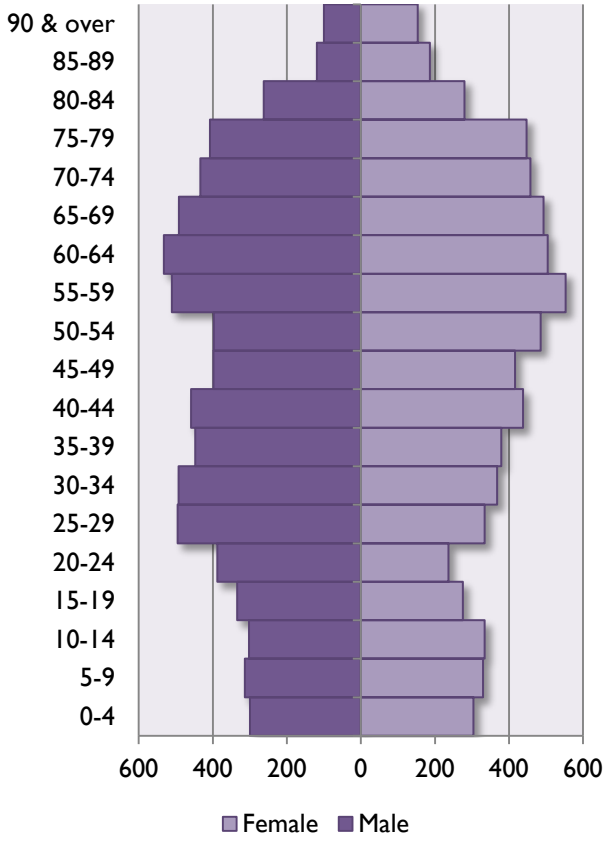


Figure 149 Projected population profile by age and sex in Badenoch and Strathspey in 2026 (NRS, 2016).

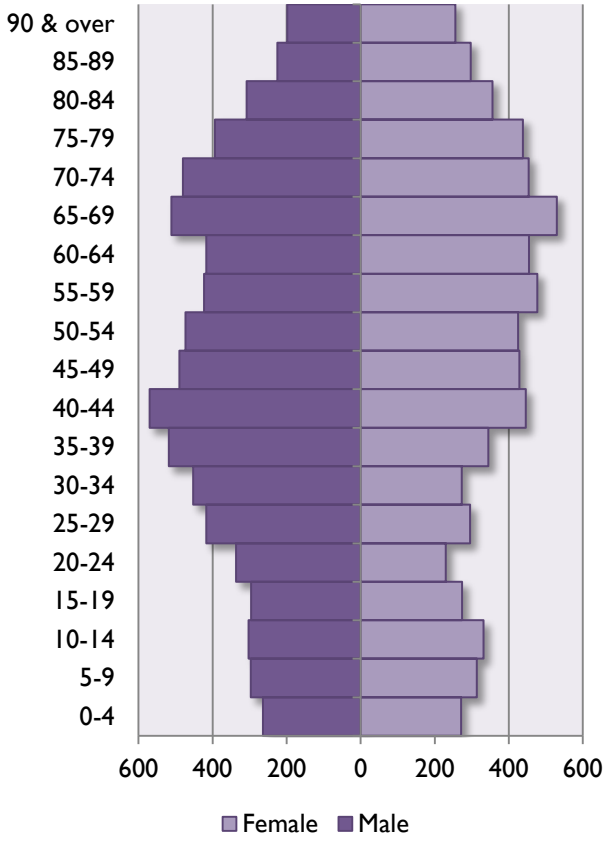


Figure 150 Projected population profile by age and sex in Badenoch and Strathspey in 2037 (NRS, 2016).

groups are likely to be less reliable than those for larger groups, the projections within this report have been grouped into broader household types.

In geographical terms, the same caveats apply to the household projections as the population projections. That is, since most households within the Aberdeenshire, Moray and Perth and Kinross areas are located outwith the National Park, caution should be taken when considering their projections within the National Park context. Therefore, while **Figure 151** and **Table 32** provide useful information about broader demographic changes, only the Badenoch and Strathspey area deserves greater analysis.

The projections suggest that households in Badenoch and Strathspey are set to increase from 5,-82 in 2012 to 6,688 in 2026, an increase of around 12% (**Figure 151**). During this period households with 2 adults with children are set to fall from around 1,117 to 1,094, a drop of around 2%. Households with three adults or more are also projected to fall, from 429 to 378,

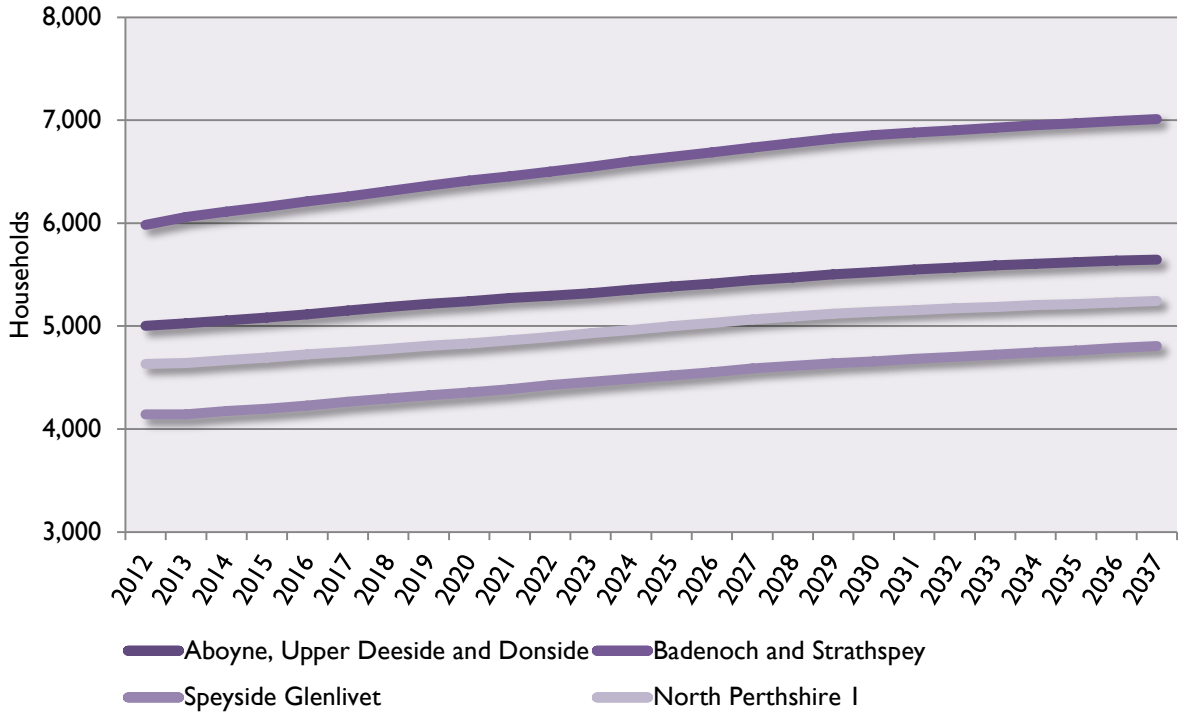


Figure 151 Overall household projections for sub-council areas within and overlapping the National Park (NRS, 2016).

Table 32 Projected household change for sub-council areas within and overlapping the National Park (NRS, 2016)

Local Authority	Sub-council Area	2012	2026	Change
Aberdeenshire	Aboyne, Upper Deeside and Donside	5,002	5,413	8.2%
Highland	Badenoch and Strathspey	5,982	6,688	11.8%
Moray	Speyside and Glenlivet	4,142	4,550	9.9%
PKC	North Perthshire 1	4,631	5,030	8.6%

representing a more significant proportional decrease of 12% (**Figure 152**). All other household types are projected to grow, with 1 adult households (1,965 to 2,351; 20%) and single parent households (320 to 378; 18%) seeing the greatest proportional increases.

Housing Deprivation

The relationship between the availability of good quality housing and the health and well-being of people is now well recognised (National Housing Federation, 2014; Parliamentary Office of Science and Technology, 2011).

For example, children who are brought up in disadvantaged neighbourhoods, in poor quality housing or insecure accommodation are more likely to be exposed to avoidable health risks such as damp, cold, accidents, community safety concerns, inadequate pre-school and early-years provision, poor schools, and a lack of safe play areas

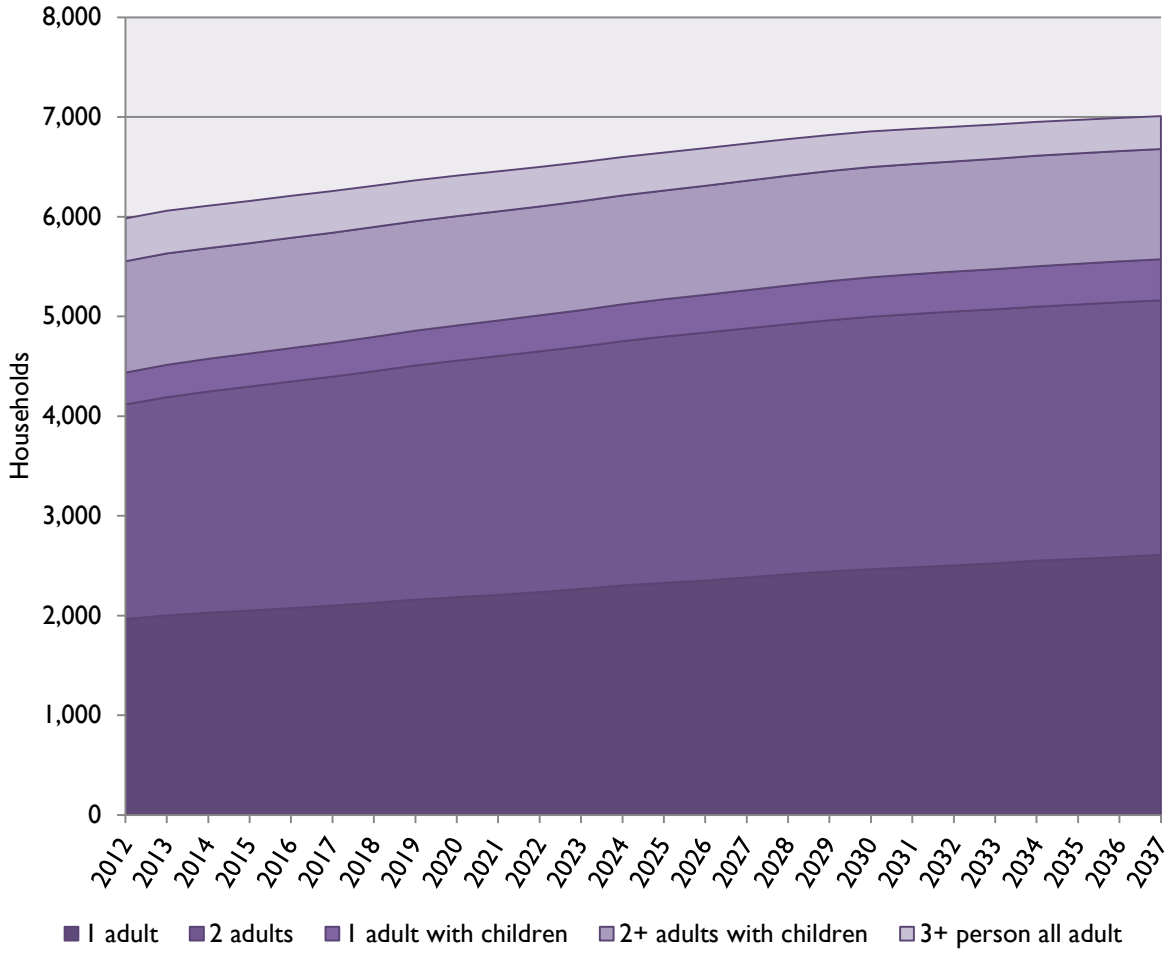


Figure 152 Household projections for Badenoch and Strathspey, by type of household, 2012 to 2037 (NRS, 2016).

(Shelter, 2006). Similarly, growing older in poor quality, unaffordable or inappropriate housing has a negative impact on quality of life the maintenance of independence in retirement (The Housing and Ageing Alliance, 2013). Research carried out in England, showed an average life expectancy gap of seven years between the richest and poorest areas of the country. People living in poorer areas and households with the lowest incomes spend a greater proportion of their lives (an additional 17 years on average) coping with the impact of long-term illness and associated disability (Marmot, 2010).

Fortunately, there is not a high level of housing related deprivation within the National Park, with no data zones falling within the 20% most deprived (see **Figure 153**). There are however areas of the National Park where certain indicators of housing deprivation exceed the national average.

In particular, many areas of the National Park have relatively high proportions of the

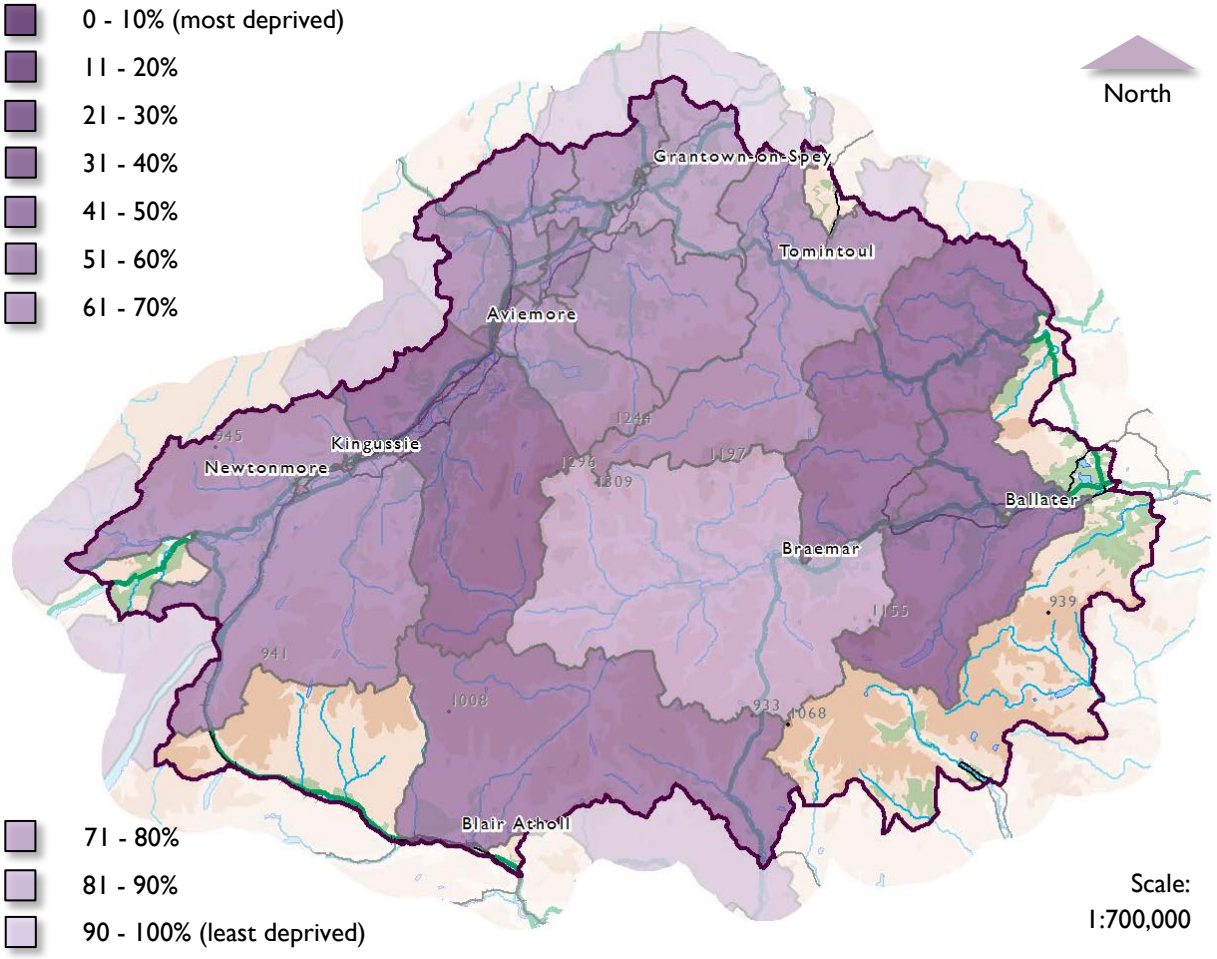


Figure 153 Housing deprivation by decile according to the SIMD (2012).

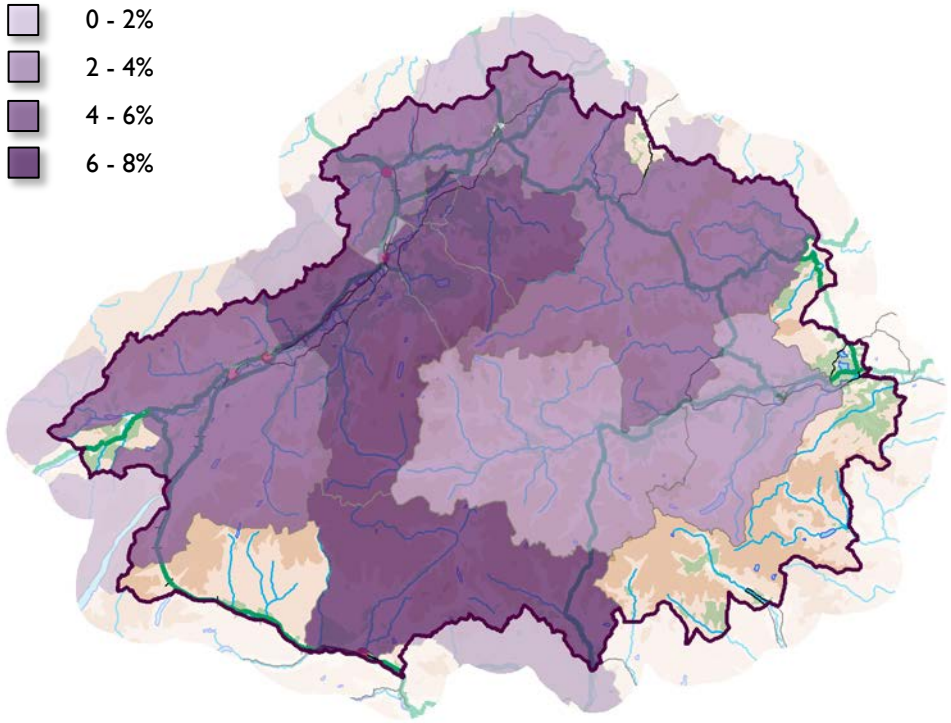


Figure 154 Proportion of household population without central heating, 2011 (Census table LC1403SC). Crown copyright 2013.

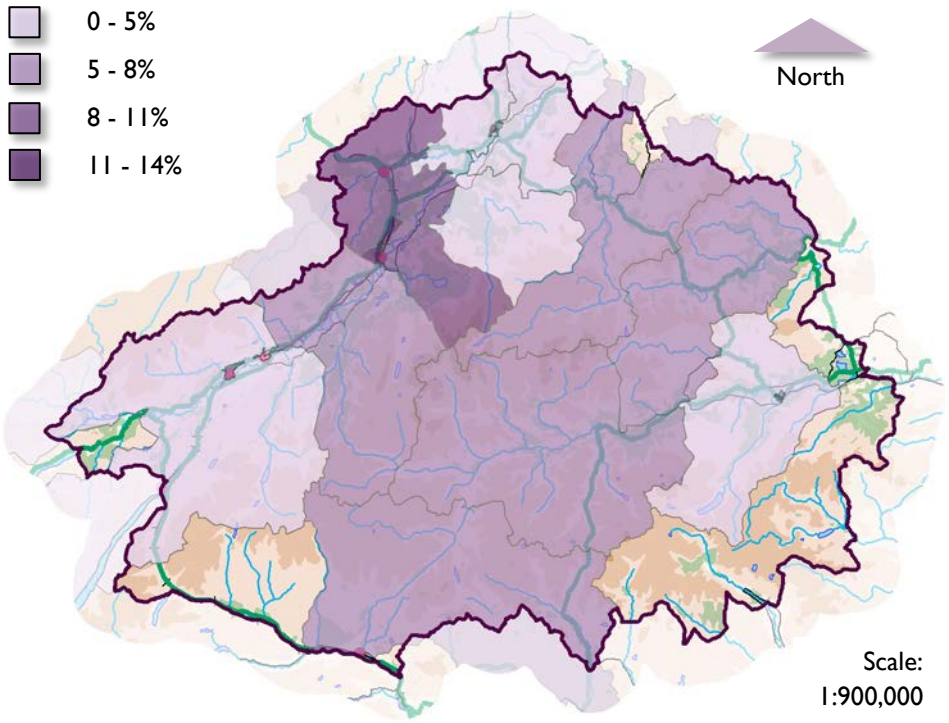


Figure 155 Proportion of household population living in overcrowded households, 2001 (SIMD, 2012).

For further information on variables, see www.scotlandscensus.gov.uk/variables

In order to protect against disclosure of personal information, some records have been swapped between different geographic areas. Some cell values will be affected, particularly small values at the most detailed geographies.

household population living in homes with no central heating, equating to around 4.3% across the whole area (Scotland 2.3%) (**Figure 154**). Levels of household overcrowding are relatively low within the National Park (**Figure 155**), with the vast majority of data zones falling below the Scottish average of around 13.9%. It should be noted however that data on overcrowding comes, via the 2012 SIMD, from the 2001 Census and therefore, owing to its age, a degree of caution should be applied when quoting these statistics.

Overcrowding statistics may be skewed by the fact that compared to the Scottish average, there is higher proportion of large dwellings within the National Park and a lower proportion of small ones (**Table 33** and **Table 34**). This may therefore mask significant instances of overcrowding suffered by those unable to afford larger properties (see pages 261 to 263).

Table 33 Number of dwellings by size in the Cairngorms National Park in 2013 (Source: www.sns.gov.uk/).

Area of National Park	All Dwellings	One Room	Two Rooms	Three Rooms	Four Rooms	Five Rooms	Six Rooms	Seven Rooms	Eight Rooms	Nine Rooms	Ten or more rooms	Unknown
ABD	1916	47	216	284	448	393	238	128	76	35	51	0
Highland	7170	26	701	1682	1863	1168	691	423	177	83	141	215
Moray	421	5	38	52	121	95	51	26	16	5	12	0
PKC	449	4	33	100	118	79	43	25	16	11	13	7
CNPA	9956	82	98	2118	2550	1735	1023	602	285	134	217	222
Scotland	2,532,119	21,638	302,018	741,849	673,791	414,947	188,535	84,796	38,617	16,355	14,007	35,566

Table 34 Proportion of dwellings by size in the Cairngorms National Park in 2013 (Source: www.sns.gov.uk/).

Area of National Park	All Dwellings	One Room	Two Rooms	Three Rooms	Four Rooms	Five Rooms	Six Rooms	Seven Rooms	Eight Rooms	Nine Rooms	Ten or more rooms	Unknown
ABD	100%	2.5%	11.3%	14.8%	23.4%	20.5%	12.4%	6.7%	4.0%	1.8%	2.7%	0.0%
Highland	100%	0.4%	9.8%	23.5%	26.0%	16.3%	9.6%	5.9%	2.5%	1.2%	2.0%	3.0%
Moray	100%	1.2%	9.0%	12.4%	28.7%	22.6%	12.1%	6.2%	3.8%	1.2%	2.9%	0.0%
PKC	100%	0.9%	7.3%	22.3%	26.3%	17.6%	9.6%	5.6%	3.6%	2.4%	2.9%	1.6%
CNPA	100%	0.8%	9.9%	21.3%	25.6%	17.4%	10.3%	6.0%	2.9%	1.3%	2.2%	2.2%
Scotland	100%	0.9%	11.9%	29.3%	26.6%	16.4%	7.4%	3.3%	1.5%	0.6%	0.6%	1.4%

A significant barrier in reducing household deprivation is the availability of enough new housing to replace existing poor quality stock while also meeting projected growth in households. The number of new homes completed in the National Park fell following the 'credit crunch' in 2008 and has resulted in an average annual completion rate of around 60 new dwellings (**Figure 156**). The planned ending of the Government's Help to Buy Scheme (Scotland) in 2016, combined with continued constraints on mortgage availability, may further dampened confidence in the housing market and limit the development of new homes.

Being the area of the National Park in which most development takes place, completions in Badenoch and Strathspey heavily influence this trend with development peaking in 2006, and falling to a nadir in 2013 (**Figure 157**).

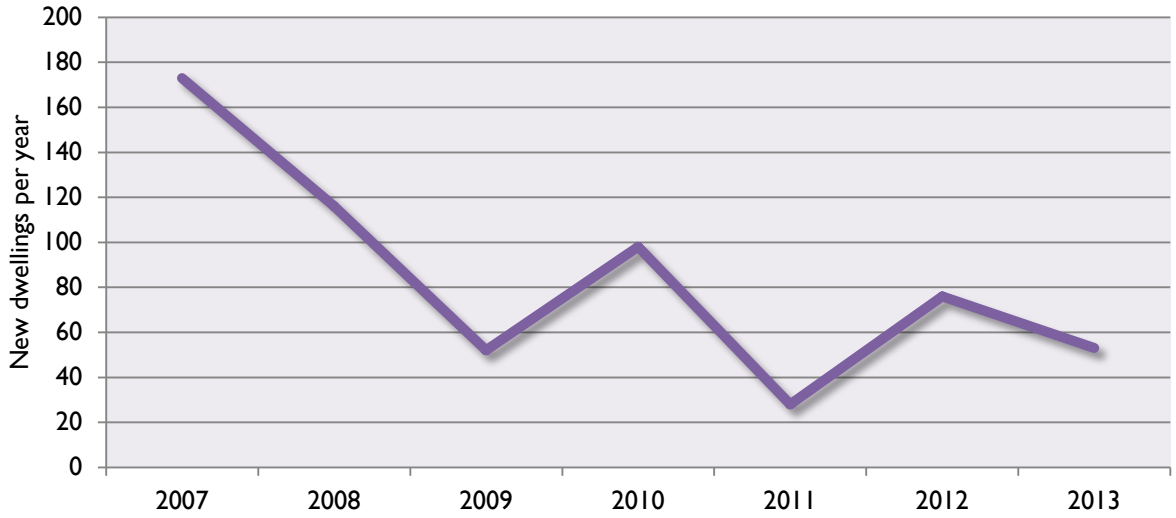


Figure 156 Number of new dwelling per year in the Cairngorms National Park (Source: www.sns.gov.uk/).

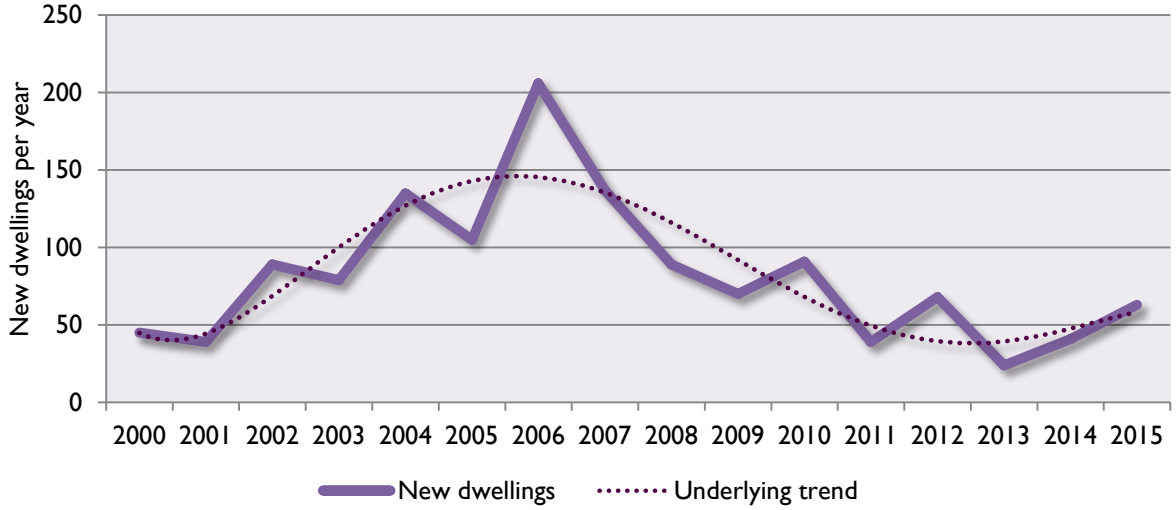


Figure 157 Number of new dwelling per year in Badenoch and Strathspey (Highland Council, 2015)

Affordability is a further barrier. Between 1993 and 2013, the median price of a property in the Cairngorms National Park saw a net rise of 195%, with a peak in 2011 of £191,000 (**Table 35**). The 'credit crunch' does not appear to have had much of an immediate impact on prices, although it seems to have resulted in a lower level of sales since a peak in 2007. Since 2012, house prices seem to have been reducing, with 2013 returning to pre-2006 levels. It is however difficult to tell whether or not this represents a long term trend.

Between 2007 and 2013, the median house price to median household income/earnings ratio in the National Park fell from over 8 times income to around 6 (see page 268 for information on income). However, despite this improvement, the lower availability of mortgage finance for first time buyers means that many aspiring households still cannot afford to buy.

Table 35 Median House Prices in the Cairngorms National Park (Source: http://www.sns.gov.uk/).

Year	Median Sale Price	Annual Change in Sale Price	Number of Sales	Annual Change in Number of Sales
1993	£56,000	N/A	237	N/A
1992	£58,500	4.5%	222	-6.3%
1995	£60,000	2.6%	234	5.4%
1996	£59,000	-1.7%	233	-0.4%
1997	£65,500	11%	274	17.6%
1998	£57,000	-13%	276	0.7%
1999	£68,876	20.8%	301	9.1%
2000	£75,000	8.9%	258	-14.3%
2001	£75,000	0%	344	33.3%
2002	£87,000	16%	338	-1.7%
2003	£93,250	7.2%	334	-1.2%
2004	£125,000	34%	306	-8.4%
2005	£146,000	16.8%	328	7.2%
2006	£175,000	19.9%	392	19.5%
2007	£180,500	3.1%	414	5.6%
2008	£181,000	0.3%	287	-30.7%
2009	£175,000	-3.3%	229	-20.2%
2010	£190,000	8.6%	289	26.2%
2011	£191,000	0.5%	251	-13.1%
2012	£176,500	-7.6%	230	-8.4%
2013	£165,000	-6.5%	294	-27.8%

There is also considerable variation in the median house prices across the National Park, ranging from £53,000 in Moray, to £272,500 in Perth and Kinross (**Figure 158** and **Figure 159**). The Moray area was the only part of the National Park where in 2013, the median house price / median household income/earnings ratio was below 3, while the Perth and Kinross area had the greatest difference, with median house prices being in the region of 11 times median incomes. However, it should be noted that statistics for these two LA areas represent relatively small sample sizes, with just 8 sales each in that year.

Figure 158 offers an insight into the evolution of median house prices across the National Park. It indicates that not only have median house prices risen dramatically since 1993, but that the difference between the most and least expensive data zones has also grown considerably. Indeed, the distribution of median prices has broadened across all quartiles, further indicating significant variations between localities.

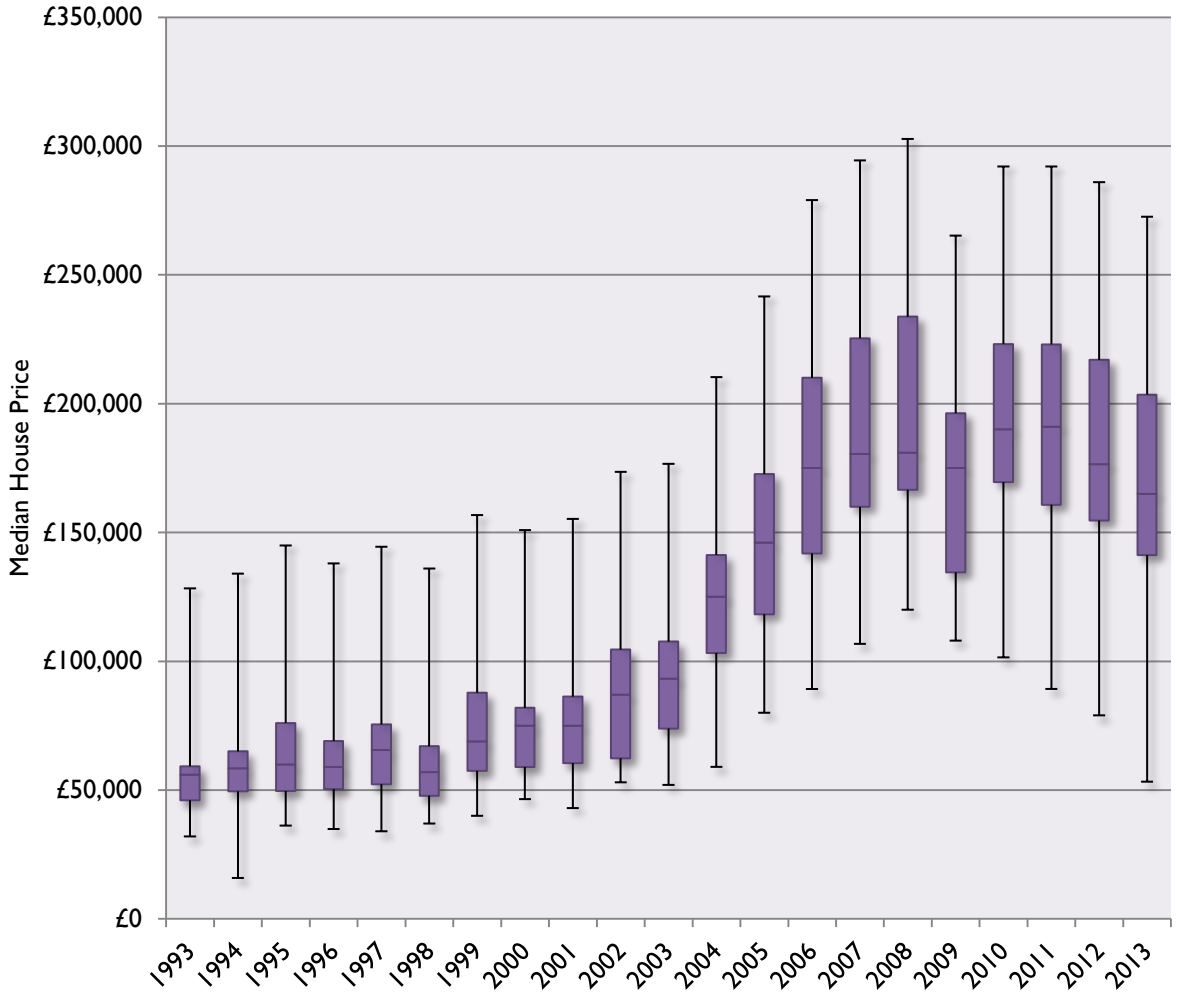


Figure 158 Box plots of Median house prices of data zones within the Cairngorms National Park (Source: http://www.sns.gov.uk/).

Between the 17th and 18th September 2015 the CNPA undertook a study of the current asking price for property within the National Park based on a search of Estate Agent and property marketing websites. It was found that there were 169 properties for sale within the National Park on these dates, mostly within Badenoch and Strathspey.

According to this sample the median asking price within the National Park was £225,000, which is around 8 times greater than median income/earnings. While this figure is considerably higher than the median sale price achieved in 2013, it is unlikely to equate to the current median sale price, given that negotiation tends to result in a drop in price at the point for sale. It is probable that median prices have risen since 2013, probably sitting somewhere between the median sale and asking prices quoted in this paper. The high median asking price quoted in this study is likely to be in part due to the current dominance of large and / or detached units within the sample (**Figure 160** and

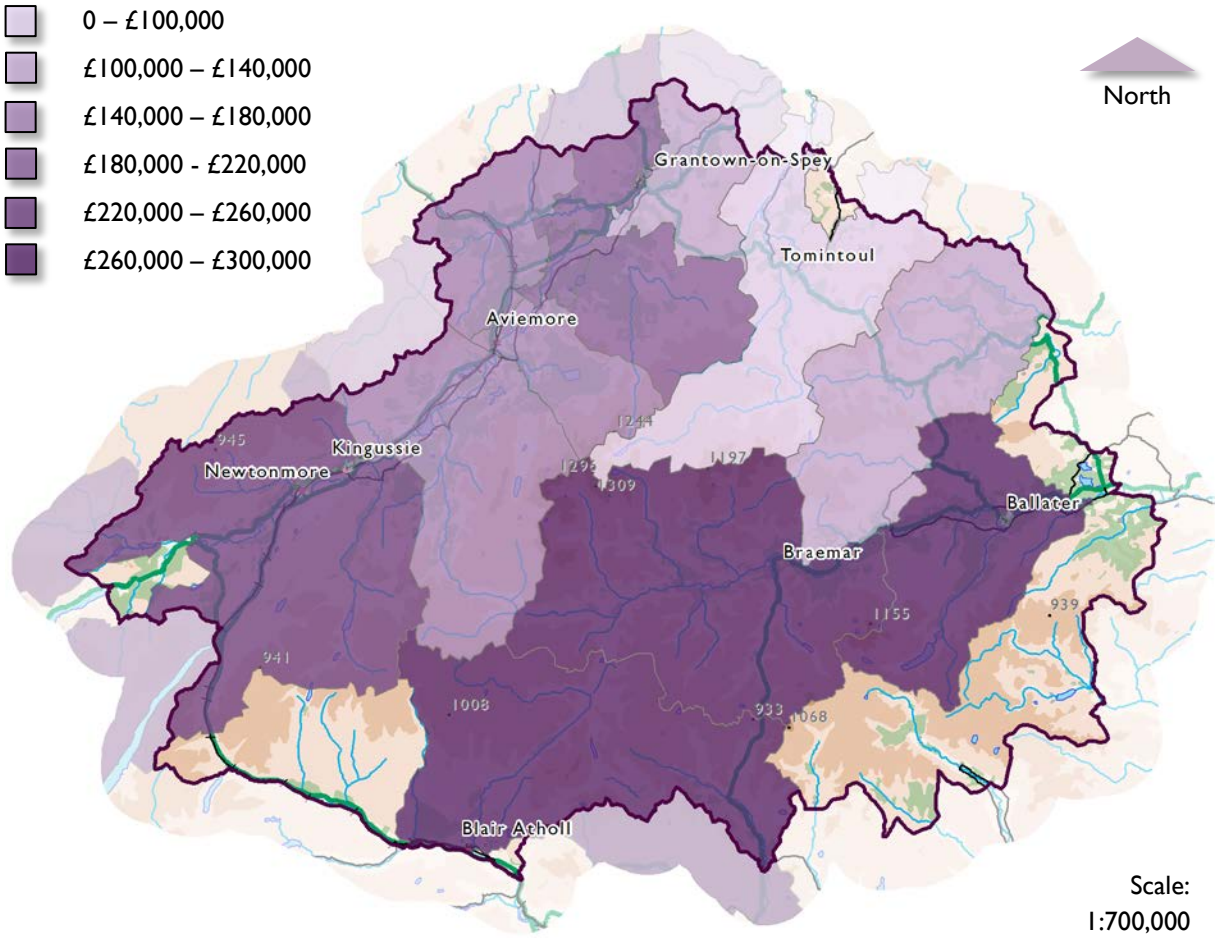


Figure 159 Median House Prices of data zones within the Cairngorms National Park in 2013 (Source: http://www.sns.gov.uk/).

Figure 161) as the median asking price for detached properties is around twice that of terraced and semi-detached properties and around three times that of flats.

The relatively low numbers of small units in the sample may be due to a number of reasons. Firstly, it is likely that such units are sold quicker than larger units and therefore the number of properties counted in a sample such as this is always likely to be low. Secondly, based on information derived from Council Tax payments, it is evident that the National Park contains a lower proportion of smaller houses than the Scottish average (see **Table 33** and **Table 34**).

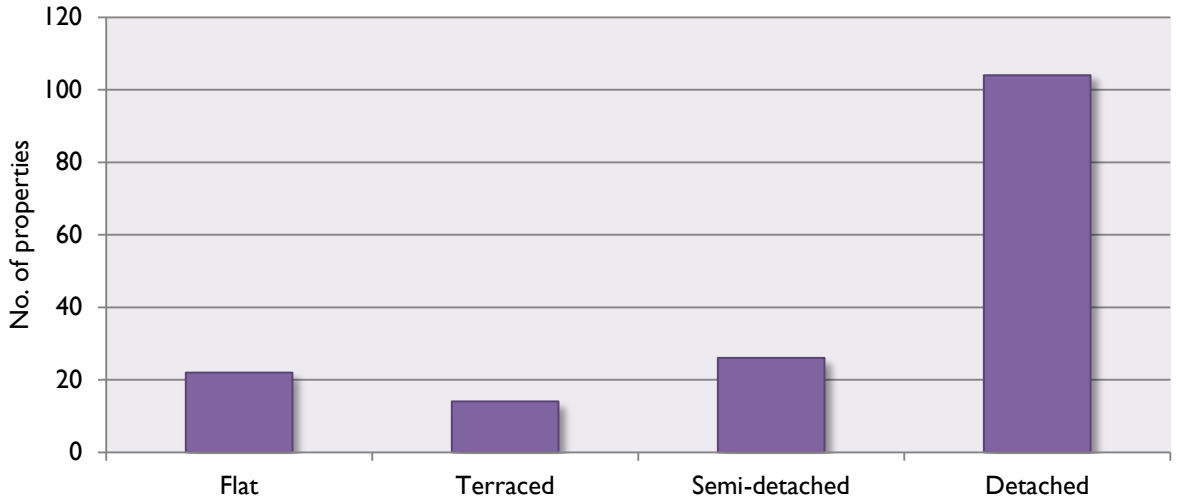


Figure 160 Property types on sale within the Cairngorms National Park, September 2015.

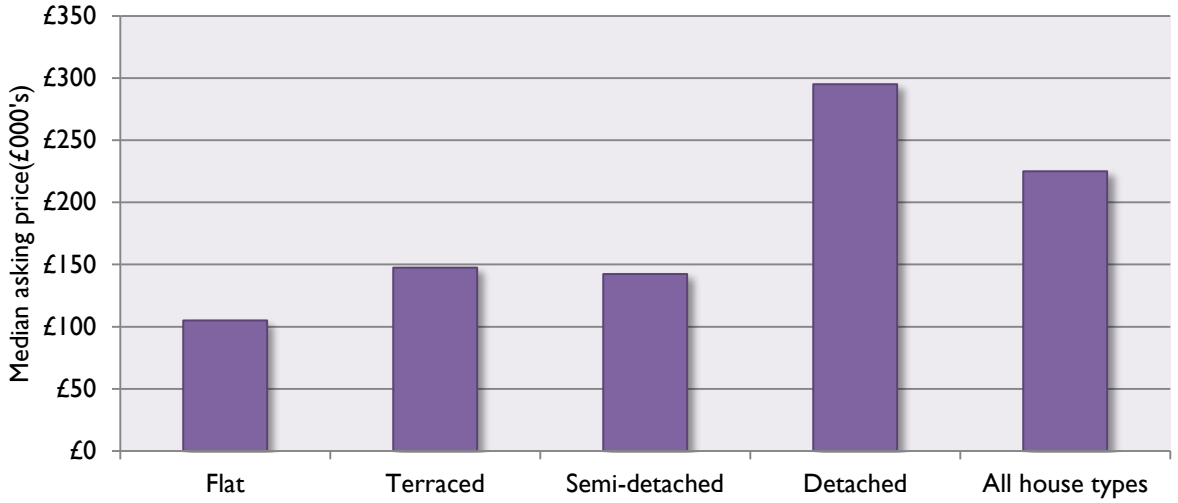


Figure 161 Median asking price by property type the Cairngorms National Park, September 2015.

Economic Activity

At the time of writing 2014 estimates of working age population were not available at a data zone level and therefore this report draws upon data from the 2013 mid-year estimates. These indicate that the National Park had a working age population of 10,909 people (51.9% of total population), with 5,666 males and 5,243 females. Those of pensionable age numbered 4,539 (24.6% of total population) with 1,911 males and 2,628 females.

Educational achievement within the National Park is a little higher than the Scottish average. In terms of qualifications, the 2011 Census (Table LC5102SC) suggests that around 76.8% of the 16+ Census population had NVQ1 level and above (Scotland 73.2%), and around 30.8% had NVQ4 and above (Scotland 26.1%).

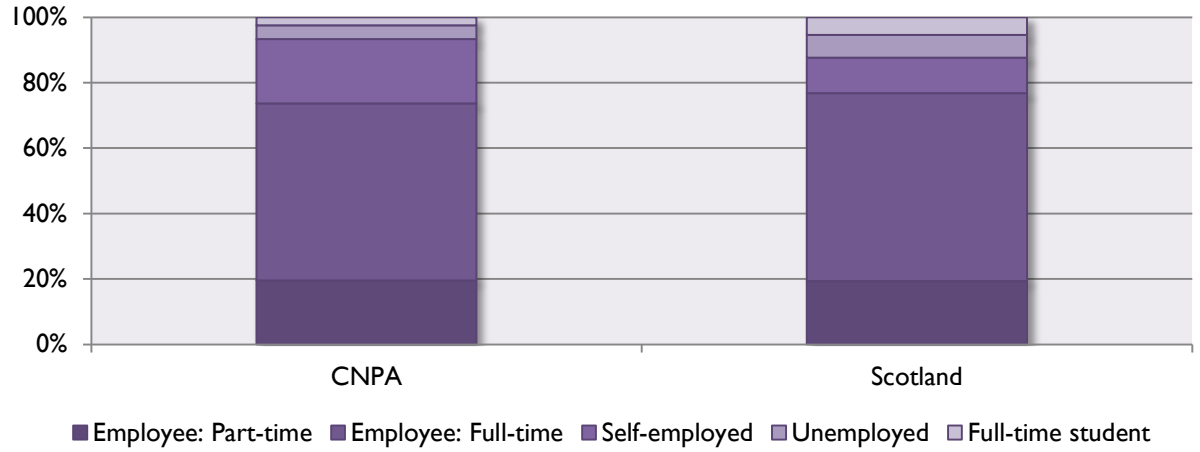


Figure 162 Occupations of the economically active population (Census table KS601SC).

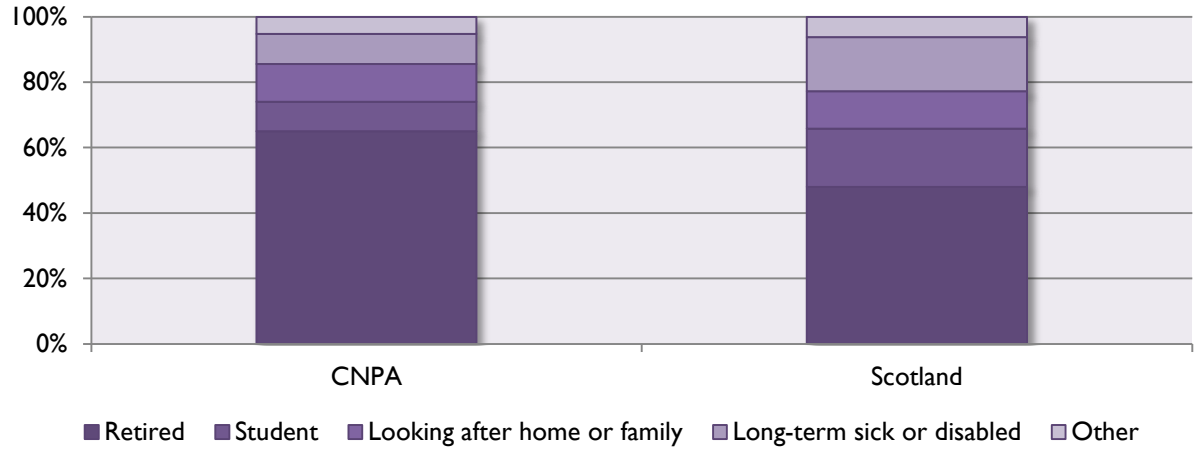


Figure 163 Occupations of the economically active population (Census table KS601SC).
For further information on variables, see www.scotlandscensus.gov.uk/variables
In order to protect against disclosure of personal information, some records have been swapped between different geographic areas. Some cell values will be affected, particularly small values at the most detailed geographies.

According to the Census (Table LC6107SC) of the economically active in 2011 (around 10,487 individuals, or 66% of the 16+ population), around 95% were classed as being in employment, which is slightly higher than the Scottish level of 91.9% (**Figure 162** and **Figure 164**). Of the inactive, who numbered 5,377 (around 33.9% of the 16+ population), around 75% were inactive due to retirement. This is much higher than the Scottish retirement level of approximately 60% (**Figure 163**). There are two reasons for this. Firstly, as shown by **Figure 137** the National Park has a higher proportion of those over the age of 55 than the national average, and secondly, owing to the absence of a higher education facility within the National Park, there are relatively few full time students residing within its boundary.

The Census profile of full time (72.8%) and part time (27.2%) employee jobs (excludes self-employed, government, trainees and HM Forces) (Table LC6109SC) is generally consistent with Scotland as a whole.

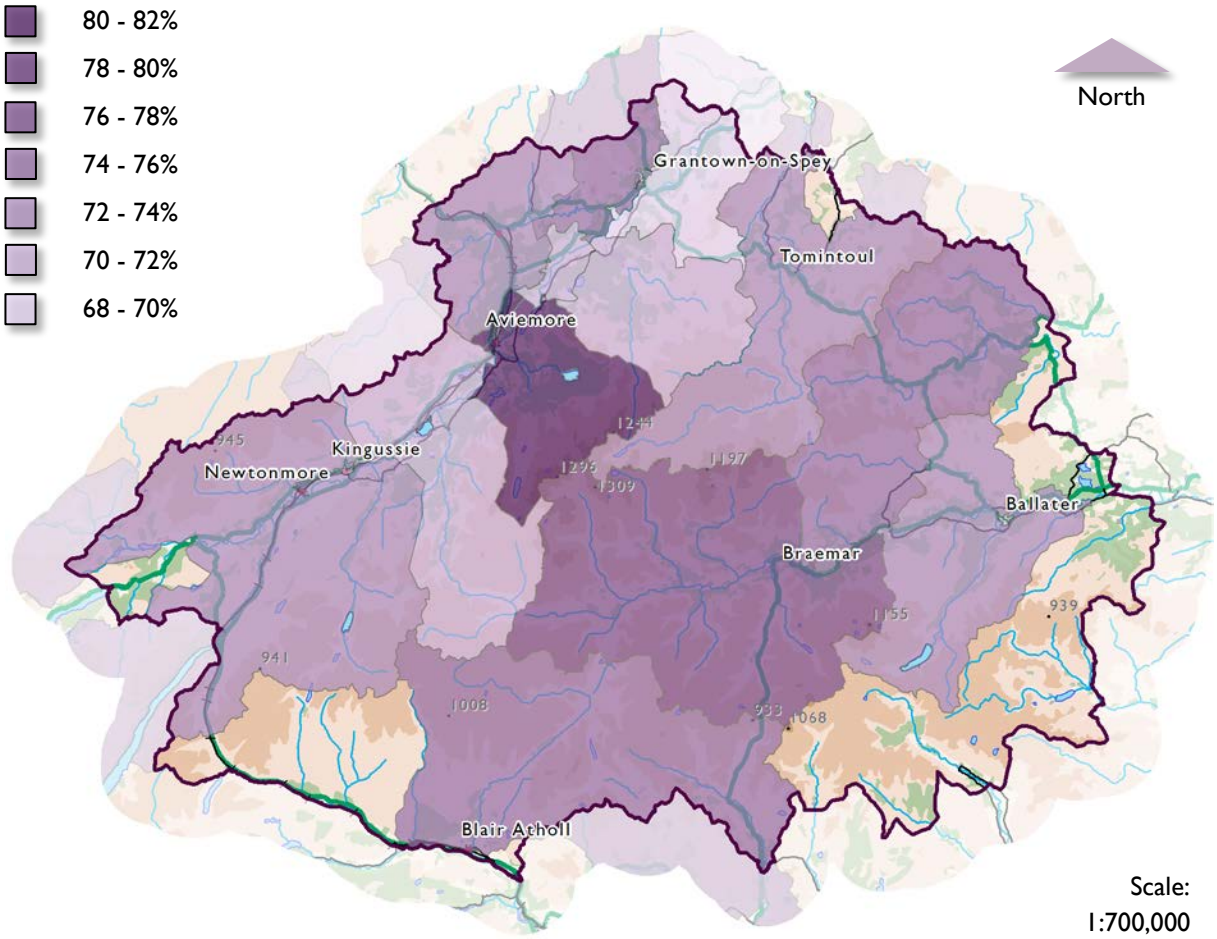


Figure 164 Proportion of the population aged 16-75 that are economically active. (Census table KS601SC).

For further information on variables, see www.scotlandscensus.gov.uk/variables

The significance of certain employment sectors differs quite significantly however, with the proportion of those employed in agriculture, forestry and fishery, accommodation and food and 'other' forms of work far exceeding the Scottish average (**Figure 165**).

According to SIMD 2012 data, the National Park has relatively low levels of employment related deprivation, which it rates using indicators such as Working Age Unemployment Claimant Count, Working Age Incapacity Benefit recipients and Working Age Severe Disablement Allowance recipients. None of the data zones within the National Park fall into any of the most deprived categories, with 10 out of the 23 falling within the 20% least deprived.

Indeed, unemployment levels within the National Park are relatively low, with the Census suggesting that in March 2011 only around 445 of the population aged 16-74 (3.2% compared to the Scottish 4.8%)

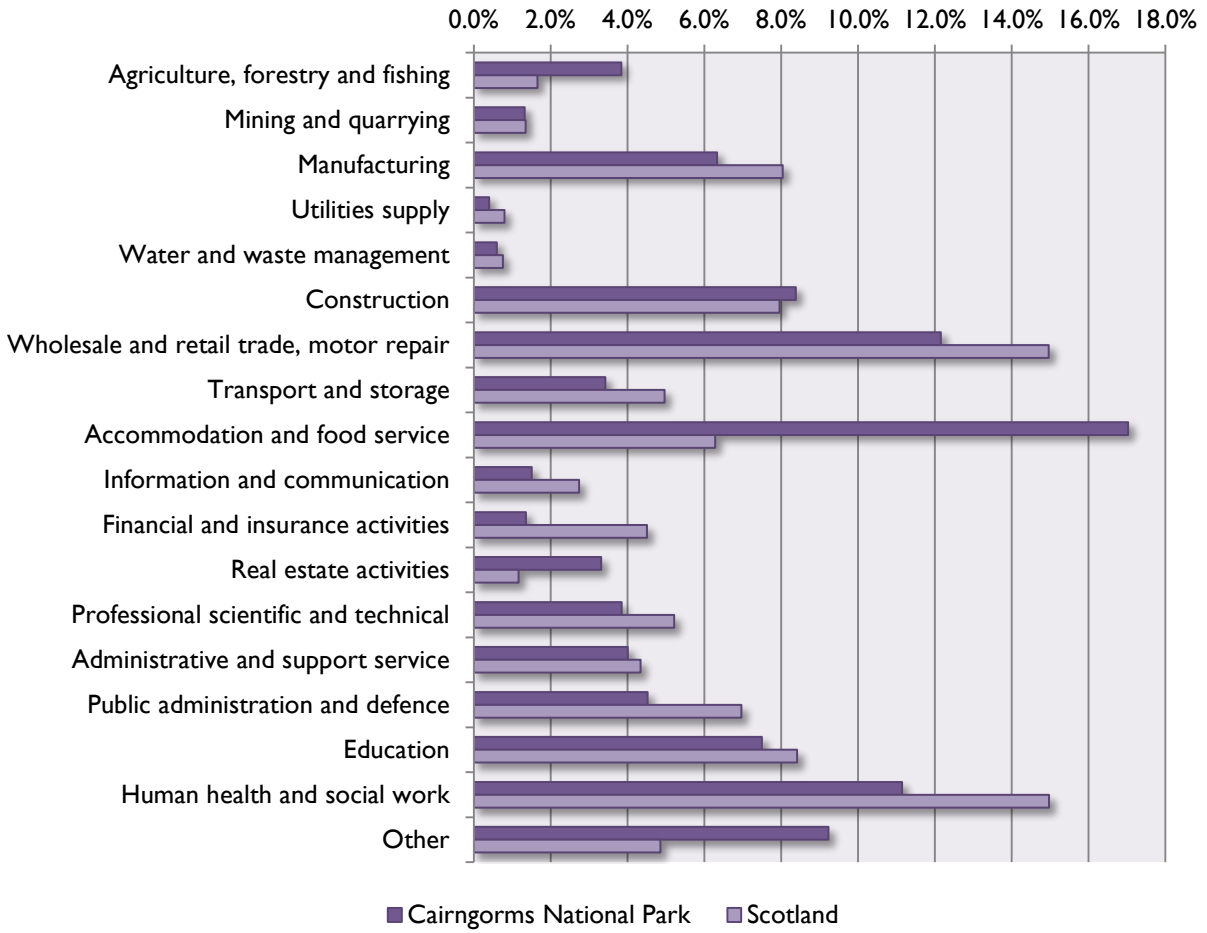


Figure 165 Proportion of all people aged 16 to 74 in employment the week before the census by industry (Census table KS605SC). Crown copyright 2013.

For further information on variables, see www.scotlandscensus.gov.uk/variables

In order to protect against disclosure of personal information, some records have been swapped between different geographic areas. Some cell values will be affected, particularly small values at the most detailed geographies.

were unemployed, of which around 150 were in long term unemployment, while only around 35 had never worked at all (Table KS601SC). There is however some geographical variation across the area, with the Moray part of the National Park experiencing the highest unemployment level, at around 6.2% (**Figure 166**).

Data on Out of work benefits issued to those of working age in the area supports this , with those claiming Job Seekers Allowance (JSA) in quarter 4 of 2012 standing at 225 (1.7%), below the Scottish figure of 4%. The nature of employment within the National Park is however extremely seasonal, with JSA claimants peaking in the winter months (**Figure 167**). Unemployment is at its lowest in July, which coincides with Scottish school and public holidays.

In employment terms, claimant data suggests that the recession began in the National Park in March 2008. It continued to get worse at the rate of about two jobs per week until July 2009 when the position

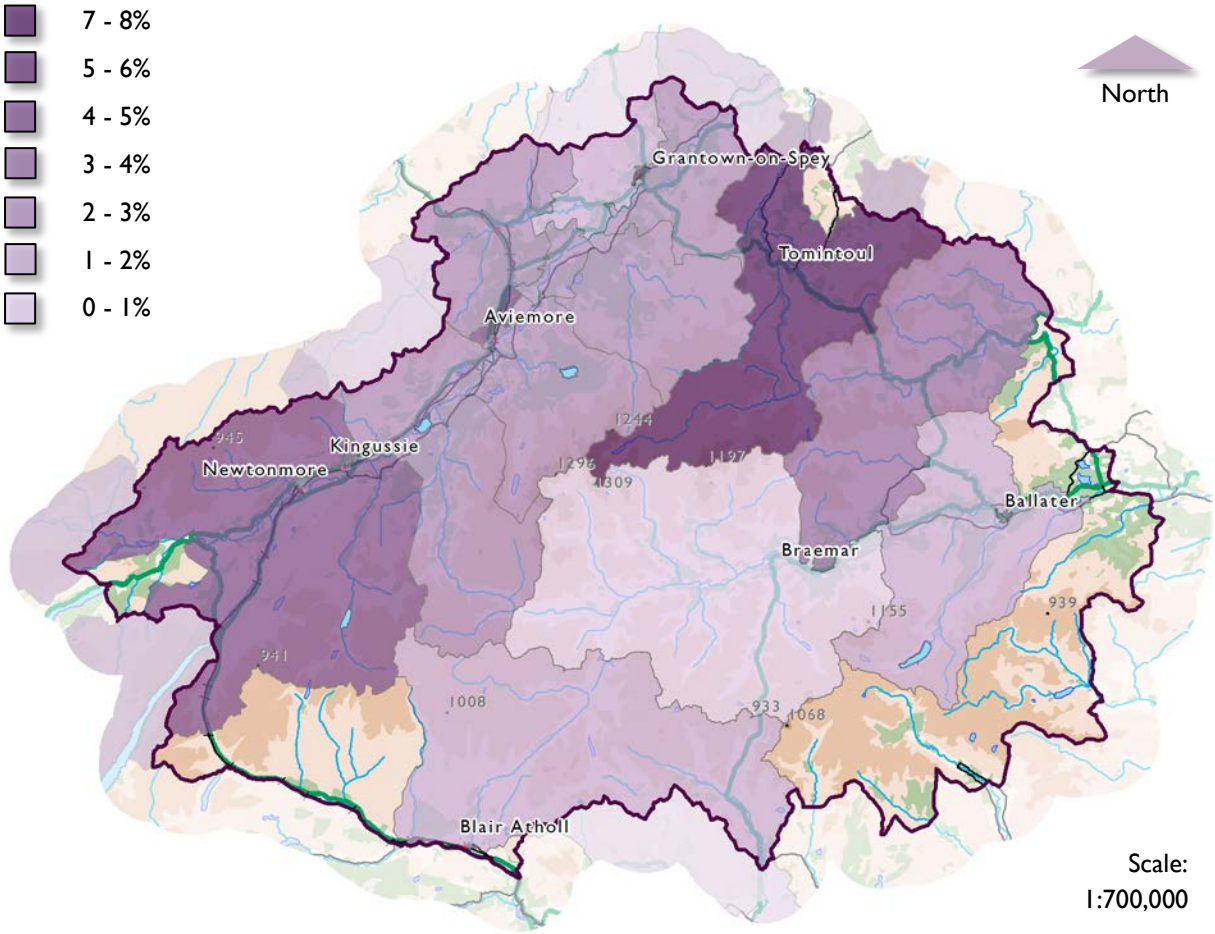


Figure 166 Proportion of the population aged 16-75 that are unemployed. (Census table KS601SC).

For further information on variables, see www.scotlandscensus.gov.uk/variables

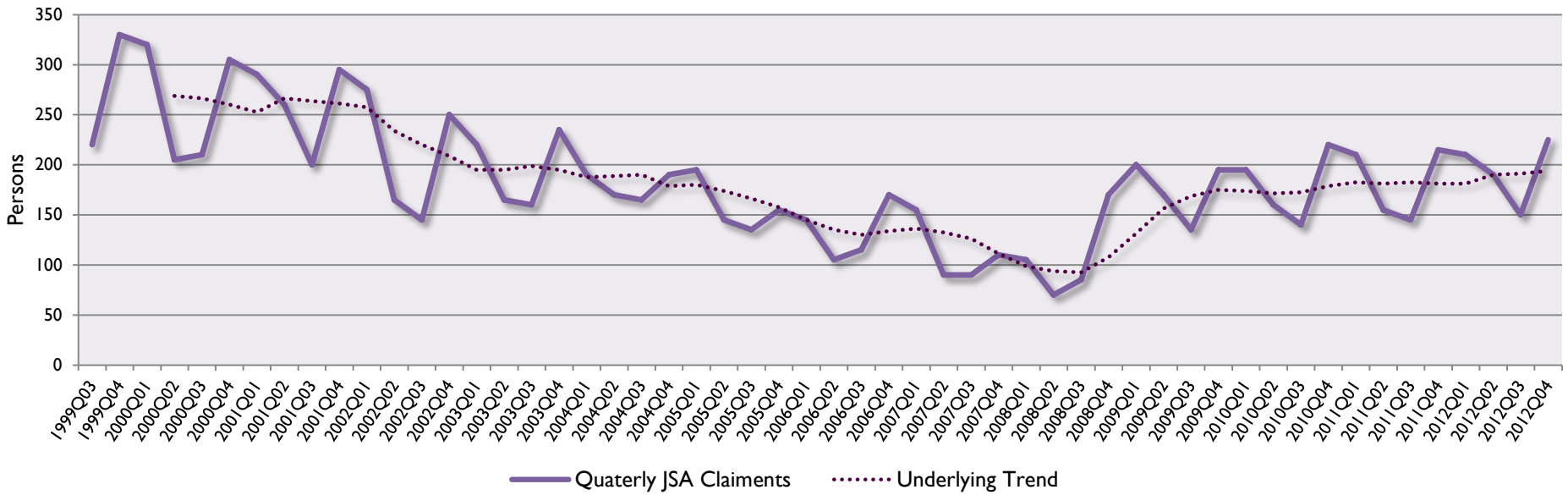


Figure 167 Job Seekers Allowance (JSA) claimants within the Cairngorms National Park (Source: http://www.sns.gov.uk/default.aspx).

began to improve, with a stabilisation in the level of those claiming JSA. Most recent data suggests that claimant numbers are beginning to fall, though it is still too soon say whether this represents the beginnings of a durable recovery (CogentSi, 2010; CogentSi, 2013).

Wages and Income

Due to the low level of unemployment within the National Park, levels of income deprivation are relatively low according to the SIMD 2012. However, this masks the fact that there is strong evidence to suggest that average earnings within the National Park are well below the Scottish and British averages.

There is no official up-to-date data available for earnings specifically in the National Park, however an idea may be gained from the Local Authorities that contribute towards the National Park's area. Of these, only Aberdeenshire is above to the Scottish median income (**Table 36**). 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 National Park.

Table 36 Median gross weekly earnings by residence, 2014 (Source: ONS annual survey of hours and earnings - resident analysis; www.nomisweb.co.uk).

Area	Median Gross Weekly Earnings
Great Britain	£520.2
Scotland	£519.4
Aberdeenshire	£509.8
Angus	£467.7
Highland	£487.9
Moray	£434.3
Perth & Kinross	£481.2

The likelihood is that the nature of earnings for National 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 National Park is much closer to the first two Local Authorities. Indeed, there is evidence that it is likely to be below the Moray and Angus figures.

To aid understanding of the incomes of residents within the National Park, CongestSi (2010) calculated earnings by industry in each of its contributing NUTS3[16] areas. With the exception of utilities and distilling, the National 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 National Park residents for 2006 were estimated at significantly lower levels than the contributing NUTS3 areas. One factor behind this is the relatively light representation of the public sector in the National 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 National Park in 2006 was estimated at £18,370, which is 74% of the Scottish average of £24,840 (CogentSi, 2010).

Another indicator of the income of National Park's residents may be found in research carried out by Herriot-Watt University on developing local and small area estimates of income distribution, poverty and deprivation (Bramley & Watkins, 2013). This study offers a snap shot of household incomes at a data zone level in 2008 / 2009. It should be noted that the figures presented in this study are not directly comparable to those in **Table 36**, since the Herriot-Watt figures represent household income rather than individual worker pay. The Herriot-Watt figures also include welfare payments (e.g. pensions, tax credits, JSA etc.) within their figures, which are also not present within the **Table 36** figures. It is not possible to use the figures to create an aggregate of the National Park either since it is not appropriate to sum the median figures or percentages for individual data zones. Therefore analysis must take place at a data zone by data zone level.

What the data presents in **Table 37** and **Figure 168** therefore is an idea of the variation in median household incomes

[16] NUTS is the standard statistical geography of the European Union. The National Park consists of part of four of Scotland's 23 NUTS3 areas.

across the National Park. An analysis of these figures (**Figure 169**) shows that the National Park's median gross household income (£503) is above that of Scotland (£467) and, with the exception of Aberdeenshire, is comparable with all of its constituent Local Authorities. It also shows that the distribution of incomes is much narrower than these areas, with the maximum income being lower and the minimum income being higher.

The figures also demonstrate a great deal of variation between the proportions of households on low incomes. For example, 20% of households in S01000303 have a gross income of less than £300 per week, while the figure is 38% for households in S01004233 (see **Figure 178** (p. 284) for location of data zones). Most are however around the median of 25%, which is below the Scottish 28%.

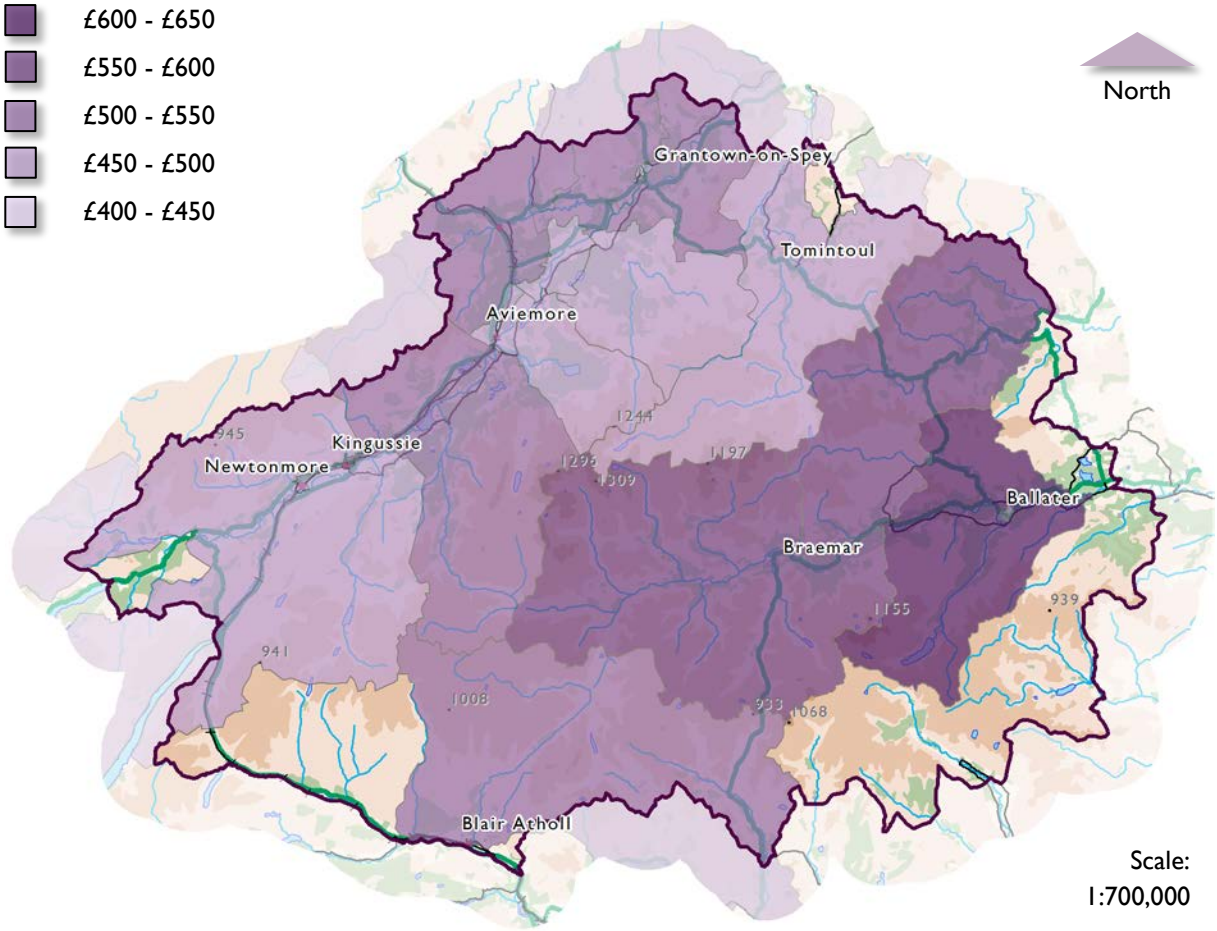


Figure 168 Estimated median weekly gross household income of data zones within the Cairngorms National Park 2008 /2009 (based on Bramley & Watkins, 2013).

Table 37 Estimated household income for data zones within the Cairngorms National Park 2008 / 2009 (Bramley & Watkins, 2013).

Local Authority	Data Zone (2001)	Median weekly net[17] household income	Median weekly median gross[18] household income	Households with a gross income of less than £300 per week	Households with a gross income of less than £400 per week	Households with a gross income of less than £500 per week	Households with a gross income of less than £600 per week	Households with a gross income of less than £800 per week
Aberdeen-shire	S01000301	£476	£586	22%	31%	42%	49%	65%
	S01000303	£510	£625	20%	28%	37%	44%	60%
	S01000312	£470	£573	23%	33%	45%	49%	64%
	S01000316	£405	£510	29%	42%	53%	58%	71%
	S01000360	£459	£560	26%	34%	45%	51%	67%
Highland	S01003743	£451	£495	27%	35%	43%	52%	69%
	S01003747	£415	£487	24%	37%	49%	57%	76%
	S01003748	£441	£511	23%	35%	45%	52%	70%
	S01003749	£428	£517	23%	36%	44%	53%	71%
	S01003750	£437	£515	26%	36%	45%	53%	70%
	S01003751	£401	£473	25%	37%	49%	57%	77%
	S01003754	£338	£430	29%	44%	54%	62%	78%
	S01003755	£364	£460	26%	40%	49%	58%	74%
	S01003756	£391	£457	30%	41%	52%	59%	76%
	S01003759	£414	£484	27%	38%	49%	56%	74%
	S01003760	£446	£525	22%	33%	42%	51%	70%
	S01003764	£396	£485	26%	39%	49%	59%	77%
	S01003766	£341	£432	31%	45%	55%	61%	75%
	S01003767	£412	£484	25%	37%	49%	56%	73%

[17] Net income covers income from all sources (as in Gross Income) but after the deduction of income taxes and national insurance contributions.

[18] Gross income is income from all sources (wages, salaries, pensions, benefits, rent, interest, maintenance) before the deduction of tax and national insurance contributions.

Local Authority	Data Zone (2001)	Median weekly net[19] household income	median weekly gross[20] household income	Households with a gross income of less than £300 per week	Households with a gross income of less than £400 per week	Households with a gross income of less than £500 per week	Households with a gross income of less than £600 per week	Households with a gross income of less than £800 per week
Highland	S01003771	£469	£513	24%	32%	39%	49%	66%
	S01003772	£460	£503	25%	34%	41%	50%	66%
Moray	S01004233	£388	£484	38%	46%	58%	61%	78%
PKC	S01005147	£443	£549	25%	33%	45%	53%	69%

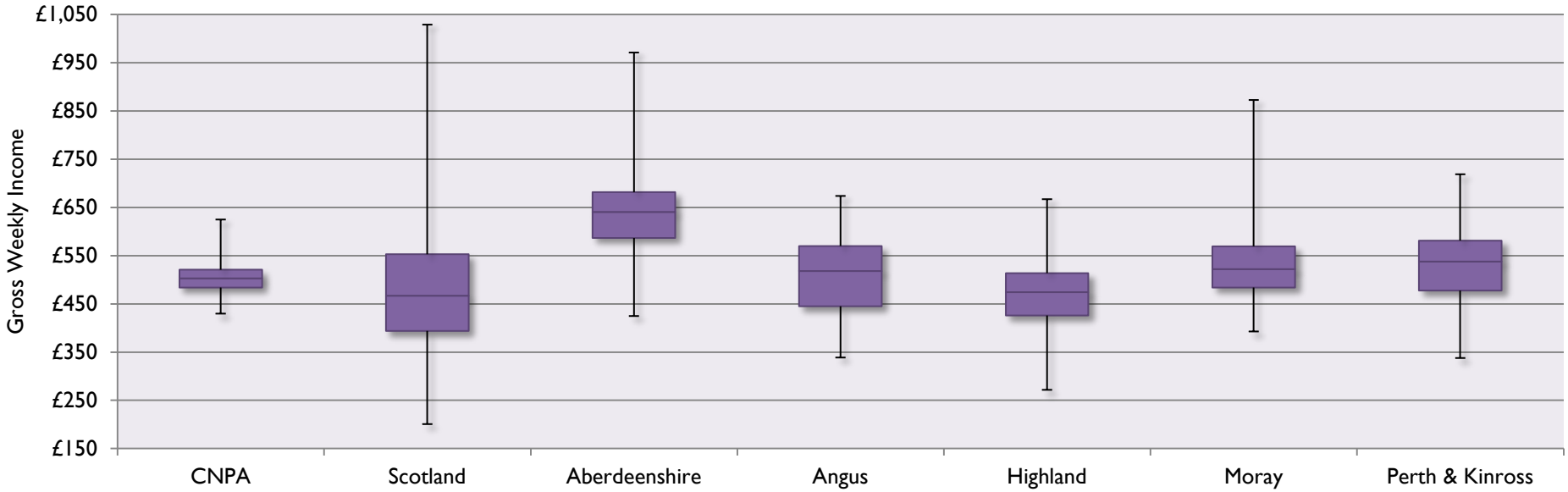


Figure 169 Box plots of median weekly gross household income for data zones in 2008 / 2009 (based on Bramley & Watkins, 2013).

[19] Net income covers income from all sources (as in Gross Income) but after the deduction of income taxes and national insurance contributions.

[20] Gross income is income from all sources (wages, salaries, pensions, benefits, rent, interest, maintenance) before the deduction of tax and national insurance contributions.

Commuting

The 2011 Census indicated that of the 9,700 people aged 16 -74 in employment around 4,771 (49.2%) of them commuted to work via car, van or motor cycle (Census table LC7101SC) (**Figure 170**). This is lower than the Scottish level of 56%, a reflection of the fact that the National Park has a relatively high level of home working (22.9%). The use of public transport is particularly low within the National Park, a reflection of the difficulties of providing good service in such a rural area.

Most commuting occurs within the National Park, since most of its population is too far from major centres of employment for commuting out to be a very large scale phenomenon. In fact, over half of workers travel less than 10km to their place of work (**Figure 171**). Even with improved connectivity bought about by the A9 Dualling Strategy (see **Topic 5: Material Asset**, p. 124), there is very little chance of the Cairngorms National Park becoming a

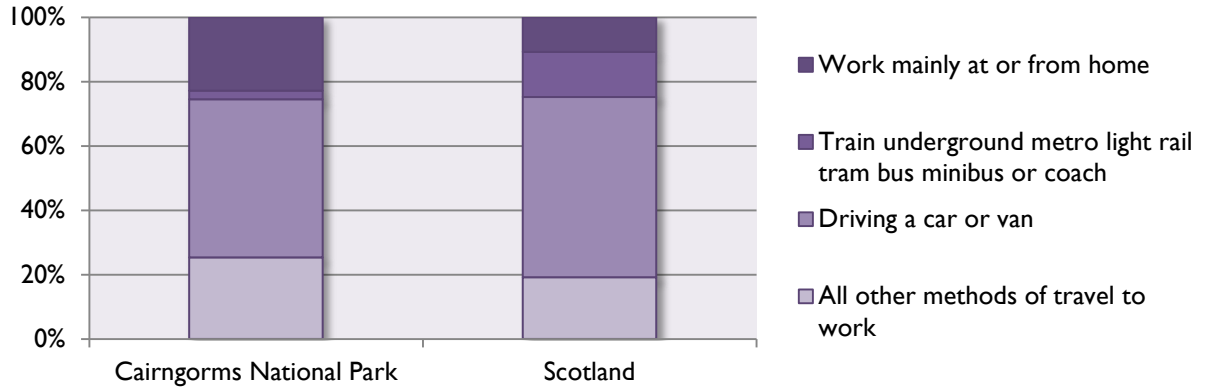


Figure 170 Method of travel to work, 2011 (Census table LC7101SC).

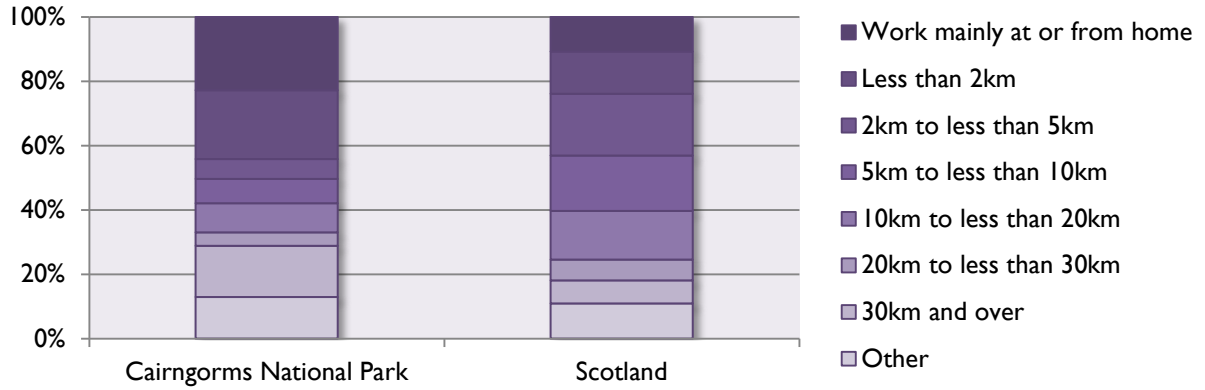


Figure 171 Distance travelled to work, 2011 (Census table LC7102SC)[21][22]. Crown copyright 2014.
For further information on variables, see www.scotlandscensus.gov.uk/variables
In order to protect against disclosure of personal information, some records have been swapped between different geographic areas. Some cell values will be affected, particularly small values at the most detailed geographies.

[21] The distance travelled is a calculation of the straight line between the postcode of place of residence and postcode of workplace.
[22] 'Other' Includes no fixed place of work, working on an offshore installation and working outside the UK

dormitory suburb to any significant extent (CogentSi, 2010).

Nevertheless, within the National 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 National Park may need to travel outwith the area to work. According to the 2011 Census, some 287 people were commuting out of the Badenoch and Strathspey Travel to Work Area (TTWA) and into the neighbouring Inverness and Dingwall TTWA for work (Highland Council, 2015). Correspondingly, the National 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 National Park, but outwith its boundaries; for example the Badenoch and Strathspey TTWA had around 6 workers commuting in from the neighbouring Lochaber TTWA (Highland Council, 2015). For these surrounding residents the National Park offers the best job prospects available (CogentSi, 2010).

Human Health

Life Expectancy

Human Health covers a wide range of issues, many of which have strong relationships with other topic areas. Life expectancy is a good indicator of the overall health of a population. While there is no official data available for life expectancy specifically within the National Park, quantitative reasoning, based on statistics available for Local Authorities, Health Board Areas, SIMD deciles and Urban / Rural Categories, may be used to gain a reasonable estimate.

Taking the Local Authorities and Health Board areas that cover the National Park's area (**Table 38**) as a starting point, it can be seen that all have life expectancies that are above the Scottish average. Estimates range from 77.6 to 79.3 for males and 81.4 to 82.8 for females and it is not unreasonable to assume that the National Park's overall life expectancy falls somewhere within this range.

Table 38 Life expectancy at birth in Scotland, 2011-2013, by Local Authority and NHS Board area (National Records of Scotland, 2014).

Area	Male	Female
Scotland	76.9	81.0
Local Authority		
Aberdeenshire	79.2	82.2
Angus	78.5	81.6
Highland	77.7	82.2
Moray	77.9	81.7
Perth & Kinross	79.3	82.8
Health Board		
Grampian	78.3	81.8
Highland	77.8	82.0
Tayside	77.6	81.4

Estimates may also be derived from the SIMD 2012; according to NRS (2014), male and female life expectancy increases and the gap between male and female life expectancy decreases as the level of deprivation decreases. Consequently, NRS have estimated life expectancy according to SIMD decile. Based on the position of the National Park's data zones within the SIMD therefore, an estimate of its life expectancy may be derived. Furthermore, because data zones represent discreet geographies, potential variations in life expectancy across the National Park may be mapped (**Figure 172**).

It should be noted that the SIMD measures deprivation and not affluence, therefore the data displayed by **Figure 172** should not be translated as 'life expectancy of the rich versus that of the poor'. It should also be noted that NRS estimates are generalised and the criteria that result in an overall SIMD rank may vary greatly between data zones. The life expectancies presented therefore should not be viewed as geography specific absolutes, but as rough

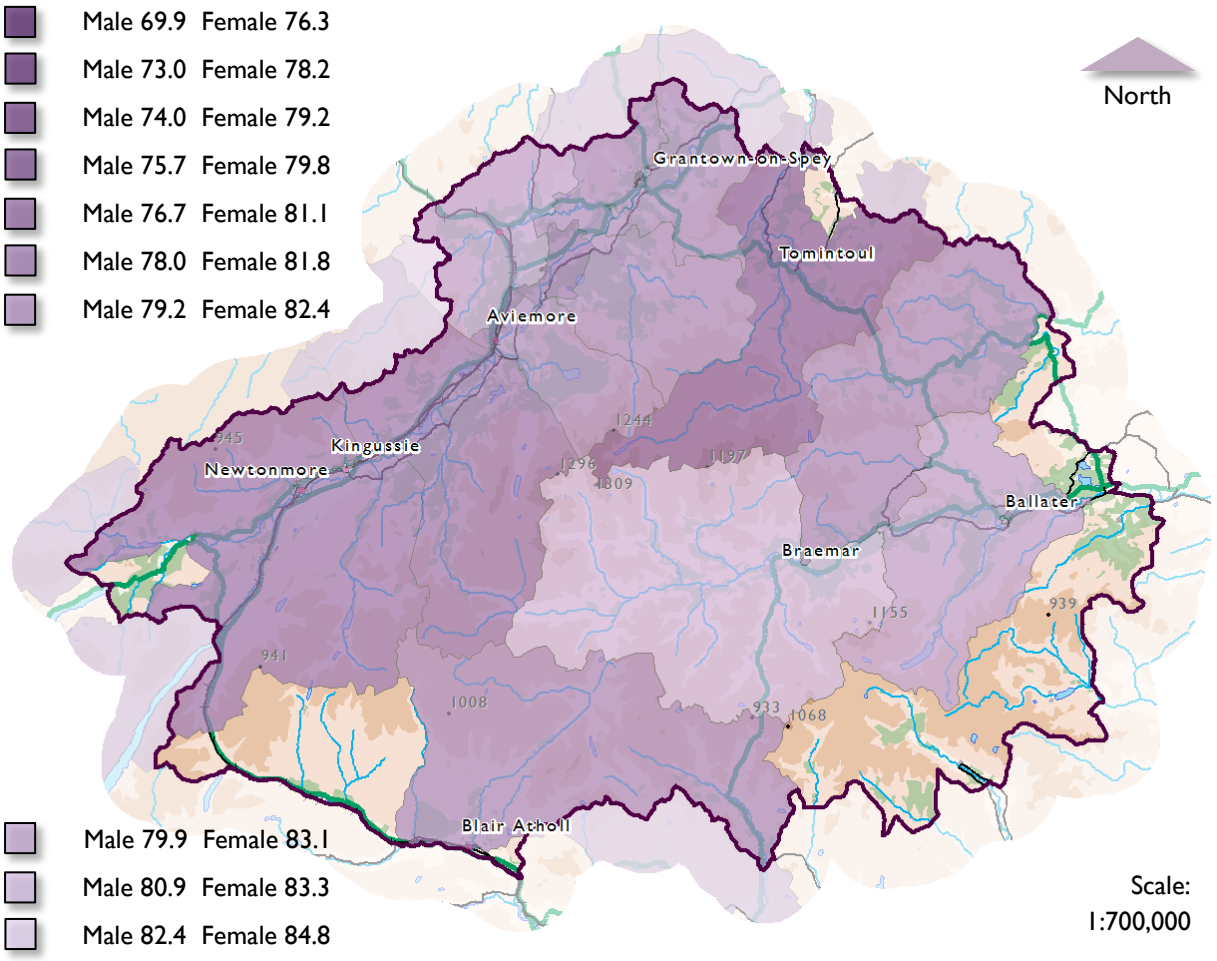


Figure 172 Life expectancy within the Cairngorms National Park by SIMD Decile. Based on NRS (2014).

approximations based on national data.

Estimating life expectancy via this means offers a range of 76.7 to 80.9 for males and 81.1 to 83.3 for females living within the National Park. This is a broader range than the estimate based on the Local Authorities and Health Boards, but is close enough to support the theory that the life expectancy falls within this initial estimate.

If the deprivation based estimates are weighted according to the population of the National Park's data zones, then the estimated life expectancy of the National Park is 79 for males and 82.3 females. This estimate is not unreasonable as it falls within 1% of figures for the Scottish Government's Urban Rural Classification areas, which estimates life expectancy for males to be 79.2 and females to be 82.6 in remote rural areas[23] (National Records of Scotland, 2014), which the whole of the Cairngorms National Park is identified as.

[23] Defined as "areas with a population of less than 3,000 people, and with a drive time of over 30 minutes to a settlement of 10,000 or more."

Irrespective of the exact figures, it is possible to say with some confidence that the residents of the Cairngorms National Park have a greater life expectancy than the Scottish average and live around 6 to 9 years longer than people living in the most deprived parts of Scotland.

Health

Evidence suggests that the population in the National Park is healthier than the Scottish average. According to the 2011 Census, the proportion of people with long term health problems whereby their day-to-day activities are limited a lot was only 6.8% (Scotland 9.6%) while the proportion of people claiming very good to fair health was higher (96.6% compared to Scotland's 94.4%) and the proportion claiming bad to very bad health lower (3.4% compared to Scotland's 6.1%) (**Table 39**). This is supported by evidence from the proportion of Incapacity Benefit and Severe Disability Allowance claimants within the National Park, which in 2012 ranged between 1.1 and 1.8% of the 16+ population, compared to Scotland's 2.7 to 4.1%.

Table 39 Census health indices, 2011.

Indicator	CNP	Scot.
Long-term health problem or disability (Table LC3101SC)		
Day-to-day activities limited a lot	6.8%	9.6%
Day-to-day activities limited a little	10.2%	10.1%
Day-to-day activities not limited	83.0%	80.4%
General health (Table LC3102SC)		
Very good health	55.6%	52.5%
Good health	30.7%	29.7%
Fair health	10.3%	12.2%
Bad health	2.7%	4.3%
Very bad health	0.7%	1.3%
Provision of unpaid care (Table LC3301SC)		
Provides no unpaid care	90.9%	90.6%
Provides 1 to 19 hours unpaid care a week	5.7%	5.2%
Provides 20 to 34 hours unpaid care a week	0.8%	0.9%
Provides 35 to 49 hours unpaid care a week	0.6%	0.8%
Provides 50 or more hours unpaid care a week	2.0%	2.5%

The Health Domain of the SIMD also provides an indication of the relative healthiness of the National Park, with 5 of its 23 data zones falling within the 10% least deprived. The SIMD does however demonstrate an element of geographical variation, with 6 data zones, mostly in Badenoch and Strathspey falling within the 41 to 50% most deprived range. This is not necessarily an indication of poor health within these areas, but rather an indication that health related deprivation is closer to the Scottish median in these locations.

Index of Multiple Deprivation

SIMD domains (see **Figure 173** for summary) have been drawn upon throughout this report and since the level of deprivation experienced by an area can have significant influence on the health and wellbeing of its population, it is also worth considering the SIMD's overall ranking of data zones within the National Park as well as briefly summarising the factors that have led to this situation.

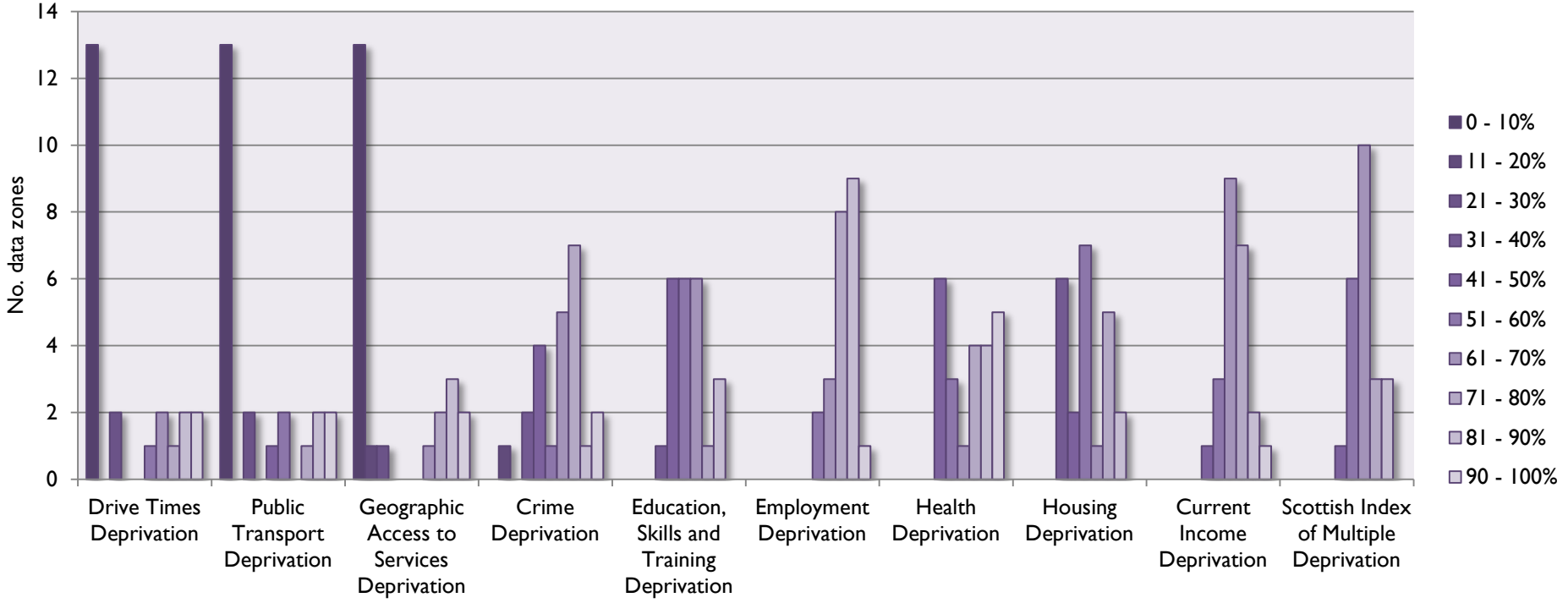


Figure 173 Distribution of SIMD 2012 deciles acoording to data zones within the Cainrgorms National Park.

According to the SIMD 2012, overall deprivation levels within the National Park are relatively low (**Figure 174**). Three data zones (S01000301, S01000312 and S01003748) fall within the 20% least deprived, while only one, S01004233, is ranked as being among the most deprived, falling within the 41 to 50% range (see **Figure 178** (p. 284) for location of data zones). Again, this is not an indication of significant deprivation, but indicates that this data zone has a level of deprivation closer to the Scottish median than other locations within the National Park.

Most domains possess a low level of deprivation, and it is only the domains relating to drive times, public transport and access to services that show any signs of significant deprivation. This is consistent with the rest of remote rural Scotland, where the sparse nature of settlement makes long distances between services inevitable.

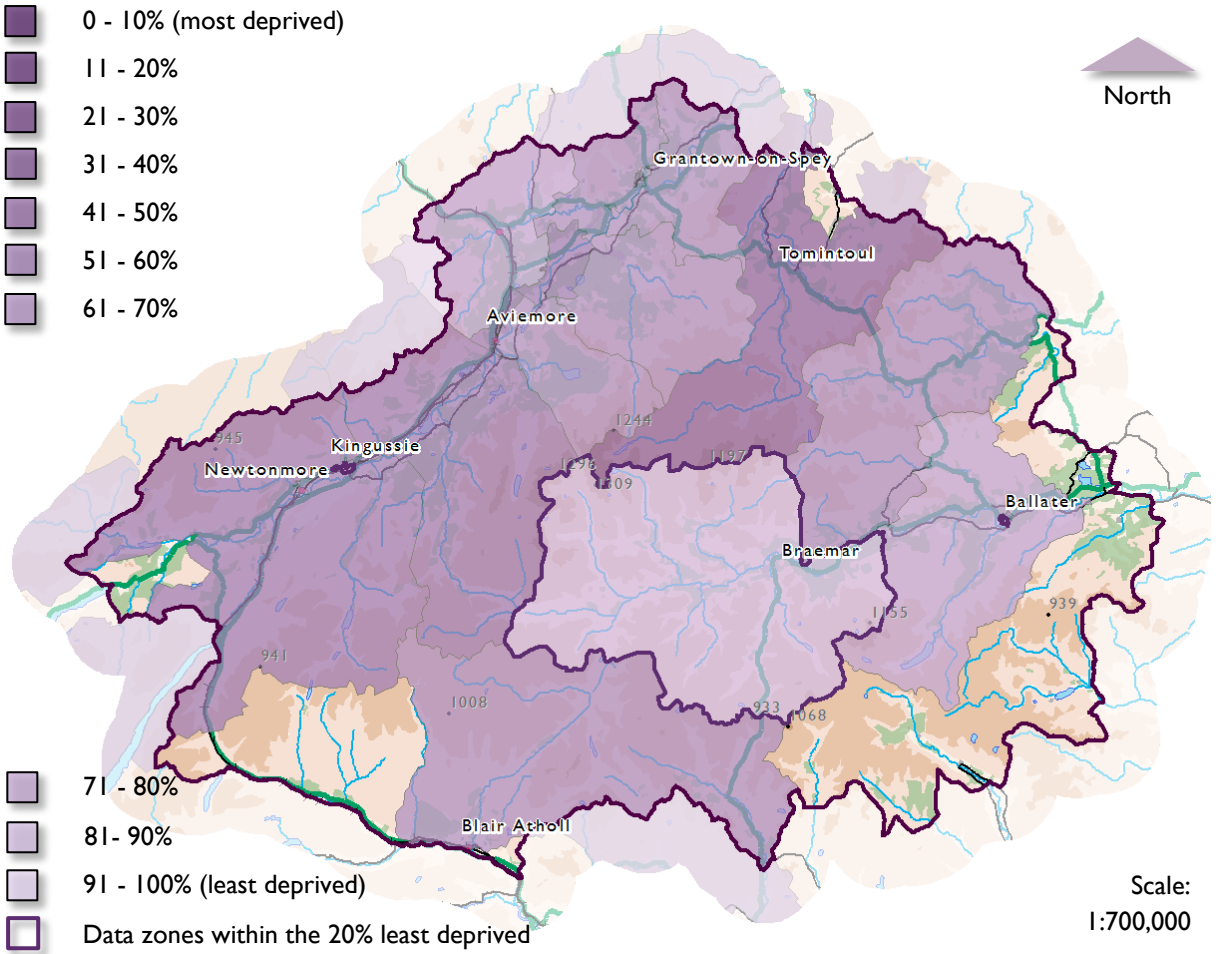


Figure 174 Overall SIMD 2012 deciles according to data zones within the Cairngorms National Park (SIMD, 2012).

The 2012 SIMD is the fourth version of the index. However, because SIMD is a relative measure (it ranks Scotland's data zones relative to each other), it is not straightforward to interpret any change in a data zone's rank from one version of the index to another. Additionally, analysis of change over time is complicated because there have been changes to the methodology and changes to some of the indicators used. Disclosure control methods can also complicate analysis of change over time for some SIMD indicators because when cell values are suppressed, this may lead to data zones having empty cells for one or more of the versions of the SIMD.

Bearing in mind the cautions expressed above, there are ways of undertaking a limited amount of analysis of change over time. **Figure 175** and **Figure 176** offer two different means of measuring relative change, the former showing changes in overall rank and distribution of data zones and the latter showing the number of people falling within an overall SIMD decile.

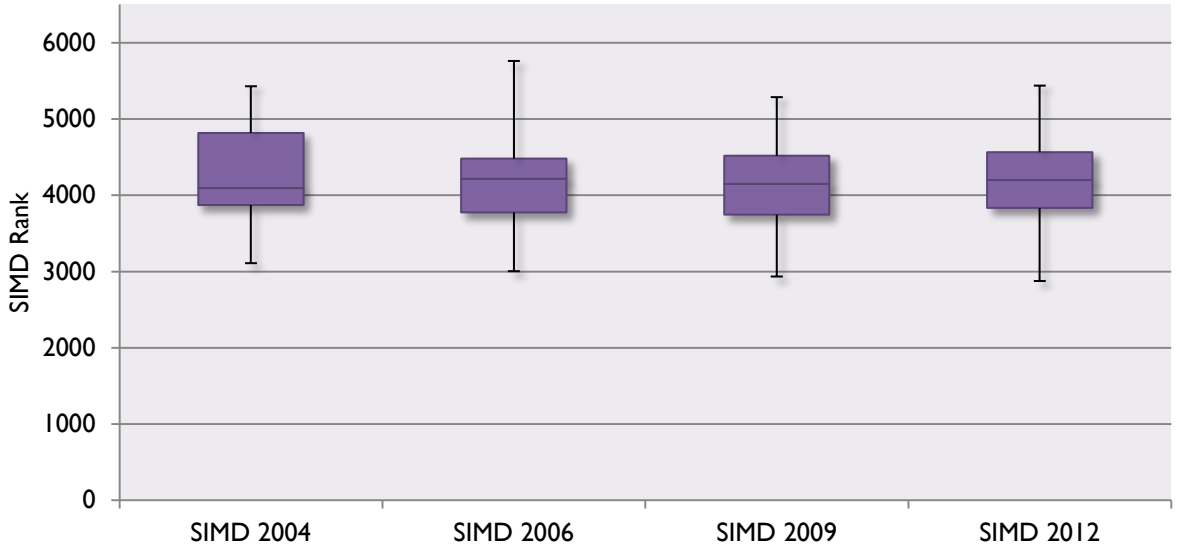


Figure 175 Boxplots showing the distribution of data zones in the Cairngorms National Park by their overall SIMD rank.

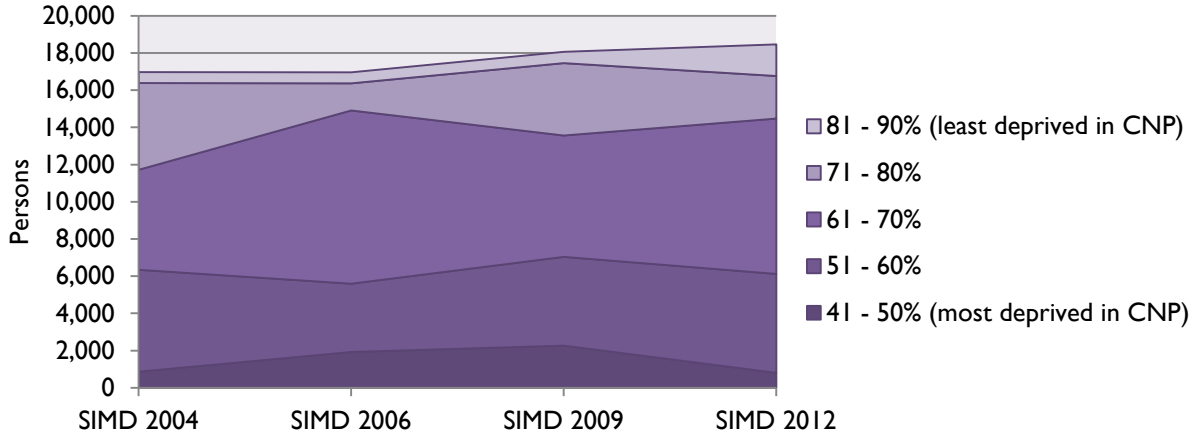


Figure 176 Population distribution by the overall SIMD decile for data zones in the Cairngorms National Park.

Outdoor Recreation

Standardised measures of deprivation aside, there are many factors that can have an influence on a population's health and it is probable that the high quality environment described in this report is a contributory factors. Another factor is likely to be the ability of the population to easily access this environment for leisure and recreational purposes.

Significantly, the Cairngorms National Park is a world renowned area where both residents and visitors can enjoy an unparalleled range of outdoor recreation opportunities. People are able to explore the area on foot, in a wheelchair, on horse-back, on a bicycle or even in a boat or canoe, as long as they do so in a responsible manner, with respect for other people and for the environment, and in accordance with the Scottish Outdoor Access Code.

One important means of access is via the National Park's public footpath network, of which the Core Paths network plays a

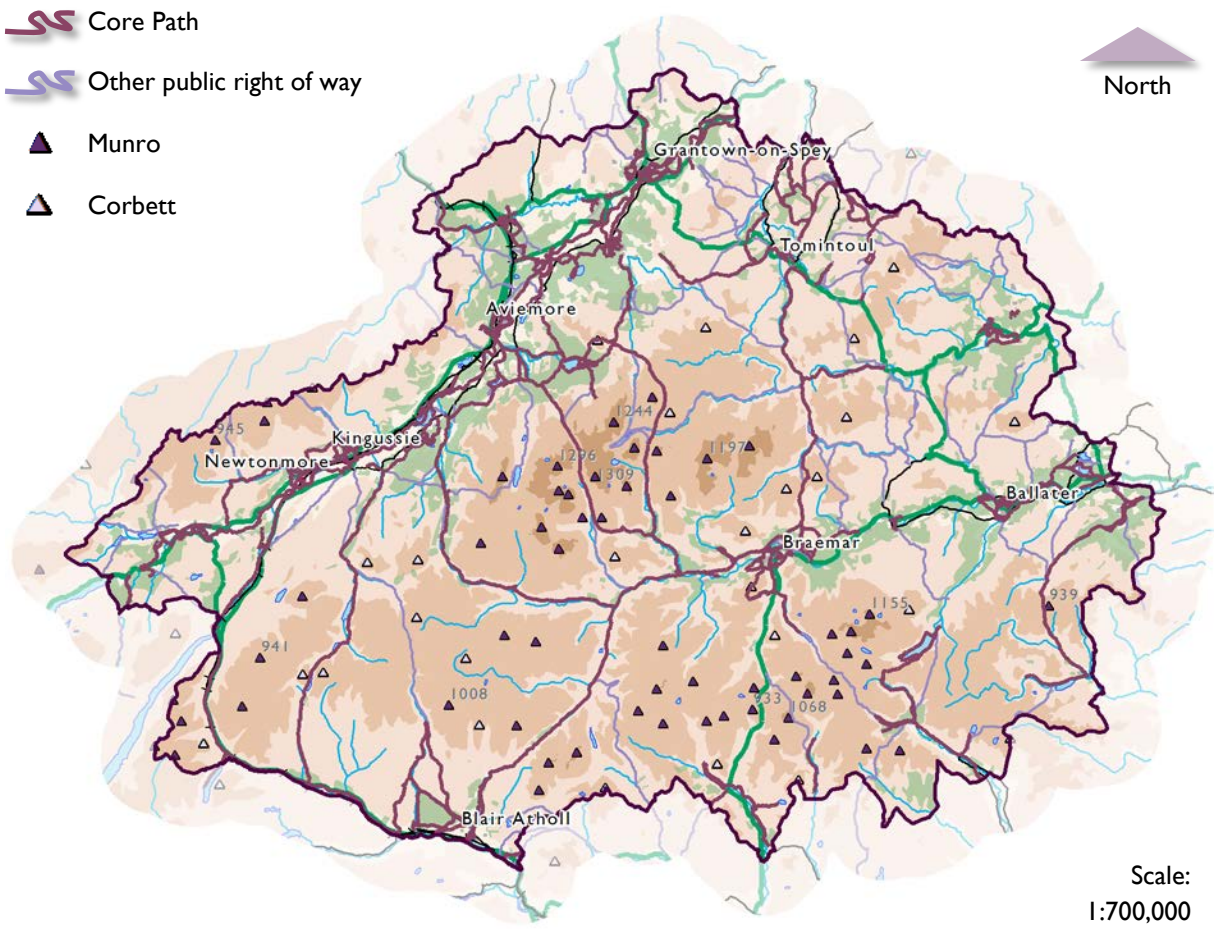


Figure 177 Public footpath network and 'listed' mountains of the Cairngorms National Park.

significant role (see **Figure 177**). The CNPA has a duty under the Land Reform (Scotland) Act 2003 to prepare a Core Paths Plan. Section 17 (1) Act states that the core paths network should be: '… *sufficient for the purpose of giving the public reasonable access throughout the area*'.

The CNPA has recently published its Core Paths Plan (2015), which was developed in Partnership with the Local Outdoor Access Forum and Inclusive Cairngorms. The aim of the Plan is to help people enjoy and understand the special qualities of the National Park through the identification of outdoor access opportunities. The path network should satisfy the needs of visitors and local people to get around, and link to the wider path network and beyond.

The network is made up of a mixture of existing and new paths, which together provide a cohesive system. The National Park now has a network that totals 1,073km of core path, 88km of which is on water (River Spey). Furthermore, over 300km of the network has been signed and promoted with a further 100 or so km to be developed and improved.

Visitors

There has been an overall increase in the number of visitors to the Cairngorms National Park since 2009 with 1.64 million visitors in 2014. Between 2012 and 2014, visitor numbers have increased by 8.6% and visitor days by 9.6% (STEAM, 2015).

Whilst the overall numbers have increased, there is still a strong seasonal trend in tourism, with the highest numbers of visitors in the summer months. A continuing challenge for the National Park is creating a more year round tourism economy, and the 2014 data shows some slight improvement in that area with a greater increase in visitors at off-peak times.

The Cairngorms Visitor Survey 2014/15 gathered a range of information about how visitors interact with the National Park. The survey has been repeated every five years since 2003/04 using the same methodology of 2,500 face to face interviews over a 12 month period in a range of locations across the National Park.

The survey found that the area's status as a National Park was of high importance for those deciding to visit the area, particularly for overseas visitors. This also varies considerably between the National Park areas where status is of greater importance to those visiting the Moray area.

Key Messages

The Cairngorms National Park has seen significant population growth over its lifetime, although this is now projected to slow down significantly over the next 25 years. The population change will result in a particular set of needs to be addressed by the Plan, including the need to provide accommodation for at least 910 households over this period.

Unemployment is low although the median wage remains below that of Scotland. Gross household incomes, are however slightly higher. The National Park retains a high proportion of its workforce with the most commuting via private motor vehicle.

Overall, deprivation levels are low and the life expectancy of the population is estimated to be above Scotland's as a whole. Instances of life limiting conditions are low and claimants of related benefits few.

The National Park has an extensive and well maintained public footpath network and many man-made and natural features that provide attractive objectives and encourage healthy recreational activities.

Inter-relationships with other topics

- Topic 1: Climatic Factors 83
- Topic 3: Water 96
- Topic 5: Material Assets 124
- Topic 6: Biodiversity, Fauna and Flora 143
- Topic 7: Landscape and Cultural Heritage 215