Updated Demographic Projections for Sussex Coast HMA Authorities

Adur, Arun, Brighton & Hove, Chichester, Lewes and Worthing Councils

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1 INTRODUCTION

1.1 This report provides a revised set of demographic projections for the local authorities within the Sussex Coast HMA. These are:

- Adur District
- Arun District
- Brighton and Hove City
- Chichester District
- Lewes District
- Worthing District

1.2 The projections update those set out within the Coastal West Sussex Strategic Housing Market Assessment Update and provide a consistent set of projections for strategic planning purposes.

1.3 The projection approach is broadly consistent with the SHMA Update. However the projections have been updated to take account of:

- 2011 Census
- 2011-based Interim Sub-National Population Projections
- Revised Mid-Year Population Estimates and Components of Change for the 2002-11 period.

Report Structure

1.4 The remainder of this report is structured as follows:

- Section 2: Projections Methodology;
- Section 3: Projection Outputs;
- Section 4: Backlog of Housing Provision;
- Section 5: Conclusions.

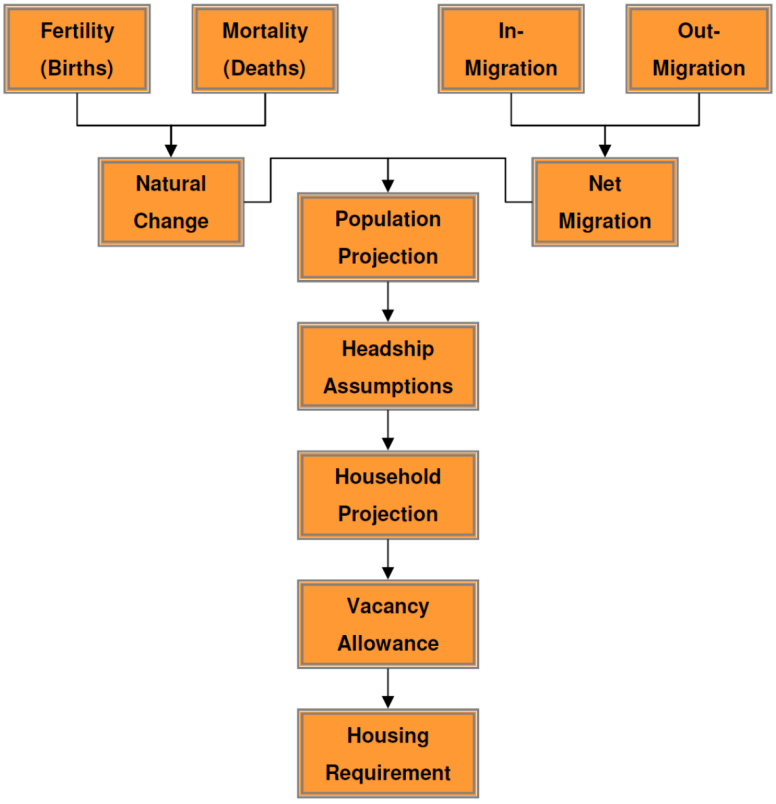
2 PROJECTION METHODOLOGY

Introduction

2.1 In this section we set out demographic projections methodology. The core projections prepared within this report cover the period from 2011-31. We also consider in Section 4 whether there is a backlog of housing need which needs to be included in calculating future housing requirements. 2011 is used as the start-date for the projections as there is a comprehensive suite of data available regarding the base population and past trends to this point, which takes account of data from the 2011 Census.

2.2 The methodology used to determine population growth and hence housing requirements is based on fairly standard population projection methodology consistent with the methodology used by ONS and CLG in their population and household projections. Essentially the method establishes the current population and how will this change in the period from 2011 to 2031. 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 each District. These are the principal components of population change and are used to construct our population projections. Figure 1 shows the key stages of the projection analysis through to the assessment of housing requirements.

Figure 1: Overview of Methodology



2.3 Much of the data for our projections draws on ONS information contained within the 2010- and 2011-based Subnational Population Projections (SNPP) and the 2011-based CLG Household Projections. In particular we have used the SNPP to look at fertility rates, mortality rates and the profile of in- and out-migrants (by age and sex).

Projections Run

2.4 As part of this assessment we have run nine projections to assess how the population and labour supply/employment might change under different assumptions. The projections can broadly be split into three categories a) demographic (PROJ 1 to 4), b) economic-led (PROJ A and B) and c) component (PROJ Y and Z). The nine projections run are listed below with a brief description of each following – all projections cover the period from 2011 to 2031:

Figure 2: Suite of Projections Run

Type of Projections	Projections Run
Demographic-Driven	• PROJ 1 (Linked to 2010- and 2011-based SNPP) • PROJ 2 (SNPP adjusted) • PROJ 2 (10-year migration trends) • PROJ 3 (5-year migration trends)
Economic-Driven	• PROJ A (Labour supply) • PROJ B (Labour demand) • PROJ C (Experian (updated))
Component Projections	• PROJ Y (Zero Net Migration) • PROJ Z (Zero Employment Growth)

2.5 In considering future demographic trends and housing requirements, the starting point is the latest subnational projections (SNPP) (PROJ 1). Due to new information being available since the SNPP was published differences in inputs can be identified (PROJ 2). The housing requirements arising from the demographic projections are particularly sensitive to assumptions around migration. PROJ 3 and PROJ 4 consider alternative scenarios for migration, based on trends over the last 5 and 10 years.

2.6 The NPPF emphasises the alignment of housing and economic strategies in local plans. Projections A and B consider scenarios for employment growth and the potential level of housing which might be required to support this. Employment growth at a district-level is difficult to forecast accurately and both this, and the implications of employment growth on demography and the housing market, will be sensitive to a range of factors. These are discussed later in the report.

2.7 The 'component' projections are developed to aid understanding of demographic dynamics but do not represent an assessment of 'demand' for homes *per se*.

PROJ 1 (linked to ONS 2010- and 2011-based SNPP)
PROJ 2 (SNPP Updated)

2.8 Our first two projections use information in the ONS 2010- and 2011-based Sub-National Population Projections (SNPP). 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 PROJ 1 models the exact assumptions in the most recent (2011-based) SNPP and the 2011-based CLG household projections. Because these projections only run to 2021 assumptions have been made for the period 2021-31. The key assumptions are that the 2010-based SNPP are relevant (suitably rebased to be consistent with the 2011-based figures) and that headship rates will continue on the trend showing by CLG for the period 2011-21. This projection can be seen as setting up an initial baseline position prior to interrogation of the background data feeding into this analysis (mainly around migration).

2.11 When comparing the migration trends that were used to construct the 2010- and 2011- based SNPP with trends now shown in the April 2013 release of mid-year population estimtes is became apparent that ONS had either under or over-recorded past migration when compared with that which was subsequently shown to have happened (based on an understaning of inter-censal population change and levels of natural change (births minus deaths)).

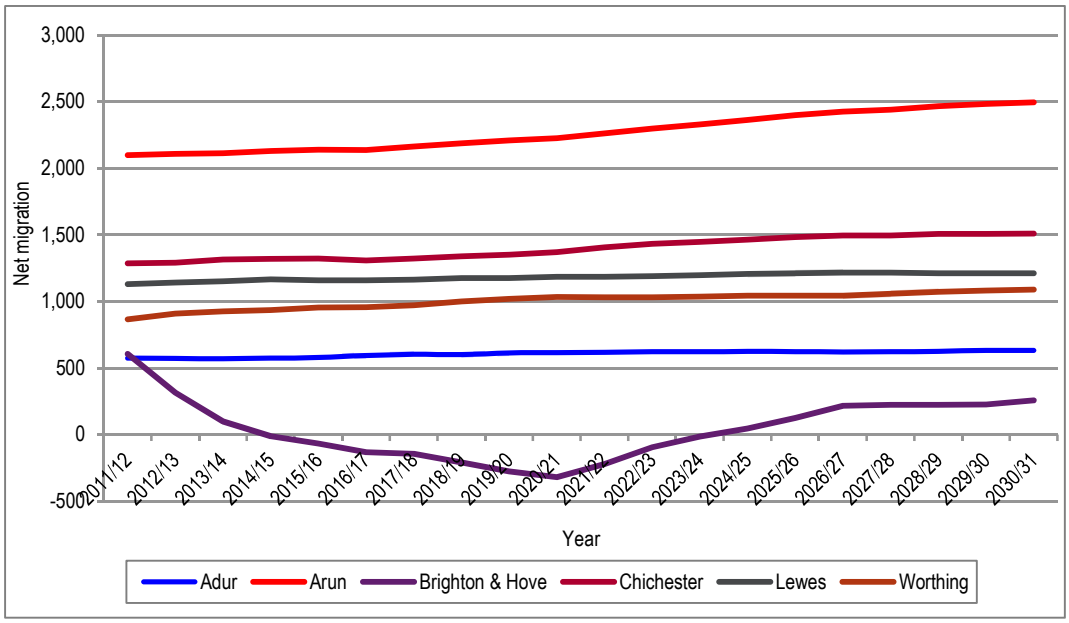
2.12 Past estimtes of migration had typically under-estimted net migration to Brighton & Hove (and to a lesser extent Worthing) with over-estimtations being seen in the other four areas.

2.13 As a result of having access to the detailed ONS revised mid-year population estimtes we have sought to remodel migration on the basis of more up-to-date information. This is discussed in detail in Appendix 1 of this document. Essentially we have revised the start point of the SNPP prpojections (2011/12) top be more in line with trends observed over the previous 5-years. This also takes account of any apparent under- or over-estimtion of net migration in this period. From this data we have therefore developed a second projection (PROJ 2) which uses the core assumptons in the 2011-based SNPP (e.g. about how migration patterns might change in the future) but from a slightly different position in 2011/12.

2.14 The figures below show the levels of net migration assumed by our projections linked to the SNPP from 2011/12 to 2030/31. In most areas the level of net migration is expected to rise slightly over time with the exception being in Brighton & Hove where year-on-year figures can be more variable. When comparing the two charts (for PROJ 1 and PROJ 2) the most notable difference is in the case of Brighton & Hove which shows a much higher assumed level of net migration throughout the period. This difference is due to the new mid-year population estimates suggesting that net migration had been under-recorded by around 1,200 people per annum over the past five years.

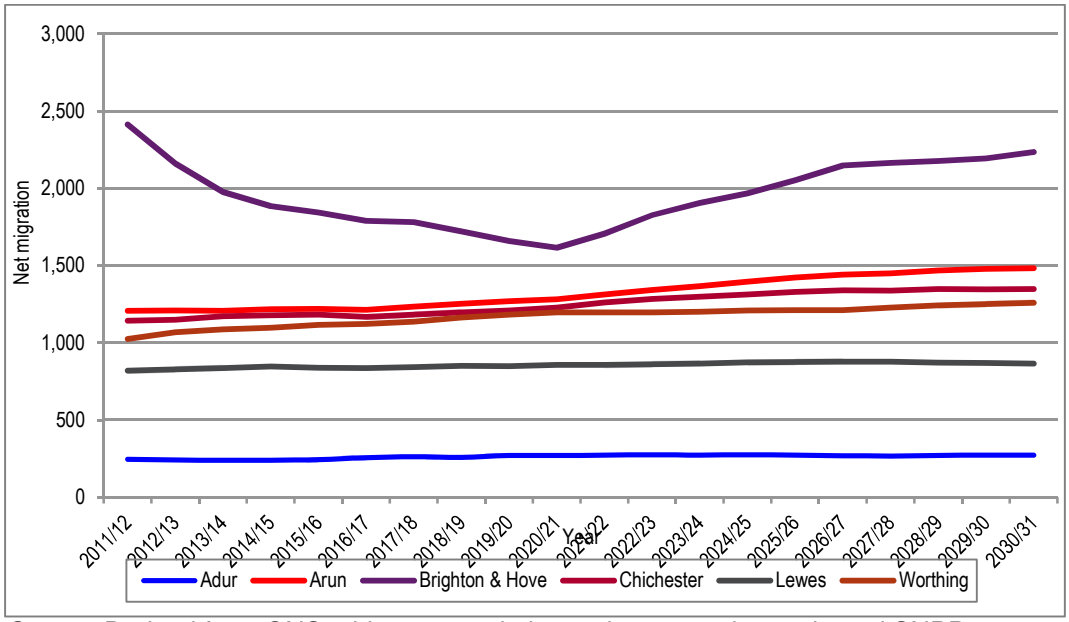
2.15 Taking the period studied as a whole the projections suggest an average net in migration of between about 6,500 (PROJ 1 – SNPP) and 6,800 (PROJ 2 – SNPP updated). The key difference between these two projections is that PROJ 2 takes account of Census data about population change from 2001 to 2011 whilst PROJ 1 is based on ONS information before a rebasing of data had taken place.

Figure 3: PROJ 1 (SNPP) net migration assumptions 2011/12 to 2030/31



Source: Derived from ONS mid-year population estimates and 2011-based SNPP

Figure 4: PROJ 2 (SNPP updated) net migration assumptions 2011/12 to 2030/31



Source: Derived from ONS mid-year population estimates and 2011-based SNPP

PROJ 3 (10-year migration trends)
PROJ 4 (5-year migration trends)

2.16 Our second two projections look at recorded trends in migration over the past ten (and five) years. These projections are comparable with PROJ 1 and PROJ 2 in the Coastal West Sussex SHMA of 2012. The figure below shows estimated net migration into each District from 2001/2 to 2010/11. The figures have been taken from ONS Mid-Year Population Estimates taking into account the 2011 Census. The figures used are for the 'migration and other changes' category in the ONS data which reflects an adjustment for over or under-estimates of net migration levels over the past decade.

2.17 The data shows that the figures for the sub-region are quite consistent over time with net migration ranging from between about 4,800 and 7,900 in any year. Sub-regionally, the trend is in a slightly upwards direction with the average level of net migration over the past five years being about 1,000 higher than in the period from 2001 to 2006. At a more local level however there is considerable variation in the data. Brighton & Hove in particular goes from having small levels of net out-migration from 2001 to 2004 to notable levels of net in-migration from 2004/5 onwards. Arun on the other hand has seen levels of net migration drop quite notably from in excess of 2,000 per annum at the start of the decade down to more like 1,000 over the past few years. Other areas tend to show less variation when comparing the past five years with the five years prior to that.

2.18 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 in-migration of 6,371 people with a higher figure (of 6,865) if we look at 5-year trends (2006-11).

2.19 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. We would however note some caution with respect to constant migration in Brighton & Hove given that the SNPP does suggest quite some variation over time which will largely be linked to the population age structure of the City which is quite different to other parts of the study area.

2.20 It is also noteworthy in other parts of the study-area that the SNPP is expecting to see an increase in net migration moving forward to 2031. There is some logic to this given that as populations age there will be more older people – such people are typically less migrant and will therefore have a downward impact on out-migration. At the same time, growing populations elsewhere (and where ageing is less pronounced) will potentially drive an increase in in-migration. Hence, a growing level of net migration in areas other than Brighton & Hove (as generally seen in the SNPP) can be considered as realistic and therefore some caution should be applied when considering the outputs of a constant migration forecast.

2.21 Regardless of the period used the figures are broadly similar to the overall average contained within the 2011-based SNPP and our revised SNPP position (which as seen above are 6,500 and 6,800 per annum respectively).

Figure 5:Past trends in Net In-Migration

Year	Adur	Arun	Brighton & Hove	Chichester	Lewes	Worthing	Sub region
2001/2	511	2,437	-305	1,041	911	1,172	5,767
2002/3	87	2,093	-21	927	635	1,059	4,780
2003/4	154	2,541	-371	1,091	818	1,124	5,357
2004/5	-2	1,654	2,430	964	265	1,056	6,367
2005/6	679	1,669	2,074	1,214	569	893	7,098
2006/7	318	1,693	1,778	1,289	793	1,126	6,997
2007/8	285	1,322	2,862	1,499	855	1,055	7,878
2008/9	342	1,009	2,598	911	783	632	6,275
2009/10	184	1,253	2,681	1,172	1,018	1,065	7,373
2010/11	91	845	2,222	763	648	1,237	5,806
Average (last ten years)	265	1,652	1,595	1,087	730	1,042	6,371
Average (last five years)	244	1,224	2,428	1,127	819	1,023	6,865

Source: ONS

PROJ A (Labour supply)
PROJ B (Labour demand)
PROJ C (Experian Updated)

2.22 To inform the assessment of future housing need and demand within the SHMA Update, GL Hearn commissioned econometric forecasts from Experian. The forecasts overlay the economic structure and past performance of local economies with Experian's macro-economic forecasts as at March 2012.

2.23 Clearly there are a range of factors which could influence future economic performance and this affects the level of uncertainty associated with any long-term forecasting. Recent economic performance and events in the Eurozone heighten this uncertainty and thus the error margin associated with econometric forecasts. It should also be borne in mind that the Experian economic forecasts do not take into account 'economic strategy' initiatives or key development projects which may influence future performance (in so far as their impact differs from previous initiatives or projects). The forecasts do however provide an up-to-date view regarding economic performance which takes account of Government's current spending plans, recent macro-economic performance and potential.

2.24 The economic forecasts adopted are consistent with those in the SHMA. The Experian forecasts have been used to devise projections for labour supply taking account of existing commuting patterns (based on 2001 Census travel to work matrices between local authority areas). The projections thus take account of job growth not just in the functional Housing Market but wider areas to which there is a notable degree of commuting, including South Hampshire and London. This takes account of employment growth across the region and in London with a consistent % of people working in each local authority living in the Sussex Coast HMA local authorities as was the case in 2001.

2.25 Economic forecasts for areas outside of Coastal West Sussex (including Brighton and Hove and Lewes) are 2010 forecasts for other authorities in the South East prepared by Cambridge Econometrics for SEEDA and GLA 2011 forecasts for London. These however have a relatively moderate impact on labour supply forecasts in Coastal West Sussex.

2.26 Assumptions regarding growth in employment in PROJ A and PROJ B are set out below. PROJ B is comparable with PROJ 5 of the earlier Coastal West Sussex SHMA (2012). This projection is based on modelling employment growth on a 1:1 basis with changes in the resident population who are in employment. PROJ A takes account of commuting patterns to work out the likely growth in the resident workforce if commuting patterns remain the same. Hence in the case of Adur where there is a high level of out-commuting the job growth is forecasts as 2,220 but if commuting patterns remain the same then the number of residents in employment is likely to rise by a higher figure. The opposite of this is seen in Chichester which has net in-commuting.

Figure 6: Phasing of assumptions for employment growth (2011-2031)

Period	PROJ A Labour supply		PROJ B Labour demand	
	Annual	5-year total	Annual	5-year total
2011-2016	2,491	12,457	2,251	11,254
2016-2021	3,415	17,075	3,233	16,163
2021-2026	2,648	13,241	2,329	11,643
2026-2031	2,722	13,612	2,306	11,531
Total	56,385		50,591	
Adur	3,564		2,220	
Arun	10,502		7,630	
Brighton & Hove	17,785		16,440	
Chichester	10,799		11,540	
Lewes	7,373		6,791	
Worthing	6,362		5,970	

2.27 To bring the assessment as up-to date as possible an additional economic based scenario has been run to consider potential housing requirements. This is based on a Spring 2013 Experian forecasts (PROJ C). This is broadly similar to the above forecasts although a slightly different approach has been taken in converting job growth into the likely growth in the number of residents in employment.

2.28 It is important to distinguish between the number of residents in employment (which is the output of the projections in this report) and the number of jobs. The two will be slightly different due to a number of people 'double-jobbing' and because of commuting patterns (i.e. not all new jobs in an area will be filled by local residents whilst some residents in employment will work outside their local authority area).

2.29 To convert the number of jobs into the likely change in the number of residents in employment the analysis has looked at a simple comparison between the number of residents in employment in 2011 (as evidenced through the 2011 Census) and the number of jobs. Taking Adur for example the 2011 Census suggested that there were 29,356 people working compared with an estimate of 21,465 jobs. The number of residents in employment is therefore around 1.37 times the number of jobs. The job growth figures for modelling purposes have therefore been moderated by a factor of 1.37 with this figure being held constant for the whole period to 2031.

2.30 The table below therefore shows the job growth under this additional scenario and the estimated change in the number of residents in employment. The data shows for the whole study area that the forecast increase in residents in employment is very similar to the figure derived under PROJ A (Labour supply) although the distribution between different areas is slightly different.

Figure 7: Phasing of assumptions for employment growth (2011-2031) – PROJ C

Period	Jobs		Residents in employment	
	Annual	5-year total	Annual	5-year total
2011-2016	3,295	16,473	3,413	17,065
2016-2021	2,980	14,898	3,142	15,712
2021-2026	2,285	11,423	2,373	11,867
2026-2031	2,190	10,950	2,274	11,372
Total	53,744		56,017	
Adur	2,249		3,076	
Arun	8,567		11,532	
Brighton & Hove	20,255		20,301	
Chichester	12,779		10,617	
Lewes	3,184		3,824	
Worthing	6,708		6,667	

PROJ W (Zero Net Migration)
PROJ X (Zero Employment Growth)

2.31 The next two 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. The component projections aim to aid understanding of demographic dynamics rather than provide an assessment of future housing needs per se. These projections are comparable with PROJ 3 and PROJ 4 of the 2012 Coastal West Sussex SHMA.

2.32 The first projection looks at housing requirements if there were to be no net migration into the District 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). In- and out-migration in this projection balance one another out.

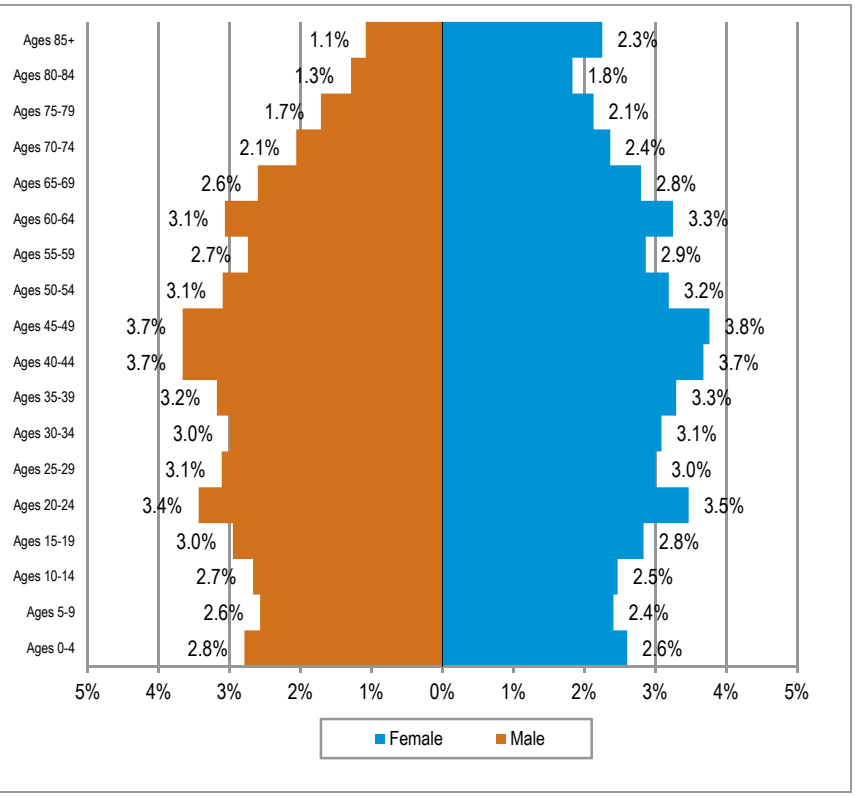
2.33 The second 'component' projection looks at what level of housing growth would be required to achieve stable employment levels. Within this projection (and indeed all other projections) we have also looked at the impact of the economic downturn on the number of people in employment and considered 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.

Baseline Population

2.34 The baseline for our projections is taken to be 2011 with the projection run for each year over the period up to 2031. The estimated population profile as of 2011 has been taken from the 2011-based SNPP. The overall population in 2011 was estimated to be 800,674 with slightly more females than males.

Figure 8:Population of Study Area – 2011

Age group	Male	Female
Ages 0-4	22,360	20,851
Ages 5-9	20,558	19,298
Ages 10-14	21,380	19,785
Ages 15-19	23,640	22,716
Ages 20-24	27,507	27,800
Ages 25-29	24,916	24,086
Ages 30-34	24,022	24,728
Ages 35-39	25,450	26,396
Ages 40-44	29,309	29,449
Ages 45-49	29,322	30,137
Ages 50-54	24,787	25,547
Ages 55-59	21,966	22,958
Ages 60-64	24,541	26,025
Ages 65-69	20,823	22,399
Ages 70-74	16,494	18,943
Ages 75-79	13,699	17,071
Ages 80-84	10,327	14,687
Ages 85+	8,640	18,057
All Ages	389,741	410,933



Source: 2011-Mid Year Population Estimates

2.35 The table and figure below show the population distribution in each local authority area in broad 15-year age categories. The data shows the highest population (of around 273,000) to be in Brighton & Hove with the smallest population (of about 61,000 being in Adur). The population of the whole sub-region in 2011 was around 800,000.

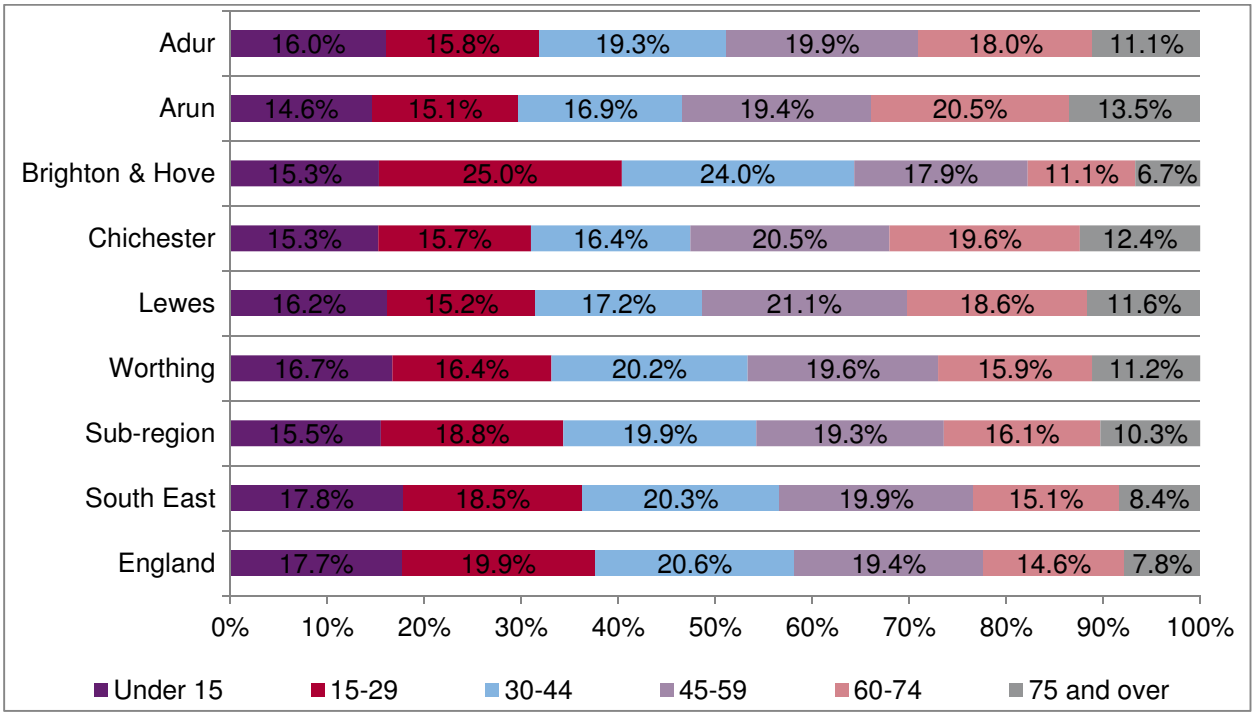
2.36 When looking at the population age structure the data shows a slightly older profile to both the regional and national average. There are however some notable differences within different local authorities. Brighton & Hove in particular has a young population with 40% of the population aged under 30 (compared with a sub-regional average of 34%). In contrast Arun and to a lesser extent Chichester have much older populations. In Arun some 34% of the population is aged 60 or over compared with sub-regional figure of 26% and just 18% in Brighton & Hove.

Figure 9:Comparison of population profile in different local authorities (2011)

Age group	Adur	Arun	Brighton & Hove	Chichester	Lewes	Worthing	Sub region
Under 15	9,844	21,860	41,799	17,387	15,797	17,545	**124,232**
15-29	9,674	22,656	68,323	17,949	14,855	17,208	**150,665**
30-44	11,810	25,337	65,401	18,740	16,819	21,247	**159,354**
45-59	12,184	29,092	48,875	23,371	20,590	20,605	**154,717**
60-74	11,024	30,658	30,282	22,395	18,192	16,674	**129,225**
75+	6,798	20,208	18,272	14,153	11,331	11,719	**82,481**
Total	**61,334**	**149,811**	**272,952**	**113,995**	**97,584**	**104,998**	**800,674**

Source: 2011-Mid-Year population estimates

Figure 10: Population Age Profile (2011)



Source: 2011-Mid-Year population estimates

Fertility and Mortality Rate Assumptions

2.37 For modelling of fertility we have used the rates contained within the ONS 2010-based population projections – in all areas fertility rates are expected to increase very slightly in the short-term before dropping quite notably moving towards the end of the projection period. 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.

2.38 The table below shows figures for the total fertility rate (the expected average number of live births per woman throughout their childbearing lifespan) and life expectancy (e0) in each area for key dates at the start and end of the projection period. The data suggests a lower fertility rate in Brighton & Hove with all other areas being broadly similar. Life expectancy also shows some variation between areas with Lewes in particular having higher life expectancy than other areas.

2.39 We have no evidence to suggest that either the fertility or mortality estimates used by ONS are unreasonable and note that the expected figures and changes in the sub-region are consistent with past trend data and future expected patterns as published by ONS on a national basis.

Figure 11: Fertility and mortality assumptions (key periods)

Age group	Adur	Arun	Brighton & Hove	Chichester	Lewes	Worthing
TFR – 2011/12	2.10	2.05	1.68	2.02	2.03	2.05
TFR – 2030/31	1.91	1.85	1.52	1.85	1.86	1.86
Male e0 – 2011/12	78.7	79.8	77.7	80.0	81.2	78.6
Male e0 – 2030/31	82.4	83.5	81.9	83.5	84.9	82.2
Female e0 – 2011/12	82.5	83.7	82.9	83.8	84.7	82.8
Female e0 – 2030/31	85.7	86.9	86.2	86.9	88.0	86.1

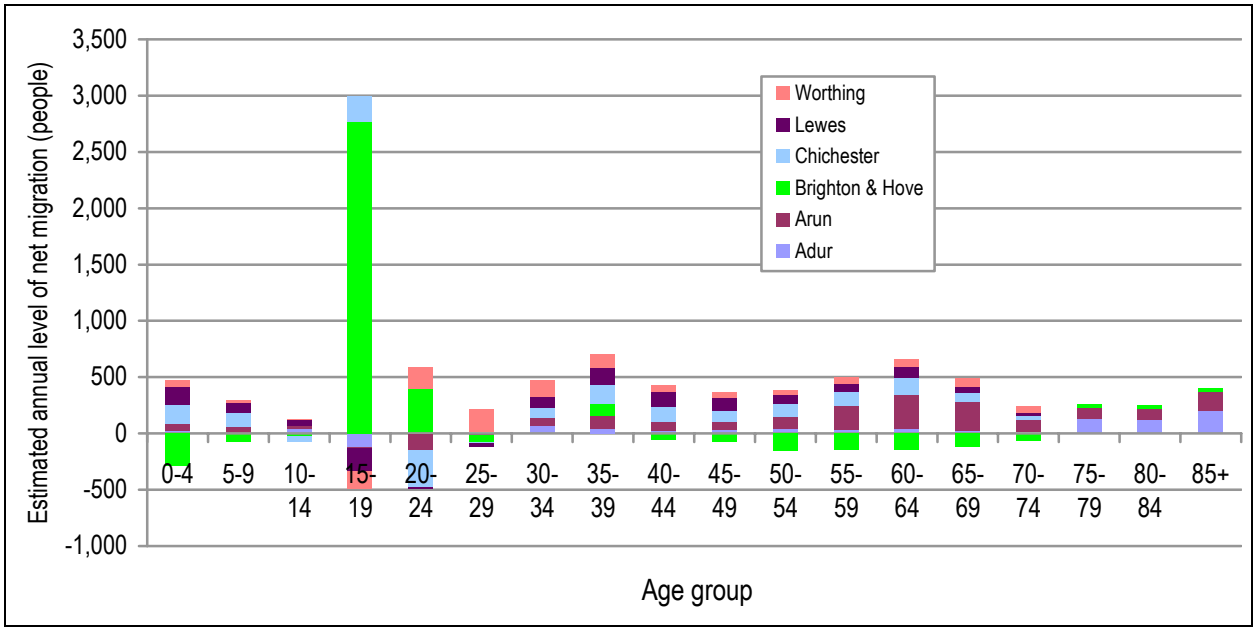
Source: ONS 2010-based SNPP

Migration Assumptions

2.40 For the purposes of understanding the profile of migrants we have again drawn on the ONS 2010-and 2011-based sub-national population projections. Over the period from 2011 to 2031 our SNPP updated projection (PROJ 2) shows an average annual level of net in-migration of about 6,800 people. The data (shown below) clearly shows that the most important age groups are from 15 to 24. The high level of net in-migration of those aged 15-19 is driven by in-migration to Brighton & Hove and to a lesser extent Chichester – driven by the student population. All of the other four areas actually show a net out-migration of the population aged 15 to 19. Data in Appendix X shows figures for each of the individual local authority areas (which also shows in- and out-migration levels for each local authority).

2.41 When projecting migration patterns for the various projection scenarios 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.

Figure 12: Estimated Annual level of Net Migration by Five-Year Age Band (2011-2031)



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

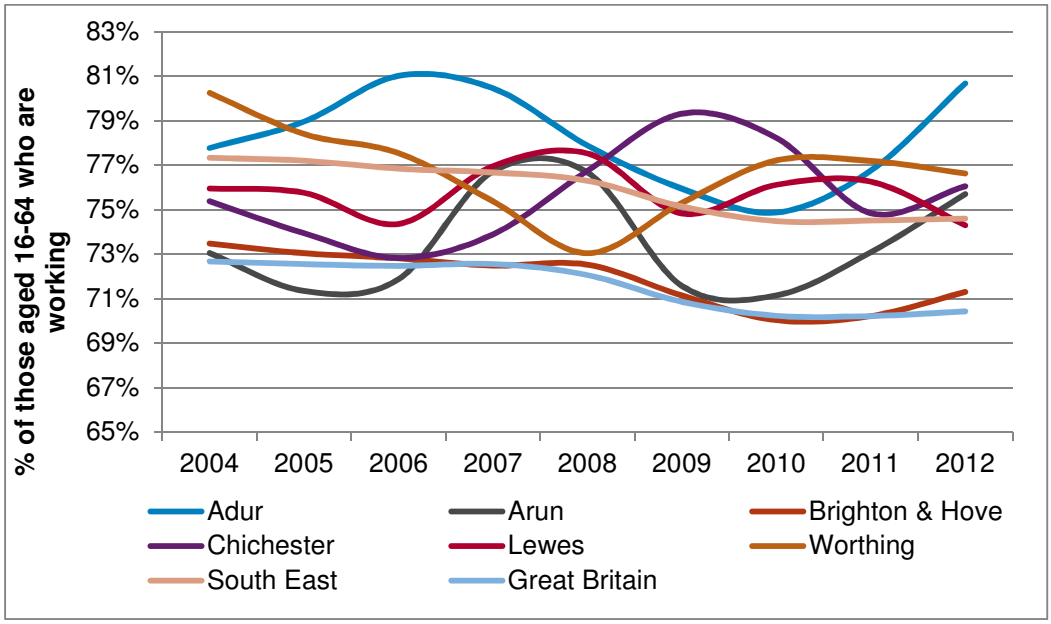
Employment Rate Assumptions

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 night change under each of our main projections and also to consider the demographic implications of different levels of employment growth.

2.43 The first stage of the process was to establish working patterns in each local authority. The figure below shows data on the proportion of people living in each area 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 been quite variable over time – generally the trend has been downward although for a number of authorities the data shows an upward trend (particularly over the past couple of years). Overall, it is quite difficult to pick out a real trend from the district-level data. In both the South East and Great Britain employment rates can more clearly be seen to have dropped along with a levelling off through 2012.

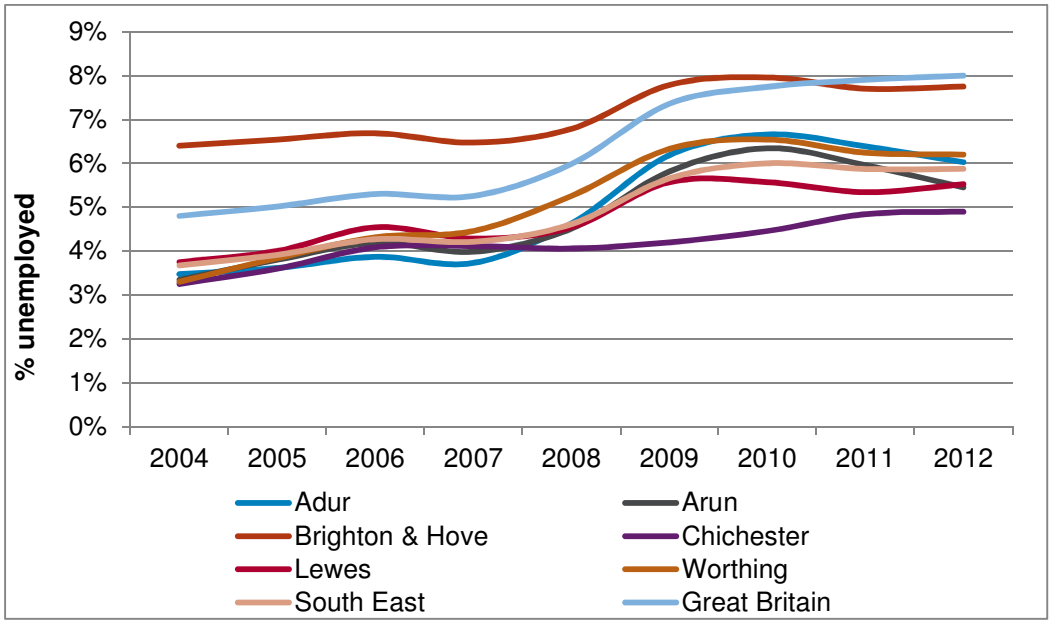
Figure 13: Proportion of Population Working



Source: Annual Population Survey

2.45 Part of the problem with the Annual Population Survey source used above is that data is based on only a sample of the population and therefore figures can be quite variable at smaller area level. We have therefore also drawn on data about unemployment to give an indication of how employment rates may have changed over the past few years. In all areas this analysis shows a clearer trend towards increased unemployment with figures going up in all areas (increases in unemployment typically in the range of 2%-3% depending on area).

Figure 14: Unemployment rate



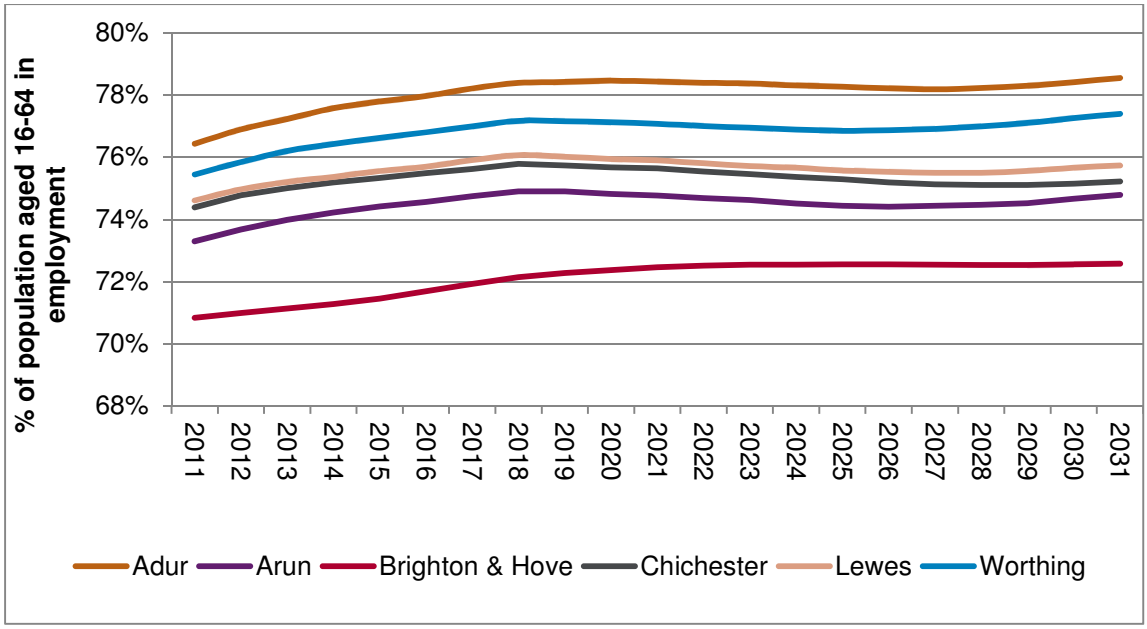
Source: Annual Population Survey (modelled data)

2.46 Using the above data to provide us with an overall picture of working patterns we also drew on 2001 and 2011 Census data and information from the Annual Population Survey to inform the distribution of workers by age and sex. In projecting forward we have assumed that there is a latent labour force that could be brought back into work as a result of reducing unemployment. This improvement is assumed to occur fairly consistently through the projection period to 2031.

2.47 The modelling also includes provision for potential increases in rates due to changes in pensionable age – these additional changes have been based on studying the age-specific 'drop-off' in employment as people get older. The modelled improvement to employment rates will have the effect of reducing unemployment.

2.48 The figure below shows how employment rates are projected to change over the period studied. In all of the authorities the data shows a short-term improvement to about 2018 – this is mainly due to changes in pensionable age – following this the rate levels off or drops down slightly – this is due to age structure changes with a greater number of people expected to be in some of the older 'working' age groups which typically have lower employment rates. Beyond about 2027 there is expected to be some increase in employment rates in most areas – this is again linked to demographic change with all areas expected to see population increases in some of the key working age groups. Overall employment rates are highest in Adur and lowest in Brighton & Hove.

Figure 15: Projected changes in Employment Rates



2.49 By applying these rates to our population figures it is estimated that in mid-2011 there were 386,050 people in employment across the sub-region – this figure has been derived by analysis of 2011 Census data and is consistent with recent figures provided in the Annual Population Survey.

Headship Rate Assumptions

2.50 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 2011-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.

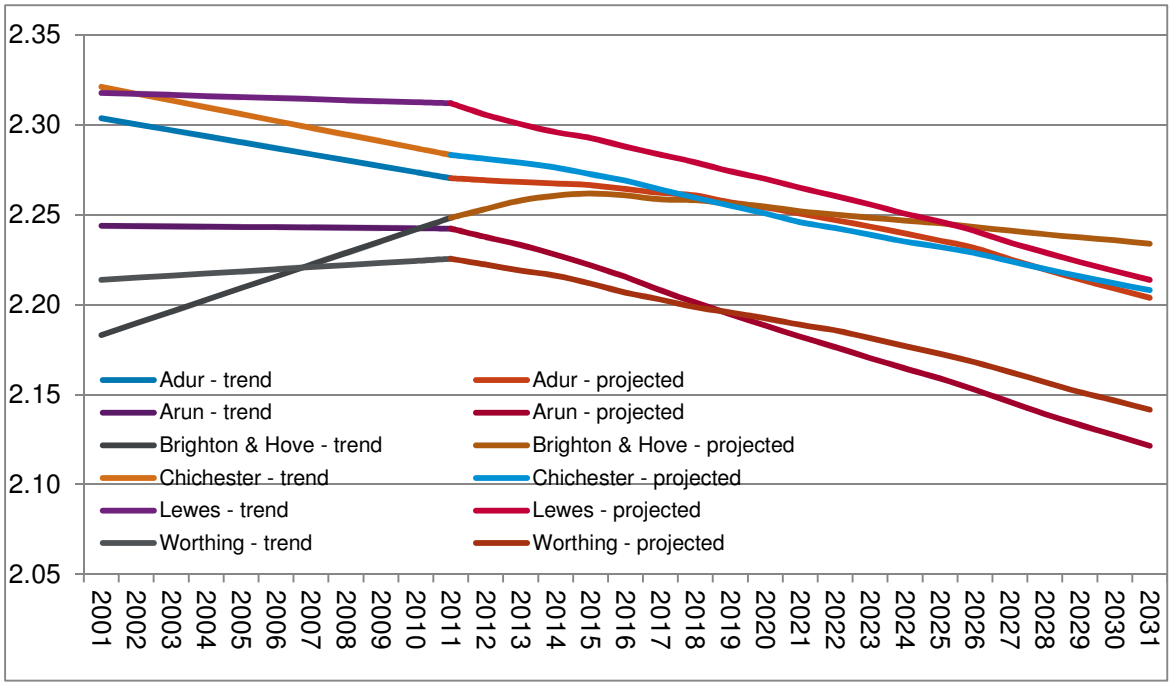
2.51 Headship rates can be described in their most simple terms as the number of people who are counted as heads of households (or in this case the more widely used Household Reference Person (HRP)).

2.52 The figure below shows the estimated average household size in each area in 2001 and 2011 along with estimated household sizes derived from CLG projections. The data shows in Chichester and Adur that household sizes have been declining and are expected to continue to do so moving forward (albeit at a slightly lesser rate). In Arun, Lewes and Worthing household sizes are roughly the same in 2011 and they were in 2001 – in the future however, these are expected to decline which is more consistent with a longer-term trend of seeing smaller household sizes.

2.53 In Brighton & Hove the situation is somewhat different; over the past decade we have seen a notable increase in households sizes and this trend is expected to continue for a few years into the future. Post about 2015 it is expected that household sizes in Brighton & Hove will start to decline although the rate of change is far less pronounced when compared with other parts of the sub-region.

2.54 For the purposes of the projection across the whole sub-region it is assumed that average household sizes start at about 2.26 in 2011 and reduce down to 2.19 in 2031 (although exact figures do vary depending on the projection being run).

Figure 16: Past and projected trends in Average Household Size



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

2.55 When applying our headship rates to the population data we derive an estimated number of households in mid-2011 of 354,500. This figure is consistent with the number of households shown in the 2011 Census and the 2011-based CLG household projections.

Allowance for Vacant and Second Homes

2.56 In converting an estimated number of households into requirements for additional dwellings a small vacancy allowance has also been factored in which is normal to allow for movement of households between properties. For the analysis it is assumed that around 3% of additional stock will be vacant which should be reflective of what can be achieved in new housing stock. This figure also includes an allowance for growth in second home ownership.

3 PROJECTION OUTPUTS FOR SUSSEX COAST HMA

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 2011 to 2031 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 the figure below.

Figure 17: Description of Projections used for Demographic Modelling

	Projection	Description
Demographic Driven	PROJ 1	Linked to 2010- and 2011-based SNPP
	PROJ 2	SNPP (updated)
	PROJ 3	10-year migration trends
	PROJ 4	5-year migration trends
Economic Driven	PROJ A	Labour supply
	PROJ B	Labour demand
	PROJ C	Experian (updated)
Component	PROJ Y	Zero net migration
	PROJ Z	Zero employment Growth

Population Projections

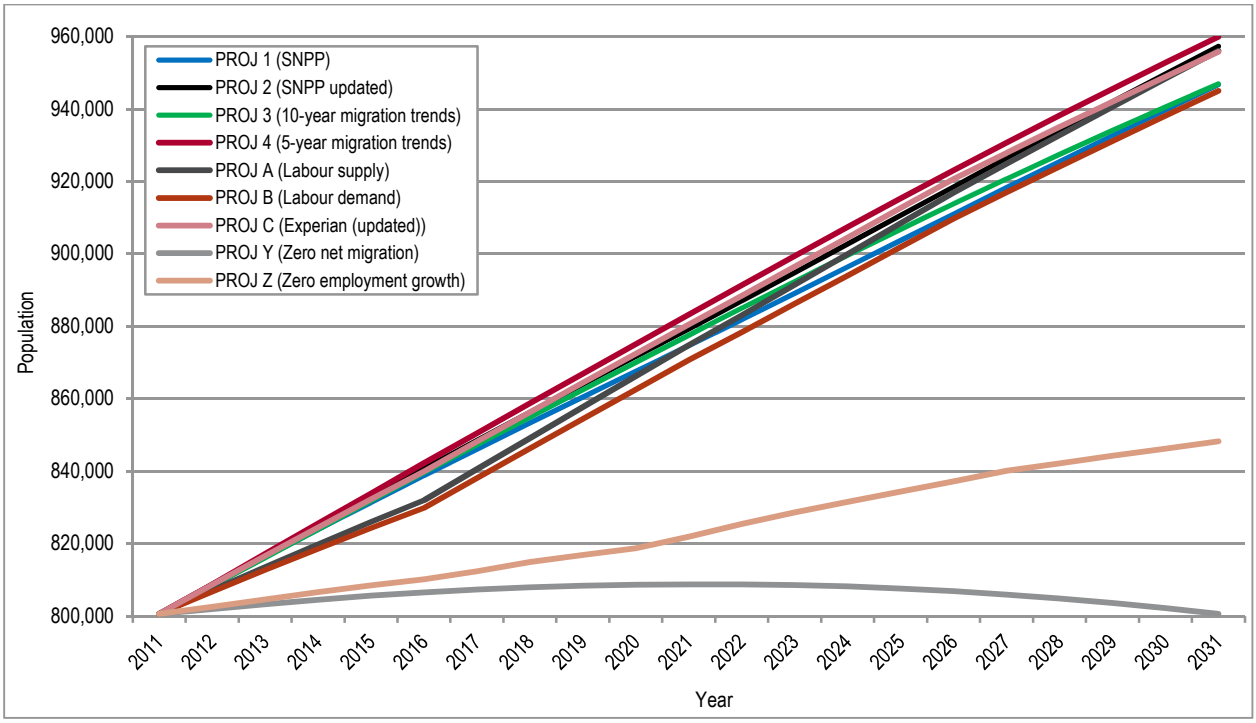
3.2 The figures below show the expected growth in population under each of the nine scenarios. The data shows that the two demographic projections linked to the SNPP (PROJ 1 and 2) show population growth of between 18% and 20% whilst the demographic projections linked to past migration trends (PROJ 3 and 4) are also within this range (18%-20%). In numerical terms this represents an increase of between about 146,000 and 159,300 people.

3.3 The three economic projections (PROJ A to C) again show similar levels of population growth to the demographic projections ranging from 18% to 19% (144,400 to 155,400 more people). With no net migration we would expect to see virtually no change in population over time whilst to maintain employment at current (2011) levels would require a population increase of 6% - this is due to the ageing of the population.

Figure 18: Population Estimates 2011 to 2031

	2011	2016	2021	2026	2031
PROJ 1 (SNPP)	800,674 0.0%	838,833 4.8%	874,684 9.2%	910,985 13.8%	946,675 18.2%
PROJ 2 (SNPP updated)	800,674 0.0%	840,751 5.0%	879,264 9.8%	918,518 14.7%	957,266 19.6%
PROJ 3 (10-year migration trends)	800,674 0.0%	839,569 4.9%	877,545 9.6%	913,805 14.1%	946,896 18.3%
PROJ 4 (5-year migration trends)	800,674 0.0%	842,213 5.2%	883,272 10.3%	923,045 15.3%	959,930 19.9%
PROJ A (Labour supply)	800,674 0.0%	832,025 3.9%	874,731 9.2%	916,879 14.5%	956,034 19.4%
PROJ B (Labour demand)	800,674 0.0%	829,851 3.6%	870,715 8.7%	909,762 13.6%	945,024 18.0%
PROJ C (Experian (updated))	800,674 0.0%	839,972 4.9%	880,520 10.0%	920,684 15.0%	955,746 19.4%
PROJ W (Zero net migration)	800,674 0.0%	806,598 0.7%	808,793 1.0%	806,915 0.8%	800,634 0.0%
PROJ X (Zero employment growth	800,674 0.0%	810,207 1.2%	821,901 2.7%	837,208 4.6%	848,279 5.9%

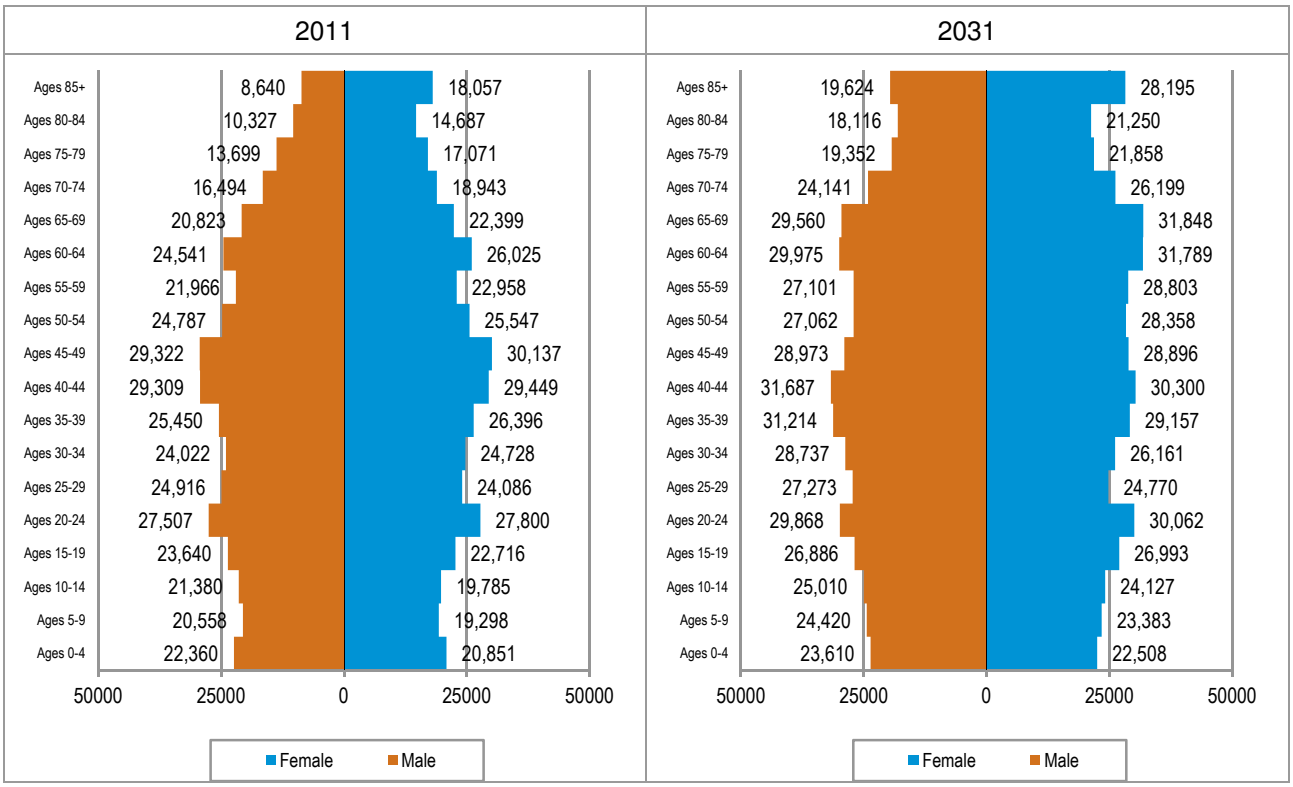
Figure 19: Population Change, 2011 – 2031



Changes to the Population Structure

3.4 With the changes shown above there will also be a change in the age/sex profile of the population. We have therefore looked in a bit more detail at population change under PROJ 2 (linked to the updated SNPP). The figure below shows population pyramids for 2011 and 2031. The 'pyramids' show the growth in population overall and highlight the ageing of the population with a greater proportion of the population expected to be in age groups aged 60 and over (and even more so for older age groups) - in particular the oldest age group (85+) shows an increase from 26,700 people to 47,800.

Figure 20: Distribution of Population 2011 and 2031 (PROJ 2 – updated SNPP)



3.5 The figure below summarises the findings for key (15 year) age groups. The largest growth will be in people aged over 60. In 2031 it is estimated that there will be 301,900 people aged 60 and over. This is an increase of 90,200 from 2011, representing growth of 43%. The population aged 75 and over is projected to increase by an even greater proportion, 56%.

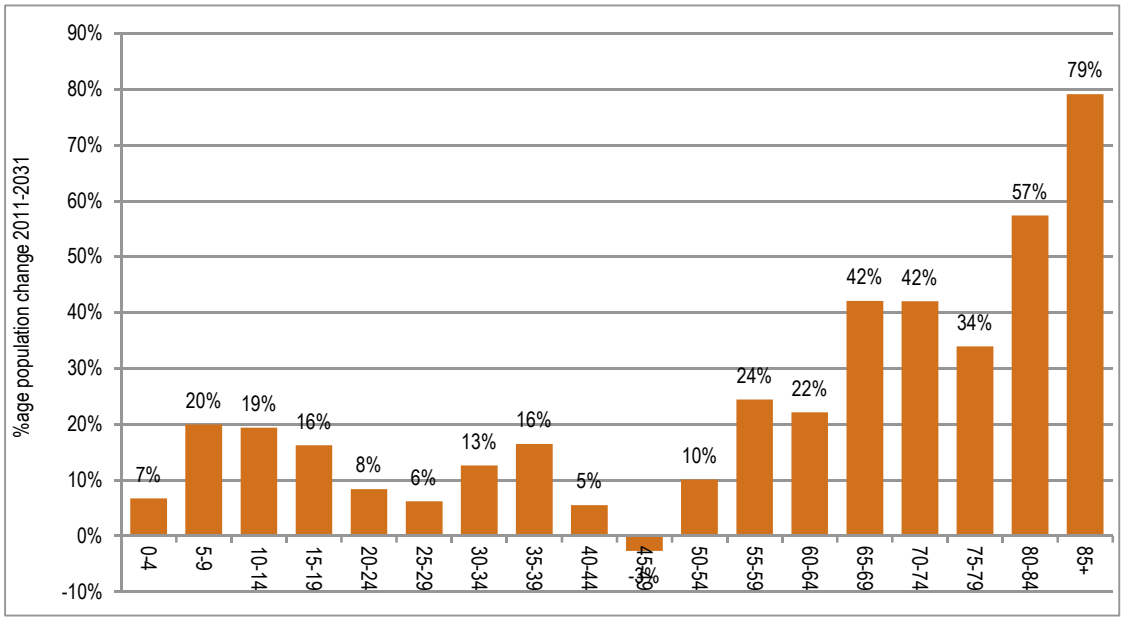
3.6 Looking at the other end of the age spectrum we can see that there are projected to be around 15% more people aged under 15 with more moderate increases seen for all other age groups.

Figure 21: Population Change 2011 to 2031 by Fifteen Year Age bands

Age group	Population 2011	Population 2031	Change in population	% change from 2011
Under 15	124,232	143,059	18,827	15.2%
15-29	150,665	165,853	15,188	10.1%
30-44	159,354	177,256	17,902	11.2%
45-59	154,717	169,192	14,475	9.4%
60-74	129,225	173,511	44,286	34.3%
75+	82,481	128,396	45,915	55.7%
Total	800,674	957,266	156,592	19.6%

3.7 The figure below shows the percentage changes for each five year age group. The most stark trend is the increase in the population aged 85 and over (up 79%) which may have implications for future housing delivery as many of this group may require some form of specialist housing. In contrast we see only moderate increases (and some decreases) in most age groups up to age 65.

Figure 22: Forecast Population Change by Age Group 2011 – 2031



Changes in Labour Supply & Employment

3.8 The figures below show the estimated number of people living in the sub-region who are working under each of our nine projections. The two demographic projections linked to the SNPP (PROJ 1 and 2) show increases in the number of residents who are working of between 13% and 15% whilst the demographic projections linked to past trends (PROJ 3 and 4) are very slightly higher with increases in the number of residents who are working ranging from 14% to 16% (53,200 to 61,200 in numerical terms).

3.9 The three economic projections (PROJ A to C show forecast increases in the number of people working of between 13% and 15% - roughly the same as the two SNPP based projections. With no net migration we would expect to see a notable decline in the working population – this would fall from 386,000 people in 2011 to 362,800 in 2031 – a decrease of 6%.

Figure 23: Employment Estimates 2011 to 2031

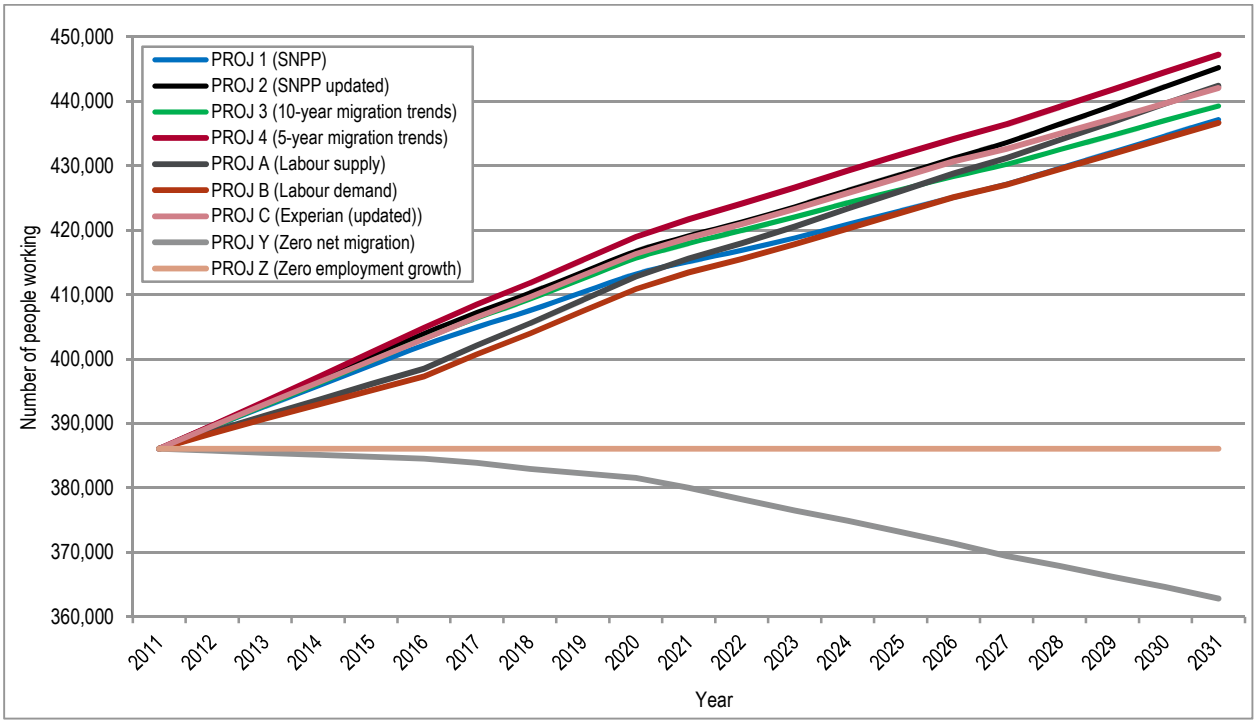
	2011	2016	2021	2026	2031
PROJ 1 (SNPP)	386,050 0.0%	402,147 4.2%	415,145 7.5%	425,103 10.1%	437,157 13.2%
PROJ 2 (SNPP updated)	386,050 0.0%	403,939 4.6%	419,115 8.6%	431,147 11.7%	445,249 15.3%
PROJ 3 (10-year migration trends)	386,050 0.0%	403,167 4.4%	417,969 8.3%	428,346 11.0%	439,273 13.8%
PROJ 4 (5-year migration trends)	386,050 0.0%	404,872 4.9%	421,710 9.2%	434,174 12.5%	447,219 15.8%
PROJ A (Labour supply)	386,050 0.0%	398,507 3.2%	415,582 7.6%	428,823 11.1%	442,435 14.6%
PROJ B (Labour demand)	386,050 0.0%	397,304 2.9%	413,467 7.1%	425,110 10.1%	436,641 13.1%
PROJ C (Experian (updated))	386,050 0.0%	403,115 4.4%	418,827 8.5%	430,695 11.6%	442,067 14.5%
PROJ W (Zero net migration)	386,050 0.0%	384,507 -0.4%	380,024 -1.6%	371,368 -3.8%	362,830 -6.0%
PROJ X (Zero employment growth	386,050 0.0%	386,050 0.0%	386,050 0.0%	386,050 0.0%	386,050 0.0%

3.10 A key issue is what weight should be attached to the economic-driven projections. The projections are sensitive to:

- changes in the proportion of people in different age groups in work;
- the balance of commuting in and out of each District;
- performance of different sectors within the local economy;
- the investment/disinvestment decision of individual businesses;
- enterprise and growth in the small business base within each District;
- The potential for 'double jobbing' where people can hold down more than one job.

3.11 There are multiple assumptions which feed into the projections and while they are important in considering issues regarding homes-jobs balance, in our view greater weight should be attached to the demographic-driven projections.

Figure 24: Employment Change, 2011 – 2031



Household Growth

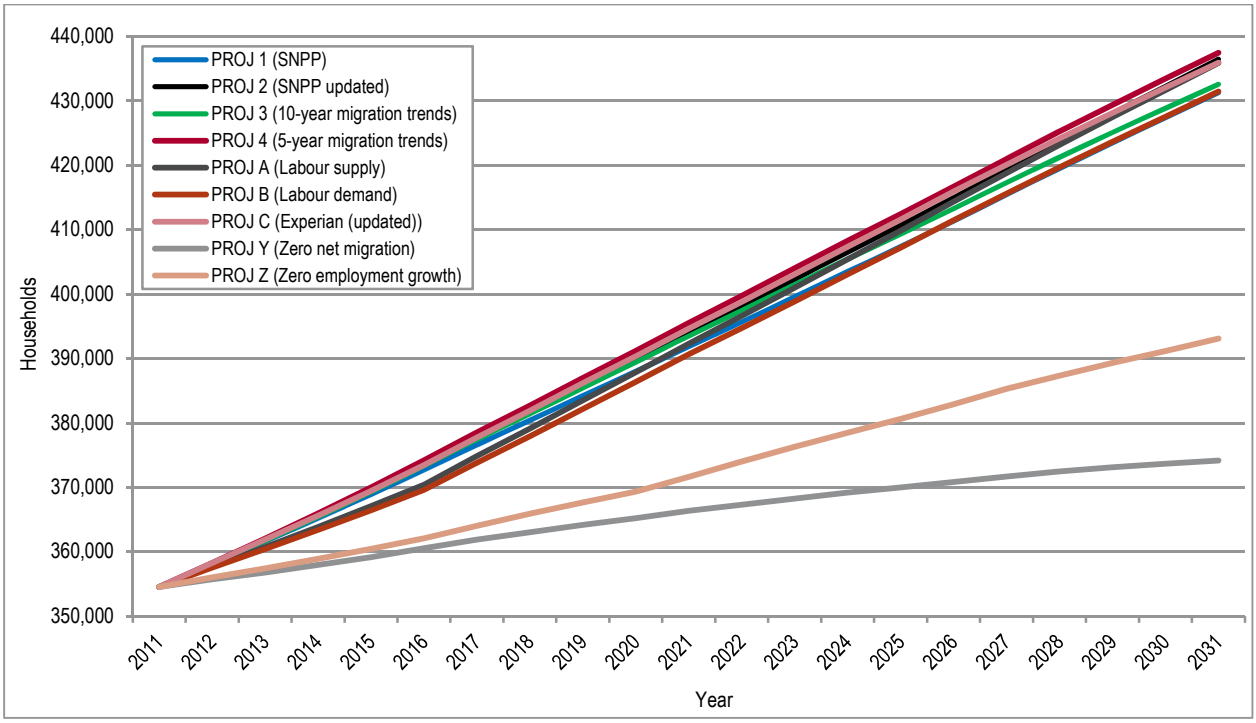
3.12 The figures below show the projected growth in the number of households under each of the nine scenarios. The two demographic projections linked to the SNPP (PROJ 1 and 2) show household growth of between 22% and 23% (76,700 to 81,900 additional households) between 2011-31 whilst figures derived under the demographic projections linked to past trends are broadly similar (household growth of between 78,000 and 83,000).

3.13 The economic projections (PROJ A to C) are again consistent with demographically-based projections with household growth in the range of 22% to 23% which is up to 81,400 more households. With no net migration we would expect to see an increase in households of 5.5% despite this projection showing no change in population. This is related to changes in the age structure of the population and how people of different ages occupy homes. To achieve stable employment levels it is expected that the number of households would need to increase by about 11%.

Figure 25: Household Estimates 2011 to 2031

	2011	2016	2021	2026	2031
PROJ 1 (SNPP)	354,537 0.0%	372,748 5.1%	391,877 10.5%	411,356 16.0%	431,269 21.6%
PROJ 2 (SNPP updated)	354,537 0.0%	373,714 5.4%	394,077 11.2%	414,976 17.0%	436,464 23.1%
PROJ 3 (10-year migration trends)	354,537 0.0%	373,352 5.3%	393,509 11.0%	413,289 16.6%	432,569 22.0%
PROJ 4 (5-year migration trends)	354,537 0.0%	374,226 5.6%	395,547 11.6%	416,683 17.5%	437,490 23.4%
PROJ A (Labour supply)	354,537 0.0%	370,453 4.5%	392,314 10.7%	414,363 16.9%	435,885 22.9%
PROJ B (Labour demand)	354,537 0.0%	369,581 4.2%	390,670 10.2%	411,486 16.1%	431,438 21.7%
PROJ C (Experian (updated))	354,537 0.0%	373,473 5.3%	394,664 11.3%	415,949 17.3%	435,925 23.0%
PROJ W (Zero net migration)	354,537 0.0%	360,536 1.7%	366,350 3.3%	370,825 4.6%	374,166 5.5%
PROJ X (Zero employment growth	354,537 0.0%	362,111 2.1%	371,636 4.8%	382,891 8.0%	393,092 10.9%

Figure 26: Household Change, 2011 – 2031



Growth in Dwellings

3.14 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 3% to all of the above figures to make estimated housing requirements with figures shown in the figure below.

Figure 27: Estimated Housing Numbers with 3% Vacancy Allowance (to 2031)

Projection variant	Annual household growth	Annual requirement with vacancy allowance	Requirement over 20 years
PROJ 1 (SNPP)	3,837	3,952	79,034
PROJ 2 (SNPP updated)	4,096	4,219	84,385
PROJ 3 (10-year migration trends)	3,902	4,019	80,372
PROJ 4 (5-year migration trends)	4,148	4,272	85,441
PROJ A (Labour supply)	4,067	4,189	83,788
PROJ B (Labour demand)	3,845	3,960	79,208
PROJ C (Experian (updated))	4,069	4,191	83,829
PROJ W (Zero net migration)	981	1,011	20,218
PROJ X (Zero employment growth)	1,928	1,986	39,712

4 SUMMARY OF PROJECTIONS BY LOCAL AUTHORITY

4.1 The series of tables below show summary outputs for each local authority under each of the projection scenarios. In each case the first table shows annual figures with the second one showing data for the full 20-year period. The initial two tables show summary results for the whole sub-region.

Sussex Coast HMA

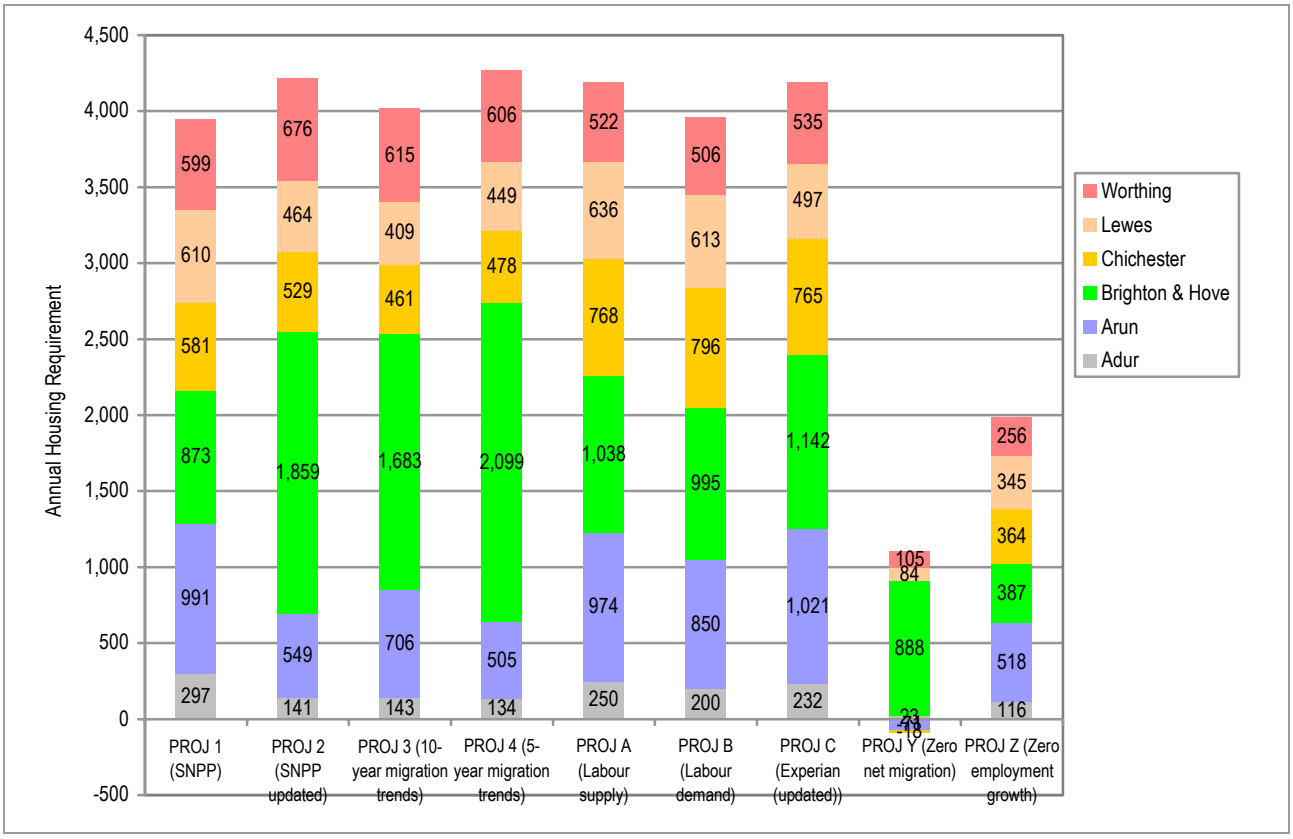
Figure 28: Summary of projections 2011 to 2031 – annual – sub-region

Projection	Population growth		Housing numbers		Employment growth	
	Per annum	% change	Per annum	% change	Per annum	% change
PROJ 1 (SNPP)	7,300	0.9%	3,952	1.1%	2,555	0.7%
PROJ 2 (SNPP updated)	7,830	1.0%	4,219	1.2%	2,960	0.8%
PROJ 3 (10-year migration trends)	7,311	0.9%	4,019	1.1%	2,661	0.7%
PROJ 4 (5-year migration trends)	7,963	1.0%	4,272	1.2%	3,058	0.8%
PROJ A (Labour supply)	7,768	1.0%	4,189	1.1%	2,819	0.7%
PROJ B (Labour demand)	7,217	0.9%	3,960	1.1%	2,530	0.7%
PROJ C (Experian (updated))	7,754	1.0%	4,191	1.1%	2,801	0.7%
PROJ X (Zero net migration)	-2	0.0%	1,011	0.3%	-1,161	-0.3%
PROJ Y (Zero employment growth)	2,380	0.3%	1,986	0.5%	0	0.0%

Figure 29: Summary of projections 2011 to 2031 – total – sub-region

Projection	Population growth		Housing numbers		Employment growth	
	Total	% change	Total	% change	Total	% change
PROJ 1 (SNPP)	146,001	18.2%	79,034	21.6%	51,107	13.2%
PROJ 2 (SNPP updated)	156,592	19.6%	84,385	23.1%	59,199	15.3%
PROJ 3 (10-year migration trends)	146,222	18.3%	80,372	22.0%	53,223	13.8%
PROJ 4 (5-year migration trends)	159,256	19.9%	85,441	23.4%	61,169	15.8%
PROJ A (Labour supply)	155,360	19.4%	83,788	22.9%	56,385	14.6%
PROJ B (Labour demand)	144,350	18.0%	79,208	21.7%	50,591	13.1%
PROJ C (Experian (updated))	155,072	19.4%	83,829	23.0%	56,017	14.5%
PROJ X (Zero net migration)	-40	0.0%	20,218	5.5%	-23,220	-6.0%
PROJ Y (Zero employment growth)	47,605	5.9%	39,712	10.9%	0	0.0%

Figure 30: Housing Requirements by Scenario (per annum)



Adur

Figure 31: Summary of projections 2011 to 2031 – annual – Adur

Projection	Population growth		Housing numbers		Employment growth	
	Per annum	% change	Per annum	% change	Per annum	% change
PROJ 1 (SNPP)	604	1.0%	297	1.1%	240	0.8%
PROJ 2 (SNPP updated)	213	0.3%	141	0.5%	34	0.1%
PROJ 3 (10-year migration trends)	218	0.4%	143	0.5%	36	0.1%
PROJ 4 (5-year migration trends)	194	0.3%	134	0.5%	24	0.1%
PROJ A (Labour supply)	484	0.8%	250	0.9%	178	0.6%
PROJ B (Labour demand)	358	0.6%	200	0.7%	111	0.4%
PROJ C (Experian (updated))	439	0.7%	232	0.8%	154	0.5%
PROJ X (Zero net migration)	-84	-0.1%	23	0.1%	-125	-0.4%
PROJ Y (Zero employment growth)	147	0.2%	116	0.4%	0	0.0%

Figure 32: Summary of projections 2011 to 2031 – total – Adur

Projection	Population growth		Housing numbers		Employment growth	
	Total	% change	Total	% change	Total	% change
PROJ 1 (SNPP)	12,078	19.7%	5,948	21.4%	4,793	16.3%
PROJ 2 (SNPP updated)	4,255	6.9%	2,829	10.2%	672	2.3%
PROJ 3 (10-year migration trends)	4,357	7.1%	2,868	10.3%	725	2.5%
PROJ 4 (5-year migration trends)	3,881	6.3%	2,677	9.6%	471	1.6%
PROJ A (Labour supply)	9,676	15.8%	5,000	18.0%	3,564	12.1%
PROJ B (Labour demand)	7,157	11.7%	3,991	14.3%	2,220	7.6%
PROJ C (Experian (updated))	8,773	14.3%	4,636	16.7%	3,076	10.5%
PROJ X (Zero net migration)	-1,682	-2.7%	451	1.6%	-2,494	-8.5%
PROJ Y (Zero employment growth)	2,948	4.8%	2,311	8.3%	0	0.0%

Arun

Figure 33: Summary of projections 2011 to 2031 – annual – Arun

Projection	Population growth		Housing numbers		Employment growth	
	Per annum	% change	Per annum	% change	Per annum	% change
PROJ 1 (SNPP)	1,768	1.2%	991	1.4%	539	0.8%
PROJ 2 (SNPP updated)	728	0.5%	549	0.8%	34	0.1%
PROJ 3 (10-year migration trends)	1,097	0.7%	706	1.0%	215	0.3%
PROJ 4 (5-year migration trends)	626	0.4%	505	0.7%	-17	0.0%
PROJ A (Labour supply)	1,720	1.1%	974	1.4%	525	0.8%
PROJ B (Labour demand)	1,430	1.0%	850	1.2%	382	0.6%
PROJ C (Experian (updated))	1,832	1.2%	1,021	1.5%	577	0.9%
PROJ X (Zero net migration)	-722	-0.5%	-71	-0.1%	-681	-1.0%
PROJ Y (Zero employment growth)	653	0.4%	518	0.8%	0	0.0%

Figure 34: Summary of projections 2011 to 2031 – total – Arun

Projection	Population growth		Housing numbers		Employment growth	
	Total	% change	Total	% change	Total	% change
PROJ 1 (SNPP)	35,368	23.6%	19,821	28.8%	10,773	16.0%
PROJ 2 (SNPP updated)	14,551	9.7%	10,983	16.0%	676	1.0%
PROJ 3 (10-year migration trends)	21,940	14.6%	14,126	20.5%	4,292	6.4%
PROJ 4 (5-year migration trends)	12,529	8.4%	10,106	14.7%	-340	-0.5%
PROJ A (Labour supply)	34,396	23.0%	19,483	28.3%	10,502	15.6%
PROJ B (Labour demand)	28,593	19.1%	16,998	24.7%	7,630	11.3%
PROJ C (Experian (updated))	36,642	24.5%	20,416	29.7%	11,532	17.1%
PROJ X (Zero net migration)	-14,445	-9.6%	-1,416	-2.1%	-13,615	-20.2%
PROJ Y (Zero employment growth)	13,057	8.7%	10,359	15.1%	0	0.0%

Brighton & Hove

Figure 35: Summary of projections 2011 to 2031 – annual – Brighton & Hove

Projection	Population growth		Housing numbers		Employment growth	
	Per annum	% change	Per annum	% change	Per annum	% change
PROJ 1 (SNPP)	1,659	0.6%	873	0.7%	773	0.6%
PROJ 2 (SNPP updated)	3,945	1.4%	1,859	1.5%	2,026	1.4%
PROJ 3 (10-year migration trends)	3,506	1.3%	1,683	1.3%	1,776	1.3%
PROJ 4 (5-year migration trends)	4,527	1.7%	2,099	1.7%	2,354	1.7%
PROJ A (Labour supply)	1,928	0.7%	1,038	0.8%	889	0.6%
PROJ B (Labour demand)	1,818	0.7%	995	0.8%	822	0.6%
PROJ C (Experian (updated))	2,172	0.8%	1,142	0.9%	1,015	0.7%
PROJ X (Zero net migration)	1,551	0.6%	888	0.7%	668	0.5%
PROJ Y (Zero employment growth)	338	0.1%	387	0.3%	0	0.0%

Figure 36: Summary of projections 2011 to 2031 – total – Brighton & Hove

Projection	Population growth		Housing numbers		Employment growth	
	Total	% change	Total	% change	Total	% change
PROJ 1 (SNPP)	33,176	12.2%	17,465	14.0%	15,468	11.1%
PROJ 2 (SNPP updated)	78,892	28.9%	37,186	29.7%	40,517	29.0%
PROJ 3 (10-year migration trends)	70,113	25.7%	33,665	26.9%	35,512	25.4%
PROJ 4 (5-year migration trends)	90,539	33.2%	41,979	33.6%	47,086	33.7%
PROJ A (Labour supply)	38,570	14.1%	20,766	16.6%	17,785	12.7%
PROJ B (Labour demand)	36,358	13.3%	19,909	15.9%	16,440	11.8%
PROJ C (Experian (updated))	43,438	15.9%	22,838	18.3%	20,301	14.5%
PROJ X (Zero net migration)	31,027	11.4%	17,756	14.2%	13,363	9.6%
PROJ Y (Zero employment growth)	6,764	2.5%	7,739	6.2%	0	0.0%

Chichester

Figure 37: Summary of projections 2011 to 2031 – annual – Chichester

Projection	Population growth		Housing numbers		Employment growth	
	Per annum	% change	Per annum	% change	Per annum	% change
PROJ 1 (SNPP)	1,103	1.0%	581	1.1%	280	0.5%
PROJ 2 (SNPP updated)	946	0.8%	529	1.0%	217	0.4%
PROJ 3 (10-year migration trends)	768	0.7%	461	0.9%	126	0.2%
PROJ 4 (5-year migration trends)	813	0.7%	478	0.9%	149	0.3%
PROJ A (Labour supply)	1,563	1.4%	768	1.5%	540	1.0%
PROJ B (Labour demand)	1,636	1.4%	796	1.5%	577	1.1%
PROJ C (Experian (updated))	1,558	1.4%	765	1.5%	531	1.0%
PROJ X (Zero net migration)	-480	-0.4%	-18	0.0%	-512	-1.0%
PROJ Y (Zero employment growth)	513	0.5%	364	0.7%	0	0.0%

Figure 38: Summary of projections 2011 to 2031 – total – Chichester

Projection	Population growth		Housing numbers		Employment growth	
	Total	% change	Total	% change	Total	% change
PROJ 1 (SNPP)	22,054	19.3%	11,629	22.6%	5,603	10.5%
PROJ 2 (SNPP updated)	18,918	16.6%	10,575	20.6%	4,330	8.1%
PROJ 3 (10-year migration trends)	15,352	13.5%	9,219	17.9%	2,520	4.7%
PROJ 4 (5-year migration trends)	16,264	14.3%	9,569	18.6%	2,986	5.6%
PROJ A (Labour supply)	31,268	27.4%	15,361	29.9%	10,799	20.3%
PROJ B (Labour demand)	32,726	28.7%	15,927	31.0%	11,540	21.7%
PROJ C (Experian (updated))	31,152	27.3%	15,294	29.7%	10,617	19.9%
PROJ X (Zero net migration)	-9,604	-8.4%	-370	-0.7%	-10,241	-19.2%
PROJ Y (Zero employment growth)	10,263	9.0%	7,278	14.2%	0	0.0%

Lewes

Figure 39: Summary of projections 2011 to 2031 – annual – Lewes

Projection	Population growth		Housing numbers		Employment growth	
	Per annum	% change	Per annum	% change	Per annum	% change
PROJ 1 (SNPP)	1,152	1.2%	610	1.4%	327	0.7%
PROJ 2 (SNPP updated)	791	0.8%	464	1.1%	148	0.3%
PROJ 3 (10-year migration trends)	653	0.7%	409	0.9%	79	0.2%
PROJ 4 (5-year migration trends)	754	0.8%	449	1.0%	130	0.3%
PROJ A (Labour supply)	1,222	1.3%	636	1.5%	369	0.8%
PROJ B (Labour demand)	1,163	1.2%	613	1.4%	340	0.7%
PROJ C (Experian (updated))	873	0.9%	497	1.1%	191	0.4%
PROJ X (Zero net migration)	-163	-0.2%	84	0.2%	-331	-0.7%
PROJ Y (Zero employment growth)	492	0.5%	345	0.8%	0	0.0%

Figure 40: Summary of projections 2011 to 2031 – total – Lewes

Projection	Population growth		Housing numbers		Employment growth	
	Total	% change	Total	% change	Total	% change
PROJ 1 (SNPP)	23,032	23.6%	12,197	28.1%	6,542	14.4%
PROJ 2 (SNPP updated)	15,810	16.2%	9,285	21.4%	2,960	6.5%
PROJ 3 (10-year migration trends)	13,061	13.4%	8,189	18.8%	1,587	3.5%
PROJ 4 (5-year migration trends)	15,071	15.4%	8,990	20.7%	2,598	5.7%
PROJ A (Labour supply)	24,444	25.0%	12,728	29.3%	7,373	16.2%
PROJ B (Labour demand)	23,259	23.8%	12,257	28.2%	6,791	14.9%
PROJ C (Experian (updated))	17,462	17.9%	9,945	22.9%	3,824	8.4%
PROJ X (Zero net migration)	-3,257	-3.3%	1,689	3.9%	-6,623	-14.5%
PROJ Y (Zero employment growth)	9,833	10.1%	6,908	15.9%	0	0.0%

Worthing

Figure 41: Summary of projections 2011 to 2031 – annual – Worthing

Projection	Population growth		Housing numbers		Employment growth	
	Per annum	% change	Per annum	% change	Per annum	% change
PROJ 1 (SNPP)	1,015	1.0%	599	1.2%	396	0.8%
PROJ 2 (SNPP updated)	1,208	1.2%	676	1.4%	502	1.0%
PROJ 3 (10-year migration trends)	1,070	1.0%	615	1.3%	429	0.8%
PROJ 4 (5-year migration trends)	1,049	1.0%	606	1.2%	418	0.8%
PROJ A (Labour supply)	850	0.8%	522	1.1%	318	0.6%
PROJ B (Labour demand)	813	0.8%	506	1.0%	299	0.6%
PROJ C (Experian (updated))	880	0.8%	535	1.1%	333	0.7%
PROJ X (Zero net migration)	-104	-0.1%	105	0.2%	-181	-0.4%
PROJ Y (Zero employment growth)	237	0.2%	256	0.5%	0	0.0%

Figure 42: Summary of projections 2011 to 2031 – total – Worthing

Projection	Population growth		Housing numbers		Employment growth	
	Total	% change	Total	% change	Total	% change
PROJ 1 (SNPP)	20,294	19.3%	11,974	24.6%	7,927	15.7%
PROJ 2 (SNPP updated)	24,165	23.0%	13,527	27.8%	10,043	19.8%
PROJ 3 (10-year migration trends)	21,399	20.4%	12,305	25.3%	8,588	17.0%
PROJ 4 (5-year migration trends)	20,973	20.0%	12,120	24.9%	8,367	16.5%
PROJ A (Labour supply)	17,006	16.2%	10,449	21.5%	6,362	12.6%
PROJ B (Labour demand)	16,256	15.5%	10,126	20.8%	5,970	11.8%
PROJ C (Experian (updated))	17,605	16.8%	10,700	22.0%	6,667	13.2%
PROJ X (Zero net migration)	-2,078	-2.0%	2,107	4.3%	-3,611	-7.1%
PROJ Y (Zero employment growth)	4,740	4.5%	5,116	10.5%	0	0.0%

5 COMPARING PROJECTIONS WITH THOSE IN THE 2012 SHMA

5.1 The Section above summarised the outputs from the projections run as part of this exercise. A number of these projections are comparable with a set run as part of the 2012 Coastal West Sussex SHMA and it is worthwhile comparing these and commenting on the differences. In the 2012 SHMA five different scenarios were run, all of which have an equivalent in this project. The projections are summarised in the table below.

Figure 43: Comparable projections in 2012 SHMA and 2013 update report

Projection	2012 SHMA	2013 Update
10-year migration trends	PROJ 1	PROJ 3
5-year migration trends	PROJ 2	PROJ 4
Zero net migration	PROJ 3	PROJ X
Zero employment growth	PROJ 4	PROJ Y
Employment-led	PROJ 5	PROJ B

5.2 The table below compares the outputs of the 10- and 5-year trend based analysis in the two projection runs. The data shows that the updated figures are significantly higher than those calculated in 2012 with an increased housing figure of over 800 units per annum being shown for both projections. Closer inspection however reveals that the vast majority of this increase is due to calculations for Brighton & Hove and to a lesser extent Worthing. All other areas show lower or comparable figures in the two sets of projections.

Figure 44: Comparison of demographic projections (2012 and 2013) – housing requirements per annum

Area	2012		2013	
	10-year migration trends	5-year migration trends	10-year migration trends	5-year migration trends
Adur	186	215	143	134
Arun	754	602	706	505
Brighton & Hove	937	1,319	1,683	2,099
Chichester	438	497	461	478
Lewes	411	435	409	449
Worthing	445	425	615	606
Total	3,169	3,493	4,019	4,272

5.3 The zero net migration projection (not detailed in this report) shows a difference in housing requirements of about 250 homes per annum between the two reports (the 2013 figures being the higher). For all areas other than Adur the figures in the 2013 update are higher than calculated in 2012. Differences are generally quite slight and appear to be largely due to different assumptions around headship rates. In Adur there is no notable difference between the two reports with regard to the zero net migration outputs.

5.4 The table below compares the outputs of the employment-led projection and the zero employment growth scenario. Taking the study area as a whole the data shows relatively small differences between the outputs in terms of housing requirements although the 2013 figures are slightly lower. This difference is driven by the adjustments made to baseline population profiles which have tended to show a greater proportion of people of working age in the area than had previously been forecast by ONS.

Figure 45: Comparison of economic projections (2012 and 2013) – housing requirements per annum

Area	2012		2013	
	Employment-led	Zero employment growth	Employment-led	Zero employment growth
Adur	200	116	213	85
Arun	850	518	886	436
Brighton & Hove	995	387	907	219
Chichester	796	364	750	367
Lewes	613	345	602	323
Worthing	506	256	507	248
Total	3,960	1,986	3,866	1,678

6 PROJECTIONS FOR THE SOUTH DOWNS NATIONAL PARK

6.1 As well as providing a range of projections for the whole study area and individual local authorities the analysis has further considered how much of the demand for housing would be likely to arise in the South Downs National Park area. To define the boundaries to be used we have drawn on information in the South Downs National Park Housing Requirements Study of October 2011 (by DTZ). Appendix 6 of this document sets out a ward based geography which whilst only providing a best-fit does work well for the purposes of projections as there is a good range of data available at this level. In consultation with the National Park authority we have slightly amended the wards used for analysis by including Findon (Arun) and excluding Arundel and Walberton (both Arun). Otherwise the definitions are as in Appendix 6 of the DTZ report.

6.2 As with the Council area-wide projections the analysis for National Park area takes a baseline of 2011. Data from the 2011 Census has been used and rolled forward on the basis of a small difference shown by ONS in their 2011 mid-year population estimates.

6.3 The table below provides a comparison of the baseline population figures for the National Park and the rest of the study area. The data shows that the National Park has a slightly older population profile with a higher proportion of people in all age groups from 45 and above.

Figure 46: Comparison of population profile in National Park and the rest of the study area

Age group	National Park		Rest of study area	
	Population	% of population	Population	% of population
Under 15	10,078	16.7%	114,154	15.4%
15-29	8,126	13.5%	142,539	19.3%
30-44	10,256	17.0%	149,098	20.1%
45-59	13,587	22.5%	141,130	19.1%
60-74	11,442	19.0%	117,783	15.9%
75+	6,782	11.3%	75,699	10.2%
Total	60,271	100.0%	740,403	100.0%

Smaller Area Population Projection Methodology

6.4 It is difficult to develop small area projections using the standard methodology involving birth rates, death rates and migration patterns due to the relative lack of up-to-date and robust data at this level. For example, ward level data about life expectancy is available but error margins associated with these are quite large whilst the most recent data about migration at the time of writing was from the 2001 Census which is now quite dated and only based on data for a single year.

6.5 The methodology used to assign the population change figures to smaller areas is therefore based on overall change district-wide (by age and sex) applied to the demographic profile of the local population. This methodology takes account of past trends in fertility, mortality and migration to the extent that these will have shaped the current population profile (with such trends likely to shape the future population).

6.6 Essentially the methodology works by looking at incremental changes in each age and sex band (for each year of each projection) and applies this to the local population. For example, if a particular age/sex group is projected to increase by 10% Borough-wide then the methodology will assume a similar level of population growth for that particular group at a smaller area level.

6.7 Specific local data about employment and headship rates have been used to ensure that the outputs about the number of people working and the number of households properly reflect any local differences.

Outputs

6.8 The tables below show estimated population and employment growth along with housing numbers for the National Park area on the basis of PROJ 2 (updated SNPP). The data suggests that around 5,200 of the total estimated requirement of 84,400 is required in National Park areas – this is about 6% of the total housing requirement in the study area.

6.9 The data also shows that the proportionate increase in stock estimated for the National Park is slightly lower than for the whole study area. This is to a large degree driven by the fairly high projection for Brighton & Hove under this scenario. Employment growth in the National Park is expected to be pretty modest which is in part due to the older population and a greater expectation of the population ageing in the future.

Figure 47: Summary of PROJ 2 (SNPP updated) 2011 to 2031 – annual

Projection	Population growth		Housing numbers		Employment growth	
	Per annum	% change	Per annum	% change	Per annum	% change
South Downs National Park	463	0.8%	260	1.0%	98	**0.3%**
Rest of study area	7,367	1.0%	3,959	1.2%	2,862	**0.8%**
Total	**7,830**	**1.0%**	**4,219**	**1.2%**	**2,960**	**0.8%**

Figure 48: Summary of PROJ 2 (SNPP updated) 2011 to 2031 – total

Projection	Population growth		Housing numbers		Employment growth	
	Total	% change	Total	% change	Total	% change
South Downs National Park	9,261	15.4%	5,195	19.5%	1,969	**6.8%**
Rest of study area	147,331	19.9%	79,190	23.4%	57,230	**16.0%**
Total	**156,592**	**19.6%**	**84,385**	**23.1%**	**59,199**	**15.3%**

7 IMPLICATION OF DIFFERENT BASELINE POPULATION STRUCTURES

7.1 Within this report we have discussed past levels of migration and how this information might be used to realistically amend future assumptions within the ONS subnational population projections. One additional implication of different levels of migration is around the profile of migrants which could make a difference to the structure of the population and potentially the housing requirement.

7.2 We have studied the differences between ONS recorded migration and what looks to have actually occurred by comparing data for 2011 from both the 2011 mid-year population estimates (which have been calibrated to be consistent with 2011 Census data) and data from the 2010-based SNPP (which was the last full SNPP and did not have its baseline informed by Census data). By comparing data from these two sources we can start to get an indication of the differences in population that might be expected to arise in the future were recent past trends to continue. This information is shown in the table below for the whole study area.

Figure 49: Difference in baseline population age structure (2011)

Age group	Previous projections	Current estimate	Difference	% difference
Ages 0-4	43,065	43,211	146	0.3%
Ages 5-9	39,843	39,856	13	0.0%
Ages 10-14	40,119	41,165	1,046	2.6%
Ages 15-19	46,081	46,356	275	0.6%
Ages 20-24	54,420	55,307	887	1.6%
Ages 25-29	46,763	49,002	2,239	4.8%
Ages 30-34	44,314	48,750	4,436	10.0%
Ages 35-39	49,618	51,846	2,228	4.5%
Ages 40-44	57,500	58,758	1,258	2.2%
Ages 45-49	59,184	59,459	275	0.5%
Ages 50-54	50,146	50,334	188	0.4%
Ages 55-59	44,989	44,924	-65	-0.1%
Ages 60-64	50,113	50,566	453	0.9%
Ages 65-69	43,413	43,222	-191	-0.4%
Ages 70-74	35,956	35,437	-519	-1.4%
Ages 75-79	31,401	30,770	-631	-2.0%
Ages 80-84	25,707	25,014	-693	-2.7%
Ages 85+	28,141	26,697	-1,444	-5.1%
All Ages	790,773	800,674	9,901	1.3%

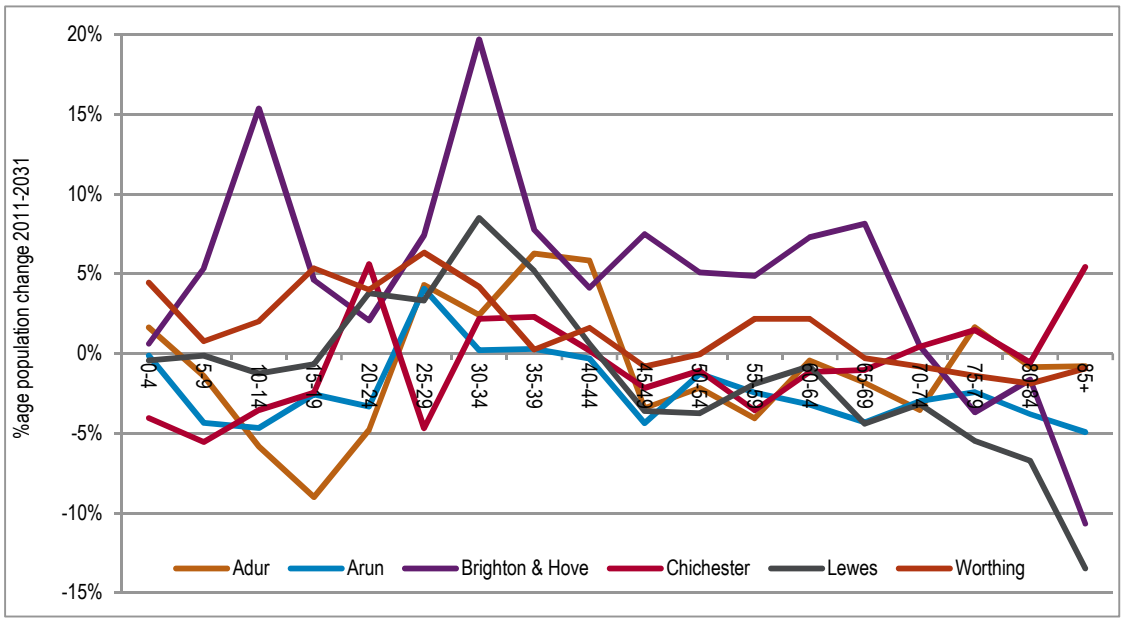
Source: ONS mid-year population estimates

7.3 The data shows that ONS had slightly underestimated population growth in the study area with a rebased mid-year figure showing a population of about 10,000 more people than had previously been estimated in the 2010-based SNPP. Within the population figures there are also some important differences with a higher population in some of the key working age groups (25-39) and less ageing of the population – as evidenced by lower populations in all age groups from 65 upwards.

7.4 From the data available it is not possible to say exactly what the differences are due to but it will most probably be as a consequence of lower levels of both in- and out-migration of certain groups which may have been affected by current housing market conditions. For the older person population some of the difference may also be due to different actual death rates when compared with projections.

7.5 The information in the table above can also be studied on a local authority basis as shown in the figure below. The figure shows (for each age group) the percentage difference between population estimates in the 2010-based SNPP (for 2011) and the 2011 mid-year population estimates.

Figure 50: Forecast Population Change by Age Group 2011 – 2031



7.6 Although the data does not appear to show particularly strong patterns it does confirm the finding (generally) of a higher population in some of the 'working' age groups and fewer older people although there are some exceptions to these patterns. Brighton & Hove clearly stands out as having the greatest differences between past and current estimates of population size by age.

7.7 Whilst this analysis is interesting it is also necessary to consider the implications of differences between previous population estimates and current figures – particular given that past figures will to some degree have been used to construct future migration profiles. At the same time it needs to be recognised that the differences in population profile may have arisen due to short term changes in the housing market and effective restrictions on people's mobility. This for example may have restricted the out-migration from Brighton & Hove of people in their 20s and 30s and hence Brighton & Hove has seen stronger population growth than had previously been expected. Such trends may not continue in the future.

7.8 It is difficult to do a full reanalysis of the data on the basis of studying the differences in population profiles as this requires consideration of how particular cohorts move through the population with data (particularly for older ages groups) also being substantially affected by mortality rates. However in a previous study for Arun we did develop an alternative migration profile to test the implications of this on overall housing requirements and likely housing requirements to meet particular job growth targets. In line with the study area as a whole the comparative population data for Arun suggested higher relative populations of those of working age and less ageing of the population.

7.9 In Arun the projections suggested that the implication for housing numbers of using a different migration profile was quite slight in the case of looking at demographic trend-based projections with housing requirements typically falling by around 3%-4%. This difference is due to the migration profile being slightly skewed toward people who are more likely to live in larger households (e.g. those in their 30s).

7.10 However, in the case of looking at a projection linked to employment growth the difference in housing requirements was quite notable with a decrease in the number of homes needed in the region of 25%. This is due the migration profile being more heavily skewed towards people of working age and hence a smaller overall population being required to achieve the growth in the resident workforce – the smaller population in turn required fewer homes.

7.11 This analysis should be seen as indicative and will not have a substantial impact on our conclusions - which at the sub-regional/study area level we would recommend to be based on demographic (migration) trends. The analysis does however indicate that changes to the profile of migrant can have some impact on housing requirements and in particular the size of the local labour force.

8 HEADSHIP RATE SENSITIVITY

8.1 The core analysis has converted population data into households by using data from the 2011-based CLG household projections about headship rates. These rates tend to show a slower reduction in average household sizes over time and as a result a lower dwelling requirement when compared with the previous 2008-based household projections.

8.2 It may be the case that the 2011-based figures have been constrained in some way due to the recent state of the housing market and hence it could be argued that household formation over time will return back to longer-terms trends (as used in the 2008-based household projections). On the other hand the slower reductions in household sizes could be considered as realistic against a backdrop of societal changes such as an increase in flat/house sharing for some age groups who in the past may have formed their own separate household.

8.3 At the present time and with the evidence available we would suggest that the data in the 2011-based projections is the most robust and plausible to use for forward projection. However, it is of interest to test likely household growth and housing requirements of using 2008-based figures. By doing this we can get an upper end projection under the assumption that the housing market and household formation rates return (immediately) to longer-term trends.

8.4 The table below shows estimated housing requirements in each area and overall under PROJ 2 (SNPP updated) with the two different sets of headship rates. The data shows that housing requirements based on the older rates would have been about 15% higher than in our main analysis.

Figure 51: Housing requirements with different headship rate assumptions (per annum

	2011 based headship	2008 based headship	Difference	% difference
Adur	141	188	46	32.8%
Arun	549	627	78	14.1%
Brighton & Hove	1,859	2,174	315	16.9%
Chichester	529	604	75	14.2%
Lewes	464	520	55	11.9%
Worthing	676	757	80	11.9%
Study area	4,219	4,869	650	15.4%

9 CONCLUSIONS

9.1 The NPPF sets out that plans should be prepared on the basis of meeting full needs for market and affordable housing. This study looked at potential housing requirements using a number of different projection scenarios. These were mainly based on either demographic trends or linked to employment forecasts.

9.2 For the whole study area the results are fairly consistent with the demographic projections suggesting a range of requirement of between about 4,000 and 4,300 homes per annum. The employment-led scenarios similarly had a range from 4,000 to 4,200. On this basis we would suggest that the objectively-assessed need is somewhere in the range of 79,000 to 85,000 homes over the 20-year period from 2011 to 2031.

9.3 This range is significantly higher than has been planned for in the past and is also much higher than the housing targets in the old South East Plan – about 2,600 homes per annum across the six authorities (including Shoreham Harbour). However, it needs to be noted that the SEP figures were largely capacity driven and were not based on an assessed level of need/demand for housing specifically to the local area.

9.4 In terms of an objective assessment we return back to a figure of about 80,000 homes (or 4,000 per annum) based on likely demand. This figure represents an annual increase in the number of households of about 1.1% which is the same as projected by CLG for the whole South East region and also broadly in-line with the national figure of 1.0%. Hence the level of requirement looks realistic in comparison with other locations.

9.5 In determining housing figures consideration can be made of recent changes in the profile of the population and likely migration trends. Across the whole sub-region we have seen a higher level of working age population than had previously been expected along with less ageing of the population. This trend, if continued, would probably put a slightly downward pressure on housing numbers.

9.6 However, any reduced housing requirement due to population structure may be offset by increased requirements should housing market conditions improve. The analysis in this report has shown that returning back to headship rates in the 2008-based CLG household projections could increase the housing requirement by around 15%.

9.7 Hence when considering the figure of c4,000 homes per annum there are factors moving forward that could push this in either an upward or downward direction.

9.8 In determining a figure for delivery of housing the authorities will need to consider a range of factors such as development constraints (which are clearly present across the whole sub-region). Consideration will also need to be given as to whether there is a backlog of housing to be provided and also what provision needs to be made for affordable housing. Whilst generally across the study area there is evidence that the private rented sector is playing a significant role in meeting needs it is the case in Brighton & Hove that this sector still falls well short of making up for a shortfall in genuine affordable housing.

9.9 On the expectation that the authorities together will be unable to meet their objectively-assessed needs there will need to be constructive discussions with other authorities about additional housing provision. The 'Next Steps' section of the Coastal West Sussex Duty to Cooperate Housing Study (July 2013) provides more detail about some of the areas and options that could be considered by the Councils.

APPENDIX 1: ADJUSTED MIGRATION PROFILES

A1.1 In section 2 of the report we briefly discussed amending the migration profiles used in the subnational population projections (SNPP) to take account of more recent data published by ONS about past migration trends. This appendix looks in more detail about the changes made on an area by area basis.

A1.2 For all areas two figures have been provided to show:

a) past trends in migration (as recorded by ONS) over the period from 2001/2 to 2010/11 and how these have been projected forward from 2011/12 to 2020/21.

b) How these figures have been adjusted to take account of any over- or under-estimation of past migration (as evidenced through the mid-year population estimates published in April 2013) and how this might be translated into a projection moving forward.

A1.3 In all cases figures have separately been provided for internal migration (including cross-border movements from other parts of the UK) and international migration.

A1.4 In moving from data in the 2011-based SNPP to an amended position we have carried out a series of steps as described below:

1) Past migration trends have been adjusted to take account of the over- or under-recording of migration. It is not clear whether differences are due to the recording of in- or out-migration or if it impacts more on international rather than internal migration. Hence a balanced approach had been taken to assume that any differences have occurred in proportion with the recorded numbers in each category. In Adur for example the mid-year population estimates suggest a slight over estimation of migration in the past. This has been remodelled under the assumption of a small decrease in in-migration and a small increase in out-migration. Given that internal migration is significantly larger than international migration these figures are disproportionately affected.

2) Having amended the past trend data to be consistent with the new mid-year population estimates we have taken an average over the past five years of each of internal and international in- and out-migration. These figures give us the start point data (from 2011/12) which is used in the projection.

A1.5 For the SNPP updated projection (PROJ 2) the general trends projected by ONS are maintained but from a slightly different (higher or lower) baseline position. This can clearly be seen by comparing the two graphs for any given area. For each area the adjustments made to baseline figures can be summarised as:

- Adur – net migration previously over-estimated by an average of 47 people per annum
- Arun – net migration previously over-estimated by an average of 422 people per annum
- Brighton & Hove – net migration previously under-estimated by an average of 1,222 people per annum
- Chichester – net migration previously over-estimated by an average of 72 people per annum
- Lewes – net migration previously over-estimated by an average of 159 people per annum
- Adur – net migration previously under-estimated by an average of 127 people per annum

A1.6 In using these figures to project forward it is not as simple as just amending net migration by the average over- or under-estimation. It has also been necessary to rebase figures where particular components look to be out of kilter with past trends. This can perhaps most clearly be seen in the case of Brighton & Hove where past trends in internal migration look to be considerably below projected figures.

A1.7 To some degree our analysis has been enhanced by the availability of 2010/11 migration data which would not have been available at the time either the 2010- or 2011-based SNPP were published. This more recent data shows that migration has not gone back up as had been projected and so our revised baseline positions look to be reasonable.

A1.8 The table below shows our starting position for the SNPP updated projection in each area. As noted above the figures have been taken as an average over the past five years once adjusted for any over- or under-estimation of past migration figures (figures for internal migration include cross-border moves). There is no sub-regional data for internal in- and out-migration as this is not simply the sum of the figures for each area due to moves between different authorities in the sub-region. The overall net migration figure (of 6,809) is slightly different to the average five year figure used in PROJ 4 (5-year migration trends) of 6,865; this is due to the data below not including other changes to the population such as the prison population, armed forces and asylum seekers.

Figure 1:Migration figures by component for 2011/12 used in PROJ 2 (SNPP updated)

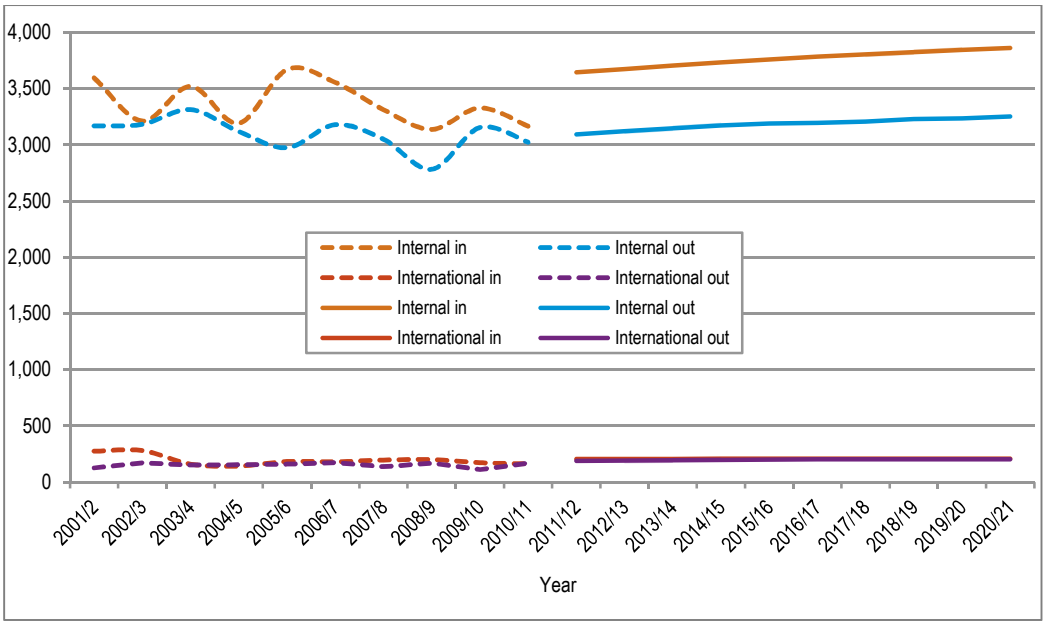
Component	Adur	Arun	Brighton & Hove	Chichester	Lewes	Worthing	Sub region
Internal in-migration	3,277	6,753	18,106	7,148	5,153	5,424	-
Internal out-migration	3,061	6,107	17,350	6,343	4,501	4,500	-
Internal net migration	216	645	756	805	652	924	3,999
International in-migration	182	1,109	4,716	905	391	562	7,865
International out-migration	153	547	3,060	567	224	504	5,056
International net migration	29	562	1,657	337	167	58	2,810
Total in-migration	3,459	7,862	22,823	8,053	5,544	5,986	53,727
Total out-migration	3,214	6,655	20,410	6,910	4,725	5,005	46,918
Total net migration	245	1,207	2,413	1,143	819	982	6,809

Source: Derived from ONS data

A1.9 The revised figures for out-migration have been used in our analysis where other scenarios have been tested (e.g. where we are looking to estimate population growth linked to a particular change in the workforce) and changes have been made to in-migration levels to meet the requirements of the scenario being tested.

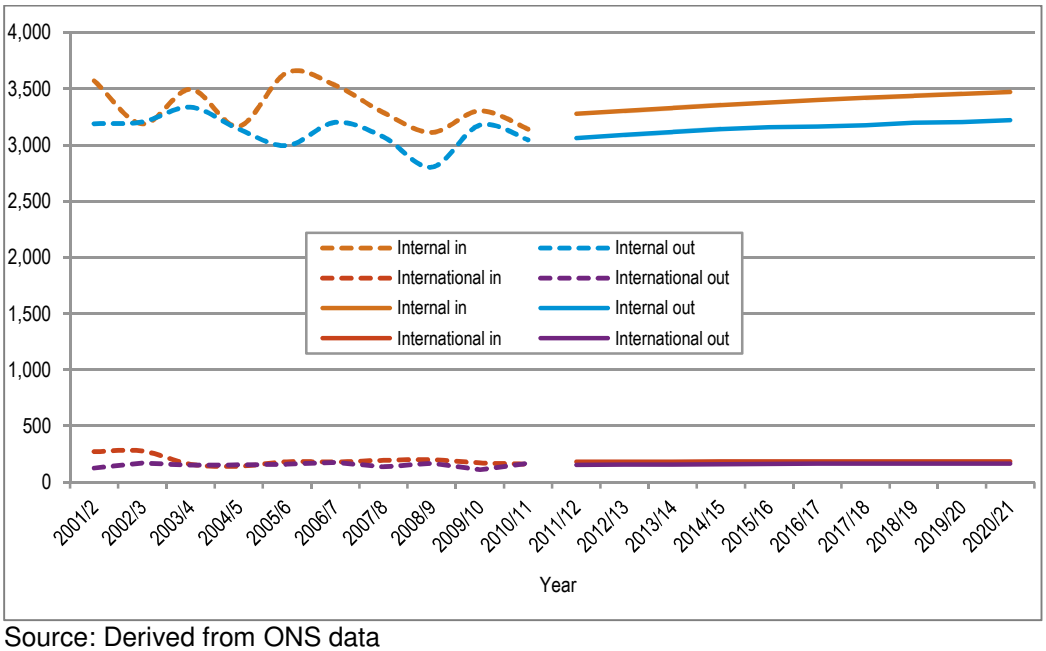
Adur

Figure 2:Past migration trends (as recorded by ONS) and projected figures in the 2011-based SNPP



Source: Derived from ONS data

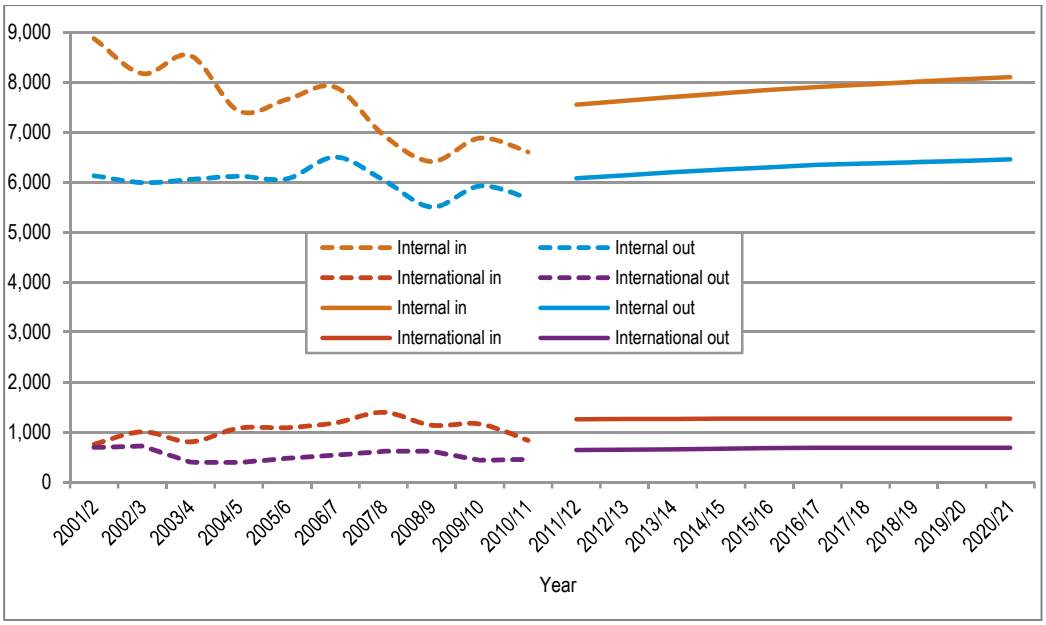
Figure 3:Past migration trends (amended on basis of mid-year population data) and projected figures in PROJ 2 (SNPP updated)



Source: Derived from ONS data

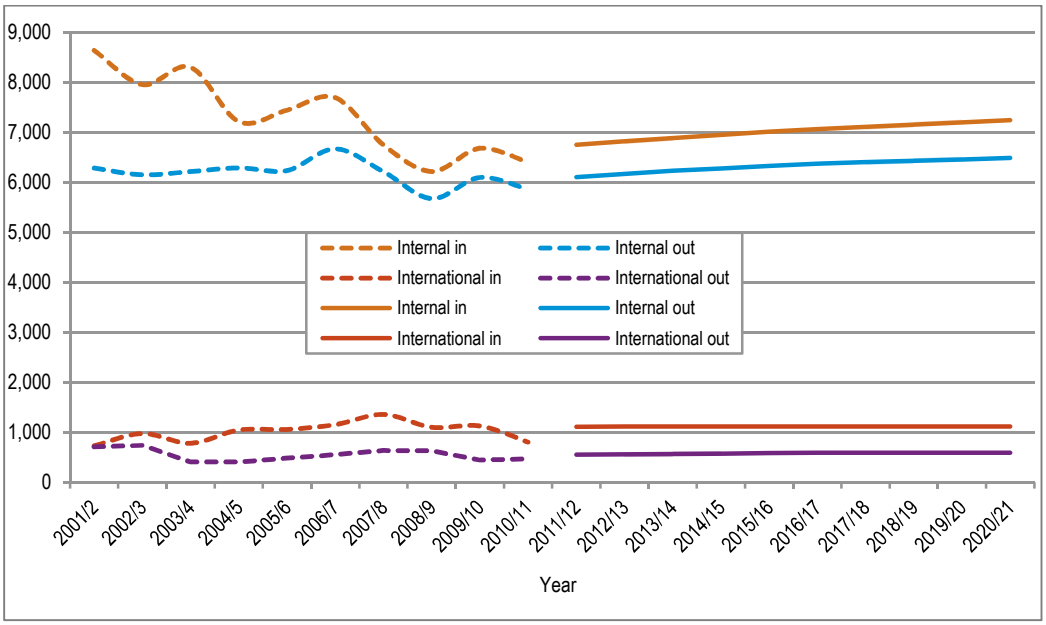
Arun

Figure 4:Past migration trends (as recorded by ONS) and projected figures in the 2011-based SNPP



Source: Derived from ONS data

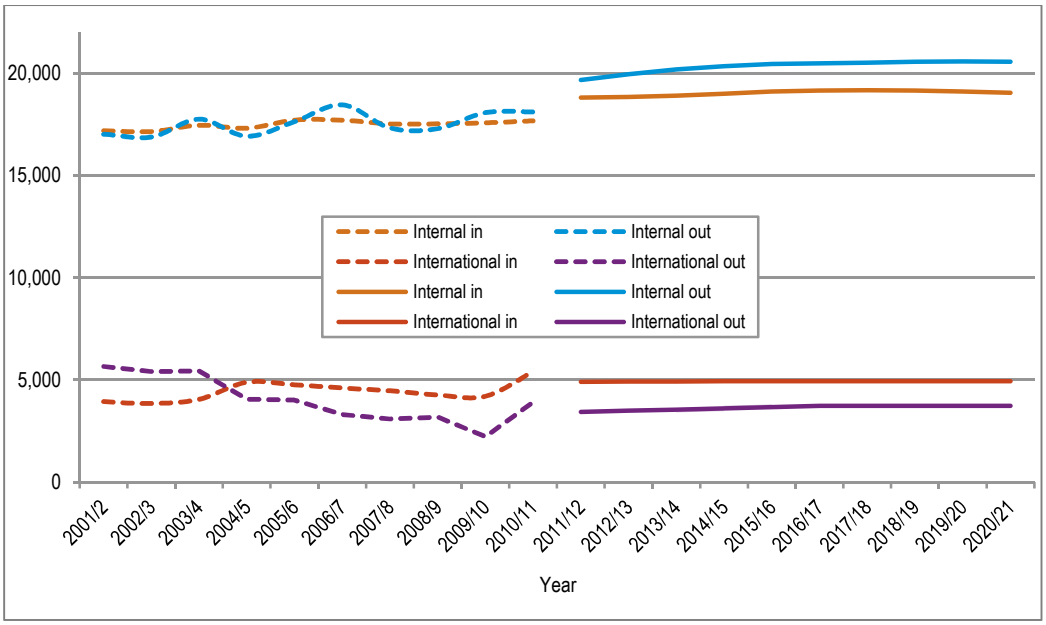
Figure 5:Past migration trends (amended on basis of mid-year population data) and projected figures in PROJ 2 (SNPP updated)



Source: Derived from ONS data

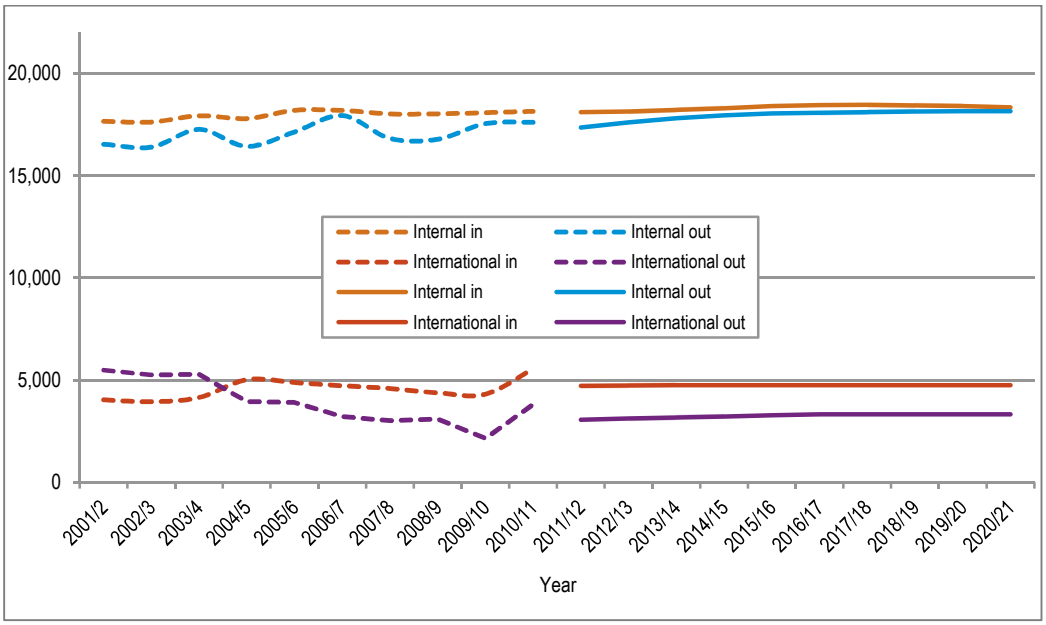
Brighton & Hove

Figure 6:Past migration trends (as recorded by ONS) and projected figures in the 2011-based SNPP



Source: Derived from ONS data

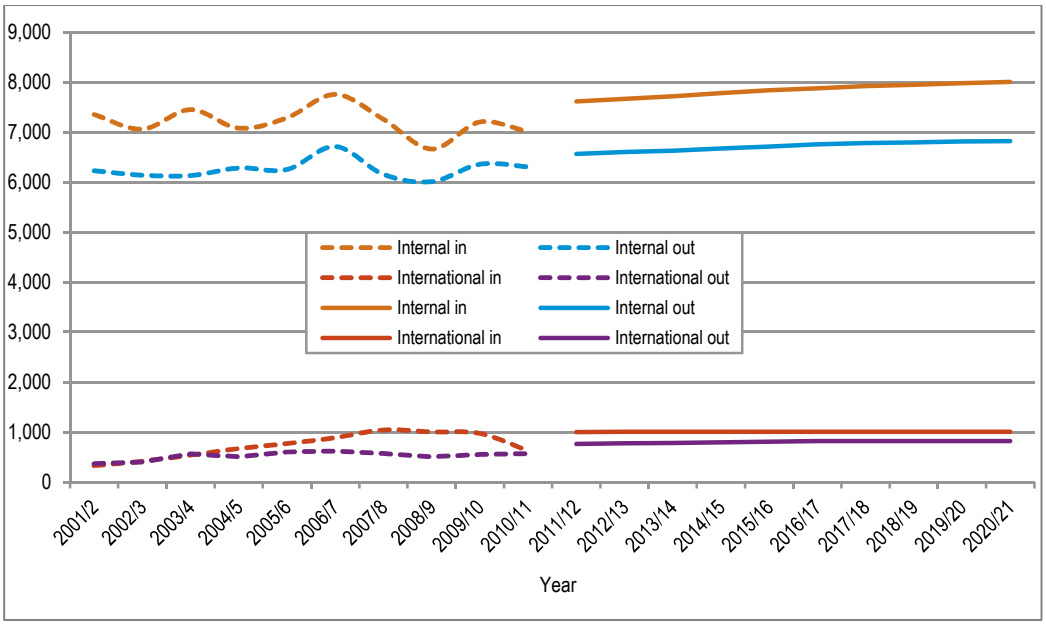
Figure 7:Past migration trends (amended on basis of mid-year population data) and projected figures in PROJ 2 (SNPP updated)



Source: Derived from ONS data

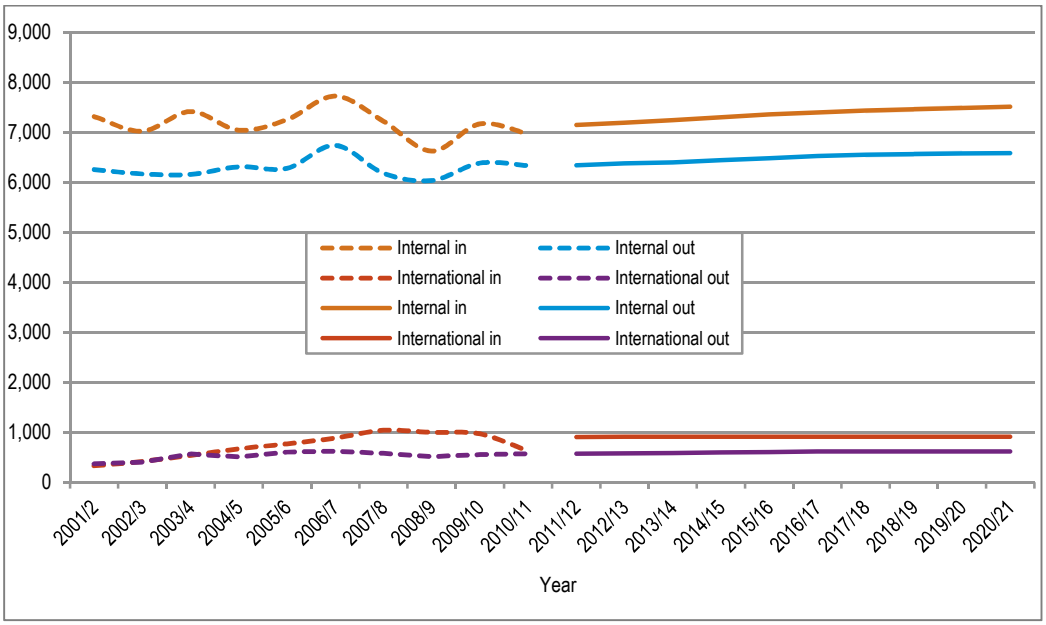
Chichester

Figure 8:Past migration trends (as recorded by ONS) and projected figures in the 2011-based SNPP



Source: Derived from ONS data

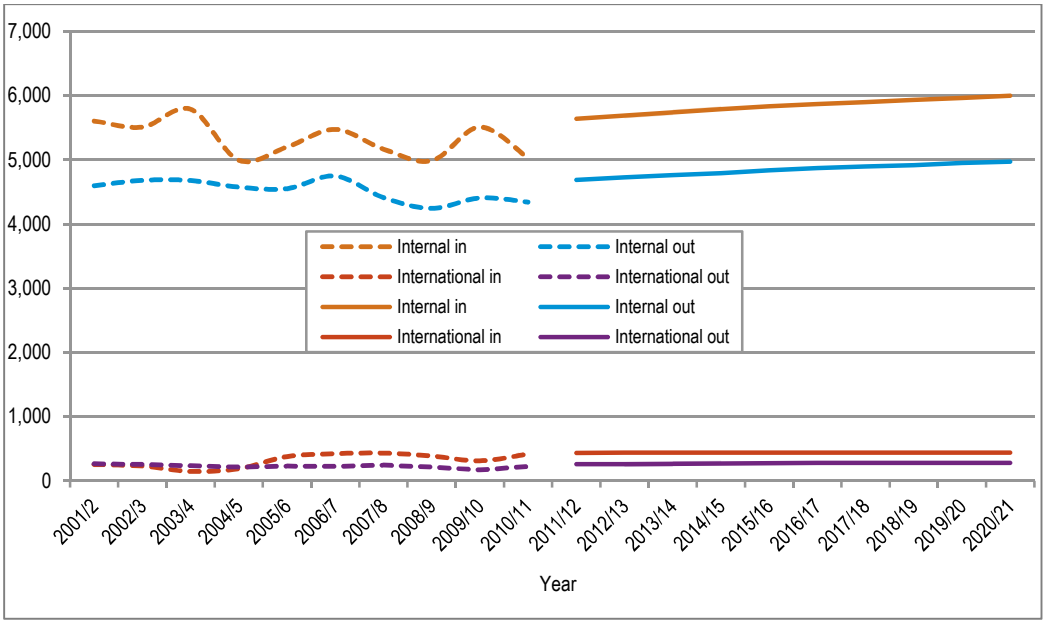
Figure 9:Past migration trends (amended on basis of mid-year population data) and projected figures in PROJ 2 (SNPP updated)



Source: Derived from ONS data

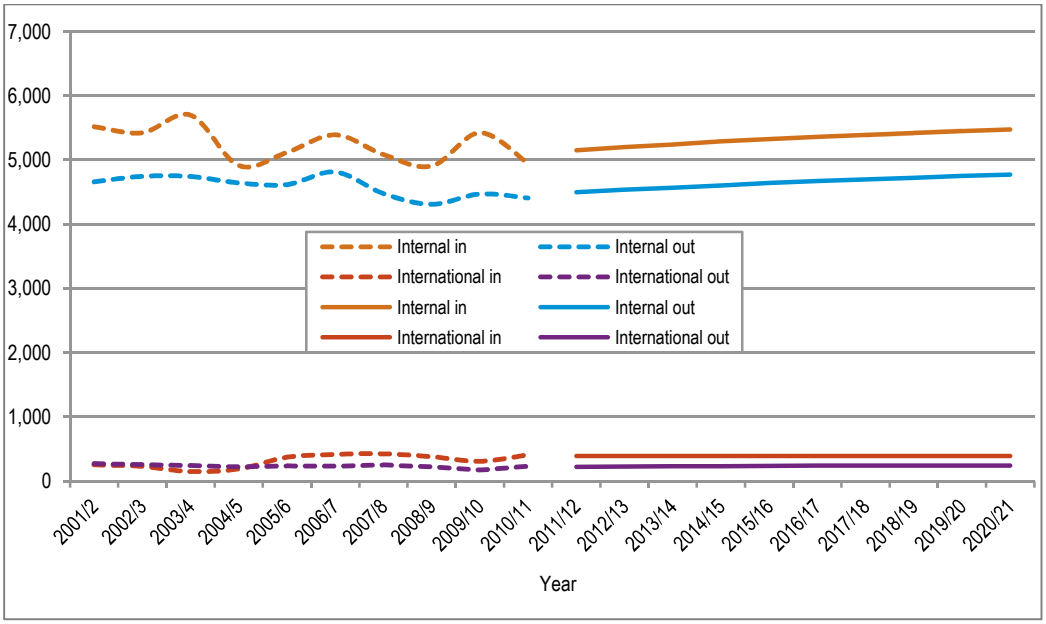
Lewes

Figure 10: Past migration trends (as recorded by ONS) and projected figures in the 2011-based SNPP



Source: Derived from ONS data

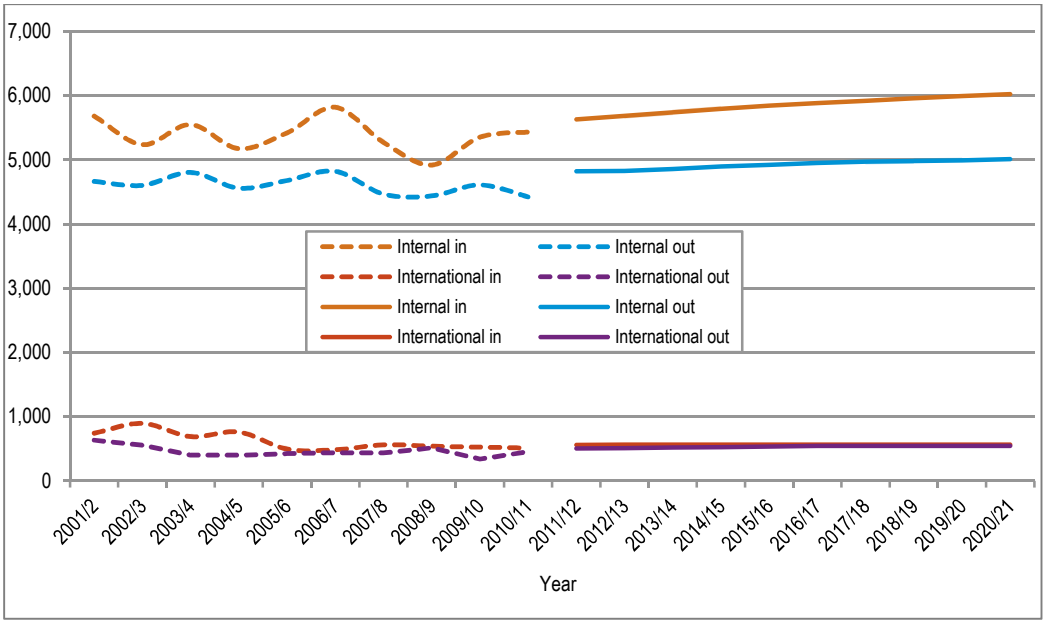
Figure 11: Past migration trends (amended on basis of mid-year population data) and projected figures in PROJ 2 (SNPP updated)



Source: Derived from ONS data

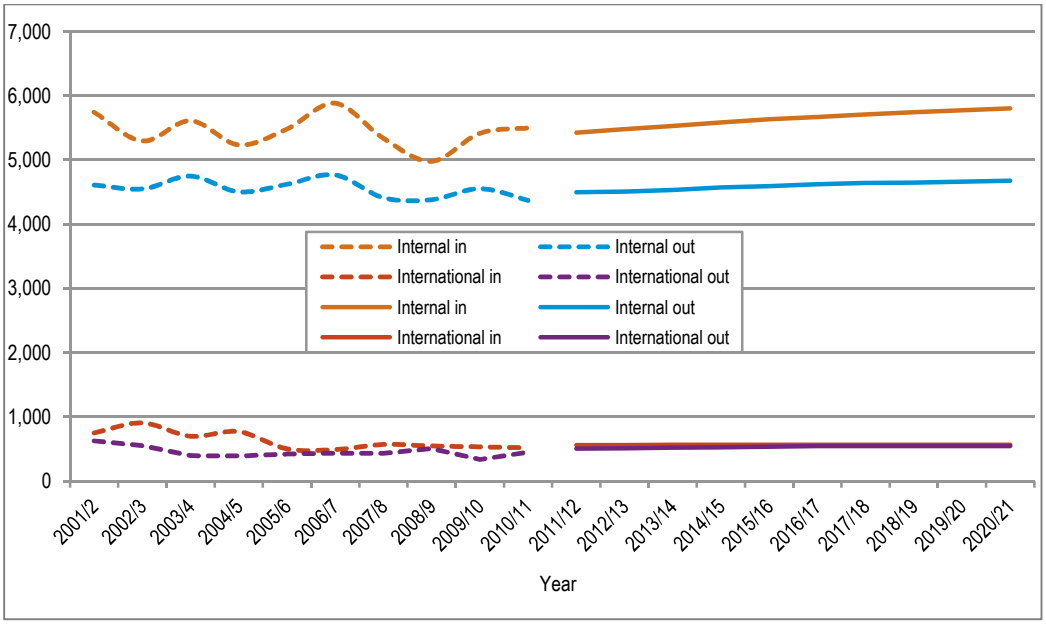
Worthing

Figure 12: Past migration trends (as recorded by ONS) and projected figures in the 2011-based SNPP



Source: Derived from ONS data

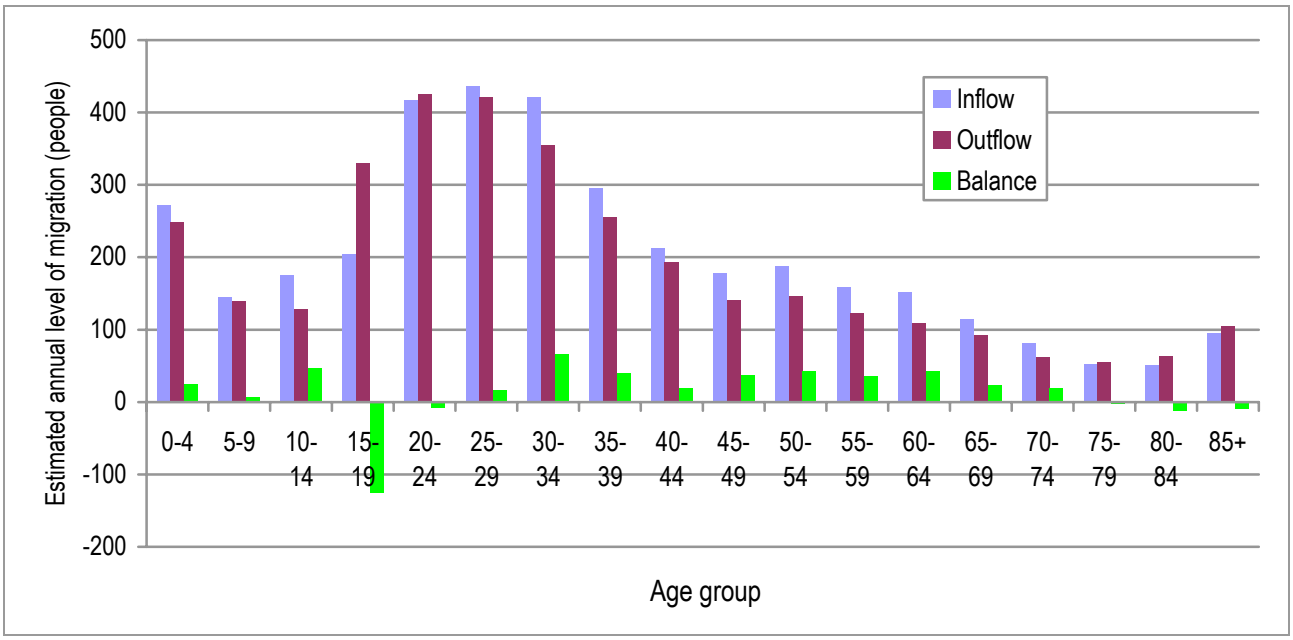
Figure 13: Past migration trends (amended on basis of mid-year population data) and projected figures in PROJ 2 (SNPP updated)



Source: Derived from ONS data

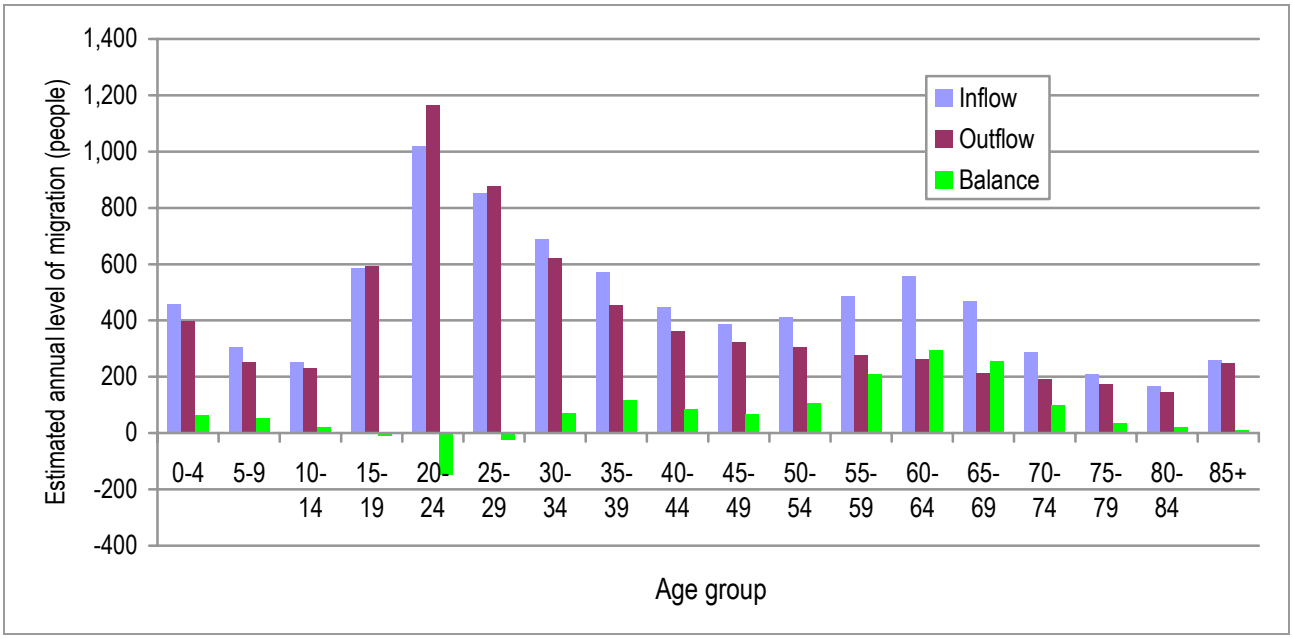
APPENDIX 2: DETAILED MIGRATION PROFILES

Figure 14: Estimated annual level of migration by five-year age band (2011-2031) – Adur



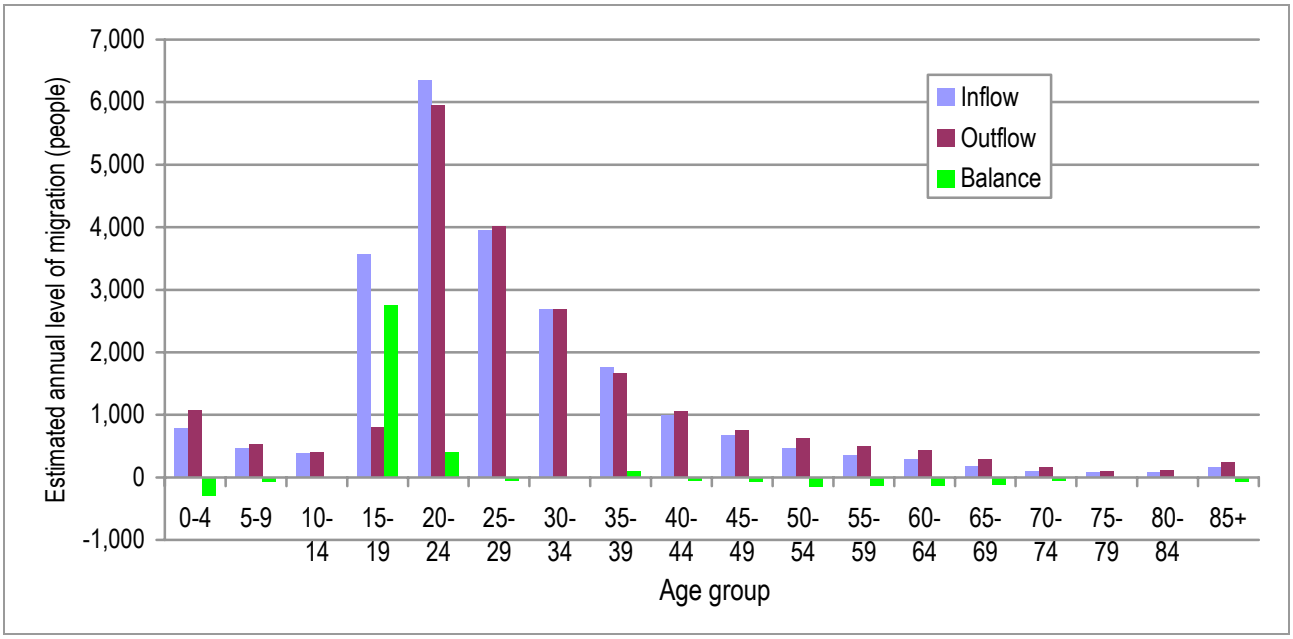
Source: Derived from ONS 2010-based population projections

Figure 15: Estimated annual level of migration by five-year age band (2011-2031) – Arun



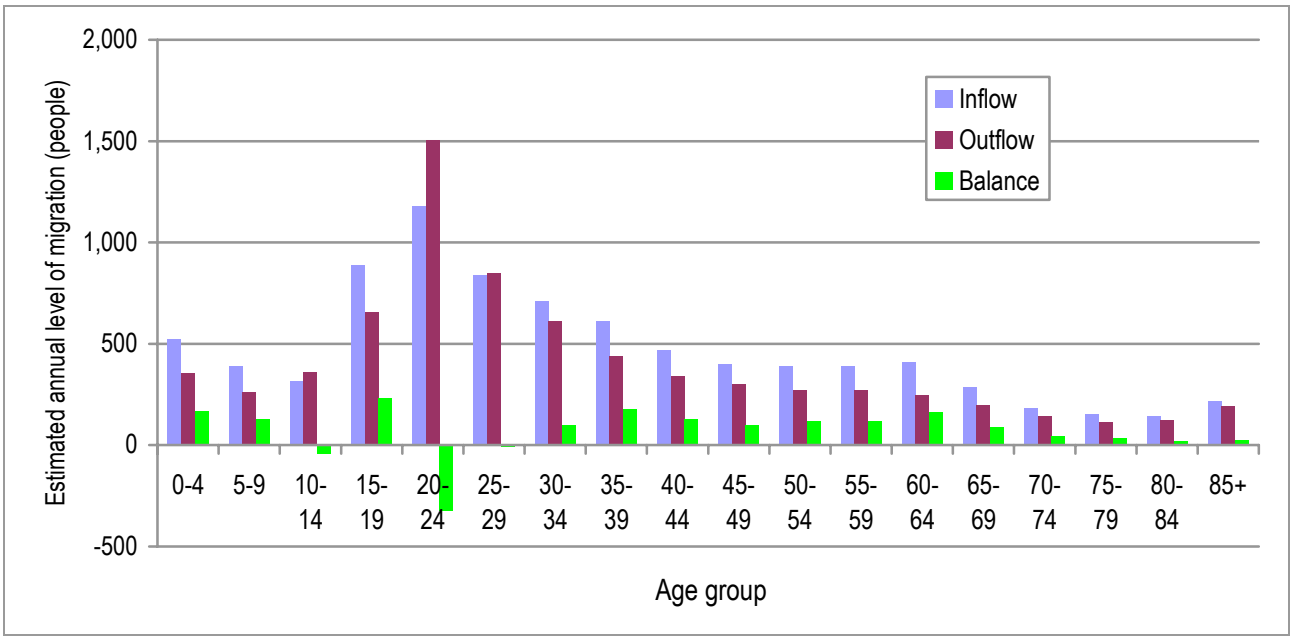
Source: Derived from ONS 2010-based population projections

Figure 16: Estimated annual level of migration by five-year age band (2011-2031) – Brighton & Hove



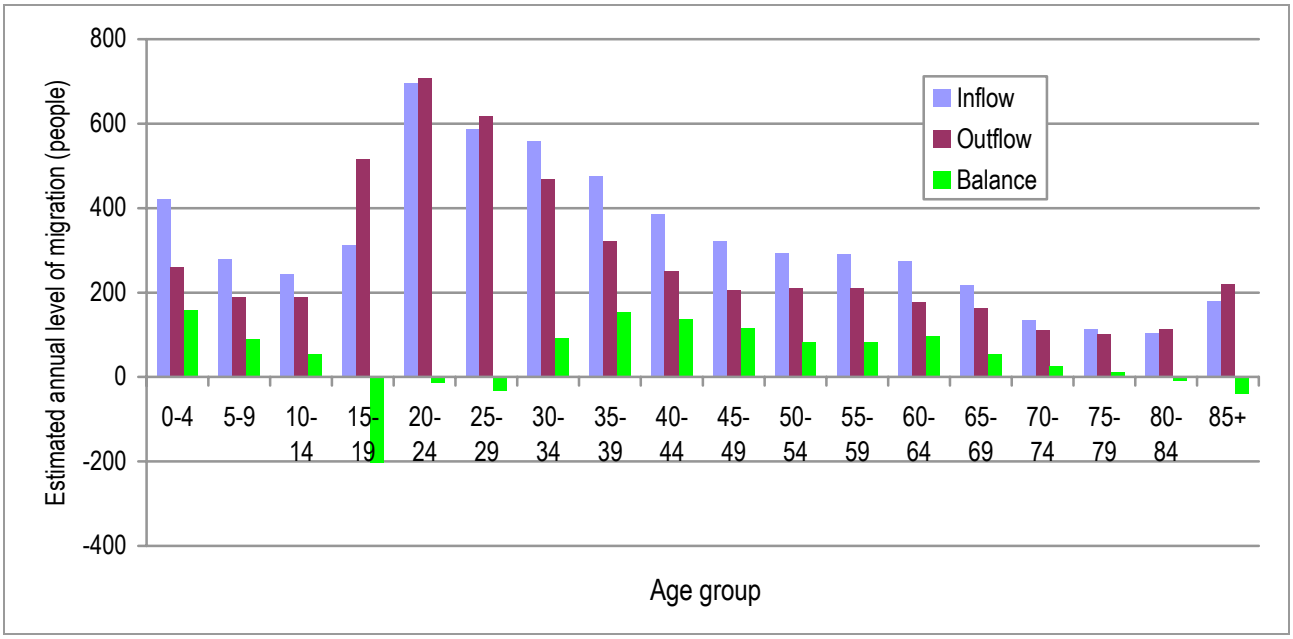
Source: Derived from ONS 2010-based population projections

Figure 17: Estimated annual level of migration by five-year age band (2011-2031) – Chichester



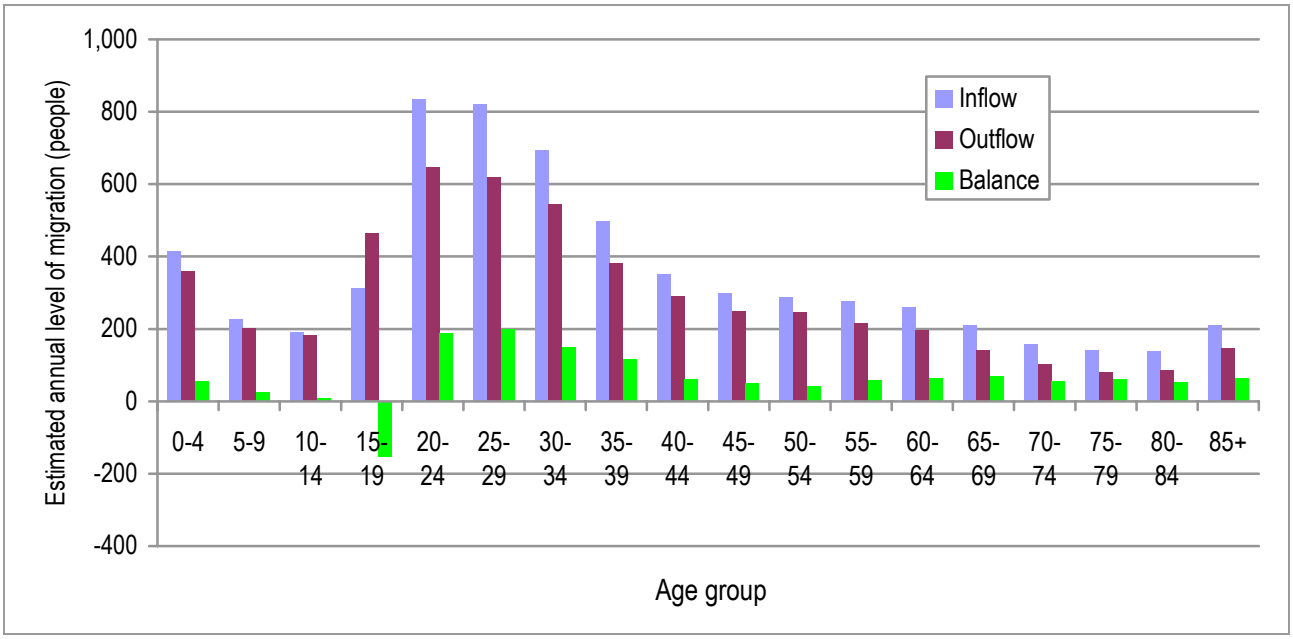
Source: Derived from ONS 2010-based population projections

Figure 18: Estimated annual level of migration by five-year age band (2011-2031) – Lewes



Source: Derived from ONS 2010-based population projections

Figure 19: Estimated annual level of migration by five-year age band (2011-2031) – Worthing



Source: Derived from ONS 2010-based population projections