# Housing Requirements Study

**Brighton & Hove City Council**

Final Report

October 2012 - Update

**Prepared by**

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# 1 INTRODUCTION

## Context and Purpose

1.1 GL Hearn and Justin Gardner Consulting (JGC) prepared a Housing Requirements Study for Brighton and Hove City Council in Summer 2011. The Study was published in June 2011. It analysed population trends and set out a number of projections for population and housing requirements for the City between 2010 and 2030. The Study was intended to inform and support the development of the Brighton & Hove City Plan (Part I) and forms parts of the Plan's evidence base.

1.2 Subsequent to the preparation of the main Housing Requirements Study in Summer 2011, additional modelling was undertaken in March 2012 to consider the demographic implications of the proposed housing trajectory being considered by the Council.

1.3 Since December 2011 the following further information has been published:

- Publication by the Office for National Statistics of 2010-based Sub-National Population Projections in March 2012 and 2011-based interim projections covering 2011 to 2021 (published in September 2012);
- Initial release of 2011 Census data in July 2012, providing new information on the City's population by age and sex and the number of households – this was subsequently updated in September 2012.

1.4 Brighton and Hove City Council has commissioned this update of the Housing Requirements Study modelling to take into account this new information, to ensure that the Council's planning policies are based on the most up-to-date information.

1.5 This update report is intended to represent an appendix to, and be read alongside, the 2011 Housing Requirements Study. It provides revised projections of housing requirements based on past demographic trends, an understanding of demographic components of change, and consideration of how economic growth could influence housing requirements. The economic-led scenarios are based on new, 2012 econometric forecasts[1].

1.6 The report also considers the implications of the potential supply of land for residential development in the City, providing revised modelling of the 'housing trajectory' scenario presented in the March 2012 paper. The assumptions regarding housing delivery numbers and phasing are consistent to

[1] The economic forecasts used are consistent with those used in the 2012 Coastal West Sussex SHMA Update

this. However the revised modelling takes account of other more recent demographic information, specifically the 2011 Census data.

1.7 It should be noted that the report represents a technical study which is intended to be brought together with the views of the local community, other technical evidence and engagement with a range of stakeholders in informing policies for future housing provision. In Brighton and Hove, the availability of land for residential development and the recovery of the residential development market are particular drivers or what level of housing provision can be supported over the period to 2030.

## Report Structure

1.8 The report is structured as follows:

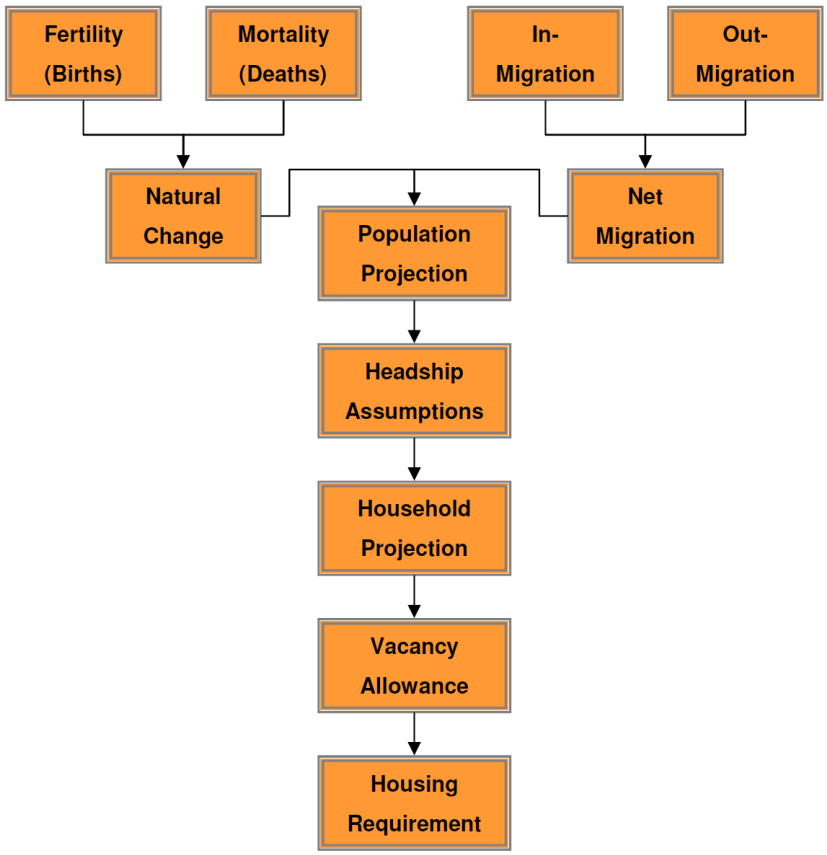
- **Section 2: Projections Methodology and Assumptions** – this section provides an overview of the projections included within the previous 2011 Study and reviews the baseline population and assumptions about future population changes in light of the new information;
- **Section 3: Revised Projection Results** – outlines the result of the revised projections, providing updated projections for growth in the City's population and associated household growth and housing requirements. The new projections are compared against those prepared in 2011;
- **Section 4: Conclusions** – draws the analysis together to review the conclusions drawn in the 2011 Study in light of the revised modelling.

# 2 PROJECTION METHODOLOGY & ASSUMPTIONS

## Introduction

2.1 The methodology used to determine population growth and hence housing requirements is based on fairly standard population projection methodology and is consistent with the approach taken in the previous set of projections run for the City Council. Essentially the method establishes the current population and how will this change in the period from 2010 to 2030. This requires us to work out how likely it is that women will give birth (the fertility rate); how likely it is that people will die (the death rate) and how likely it is that people will move into or out of the City (migration). These are the principal components of population change and are used to construct our principal trend-based population projections. Figure 2.1 below shows the key stages of the projection analysis through to the assessment of housing requirements.

**Figure 2.1 Overview of Methodology**




2.2 The projections cover the period from 2010 to 2030, however it must be recognised that there is already some data available for 2011 and 2012. We have therefore done some 'back' projecting to

provide fixed figures for all of 2010, 2011 and 2012.

2.3 Firstly ONS has published mid-year population data for 2011 and this is taken to reflect the population profile at this time. Within these mid-year estimates figures are published for natural change and net migration from 2010 to 2011. The data for natural change as published at the time of writing was clearly incorrect (figures for both births and deaths were unfeasibly low) whilst the migration data may well have been correct in the context of previously observed trends (the data suggested a net out-migration of 800 people). When this is added to a plausible level of natural change (of about 1,800) the data would suggest population growth of about 1,000 people. We have therefore modelled the population in 2010 to be 1,000 less than in 2011. The profile of the population has been established by using 2010-based SNPP about the proportionate changes in age groups moving from 2010 to 2011 – with the overall change fixed to be 1,000.

2.4 In moving from 2011 to 2012 we have data from the Council about the number of additional homes provided in that year which in turn may link to household growth. We have therefore adjusted the overall level of migration in 2011-12 to match the expected increase in households in that year. We also have data on completions for 2010-11 which allows us to estimate household change in that year. To reflect this in the modelling we have adjusted the headship rate for 2010 so that housing growth 2010-11 matches expected growth based on housing delivery.

2.5 In projecting forward therefore our modelling only varies for the period from 2012 to 2030 with all projections showing the same figures for the 2010 to 2012 period. For example, the projection (discussed below) looking at zero population growth will only be zero post-2012 with population growth from 2010-12 being included as it is considered to have already arisen.

## Projections Run

2.6 As part of this assessment we have run nine projections to assess how the population might change under different assumptions. For each we also consider what level of growth in labour supply or employment this might support. The projections used largely match the set run in the previous assessment of housing requirements in the City[2]. The nine projections run are listed below with a brief description of each following:

- PROJ 1 (linked to ONS 2010- and 2011-based SNPP)
- PROJ 2 (10-year migration trends)
- PROJ 3 (5-year migration trends)

[2] GL Hearn (June 2011) *Housing Requirements Study*

- PROJ 4 (zero net migration)
- PROJ 5 (zero employment growth)
- PROJ 6 (zero population growth)
- PROJ 7 (Forecast Employment Growth)
- PROJ 8 (Labour Demand (taking account of commuting))
- PROJ 9 (Housing Trajectory)

***PROJ 1 (linked to ONS 2010- and 2011-based SNPP)***

2.7 Our first projection uses information in the ONS 2010- and 2011-based Sub-National Population Projections (SNPP) updated using 2011 Census data (which in turn has been 'back' projected to derive an estimated population profile for mid-2010). The projection has been run for the 20-year period to 2030.

2.8 The last full set of SNPP published by ONS were 2010-based figures. These have subsequently been updated by 2011-based 'interim' projections which look at the ten year period to 2021. These interim projections use the same assumptions around fertility, mortality and migration profiles as 2010-based figures. However the 2011-based figures have updated estimates of future levels of migration (both in- and out-migration and by type of migration (e.g. international vs. internal).

2.9 Our projections therefore use the same assumptions as in the ONS 2010-based SNPP with regards to fertility, mortality and migration rates but with some adjustments to overall levels of migration on the basis of the 2011-based figures (the assumptions around fertility, mortality and migration rates from the 2010-based SNPP are also used in all other projections within this report).

2.10 The table below shows the average level of migration assumed in each of the 2010- and 2011-based projections for the period from 2011 to 2021 (the maximum period used in the 2011-based projections). We have used averages for the purpose of comparison although ONS projections do build in some small year-on-year differences.

2.11 The data shows that overall levels of migration (including net migration) are not projected to differ dramatically between the two projection runs – both averaging a small level of net out-migration. However, when we look at the types of migration we see some notable differences. In particular the 2011-based projections show a much higher level of internal out-migration and also a higher level of international in-migration. The potential impact of this on future population change can be quite dramatic given that international migrants tend to be more likely to be in age bands which are economically active which will impact on both the population structure and the number of people in employment.

**Figure 2.2 Comparing migrations in 2010- and 2011-based SNPP (average figures 2011-2021)**

| | 2010-based SNPP | 2011-based interim SNPP |
|---|---|---|
| Internal in-migration | 17,984 | 18,410 |
| Internal out-migration | 18,462 | 19,720 |
| Internal net migration | -479 | -1,310 |
| Cross-border in-migration | 619 | 600 |
| Cross-border out-migration | 609 | 600 |
| Cross-border net migration | 10 | 0 |
| International in-migration | 4,919 | 4,900 |
| International out-migration | 4,570 | 3,620 |
| International net migration | 349 | 1,280 |
| All in-migration | 23,521 | 23,910 |
| All out-migration | 23,641 | 23,940 |
| **All net migration** | **-120** | **-30** |

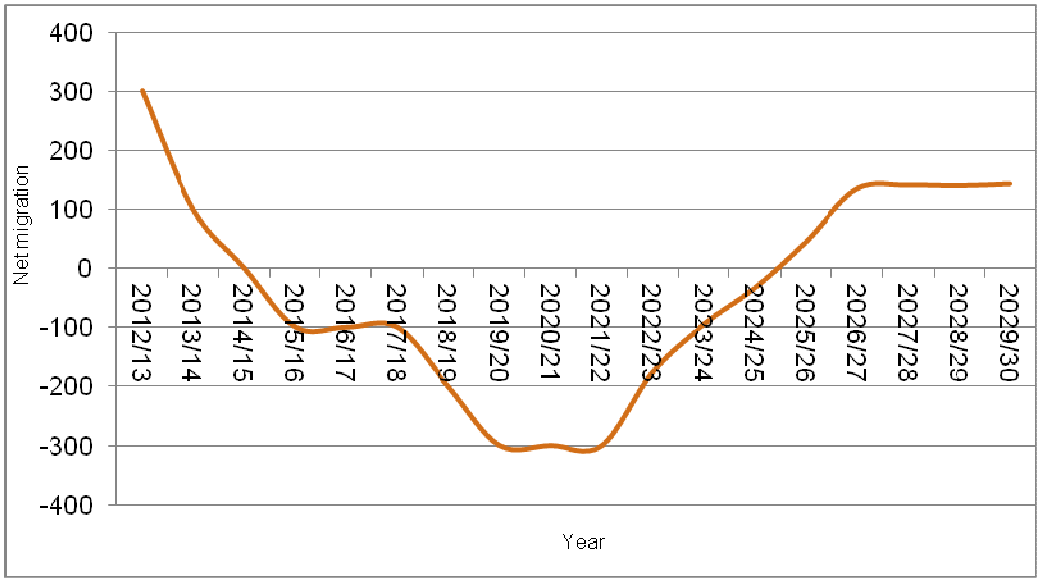
*Source*: 2010- and 2011-based SNPP

2.12 In taking this data forward in to the projection modelling we have assumed the migration patterns from the 2011-based SNPP for the period from 2011 to 2021. Beyond 2021 we have used 2010-based SNPP data but adjusted this to take account of the differences as shown in the table above. In keeping with the methodology used by ONS figures for cross-border and international migration are held constant with internal figures changing slightly on the basis of the projected change in the 2010-based data (but from the adjusted baseline position for 2021 shown in 2011-based projections.

2.13 The figure below shows the levels of net migration assumed by our projections from 2012/13 to 2029/30 – this figures start from 2012/13 as we have fixed the figures based on housing delivery up until 2012 (as discussed above). The projections start in 2012/13 with a net migration figure of around 300. This is expected to decrease over time to reach a net out-migration of around 300 people in 2019 - 2022. This figure is then expected to rise reaching net in-migration of around 150 people per annum from 2027/28 onwards. The figures up until 2020/21 do not show a very 'smooth' distribution – this is because at the time of writing only data rounded to the nearest hundred was available from ONS. The fact that data is rounded will have a negligible impact on projections moving forward (particularly over the longer-term to 2030)

2.14 For the projection period studied as a whole, the average level of net migration is an out-migration of 39 people per annum.

**Figure 2.3 ONS migration assumption 2012/13 to 2029/30**




*Source*: ONS 2010- and 2011-based subnational population projections

***PROJ 2 (10-year migration trends)***
***PROJ 3 (5-year migration trends)***

2.15 Our second two projections look at recorded trends in migration over the past ten (and five) years. Figure 2.4 below shows estimated net migration into the City from 2002/2 to 2010/11. The figures have been taken from ONS mid-year population estimates with data for 2005/6 to 2009/10 being adjusted to take account of improvements made by ONS in recording migration data.

2.16 The data shows that the figures can be quite variable over time, with some of the lower figures being at the start of the period studied. In developing our two projections we have simply taken an overall average and projected this forward – over the last ten years (2001-11) the average level of net migration has been an out-migration of 60 people with a higher figure (of 594) if we look at 5-year trends (2006-11).

2.17 For the purposes of the projections we have assumed a constant level of net migration throughout the period. Given variability in the migration data it seems reasonable to assume a constant level for the purposes of projection modelling. This approach of projecting constant migration levels is consistent with the analysis carried out in the previous projections run for the Council which informed the June 2011 Study.

**Figure 2.4 Past trends in net in-migration**

| Year | Net migration |
|---|---|
| 2001/2 | -1,700 |
| 2002/3 | -1,500 |
| 2003/4 | -1,800 |
| 2004/5 | 1,000 |
| 2005/6 | 430 |
| 2006/7 | 83 |
| 2007/8 | 1,253 |
| 2008/9 | 1,076 |
| 2009/10 | 1,358 |
| 2010/11 | -800 |
| Average (last ten years) | -60 |
| **Average (last five years)** | **594** |

*Source*: ONS

***PROJ 4 (zero net migration)***
***PROJ 5 (zero employment growth)***
***PROJ 6 (zero population growth)***

2.18 The next three projections might be called 'component' projections and look at the impact on population, employment and housing requirements of holding certain aspects of the projection constant over time.

2.19 The first projection looks at housing requirements if there were to be no net migration into the City for the next 20-years. Whilst net migration is held at zero this projection does allow for in- and out-migration, so there will be changes in the age structure due to migration trends as well as those created by natural change (i.e. births minus deaths).

2.20 The second 'component' projection looks at what level of housing growth would be required to achieve stable employment level, but with no employment growth. Within this projection (and indeed all other projections) we have also looked at the impact of the economic downturn on the number of people in employment and considered the scope for some local residents to return to work if additional jobs were available. We have also considered the likely impact of changes in pensionable age throughout the projection period as and when these become relevant.

2.21 The third of these projections studies the implications for housing requirements and employment growth of the population remaining at current levels throughout the projection period. As with other projections the modelling does allow for in- and out-migration and also changes in the age structure of the population. This is used to assess what level of housing would be required to maintain the current population.

2.22 It should be noted that for all of the component projections are run from 2010 to 2030 with data for 2010-12 being fixed by reference to ONS mid-year population estimate data (for 2011), estimates of demographic change for the period 2010-11 and further estimates of change from 2011 to 2012 linked to housing delivery. Hence the 'component' is only fixed for 18 years of the 20-year period studied. This can most clearly be seen in the case of zero population growth and zero employment growth where figures over 20-years do not sum to zero due to growth in the first two years of the study period (2010-12).

***PROJ 7 (projected employment growth)***
***PROJ 8 (projected labour demand)***

2.23 The next set of projections are based on studying what level of housing provision would be necessary to support different levels of employment growth. We have developed two economic-led projections:

- PROJ 7: Employment Growth Projection – this projection assumes growth in the labour force matches forecast growth in employment in Brighton & Hove based on Experian Summer 2012 projections;
- PROJ 8: Labour Dmeand Projection – this projection takes account of forecast employment growth in Brighton and Hove and Coastal West Sussex based on Experian Summer 2012 projections, as well as other parts of the South East and London[3]. It assumes that the proportion of the workforce in these areas drawn from Brighton and Hove is consistent to that recorded in the 2001 Census. This approach is used to derive projections of labour supply growth in Brighton and Hove.

2.24 Figure 2.5 below shows forecast growth in the (residence-based) employment in Brighton and Hove in each of these projections.

**Figure 2.5 Phasing of assumptions for employment growth 2010-2030**

| Projection period | PROJ 7 (projected employment growth) | PROJ 8 (projected labour demand) |
|---|---|---|
| **2010-2015** | 3,176 | 3,080 |
| **2015-2020** | 6,162 | 6,330 |
| **2020-2025** | 3,828 | 3,330 |
| **2025-2030** | 3,801 | 3,010 |
| **Total** | **16,967** | **15,750** |

[3] Using Cambridge Econometrics 2010 forecasts for local authorities elsewhere in the South East and GLA 2009 forecasts for London

2.25 We would advise that the employment-based projections are treated with some caution, not least because of the dynamic nature of labour markets which cross administrative boundaries, the multiple assumptions which are necessary to inform the modelling and particularly the accuracy of employment forecasts, particularly at the current time. The recent double-dip recession and uncertainty regarding the nature and pace of recovery effect the error margin associated with any long-term forecasting.

***PROJ 9 (housing trajectory)***

2.26 The final projection run in this report is based on modelling likely population change associated with the level of housing delivery which could be brought forward over the plan period based on the results of the 2012 SHLAA Update[4].

2.27 The Draft Brighton and Hove City Plan (Part I), published in May 2012, sets a target for delivery of 11,300 homes over the 2010-30 plan period.

2.28 The assumptions on housing supply are derived from the Council's 2012 Draft SHLAA Update, but also include an allowance for development of small, unidentified sites (< 6 dwellings) throughout the plan period. An allowance for development of small unidentified sites has therefore been included (at a rate of 130 units per annum) from 2014 onwards in consultation with BHCC.

2.29 The resultant assumptions on housing supply are therefore:

**Figure 2.6 Housing Supply Assumptions**

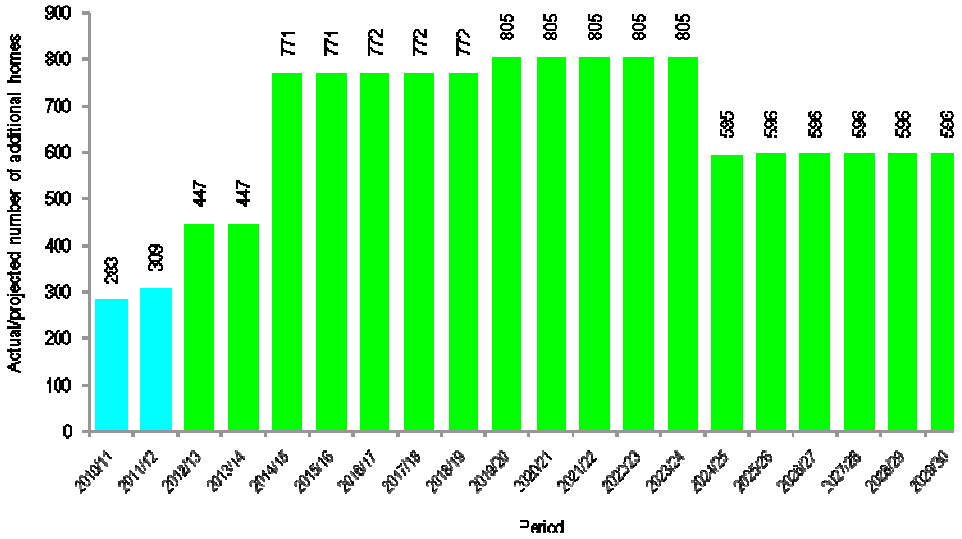
| | 2010-14 | 2014-19 | 2019-24 | 2024-30 | Total |
|---|---|---|---|---|---|
| **Identified Supply in Development Areas (6+ Units)** | 217 | 2424 | 2197 | 932 | 5770 |
| **Other Identified Supply not in DAs (6+ Units)** | 621 | 784 | 728 | 1413 | 3546 |
| **Small Site Identified Supply (< 6 Units)** | 648 | 0 | 0 | 0 | 648 |
| **Broad Locations (Estates & Sh Harbour)** | 0 | 0 | 450 | 450 | 900 |
| **Small Unidentified Site (Windfall) Allowance** | 0 | 650 | 650 | 780 | 2080 |
| **Total Supply** | 1486 | 3858 | 4025 | 3575 | 12944 |

*Source*: Brighton & Hove Council

2.30 This has been used to calculate a housing trajectory, which is shown in Figure 2.7 below.

[4] Draft as at October 2012

**Figure 2.7 Housing Supply Assumptions**




2.31 As with other projections run the figures for the first two years (2010-2012) have been fixed by reference to estimated population change in the 12-month period. This has been based on housing completions of 283 homes in the year 2010/11 and a further 309 homes for 2011/12.

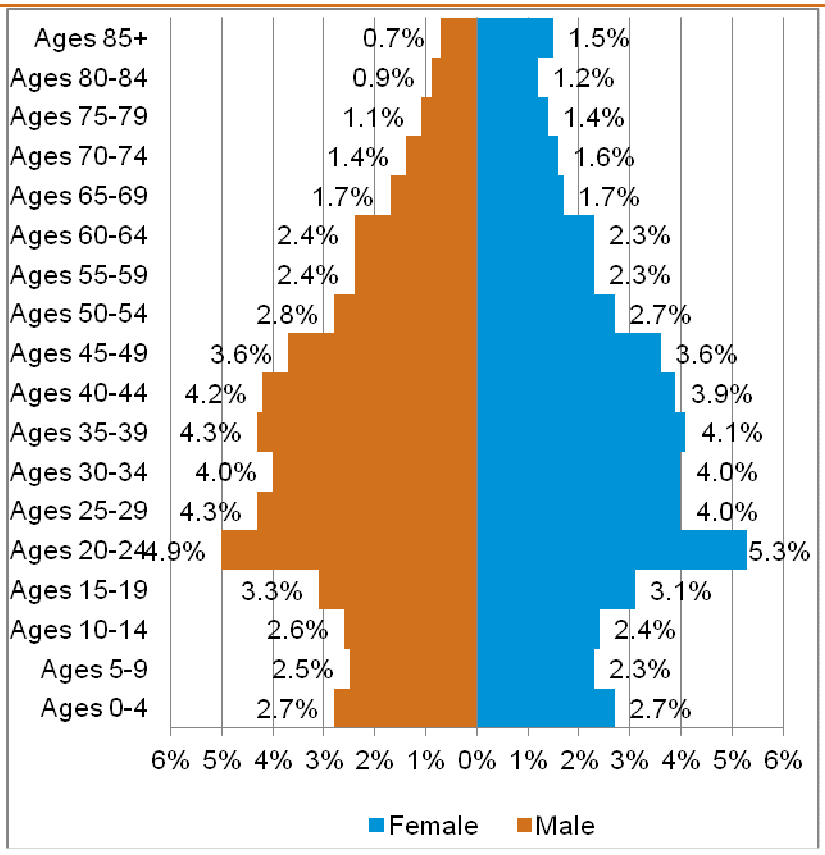
**Baseline Population**

2.32 The baseline for our projections is taken to be 2010 with the projection run for each year over the period up to 2030. The estimated population profile as of 2010 has taken into account data released from the 2011 Census in September 2012. The base population in 2010 has been 'back' projected on the basis of likely population change given information by ONS about the components of population change between 2010 and 2011.

2.33 The overall population in 2010 is estimated to be 271,952 with slightly more females than males. The baseline population figure (of 271,952) is notably higher than the figure (for mid-2010) estimated in the 2010-based SNPP (256,062) and also higher than was assumed in the last set of projections run for the City Council (257,988).

**Figure 2.8 Population of Brighton & Hove (5 year age bands) – 2010**

| Age group | Male | Female |
|---|---|---|
| Ages 0-4 | 7,549 | 7,351 |
| Ages 5-9 | 6,733 | 6,321 |
| Ages 10-14 | 7,045 | 6,592 |
| Ages 15-19 | 8,544 | 8,338 |
| Ages 20-24 | 13,590 | 14,373 |
| Ages 25-29 | 11,706 | 10,974 |
| Ages 30-34 | 10,914 | 10,744 |
| Ages 35-39 | 11,574 | 11,034 |
| Ages 40-44 | 11,475 | 10,715 |
| Ages 45-49 | 9,964 | 9,924 |
| Ages 50-54 | 7,595 | 7,402 |
| Ages 55-59 | 6,400 | 6,252 |
| Ages 60-64 | 6,546 | 6,285 |
| Ages 65-69 | 4,730 | 4,677 |
| Ages 70-74 | 3,897 | 4,271 |
| Ages 75-79 | 2,978 | 3,765 |
| Ages 80-84 | 2,322 | 3,360 |
| Ages 85+ | 1,878 | 4,134 |
| All Ages | 135,441 | 136,511 |




Source: Derived from ONS data

2.34 As well as there being a notable difference in baseline population estimated in 2010 in this assessment when compared with the previous projections run there are also some differences in the assumed age structure. This is shown in Figure 2.9 below. The table shows that the main difference is in relation to the 15-19 age group with the current population being estimated to be notably higher than previously thought (26% higher for this age group). The population aged 30-34 and 10-14 are also shown to be notably higher than previously estimated. Only a small number of age groups show lower population levels in this assessment when compared with previous projections and the main ones can be seen to be people aged 20 to 29).

**Figure 2.9 Difference in baseline population age structure**

| Age group | Previous projections | Current estimate | Difference | % difference |
|---|---|---|---|---|
| Ages 0-4 | 15,315 | 14,900 | -415 | -2.7% |
| Ages 5-9 | 11,871 | 13,054 | 1,183 | 10.0% |
| Ages 10-14 | 11,707 | 13,637 | 1,930 | 16.5% |
| Ages 15-19 | 13,360 | 16,881 | 3,521 | 26.4% |
| Ages 20-24 | 29,381 | 27,964 | -1,417 | -4.8% |
| Ages 25-29 | 24,253 | 22,680 | -1,573 | -6.5% |
| Ages 30-34 | 17,994 | 21,659 | 3,665 | 20.4% |
| Ages 35-39 | 21,653 | 22,608 | 955 | 4.4% |
| Ages 40-44 | 21,152 | 22,190 | 1,038 | 4.9% |
| Ages 45-49 | 18,039 | 19,888 | 1,849 | 10.2% |
| Ages 50-54 | 14,038 | 14,997 | 959 | 6.8% |
| Ages 55-59 | 11,839 | 12,651 | 812 | 6.9% |
| Ages 60-64 | 11,613 | 12,831 | 1,218 | 10.5% |
| Ages 65-69 | 8,587 | 9,407 | 820 | 9.6% |
| Ages 70-74 | 7,943 | 8,168 | 225 | 2.8% |
| Ages 75-79 | 6,650 | 6,743 | 93 | 1.4% |
| Ages 80-84 | 5,753 | 5,682 | -71 | -1.2% |
| Ages 85+ | 6,839 | 6,011 | -828 | -12.1% |
| All Ages | 257,988 | 271,952 | 13,964 | 5.4% |

## Fertility and Mortality Rate Assumptions

2.35 For modelling of fertility we have used the rates contained within the ONS 2010-based population projections. For the period from 2011 to 2030 the total fertility rate (the expected average number of live births per woman throughout their childbearing lifespan) has been calculated to be 1.63 in 2011 reducing to 1.52 in 2030. These figures compare with the figure of 1.58 which was used throughout the projection period in the previous run of projections. Over the full 20-year projection period these figures are therefore fairly consistent. In any case they will make little difference to housing requirements over the period to 2030 as very few of those born in the projection period would also be expected to form a household during that time.

2.36 We also interrogated the ONS 2010-based projections with regard to death rates which suggested that life expectancy is expected to increase over time for both males and females. It is not possible to provide exact life expectancy figures from the 2010-based SNPP as this to some degree will depend on the assumptions made about the death rates for age groups beyond 90 (the ONS data stops at a figure for 90+). However in modelling life expectancy on the most similar basis as possible we suggest that the figures will see an improvement from 77.8 to 81.7 for males from 2011

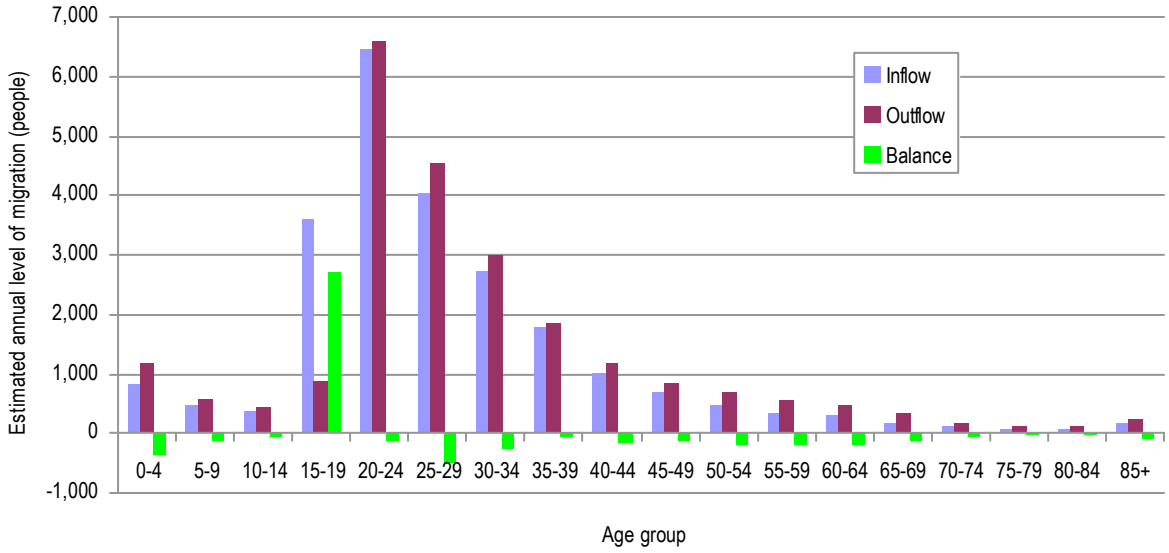
to 2030 with figures of 82.9 to 86.1 expected for females. These figures are not dissimilar to those in the previous projections run which projected life expectancy to rise from 77.5 to 81.9 for males and 83.0 to 86.8 in the case of females.

## Migration Assumptions

2.37 For the purposes of understanding the profile of migrants we have again drawn on the ONS 2010-based Sub-National Population Projections. Over the period from 2011 to 2030 the ONS figures show an average annual level of net out migration of 31 people made up of in-migration of 23,788 and out-migration of 23,819. The data clearly shows that the most important age groups are from 15 to 34. The data is interesting in that it shows net in-migration of those aged 15-19 but net out-migration for all other age groups. Overall migration to and from the City is clearly concentrated amongst those aged between 15-39.

2.38 As noted above the more recent 2011-based SNPP suggests some change in migration patterns with a greater level of net international in-migration and also more internal out-migration. We do not have a migration profile directly associated with the 2011-based SNPP (although it has been based on 2010-based figures). Hence the pattern below should be considered a indicative as there will be difference in the modelled outputs to take account of different profiles for different types of migrant.

**Figure 2.10 Estimated annual level of net migration by five-year age band (2011-2030)**




*Source*: Derived from ONS 2010-based Population Projections

2.39 We can also compare the migration assumptions used in these projections with the last projection run for the Council. In the last projections the figures were derived from the 2008-based SNPP and were adjusted to model a range of scenarios (as has been done in this report). Over the period from

2011 to 2030 the 2008-based SNPP suggested an average level of net out-migration of 33 people which is very close to the figure (of 31) shown in the 2010-based projections and so a direct comparison is possible (the components of migration (i.e. international, internal and cross-border) were also broadly similar in the 2008-based and 2010-based projections).

2.40 The data (shown in the table below) shows that the differences between the two sources of migration information are not that great – compared with previous figures the key difference is for those aged 20 to 24 with the 2008-based projections suggesting a net in-migration of 263 people per annum and the 2010-based projections a net out-migration of 137. In the context of levels of gross in- and out-migration in the region of 24,000 per annum these differences are fairly minor and unlikely to have much impact on the projections moving forward.

**Figure 2.11 Difference in levels of net in-migration (from 2008-based and 2010-based SNPP) – 2011 to 2030**

| Age group | Previous projections | Current estimate | Difference |
|---|---|---|---|
| Ages 0-4 | -399 | -373 | 26 |
| Ages 5-9 | -163 | -114 | 49 |
| Ages 10-14 | -68 | -51 | 17 |
| Ages 15-19 | 2,526 | 2,708 | 182 |
| Ages 20-24 | 263 | -137 | -400 |
| Ages 25-29 | -427 | -503 | -76 |
| Ages 30-34 | -158 | -267 | -109 |
| Ages 35-39 | -97 | -67 | 30 |
| Ages 40-44 | -269 | -164 | 105 |
| Ages 45-49 | -193 | -139 | 54 |
| Ages 50-54 | -259 | -205 | 53 |
| Ages 55-59 | -220 | -180 | 39 |
| Ages 60-64 | -222 | -183 | 40 |
| Ages 65-69 | -145 | -142 | 3 |
| Ages 70-74 | -92 | -70 | 22 |
| Ages 75-79 | -27 | -26 | 1 |
| Ages 80-84 | -13 | -30 | -17 |
| Ages 85+ | -72 | -89 | -17 |
| All Ages | -33 | -31 | 2 |

*Source*: Derived from ONS 2008- and 2010-based SNPP

2.41 When projecting migration patterns we have used the migration data and adjusted levels of in-migration to match the requirements of our scenario (e.g. when testing what level of migration is required to support a workforce of a particular size). This approach has consistently been adopted across all analysis and is consistent with the approach used in the previous projections. The

adjustments to migration are in addition to changes made to reflect the different profile of migrants highlighted by the 2011-based SNPP.

## Economic (Employment) Assumptions

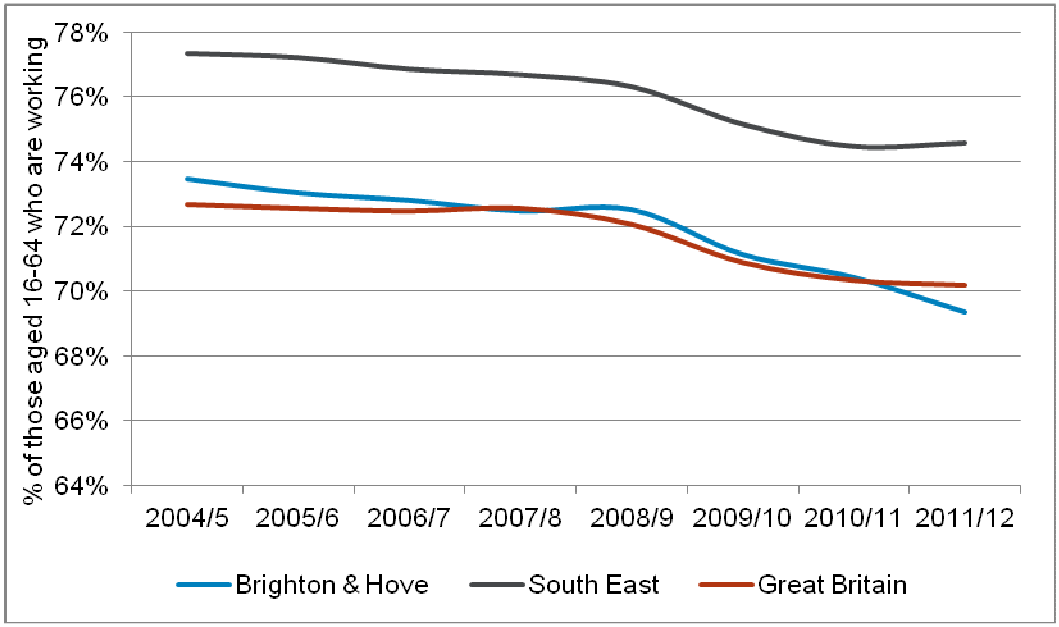
2.42 With the change in demographic structure will come changes in the number of people who are working (as the population of people of working age changes). The next stage of the projection process was therefore to make estimates about how employment levels would change under each of our main projections and also to consider the demographic implications of different levels of employment growth. The process is set out in Figure 2.12 below.

**Figure 2.12 Overview of Economic-Driven Projection Methodology**


2.43 The first stage of the process was to establish working patterns in the City. Figure 2.12 shows data on the proportion of people living in the City who were in employment (based on the proportion of the population aged 16-64 who are working). This latter data has also been provided for the South East and Great Britain.

2.44 The data shows that overall the proportion of people working has declined over time from an average of about 73% pre-economic downturn (up until about 2008) to an average of closer to 69%-70%. This trend is consistent with that seen in the South East and for the whole of Great Britain. Throughout the period studied the employment rate in Brighton & Hove has been consistently below the regional average but closely tracking national data.

**Figure 2.13 Proportion of Population Working**




*Source*: Annual Population Survey

2.45 Using the above data to provide us with an overall picture of employment patterns we also drew on 2001 Census data and information from the Annual Population Survey to inform the distribution of workers by age and sex. In projecting forward we have used overall employment rates post-2008 (i.e. since the economic downturn) as a start point and assumed over the life of the projection that they will return to pre-2008 levels – this approach is again consistent with previous projections.

2.46 Our projections thus assume that employment rates will recover to around the average for pre-2008 figures – for modelling purposes we have assumed that this recovery will happen in the period from 2011 to 2021 with rates levelling off for the remaining nine years of the projection (i.e. to 2030). Adjustments over time have also been made to take account of changes in pensionable age.

2.47 Figure 2.14 shows the age specific employment rates used for modelling in 2010 and 2030. From the population modelling exercise it was estimated that in mid-2010 there were around 138,616 people in employment with an employment rate of 70.6%. As a result of the modelled improvement in rates, along with changes in pensionable age, this figure rises to 73.8% by 2021 before dropping down slightly (to 73.3% in 2030) due to the changing age structure in the City. These figures are very close to those assumed in the previous projections run which modelled rates to go from 70.3% to 73.8% from 2010 to 2030.

**Figure 2.14 Employment Rates by Age and Sex**

| Age group | Male | | Female | |
|---|---|---|---|---|
| | 2010 | 2030 | 2010 | 2030 |
| **Aged 16 to 19** | 40.2% | 42.5% | 51.9% | 52.5% |
| **Aged 20 to 24** | 52.1% | 55.1% | 58.5% | 59.2% |
| **Aged 25 to 29** | 81.3% | 86.1% | 75.1% | 76.0% |
| **Aged 30 to 34** | 85.3% | 90.3% | 72.5% | 73.3% |
| **Aged 35 to 39** | 84.7% | 89.7% | 72.5% | 73.3% |
| **Aged 40 to 44** | 84.0% | 88.9% | 74.4% | 75.3% |
| **Aged 45 to 49** | 82.5% | 87.3% | 78.2% | 79.1% |
| **Aged 50 to 54** | 81.0% | 85.7% | 83.0% | 84.0% |
| **Aged 55 to 59** | 72.5% | 76.7% | 68.2% | 69.0% |
| **Aged 60 to 64** | 52.9% | 56.0% | 36.6% | 51.8% |
| **Aged 65 to 69** | 26.0% | 30.2% | 25.1% | 30.5% |
| **Aged 70 to 74** | 13.6% | 14.4% | 10.5% | 10.6% |

*Source*: Annual Population Survey - adjusted using 2001 Census data

## Household (and Housing) Growth Projections

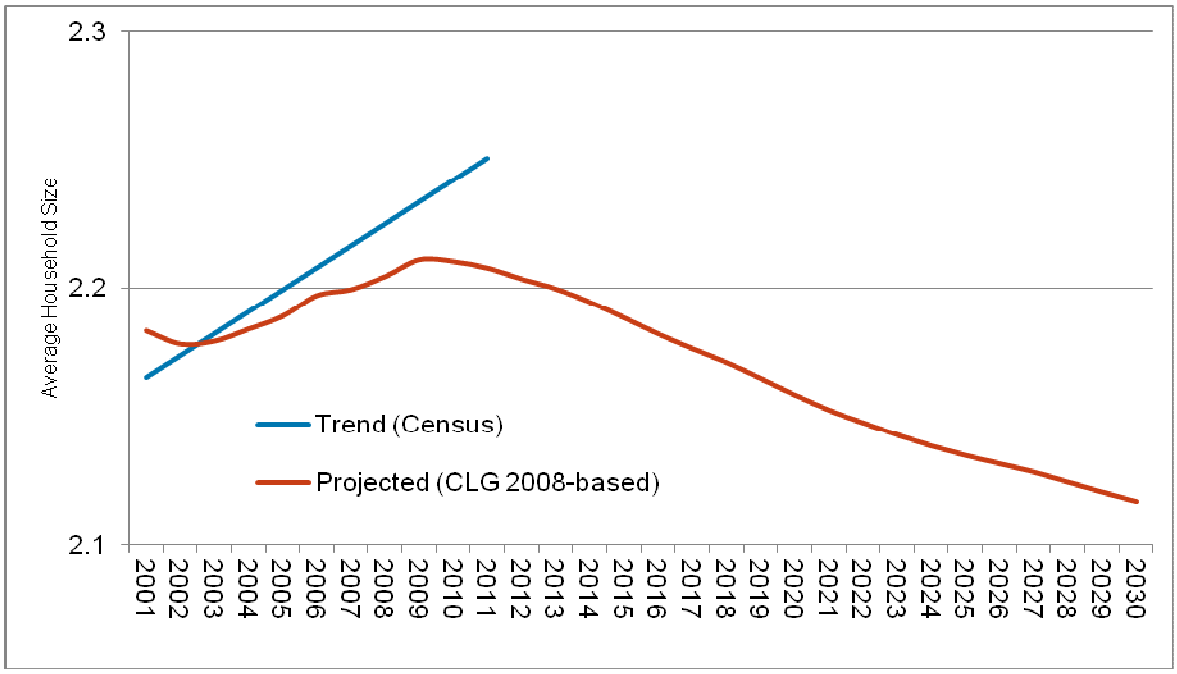
2.48 Having estimated the population size and the age/sex profile of the population the next step in the process is to convert this information into estimates of the number of households in the area. To do this we use the concept of headship rates. For the purposes of this analysis we have used information contained in the 2008-based CLG household projections about the relationship between the total population in an age group and the number of household reference persons (HRPs) in that age group.

2.49 Headship rates can be described in their most simple terms as the number of people who are counted as heads of households (or in this case the more widely used Household Reference Person (HRP)). We have however also taken account of recent trends in household formation which have generally seen less households being formed from the population than was projected in the CLG 2008-based household projections. This is clearly shown in Figure 2.15.

2.50 Figure 2.15 shows the estimated average household size in Brighton & Hove from 2001 to 2011 and how this was projected to change in the future under the 2008-based CLG projections. The data for 2001 and 2011 has been based on the relationship between total population numbers and the number of households shown in each of the relevant Census with a linear trend being plotted in the absence of any other up-to-date information. The data clearly shows that household sizes have moved significantly away from long-term trends with the City showing a larger average household size than was expected through the 2008-based CLG household projections in 2011. It would

therefore not be appropriate to use the CLG headship figures without some adjustment to bring them in line with up-to-date Census information.

**Figure 2.15 Past and projected trends in Average Household Size – Brighton & Hove**




*Source*: Derived from ONS and CLG data (including 2001 and 2011 Census)

2.51 Moving forward it is difficult to accurately predict what will happen with headship rates (and hence household sizes) although the data is clear that there has been a shift away from CLG projected trends. For the purposes of our analysis we have used headship rates that fit between recent trends and long-term projections (which show significantly decreasing household size). Hence we project decreasing household sizes in the future, but at a lesser rate than was projected by CLG in 2008. This approach is the same as we have recently used in developing projections in the Coastal West Sussex SHMA Update.

2.52 For the purposes of PROJ 1 (linked to the 2010- and 2011-based SNPP) we have assumed that average household sizes start at about 2.25 in 2010, rise very slightly in the short-term and then reduce down to 2.20 by 2030. Other projections will show slightly different changes in average household size depending on the population profile but have been calculated on the basis of a consistent set of headship rates.

2.53 Figure 2.16 below shows headship rates derived from our analysis for each of the key periods of 2010 and 2030. The data shows that whilst most headship rates remain at a fairly constant level over time there are a number of groups where notable changes are projected to occur (both in an upward and downward direction and particularly in relation to women).

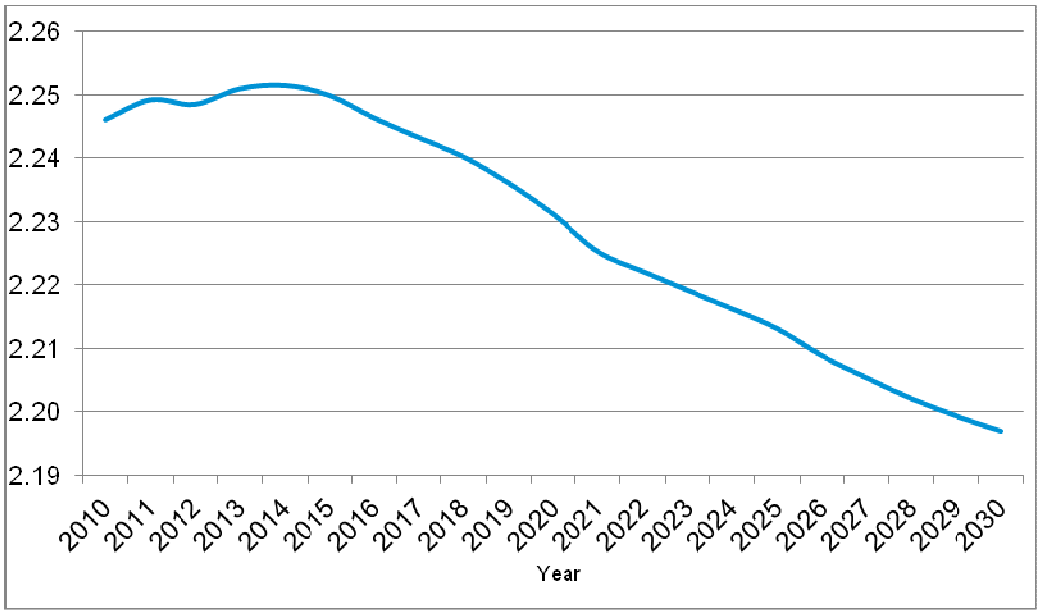
**Figure 2.16 Estimated Headship Rates by Age and Sex (2010 and 2030)**

| Age group | Male | | Female | |
|---|---|---|---|---|
| | 2010 | 2030 | 2010 | 2030 |
| **Ages 15-19** | 4.3% | 4.3% | 3.3% | 3.2% |
| **Ages 20-24** | 35.2% | 34.6% | 15.2% | 15.0% |
| **Ages 25-29** | 60.1% | 58.0% | 25.4% | 26.0% |
| **Ages 30-34** | 72.5% | 67.9% | 34.8% | 38.7% |
| **Ages 35-39** | 86.9% | 85.9% | 36.5% | 39.9% |
| **Ages 40-44** | 89.9% | 89.6% | 35.2% | 35.2% |
| **Ages 45-49** | 89.4% | 87.2% | 35.0% | 31.3% |
| **Ages 50-54** | 89.9% | 86.9% | 37.4% | 39.6% |
| **Ages 55-59** | 92.1% | 89.8% | 38.9% | 43.2% |
| **Ages 60-64** | 94.0% | 91.1% | 37.3% | 42.7% |
| **Ages 65-69** | 95.1% | 92.1% | 42.9% | 47.6% |
| **Ages 70-74** | 94.5% | 91.1% | 47.5% | 49.4% |
| **Ages 75-79** | 94.1% | 90.2% | 54.4% | 50.1% |
| **Ages 80-84** | 91.5% | 88.7% | 65.4% | 57.5% |
| **Ages 85+** | **82.6%** | **80.7%** | **62.5%** | **55.7%** |

*Source*: Derived from CLG 2008-based household projections

2.54 Figure 2.17 shows the average household size for each year of our projection. As can be seen the decrease is not linear with little projected change in average household sizes in the early part of the projection period.

**Figure 2.17 Average household sizes assumed for projections (2010-2030)**




*Source*: Derived from ONS and CLG data (including 2001 and 2011 Census)

2.55 When applying these headship rates to our population we derive an estimated number of households in 2011 of 121,355. This figure is consistent with the number of households shown in the 2011 Census. For 2010, the household figure derived is 121,079, which is higher than the assumed figure used in the previous projection run for the City (117,400).

2.56 When compared with the approach taken to headship rates in the previous set of projections run the methodology used here is slightly different. In previous projections we rebased the figures for 2011 to our estimate of the number of households and then assumed that headship rates would broadly follow the pattern implied by the 2008-based CLG household projections. With the release of 2011 Census data we are now better able to look at actual trends in changing headship rates and this has lead us to moderate the figures slightly.

2.57 In converting an estimated number of households into requirements for additional dwellings we have also factored in a small vacancy allowance. For the analysis we have assumed that around 2.5% of additional stock will be vacant which should be reflective of what can be achieved in new housing stock. The assumption around vacant homes makes very little difference to the outputs of the analysis.

# 3 REVISED PROJECTION RESULTS

## Introduction

3.1 This section provides detailed outputs of the modelling under each of the nine scenarios run to look at population growth, employment change and housing requirements. All the projections look at the period from 2010 to 2030 with outputs available for each year of the projection (although these have generally been summarised for five year periods). The projections run are summarised in Figure 3.1 below.

**Figure 3.1 Description of Projections used for Demographic Modelling**

| Projection | Description |
|---|---|
| **PROJ 1** | Linked to ONS 2010- and 2011-based SNPP |
| **PROJ 2** | 10-year migration trends |
| **PROJ 3** | 5-year migration trends |
| **PROJ 4** | Zero net migration |
| **PROJ 5** | Zero employment growth |
| **PROJ 6** | Zero population growth |
| **PROJ 7** | Projected employment growth |
| **PROJ 8** | Projected labour demand |
| **PROJ 9** | Housing trajectory |

## Population Projections

3.2 Figure 3.2 below shows the expected growth in population under each of the nine scenarios. Under the three projections based on past demographic trends (PROJ 1 to 3), the population is expected to increase by between about 10% and 15% over the 20-year projection period (an increase of between 27,700 and 41,500 people). The strongest population growth shown in PROJ 3 is based on 5 year migration trends.

3.3 The component projections, PROJ 4 – 6, are developed to aid understanding of demographic dynamics and drivers. The City's population has a relatively young age structure. The modelling indicates that the population could thus maintain current employment levels even if overall population numbers were to fall slightly over the period to 2021 (with recovery over the second part of the plan period).

3.4 The component projections also highlight the importance of natural change in the City (with higher numbers of births than deaths), rather than migration, as the key driver of population growth. The zero net-migration scenario (PROJ 4) shows level of population growth close to that derived from PROJ 1 (linked to 2010-and 2011-based SNPP)

3.5 The economically-driven projections (PROJ 7 and 8) show levels of population growth which are slightly lower than any of the trend-based projections and the zero net-migration projection (PROJ 4) – both economic projections suggesting population growth of around 9%-10% over the period from 2010 to 2030.

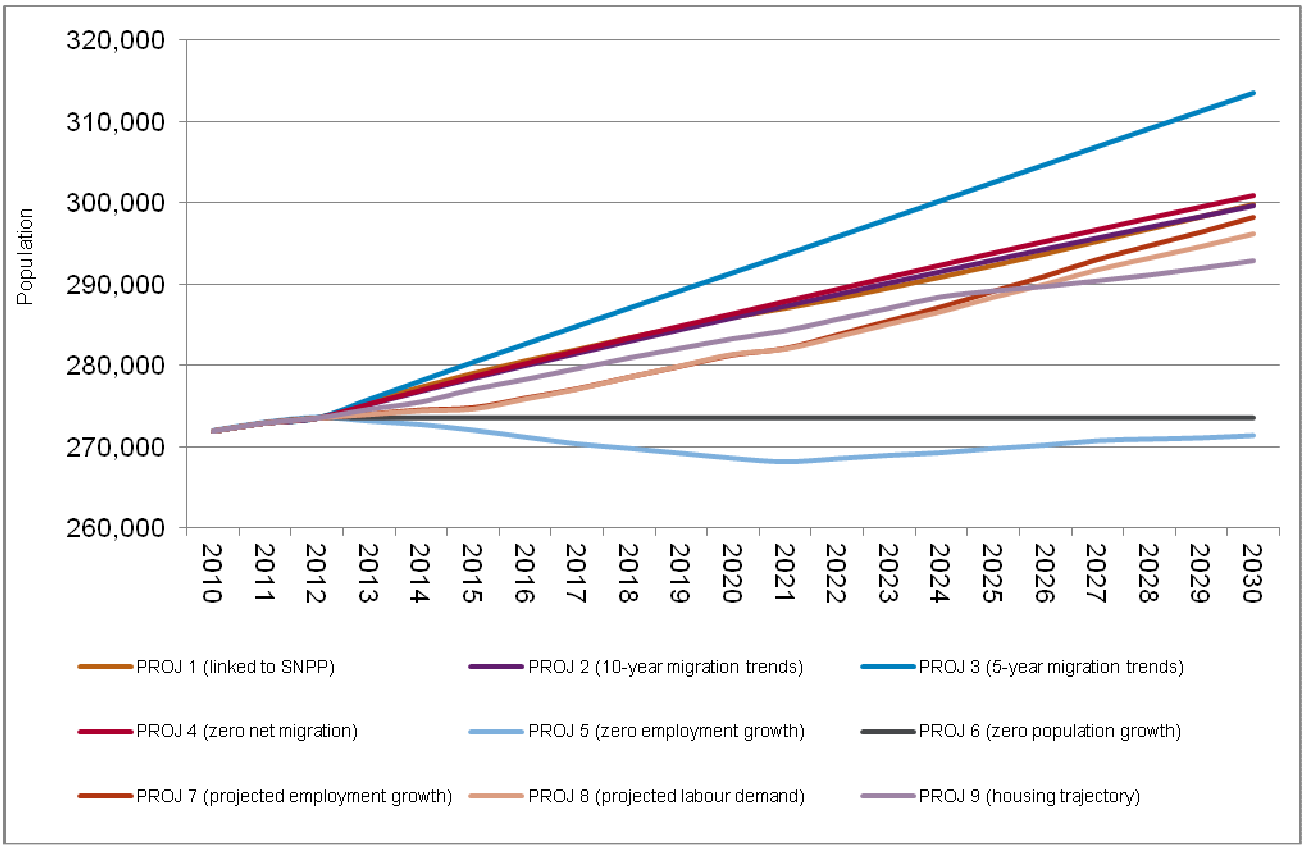
3.6 Finally, the housing trajectory projection (PROJ 9), which could deliver slightly more homes than the minimum targeted in the Draft City Plan (Part I), shows a level of population growth which is slightly lower than those based on past demographic trends or projected economic performance. It projects population growth of about 7.7% over 20-years – a population increase of about 21,000 people from 2010 to 2030.

3.7 Figure 3.3 shows this data in graphical form for each year of each projection – all projections are the same for 2010-12.

**Figure 3.2 Population Estimates 2010 to 2030**

| | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| **PROJ 1 (linked to ONS 2010- & 2011-based SNPP)** | 271,952 | 279,046 | 285,945 | 292,282 | 299,777 |
| | 0.0% | 2.6% | 5.1% | 7.5% | 10.2% |
| **PROJ 2 (10-year migration trends)** | 271,952 | 278,461 | 285,889 | 292,967 | 299,654 |
| | 0.0% | 2.4% | 5.1% | 7.7% | 10.2% |
| **PROJ 3 (5-year migration trends)** | 271,952 | 280,417 | 291,426 | 302,492 | 313,469 |
| | 0.0% | 3.1% | 7.2% | 11.2% | 15.3% |
| **PROJ 4 (zero net migration)** | 271,952 | 278,640 | 286,397 | 293,841 | 300,921 |
| | 0.0% | 2.5% | 5.3% | 8.0% | 10.7% |
| **PROJ 5 (zero employment growth)** | 271,952 | 271,986 | 268,596 | 269,775 | 271,348 |
| | 0.0% | 0.0% | -1.2% | -0.8% | -0.2% |
| **PROJ 6 (zero population growth)** | 271,952 | 273,542 | 273,542 | 273,542 | 273,542 |
| | 0.0% | 0.6% | 0.6% | 0.6% | 0.6% |
| **PROJ 7 (projected employment growth)** | 271,952 | 274,833 | 281,307 | 289,128 | 298,208 |
| | 0.0% | 1.1% | 3.4% | 6.3% | 9.7% |
| **PROJ 8 (projected labour demand)** | 271,952 | 274,676 | 281,422 | 288,433 | 296,235 |
| | 0.0% | 1.0% | 3.5% | 6.1% | 8.9% |
| **PROJ 9 (housing trajectory)** | 271,952 | 277,091 | 283,318 | 289,194 | 292,886 |
| | 0.0% | 1.9% | 4.2% | 6.3% | 7.7% |

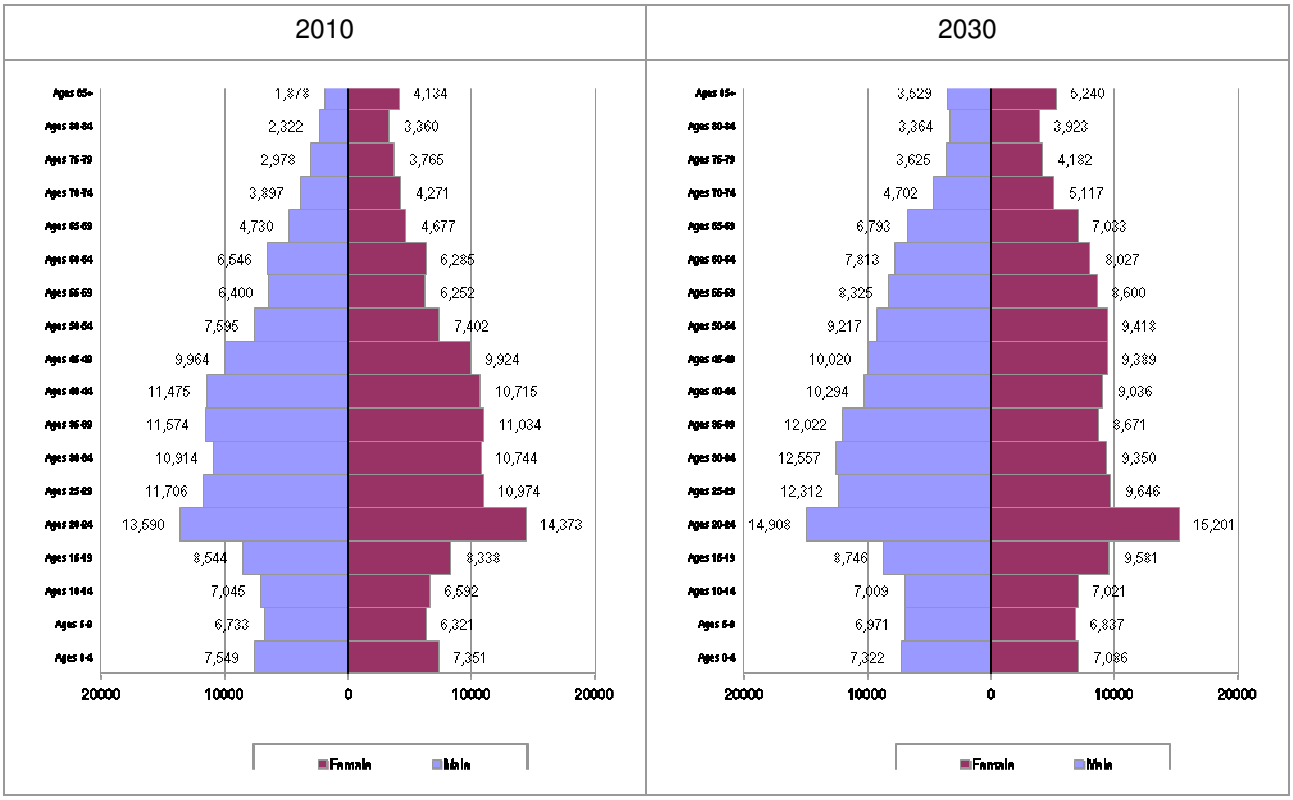
**Figure 3.3 Population Change, 2010 – 2030**




## Housing Trajectory Projection (PROJ 9) – demographic change

3.8 The figure below shows population pyramids for 2010 and 2030 under our housing trajectory projection (PROJ 9). The City's population will continue to be focused on households aged in their 20s and 30s with particularly strong growth expected in the male population in these groups (and a decline in the female population in many cases). Changes in the population structure will also occur as the population ages (with each age group moving up the pyramid). The population at the top end of the pyramid will also grow as life expectancy continues to improve.

**Figure 3.4 Distribution of Population 2010 and 2030 for PROJ 9 – housing trajectory**



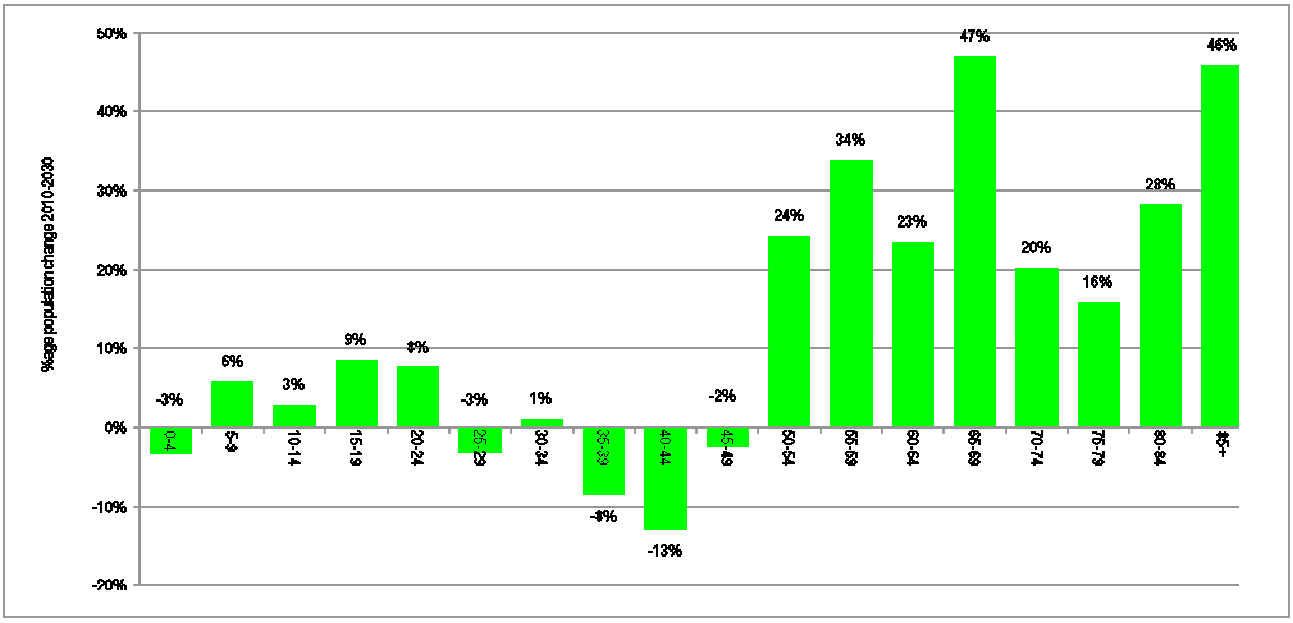

3.9 The figure below summarises the findings for key (15 year) age groups under PROJ 9 (housing trajectory). The largest growth will be in people aged over 60. In 2030 it is estimated that there will be 63,348 people aged 60 and over. This is an increase of 14,505 from 2011, representing growth of 30%. Looking at the other end of the age spectrum we can see that there are projected to be around 2% more people aged under 15 with increases also shown for the 15-29 and 45-59 age groups. It is projected that there will be a 7% decrease in the number of people aged 30-44 although numerically this remains the largest age group in the City.

**Figure 3.5 PROJ 9 (housing trajectory) population change 2010 to 2030 by fifteen year age bands**

| Age group | Population 2010 | Population 2030 | Change in population | % change from 2010 |
|---|---|---|---|---|
| Under 15 | 41,592 | 42,245 | 653 | 1.6% |
| 15-29 | 67,525 | 70,395 | 2,870 | 4.3% |
| 30-44 | 66,457 | 61,930 | -4,527 | -6.8% |
| 45-59 | 47,536 | 54,968 | 7,432 | 15.6% |
| 60-74 | 30,407 | 39,485 | 9,078 | 29.9% |
| 75+ | 18,436 | 23,863 | 5,427 | 29.4% |
| Total | 271,952 | 292,886 | 20,934 | 7.7% |

3.10 The figure below shows the percentage changes for each five year age group. The strongest growth in population over the 20 year period is expected to occur in those aged 50 and over (as the current large population groups aged in their late 30s and 40s get older). The school age population is expected to grow slightly, as is the population in most age groups. There are however a number of age groups in which the population is expected to decline – most notably those aged 35 to 44.

**Figure 3.6 Forecast Population Change by Age Group 2010 – 2030 (PROJ 9 – housing trajectory)**




## Economic (Employment) Changes

3.11 Figures 3.7 and 3.8 below show the estimated number of people living in the City who are working under each of our nine projections. The three trend-based projections (PROJ 1 to 3) show quite substantial expected increases in the size of the working population, ranging from 13% to 18% over the full 20-year projection period. This represents an increase of between 17,400 and 25,400 additional people working.

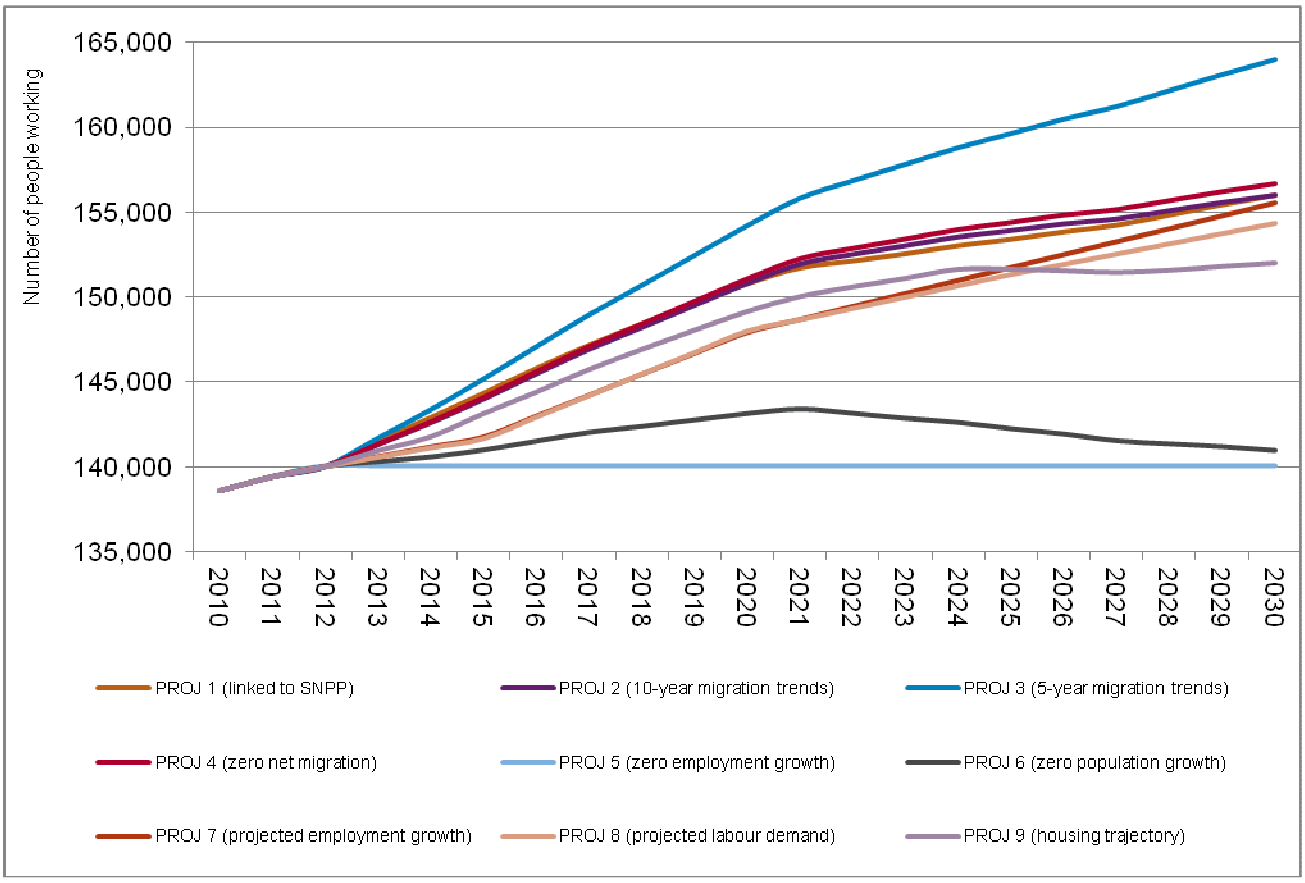
3.12 With no net migration it is estimated that there will still be a notable increase in the local working population – an increase by 13% between 2010-30, which is close to the figure derived from PROJ 1 (linked to 2010- and 2011-based SNPP).

3.13 The two economically-based projections (PROJ 7 and 8) show increases in the number of people working of between about 11% and 12% depending on the scenario whilst the housing trajectory projection (PROJ 9) shows a more moderate growth in the number of people in employment – up by 9.7% or 13,400 people for the full 20-year projection period.

**Figure 3.7 Employment Estimates 2010 to 2030**

| | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| **PROJ 1 (linked to ONS 2010- & 2011-based SNPP)** | 138,616 | 144,370 | 150,824 | 153,439 | 156,037 |
| | 0.0% | 4.2% | 8.8% | 10.7% | 12.6% |
| **PROJ 2 (10-year migration trends)** | 138,616 | 144,012 | 150,792 | 153,905 | 155,978 |
| | 0.0% | 3.9% | 8.8% | 11.0% | 12.5% |
| **PROJ 3 (5-year migration trends)** | 138,616 | 145,209 | 154,234 | 159,661 | 164,020 |
| | 0.0% | 4.8% | 11.3% | 15.2% | 18.3% |
| **PROJ 4 (zero net migration)** | 138,616 | 144,121 | 151,108 | 154,433 | 156,716 |
| | 0.0% | 4.0% | 9.0% | 11.4% | 13.1% |
| **PROJ 5 (zero employment growth)** | 138,616 | 140,049 | 140,049 | 140,049 | 140,049 |
| | 0.0% | 1.0% | 1.0% | 1.0% | 1.0% |
| **PROJ 6 (zero population growth)** | 138,616 | 141,001 | 143,122 | 142,239 | 140,969 |
| | 0.0% | 1.7% | 3.3% | 2.6% | 1.7% |
| **PROJ 7 (projected employment growth)** | 138,616 | 141,792 | 147,954 | 151,782 | 155,583 |
| | 0.0% | 2.3% | 6.7% | 9.5% | 12.2% |
| **PROJ 8 (projected labour demand)** | 138,616 | 141,696 | 148,026 | 151,356 | 154,366 |
| | 0.0% | 2.2% | 6.8% | 9.2% | 11.4% |
| **PROJ 9 (housing trajectory)** | 138,616 | 143,171 | 149,196 | 151,677 | 152,045 |
| | 0.0% | 3.3% | 7.6% | 9.4% | 9.7% |

**Figure 3.8 Employment Change, 2010 – 2030**



3.14 The suite of projections indicate that the housing trajectory (which assumes delivery of around 12,950 homes over the plan period to 2030 – 14% above the requirement in the Draft City Plan Part I) could support employment growth broadly in line with that projected over the period to 2021. However over the latter part of the plan period, housing provision could potentially restrain growth in the resident workforce in the City. While there is potential for commuting dynamics within the sub-region to change, there is a risk that a 'tight' labour market might restrict economic growth.

3.15 A further conclusion that we can draw at this point relates to the similarity of the projections driven by demographic trends (PROJ 1) and the economic forecasts (PROJ 7 and 8). The similarities between the projections give us confidence in these as an assessment of (unconstrained) overall need/demand for homes over the period to 2030 based on current evidence.

## Household (and Housing) Growth

3.16 Figures 3.9 and 3.10 below show the projected growth in the number of households under each of the nine scenarios. The three trend-based projections (PROJ 1 to 3) show household growth of between about 13% and 17% over the 20-year period equating to between 15,400 and 21,000 additional households.

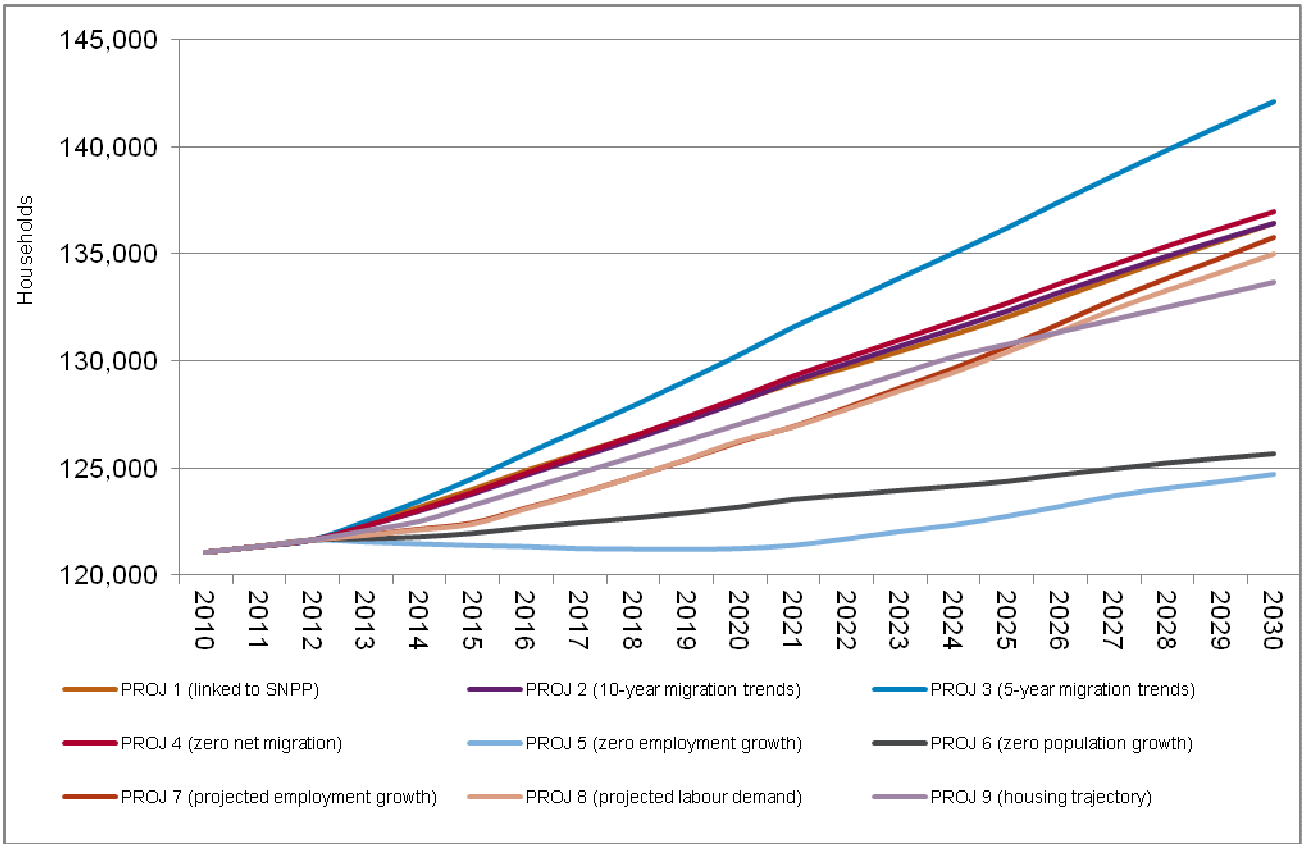
3.17 Looking at the component projections, any growth in household numbers of over 3% over the plan period to 2030 will support growth in population and employment, given the City's relatively young population base. Household growth of less than 13.1% is however likely to support net out-migration from the City (albeit that this is a characteristic of many larger urban areas in the UK).

3.18 The two economically driven projections show slightly lower levels of household growth to PROJ 1 (linked to 2010- and 2011-based SNPP) with both PROJ 7 and PROJ 8 suggesting household growth of around 12% over the 20-year period from 2010 to 2030 – this is around 13,900 to 14,700 additional households. Finally, the housing trajectory projection would be expected to see a 10% increase in households – 12,600 more households in 2030 than 2010.

**Figure 3.9 Household Estimates 2010 to 2030**

| | 2010 | 2015 | 2020 | 2025 | 2030 |
|---|---|---|---|---|---|
| **PROJ 1 (linked to ONS 2010- & 2011-based SNPP)** | 121,079 | 124,024 | 128,161 | 132,070 | 136,457 |
| | 0.0% | 2.4% | 5.8% | 9.1% | 12.7% |
| **PROJ 2 (10-year migration trends)** | 121,079 | 123,802 | 128,115 | 132,339 | 136,447 |
| | 0.0% | 2.2% | 5.8% | 9.3% | 12.7% |
| **PROJ 3 (5-year migration trends)** | 121,079 | 124,529 | 130,305 | 136,211 | 142,109 |
| | 0.0% | 2.8% | 7.6% | 12.5% | 17.4% |
| **PROJ 4 (zero net migration)** | 121,079 | 123,868 | 128,316 | 132,694 | 136,966 |
| | 0.0% | 2.3% | 6.0% | 9.6% | 13.1% |
| **PROJ 5 (zero employment growth)** | 121,079 | 121,396 | 121,253 | 122,754 | 124,710 |
| | 0.0% | 0.3% | 0.1% | 1.4% | 3.0% |
| **PROJ 6 (zero population growth)** | 121,079 | 121,970 | 123,208 | 124,397 | 125,691 |
| | 0.0% | 0.7% | 1.8% | 2.7% | 3.8% |
| **PROJ 7 (projected employment growth)** | 121,079 | 122,455 | 126,233 | 130,666 | 135,761 |
| | 0.0% | 1.1% | 4.3% | 7.9% | 12.1% |
| **PROJ 8 (projected labour demand)** | 121,079 | 122,397 | 126,272 | 130,401 | 134,980 |
| | 0.0% | 1.1% | 4.3% | 7.7% | 11.5% |
| **PROJ 9 (housing trajectory)** | 121,079 | 123,281 | 127,078 | 130,800 | 133,707 |
| | 0.0% | 1.8% | 5.0% | 8.0% | 10.4% |

**Figure 3.10 Household Change, 2010 – 2030**



3.19 The analysis above concentrated on the number of additional households. In reality there are always likely to be some vacant homes in the area and so the number of properties required to house all of these households will be slightly greater than the projected household numbers. We have therefore added a vacancy allowance of 2.5% to all of the above figures to make estimated housing requirements. This is shown in Figure 3.11.

**Figure 3.11 Estimated housing numbers with 2.5% vacancy allowance (to 2030)**

| Projection variant | Annual household growth | Annual requirement with vacancy allowance | Requirement over 20-years |
|---|---|---|---|
| **PROJ 1 (linked to ONS 2010- & 2011-based SNPP)** | 769 | 788 | 15,762 |
| **PROJ 2 (10-year migration trends)** | 768 | 788 | 15,752 |
| **PROJ 3 (5-year migration trends)** | 1,051 | 1,078 | 21,556 |
| **PROJ 4 (zero net migration)** | 794 | 814 | 16,284 |
| **PROJ 5 (zero employment growth)** | 182 | 186 | 3,722 |
| **PROJ 6 (zero population growth)** | 231 | 236 | 4,728 |
| **PROJ 7 (projected employment growth)** | 734 | 752 | 15,050 |
| **PROJ 8 (projected labour demand)** | 695 | 712 | 14,249 |
| **PROJ 9 (housing trajectory)** | 631 | 647 | 12,944 |

## Comparing Projections with Previous Figures in the 2011 Study

3.20 In this final section we have provided an analysis comparing the outputs of the projections run in this report with those in the June 2011 Housing Requirements Study. The two tables below show a comparison of overall housing requirements (firstly annually and then for the whole 20-year projection period) for each of the projections run in this report. It should be noted that the projection numbering differs from that in the 2011 study although the basis for projections are broadly similar.

3.21 The data shows, for the majority of projections that the assessed housing requirements are lower than previously estimated. This is partly due to different assumptions made around headship rates although the two scenarios based on constant migration moving forward (PROJ 2 and 3) are lower due to a lower assessment of past migration patterns.

3.22 However assumptions on overall levels of migration in the 2008-, 2010- and 2011-based ONS projections are relatively consistent – we consider these to provide a good basis for considering future migration trends, as they take account of how the age structure of the population in the City and other areas inter-relates to potential migration flows over time.

3.23 Looking at overall housing requirements, we see on the basis of 10-year migration trends that the projected housing requirement has fallen from around 24,000 additional homes to about 15,800. A

bigger difference is seen for the projection based on 5-year migration trends.

3.24 The two projections run for housing requirements set against projected economic growth both shows slightly lower figures than previously estimated. Stronger forecast employment growth in PROJ 7 is largely negated by the impact of lower projected reductions in average household sizes along with a shift in ONS migration estimates towards more net international migration).

3.25 There are small variations in the two projections in terms of the component projections (i.e. zero net migration, zero employment growth and zero population growth). This is partly due to the fact that figures moving from 2010 to 2012 have been fixed in the projection process with the 'component' only being held constant post-2012.

**Figure 3.12 Comparing housing requirements with previous projections run - annual**

| Projection | Current projections | Previous projections | Difference |
|---|---|---|---|
| **PROJ 1 (linked to ONS 2010- & 2011-based SNPP)** | 788 | 971 | -183 |
| **PROJ 2 (10-year migration trends)** | 788 | 1,201 | -413 |
| **PROJ 3 (5-year migration trends)** | 1,078 | 1,735 | -657 |
| **PROJ 4 (zero net migration)** | 814 | 989 | -175 |
| **PROJ 5 (zero employment growth)** | 186 | 140 | 46 |
| **PROJ 6 (zero population growth)** | 236 | 247 | -11 |
| **PROJ 7 (projected employment growth)** | 752 | 819 | -67 |
| **PROJ 8 (projected labour demand)** | 712 | 790 | -78 |
| **PROJ 9 (housing trajectory)** | 647 | 642 | 5 |

**Figure 3.13 Comparing housing requirements with previous projections run – 20-year**

| Projection | Current projections | Previous projections | Difference |
|---|---|---|---|
| **PROJ 1 (linked to ONS 2010- & 2011-based SNPP)** | 15,762 | 19,423 | -3,661 |
| **PROJ 2 (10-year migration trends)** | 15,752 | 24,017 | -8,265 |
| **PROJ 3 (5-year migration trends)** | 21,556 | 34,697 | -13,141 |
| **PROJ 4 (zero net migration)** | 16,284 | 19,790 | -3,506 |
| **PROJ 5 (zero employment growth)** | 3,722 | 2,802 | 920 |
| **PROJ 6 (zero population growth)** | 4,728 | 4,936 | -208 |
| **PROJ 7 (projected employment growth)** | 15,050 | 16,373 | -1,323 |
| **PROJ 8 (projected labour demand)** | 14,249 | 15,791 | -1,542 |
| **PROJ 10 (housing trajectory 2)** | 12,944 | 12,841 | 103 |

3.26 As well as changes in overall housing requirements we can compare population and employment growth estimates from each of the comparable projections. As would be expected from the data above it is the case for most projections that all of population, employment and housing requirements are lower in these projections when compared with previous versions. However, it is

notable that in proportionate terms some of the bigger decreases are seen for housing requirements (and to a lesser extent employment growth)

3.27 Taking the example of zero net migration we can see that population growth in these projections is about 4% lower than previously estimated; however the projection also sees a 13% drop in employment increase and an 18% decrease in the related housing requirement.

3.28 The housing trajectory projection is for a very similar level of housing delivery to previous projections but actually sees a notable uplift in both expected population growth and the number of additional people in employment this would support.

3.29 Higher population growth is to some degree linked to higher projected birth rates although this is also affected by different age profiles of the population with the latest figures (derived from 2011 Census data) suggesting slightly lower numbers of older people in some key age groups – notably those aged 85 and over.

3.30 For housing requirements the figures are lower mainly due to the recalibration of headship rates which (again using data from the 2011 Census) can be seen to have moved notably away from the long-term trend suggested in the 2008-based CLG household projections. A slightly younger population structure also has a moderate effect.

3.31 Finally, whilst the age structure has some impact on the employment numbers these are also influenced by assumptions about the scope for recovery and the ability of a latent labour-force to fill any new jobs that might be created.

**Figure 3.14 Comparing projections 2010 to 2030 – total – Brighton & Hove**

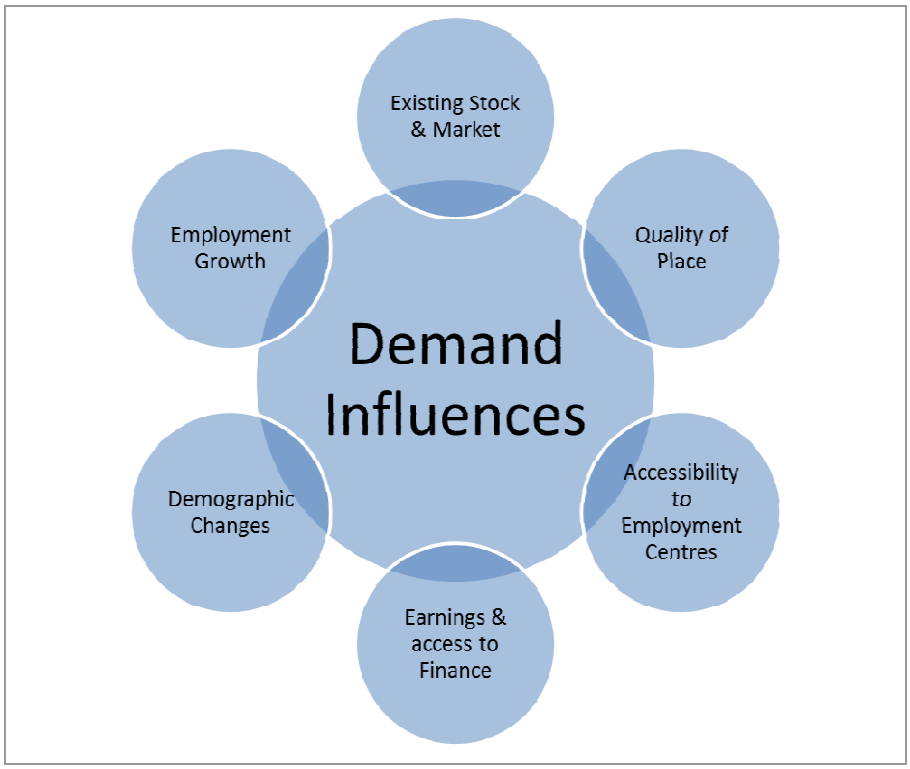
| Projection | Population Growth | | Housing Numbers | | Employment Growth | |
|---|---|---|---|---|---|---|
| | Current projections | Previous projections | Current projections | Previous projections | Current projections | Previous projections |
| **PROJ 1 (linked to ONS 2010- & 2011-based SNPP)** | 27,825 | 29,581 | 15,762 | 19,423 | 17,421 | 20,264 |
| **PROJ 2 (10-year migration trends)** | 27,702 | 38,963 | 15,752 | 24,017 | 17,362 | 25,865 |
| **PROJ 3 (5-year migration trends)** | 41,517 | 60,769 | 21,556 | 34,697 | 25,404 | 38,886 |
| **PROJ 4 (zero net migration)** | 28,969 | 30,331 | 16,284 | 19,790 | 18,100 | 20,711 |
| **PROJ 5 (zero employment growth)** | -604 | -4,356 | 3,722 | 2,802 | 1,434 | 0 |
| **PROJ 6 (zero population growth)** | 1,590 | 0 | 4,728 | 4,936 | 2,353 | 2,601 |
| **PROJ 7 (projected employment growth)** | 26,256 | 23,656 | 15,050 | 16,373 | 16,967 | 17,470 |
| **PROJ 8 (projected labour demand)** | 24,283 | 22,489 | 14,249 | 15,791 | 15,750 | 16,800 |
| **PROJ 9 (housing trajectory)** | 20,934 | 16,177 | 12,944 | 12,841 | 13,430 | 12,400 |

# 4 REQUIREMENTS FOR DIFFERENT SIZES OF HOMES

4.1 In the previous sections we studied likely population and household change under a range of different growth scenarios. In this section we have sought to provide an assessment of market and affordable housing size requirements based on an understanding of household occupancy patterns and future demographic change. . It is intended to supplement and update the analysis where appropriate within the Brighton and Hove Strategic Housing Market Assessment (DTZ, April 2008)

4.2 There are a range of factors which influence housing demand. These are summarised in Figure 4.1. These factors play out at different spatial scales and influence both the level of housing demand (in terms of aggregate household growth) and the nature of demand for different types, tenures and sizes of homes.

Figure 4.1: Housing Demand Influences




4.3 In this section we consider in some detail the implications of demographic drivers on demand for different housing products. The assessment is intended to provide an understanding of the implications of demographic dynamics on need and demand for different sizes of homes.

4.4 The approach and analysis recognises that the available land supply in the City will play a significant influence on demographic dynamics. This report concludes that while a realistic

assessment of housing need/demand in Brighton and Hove would be for around 15,800 dwellings. However available land supply may constrain housing delivery to around 12,900 homes over the 20 year plan period to 2030 based on the housing trajectory and assumptions agreed with BHCC (which formed the basis of PROJ 9).

4.5 The analysis in this section seeks to use information in previous sections about the size and structure of the population and household structures; and consider what impact this may have on the sizes of housing required in the future. The starting point for our analysis is to consider the implications of demographic trends on demand, in the longer-term, for different sizes of housing.

## Expected Changes in Population Structure

4.6 Figure 4.2 shows the number of household reference persons (HRP) by sex in each five year age group from PROJ 9 (Housing Trajectory) for 2010 and 2030. The HRP can best be described as the 'head of household'. The data shows that over the 20-year period studied, the number of households might be expected to rise by about 12,600 (about 630 per annum). The data shows increases for most age groups, with a particularly high change to be expected amongst those aged 50-69.

**Figure 4.2 Household estimates in Brighton & Hove 2010 and 2030 (by age and sex**

| Age group | 2010 | | 2030 | |
|---|---|---|---|---|
| | Male | Female | Male | Female |
| **24 and under** | 5,123 | 2,448 | 5,524 | 2,580 |
| **25-29** | 7,003 | 2,774 | 7,119 | 2,503 |
| **30-34** | 7,879 | 3,721 | 8,510 | 3,609 |
| **35-39** | 10,015 | 4,013 | 10,301 | 3,448 |
| **40-44** | 10,277 | 3,753 | 9,198 | 3,177 |
| **45-49** | 8,870 | 3,460 | 8,718 | 2,930 |
| **50-54** | 6,803 | 2,757 | 7,993 | 3,718 |
| **55-59** | 5,871 | 2,426 | 7,456 | 3,702 |
| **60-64** | 6,129 | 2,337 | 7,096 | 3,416 |
| **65-69** | 4,479 | 1,997 | 6,243 | 3,341 |
| **70-74** | 3,669 | 2,020 | 4,270 | 2,522 |
| **75-79** | 2,791 | 2,041 | 3,260 | 2,092 |
| **80-84** | 2,117 | 2,188 | 2,978 | 2,249 |
| **85+** | 1,545 | 2,572 | 2,841 | 2,913 |
| **Total** | 82,573 | 38,506 | 91,507 | 42,200 |
| **Total (M & F)** | **121,079** | | **133,707** | |

*Source*: PROJ 9 (Housing Trajectory)

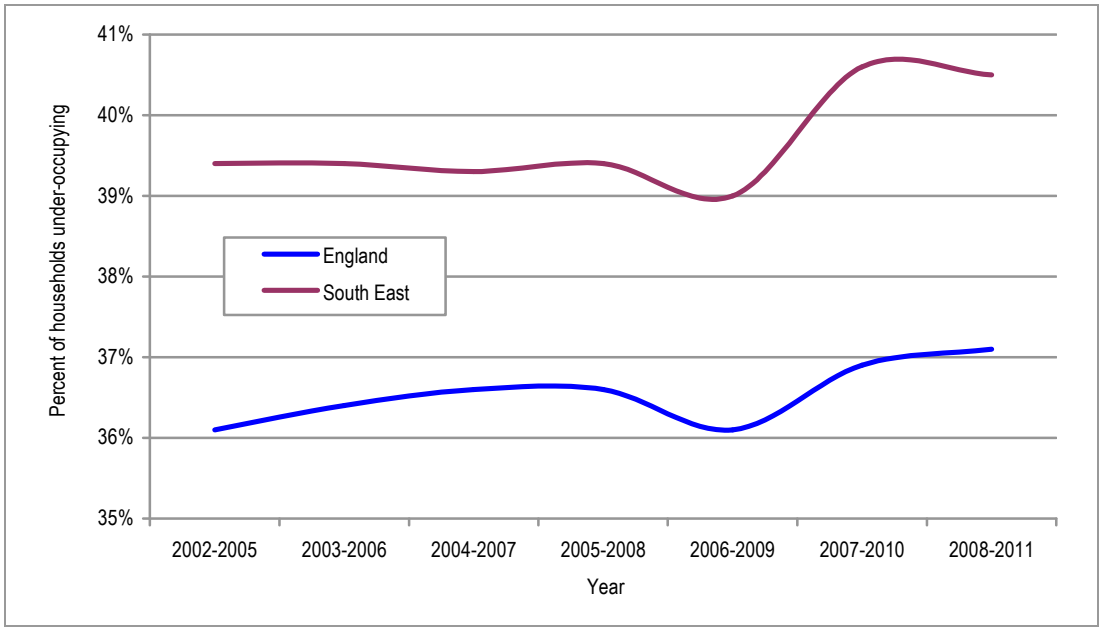
## Understanding How Households Occupy Homes

4.7 The relationship between changes in demographics and need and demand for different sizes of homes is complex. The main reason for this is that in the market sector households are able to buy or rent any size of property (subject to what they can afford) and therefore knowledge of the profile of households in an area does not directly transfer into the sizes of property to be provided. The size of housing which households occupy relates more to their wealth and age than the number of people which they contain.

4.8 For example, there is no reason why a single person cannot buy (or choose to live in) a four bedroom home as long as they can afford it and hence projecting an increase in single person households does not automatically translate in to a need for smaller units.

4.9 Figure 4.3 demonstrates this, using data from the Survey of English Housing and the English Housing Survey about the proportion of households who under-occupy their dwellings. It can be seen that nationally between about 36% and 37% of households under-occupy with slightly higher figures in the South East region. It is also notable that levels of under-occupancy have risen slightly over the past few years although differences year-on-year are relatively slight.

**Figure 4.3 Proportion of Households Under-Occupying in England and the South**




*Source*: Survey of English Housing/English Housing Survey 2002-2010

4.10 The projections of demand for different sizes of homes are developed on the basis that households of specific ages will broadly continue to occupy dwellings in the same way in the future as they do

currently. They take account of how households of different ages occupy homes separately in the market and affordable sectors but assume that how households in specific age and tenure groups occupy homes will remain constant.

4.11 The general methodology is therefore to use the information derived from PROJ 9 about the number of household reference persons (HRPs) in each age and sex group and apply this to the profile of housing within these groups. The data for this analysis has been formed from a commissioned table by ONS (Table C1236 which provides relevant data for all local authorities in England). An extract of this is shown in the figure below.

4.12 The extract shows the number of male owner occupiers in selected age groups along with the size of accommodation that they occupy. By estimating how the number of HRPs in each age group changes over time we are also able to estimate the profile of housing that they would be likely to occupy.

4.13 Figure 4.4 below shows, for example, that 13% of male HRPs aged 25 to 29 live in a home with six or more rooms, for the 45 to 49 age group this figure rises to 46%. The age profile of HRPs will therefore have an impact on the sizes of homes we would expect to be occupied. From the Commissioned Table information is available for all HRP age bands up to 85+ and for both sexes.

**Figure 4.4 Extract from ONS Commissioned Table C1236 – Male HRPs in Owner-Occupied Housing by Size of Dwelling (Brighton & Hove)**

| Dwelling size | Age of Household Reference Person | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 25-29 | | 30-34 | | 35-39 | | 40-44 | | 45-49 | |
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| **1-3 rooms** | 2,494 | 45.2% | 2,288 | 30.2% | 1,681 | 21.5% | 1,105 | 18.2% | 761 | 14.6% |
| **4 rooms** | 1,609 | 29.2% | 2,042 | 26.9% | 1,731 | 22.1% | 1,084 | 17.9% | 888 | 17.1% |
| **5 rooms** | 694 | 12.6% | 1,499 | 19.8% | 1,773 | 22.7% | 1,198 | 19.8% | 1,159 | 22.3% |
| **6 rooms** | 442 | 8.0% | 1,053 | 13.9% | 1,392 | 17.8% | 1,228 | 20.3% | 1,046 | 20.1% |
| **7 rooms** | 145 | 2.6% | 404 | 5.3% | 659 | 8.4% | 694 | 11.4% | 634 | 12.2% |
| **8+ rooms** | 135 | 2.4% | 297 | 3.9% | 587 | 7.5% | 753 | 12.4% | 717 | 13.8% |
| **Total** | **5,519** | **100.0%** | **7,583** | **100.0%** | **7,823** | **100.0%** | **6,062** | **100.0%** | **5,205** | **100.0%** |

*Source*: ONS Commissioned Table C1236

4.14 When using the data from the Census we have made some adjustments to provide the best possible outputs. The key problem is that the Census only collects information about the number of rooms in a home rather than the number of bedrooms (which is more useful in considering dwelling sizes). Data about the number of rooms in a dwelling has therefore been adjusted to provide an estimate of the number of bedrooms. The tables below show the assumptions used to make this conversion – slightly different assumptions have been used for market and affordable housing although generally they are very similar. Information in the tables has been based on a range of surveys where information about both bedrooms and rooms was collected and has been adjusted in

the case of Brighton & Hove to broadly reflect the size profile shown in the Council's most recent housing needs survey.

**Figure 4.5 Relationship between the Number of Rooms and Number of Bedrooms – Market Housing**

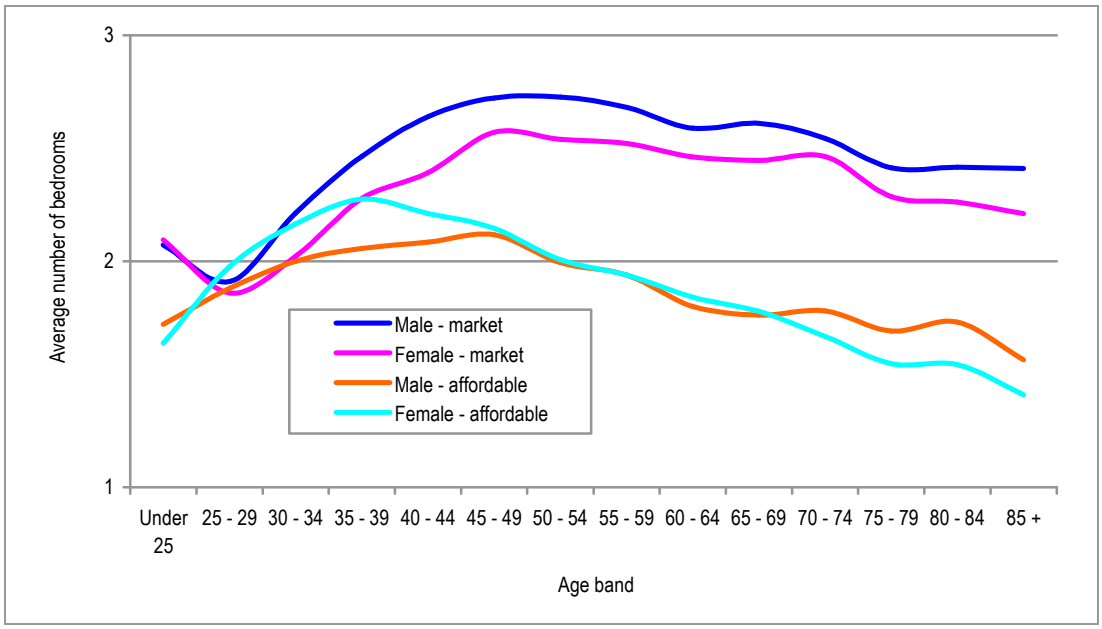
| Number of Rooms | Number of Bedrooms | | | | |
|---|---|---|---|---|---|
| | 1 bedroom | 2 bedrooms | 3 bedrooms | 4+ bedrooms | Total |
| **1-3 rooms** | 80% | 20% | 0% | 0% | 100% |
| **4 rooms** | 5% | 87% | 8% | 0% | 100% |
| **5 rooms** | 0% | 31% | 68% | 1% | 100% |
| **6 rooms** | 0% | 10% | 76% | 14% | 100% |
| **7 rooms** | 0% | 0% | 34% | 66% | 100% |
| **8+ rooms** | **0%** | **0%** | **6%** | **94%** | **100%** |

**Figure 4.6 Relationship between the Number of Rooms and Number of Bedrooms – Affordable Housing**

| Number of Rooms | Number of Bedrooms | | | | |
|---|---|---|---|---|---|
| | 1 bedroom | 2 bedrooms | 3 bedrooms | 4+ bedrooms | Total |
| **1-3 rooms** | 94% | 6% | 0% | 0% | 100% |
| **4 rooms** | 9% | 89% | 2% | 0% | 100% |
| **5 rooms** | 0% | 26% | 74% | 0% | 100% |
| **6 rooms** | 0% | 4% | 82% | 14% | 100% |
| **7 rooms** | 0% | 0% | 47% | 53% | 100% |
| **8+ rooms** | **0%** | **0%** | **11%** | **89%** | **100%** |

4.15 Figure 4.7 shows an estimate of how the average number of bedrooms varies by different ages of HRP and different sexes for the whole of Brighton & Hove. The figure shows that in the market sector the average size of accommodation rises over time to typically reach a peak around the 45-54 age groups. In the affordable sector this peak appears earlier. After sizes peak the average dwelling size decreases – possibly due to a number of people down-sizing as they get older. It is also notable that the average size for affordable dwellings are lower than those for market housing whilst in the market sector male HRPs live in larger accommodation for virtually all age groups (there is no consistent trend in the affordable sector).

**Figure 4.7 Average Bedrooms by Age, Sex and Tenure (Brighton & Hove**




*Source*: Derived from ONS Commissioned Table C1236

## Establishing a Baseline Position

4.16 As of 2010, our projections suggest that there are 121,079 households living in Brighton & Hove. Analysis of these households based on headship rates and the size and tenure of homes provides us with an estimate of the profile of the housing stock in 2010, as shown in Figure 4.8 below.

4.17 The table shows that an estimated 16.5% of households live in affordable housing with 83.5% being in the market sector[5] (the size of the affordable sector has been fixed by reference to an estimate of the number of occupied affordable homes in 2010). The data also suggests that homes in the market sector are generally bigger than in the affordable sector with 47% having three or more bedrooms compared to 26% for affordable housing.

**Figure 4.8 Estimated Profile of Occupied Dwellings in 2010 by Size – Brighton & Hove**

| Size of housing | Market | | Affordable | | Total | |
|---|---|---|---|---|---|---|
| | Number | % | Number | % | Number | % |
| **1 bedroom** | 19,914 | 19.7% | 7,676 | 38.5% | 27,590 | 22.8% |
| **2 bedrooms** | 34,012 | 33.6% | 7,118 | 35.7% | 41,131 | 34.0% |
| **3 bedrooms** | 32,271 | 31.9% | 4,432 | 22.3% | 36,703 | 30.3% |
| **4+ bedrooms** | 14,965 | 14.8% | 691 | 3.5% | 15,656 | 12.9% |
| **Total** | 101,161 | 100.0% | 19,918 | 100.0% | 121,079 | 100.0% |
| **% in tenure** | **83.5%** | | **16.5%** | | **100.0%** | |

*Source*: Derived from ONS Commissioned Table C1236

[5] The market sector includes both owner occupied and private rented housing

## Tenure Assumptions & Projections

4.18 The housing market model has been used to estimate future requirements for different sizes of property over the twenty year period from 2010 to 2030. The model works by looking at the types and sizes of accommodation occupied by different ages of residents, and attaching projected changes in the population to this to project need and demand for different sizes of homes. However the way households of different ages occupy homes differs between the market and affordable sectors (as shown earlier). Thus it is necessary to consider what mix of future housing will be in the market and affordable sectors.

4.19 The key assumption here is a view on what proportion of new housing might be delivered as affordable housing. We have assumed that 30% of additional housing will be affordable and 70% market. This is consistent with recent development trends, with 29% of housing development over the 2006-11 period in the City being of affordable housing.

4.20 This is also considered a reasonable assumption regarding future delivery given policies in the Draft City Plan Part I (May 2012) which proposed 40% onsite affordable housing on sites of over 15 dwellings, 30% on sites of 10-14 dwellings and 20% on sites of between 5-9 dwellings as equivalent financial contribution. Given that there will be circumstances where this level of provision is not viable on specific sites, overall delivery of around 30% affordable housing seems reasonable.

## Findings: Market Housing

4.21 As we have previously identified there are a range of factors which can be expected to influence demand for housing. However we identified that key long-term drivers would be demographic and economic trends. This section uses a demographic-driven approach to quantify demand for different sizes of properties over the twenty year period from 2010 to 2030.

4.22 Figure 4.9 shows estimates of the sizes of market housing required from 2010 to 2030. It suggests that the demand over the longer-term is likely to be focused towards two- and three-bedroom homes.

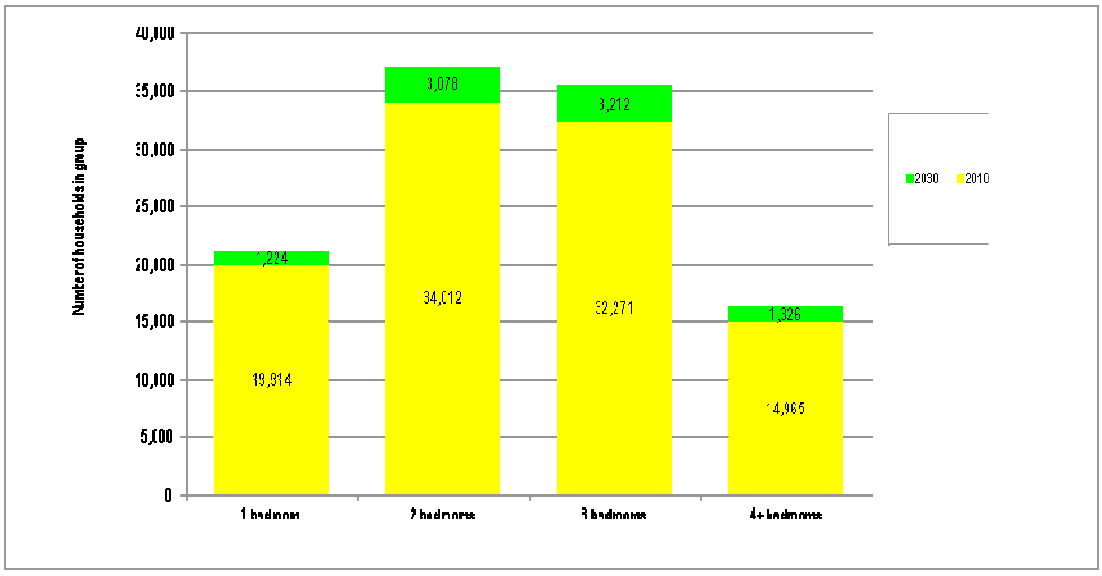
**Figure 4.9 Estimated Size of Dwellings Required 2010 to 2030 – Market Housing (Brighton & Hove)**

| Type/size | 2010 | 2030 | Additional households 2010-2030 | Including 2.5% vacancy allowance | % of additional homes |
|---|---|---|---|---|---|
| **1 bedroom** | 19,914 | 21,138 | 1,224 | 1,255 | 14% |
| **2 bedroom** | 34,012 | 37,090 | 3,078 | 3,155 | 35% |
| **3 bedroom** | 32,271 | 35,482 | 3,212 | 3,292 | 36% |
| **4+ bedroom** | 14,965 | 16,291 | 1,326 | 1,359 | 15% |
| **Total** | **101,161** | **110,001** | **8,840** | **9,061** | **100%** |

4.23 The analysis suggests a slightly greater shift of demand towards smaller dwelling relative to the modelling undertaken by GLH/JGC in 2011.

4.24 Figure 4.10 shows how our estimated market requirement compares with the current stock of housing. The analysis largely reinforces the current profile of dwelling in the City although there is some evidence of a slight shift towards a requirement for larger dwellings relative to the distribution of the existing stock. This seems slightly counter-intuitive given that household sizes are expected to fall slightly in the future and is driven by the fact that much of the projected household growth is in age groups who tend to occupy larger homes. It is also a function of the limited supply of family housing currently within the City's housing stock relative to other parts of the region.

**Figure 4.10 Impacts of Demographic Trends on Market Housing Requirements by House Size, 2010 to 2030 – Brighton & Hove (households**



4.25 The graphs and statistics are based upon our modelling of demographic trends. As we have identified, it should be recognised that a range of factors including affordability pressures and market signals will continue to be important in understanding market demand.

4.26 In the short-term we would expect stronger demand in relative terms for larger family homes (3 or more bedrooms) as the market for smaller properties – and particularly flatted development - is restricted by mortgage finance constraints together with issues associated with the development viability (particularly for flatted schemes).. As the last four years have shown, there are a range of inter-dependencies which affect housing demand, with effective demand for entry-level market housing currently curtailed by the availability of mortgage finance for first-time buyers and those on lower earnings. This is likely to affect market demand for smaller properties typically purchased by first-time buyers in the short-term.

4.27 Given the potential supply of sites across Brighton and Hove, the analysis does suggest that there may be a role for policy to promote delivery of larger homes (including for instance more three-bed properties) where opportunities exist to do so.

4.28 Within the City's existing housing stock there is clear evidence of a bias towards smaller dwellings and the pattern of recent residential development has reinforced this. There is a strategic role for policy in seeking to secure delivery of larger family-sized dwellings on appropriate sites, including larger/ strategic development sites within the City. This approach is implicit within Policy CP19 in the Draft City Plan Part I.

4.29 It will be important to recognise that the setting of a site and character of the surrounding area should influence the density of development (and thus housing mix).

## Findings: Affordable Housing

4.30 Figure 4.11 estimates the sizes of affordable housing required based on our understanding of demographic trends.

4.31 The analysis herein provides a long-term analysis taking account of expected demographic trends. This should be brought together with analysis of the balance between need and supply of affordable housing through updating the Council's housing needs evidence base (which is ongoing).

4.32 The data suggests in the period between 2010 and 2030 that the majority of the requirement is for one and two bedroom homes, although there is also a considerable requirement for three bedroom accommodation.

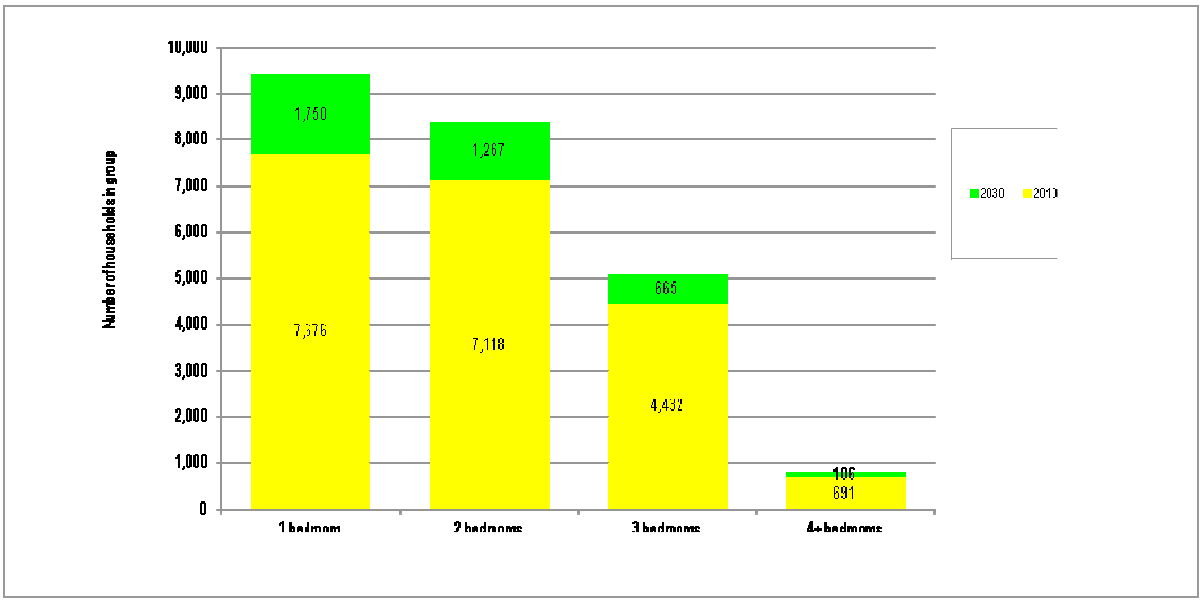
**Figure 4.11 Estimated Size of Dwellings Required 2010 to 2030 – Affordable Housing (Brighton & Hove)**

| Type/size | 2010 | 2030 | Additional households 2010-2030 | Including 2.5% vacancy allowance | % of Additional Homes |
|---|---|---|---|---|---|
| **1 bedroom** | 7,676 | 9,426 | 1,750 | 1,794 | 46% |
| **2 bedroom** | 7,118 | 8,385 | 1,267 | 1,299 | 33% |
| **3 bedroom** | 4,432 | 5,098 | 665 | 682 | 18% |
| **4+ bedroom** | 691 | 797 | 106 | 109 | 3% |
| **Total** | **19,918** | **23,706** | **3,789** | **3,883** | **100.0%** |

4.33 In setting policies regarding the mix of affordable housing of different sizes, this should be considered alongside issues related to the management of the City's affordable housing stock.

4.34 Figure 4.12 below shows how our estimated affordable requirement compares with the stock of affordable housing in 2010. The data suggests that over time there will gradually be a greater requirement for smaller homes (as a proportion of current stock) – this will largely be due to the projected increase in the number of single person households.

**Figure 4.12 Impacts of Demographic Trends on Affordable Housing Requirements by House Size, 2011 to 2036 – Brighton & Hove (Households)**



## Findings: All Homes

4.35 If we bring together the analysis of requirements for both market and affordable housing, the resultant mix of housing is shown in the figure below. The figure indicates that an estimated 42% of overall housing need and demand (market and affordable) is for 3- and 4-bedroom properties. Overall the analysis suggests around 65% of homes should be two- and three-bed properties.

**Figure 4.13 Housing Mix by Unit Size across Tenures – Brighton & Hove**

| Housing Requirements, 2010-30 | 1-bed | 2-bed | 3-bed | 4+ bed | Total |
|---|---|---|---|---|---|
| **Affordable Housing** | 1,255 | 3,155 | 3,292 | 1,359 | 9,061 |
| **Market Housing** | 1,794 | 1,299 | 682 | 109 | 3,883 |
| **Total** | 3,049 | 4,454 | 3,974 | 1,468 | 12,944 |
| **% Total Housing by Size** | **24%** | **34%** | **31%** | **11%** | **100%** |

Source: Housing Market Model

4.36 BHCC has recorded the mix of homes delivered over the last couple of years (2009/10 and 2010/11). Over this period 30% of new development was of 1-bed properties, and 50% of 2-bed properties. Just 10% of new supply was of 3-bed properties and 9% of properties with 4 or more bedrooms. The analysis suggests a stronger requirement for 3-bed properties and lower requirement for 1-bed properties relative to these trends. The analysis would also support a policy approach which sought to deliver a larger proportion of family homes than in the recent past.

4.37 Given the supply of land within the City, it may not be possible to meet the full requirements for family housing. It seems likely that this will support continuing out-migration of people in their 30s and 40s in particular to surrounding areas to secure family homes.

# 5 CONCLUSIONS

5.1 Since the preparation of the 2011 Housing Requirements Study, Brighton and Hove City Council has published its Draft City Plan (Part I) for consultation. Further demographic data has also become available, including the release of initial data from the 2011 Census.

5.2 The 2011 Census data suggests that the City's population is notably larger than was previously thought. Taking account of homes delivered between 2010 and 2011, we estimate that the City's base population in 2010 – the beginning of the plan period – is around 14,000 persons higher than previously estimated.

5.3 In addition the Census data suggests a different age structure of the population. It indicates that the population amongst a number of age groups is higher than shown in previous estimates (with the exception of those aged under 4, 20-29 and over 80), and that there are notably more residents aged 15-19 and 30-34 than previously estimated.

5.4 However while the City's population is notably larger than previously estimated, its housing stock is not (to any significant degree). As a result average household size is found to be higher, and indeed the average size of households in the City appears to have increased between 2001 and 2011. The City's housing stock is occupied in a more intensive way than previously thought. There are likely to be a range of potential causes of this, including a growing student population, higher numbers of people in their 20s and early 30s living in shared accommodation in the private rented sector, and wider changes in the housing market (particularly since 2008) which have resulted in subdued household formation.

5.5 In terms of the economic data, this report has used 2012 economic projections in contrast to 2010-based projections which were used in the 2011 Study. The new economic projections forecast moderately higher growth in employment in the City over the plan period relative to the older projections, but the impact of this on potential housing need/demand is relatively moderate once commuting dynamics are taken into account. It should be noted that the economic-driven projections in this report will be sensitive to changes in commuting dynamics and future changes to economic participation rates.

5.6 Figure 5.1 draws together the results from all of the revised projections developed. It shows projected population growth, growth in labour supply (in employment) and housing requirements for each of the 9 projections developed.

5.7 We consider that PROJ 1 represents the most realistic projection of future (unconstrained) housing requirements based on the current evidence. This takes account of the most recent demographic data. It takes account of how migration patterns may be influenced by changes in the population

age structure both in the City and in areas from which there is typically migration to the City. This projection indicates a requirement for 15,800 dwellings over the 2010-30 plan period (equivalent 790 homes per annum).

5.8 PROJ 8, based on projected labour demand, indicates a housing requirement which is lower than this, for nearer 14,250 dwellings over the plan period (an average of 712 per annum). This takes account of employment growth in the City, as well as in wider areas in which the City's residents have traditionally worked. However this supports less growth in the workforce in the City than forecast growth in jobs, and could result in some increase in net in-commuting to the City to work.

5.9 The slightly lower estimate of housing need/demand over the plan period, relative to the June 2011 Study, particularly reflects the evidence of higher current household sizes in the City revealed by 2011 Census data which results in slightly more moderate forecasts of future reductions in household sizes moving forward. In addition, the 2011-based interim SNPP project a slightly lower level of net migration than earlier 2008- and 2010-based versions. There are also some moderate effects in the futures from differences in the population age structure in 2011 and thus how this is expected to change moving forwards.

**Figure 5.1 Summary of projections 2010 to 2030 – Total – Brighton & Hove**

| Projection | Population Growth | | Housing Numbers | | Employment Growth | |
|---|---|---|---|---|---|---|
| | Total | % change | Total | % change | Total | % change |
| **PROJ 1 (linked to SNPP)** | 27,825 | 10.2% | 15,762 | 12.7% | 17,421 | 12.6% |
| **PROJ 2 (10-year migration trends)** | 27,702 | 10.2% | 15,752 | 12.7% | 17,362 | 12.5% |
| **PROJ 3 (5-year migration trends)** | 41,517 | 15.3% | 21,556 | 17.4% | 25,404 | 18.3% |
| **PROJ 4 (zero net migration)** | 28,969 | 10.7% | 16,284 | 13.1% | 18,100 | 13.1% |
| **PROJ 5 (zero employment growth)** | -604 | -0.2% | 3,722 | 3.0% | 1,434 | 1.0% |
| **PROJ 6 (zero population growth)** | 1,590 | 0.6% | 4,728 | 3.8% | 2,353 | 1.7% |
| **PROJ 7 (projected employment growth)** | 26,256 | 9.7% | 15,050 | 12.1% | 16,967 | 12.2% |
| **PROJ 8 (projected labour demand)** | 24,283 | 8.9% | 14,249 | 11.5% | 15,750 | 11.4% |
| **PROJ 9 (housing trajectory)** | 20,934 | 7.7% | 12,944 | 10.4% | 13,430 | 9.7% |

**Figure 5.2 Summary of projections 2010 to 2030 – Annual – Brighton & Hove**

| Projection | Population Growth | | Housing Numbers | | Employment Growth | |
|---|---|---|---|---|---|---|
| | Per annum | % change | Per annum | % change | Per annum | % change |
| **PROJ 1 (linked to SNPP)** | 1,391 | 0.5% | 788 | 0.6% | 871 | 0.6% |
| **PROJ 2 (10-year migration trends)** | 1,385 | 0.5% | 788 | 0.6% | 868 | 0.6% |
| **PROJ 3 (5-year migration trends)** | 2,076 | 0.8% | 1,078 | 0.9% | 1,270 | 0.9% |
| **PROJ 4 (zero net migration)** | 1,448 | 0.5% | 814 | 0.7% | 905 | 0.7% |
| **PROJ 5 (zero employment growth)** | -30 | 0.0% | 186 | 0.1% | 72 | 0.1% |
| **PROJ 6 (zero population growth)** | 80 | 0.0% | 236 | 0.2% | 118 | 0.1% |
| **PROJ 7 (projected employment growth)** | 1,313 | 0.5% | 752 | 0.6% | 848 | 0.6% |
| **PROJ 8 (projected labour demand)** | 1,214 | 0.4% | 712 | 0.6% | 787 | 0.6% |
| **PROJ 9 (housing trajectory)** | 1,047 | 0.4% | 647 | 0.5% | 671 | 0.5% |

5.10 It is important however to recognise that land supply is a notable constraint on housing requirements moving forwards. Assessed housing needs (for market and affordable homes) of 15,800 homes over the plan period based on the latest evidence are around 2,850 homes higher than those indicated in PROJ 9, the potential housing trajectory and a more substantial 4,500 homes higher than the housing requirement proposed in the Draft City Plan (Part I).

4.9 Against this context it is likely that Brighton and Hove will need to consider, working with surrounding authorities in light of the duty to cooperate introduced in the 2011 Localism Act, whether a shortfall in housing provision in the City can be met elsewhere in other parts of Sussex.