

**The Future Housing Market:  
POPGROUP Scenarios - 2011 Refresh - Cumbria**

## **Introduction**

**Aim:** This report estimates the future number of dwellings (including the number of new dwellings) that may be associated with a series of differing population, housing and economic scenarios. These scenarios are defined in subsequent sections of this report. All scenarios have been generated using the POPGROUP demographic forecasting software.

**About POPGROUP:** POPGROUP is a family of software products designed to project the population, households and labour force that may be associated with specified future scenarios. The software is provided by the Centre for Census & Survey Research at the University of Manchester. It uses a standard cohort component methodology, allowing users to generate scenarios based on the entry of past information and assumptions about the future in relation to births and fertility, deaths and mortality, migration, housing and the labour market. POPGROUP analysis is only available down to a district level.

**The need for local information:** The Office for National Statistics (ONS) makes national and sub-national population projections every two years using the same standard cohort component methodology applied by POPGROUP. ONS projections are simply intended to represent what the population may look like in the future based on one fixed set of assumptions. The assumptions made by the ONS are that past trends relating to births, deaths and migration (based on data observed over the five years immediately prior to the projections being made) will continue into the future. This set of assumptions can be said to present one potential future 'scenario'.

While the ONS projections provide a useful baseline scenario, they do not offer users the flexibility to adjust or add any further assumptions, for example: the implications of local planning restrictions/developments; decline/growth of the local economy; or, longer / shorter term trends in birth, death and migration rates. However, we know that these local factors can make a real difference to the way populations might look in twenty years time. To address this issue, POPGROUP was purchased as a means of providing us with the facility to create our own scenarios, incorporating our own localised assumptions into projections.

**POPGROUP and Strategic Housing Market Assessments (SHMAs):** In early 2009 Cumbria Intelligence Observatory (CIO) used the POPGROUP software to produce a series of district level population and housing projections to inform the county's 2009 Strategic Housing Market Assessments (SHMAs). These projections were based on a number of scenarios which utilised a wide range of local information.

When running a POPGROUP scenario, only one factor (either population, dwellings or the labour force) may be selected to drive the model. Associated projections for the remaining two factors are then produced to fit around the driving factor. Therefore, the POPGROUP projections within the 2009 SHMAs were split into three distinct types of scenario:

1. Population Led Scenarios
2. Dwelling Led Scenarios
3. Labour Force Led Scenarios

**Population Led Scenarios:** With population as a driving factor, these scenarios looked at what had happened to population in the past in terms of district level trends in fertility, mortality and migration, and projected what would happen to the population in the future should these trends continue. Age and gender specific projections were produced for each district by the software, along with projections for the associated numbers of dwellings and households that would be needed to support the projected population.

**Dwelling Led Scenarios:** With dwellings as a driving factor, these scenarios looked at what had happened to the number of dwellings in each district in the past and made assumptions about what was expected to happen to these numbers of dwellings in the future. The population projections produced by the software reflected the associated population that would be required to live in the dwellings that the model predicted for each district.

**Labour Force Led Scenarios:** With the labour force as a driving factor, these scenarios looked at what had happened to the number of Full Time Equivalent (FTE) jobs in each district in the past, and applied what was expected to happen in the future in terms of numbers of FTE jobs. The population, household and dwelling projections produced by the model reflected the associated number of people and houses that would be needed to support these changes in the number of jobs for each district.

**2010 Refresh:** Since the 2009 POPGROUP forecasts were produced by the CIO, a number of the data sets that were incorporated into the scenarios have been superseded as new and more up to date information has become available. More specifically, new data has become available in relation to:

- National fertility, mortality and migration rates for 2008;
- District level counts for births and deaths in 2007 and 2008;
- District level fertility and mortality rates for 2007 and 2008;
- District level internal migration estimates for 2007, 2008 and 2009;
- District level international migration estimates for 2007, 2008 and 2009; and
- District level population estimates for 2007, 2008 and 2009.

Furthermore, as part of the 'Improving Migration and Population Statistics programme', the ONS have also revised their local population estimates from 2002 through to 2008 having gained access to new administrative sources that provide more accurate indications of migration patterns for people moving between local authorities in the UK.

Following the release of the above data sets, the CIO has re-run the two 'Population-Led' POPGROUP scenarios (the Zero Net Migration and the 5 Year Migration scenarios) which were included in the 2009 SHMAs. The CIO also produced one additional 'Dwelling-Led' scenario (the 10-Year Dwelling Led scenario) and one additional Population-Led scenario (the 10 Year Migration Scenario).

In **February 2011**, the CIO also updated the 2009 Labour-Force Led POPGROUP Scenario to incorporate the latest district level job forecasts; produced by Experian and provided by Cumbria County Council's Economic Development Department in February 2011.

The above forecasts were produced in order to offer some further insight for county and district planning teams as to potential future housing demand; based on the most recently available local information. It is the aim of this document to present the results of these refreshed / additional POPGROUP forecasts. The figures contained in this document should be seen as an additional piece of work that follows on from Section Four of the 2009 SHMA.

## **Limitations and Caveats**

Like all population forecasting outputs, POPGROUP outputs are simply a representation of what might happen in the future if various trends are played out as we expect. It is especially important to note that POPGROUP Scenarios can only be driven by one factor at a time (population, dwellings or the labour force). However, in reality, we know that these factors are inter-linked and dependent upon one and other, so it is very unlikely that one factor will exclusively drive change in an area.

As a result, these projections cannot be relied upon as fact, and actual results may end up being significantly different to what the scenarios suggest will happen. This should be kept in mind at all times when using the outputs, and caution should be used when incorporating the outputs into any decision making processes. Instead figures should be viewed as a guide to indicate the potential parameters for housing demand, should various scenarios arise.

## Results: POPGROUP Forecasting –2010 Refresh

### Population Led Forecast: Zero Net Migration Scenario

This scenario shows what might happen to the population if natural change (births and deaths) were the only contributing factor to future population trends. This scenario assumes that there will be no migration – either in or out both internally and internationally – for the period of the forecast. This is, of course, an unlikely scenario. However, it is useful in the broader context because it allows us to take migration out of the equation and examine how natural changes are likely to affect the future population.

Cumbria	2009	2014	2019	2024	2029
Population	495,043	492,091	489,584	487,306	483,720
Households	221,110	224,738	229,050	232,359	233,645
Dwellings	238,542	242,382	246,989	250,531	251,881
5 Year Migration		0	0	0	0
5 Year Net Change		-2952	-2507	-2278	-3586
Annualised Migration		0	0	0	0
Annualised Change		-590	-501	-456	-717
Annualised Dwelling Requirement		768	921	709	270
Average Annualised Dwelling Requirement	667				

**Source: Zero Net Migration Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010**

### Population Forecast by Age:

Cumbria	2009	2014	2019	2024	2029
0-14	78,382	72,889	71,237	70,052	70,691
15-29	80,376	84,991	84,383	78,160	72,706
30-44	92,413	78,622	71,973	79,693	84,325
45-59	107,301	108,716	104,821	89,765	76,532
60-74	89,908	94,831	97,631	97,498	99,389
75-84	33,691	37,074	41,559	49,779	52,581
85+	12,972	14,967	17,980	22,359	27,497
Total	495,043	492,091	489,584	487,306	483,720

**Source: Zero Net Migration Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010**

### Household Forecast by Household Type:

<b>Cumbria</b>					
<b>Household Types</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Married couple	102,567	98,156	94,519	91,012	87,057
Cohabiting couple	20,434	22,380	24,213	25,561	26,481
Lone parent	13,399	13,052	12,637	12,409	12,278
Other multi-person	11,695	12,172	12,712	12,937	13,274
One person	73,016	78,978	84,969	90,441	94,555
<b>All Households</b>	<b>221,110</b>	<b>224,738</b>	<b>229,050</b>	<b>232,359</b>	<b>233,645</b>
Private household population	485,804	482,511	479,478	476,318	471,718
Average household size	2.20	2.15	2.09	2.05	2.02
<b>Source: Zero Net Migration Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010</b>					

### Household Forecast by Tenure:

Using Annex Table 1.7 (Household Type by Tenure) derived from the 2008-09 English Housing Survey, which was produced by the Department for Communities and Local Government (CLG), it is possible to apportion tenure to the above household types in order to produce additional household projections by tenure.

<b>Cumbria</b>					
<b>Tenure</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Owner Occupiers	150,912	152,651	154,937	156,540	156,729
Social Renters	39,619	40,812	42,064	43,167	43,901
Private Renters	30,580	31,275	32,050	32,652	33,016
All Tenures	221,110	224,738	229,050	232,359	233,645
<b>Source: Zero Net Migration Scenario, POPGROUP Forecasting Software, with Tenure Rates by Household Type applied based on English Housing Survey 2008-09 (CLG), Cumbria Intelligence Observatory, August 2010</b>					

<b>Cumbria - Annualised Household Change</b>					
<b>Tenure</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Owner Occupiers		348	457	321	38
Social Renters		239	250	221	147
Private Renters		139	155	120	73
All Tenures		726	862	662	257
<b>Source: Zero Net Migration Scenario, POPGROUP Forecasting Software, with Tenure Rates by Household Type applied based on English Housing Survey 2008-09 (CLG), Cumbria Intelligence Observatory, August 2010</b>					

## Population Led Forecast: 5 Year Migration Scenario

This scenario uses all the information provided in the zero net migration scenario about births and deaths, but also takes account of migration. The model uses estimates of migration over the past five years to formulate **what might happen to the population if the rates of migration that we have experienced in the last 5 years continue into the future.** The migration data is weighted giving the greatest weight to migration estimates for the two most recent years.

Cumbria	2009	2014	2019	2024	2029
Population	495,043	495,985	496,015	494,632	490,726
Households	221,110	227,317	234,108	239,980	244,099
Dwellings	238,542	245,209	252,519	258,854	263,295
5 Year Migration		4332.87	4346.46	4179.85	3997.23
5 Year Net Change		942	30	-1383	-3906
Annualised Migration		867	869	836	799
Annualised Change		188	6	-277	-781
Annualised Dwelling Requirement		1333	1462	1267	888
Average Annualised Dwelling Requirement	1238				
<b>Source: 5 Year Migration (Weighted) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010</b>					

## Population Forecast by Age:

Cumbria	2009	2014	2019	2024	2029
0-14	78,382	74,074	71,661	67,720	65,004
15-29	80,376	82,609	81,074	76,229	71,982
30-44	92,413	79,796	72,873	78,415	81,147
45-59	107,301	111,030	109,419	95,870	82,769
60-74	89,908	96,303	101,110	103,242	107,503
75-84	33,691	37,153	41,776	50,591	54,476
85+	12,972	15,019	18,101	22,565	27,845
Total	495,043	495,985	496,015	494,632	490,726
<b>Source: 5 Year Migration (Weighted) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010</b>					

### Household Forecast by Household Type:

<b>Cumbria</b>					
<b>Household Types</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Married couple	102,567	99,643	97,378	95,141	92,370
Cohabiting couple	20,434	22,708	24,923	26,714	28,166
Lone parent	13,399	12,968	12,276	11,703	11,257
Other multi-person	11,695	12,290	12,996	13,426	13,967
One person	73,016	79,707	86,535	92,995	98,338
<b>All Households</b>	<b>221,110</b>	<b>227,317</b>	<b>234,108</b>	<b>239,980</b>	<b>244,099</b>
Private household population	485,804	486,405	485,909	483,644	478,723
Average household size	2.20	2.14	2.08	2.02	1.96
<b>Source: 5 Year Migration (Weighted) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010</b>					

### Household Forecast by Tenure:

<b>Cumbria</b>					
<b>Tenure</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Owner Occupiers	150,912	154,549	158,706	162,237	164,508
Social Renters	39,619	41,173	42,729	44,150	45,275
Private Renters	30,580	31,596	32,672	33,593	34,316
All Tenures	221,110	227,317	234,108	239,980	244,099
<b>Source: 5 Year Migration (Weighted) Scenario, POPGROUP Forecasting Software, with Tenure Rates by Household Type applied based on English Housing Survey 2008-09 (CLG), Cumbria Intelligence Observatory, August 2010</b>					

<b>Cumbria - Annualised Household Change</b>					
<b>Tenure</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Owner Occupiers		727	831	706	454
Social Renters		311	311	284	225
Private Renters		203	215	184	145
All Tenures		1,241	1,358	1,174	824
<b>Source: 5 Year Migration (Weighted) Scenario, POPGROUP Forecasting Software, with Tenure Rates by Household Type applied based on English Housing Survey 2008-09 (CLG), Cumbria Intelligence Observatory, August 2010</b>					

## Dwelling Led Forecast: 10 Year Dwelling Led Scenario

This scenario takes the data used in the 5 year migration scenario, but this time looks at **what might happen to the forecast population if house building (net dwelling change) were to continue as it has over the last 10 years** (based on the average figure for housing completions between 1999-01 and 2008-09).

Please note that the 2009 SHMA also included a dwelling led forecast. However, the 2009 dwelling led forecast considered what might happen if house building followed the average figure for housing completions in the five years prior to the forecast; rather than the 10 year average figure used in the above forecast. For the 2010 refreshed POPGROUP forecasts, a 10 year average was used to drive the dwelling led forecast at the request of colleagues from Strategic Planning. This change in methodology was adopted as it was agreed that a 10 year average would better reflect future housing completion levels as the average figure for the last 5 years was heavily skewed by the recent instability in housing completions following the global recession.

<b>Cumbria</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Population	495,043	497,524	497,437	497,929	499,666
Households	221,110	227,929	234,747	241,565	248,383
Dwellings	238,542	245,902	253,262	260,622	267,982
5 Year Migration		5832.09	4229.69	6118.58	9506.19
5 Year Net Change		2481	-87	492	1737
Annualised Migration		1166	846	1224	1901
Annualised Change		496	-17	98	347
Annualised Dwelling Requirement		1472	1472	1472	1472
Average Annualised Dwelling Requirement	1472				

**Source: 10 Year Dwelling Led Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010**

### Population Forecast by Age:

<b>Cumbria</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
0-14	78,382	74,265	71,795	68,022	66,107
15-29	80,376	83,060	81,350	77,167	74,472
30-44	92,413	80,107	73,132	78,964	83,117
45-59	107,301	111,310	109,756	96,533	84,139
60-74	89,908	96,521	101,411	103,793	108,768
75-84	33,691	37,208	41,843	50,794	54,967
85+	12,972	15,054	18,150	22,655	28,096
Total	495,043	497,524	497,437	497,929	499,666

**Source: 10 Year Dwelling Led Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010**



### Household Forecast by Household Type:

<b>Cumbria</b>					
<b>Household Types</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Married couple	102,567	99,907	97,671	95,752	93,857
Cohabiting couple	20,434	22,794	25,000	26,953	28,884
Lone parent	13,399	12,968	12,211	11,674	11,427
Other multi-person	11,695	12,334	13,055	13,538	14,210
One person	73,016	79,926	86,811	93,647	100,005
<b>All Households</b>	<b>221,110</b>	<b>227,929</b>	<b>234,747</b>	<b>241,565</b>	<b>248,383</b>
Private household population	485,804	487,944	487,331	486,941	487,664
Average household size	2.20	2.14	2.08	2.02	1.96
<b>Source: 10 Year Dwelling Led Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010</b>					

### Household Forecast by Tenure:

<b>Cumbria</b>					
<b>Tenure</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Owner Occupiers	150,912	154,976	159,169	163,343	167,420
Social Renters	39,619	41,273	42,821	44,413	46,051
Private Renters	30,580	31,679	32,757	33,809	34,913
<b>All Tenures</b>	<b>221,110</b>	<b>227,929</b>	<b>234,747</b>	<b>241,565</b>	<b>248,383</b>
<b>Source: 10 Year Dwelling Led Scenario, POPGROUP Forecasting Software, with Tenure Rates by Household Type applied based on English Housing Survey 2008-09 (CLG), Cumbria Intelligence Observatory, August 2010</b>					

<b>Cumbria - Annualised Household Change</b>					
<b>Tenure</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Owner Occupiers		813	839	835	815
Social Renters		331	309	319	328
Private Renters		220	216	210	221
<b>All Tenures</b>		<b>1,364</b>	<b>1,364</b>	<b>1,364</b>	<b>1,364</b>
<b>Source: 10 Year Dwelling Led Scenario, POPGROUP Forecasting Software, with Tenure Rates by Household Type applied based on English Housing Survey 2008-09 (CLG), Cumbria Intelligence Observatory, August 2010</b>					

## Population Led Forecast: 10 Year Migration Scenario

Like the 10 year dwelling led scenario, this 10 year migration scenario was also produced by the CIO in response to instability experienced in recent years.

Like the 5 Year Migration scenario, this scenario is uses all the information provided in the zero net migration scenario and takes account of migration. However, this scenario uses estimates of migration over the past ten years to formulate **what might happen to the population if the rates of migration that we have experienced in the last 10 years continue into the future.**

The migration data used in this scenario is not weighted; the model gives equal weight to each of the last ten years worth of migration data. This method offers some helpful insight in to **what would happen to the population should migration follow more longitudinal trends rather than recent short-term trends; which we know have been particularly erratic over the last five years.**

Cumbria	2009	2014	2019	2024	2029
Population	495,043	499,358	503,149	505,937	506,326
Households	221,110	229,397	237,554	244,358	249,272
Dwellings	238,542	247,468	256,260	263,602	268,900
5 Year Migration		7551.79	7642.89	7697.36	7577.96
5 Year Net Change		4315	3791	2788	389
Annualised Migration		1510	1529	1539	1516
Annualised Change		863	758	558	78
Annualised Dwelling Requirement		1785	1758	1468	1059
Average Annualised Dwelling Requirement	1518				

**Source: 10 Year Migration (Equal Weights) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010**

## Population Forecast by Age:

Cumbria	2009	2014	2019	2024	2029
0-14	78,382	75,102	73,930	71,263	69,755
15-29	80,376	81,152	78,076	73,522	70,525
30-44	92,413	80,967	75,060	80,089	81,349
45-59	107,301	112,326	111,938	99,239	86,907
60-74	89,908	97,316	103,490	107,094	112,859
75-84	33,691	37,364	42,296	51,709	56,316
85+	12,972	15,131	18,360	23,022	28,615
Total	495,043	499,358	503,149	505,937	506,326

**Source: 10 Year Migration (Equal Weights) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010**

### Household Forecast by Household Type:

<b>Cumbria</b>					
<b>Household Types</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Married couple	102,567	100,704	99,227	97,376	94,652
Cohabiting couple	20,434	22,678	24,473	25,803	26,965
Lone parent	13,399	13,173	12,670	12,284	11,996
Other multi-person	11,695	12,369	13,132	13,652	14,336
One person	73,016	80,473	88,052	95,243	101,322
<b>All Households</b>	<b>221,110</b>	<b>229,397</b>	<b>237,554</b>	<b>244,358</b>	<b>249,272</b>
Private household population	485,804	489,778	493,043	494,949	494,324
Average household size	2.20	2.14	2.08	2.03	1.98
<b>Source: 10 Year Migration (Equal Weights) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, August 2010</b>					

### Household Forecast by Tenure:

<b>Cumbria</b>					
<b>Tenure</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Owner Occupiers	150,912	155,927	160,916	164,932	167,574
Social Renters	39,619	41,581	43,462	45,160	46,545
Private Renters	30,580	31,889	33,176	34,266	35,153
All Tenures	221,110	229,397	237,554	244,358	249,272
<b>Source: 10 Year Migration (Equal Weights) Scenario, POPGROUP Forecasting Software, with Tenure Rates by Household Type applied based on English Housing Survey 2008-09 (CLG), Cumbria Intelligence Observatory, August 2010</b>					

<b>Cumbria - Annualised Household Change</b>					
<b>Tenure</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>	<b>2029</b>
Owner Occupiers		1,003	998	803	528
Social Renters		392	376	340	277
Private Renters		262	257	218	177
All Tenures		1,657	1,631	1,361	983
<b>Source: 10 Year Migration (Equal Weights) Scenario, POPGROUP Forecasting Software, with Tenure Rates by Household Type applied based on English Housing Survey 2008-09 (CLG), Cumbria Intelligence Observatory, August 2010</b>					

## Labour Force Led Forecast: Experian Jobs Forecast February 2011

In December 2010 Cumbria Intelligence Observatory began working with Experian to produce a modified baseline employment forecast for Cumbria, using Experian's standard forecasts as a start point. The purpose of this work was to ensure that local factors were fully captured rather than relying on national and regional assumptions about impacts. A workshop was held with project partners and findings from the 2010 Cumbria Business Survey were also used to take account of particular factors which may influence Experian's standard forecasts. Factors taken into account were:

- Likely pace and scale of public sector restructuring in Cumbria;
- Potential for employment in the renewables sector;
- Impact of decommissioning;
- Potential for nuclear new build;
- Positive industry sentiment in the hotel & catering sector;
- Carlisle's growth point aspirations;
- Retail developments such as Penrith New Squares and other supermarket developments;
- Expectations about the BAe Systems workforce in Barrow;
- Optimism around the ports in Barrow and Workington;
- Negative trends in the construction sector.

The result of the above work was that employment in the public administration, education, construction and fuel refining sectors was revised downwards from the original Experian baseline whilst employment in the transport, transport equipment and hotels and catering sectors was revised upwards. The overall effect of these revisions was that under the modified baseline for Cumbria, finalised in February 2011, employment was forecast to decline by around 4,500 in 2011 and a little further in 2012, before returning to modest growth thereafter. By 2016, employment was expected to have recovered to 2010 levels and by 2020 to have grown by 1.2% compared to 2010.

The table below shows how the numbers of Full Time Equivalent (FTE) jobs are predicted to change within the county from an initial position in 2009 through to 2024; based on the modified Experian baseline forecast outlined above.

Experian Jobs Forecast - February 2011							
	2009	2014	2019	2024	2009-2024		
	FTEs	FTEs	FTEs	FTEs	No. Change	% Change	Annual % Change
Cumbria	205,086	202,362	206,171	209,391	4,305	2.1	0.14

Source: Experian (2011) - Provided by Cumbria County Council, Economic Development

The following scenario takes the data used in the 5 year migration scenario, but this time looks at **what might happen to the forecast population, and the associated housing requirement, if the annual net change in jobs was to follow the latest FTE job forecasts** (produced by Experian and provided by Cumbria County Council's Economic Development Department - February 2011).

It is important to note that the employment led scenario assumes that economic activity levels will remain stable into the future. Therefore, the additional labour needed to support any employment growth must be derived from population growth rather than increased

economic activity among the existing population. However, there are a number of factors which may influence economic activity in the next decade, for example: changes to the benefit system; increased retirement age; and new employment opportunities. Should economic activity levels increase as a result of these factors, the dwelling requirement associated with employment growth would reduce.

Furthermore, it is vital to understand that the employment led scenario assumes that the additional workforce will become available to fill new jobs following employment growth. However, in reality, it is possible that the additional workforce may not become available to fill new jobs and so the availability of labour may act as a constraint on employment growth and therefore the number of dwellings that may be required.

<b>Cumbria</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>
Population	495,043	496,534	517,235	539,212
Households	221,110	227,322	243,002	259,616
Dwellings	238,542	245,283	262,219	280,195
5 Year Migration		5258.53	24550.8	25265.8
5 Year Net Change		1491	20701	21977
Annualised Migration		1052	4910	5053
Annualised Change		298	4140	4395
Annualised Dwelling Requirement		1348	3387	3595
Average Annualised Dwelling Requirement	2777			
<b>Source: Labour Force Led - Experian Jobs Forecast (February 2011) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, February 2011</b>				

#### Population Forecast by Age:

<b>Cumbria</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>
0-14	78,382	73,805	74,490	75,349
15-29	80,376	83,272	89,511	87,670
30-44	92,413	79,509	76,258	90,654
45-59	107,301	111,229	112,712	101,817
60-74	89,908	96,421	103,318	108,172
75-84	33,691	37,233	42,459	52,113
85+	12,972	15,064	18,488	23,437
Total	495,043	496,534	517,235	539,212
<b>Source: Labour Force Led - Experian Jobs Forecast (February 2011) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, February 2011</b>				

### Household Forecast by Household Type:

<b>Cumbria</b>				
<b>Household Types</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>
Married couple	102,567	99,733	100,471	101,859
Cohabiting couple	20,434	22,689	26,612	30,353
Lone parent	13,399	12,818	12,911	13,241
Other multi-person	11,695	12,322	13,483	14,392
One person	73,016	79,760	89,526	99,771
<b>All Households</b>	<b>221,110</b>	<b>227,322</b>	<b>243,002</b>	<b>259,616</b>
Private household population	485,804	486,954	507,129	528,224
Average household size	2.20	2.14	2.09	2.03

**Source: Labour Force Led - Experian Jobs Forecast (February 2011) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, February 2011**

### Household Forecast by Tenure:

<b>Cumbria</b>				
<b>Tenure</b>	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>
Owner Occupiers	150,912	154,601	164,718	175,448
Social Renters	39,619	41,133	44,365	47,823
Private Renters	30,580	31,588	33,919	36,345
All Tenures	221,110	227,322	243,002	259,616

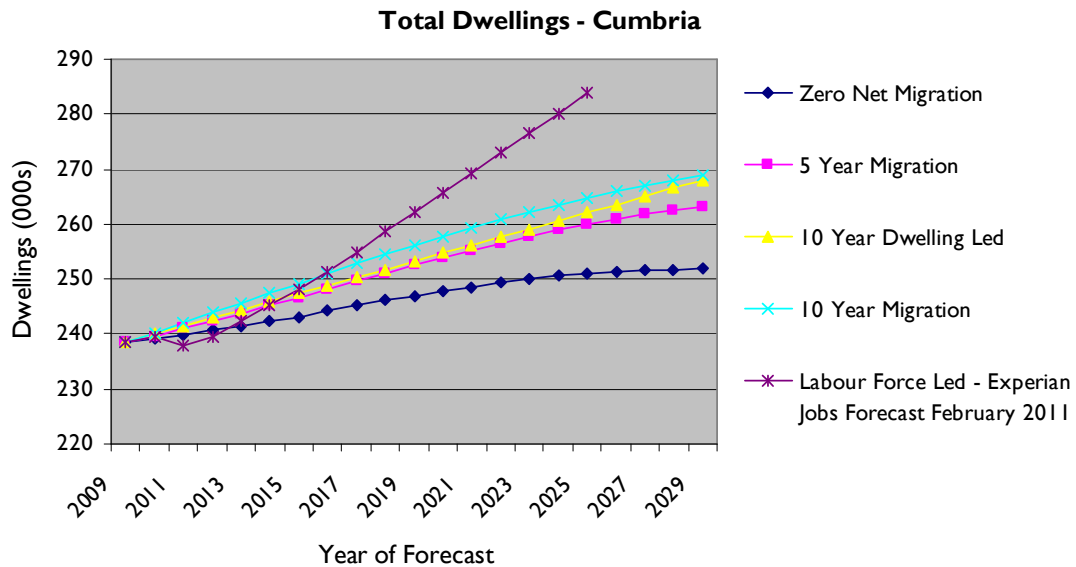
**Source: Labour Force Led - Experian Jobs Forecast (February 2011) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, February 2011**

<b>Cumbria - Annualised Household Change</b>				
	<b>2009</b>	<b>2014</b>	<b>2019</b>	<b>2024</b>
Owner Occupiers		738	2,023	2,146
Social Renters		303	646	692
Private Renters		202	466	485
All Tenures		1,242	3,136	3,323

**Source: Labour Force Led - Experian Jobs Forecast (February 2011) Scenario, POPGROUP Forecasting Software, Cumbria Intelligence Observatory, February 2011**

## Comparing 2010 POPGROUP Scenarios: Dwelling Requirements

As we have seen in the previous sections, the forecast population and associated dwelling requirements vary significantly depending upon the assumptions we make about the future. The graph below compares the number of dwellings required to support the populations forecast by each of the five scenarios discussed above.



As stated earlier, like all population forecasting outputs, POPGROUP outputs are simply a representation of what might happen in the future if various trends are played out as we expect. It is especially important to note that POPGROUP Scenarios can only be driven by one factor at a time (population, dwellings or the labour force). However, in reality, we know that these factors are inter-linked and dependent upon one and other, so it is very unlikely that one factor will exclusively drive change in an area.

As a result, these projections cannot be relied upon as fact, and actual results may end up being significantly different to what the scenarios suggest will happen. This should be kept in mind at all times when using the outputs, and caution should be used when incorporating the outputs into any decision making processes. Instead figures should be viewed as a guide to indicate the potential parameters for housing demand, should various scenarios arise.

For more information about POPGROUP Forecasting please contact Cumbria Intelligence Observatory: [info@cumbriaobservatory.org.uk](mailto:info@cumbriaobservatory.org.uk)