

# POPULATION PROJECTIONS FOR COUNCIL AREAS 2010 - 2035

July 2012

## SUMMARY

Figures from the Highland Council show that:

- If the trends experienced during the period from 2005 to 2010 continue, the population of Highland is expected to grow by 15% to 255,835 in 2035.
- Deaths will exceed births from 2023 onwards and growth will be mainly the result of net inward migration of 1,400 people per year.
- There are significant differences between our former areas, with the highest rates of projected growth in Inverness and Badenoch & Strathspey, and projected falls in Sutherland.
- The number of children will rise in all areas apart from Sutherland.
- The number of working age people will rise in Inverness and Badenoch & Strathspey but fall in all other areas.
- The number of retired people will increase by 79% (range 40% to 107% by area), while the percentage of elderly aged 75+ will more than double.
- These projections are based on rates for births, deaths and migration supplied by National Records of Scotland, and local information from NHS Highland. They assume that past trends will continue and do not take account of future policy initiatives which may influence our future population.

## Introduction

In February 2012 National Records of Scotland (NRS) published its 2010 based population projections for Scottish Areas, which included figures for all Local Authorities. Highland Council Briefing Note 51 described these projections and gave the context within Scotland together with some important caveats about the projections, which are based on recent trends. This current Briefing Note, No 52, continues the “cascade” process in which a generic set of assumptions for the UK overall are applied in a consistent way to progressively smaller areas. It describes projections for the eight former Council operating areas (District Council areas) which are the smallest areas for which projections of this type can be calculated. This set of projections uses a revised approach to modelling migration, described below, which is believed to give more accurate results in those parts of Highland where the population is ageing most rapidly. The detailed figures given below are for the principal projection (net annual inward migration to Highland of 1,400 people per year), and the final section discusses the appropriateness of these figures for use in long term business planning.

## Factors Contributing to Population change

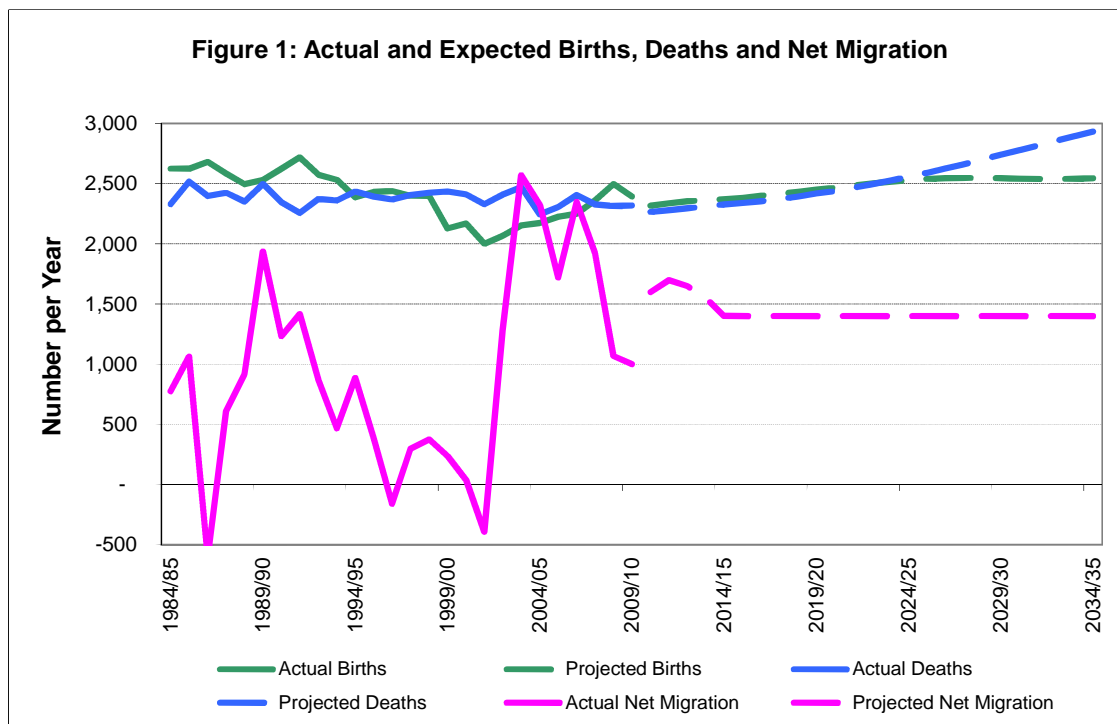
**Migration** is the most significant component of population change within Highland. NRS has supplied age and gender profiles of people moving in and out of the eight Highland areas during the five year period from mid 2005 to mid 2010, and these have been used to apportion the NRS inward and outward migration figures between the eight areas. The long term assumptions for Highland areas for 2015 onwards are shown in Table 1 below:

Table1: Net Migration Assumptions (people per year)	
Badenoch & Strathspey	+138
Caithness	+65
Inverness	+715
Lochaber	+57
Nairn	+78
Ross & Cromarty	+225
Skye & Lochalsh	+68
Sutherland	+54
Highland	+1,400

The 2035 projected Highland total of 255,835 from this work compares with the NRS figure for Highland of 255,257. There are two main reasons for this difference:

- 1 The Area figures include people moving between Highland areas - with different fertility and mortality characteristics - as well as people moving in and out of Highland.
- 2 National and previous Highland projections assume that migration will be constant, in terms of gender and numbers by single year of age. This gives reasonable results when the age structure remains fairly constant, but in areas such as Skye & Lochalsh and Sutherland where the proportion of younger people is falling, it results in too few people in their 20s and 30s: for women these are the main child-bearing ages. The net long term result is that there are too few births and the population structure can become skewed towards the middle age groups. The alternative approach adopted in this work is to assume that the number of inward and outward migrants is constant, but the numbers of moves within this are determined by the current rate (ie moves per 1,000 residents in each age band) which is assumed to be constant. This is believed to give a good compromise between the national approach and the way society is likely to behave in the future, and has been made possible because we have adopted a new model for this work ("POPGROUP", which is becoming a de facto national standard).

**Fertility and Mortality** rates have been derived by NHS Highland for each of the eight areas as adjustments to national rates, based on all events in the five-year period from 2006 to 2010. Fertility rates in seven of our areas are above the Scottish average with the highest rates in Lochaber and Caithness and the lowest in Sutherland. Mortality rates are generally lower than the Scottish average in all areas apart from Caithness, where they are above average for women in all age groups and around average for men in the 60 to 79 group. Actual and Projected Trends are shown in Figure 1 below:

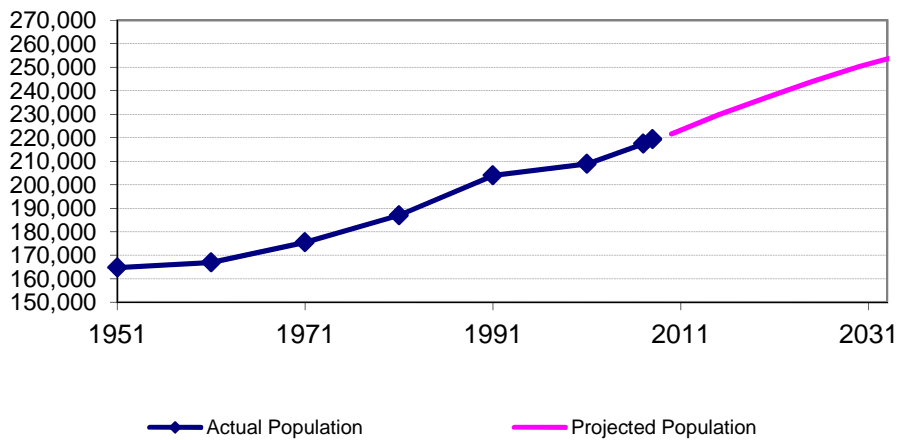


It shows that the recent increase in the birth rate is expected to result in the number of births each year exceeding deaths until 2023 when deaths become greater, with the gap widening significantly towards the end of the period. There will always be year on year variation in the balance between births and deaths, particularly for small areas, but table 2 below gives an indication of the date when deaths might first exceed births in each area which gives an interesting insight into how the demographic profile varies across Highland. In five of our areas, deaths already exceed births each year and population growth is entirely the result of inward migration. Caithness is marginal (on average actual deaths exceeded births over the last five years) and only Inverness and Lochaber are expected to see significant natural growth.

Table2: Indicative Dates When Deaths First Exceed Births	
Badenoch & Strathspey	Before 2010
Caithness	2012
Inverness	After 2035
Lochaber	After 2035
Nairn	Before 2010
Ross & Cromarty	Before 2010
Skye & Lochalsh	Before 2010
Sutherland	Before 2010
Highland	2023

**Population Trends:** Figure 2 shows that the projected rate of growth is expected to be similar to most of the post war period, with the rate declining slightly through time as the gap between deaths and births widens.

**Figure 2: Historic and Projected Population Change**



### Area Overview

Figure 3 shows schematically how the total population in each area is expected to change. Sutherland is the only area likely to see a decline (-5%) with modest increases in Caithness (5%), Skye & Lochalsh (7%) & Ross & Cromarty (8%) and the greatest increases in Inverness (28%) and Badenoch & Strathspey (24%).

**Figure 3: Projected Population Growth by Area 2010 to 2035 (2010 = 100)**

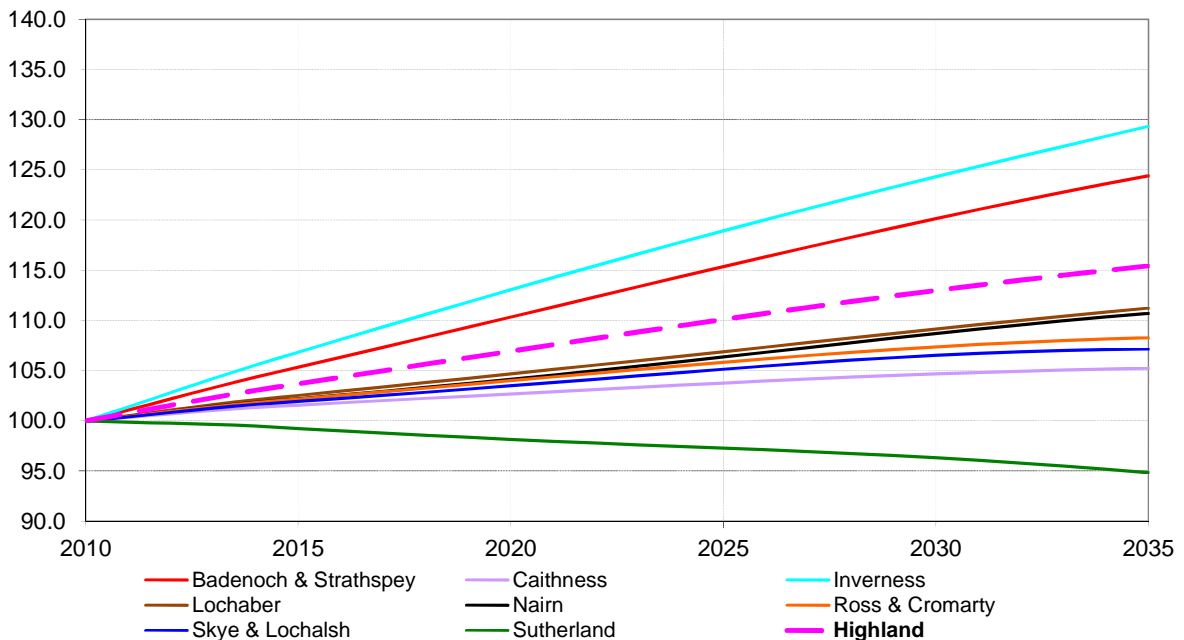
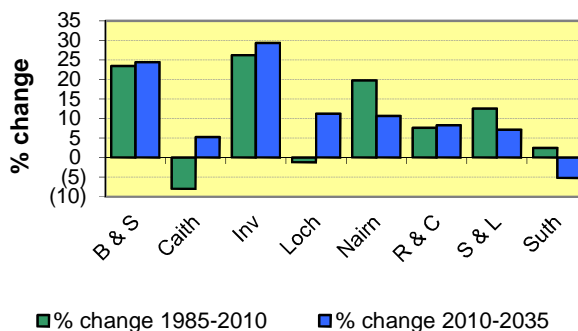


Figure 4 compares the percentage change in the total population with the actual change over the last 25 years. The rate of population increase is expected to rise in Badenoch & Strathspey, Inverness and Ross & Cromarty, and fall in Nairn and Skye & Lochalsh while the decline in Caithness and Lochaber will reverse. Modest historic growth in Sutherland is expected to become a decline.

**Figure 4: Historic and Expected Change in the Total Population**



### Age Groups

Figure 5 shows how the three broad age groups are expected to change in the future, with a significant increase in people of retirement age in all areas. For Highland as a whole, the dependency ratio (the number of working age people divided by the number of children and retired people they “support”) rose slightly from 1.72 in 1985 to 1.74 in 2010 but is expected to fall significantly to 1.18 in 2035. This declining ratio indicates potential labour shortages and difficulties in generating the financial resources to support the young and old.

**Figure 5: Expected Population Change by Age Group and Area, 2010 to 2035**

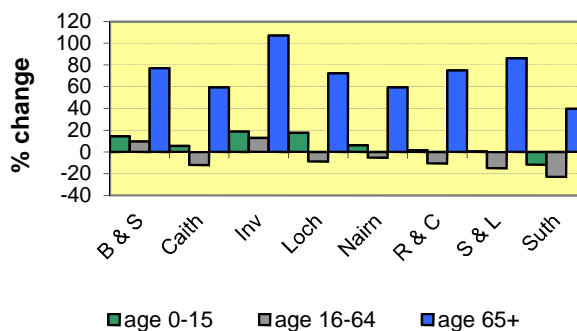
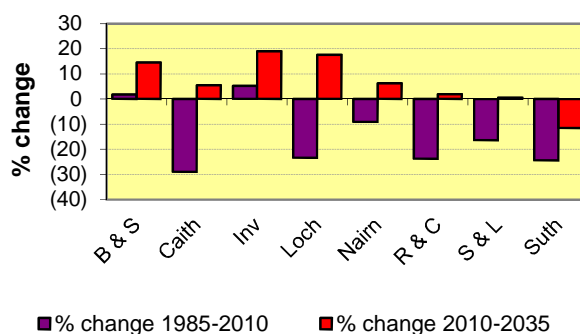


Table 2 shows the population in 2010 and 2035 and the percentage of the population in the main age groups, confirming the general trend towards an ageing population in all areas. Further detail is given in the web tables which accompany this Note (see below for links).

	2010								2035							
	0-4	5-15	16-24	25-44	45-64	65-74	75+	All Ages	0-4	5-15	16-24	25-44	45-64	65-74	75+	All Ages
<b>B &amp; S</b>	4.9	12.0	8.9	23.2	30.4	11.1	9.4	<b>12,886</b>	4.6	11.0	7.9	23.3	24.0	12.6	16.6	<b>16,033</b>
<b>Caith</b>	5.4	12.1	10.1	22.9	29.8	11.1	8.6	<b>25,124</b>	5.3	12.2	8.9	22.3	21.3	13.5	16.4	<b>26,444</b>
<b>Inv</b>	6.2	12.1	10.3	27.2	28.1	8.6	7.6	<b>74,265</b>	5.0	11.8	9.8	22.2	25.3	12.7	13.2	<b>96,060</b>
<b>Loch</b>	6.0	12.3	9.0	23.4	30.7	10.4	8.2	<b>19,319</b>	6.3	13.1	9.3	22.5	20.0	12.5	16.3	<b>21,489</b>
<b>Nairn</b>	4.8	12.5	8.7	22.1	30.4	11.5	10.0	<b>12,193</b>	5.1	11.5	7.5	23.5	21.4	14.2	16.7	<b>13,496</b>
<b>R &amp; C</b>	5.3	12.6	9.7	21.8	31.3	11.0	8.3	<b>51,554</b>	5.0	11.8	8.5	22.3	21.2	13.8	17.5	<b>55,818</b>
<b>S &amp; L</b>	4.4	11.9	8.7	20.8	34.9	10.7	8.6	<b>12,722</b>	4.6	10.7	7.2	22.3	21.6	14.0	19.6	<b>13,631</b>
<b>Suth</b>	3.9	10.8	8.1	18.1	33.6	14.2	11.3	<b>13,567</b>	4.0	9.7	5.9	22.6	20.1	14.5	23.1	<b>12,864</b>
<b>High</b>	<b>5.5</b>	<b>12.2</b>	<b>9.6</b>	<b>23.7</b>	<b>30.2</b>	<b>10.4</b>	<b>8.5</b>	<b>221,630</b>	<b>5.1</b>	<b>11.7</b>	<b>8.8</b>	<b>22.4</b>	<b>22.8</b>	<b>13.2</b>	<b>16.0</b>	<b>255,835</b>

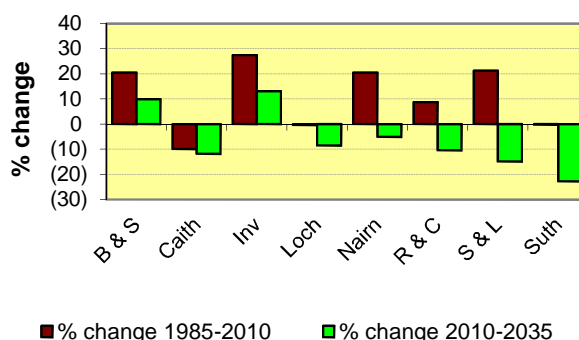
**Children Aged 0 to 15.** Despite a significant increase in the population of Highland between 1985 and 2010, a combination of the ageing population and declining fertility rates meant that the number of children in six areas fell, with modest increases in Badenoch & Strathspey and Inverness. The recent increase in birth rates – combined with revised migration assumptions which result in more women of child bearing age – mean that this trend will be reversed or slowed down. The number of children is expected to increase in Inverness (19%), Lochaber (18%) and Badenoch & Strathspey (15%). There will be marginal increases in four other areas with only Sutherland expected to see a continued fall.

**Figure 6: Historic and Expected Change in the Number of Children Aged 0 to 15**



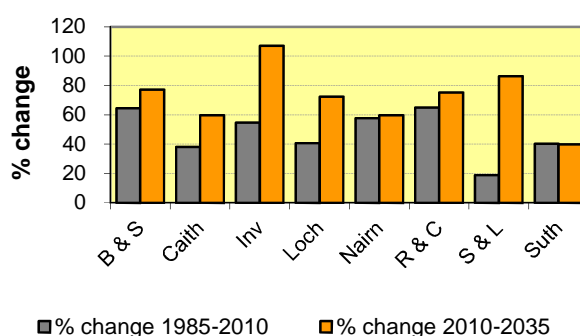
**Working Age 16 to 64.** The working age population of Highland continues to be heavily influenced by the number of young people leaving Highland for higher and further education. Over the past 25 years we have seen an increase in the numbers of working age people in seven areas with a fall in Caithness and marginal declines in Lochaber and Sutherland. Only Inverness (13%) and Badenoch & Strathspey (10%) will see a continued increase with significant falls in Caithness (-12%), Ross & Cromarty (-11%), Skye & Lochalsh (-15%) and Sutherland (-23%).

**Figure 7: Historic and Expected Change in the Working Age Population Aged 16 to 64**



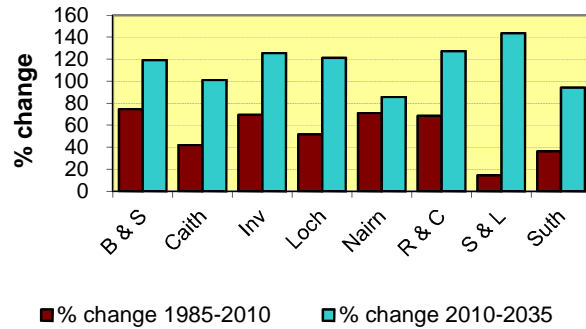
**Retired People Aged Over 65.** The next 25 years will see a continued and accelerating rate of increase in the number of retired people in Highland. The most significant increases will be in Inverness (107%), Skye & Lochalsh (86%) and Badenoch & Strathspey (70%), and the lowest in Sutherland (40%).

**Figure 8: Historic and Expected Change in the Number of Retired People Aged 65+**



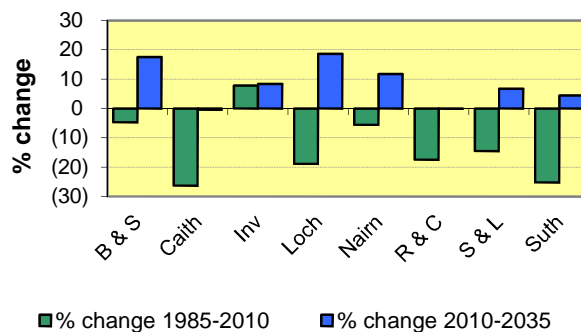
**Elderly People Aged over 75.** The care needs of elderly people increase significantly beyond 75 and an understanding of how their numbers might change is essential to service planning. The general pattern of change mirrors that for the retired age group overall, with the greatest increase in Skye & Lochalsh (144%), Ross & Cromarty (127%), Inverness (126%), Lochaber (121%) and Badenoch & Strathspey (119%), and the lowest in Nairn (86%) and Sutherland (94%).

**Figure 9: Historic and Expected Change in the Number of Elderly Aged 75+**



**Women of Childbearing Age.** The number of women who can have children gives a very clear signal about the viability of the native population, and is closely correlated to the future number of children. All of Highland apart from Inverness saw a reduction in numbers during the last 25 years. Increases are expected in six areas with the largest in Lochaber (19%), Badenoch & Strathspey (18%) and Nairn (12%), and fractional reductions in Caithness and Ross & Cromarty.

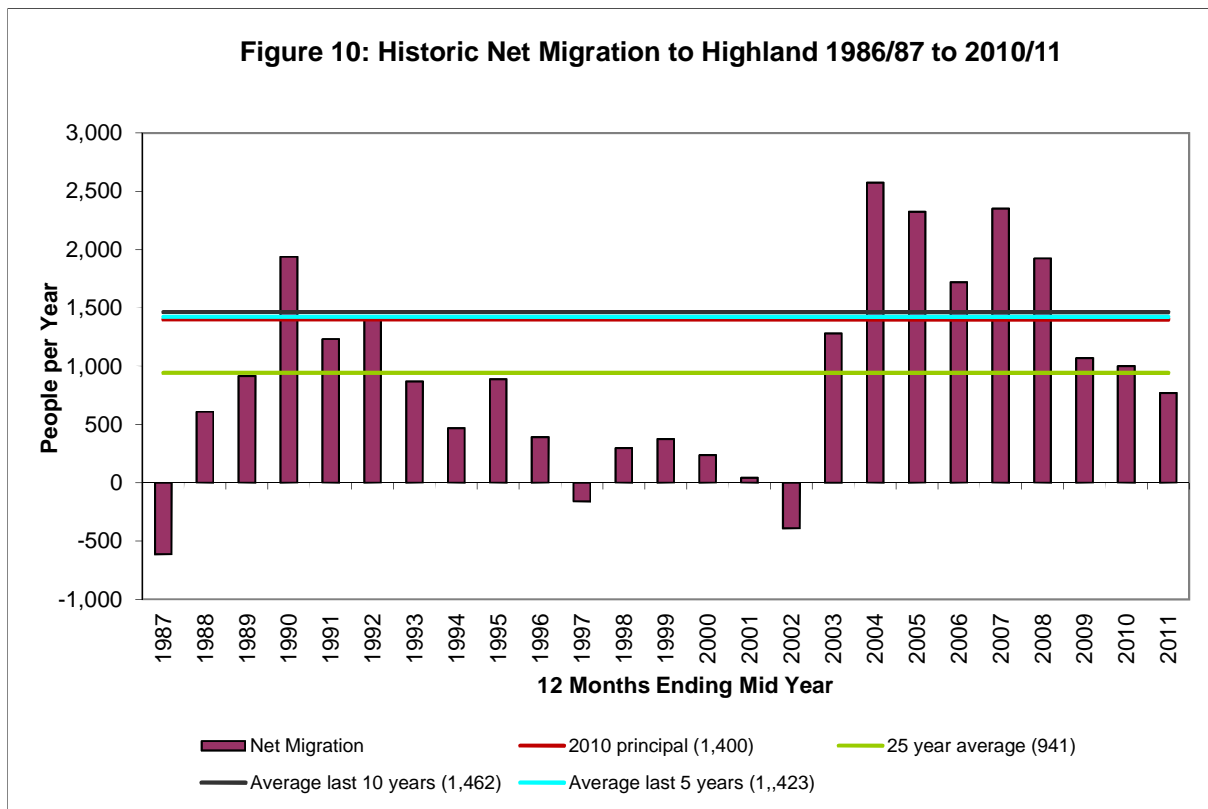
**Figure 10: Expected Change in the Number of Women of Childbearing Age (15 to 44)**



### The Use of Projections in Business Planning

The previous Note on this topic, Briefing Note 38, discussed the migration assumptions used in the 2008 series of projections, and their likely accuracy when used for business planning. It concluded that the 2008 principal assumption of 1,650 per year was likely to be too high and that a lower figure of 1,200 was more appropriate. Figure 10 below shows that the 2010 assumption of +1,400 people per year is close to both the five year and ten year averages (1,423 and 1,462 respectively) but higher than the 25 year average of 941. At the time of writing this note, both the national and international economic positions are precarious. Low economic growth combined with the continuing depressed housing market is making it difficult for families to move house, with the potential for low migration rates in the future. Despite this, the outlook for the Highland economy remains positive with the continued growth of UHI - construction of the campus underway and funding for 2,000 additional students across the whole UHI area during the next three years – and the potential of the renewable energy industry. There are good reasons to believe that the long term net migration rate may be above the 25 year average of 941 although the principal assumption here of +1,400 may be optimistic.

**Figure 10: Historic Net Migration to Highland 1986/87 to 2010/11**



The previous recommendation of +1,200 remains a sensible compromise but there was little demand for this “business planning scenario” produced in Highland as part of the 2008 projections, and we do not plan to reproduce it at the moment. However, alternative scenarios are available from the contact below.

#### **Further Information.**

Summary tables, schematics, and detailed tables of the projected population by gender and single year of age at five year intervals, are available as a series of web based Excel tables.

The 2010 GROS principal projection, the subject of this Note, is available at:

[principal projection spreadsheet](#)

For further information and guidance on the uses and limitations of these projections please contact Cameron Thomas as described below.

#### **Footnote**

If you have a particular interest in demographics, NRS has published a useful set of fact sheets for local authorities. They are available at:

[NRS council area statistics](#)

Information on migration to and from Highland is available in excel tables available at:

[NRS local area migration tables](#)