

Aylesbury Vale District Council

**Housing & Economic Growth
Assessment**

Part II Report: September 2011

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This document must only be treated as a draft unless it has been signed by the Originator and approved by a Director or Associate.

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Limitations

This document has been prepared for the stated objective and should not be used for any other purposes without the prior written authority of GL Hearn; we accept no liability for the consequences of this document being used for a purpose other than for which it was commissioned.

9 INTRODUCTION

- 9.1 This is the second of two reports which together form a Housing and Economic Growth Assessment for Aylesbury Vale District. The report has been commissioned by Aylesbury Vale District Council (AVDC) against a context of the Government's stated intention to revoke the South East Plan and other Regional Strategies through the Localism Bill, and give responsibilities for determining housing targets and the wider development strategy to local authorities. Against this context, AVDC is working to prepare the Vale of Aylesbury Plan.
- 9.2 The Housing and Economic Growth Assessment is intended to be a technical piece of evidence which will be used to inform and support the development of future policies for housing and employment within the forthcoming Vale of Aylesbury Plan.
- 9.3 The report takes account of policies within the draft National Planning Policy Framework, published by Government in July 2011¹. The report provides an objective assessment of housing and employment development needs in the Vale over the next 20 years, as required by the NPPF to inform the development of Local Plans.
- 9.4 The report is however just one of a number of inputs to the plan preparation process. The Council is separately assessing infrastructure needs and requirements and is engaging with members of the district, town and parish councils in the Vale, alongside other stakeholders.
- 9.5 The Housing and Economic Growth Assessment has been prepared by a consultant team led by GL Hearn, who have been supported by Justin Gardner Consulting (on housing need and demographics) and JOP Consulting (on economic development).
- 9.6 The report is intended to be capable of being developed into an updated Strategic Housing Market Assessment (SHMA) for Aylesbury Vale following stakeholder consultation. It is prepared in line with current Government guidance on undertaking these assessments². A Strategic Housing Market Assessment was previously prepared at the county level (Buckinghamshire wide); however this was informed by policies in the South East Plan. This report takes account of the previous Buckinghamshire SHMA³ where relevant and provides an updated assessment specifically for Aylesbury Vale District which is 'policy neutral'.
- 9.7 The report has been split into two parts. The Part I Report explored the characteristics of the area, and considered evidence of housing need and demand.

¹ CLG (July 2011) *Draft National Planning Policy Framework*

² CLG (2007) *Strategic Housing Market Assessments – Practice Guidance Version 2*

³ Fordham Research (2008) *Buckinghamshire Strategic Housing Market Assessment*

- 9.8 This Part II Report builds on this analysis, and the conclusions we can draw from it, to develop projections for future population growth and housing requirements.
- 9.9 The report develops this to provide additional analysis on need and demand for different sizes of homes. It also considers the housing needs of specific groups within the community where these might differ from the wider population, addressing Black & Minority Ethnic (BME) groups, older persons and students.
- 9.10 On the economic side, the report assesses future demand for employment land. It does not however consider the existing supply of employment sites and premises, which has been assessed elsewhere.⁴
- 9.11 The chart below provides an overview of the two parts of the report:

Figure 9.1: Overview of Housing & Economic Growth Assessment



- 9.12 A key intention of the report is to provide an integrated evidence base for Aylesbury Vale District Council to use in developing policies for housing and employment development.

⁴ Aylesbury Vale Employment Land Study (2008) Roger Tym & Partners

Part 2 – Report Structure

9.13 The remainder of the Part II Report is structured as follows:

- Section 10: Initial Population Projections;
- Section 11: Future Employment Growth;
- Section 12: Economic-Led Population Projections;
- Section 13: Projections of Housing Requirements for Aylesbury Vale;
- Section 14: Considering Housing Distribution to Sub-Markets;
- Section 15: Requirements for Different Sizes of Homes;
- Section 16: Specialist Housing Requirements;
- Section 17: Employment Land Requirements; and
- Section 18: Bringing the Evidence Together.



10 INITIAL POPULATION PROJECTIONS

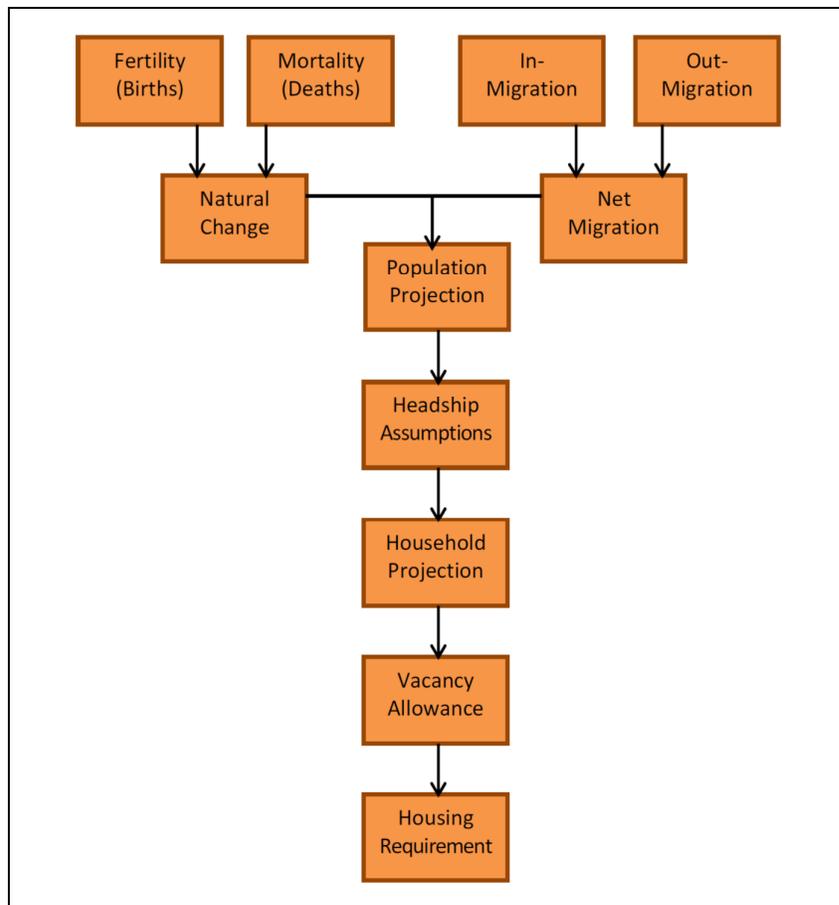
10A INTRODUCTION

10.1 In this section we develop population projections based on an analysis of past demographic trends.

10.2 The first thing we need to establish is the current population and how will this change in the period to 2031. This will require 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 in to or out of the District. These are the principal components of population change and are used to construct our principal trend-based population projections.

10.3 Figure 10.1 below shows the key stages of the projection analysis through to the assessment of housing requirements.

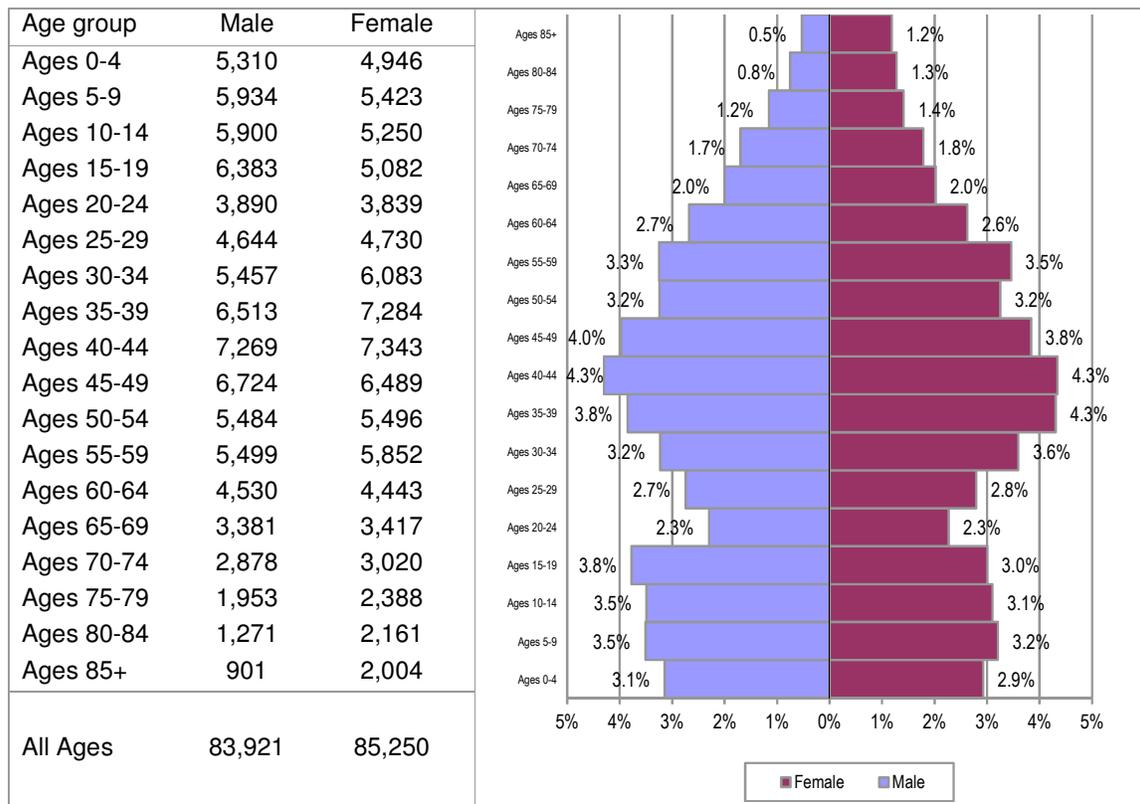
Figure 10.1: Overview of Methodology



10B BASELINE POPULATION

10.4 The baseline for our projections is taken to be mid-2006 with the projection run for five year intervals over the period up to 2031. The estimated population profile as of 2006 has been taken directly from CLG household projection data (which in turn is based on ONS population information) and is presented below. The overall population in mid-2006 was estimated to be 169,171 with slightly more females than males.

Figure 10.2: Population of Aylesbury Vale (5 year age bands) – 2006



Source: Derived from CLG 2008-based Household Projections

10C FERTILITY RATES

10.5 To establish the future number of births we have projected age specific fertility rates. This is the number of births to women in particular age groups (taken in five year bands from 15 to 44). Below we have highlighted various data about fertility rates in Aylesbury Vale (and other areas for comparative purposes) before moving on to set out the assumptions about future fertility used in our projection.

10.6 Although our projection starts from 2006 we have accessed the most recent available information (for 2009). The data shows that in 2009, Aylesbury Vale had a Total Fertility Rate (TFR) of 2.05; this compares with a regional figure of 1.97 and a national average of 1.95.

Figure 10.3: Live Births by residence of Mother and Total Fertility Rate (TFR) (2009)

Area	Live births	TFR
Aylesbury Vale	2,148	2.05
Buckinghamshire	5,908	2.01
South East	103,669	1.97
England	671,058	1.95

Source: Office for National Statistics

10.7 Local level figures can be quite variable year on year and we have therefore looked at the period from 2005. The table (Figure 10.4) and chart Figure 10.5 below shows the number of live births in each of Aylesbury Vale, the South East and England. In Figure 10.5 these have been based to 100 for 2005.

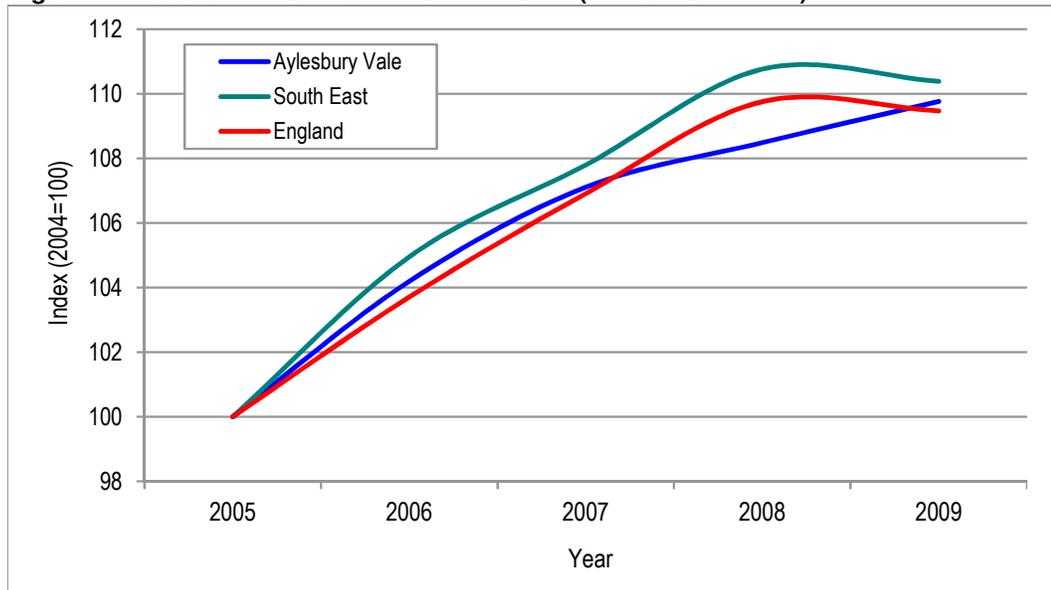
10.8 The data shows that the number of births in England has steadily increased over this period (with roughly the same pattern for the South East). Since 2008, the number of births nationally and regionally has levelled off (or dropped slightly) whilst figures for Aylesbury Vale have continued to increase slightly.

Figure 10.4: Live Births, 2005 to 2009

Year	Aylesbury Vale	South East	England
2005	1,957	93,919	613,028
2006	2,039	98,566	635,748
2007	2,096	101,238	655,357
2008	2,123	104,024	672,809
2009	2,148	103,669	671,058

Source: Office for National Statistics

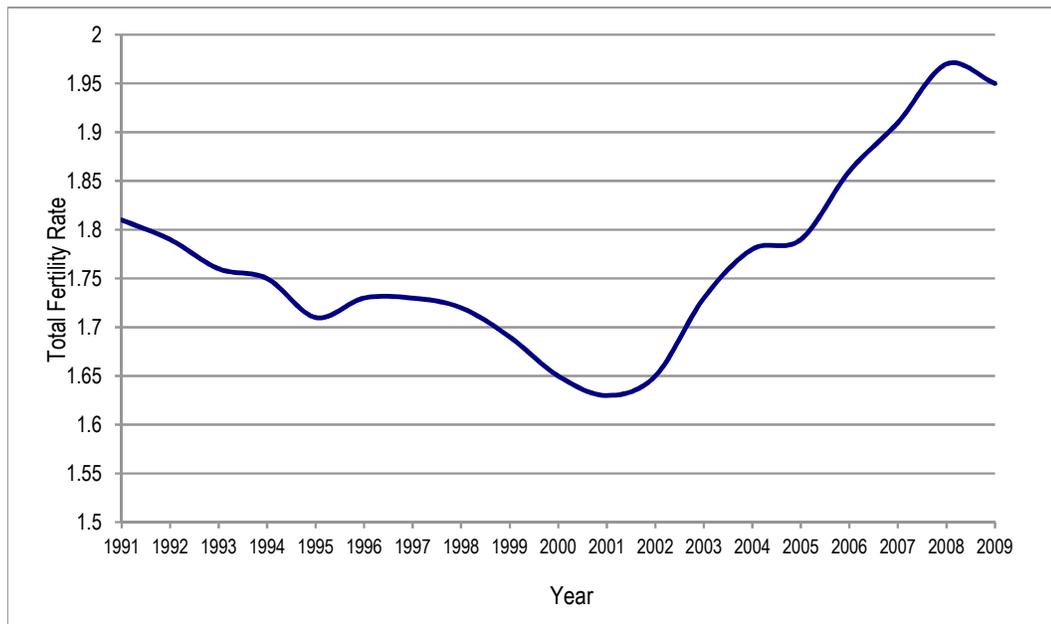
Figure 10.5: Number of Live Births 2005 to 2009 (Indexed 2005=100)



Source: Office for National Statistics

10.9 We can also look at longer term trends. The figure below shows the TFR in England from 1991 to 2009. The data shows that fertility rates dropped between 1991 and 2001 and have been steadily rising since then. The data also shows a slight drop in TFR since 2008.

Figure 10.6: Total Fertility Rate in England 1991 to 2009



Source: Office for National Statistics

Fertility Rate Assumptions

- 10.10 Given the evident trends, as described above, it is clear that assumptions about future fertility rates will be difficult to accurately predict. Again we have drawn on information from ONS about future fertility rates. The general position taken by ONS currently is that fertility rates will be fairly constant over the next 25-years and at a level about 5% below 2008 estimates (nationally a TFR of 1.95).
- 10.11 In Aylesbury Vale the number of births (and the TFR) actually increased slightly from 2008 to 2009 and so we have taken an estimated TFR based on a 5% reduction from 2009 levels (rather than 2008) - this makes for a TFR of 1.95. This figure has been used consistently throughout the projection period and is also consistent with the parts of the projection period where we already have data (i.e. between 2006 and 2009).

Age-Specific Fertility Rates

- 10.12 In addition to establishing overall fertility rates it is necessary to make an estimate of the distribution of births amongst women of different ages. We have assumed that the national distribution of Age-Specific Fertility Rates (ASFRs) applies to Aylesbury Vale (suitably adjusted for differences in the overall fertility rate). Figure 2.7 below sets out the ASFRs by age. The data again remains unchanged throughout the projection period for our main analysis.
- 10.13 Figure 10.7 shows that the number of births is predicted to rise from 28 per thousand for females aged under 20 to peak at a little over 100 in the 25-34 age group (figures are births per year) before dropping off to reach around 12 per thousand in the over 40 age group. To be consistent with national projections the fertility rates for the youngest age group are applied to the female population aged 15-19 whilst the figures for the oldest age group are applied to the population aged 40-44.

Figure 10.7: Age Specific Fertility Rate Assumptions for Aylesbury Vale

Age group	Rate (per thousand)
Under 20	27.7
20-24	76.8
25-29	105.6
30-34	110.6
35-39	57.2
Over 40	12.2

Source: Based on ONS data

Ratio of Male to Female Births

10.14 A further consideration required for projecting the population is the ratio between male and female births. For the purpose of our projection we have assumed a ratio of 1.05 male births per female birth which is consistent with national data for the period from 2005 to 2009.

10D DEATH RATES

10.15 Death rates input into the model are based on life tables produced by ONS for use in national projections. These are then adjusted to take account of life expectancy in the local authority area. A life table is a table which shows, for each age, what the probability is that a person of that age will die before their next birthday. Life tables are constructed separately for men and for women because of their different mortality rates.

10.16 For data on death rates we have looked at estimates of life expectancy at birth. Figure 10.8 shows average life expectancy from January 2007 to December 2009 for Aylesbury Vale, the South East and England. The data shows that life expectancy in Aylesbury Vale is better than found nationally and better for males when compared with regional data.

Figure 10.8: Life Expectancy at Birth, 2007-2009

Area	Males	Females
Aylesbury Vale	80.2	82.6
South East	79.4	83.3
England	78.3	82.3

Source: Office for National Statistics

10.17 When projecting changes in death rates in to the future, we are driven by the assumptions used in national projections. The national figures set out three options for mortality plus a scenario where there is no change in mortality (which has been called a 'special case' scenario). We believe that death rates are likely to improve and have therefore used the 'principal variant' scenario from ONS and applied this to data for Aylesbury Vale. The ONS data looks at a period from 2008 to 2033 (i.e. 25 years) and we have assumed a linear improvement in death rates over this period.

10.18 The table below (Figure 10.9) sets out the key scenario used in ONS projections and how this is estimated to apply to Aylesbury Vale. The ONS figures are for 2008 and 2033 whilst we are principally looking at the period 2006 to 2031. The figures show improvements for both sexes with greater improvements in areas with currently lower life expectancy (consistent with ONS projections). In addition, for females the improvements in life expectancy are slightly lower

than for males. This pattern is consistent with ONS assumptions *'that for most ages these improvements will gradually converge to common 'target rates' of improvement'*.

Figure 10.9: Life Expectancy, 2006 to 2033

Year	England		Aylesbury Vale	
	Male	Female	Male	Female
2006	-	-	79.7	82.1
2008	77.9	82.0	-	-
2031	-	-	85.1	87.1
2033	83.5	87.1	-	-

Source: Based on ONS data

10E MIGRATION

10.19 Probably the hardest assumption to make for a local level projection is around migration – the numbers of people moving into or out of the District over a given time period, Although the 2001 Census would be considered as the main source of information about the profile of migrants it is slightly problematic, particularly as international out-migration is not measured; and the Census is for one year only, thus only reflects what was happening at that point in time.

10.20 We have therefore looked at past trend data about the overall level of in and out-migration (including estimates of international out-migration) and data from ONS about the projected profile of in and out migrants (split between male and female and in 5 year age bands). These two pieces of information are discussed below.

Overall (Net) Level of Migration

10.21 Figure 10.10 shows annual estimates of net in-migration to Aylesbury Vale over the past 10 years. The data shows how variable migration rates have been over this period with data for individual years ranging from an out-migration of 400 people to net in-migration of 1,300. Taking trends over the past ten years suggests an annual net in-migration of 400 persons. If we were to take a shorter-term (5 year) view on migration then the average annual figure is 480 persons.

Figure 10.10: Net in migration to Aylesbury Vale 1999-2009

Period	Net in-migration	Period	Net in-migration
1999-2000	700	2004-05	300
2000-01	1,300	2005-06	200
2001-02	-400	2006-07	600
2002-03	0	2007-08	600
2003-04	0	2008-09	700
Average 1999-2004	320	Average 2004-2009	480
		Average 1999-2009	400

Source: Office for National Statistics

10.22 It should be borne in mind that past migration flows will have been influenced by past housing supply policies within the District. Aylesbury Vale has been a growth area for a number of years, with sizeable new developments at Fairford Leys, Hampden Hall and other locations across the District delivered over the past 10-15 years.

Migration Assumptions used for Modelling

10.23 To develop a trend based projection we have used the average level of net in-migration over the past ten years as a guide although we have also modelled an assumption based on the short-term (five year) average.

Profile of Migrant Population

10.24 In looking at the profile of in and out-migrants in Aylesbury Vale we have drawn on information provided by ONS about their migration assumptions in the 2008-based population projections. Data from the ONS projections has been taken and then adjusted to meet the net migration levels required for analysis – to adjust the figures we have increased or decreased levels of in-migration until the net figure is met.

10.25 Figure 10.11 shows annual migration patterns for the first and last 5-year periods of our projection. The data shows that the figures do not vary substantially over time although there is a general increase in both in- and out-migration (consistent with a growing population) whilst figures for older people tend to get larger later on in the projection (this is again consistent with a greater proportion of the population being in older age groups).

Figure 10.11: Estimated Trend-based Levels of In- and Out-Migration by Age and Sex – Aylesbury Vale

Age group	2006-2011						2026-2031					
	Male			Female			Male			Female		
	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net
Ages 0-4	402	302	101	400	295	105	373	265	108	371	258	114
Ages 5-9	240	199	40	263	205	58	230	189	41	254	201	52
Ages 10-14	237	196	41	253	199	54	182	192	-11	196	199	-3
Ages 15-19	229	643	-413	228	611	-383	296	741	-445	296	773	-477
Ages 20-24	700	662	38	684	623	60	922	723	199	903	703	200
Ages 25-29	641	512	128	611	536	75	773	614	160	750	617	133
Ages 30-34	557	444	112	591	479	112	585	444	140	615	468	147
Ages 35-39	486	411	75	516	435	81	439	368	71	462	368	93
Ages 40-44	403	358	45	403	354	49	320	285	35	314	267	47
Ages 45-49	272	283	-10	254	255	-2	228	234	-6	208	213	-5
Ages 50-54	171	201	-29	165	184	-19	182	188	-6	175	186	-11
Ages 55-59	140	186	-46	158	210	-52	142	165	-24	160	200	-40
Ages 60-64	123	166	-43	139	190	-51	127	158	-31	143	193	-50
Ages 65-69	86	106	-21	108	141	-33	90	92	-2	117	127	-11
Ages 70-74	61	64	-3	77	86	-8	63	56	7	80	83	-3
Ages 75-79	42	33	9	56	51	5	60	40	19	75	63	12
Ages 80-84	36	18	19	63	40	23	59	36	24	91	70	21
Ages 85+	45	27	18	112	84	28	118	61	57	205	126	79
All Ages	4,872	4,809	63	5,081	4,980	101	5,190	4,852	337	5,415	5,116	299

Source: Derived from ONS 2008-based Population Projections

10.26 In translating the above figures into data for use in our projection modelling there are two other factors that need to be taken into account. These relate to the fact that we are running a projection model for five year periods and for five year age bands.

10.27 Firstly we need to recognise that within each five year age band people of certain ages are more likely to move than others. The key group affected by this is the 15-19 age group where typically the majority of migrants are aged 18 or 19 (normally reflecting moves to educational establishments). We have therefore adjusted figures on the basis of Census data to reflect a greater proportion of those in the 15-19 age group being aged 18 or 19.

10.28 Secondly, the data from ONS is for single years – when translating this into a projection over five years we also need to recognise that some people will be both an in- and an out-migrant to or from an area. Whilst this doesn't make any difference to net migration figures it will impact on the gross levels of both in- and out-migration. Again the figures have been adjusted to take account of likely multiple moves (based on the proportions of each age group who are in and out-migrants). This adjustment mainly affects those groups with high levels of both in- and out-migration (particularly the 20-29 age groups).

10.29 When projecting migration patterns for other scenarios we have used the figures in the above tables 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.

10F INITIAL TREND-BASED POPULATION PROJECTIONS

10.30 Figure 10.12 shows the three initial population projections carried out – the first (PROJ 1) is based on our trend-based assumptions about migration (net in-migration of 400 people per annum) and the second (PROJ 2) is based on projecting net in-migration to be at 480 per annum (based on five year rather than ten year trends). The third projection (PROJ 3) is modelled under the assumption of zero net migration - this projection sets levels of in and out-migration the same but does allow for changes in the population due to different age profiles of in and out migrants. In addition to these we have reproduced the 2008-based ONS projections for comparison.

Figure 10.12: Description of Projections used for Population Modelling

Projection	Description
PROJ 1	Trend based – linked to migration over past ten years
PROJ 2	Trend based – linked to migration over past five years
PROJ 3	Zero net-migration
ONS 2008-Based	2008-based ONS population projections

10.31 Figure 10.13 summarises the results from each of the above projections (for 5 year periods up to 2031). The table shows that under our main trend based projection, PROJ 1, the population is expected to rise by 13.4% to 2031. This represents growth in the population of around 22,700 people over the 25 years to 2031.

10.32 With the slightly higher migration assumption (PROJ 2) we would expect to see a population increase over the 25-year period of 14.7% whilst the zero net-migration scenario shows an increase in population of around 450 people per annum (up 6.9% over the 25-year projection period). This is consistent with earlier data showing that natural increase in the District has generally been positive over the past few years.

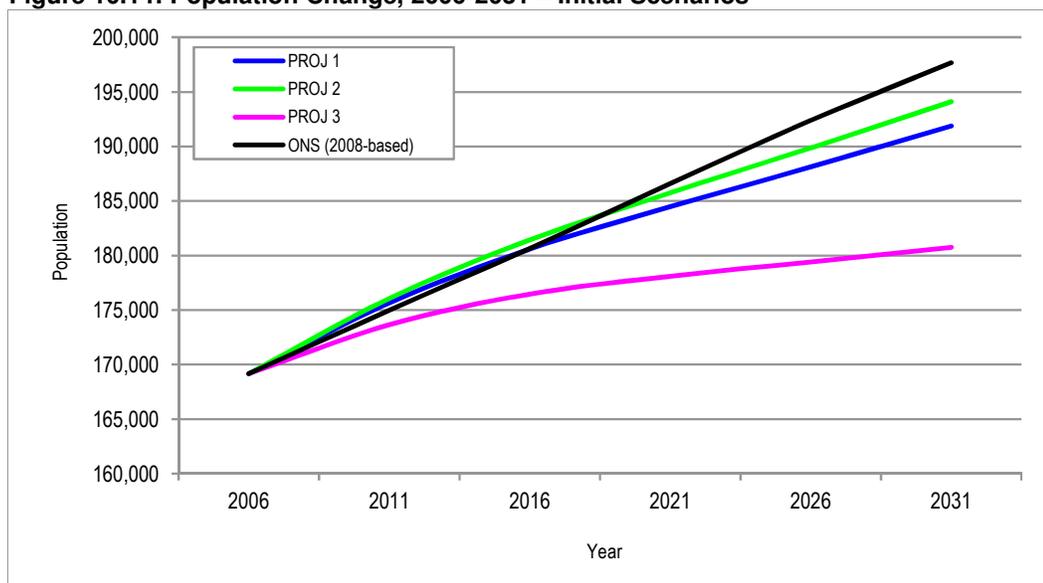
10.33 Finally, ONS projections show a higher level of population growth over the 25-year period. This is due to assumptions about migration with the ONS figures projecting an increase in net migration as the projection period moves further into the future.

Figure 10.13: Population Estimates 2006 to 2031 – Initial Scenarios

	2006	2011	2016	2021	2026	2031
PROJ 1	169,171 0.0%	175,666 3.8%	180,604 6.8%	184,477 9.0%	188,131 11.2%	191,886 13.4%
PROJ 2	169,171 0.0%	176,066 4.1%	181,431 7.2%	185,752 9.8%	189,873 12.2%	194,110 14.7%
PROJ 3	169,171 0.0%	173,666 2.7%	176,471 4.3%	178,106 5.3%	179,422 6.1%	180,764 6.9%
ONS 2008- Based	169,171 0.0%	174,980 3.4%	180,655 6.8%	186,597 10.3%	192,388 13.7%	197,672 16.8%

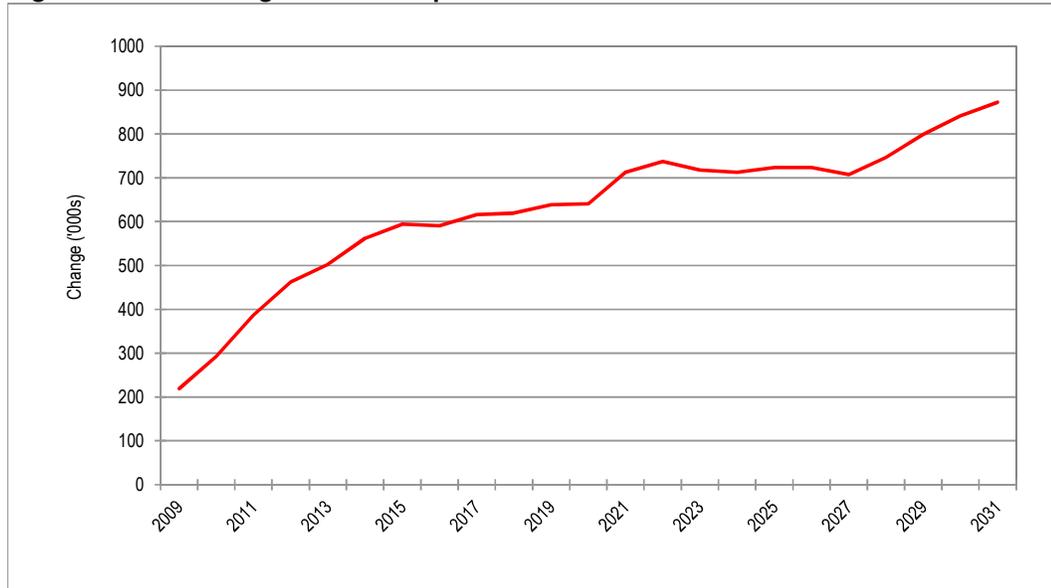
10.34 Figure 10.14 shows the results of the initial demographic-driven projections in graphical form. The figure confirms that under our main trend based assumptions the population of Aylesbury Vale is expected to continue to grow at an average of about 0.5% per annum.

Figure 10.14: Population Change, 2006-2031 – Initial Scenarios



10.35 It will be noticed from Figure 10.14 that the national projections tend to start a bit lower than either of our trend-based scenarios but then show higher population growth from 2016-2021. On closer inspection of the ONS assumptions we find that it has been assumed that net immigration will increase over the projection period (as shown in the figure below). On the basis of past trends (particularly over the last ten years) we do not see any strong justification for expecting migration to increase over time and believe our assumptions around constant migration to be realistic.

Figure 10.15: ONS Migration Assumptions 2009-2031

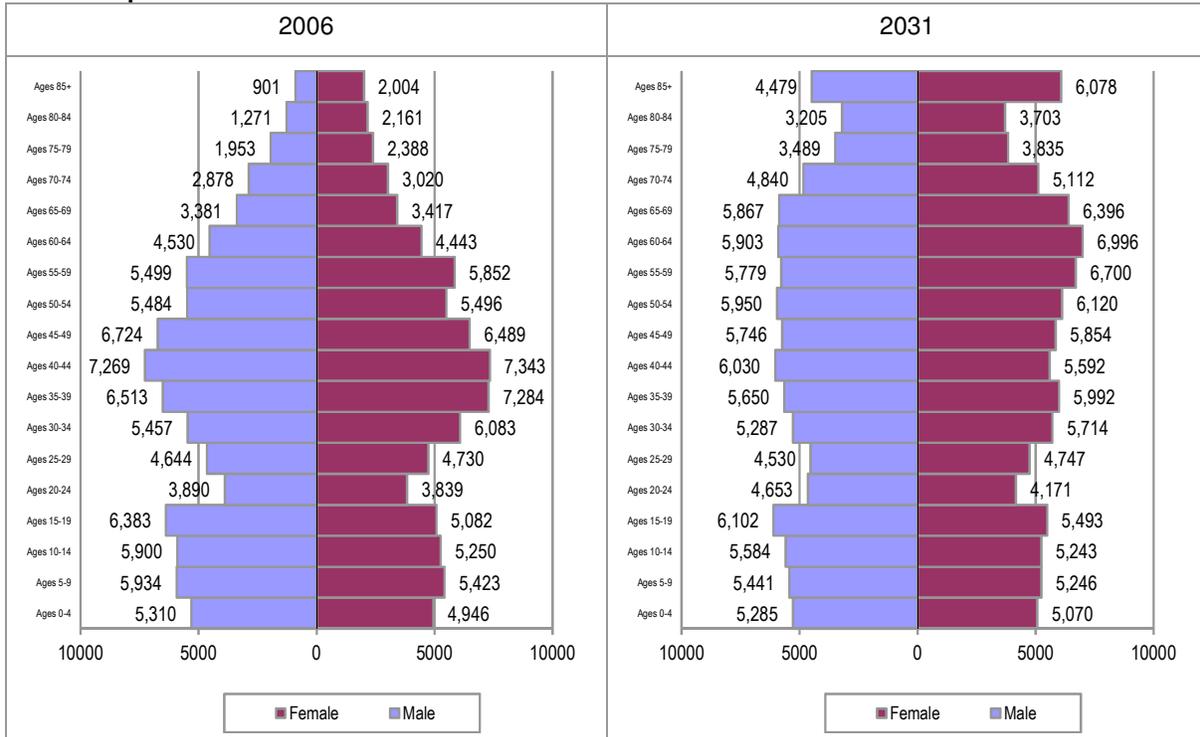


Source: Derived from ONS 2008-based population projections

Main Trend-Based Projection, PROJ 1

10.36 Figure 10.16 shows population pyramids for 2006 and 2031 under our main trend based assumption (PROJ 1) – linked to migration trends over the past 10 years. The ‘pyramids’ clearly show the growth in population overall and highlight the ageing of the population by 2031, 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 2,905 people in 2006 to 10,557 in 2031.

Figure 10.16: Distribution of Population 2006 and 2031 for PROJ 1 – Main Trend based Assumptions



10.37 Figure 10.17 summarises the findings for key (15 year) age groups under PROJ 1. The largest growth will be in people aged over 60. In 2031 it is estimated that there will be 59,904 people aged 60 and over. This is an increase of 27,557 from 2006, representing growth of 85%. The population aged 75 and over is projected to increase by an even greater proportion, 132%, between 2006 and 2031.

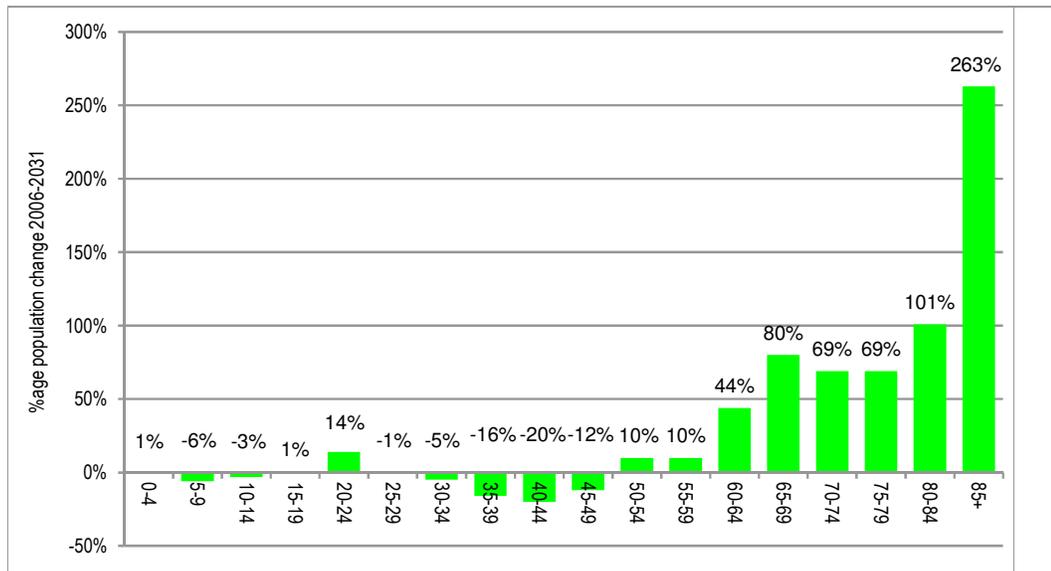
10.38 Looking at the other end of the age spectrum we can see that there are projected to be around 3% less people aged under 15, a small increase in the 15-29 age group and population decline for the 30-44 age group. These findings are particularly important as this influences the size of the economically active population.

Figure 10.17: PROJ 1 – Population Change 2006 to 2031 by five year Age Bands

Age group	Population 2006	Population 2031	Change in population	% change from 2006
Under 15	32,763	31,870	-893	-2.7%
15-29	28,568	29,697	1,129	4.0%
30-44	39,949	34,265	-5,684	-14.2%
45-59	35,544	36,150	606	1.7%
60-74	21,669	35,115	13,446	62.1%
75+	10,678	24,789	14,111	132.2%
Total	169,171	191,886	22,715	13.4%

10.39 Figure 10.18 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 263%) which may have implications for future housing delivery as many of this group may require some form of specialist housing. In contrast we see decreases in many age groups up to age 49, except 15-19 and 20-24.

Figure 10.18: Forecast Population Change by Age Group 2006 – 2031 (PROJ 1)



11 FUTURE EMPLOYMENT GROWTH

11A INTRODUCTION

- 11.1 This section considers future employment growth, exploring how the economy might develop moving forward as it emerges from the current economic recession. It considers forecasts for future employment growth within Aylesbury Vale. These provide an assessment of future demand for employment, taking account of the characteristics and growth potential of the local economy.
- 11.2 The section considers and interrogates forecasts for employment growth in Aylesbury Vale, building on the analysis of economic characteristics and trends set out in the Part I Report. To support this, it provides an analysis of sectoral performance within the Vale.
- 11.3 The analysis seeks to focus on demand-side factors, to allow the projections of economic growth to feed into future planning for housing and employment land provision. While specific economic interventions are considered, the analysis does not provide a detailed assessment of the supply of employment sites or premises within the Vale nor take account of proposed or consented employment development schemes. It is intended that future work will consider the supply of employment sites and premises in the Vale, taking account of both the quantity and quality of sites, to inform allocations of employment land in the Vale of Aylesbury Plan.
- 11.4 The analysis undertaken focused on demand-side factors, and does not take account of the existing supply or future of employment land (either allocated or with planning consent for development).
- 11.5 This section assesses forecasts for future employment growth in the Vale. The economic climate for predictive work at the time of writing in Summer 2011 is however at best unhelpful. The UK economy is struggling to shrug off the effects of the recession and it is becoming clear that these effects are going to be with us for some time to come. The Bank of England has recently been revising its output forecasts downwards, as has the Treasury, which in turn raise the level of uncertainty associated with predictive work. We can assume that this significantly heightens the degree of 'error' in any forecasting work in the current climate.
- 11.6 Against this context a number of forecasting methods are used which allow us to 'converge' on a realistic assessment of economic growth potential for Aylesbury Vale. This is achieved by using, analysing and comparing forecasts by two different forecasting houses, Experian and Cambridge Econometrics (CE).

11B MACRO-ECONOMIC CONTEXT

11.7 The UK economy has continued in recent quarters to shrug off the recent economic recession; with a fall of 0.5% in GDP in the final quarter of 2010 mirrored by 0.5% growth in Quarter 1 (Q1), 2011, meaning that the economy has been broadly flat lining since Q3 2010. The overall picture is of reasonably strong performance in manufacturing and exports, with a positive net trade balance (with the value of exports exceeding imports), but relatively modest growth in services and erratic performance in construction.

11.8 Consumer and business confidence remains relatively fragile, with risks associated with economic weaknesses in countries elsewhere in the Eurozone (as a major export market for UK businesses) and vulnerability to further financial shocks affecting the global banking system and capital markets resulting in further lending constraints and potentially further Government borrowing.

11.9 Price Waterhouse Cooper's (PWC) latest 'principal' forecasts (July 2011)⁵ are for output (GDP) growth of a modest 1.3% in 2011 and 2.2% in 2012. These are similar to HM Treasury's survey of economic forecasts in June 2011 which showed average projections for real GDP growth of 1.5% in 2011 and 2.1% in 2012. However recognising the uncertainties to performance, even in the short-term, PWC highlight two alternative growth scenarios:

- A 'strong recovery' scenario - in which business and consumer confidence picks up and credit constraints on businesses and households begin to ease over the next year. Coupled with strong global growth and rapid restocking, this results in UK GDP growth of around 2% in 2011 and close to 4% in 2012;
- A 'double dip' scenario – resulting from further financial shocks and tightening of credit conditions and leading to reductions in consumer confidence and business investment and exports. In this scenario a widening budget deficit could lead to further spending constraints and reductions in economic output through 2011 and into early 2012.

11.10 This highlights the current uncertainty regarding macro-economic conditions which increases the risk associated with any predictive modelling.

11.11 In the principal forecasts, PWC expect business investment to bounce back in 2012 and this may support property market activity, although there are uncertainties associated with how far recovery could be constrained by the availability of credit, particularly for small and medium-sized businesses that rely more heavily on bank lending.

⁵ PWC UK (2011) *UK Economic Outlook July 2011*

- 11.12 Moving forward in terms of the labour market, unemployment is expected to edge down, but the pace of improvement overall (linked to rates of employment growth) is expected to be dampened significantly by public sector job cuts and the knock-on supply chain impacts.
- 11.13 Looking to the medium term, HM Treasury's May 2011 survey of independent forecasts indicated projected growth between 2012-15 of around 2.4% which is close to long-term trends, but is relatively moderate set against the bounce-back in economic performance seen after previous recessions. In the medium term, consumer spending is expected to be constrained by a combination of tax rises, and relatively modest earnings and employment growth; whilst public sector spending will be constrained; and there is a risk that modest growth rates in the US and Europe could constrain export performance. Again there is a high degree of risk associated with these forecasts. Whatever happens, it is clear that the Vale of Aylesbury Plan is likely to be planning for a number of economic cycles.

11C ASSESSING ECONOMIC FORECASTS FOR AYLESBURY VALE

Introduction

- 11.14 Against the backdrop of uncertainty regarding future economic performance, at both the macro-economic and local levels as we enter a new economic cycle, we have assessed the two econometric forecasts of employment growth by Experian and Cambridge Econometrics respectively.
- 11.15 To support this project, a forecast of total employment across 41 sectors to 2031 was purchased from Cambridge Econometrics. This forecast is dated February 2011.
- 11.16 A forecast of full-time equivalent (FTE) employment, and GVA by broad sector (10 sectors) to 2026 by Experian Business Strategies was sourced from Aylesbury Vale District Council. This forecast is dated January 2011.
- 11.17 We have sought to analyse the differences between these forecasts. As the forecasts were constructed in early 2011, the base date of the forecasts is 2010; in that the figures included for employment in 2011 are forecasts of performance in this year. We have thus used 2010 as the base date for our comparative analysis. While the Cambridge forecasts run to 2031, the Experian forecasts made available for this project only run to 2026. As the basis of the comparative assessment we have therefore used a 2010-26 time period.

11.18 An important point to note is that the Cambridge Econometrics (CE) forecast is for total employment whilst the Experian forecast is for Full-Time Equivalent (FTE) employment. Figures for total employment include both those employed in full and part-time jobs and people who are self-employed. Full-time equivalent employment measures employed persons or students in a way that makes them comparable although they may work or study a different number of hours per week. It expresses jobs in terms of equivalent full-time positions. Total employment is higher than full-time equivalent as some people may work part-time or job share. We have sought to analyse and quantify the impact of these differences through our analysis.

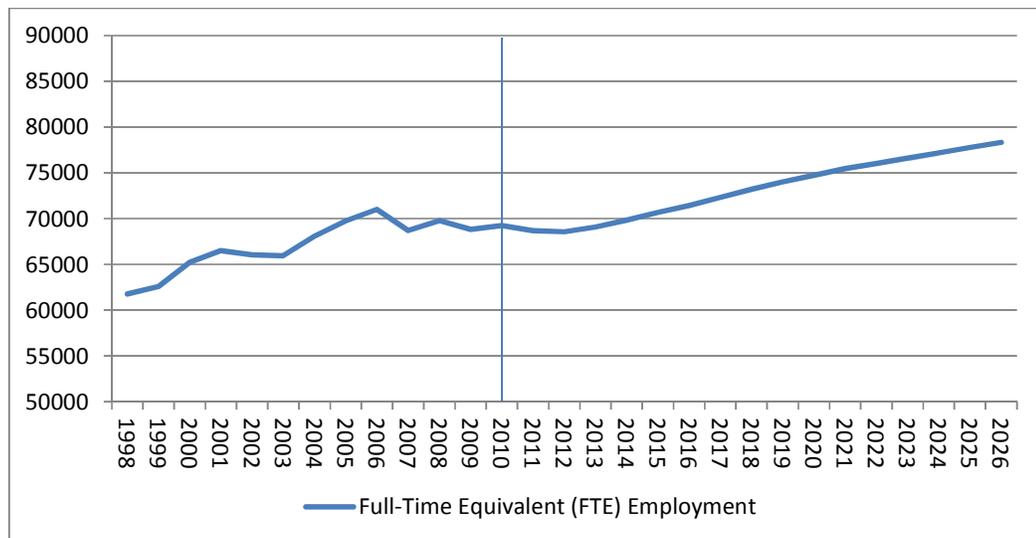
11.19 The key purpose of the comparative analysis undertaken is to consider the realism of the respective forecasts for strategic planning purposes. We consider first the overall projections for employment growth, before considering in detail, in Section 3D, the forecasts for employment growth in individual sectors.

Experian Forecasts

11.20 The Experian forecast for the period 2010-26 indicates gains of just over 9,000 Full-Time Equivalent (FTE) jobs across all sectors bar agriculture. The forecast for the 2011-26 period is for 9,600 additional FTE jobs. Figure 3.1 indicates the projected growth in employment.

11.21 The forecasts can also be used to quantify the expected impact of the recession. Experian forecast a fall in FTE employment in Aylesbury Vale of -1200 jobs between 2008 – 2012.

Figure 11.1: Experian Forecast of FTE Employment in Aylesbury Vale, 2010-26



Source: Experian ©

11.22 Compared to the analysis of the immediate past then the job numbers look highly optimistic especially given the current public sector austerity measures being adopted by the current Government and the uncertainty associated with trend growth forecast for the UK in general. Experian forecast employment growth of 566 additional jobs per annum (FTE) between 2010-26. This compares to employment growth of 565 per annum (FTE) in Aylesbury Vale between 2000-2008 according to the forecasts. There is a remarkable similarity, albeit that within the total numbers the projections for broad sectors do vary. The Experian forecasts show similar rates of employment growth being achieved in Aylesbury Vale before and after the recession.

11.23 We turn next to consider the second set of forecasts, by Cambridge Econometrics (CE).

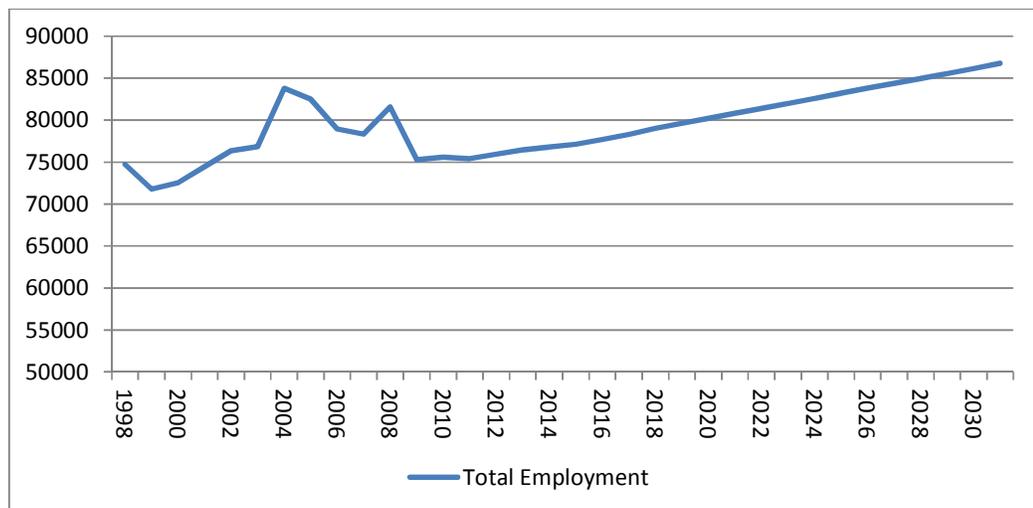
Cambridge Econometrics Forecasts

11.24 A first important point to note is that the Cambridge Econometrics (CE) forecast is for total employment rather than FTE employment and over a longer time-period to 2031, as discussed (see paragraphs 3.12-3.15).

11.25 According to the CE forecasts total employment increased by 9,000 during the 2000-08 period. This is roughly double the estimates by Experian of full-time equivalent employment.

11.26 Looking forward, the CE forecasts indicate total employment change for the 2010 – 2026 period in Aylesbury Vale of 8200 jobs – some 10% less than the Experian results in nominal terms (pure numbers). The forecasts are shown in Figure 11.2.

Figure 11.2: Cambridge Econometrics Forecast of Total Employment in Aylesbury Vale, 2010-31



Source: Cambridge Econometrics

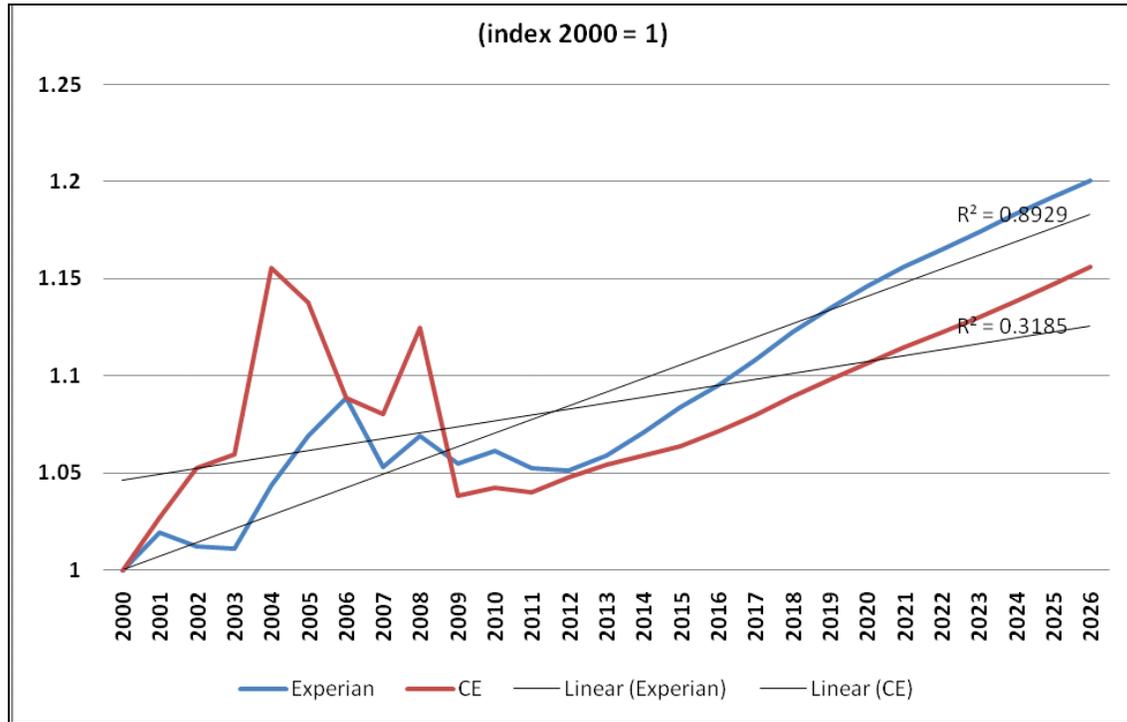
- 11.27 However as noted, these forecasts are not directly comparable – the difference in real terms is much more significant. The CE forecast analysis is not FTE based – it is nominally based. By implication the results are biased upwards in relation to the Experian results, as if the CE forecast was expressed on a comparative basis using FTE jobs, projected employment growth would be lower.
- 11.28 Adjusting the CE forecast results, to equate to an FTE base would reduce the total by approximately 15%. This would reduce the CE forecast to an increase of 7,000 in employment over the 2010 – 26 period – **some 23% less than the forecast by Experian.**

Comparing the Forecasts

- 11.29 Looking overall at the forecast job numbers, the CE forecast for the 2010 - 26 period is not unduly different to those from Experian (an increase of total employment of 8,200 (equivalent to an additional 7,000 FTE jobs) forecast by CE compared to growth of 9,000 FTE jobs forecast by Experian), however in real terms there is a significant difference in the characteristics of these forecasts.
- 11.30 The Experian forecast is basically projecting a linear trend pre- and post-recession. **According to Experian in overall terms the recession has no impact on the long term growth trend in Aylesbury Vale.**
- 11.31 **According to CE the world changes very significantly pre- and post-recession⁶.** Growth is not linear at all according to CE, where it effectively halves post-recession growth in relative and absolute terms. It is our view that this postulates a much more realistic picture of the future Aylesbury economy. Our analysis is shown graphically in Figure 11.3.
- 11.32 Figure 11.3 plots employment growth from 2000 using an index which is used to test the strength of linearity of the two forecasts. In Figure 3.3, the high R square result for the Experian trend is reflective of a strong correlation between a linear trend and the actual trend for the period between 2000 -26 which given the depth of the recession and the medium term prospects for the UK economy is a surprise. The result for CE indicate non-linearity; a low R square shows that there is a break in the trend which one would expect given the severity and gestation of the current recession.

⁶ According to CE employment growth between 2000 – 08 was 12.5%; projected growth between 2010 – 26 is forecast at near 11% but with double the time period. Growth rates by Experian for the same periods are 7% and 20% respectively.

Figure 11.3: Correlation between Forecast Trend Pre & Post Recession, 2000-26 (Index 2000=1)



Source: JOP Consulting Analysis

11.33 This lends support towards using the CE results for this exercise on the basis that this likely postulates a more realistic assessment of economic prospects. However whilst the preferred forecast base are those produced by CE, it is apparent from these results that the two forecasts together provide what is ostensibly a lower and upper band for future economic performance and employment land demand.

11D ANALYSIS OF SECTORAL GROWTH PROSPECTS

11.34 To provide a further detailed interrogation of employment growth prospects (and the forecasts), we have analysed the forecasts' predictions of future performance of individual economic sectors. We look first at the Experian Forecasts followed by those from Cambridge Econometrics.

Analysis of Sectoral Prospects using the Experian Forecasts

11.35 Figure 11.4 below shows the forecast sector trends for Aylesbury Vale for the period 2010 – 26 using the Experian forecasts.

Figure 11.4: Experian Forecasts of Employment By Sector, 2010-26

Sectors	Forecast Employment Trends 2010 – 26 (Experian)
Agriculture, Forestry & Fishing (thousands)	-0.86
Mining & Utilities (thousands)	-0.06
Metals, Minerals & Chemicals (thousands)	-0.46
Engineering (thousands)	0.42
Other Manufacturing (thousands)	0.2
Construction (thousands)	0.52
Distribution, Hotels & Catering (thousands)	1.78
Transport & Communications (thousands)	0.71
Financial & Business Services (thousands)	5.77
Other (mainly public) Services (thousands)	1.04
Total (thousands)	9.06

Source: Experian ©

11.36 The forecast suggests productivity increases in the primary / industrial sector will induce further (albeit in this case, moderate) job losses. This is more than made up by strong growth in the service sectors – particularly the financial and business services sectors and to a lesser extent the retail and distribution sectors.

11.37 However the same analysis shown in Figure 11.5 below for the period 2000 – 2008 which effectively pre-dates the full extent of the current recession shows that employment growing roughly at the same pace as this post- recession forecast.

Figure 11.5: Experian Forecasts of Employment By Sector, 2000-8 (Pre Recession)

Sectors	Past Employment Trends 2000 – 08 (Experian)
Agriculture, Forestry & Fishing (thousands)	-0.59
Mining & Utilities (thousands)	0.02
Metals, Minerals & Chemicals (thousands)	-0.57
Engineering (thousands)	-0.18
Other Manufacturing (thousands)	-1.29
Construction (thousands)	1.56
Distribution, Hotels & Catering (thousands)	-0.52
Transport & Communications (thousands)	-0.49
Financial & Business Services (thousands)	3.61
Other (mainly public) Services (thousands)	2.97
Total (thousands)	4.52

Source: Experian ©

11.38 This begs the question over the robustness of these forecasts given the severity and the persistence of the recession in the UK notwithstanding the fact that this latter period was supported by a very strong period of ('inflated'⁷) growth in the UK.

11.39 Unemployment continues to increase, some of the weakest retail figures in almost 20 years have recently been posted, major commodity price shocks continue and severe public austerity measures being imposed all add to a protracted gestation of the current recession. Whilst the UK may be technically out the recession having posted some level of GVA growth there is a continuing lagged effect that has yet to fully materialise in the UK in the form of unemployment, inflation and jobless growth.

11.40 The Office for Budget Responsibility forecast as at March 2011 that economic recovery is likely to be slower from this recession than from previous recessions. Employment is expected at the national level to remain largely flat between 2010 and 2011, before picking up from 2012 as output growth returns to above trend rates. However employment nationally is only expected to grow by 900,000 between 2010 and 2015. This results from market sector employment growth of 1.3 million offset by reductions in general government employment.

11.41 It may well be that **half of the forecast period to 2026 will simply be a period of stagnation** barely making up the losses already borne by the UK economy. A major period of 'adjustment' must be the order of the day and therefore calls into question **whether the same**

⁷ It was inflated because it was unsustainably supported by weak financial controls in the banking sector – it was in all respects 'illusory' but nevertheless significant.

rate of growth that pre-dated the recession and which is forecast here can at all be credible or achieved. That all said, it is evident that there is (as always) a split between sectors contributing more generally to GVA growth and those contributing to employment as well.

- 11.42 It can be surmised that the **financial and business services sector will be important to Aylesbury Vale as will be retail/distribution and transport in terms of both employment and GVA growth.** As for the other sectors, in employment terms (and setting the public sector aside), these are not expected to be contributing significantly to employment growth or land demand albeit it is interesting to note the small increases in some of the manufacturing sub-sectors.

Analysis of Sectoral Prospects using the Cambridge Econometrics Forecast

- 11.43 This section provides more detailed analysis of the CE dataset, matched with appropriate ONS data. It is important to note that **data at 41 sector level for Aylesbury Vale District is likely to be carrying much higher error levels simply because it is derived from survey information from the Annual Business Inquiry (ABI), the small size of the area and that the focus of the ABI is to supply data for more aggregate areas.**
- 11.44 We have analysed sectoral growth prospects by sector against past sectoral performance. The primary focus of this analysis is to establish the sectoral predisposition of the area taking account not just of employment but also of changes in businesses (referred to here as PAYE units). This provides a much richer analysis of the data because it correlates employment and businesses that inform us of the potential site and density requirements for the future in an area. That is, the **analysis allows us to match employment change with business change to consider the underlying productivity trend for the area.** We have used this to define four business and employment typologies, which relate to sectors experiencing:
- Employment and business unit growth (Zone A);
 - Employment growth but business unit decline (Zone B);
 - Employment decline and business decline (Zone C); and
 - Employment decline but business unit growth (Zone D).

11.45 The typologies developed are as follows:

Productivity Zones

ZONE A: Concentration – more jobs, fewer producers.

Comment: Potential productivity gains achievable through economies of scale and scope.

ZONE B: Enlargement - more producers, more jobs.

Comment: Potential for high value added growth through technical progress and economies of scale.

ZONE C: Fragmentation – more producers, fewer jobs.

Comment: Mixed group with equally mixed prospects. Little to suggest that productivity increases will occur through exploitation of scale economies.

ZONE D: Insecure - fewer producers, fewer jobs.

Comment: Industries experiencing strong competitive and possibly cost pressures. Potentially declining and unlikely to contribute strongly to economic growth.

11.46 Sectors in Zone A will be important in supporting GVA (i.e. wealth creation), although not necessarily employment directly. Sectors in Zone B will support both employment and output growth.

11.47 As we have explained, the District has a broad economic base and thus economic 'risk' factors linked to sectoral concentrations of employment are relatively limited, nonetheless this analysis may be useful in targeting economic development initiatives.

11.48 The results using ONS and CE data are detailed below using the 41 sub-sector disaggregation derived from the CE model⁸. To provide consistency with the analysis above, we have considered forecasts for employment between 2010-26 from the CE model.

Zone A: Concentration

11.49 In the sectors in Figure 11.6 below, potential productivity gains achievable through **economies of scale and scope**. There are more jobs, but fewer producers/ businesses. It is likely that competition is actually increasing with removal of some businesses which is not fully compensated through increases in employment (hence the productivity gains). For the data 2003-2008 and forecasts from 2010 - 2026, then these are the key sectors:

⁸ ONS data at the 2 digit level has been aggregated to accommodate the 41 sub-sector framework using the CE framework which is based on the 2003 SIC. Overall this allows analysis of 31 sub-sectors

Figure 11.6: Sectors experiencing Concentration

Sectors	Changes 2003 - 2008		Productivity Zone	Forecast Employment Growth 2010-26
	Employment	Business Units		
Electrical Engineering & Instruments	7.84%	-5.08%	A	-33.33%
Motor vehicles	15.38%	-21.43%	A	-25.00%
Water Transport	0.00%	-40.00%	A	0.00%
Other services	20.67%	-14.09%	A	10.87%

Zone B: Enlargement

11.50 In the sectors in Figure 11.7 below, growth in employment and businesses is expected – more jobs and producers. These sectors offer potential for high value added growth through technical progress and economies of scale. **These are the sectors that have been ‘setting the pace’ in the Aylesbury Vale context and are therefore of major consideration going forward.** For the data 2003 -2008 then these are the key sectors:

Figure 11.7: Sectors experiencing Enlargement

Sectors	Changes 2003 - 2008		Productivity Zone	Forecast Employment Growth 2010-26
	Employment	Business Units		
Agriculture etc	29.63%	0.00%	B	-28.30%
Non-metal. mineral products	40.00%	50.00%	B	-28.57%
Mechanical engineering	50.98%	10.00%	B	-22.03%
Other transport equip.	7.81%	60.00%	B	-9.23%
Construction	44.74%	20.28%	B	16.55%
Distribution	2.17%	0.39%	B	25.62%
Retailing	4.35%	4.65%	B	2.85%
Hotels & catering	31.66%	10.82%	B	9.22%
Banking & finance	136.78%	9.62%	B	1.89%
Insurance	2480.00%	233.33%	B	14.96%
Professional Services	9.62%	34.33%	B	44.38%
Other business services	32.56%	22.12%	B	16.01%
Health & Social Work	8.58%	30.07%	B	8.47%

11.51 The postulated importance appears to be supported in general through the forecasts employment change 2010 – 26 although clearly for the primary and manufacturing sub-

sectors they will struggle to create jobs at all.

Zone C: Fragmentation

11.52 Sectors in Zone C are expected to see some growth in businesses, but with fewer jobs overall. This is a mixed group with equally mixed prospects. There is little to suggest that productivity increases will occur through exploitation of scale economies although growing competition will in part also offset this. For the data 2003-2008 then these are the key sectors:

Figure 11.8: Sectors experiencing Fragmentation

Sectors	Changes 2003 - 2008		Productivity Zone	Forecast Employment Growth 2010-26
	Employment	Business Units		
Rubber & plastic products	-34.69%	21.74%	C	-1.35%
Land Transport	-33.33%	8.02%	C	6.52%
Computing Services	-31.37%	5.30%	C	11.88%
Public admin. & defence	-12.17%	42.86%	C	-0.86%
Education	-13.29%	19.44%	C	3.62%

11.53 The forecast confirms mixed prospects with Computing Services arguably providing the main opportunities going forward.

Zone D: Insecure

11.54 Sectors in Zone D are expected to see losses both in employment and business. These are often industries experiencing strong competitive and possibly cost pressures. They are potentially declining and unlikely to contribute strongly to economic growth. These are the sectors that on past trends provide least opportunities to Aylesbury Vale. For the data 2003 - 2008 then these are the key sectors:

Figure 11.9: Insecure Sectors

Sectors	Changes 2003 - 2008		Productivity Zone	Forecast Employment Growth 2010-26
	Employment	Business Units		
Food, drink & tobacco	-40.38%	-35.29%	D	-6.98%
Textiles, cloth. & leather	-57.14%	-8.33%	D	-33.33%
Wood & paper	-3.85%	-27.91%	D	-17.65%
Printing & publishing	-27.05%	-7.14%	D	15.15%
Chemicals & Pharma	-59.57%	-21.05%	D	10.53%
Metal production.	-20.00%	-4.72%	D	-17.02%
Electronics	-3.08%	-37.04%	D	-17.24%
Other manufacturing	-18.84%	-5.62%	D	8.33%
Communications	-44.68%	-7.45%	D	4.41%

11.55 This typology is dominated by manufacturing sub-sectors. Whilst the forecast indicates further reduction there are a one or two⁹ sub-sectors with reasonable prospects (printing and publishing and other manufacturing).

11E DRAWING THE ANALYSIS TOGETHER

Disaggregating Economic-Led Scenarios to Test

11.56 On a comparative basis, Experian forecast employment growth of 9,000 FTE jobs between 2010-26. This represents employment growth of 565 additional FTE jobs (net) a year, which is consistent with employment growth rates in the pre-recession period (2000-8). This forecast looks very optimistic in view of current economic conditions (as at Summer 2011), whereby business and consumer confidence remains fragile, credit constraints persist, and there are further risks associated with financial markets, Eurozone performance, and the impact of public sector austerity measures. We estimate that the Cambridge Econometrics forecast would represent growth in FTE jobs of around 7,000 over the 2010-26 period (440 FTE jobs per annum), 23% lower than the Experian forecasts. This seems a more realistic assessment of future employment performance, however we conclude that the two forecasts together provide reasonable upper and lower parameters for employment growth.

11.57 As part of this project, we have considered whether there are any particular planned

⁹ The increase in Chemicals sector is indicative only since it is forecast from a very small base and therefore less reliable than for the Printing sub-sector for example.

economic 'interventions' which could have a material effect on the forecast outcomes. We have considered the potential implications of the following proposals on future employment growth in the Vale at a high level:

- National Enterprise Academy;
- Delivery of Silverstone Circuit Masterplan;
- Aylesbury Town Centre Regeneration; and
- Proposals for Mega dairy at Aston Clinton.

11.58 Firstly it should be recognised that these represent development and investment proposals and we cannot be certain that whether and over what timescales these projects may be delivered. Furthermore there is a question regarding the level of 'additionality' associated with these projects.

11.59 In light of the analysis of the two forecasts identified above and our findings regarding their relative robustness, we concluded that while these interventions may contribute to net additional economic growth (any may influence growth in individual sectors), they would be unlikely to result in a level of employment growth overall which was outside of the parameters provided by the Cambridge Econometrics and Experian forecasts.

Extending the Forecast Analysis to 2031

11.60 To provide a basis for assessing employment demand over the longer-term to 2031, we have drawn principally on the Cambridge Econometric (CE) forecasts. CE forecast growth in total employment of 11,400 over the 20 year period between 2011-31. However employment is forecast to have fallen over the past five years by -3,550, resulting in net employment growth over the 25 year period 2006-31 by 7830 jobs.

Figure 11.10: Cambridge Econometrics Projections – Employment by Sector, 2011-31

Cambridge Econometrics Forecasts (Feb 2011)	Employment, 2011	Forecast Employment Growth, 2011-31	% Change
Agriculture	580	-260	-45%
Transport & Communications	2490	230	9%
Construction	5330	1250	23%
Manufacturing	5450	-630	-12%
Other Services	6340	930	15%
Distribution	6400	2350	37%
Education	7080	610	9%
Retail & Leisure	9940	680	7%
Health	10790	1220	11%
Business & Fin. Services	20980	5010	24%
Total	75380	11400	15%

Source: GL Hearn Analysis of CE Forecasts

11.61 For the Experian forecasts, total employment has been estimated by increasing the FTE forecasts by 11% based on a comparison of the CE and Experian forecasts at the 2006 base date. The forecasts have been extended from 2026 to 2031 using a linear projection of employment trends over the preceding 10 years for each of the 10 sectors (for the purposes of the demographic projections only). This results in projected growth in total employment of 14,500 over the 20 year period between 2011-31. However employment is forecast to have fallen over the past five years by -2,600, resulting in net employment growth over the 25 year period 2006-31 by 11,900 jobs.

11.62 Projections for five year periods are shown in Figure 11.11:

Figure 11.11: Employment Projections to 2031

	2006-11	2011-16	2016-21	2021-26	2026-31	2006-31
Cambridge Econometrics	-3550	2280	3121	3010	2971	7830
Experian	-2578	3066	4444	3189	3816	11938

Source: Cambridge Econometrics, Experian, GL Hearn

11.63 We have run demographic projections based on these forecasts in Section 12.

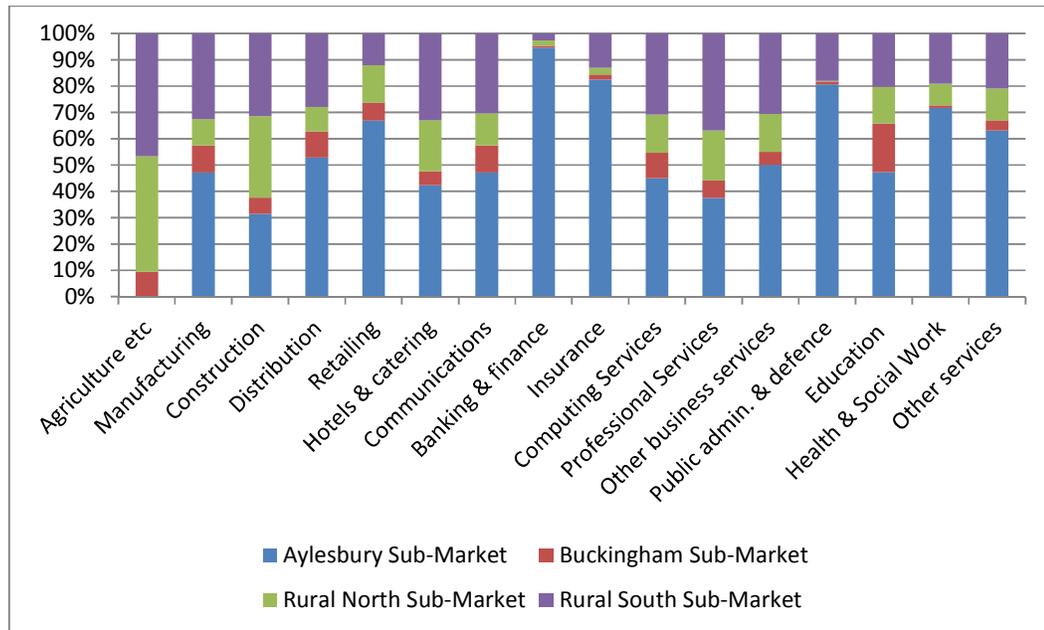
11F CONSIDERING EMPLOYMENT DEMAND IN THE SUB-MARKETS

- 11.64 As we have discussed, there are issues with the availability of robust data for employment growth in individual sectors at the District level. The error margins associated with economic data at sub-district level are greater still. There is thus a heavy 'health warning' with economic analysis at a sub-market level. Thus while GLH has developed projections for employment growth at a sub-market level in this section, these should be regarded as indicative. We would recommend that further consideration is given as the Vale of Aylesbury Plan is developed to economic dynamics in different parts of the District, taking account of supply-side factors and through dialogue with local businesses.
- 11.65 We have developed indicative projections of employment demand at a sub-market level based on the existing level of employment by sector in each of the four sub-markets. This approach takes account of the size and structure of the local economy at a sub-market level, but do not take into account employment trends or past economic performance at this level as there is a lack of robust time-series data on economic trends available for the four sub-markets.
- 11.66 The forecasts have been developed by analysing total employment in 2009 recorded by the ONS Business Register and Employment Survey (BRES) at the Lower-Level Super Output Area (LSOA) in the Vale, and aggregating employment by sector in LSOAs to the Sub-Market geographies. Employment was analysed for 99 sectors and aggregated into the 41 sectors used in the Cambridge Econometrics (CE) forecasts and 10 sectors for the Experian forecasts.
- 11.67 A shift-share approach was used to relate the Cambridge Econometrics and Experian forecasts for the District to the four Sub-Market areas. The proportion of employment in Aylesbury Vale in each sector in 2009 was analysed. Employment growth in each sector between 2006-31 (and five year periods within this) was then distributed to each of the four sub-market areas based on the proportion of employment in this sector in each sub-market in 2009.
- 11.68 The **analysis is thus indicative** and based on levels of employment in different sectors in the sub-markets, and does not take account of trends in employment in these sectors in each sub-market. The sub-market economic forecasts are thus 'top down.' This specifically reflects the lack of robust data on economic trends at a local (below district) level as well as the sensitivity of data at this level to investment decisions by individual businesses which may not be representative of wider economic dynamics.

Indicative Employment Forecasts in the Sub-Markets

11.69 The economic forecasts was developed by analysing the proportion of employment in each of the 41 sectors for the Cambridge Econometrics (CE) and 10 sectors for the Experian forecasts in 2009 in each Sub-Market. This is shown in Figure 11.12 for the Cambridge Econometrics forecast sectors¹⁰.

Figure 11.12: Employment Distribution by Sector across the four Sub-Markets, 2009



Source: BRES 2009. GLH Analysis

10.40 The economic forecasts were then analysed to consider changes in employment in each sector.

11.70 A similar analysis is included for the Experian Forecasts. Total employment has been estimated by increasing the FTE forecasts by 11% based on a comparison of the CE and Experian forecasts at the 2006 base date. The forecasts have been extended from 2026 to 2031 using a linear projection of employment trends over the preceding 10 years for each of the 10 sectors (for the purposes of the demographic projections only).

11.71 Distributing the projected changes in employment across the four sub-markets, indicative demand-based forecasts of employment growth in each of the four sub-markets were developed. These are shown in Figures 11.13 and 11.14. To reiterate, these should be

¹⁰ Manufacturing employment has been aggregated for the purpose of this graph

regarded as indicative as they do not take account of supply-side factors or past employment trends at the sub-market level.

Figure 11.13: Indicative Employment Projections at Sub-Market Level, 2006-31 (Cambridge Econometrics Forecasts)

	2006-11	2011-16	2016-21	2021-26	2026-31	2006-31
Aylesbury Sub-Market	-744	949	1568	1563	1534	4870
Buckingham Sub-Market	-737	139	224	231	230	86
Rural North Sub-Market	-796	439	465	402	407	916
Rural South Sub-Market	-1273	753	864	814	800	1958
Aylesbury Vale District	-3550	2280	3121	3010	2971	7830

Source: GLH

Figure 11.14: Indicative Employment Projections at Sub-Market Level, 2006-31 (Experian Forecasts)

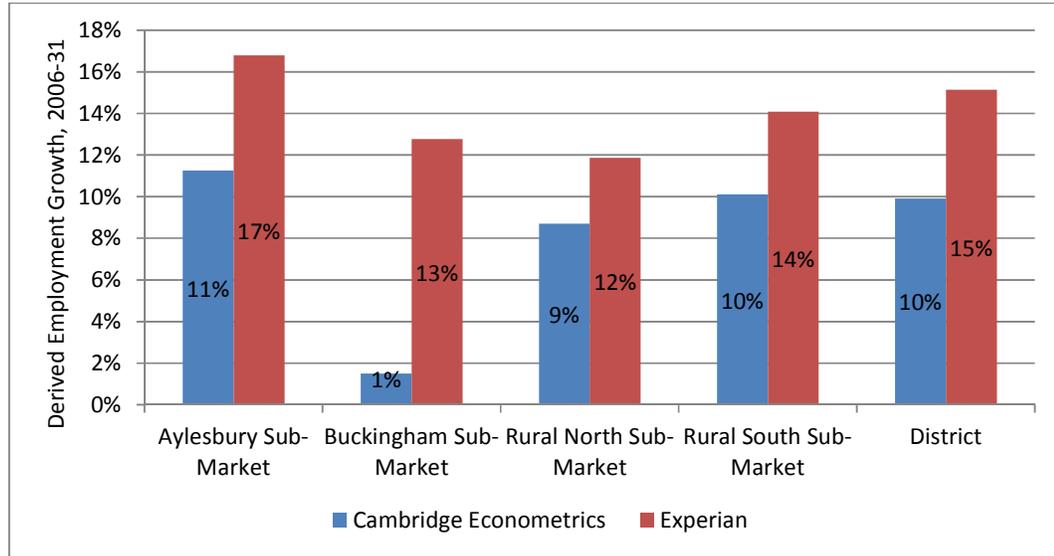
	2006-11	2011-16	2016-21	2021-26	2026-31	2006-31
Aylesbury Sub-Market	-1408	1862	2607	1827	2217	7105
Buckingham Sub-Market	-206	197	288	194	241	714
Rural North Sub-Market	-243	262	475	378	426	1298
Rural South Sub-Market	-720	745	1074	790	932	2821
Aylesbury Vale District	-2578	3066	4444	3189	3816	11938

Source: GLH

11.72 The differences in projected economic growth over the 25 year period from 2006-31 between the sub-markets arise from differences in the economic size and structure of the four sub-market areas. The Aylesbury and Rural South sub-markets have an economic structure which is more aligned to sectors which are expected to grow in the future. As a result, our demand-based forecasts for employment growth at a sub-market level over the plan period are as follows.

11.73 Some notable differences arise at a sub-market level across the two projections: Cambridge Econometrics and Experian. This relates partly to differences between the projections regarding expected economic trends at a sector level, and partly due to the 'finer grain' analysis allowed by the Cambridge Econometrics projections at a 41 sector level.

Figure 11.15: Indicative Forecasts of Employment Growth by Sub-Market, 2006-31



Source: GLH

11.74 The projections of employment at a sub-market level are fed into demographic projections for population and housing growth in the sub-markets in Section 14.

11.75 In regard to the distribution of employment development across the Vale, it is important that this is informed to consideration of commercial market factors and the balance between supply and demand in the different sub-markets. This will need to be considered further in looking at the supply/demand balance for employment sites and premises in different parts of the Vale. However the evidence of take-up of employment floorspace (both new and existing) across the Vale can be used to provide a high-level view. This indicates the following distribution (based on the analysis in the Part I Report):

Figure 11.16: Distribution of Commercial Floorspace Take-Up

	Aylesbury	Buckingham	Rural Areas
Office	48%	15%	37%
Industrial/Warehouse	49%	25%	26%

Source: Focus & EGi

12 ECONOMIC-LED POPULATION PROJECTIONS

12A INTRODUCTION

12.1 This section considers future economic performance, and how it may impact population dynamics. Our analysis thus far has demonstrated that population projections are particularly sensitive to migration. A key question which therefore arises is what level of migration is it realistic to assume may occur in the future.

12.2 There are a number of drivers of migration to and from Aylesbury Vale, including differentials in house prices, quality of life and schools performance. We would expect some of these factors to remain fairly constant over time (for instance we are not assuming that school performance or quality of life will worsen). House prices and particularly differentials in house prices are difficult to predict.

12.3 We would expect economic performance to be an important driver of migration in the future. People move (both domestically and internationally) to access employment opportunities, and we would expect economic performance moving forward to be an important driver of housing demand.

12.4 In this section we therefore take the projections of employment growth from Experian and Cambridge Econometrics which we discussed in Section 3 and model how this might influence population trends.

12.5 The relationship between employment and population growth is complex in that it can be influenced by both commuting patterns and by levels of economic participation. These factors are considered below.

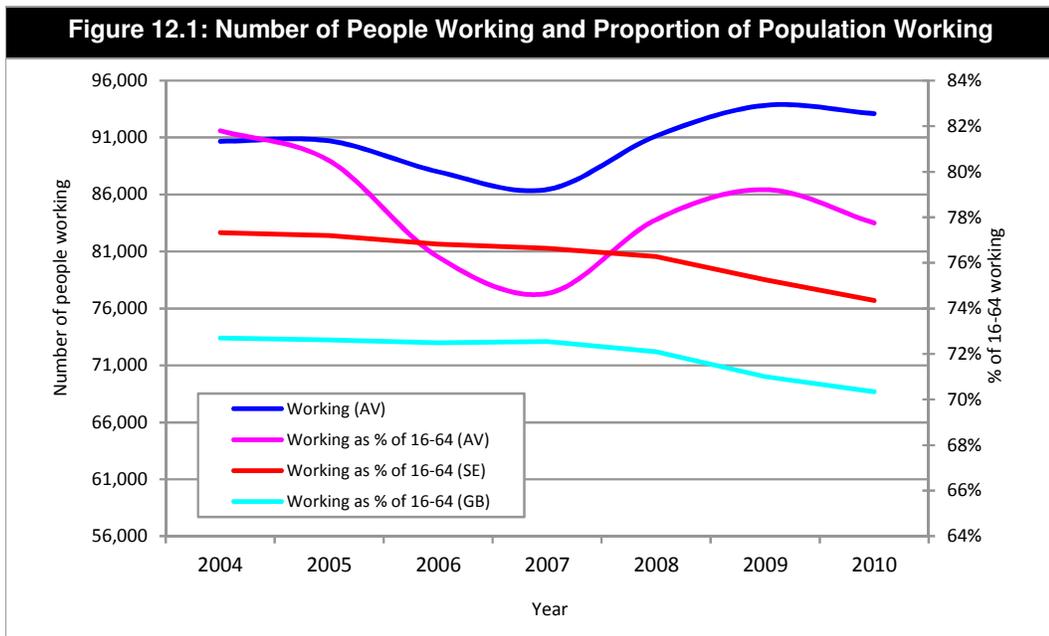
12B APPROACH TO RELATING ECONOMIC PERFORMANCE & POPULATION GROWTH

12.6 In the remainder of this section we assess the implications of economic performance on population trends. We assess changes in the working-age population which would arise from the trend-based projections (PROJ 1 & 2) and the zero net-migration projection (PROJ 3). We then consider a number of potential scenarios for rates of employment growth to 2031, and consider what growth in the labour force would be necessary to support this. This is used to adjust levels of in-migration.

Employment Rates

12.7 It is necessary first to consider the demographic make-up of the current labour force in Aylesbury Vale. The figure below shows data from National Online Manpower Information Service (NOMIS) about the number of people who are working and the proportion of people of working age who are working.

12.8 The data shows that both the number of people working and the employment rate have been variable over time. Comparing 2004 with 2010 the number of people working has increased slightly whilst the employment rate has dropped. Employment rates in the District are generally above regional equivalents and consistently above national figures for the whole of the period studied.



Source: NOMIS/Annual Population Survey

12.9 For our projections we want to estimate the number of people who are working by both age and sex and we have therefore drawn on information from the 2001 Census to give us a steer on the likely proportions of different groups who work and how this might change as the population changes over time. Figure 12.2 shows the total number of people in each age/sex group and the number who are working.

12.10 It should be noted that the Census does not record persons aged over 74 who might be in work and so it is possible that a small number of people who are working are not included in Figure 12.2.

Figure 12.2: Estimated Employment Rate by Age and Sex (2001)

Age group	Male			Female		
	Working	Persons	% working	Working	Persons	% working
Aged 16 to 19	1,517	4,478	33.9%	1,151	3,962	29.1%
Aged 20 to 24	3,460	4,429	78.1%	2,932	4,072	72.0%
Aged 25 to 29	4,506	5,023	89.7%	4,263	5,581	76.4%
Aged 30 to 34	5,837	6,328	92.2%	5,081	7,007	72.5%
Aged 35 to 39	6,651	7,216	92.2%	5,167	7,087	72.9%
Aged 40 to 44	6,224	6,761	92.1%	5,114	6,528	78.3%
Aged 45 to 49	5,257	5,739	91.6%	4,524	5,662	79.9%
Aged 50 to 54	5,334	5,968	89.4%	4,786	6,215	77.0%
Aged 55 to 59	4,005	4,910	81.6%	3,056	4,676	65.4%
Aged 60 to 64	2,350	3,739	62.9%	1,148	3,540	32.4%
Aged 65 to 69	686	3,244	21.1%	404	3,237	12.5%
Aged 70 to 74	280	2,384	11.7%	111	2,685	4.1%
Total	46,107	60,219	76.6%	37,737	60,252	62.6%
Aged 16-64	45,141	54,591	82.7%	37,222	54,330	68.5%

Source: NOMIS (from 2001 Census)

12.11 Using the information in this table we are able to calculate that around 75.6% of people in the age range 16 to 64 were working at the time of the Census. This figure is slightly lower than figures for most years presented above (from NOMIS). In making an estimate of the number of people working to use in our projection we have therefore adjusted the Census proportions to match more recent figures shown by NOMIS.

12.12 In addition, during the projection period the pensionable age for both men and women is due to change. The key changes can be summarised as:

- The State Pension age for women born on or after 6 April 1950 will increase gradually to 65 between 2010 and 2020;
- From 6 April 2020 the State Pension age will be 65 for both men and women; and
- State Pension age for men and women will increase from 65 to 66 between April 2024 and April 2026.

12.13 In addition we need to consider the scope for changes in the underlying employment rate as the projection develops. As shown in the data earlier in this section, the employment rate in Aylesbury Vale has generally dropped over the past few years. For the purposes of our modelling we have assumed that employment rates start (in 2006) at 84.3% for males and 70.5% for females (consistent with NOMIS data) before dropping to 80.9% for males and 69.5% for females in 2011. After 2011 we have assumed that employment rates will recover to reach the 2006 estimates by 2016 and level off thereafter. The changes to pensionable age

have also been applied to employment rates as they become relevant during the projection period. Figure 12.3 shows our adjusted employment for all age groups for 2006 and 2031.

Figure 12.3: Adjusted Employment Rates by Age and Sex – Aylesbury Vale

Age group	Male			Female		
	2001 Census	Adjusted 2006	Projected 2031	2001 Census	Adjusted 2006	Projected 2031
Aged 16 to 19	33.9%	35.0%	35.0%	29.1%	29.7%	29.6%
Aged 20 to 24	78.1%	81.4%	81.4%	72.0%	75.6%	75.6%
Aged 25 to 29	89.7%	93.4%	93.4%	76.4%	80.3%	80.3%
Aged 30 to 34	92.2%	96.1%	96.1%	72.5%	76.2%	76.2%
Aged 35 to 39	92.2%	96.0%	96.0%	72.9%	76.6%	76.6%
Aged 40 to 44	92.1%	95.9%	95.9%	78.3%	82.3%	82.3%
Aged 45 to 49	91.6%	95.4%	95.4%	79.9%	83.9%	83.9%
Aged 50 to 54	89.4%	93.0%	93.0%	77.0%	80.9%	80.9%
Aged 55 to 59	81.6%	84.9%	84.9%	65.4%	68.7%	68.7%
Aged 60 to 64	62.9%	65.5%	65.5%	32.4%	34.1%	51.0%
Aged 65 to 69	21.1%	22.0%	25.3%	12.5%	13.1%	17.6%
Aged 70 to 74	11.7%	12.3%	12.3%	4.1%	4.3%	4.3%

Source: NOMIS (from 2001 Census) adjusted using NOMIS data

12.14 When we apply the employment rates to our base population for 2006 we find an estimated 87,568 people who are working, with an employment rate (per person aged 16-64) of 77.6%. Both of these figures are consistent with the trend data presented above.

Commuting Patterns

12.15 In addition to studying the age profile of people in work it is worthwhile to consider commuting patterns to and from Aylesbury Vale. Figure 12.4 summarises the data about commuting from the 2001 Census. The table shows that around 17,000 more people commute out of Aylesbury Vale for work than commute in. The data also shows that around 76% of people working in Aylesbury Vale also live in the area whilst around 61% of people who live in the area (and are working) actually work in the area.

12.16 ONS neighbourhood statistics provide 2008 based estimates of commuting patterns based upon the annual population survey (APS) - estimates are compared to the 2001 Census. As the APS is based upon sampling ONS states whether findings can be regarded as significant and generally this is not the case for Aylesbury Vale.

Figure 12.4: Travel to work patterns to and from Aylesbury Vale (2001)

Area	Live in Aylesbury Vale work in...	Work in Aylesbury Vale live in...	Net flow out of Aylesbury Vale
Aylesbury Vale	52,619	52,619	0
Cherwell	1,679	1,251	428
Chiltern	1,907	843	1,064
Milton Keynes	4,613	1,841	2,772
Oxford	1,028	315	713
South Oxfordshire	2,605	1,466	1,139
Wycombe	3,828	1,780	2,048
Rest of South East	2,798	1,063	1,735
Central Bedfordshire	1,677	1,584	93
Dacorum	3,238	1,172	2,066
Rest of Eastern Region	2,689	1,140	1,549
South Northamptonshire	603	1,050	-447
Rest of East Midlands	446	618	-172
London	5,531	959	4,572
All other areas	812	1,461	-649
Total	86,073	69,162	16,911
Total in/out migration for work	33,454	16,543	-
% self-containment	61.1%	76.1%	-

Source: 2001 Census (NB Figures exclude people working abroad or off-shore)

- 12.17 Additional employment creation could have a number of impacts. It could create demand for additional housing, leading to more people living and working within the area. It could provide more local job opportunities for those currently commuting out of the area, reducing the number commuting out and the net level of out-commuting. Alternatively it could result in an increase in the level of people commuting into Aylesbury Vale to work.
- 12.18 For the purposes of our projections we are only assessing the number of people living locally who are working and so the data about commuting patterns is mainly presented to assist an overall understanding of local employment. It is however important information when considering the potential impact of additional employment opportunities locally.
- 12.19 It is difficult to estimate how commuting patterns may change moving forward. Our analysis in the Part I Report has highlighted that commuting distances in Aylesbury Vale are similar to other parts of Buckinghamshire, and are influenced by the geography of the District's boundary whereby out-commuting from the District can be of quite short distances to larger employment centres close to the District's boundary.

- 12.20 Our analysis has also highlighted the availability of higher paid employment opportunities in larger employment centres in surrounding areas (as well as London) which provides a incentive to travel.
- 12.21 On this basis the evidence suggests quite limited potential to reduce out-commuting from the District. Our population forecasts thus assume that employment growth within the Vale, moving forward, is taken-up by residents from the Vale (rather than in-commuters or a reduction in out-commuting). Over time this should increase the proportion of people who both live and work within the District.
- 12.22 There is clearly however a sensitivity of the economic-led projections to changes in commuting, and this is considered further at the end of this Chapter.

12C ECONOMIC IMPLICATIONS OF THE DEMOGRAPHIC-DRIVEN PROJECTIONS

- 12.23 Figures 12.6, 12.7 and 12.8 show the estimated number of people working under each of our three main demographic-driven projections. The projections are summarised in Figure 12.5.

Figure 12.5: Description of Initial (Demographic-Driven) Projections

Projection	Description
PROJ 1	Trend based – linked to migration over past ten years
PROJ 2	Trend based – linked to migration over past five years
PROJ 3	Zero net-migration

- 12.24 The data shows that under the main trend based assumptions (PROJ 1) the number of people working is projected to increase by 901 from 2006 to 2031. This is an increase of 36 people working per annum. It is also notable that there is expected to be a decrease in the number of people working after 2021.

Figure 12.6: Estimated Number of People Working 2006 to 2031 (PROJ 1)

Year	Number of People Working	Change in Working	Annual Change	Cumulative Change
2006	87,568	-	-	-
2011	85,996	-1,573	-315	-1,573
2016	89,423	3,428	686	1,855
2021	89,964	541	108	2,396
2026	89,303	-661	-132	1,734
2031	88,470	-833	-167	901
Total/average		901	36	

12.25 Under our alternative migration-based assumption (PROJ 2 – net in-migration of 480 per annum (five year trend)) we see a larger increase in the number of people working. Over the 25-year projection period PROJ 2 shows an increase of 2,099 people working (84 per annum).

Figure 12.7: Estimated Number of People Working 2006 to 2031 (PROJ 2)

Year	Number of People Working	Change in Working	Annual Change	Cumulative Change
2006	87,568	-	-	-
2011	86,220	-1,348	-270	-1,348
2016	89,894	3,674	735	2,326
2021	90,681	787	157	3,113
2026	90,264	-417	-83	2,696
2031	89,667	-597	-119	2,099
Total/average		2,099	84	

12.26 The figures derived under PROJ 3 (zero net-migration) show a substantial drop in the number of people working. Under this scenario the number of people working drops from 87,568 in 2006 to 82,483 in 2031 – a drop of 5,085 or 6%.

Figure 12.8: Estimated Number of People Working 2006 to 2031 (PROJ 3)

Year	Number of People Working	Change in Working	Annual Change	Cumulative Change
2006	87,568	-	-	-
2011	84,872	-2,697	-539	-2,697
2016	87,068	2,196	439	-501
2021	86,377	-690	-138	-1,191
2026	84,496	-1,882	-376	-3,073
2031	82,483	-2,012	-402	-5,085
Total/average		-5,085	-203	

12D ZERO EMPLOYMENT GROWTH PROJECTION

10.41 As well as looking at the employment numbers related to a range of different migration driven scenarios we have looked at the number of people working and the population profile related to an additional scenario as described below.

Figure 12.9: Description of additional migration lead projection

Projection	Description
PROJ 4	Zero employment growth – to assess the population change (and migration) required to maintain current employment levels

10.42 Under PROJ 4 it can be seen that to maintain the size of the current workforce in the District there would need to be an increase in the population. This is due to the ageing of the population and the fact that as the number of older persons increases there are a lower proportion of people of working age. It is estimated that to maintain the workforce at 2006 levels would require an increase in the population of around 12% to 2031 – an increase of about 21,000 people (or 840 per annum).

Figure 12.10: Population Estimates 2006 to 2031 – PROJ 4 – Zero Employment Growth

	2006	2011	2016	2021	2026	2031
PROJ	169,171	175,365	179,982	183,518	186,820	190,211
4	0.0%	3.7%	6.4%	8.5%	10.4%	12.4%

12E ECONOMIC-DRIVEN POPULATION PROJECTIONS

10.43 Having estimated the likely number of people working for each time period under our main trend-based and zero net migration projections we proceed by building a number of scenarios based on future employment growth.

10.44 As we have explained, a key question which has arisen in the course of this report is what level of net migration we might expect to see in Aylesbury Vale. The initial trend based projections indicate that future population growth is particularly sensitive to assumptions regarding future levels of net migration. Migration to Aylesbury Vale is driven by a range of factors, including employment opportunities and its quality of life offer.

10.45 While recognising that the reasons why people move to Aylesbury Vale vary, we consider that economic performance will be a key driver of trends. We have sought to examine what level

of migration the economy might be able to support, aiming to deliver a sustainable future for the area where there is balanced growth in housing and employment.

- 10.46 Two economic-led projections are based on the forecasts of employment growth by Experian and Cambridge Econometrics, dated Spring 2011 and described earlier in this Section. The projections are as follows:

Figure 12.11: Description of Economically-driven Projections

Projection	Description
PROJ 5	Cambridge Econometrics Forecasts
PROJ 6	Experian Forecasts

- 10.47 Figure 12.12 indicates the projected population change under these two scenarios.

Figure 12.12: Population estimates 2006 to 2031 for Different Projection Variants

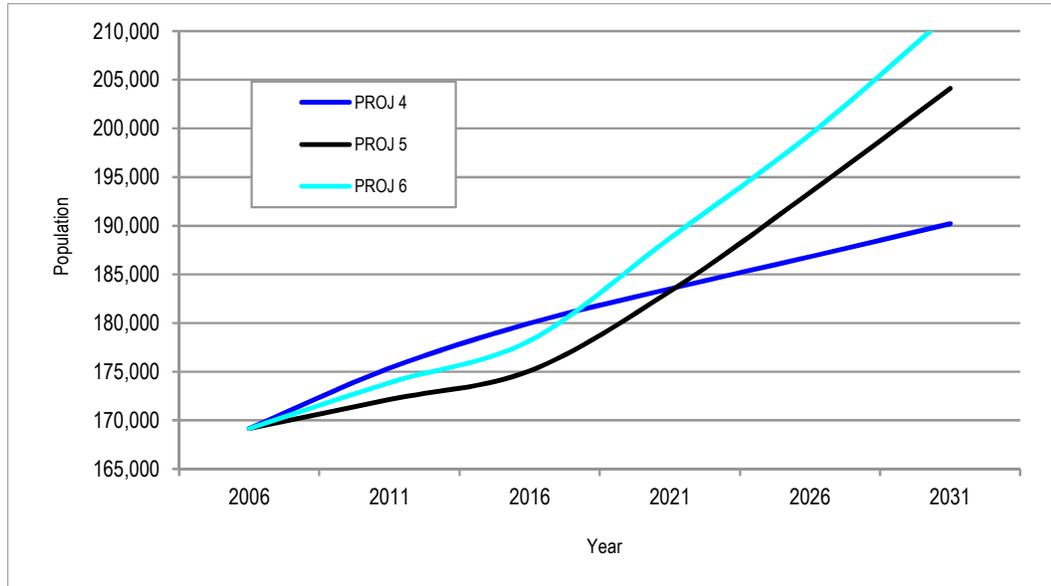
Projection	2006	2011	2016	2021	2026	2031
PROJ 5	169,171 0.0%	172,147 1.8%	175,094 3.5%	183,258 8.3%	193,414 14.3%	204,116 20.7%
PROJ 6	169,171 0.0%	173,877 2.8%	178,187 5.3%	188,714 11.6%	199,371 17.9%	211,786 25.2%

- 10.48 Figure 12.13 compares the economic-driven projections. We have also added the zero employment growth projection (PROJ 4), which is based on maintaining the current size of workforce, for comparative purposes.

- 10.49 Over the 25 year period from 2006-31, PROJ 4 indicates that to maintain the size of the workforce 12.4% population growth is required (around 21,000 people) because of expected changes to the demographic structure.

- 10.50 The economic projections indicate that particularly from 2016 onwards, employment growth could result in stronger housing need and demand than in the demographic-driven projections with the two economic scenarios indicating population growth of between 20-25% between 2006-31 compared to between 13-15% based on past population trends.

Figure 12.13: Projected Population Growth, 2006 to 2031 (Three Economic-Driven Scenarios)



12F SENSITIVITY TO CHANGES IN COMMUTING

- 10.51 The economic-led projections assume that employment growth within the Vale is supported by changes in the working-age population within the Vale. They are based on meeting demand for employment within the Vale (rather than in surrounding economic centres). This approach should result in a growth over time in the level of self-containment in terms of the proportion of residents both living and working within the District.
- 10.52 The analysis undertaken indicates commuting out of the district to work is influenced by its geography and relationships with surrounding economic centres, and that in the case of London in particular there is a significant wage incentive to travel to work (as we discussed in Section 4). Taking this into account, the scenarios have been modelled on the basis that current levels of out-commuting, in absolute terms, remain consistent but that in proportional terms, out-commuting reduces over time.
- 10.53 It should be borne in mind that commuting dynamics are influenced by a range of factors including the availability and quality of jobs, travel times and costs as well as the strength of transport links, and differences in the quality of place, the housing offer and housing costs between different locations. Given this range of influences, it is difficult to accurately predict how commuting dynamics will change moving forward. However we consider that the

approach adopted to the projections, whereby the level of self-containment (the proportion of residents both living and working within the Vale) increases gradually over time, to represent a realistic but positive approach to forward planning. We consider that this approach is also realistic given proposed changes to national policy, with a shift away from the regional planning mechanisms towards individual local authorities meeting needs arising in their areas.



13 PROJECTIONS OF HOUSING REQUIREMENTS FOR AYLESBURY VALE

13A OVERVIEW OF APPROACH

- 13.1 In this section we take the demographic- and economic-led projections for population growth, as set out in Sections 10 and 12 respectively, and derive projections for growth in households and housing.
- 13.2 Having estimated the population size and the age/sex profile of the population the next step in the process is to convert this information in to estimates of the number of households in the area. To do this we use the concept of headship rates. For the purpose 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. This method is described in more detail below.
- 13.3 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)). For the purposes of our analysis we have used data in the CLG 2008-base household projections, these take males to be the default HRP in cases where the household is headed by a couple.
- 13.4 This approach is different to that taken in the Census where defining the HRP is based on economic activity and age (ahead of sex). For example, in a household with only one adult (e.g. a lone parent household) the HRP is taken as that person. In a household with more than one adult (e.g. a couple household) the HRP is chosen on the basis of their economic activity (in the priority order of full-time job, part-time job, unemployed, retired, other). If both (or all) people have the same economic activity, the HRP is defined as the elder of the two, or if they are the same age, the first member on the form.
- 13.5 Figure 13.1 shows headship rates derived from the 2008-based CLG projections for each of the key periods of 2006 and 2031. 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 females).
- 13.6 When applying the 2006 headship rates to our population we derive an estimated number of households in 2006 of 67,157.

Figure 13.1: Estimated Headship Rates by Age and Sex (2006 and 2031) – Aylesbury Vale

Age group	Male		Female	
	2006	2031	2006	2031
Ages 15-19	1.3%	1.5%	1.0%	1.1%
Ages 20-24	19.8%	19.0%	9.1%	10.4%
Ages 25-29	60.7%	56.3%	15.6%	18.3%
Ages 30-34	83.7%	80.8%	19.1%	29.0%
Ages 35-39	89.5%	88.8%	19.2%	23.8%
Ages 40-44	93.0%	94.5%	18.1%	21.3%
Ages 45-49	94.1%	94.4%	19.6%	19.8%
Ages 50-54	95.6%	95.1%	17.3%	19.7%
Ages 55-59	95.8%	95.4%	19.3%	22.9%
Ages 60-64	96.8%	95.1%	21.6%	23.3%
Ages 65-69	97.4%	97.1%	29.2%	31.1%
Ages 70-74	97.3%	97.4%	41.3%	39.6%
Ages 75-79	95.0%	95.2%	52.8%	44.6%
Ages 80-84	91.3%	93.1%	58.5%	46.5%
Ages 85+	82.5%	87.4%	56.4%	49.4%

Source: CLG 2008-based household projections

13B HOUSEHOLD GROWTH - DEMOGRAPHIC-LED PROJECTIONS

13.7 By applying these headship rates we find the following household estimates under our trend based projections (PROJ 1 to PROJ 3) which are based on demographic trends. The data shows that under our main 10-year trend based projection (PROJ 1) there will be an additional 633 households per annum in the period 2006 to 2031 (15,817 in total). The higher net migration projection (PROJ 2) shows an annual increase of around 670 households per annum whilst under zero net-migration assumptions (PROJ 3) the growth in households is expected to be smaller (averaging 453 per annum over the period from 2006 to 2031). It should however be remembered that this scenario sees a drop in employment levels.

Figure 13.2: Estimated Household Growth under PROJ 1 to PROJ 3

Year	PROJ 1			PROJ 2			PROJ 3		
	Total hhs	Change in hhs	Cum. change	Total hhs	Change in hhs	Cum. change	Total hhs	Change in hhs	Cum. change
2006	67,157	-	-	67,157	-	-	67,157	-	-
2011	70,796	3,639	3,639	70,948	3,791	3,791	70,035	2,878	2,878
2016	73,966	3,170	6,809	74,284	3,337	7,127	72,371	2,337	5,214
2021	77,062	3,096	9,905	77,562	3,278	10,405	74,559	2,187	7,402
2026	80,050	2,988	12,893	80,744	3,182	13,587	76,579	2,021	9,422
2031	82,974	2,924	15,817	83,871	3,126	16,714	78,489	1,909	11,332
Average PA		633			669			453	

Estimated Household Growth under CLG Projections

13.8 Figure 13.3 below also provided an analysis of the growth in households estimated under the 2008-based CLG household projections (for Aylesbury Vale) for comparison purposes. The data shows that these projections expect an increase in households of around 18,550 over the period from 2006 to 2031 (742 per annum).

Figure 13.3: Estimated Household Growth under National Household Projections

Year	CLG 2008-based household projections		
	Total households	Change in households	Cumulative change
2006	67,157	-	-
2011	70,695	3,538	3,538
2016	74,679	3,984	7,522
2021	78,678	3,999	11,521
2026	82,329	3,651	15,172
2031	85,709	3,380	18,552
Average PA		742	

13C HOUSEHOLD GROWTH - ZERO EMPLOYMENT GROWTH PROJECTION

13.9 The data shows that under PROJ 4 (no change in the size of the workforce) the number of households is expected to rise from 67,157 in 2006 to 82,298 in 2031 – an average of 606 households per annum. This level of household growth is thus necessary just to maintain the current size of the labour force.

Figure 13.4: Estimated Household Growth under PROJ 4

Year	Total households	Change in households	Cumulative change
2006	67,157	-	-
2011	70,681	3,524	3,524
2016	73,726	3,045	6,569
2021	76,685	2,959	9,528
2026	79,527	2,842	12,370
2031	82,298	2,771	15,141
Average PA		606	

13D HOUSEHOLD GROWTH – ECONOMIC-LED PROJECTIONS

13.10 As well as estimating the number of household from our trend based projections we can apply the same process to our economically driven projections (PROJ 5 and PROJ 6). Household estimates from each of these are shown below. The data shows that the number of households increases from 67,157 in 2006 to 87,840 in 2031 (an increase of 20,683 households) for PROJ 5, which is based on the Cambridge Econometrics forecast; and to 90,931 (an increase of 23,774 households) for PROJ 6, which is based on the Experian forecast. PROJ 5 represents household growth of 827 per annum, while PROJ 6 represents household growth of 951 per annum.

Figure 13.5: Estimated Household Growth under PROJ 5 and PROJ 6

Year	PROJ 5			PROJ 6		
	Total hhs	Change in hhs	Cum. change	Total hhs	Change in hhs	Cum. change
2006	67,157	-	-	67,157	-	-
2011	69,457	2,300	2,300	70,115	2,958	2,958
2016	71,840	2,383	4,683	73,033	2,918	5,876
2021	76,606	4,766	9,449	78,751	5,718	11,594
2026	82,169	5,563	15,012	84,540	5,789	17,383
2031	87,840	5,671	20,683	90,931	6,391	23,774
Average PA		827			951	

13E TRANSLATING HOUSEHOLDS PROJECTIONS INTO DWELLINGS

13.11 The analysis so far has concentrated on the number of additional households and has then translated this into an estimate of the number of additional homes required. 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 with figures shown in the table below.

Figure 13.6: Estimated Annual Housing Numbers with 2.5% Vacancy Allowance (to 2031)

Projection variant	Household growth	Annual requirement with vacancy allowance
PROJ 1	633	648
PROJ 2	669	685
PROJ 3	453	465
PROJ 4	742	621
PROJ 5	827	848
PROJ 6	951	975
CLG 2008-based household projections	742	761

13F PROJECTIONS BASED ON PAST BUILD RATES & SOUTH EAST PLAN

13.12 A further projection has been developed for comparative purposes. PROJ 7 explores the implications of continuing past housebuilding rates based on average net completions figures (over the past five years, 2005-6 – 2010-11).

13.13 An analysis has also been undertaken explores the implications of delivery of South East Plan housing numbers (assuming delivery post 2026 at a consistent rate to 2006-26) **for comparative purposes only**. This analysis excludes housing associated with potential urban extensions to Milton Keynes. It assumes delivery of 3752 homes between 2006-11 (based on net completions data) and 5792 homes in subsequent 5-year periods.

Figure 13.7: Description of Housebuilding-rate Projections

Projection	Description
PROJ 7	Housebuilding of 18,700 units in the period 2006-2031 (748 per annum)
South East Plan	Housebuilding of 26,900 units in the period 2006-2031 (1076 per annum)

13.14 In carrying out this projection the growth in dwellings is fixed with the growth in households estimated to be slightly lower than this (due to the 2.5% vacancy allowance). The key outputs from this model will be to understand the implications of a particular housebuilding rate on the population and economy and below we have provided tables to look at these two issues.

13.15 Figure 13.8 below shows estimated population change in the housebuilding scenario. We see a notable increase in population with PROJ 7 seeing the population increase by 17.0% over 25-years. This would see an increase in the number of people living in the area who are working. As the Figure13.9 shows; under PROJ 7, the number of people working will increase by 4.7%.

Figure 13.8: Population estimates 2006 to 2031 for Housebuilding Rate Scenarios

Projection	2006	2011	2016	2021	2026	2031
PROJ 7	169,171 0.0%	176,749 4.5%	182,842 8.1%	187,926 11.1%	192,845 14.0%	197,905 17.0%
South	169,171	175,674	187,052	197,267	207,463	217,834
East Plan	0.0%	3.8%	10.6%	16.6%	22.6%	28.8%

Figure 13.9: Number of people in Employment - 2006 to 2031 for Housebuilding Rate Scenarios

	2006	2011	2016	2021	2026	2031
PROJ 7	87,568 0.0%	86,604 -1.1%	90,698 3.6%	91,905 5.0%	91,905 5.0%	91,710 4.7%
South	87,568	86,000	93,152	97,253	100,073	102,616
East Plan	0.0%	-1.8%	6.4%	11.1%	14.3%	17.2%

13.16 As a comparative assessment, delivery of South East Plan housing numbers would see the population increase by 28.8% between 2006-31 and the number of people in employment increase by 17.2%.

13G COMBINED RESULTS: PROJECTIONS OF HOUSING REQUIREMENTS

13.17 The headline results of all of the scenarios in terms of population, housing requirements (i.e. including a vacancy allowance) and employment numbers between 2006 and 2031 are summarised below. The first table shows annual figures with the second table showing these figures for the full twenty-five year projection period.

13.18 The projections developed are:

- PROJ 1 – Main trend based projection (based on 10-year migration trend)
- PROJ 2 – Higher trend based projection (based on 5-year migration trend)
- PROJ 3 – Zero net migration
- PROJ 4 – Zero employment growth
- PROJ 5 – Cambridge Econometrics employment projection
- PROJ 6 – Experian employment projection
- PROJ 7 – Linked to past rates of housing delivery
- SEP – Linked to delivery of the South East Plan housing requirement (26,900 homes)
- ONS/CLG – Linked to the 2008-based ONS population and CLG household projections

Figure 13.10: Summary of Projections 2006 to 2031 - Annual

Projection	Population growth		Housing Numbers		Labour Supply	
	Per annum	% change	Per annum	% change	Per annum	% change
Main Projections						
PROJ 1	910	0.5%	648	0.9%	35	0.0%
PROJ 2	100	0.6%	685	1.0%	85	0.1%
PROJ 5	1,400	0.8%	848	1.2%	315	0.4%
PROJ 6	1,705	1.0%	975	1.4%	477	0.5%
Comparator Projections						
PROJ 3	465	0.3%	465	0.7%	-205	-0.2%
PROJ 4	840	0.5%	621	0.9%	0	0.0%
PROJ 7	1,150	0.7%	748	1.1%	165	0.2%
SEP	1,947	1.2%	1,076	1.6%	602	0.7%
ONS/CLG	1,140	0.7%	761	1.1%	-	-

Figure 13.11: Summary of Projections 2006 to 2031 – Total

Projection	Population growth		Housing Numbers		Labour Supply	
	Total	% change	Total	% change	Total	% change
Main Projections						
PROJ 1	22,715	13.4%	16,210	23.6%	900	1.0%
PROJ 2	24,940	14.7%	17,130	24.9%	2,100	2.4%
PROJ 5	34,945	20.7%	21,200	30.8%	7,830	8.9%
PROJ 6	42,615	25.2%	24,370	35.4%	11,938	13.6%
Comparator Projections						
PROJ 3	11,595	6.9%	11,620	16.9%	-5,085	-5.8%
PROJ 4	21,040	12.4%	15,520	22.5%	0	0.0%
PROJ 7	28,735	17.0%	18,700	27.2%	4,140	4.7%
SEP	48,663	28.8%	26,900	39.1%	15,048	17.2%
ONS/CLG	28,500	16.8%	19,020	27.6%	-	-

*consistent labour supply figures for ONS/CLG projection are not available

- 13.19 The projections indicate that migration is an important driver of population dynamics and housing requirements within the Vale. With Zero Net Migration (PROJ 4) there is a requirement for 11,615 homes between 2006-31 (465 pa), based on locally-derived needs. However this results in just 6.9% population growth, just over half the average rate over the past five years; and because of changes to the age structure, results in a reduction of over 5,000 in labour supply. This could significantly constrain the local economy. Moreover it is not possible to control who buys market housing, and this scenario would likely make it very difficult for local people to access market housing when competing with in-migrants.
- 13.20 If past demographic trends were to continue, this would result in a housing requirement of between 16,200 – 17,100 (648 – 685 per annum). The lower end of this spectrum is based on net migration continuing at the rate achieved over 10 years (1999-09), and the higher end based on net migration over 5 years (2004-9). Housing provision at these levels would however potentially support moderate growth in employment, as a result of demographic trends, with labour supply increasing by between 1.0% - 2.4%.
- 13.21 These scenarios all fall below past rates of housebuilding, at an average of 748 per annum over the last 5 years. If projected forward this would result in a housing requirement of 18,700 between 2006-31. It would support 17% population growth and 4.7% growth in labour supply.
- 13.22 The projection based on rates of past housebuilding (PROJ 7) is similar to the Government's official population and household projections for Aylesbury Vale, which indicate a housing requirement of 19,020 homes (761 per annum).
- 13.23 Projected employment growth is however potentially stronger than this. The economic-led scenario in PROJ 5 (based on CE forecasts) would result in a housing requirement of 21,210 homes (848 per annum) which would support growth in employment of 9.0% assuming commuting patterns remain consistent. The higher end forecast for employment growth (PROJ 6), based on Experian forecasts, would result in a higher housing requirement of 24,370 homes (975 per annum) over the 2006-31 period.
- 13.24 All of the projections developed fall well below the housing requirements set out in the South East Plan, which would equate to delivery of 26,900 homes over the longer timeframe to 2031 (1076 per annum).

14 CONSIDERING HOUSING DISTRIBUTION TO SUB-MARKETS

14A INTRODUCTION

- 14.1 This section includes projections of aggregate housing need/demand for the four housing sub-markets in Aylesbury Vale. It is intended to provide an understanding of demographic dynamics within the housing sub-markets, and consider how potential economic performance may impact upon this. The assessment however comes with a number of important caveats.
- 14.2 National planning policy in PPS3: Housing¹¹ sets out that there are a range of factors which need to come together to inform housing provision, including evidence of housing need and demand, economic performance, land availability, viability and infrastructure requirements.
- 14.3 The draft National Planning Policy Framework¹² (NPPF) continues to highlight the importance of these factors, but places a greater emphasis on meeting objectively-assessed development needs (unless it can be demonstrated as not sustainable to do so) and on market factors such as land values in considering the distribution of housing provision.
- 14.4 In rural areas the NPPF states that planning authorities should be responsive to local circumstances and plan housing development to reflect local requirements, particularly for affordable housing, but should consider whether allowing some market housing would facilitate the provision of significant additional affordable housing to meet local needs.
- 14.5 The NPPF is clear that Local Plans must aim to achieve sustainable development, and reflect the vision and aspirations of local communities.
- 14.6 Aylesbury Vale District Council has been consulting with parish and town councils across the District to understand their aspirations for housing provision. A separate workstream from this Study will continue to be undertaken to consider infrastructure needs/requirements and constraints. Sustainability Appraisal also forms part of the plan-making process and the draft NPPF continues to emphasise the importance of testing reasonable options through this.
- 14.7 The Council will thus need to draw together various factors in determining the distribution of development across the Vale through the plan-making process. It is not simply a “predict and provide” task.

¹¹ CLG (June 2011) *Planning Policy Statement 3: Housing*

¹² CLG (2008) *Draft National Planning Policy Framework*

- 14.8 As part of this AVDC can define a spatial strategy which seeks to direct development to certain locations, and can test alternative spatial distribution options through the plan-preparation process. **This part of the report is not intended to do all of this, but to provide understanding of housing and economic needs and demand across the sub markets, as one of a number of inputs into this process.**
- 14.9 Within the Part I Report we defined four housing sub-markets across the District, reflecting evidence of separate housing markets operating in the north and south of the Vale, and distinctions between market characteristics and housing offer in areas in and around Aylesbury and Buckingham. The sub markets are based on groups of parishes and are shown in the Figure 14.1 below.

Figure 14.1: Aylesbury Vale District's Sub-Markets

Area	Parishes
Aylesbury Sub Market	Aylesbury, Bierton with Broughton, Buckingham Park, Coldharbour, Fleet Marston, Quarrendon, Stoke Mandeville, Stone with Bishopstone and Hartwell, Watermead, Weston Turville
Rural South Sub Market	Ashendon, Aston Abbots, Aston Clinton, Aston Sandford, Boarshall, Brill, Buckland, Chearsley, Cheddington, Chilton, Creslow, Cublington, Cuddington, Dinton-with-Ford and Upton, Dorton, Drayton Beauchamp, Edgcott, Edlesborough, Grendon Underwood, Haddenham, Halton, Hardwick, Hogshaw, Hulcott, Ickford, Ivinghoe, Kingsey, Kingswood, Long Crendon, Ludgershall, Marsworth, Mentmore, Nether Winchendon, North Marston, Oakley, Oving, Pitchcott, Pitstone, Quainton, Shabbington, Slapton, Upper Winchendon, Waddesdon, Weedon, Wendover, Westcott, Whichchurch, Wing, Wingrave with Rowsham, Woodham, Worminghall, Wotton Underwood
Buckingham Sub Market	Buckingham, Maids Moreton
Rural North Sub Market	Addington, Adstock, Akeley, Barton Hartshorn, Beachampton, Biddlesden, Calvert Green, Charndon, Chetwode, Drayton Parslow, Dunton, East Claydon, Foscott, Gawcott with Lenborough, Granborough, Great Brickhill, Great Horwood, Hillesden, Hoggeston, Leckhampstead, Lillingstone Dayrell with Luffield Abbey, Lillingstone Lovell, Little Horwood, Marsh Gibbon, Middle Claydon, Mursley, Nash, Newton Longville, Padbury, Poundon, Preston Bissett, Radclive-cum-Chackmore, Shalstone, Soulbury, Steeple Claydon, Stewkley, Stoke Hammond, Stowe, Swanbourne, Thornborough, Thornton, Tingewick, Turweston, Twyford, Water Stratford, Westbury, Whaddon, Winslow

- 14.10 The map in Figure 14.2 identifies the four sub-markets.

Figure 14.2: Sub-Markets in Aylesbury Vale



Source: GLH/ AVDC Mapping

14B METHODOLOGY FOR SUB-MARKET DEMOGRAPHIC PROJECTIONS

- 14.11 In developing population, household and dwelling projections, we have followed the same process of analysis as has been undertaken for the District-wide projections. This analysis then provides projections based on a range of assumptions. For all projections, the figures derived for individual sub markets, once summed, are in-line with those derived from the main District-wide projection modelling (i.e. they are constrained to the district-level projections). However, due to the rounding of data there are some (very small) differences between figures.
- 14.12 The methodology used to develop the sub market projections is consistent with that for the main District-wide projections and involves consideration of fertility, mortality and migration patterns along with an understanding of employment levels and headship rates. The projections are intended to provide a strong understanding of the differences in the demographic structure of each of the sub-markets and implications of this, to inform policy development.
- 14.13 Again the projections do not take account of supply-side factors such as the availability of land for housing development. They are 'demand-led' driven by the demographic structure of the four Sub-Markets (and in regard to the economic-driven projections, the economic structure).
- 14.14 Below we briefly discuss the method in relation to each of the different parts of the modelling.

Fertility Rates

- 14.15 No reliable information is available on birth rates for smaller areas and so age-specific fertility rates have been assumed to be the same as for the whole District. The number of births this generates will however vary given the slightly different age profiles. It is also worth noting that assumptions about birth rates will have little impact on our assessment of housing numbers as those born in the period 2006 to 2031 are unlikely to form a significant number of households.

Death Rates

- 14.16 There is some local level death rate (life expectancy) information available from ONS although the most recent we have found is for the period 1999-2003 – based on wards. Generally the error margins associated with ward level life expectancy data are quite large and whilst some variation is shown (some parts of Aylesbury tend to show lower life

expectancy) the differences between areas are not significant. For the purposes of our projections we have assumed the same life expectancy as for our District-wide projections although (as with births) the number of deaths will vary depending on the age structure of the population in each sub market.

Migration

- 14.17 It is difficult to get accurate data for migration below District level in Aylesbury Vale (or any other local authority nationally). The only potential source is the 2001 Census which is now rather out of date and also has the drawback of not including international migration (as there is no estimate of international out-migration). However the main problem with Census data is that it only covers one year and as our main analysis of migration has shown this can be quite variable year on year.
- 14.18 For the purposes of our projections we have therefore applied our District-wide migration figures to the population profile estimated for 2006. Technically this will underestimate both in- and out- migration at a sub market level due to migration between sub markets – however, as we have adjusted the profile based on the age/sex structure in each area the overall profile will be close to that which might be expected if a full analysis were possible. Overall levels of net migration which are particularly important for the analysis are not affected by the additional assumptions made.

Employment Rates

- 14.19 Employment rates in each sub market have been estimated by combining best fit ward data from the 2001 Census. This information has then been updated to be consistent with our assumptions for the whole of the District (on an age/sex specific basis) with additional assumptions about how employment rates might change and changes in pensionable age over the period to 2031.

Headship Rates

- 14.20 The final part of the projection process is to estimate headship rates at a sub market level. This is important as different areas will have a different number of households depending on the general household structure. For sub markets we have again drawn on 2001 Census data to identify headship assumptions and updated this to be consistent with the assumptions used in the main District-wide projections (drawn from the 2008 CLG Household Projections).

14.21 In converting household numbers into housing we have assumed a 2.5% vacancy allowance in all areas to take account of a frictional vacancy within new-build stock.

Baseline Population and Households

14.22 Figure 14.2 shows the estimated population size and number of households in each sub market as of 2006 (the starting point of the projection). The data shows that the Aylesbury Sub-Market is by far the largest with around 46% of the population and 44% of households in the whole of the District. Buckingham is the smallest sub-market, representing around 8% of both households and population.

Figure 14.2: Population and households in 2006 by Sub Market

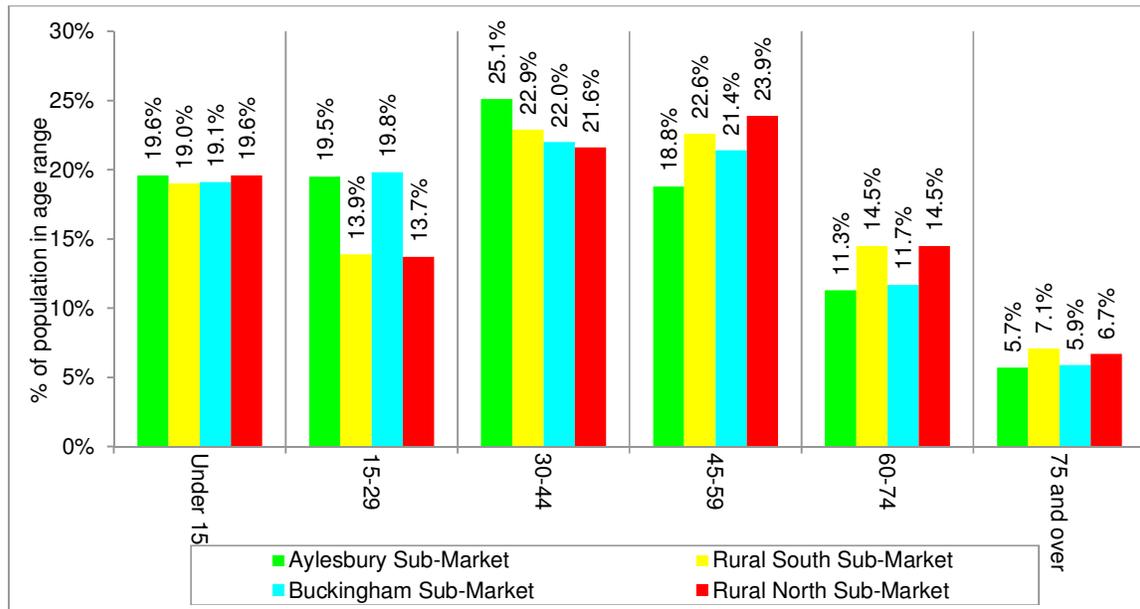
Area	Population		Households	
	Population	% of population	Households	% of households
Aylesbury Sub-Market	77,199	45.6%	29,548	44.0%
Rural South Sub-Market	50,425	29.8%	20,622	30.7%
Buckingham Sub-Market	13,134	7.8%	5,321	7.9%
Rural North Sub-Market	28,416	16.8%	11,665	17.4%
District Total	169,174	100.0%	67,157	100.0%

14.23 Figure 14.3 shows the estimated age structure in each of the four sub markets split into six broad age bands. Differences in the age structure between the four sub-markets have an important impact on the population dynamics.

14.24 The data shows that compared with other areas both Aylesbury and Buckingham have a younger age profile with a greater proportion of people in age bands up to 44 (particularly the 15-29 age group). The two rural areas have larger proportions of people aged 45 and over and notably aged 60 and over.

14.25 Over the next 20 years many of those aged 45-65 may move out of the workforce and into retirement. Employment growth in the two rural sub-markets in particular may thus create demand for in-migration to compensate for those moving out of the workforce. This dynamic is explored through the economic-led scenarios.

Figure 14.3 Sub-Market Age Profile (2006)



Assumptions for Economic-Led Projections

14.26 The projections of employment demand at a sub-market level are based on the existing level of employment by sector in each of the four sub-markets. They are based on the size and structure of the local economy, and do not take into account employment trends or past economic performance at this level as there is a lack of robust time-series data on economic trends available for the four sub-markets. Nor do the economic forecasts take account of supply-side factors such as the availability or quality of employment land. They are ‘demand-led’ driven by the economic structure of the four Sub-Markets and should be regarded as indicative only.

14C MAIN DEMOGRAPHIC-LED PROJECTION

14.27 We have run a number of demographic projections at a sub-market level based on two differing sets of assumptions. The first three projections follow our main District-wide projections (trend based migration, based on a 10 year migration trend), and the Cambridge Econometrics and Experian Forecasts) and adjust migration levels consistently across all areas based on the population profile.

14.28 The next two projections are component projections (for zero net migration and zero employment growth) with the assumptions being applied individually to each of the four sub-areas: Aylesbury Sub Market, Rural South, Buckingham Sub Market and Rural North.

14.29 The tables below show outputs at sub market level for three of the key District-wide projections. The basis of these projections is consistent with that described in Sections 8 and 9. The projections can be summarised as:

- PROJ 1 – Main trend based demographic projection (based on a 10 year migration trend, for average net migration of 400 per annum district-wide)
- PROJ 5 – Employment growth based on economic projections at sub-market level, based on the Cambridge Econometrics Forecast, as described above; and
- PROJ 6 – Employment growth at sub-market level, based on the Experian Forecast, as described above.

PROJ 1: Main Trend-based Projection

14.30 The tables show that with a net in-migration of 400 people per annum (district-wide) there would be expected to be population growth over the twenty-five year period, 2006-31, of around 22,700 and a housing requirement of about 16,200 homes for the Vale as a whole.

14.31 All areas would expect to see population growth although the majority (68.3%) of this would be in the Aylesbury Sub-Market, in which 57% of projected housing growth in the District as a whole is expected to occur.

14.32 Relative to their existing number of dwellings, under this scenario (PROJ 1) both the Aylesbury and Buckingham Sub-Markets are projected to see require around 30% growth in dwellings between 2006-31, whilst the rural sub-markets are expected to require housing growth of around 16%.

14.33 When looking at the employment growth figures it is interesting to note that both rural sub markets would be expected to see a drop in the number of people working, although District-wide it is estimated that the number will increase (mainly due to increases in the Aylesbury Sub-Market). This is a function of differences in the age structure of the four sub-markets.

Figure 14.4: Summary of Projections 2006 to 2031 – Annual (PROJ 1)

Area	Population Growth		Housing Numbers		Employment Growth	
	Per annum	% change	Per annum	% change	Per annum	% change
Aylesbury Sub-Market	630	0.8%	369	1.2%	151	0.4%
Rural South Sub-Market	122	0.2%	139	0.7%	-81	-0.3%
Buckingham Sub-Market	87	0.7%	65	1.2%	13	0.2%
Rural North Sub-Market	70	0.2%	77	0.6%	-47	-0.3%
Aylesbury Vale District	909	0.5%	648	0.9%	36	0.0%

Figure 14.5: Summary of projections 2006 to 2031 – Total (PROJ 1)

Area	Population Growth		Housing Numbers		Employment Growth	
	Per annum	% change	Per annum	% change	Per annum	% change
Aylesbury Sub-Market	15,744	20.4%	9,216	30.4%	3,769	9.3%
Rural South Sub-Market	3,052	6.1%	3,464	16.4%	-2,033	-7.8%
Buckingham Sub-Market	2,176	16.6%	1,615	29.6%	334	5.0%
Rural North Sub-Market	1,742	6.1%	1,917	16.0%	-1,168	-8.1%
Aylesbury Vale District	22,713	13.4%	16,212	23.6%	901	1.0%

14D ECONOMIC-LED PROJECTIONS

PROJ 5: Projected Employment Growth (Cambridge Econometrics)

14.34 To achieve forecast employment growth (based on Cambridge Econometrics forecasts) it is estimated that there will be a requirement to provide around 848 additional units of housing per annum between 2006 and 2031. The majority of this (47%) would again be in Aylesbury although in proportionate terms this is lower than under our trend-based assumptions (PROJ 1) principally due to the younger age structure of the sub-market.

14.35 With this projection (PROJ 5), each of the sub-markets is anticipated to see some growth in labour supply over the period to 2031.

Figure 14.6: Summary of Projections 2006 to 2031 – Annual (PROJ 5)

Area	Population Growth		Housing Numbers		Employment Growth	
	Per annum	% change	Per annum	% change	Per annum	% change
Aylesbury Sub-Market	702	0.9%	398	1.3%	195	0.5%
Rural South Sub-Market	411	0.8%	257	1.2%	78	0.3%
Buckingham Sub-Market	64	0.5%	54	1.0%	3	0.1%
Rural North Sub-Market	221	0.8%	139	1.2%	37	0.3%
Aylesbury Vale District	1,398	0.8%	848	1.2%	313	0.4%

Figure 14.7: Summary of projections 2006 to 2031 – Total (PROJ 5)

Area	Population Growth		Housing Numbers		Employment Growth	
	Total	% change	Total	% change	Total	% change
Aylesbury Sub Market	17,550	22.7%	9,945	32.8%	4,870	12.0%
Rural South Sub-Market	10,264	20.4%	6,416	30.4%	1,958	7.6%
Buckingham Sub Market	1,593	12.1%	1,357	24.9%	87	1.3%
Rural North Sub-Market	5,535	19.5%	3,481	29.1%	917	6.4%
Aylesbury Vale District	34,945	20.7%	21,200	30.8%	7,832	8.9%

PROJ 6: Projected Employment Growth (Experian)

- 14.36 To achieve forecast employment growth (based on Experian forecasts) it is estimated that there will be a requirement to provide around 975 additional units of housing per annum between 2006 and 2031. Again, the majority of this (47%) would again be in Aylesbury although in proportionate terms this is again lower than under our trend-based assumptions. This projection results in a slightly higher proportion of homes within the Buckingham Sub-Market relative to PROJ5.
- 14.37 With these projections, each of the sub-markets is anticipated to see some growth in labour supply over the period to 2031 with a total increase across the District of over 11,900 (around 1.5 times that in PROJ 5 over the 2006-31 period as a whole).

Figure 14.8: Summary of projections 2006 to 2031 – Annual (PROJ 6)

Area	Population Growth		Housing Numbers		Employment Growth	
	Total	% change	Total	% change	Total	% change
Aylesbury Sub Market	862	1.1%	461	1.5%	284	0.7%
Rural South Sub-Market	477	0.9%	285	1.3%	113	0.4%
Buckingham Sub Market	114	0.9%	76	1.4%	29	0.4%
Rural North Sub-Market	253	0.9%	153	1.3%	52	0.4%
Aylesbury Vale District	1,705	1.0%	975	1.4%	477	0.5%

Figure 14.9: Summary of projections 2006 to 2031 – Total (PROJ 6)

Area	Population Growth		Housing Numbers		Employment Growth	
	Total	% change	Total	% change	Total	% change
Aylesbury Sub Market	21,539	27.9%	11,535	38.1%	7,105	17.5%
Rural South Sub-Market	11,918	23.6%	7,115	33.7%	2,821	10.9%
Buckingham Sub Market	2,841	21.6%	1,901	34.8%	714	10.8%
Rural North Sub-Market	6,313	22.2%	3,817	31.9%	1,298	9.0%
Aylesbury Vale District	42,615	25.2%	24,368	35.4%	11,938	13.6%

14E ZERO EMPLOYMENT & NET MIGRATION PROJECTIONS

14.38 Below we have provided the outputs from the two component projections at a sub market level. These can be summarised as:

- PROJ 3A – Zero net migration
- PROJ 4A – Zero employment growth

14.39 These two component projections for sub-markets are based on the detailed demographic structure in each specific sub-market, and thus the total of these projections will not exactly sub to those derived from the respective district-wide projections. On this basis these projections have been described as ‘PROJ 3A’ and ‘PROJ 4A.’ For example to achieve zero employment growth across the District might theoretically see positive employment growth in some sub-markets balanced by negative employment change in other sub-markets. Projections 3A and 3B are developed to consider for each sub-market on its own what level of population or housing growth would be required with no net migration to or from the sub-market, or to maintain stable employment levels in the sub-market.

PROJ 3A: Zero Net Migration

14.40 The Zero Net Migration projections provide an assessment of the level of housing required to cater for need/demand from the existing local population, with no net migration.

14.41 Figure 14.10 shows that if there was no net migration in each sub-market then all areas would see a small rise in population and housing required. Overall, this projection suggests a need for 465 additional units per annum district-wide with 56% of these being in the Aylesbury Sub-Market. With no net migration the Aylesbury Sub-Market would be expected to see a small rise in the number of people working within the sub market while the Buckingham Sub-Market would see a small drop. The two rural areas would however see significant drops in the working population; estimated to go down by 12%-13% in both of the rural sub markets over the period 2006-2031.

Figure 14.10: Summary of Projections 2006 to 2031 – Annual (PROJ 3A)

Area	Population Growth		Housing Numbers		Employment Growth	
	Total	% change	Total	% change	Total	% change
Aylesbury Sub Market	359	0.5%	260	0.9%	3	0.0%
Rural South Sub-Market	29	0.1%	99	0.5%	-131	-0.5%
Buckingham Sub Market	51	0.4%	49	0.9%	-6	-0.1%
Rural North Sub-Market	23	0.1%	57	0.5%	-71	-0.5%
Aylesbury Vale District	462	0.3%	465	0.7%	-205	-0.2%

Figure 14.11: Summary of projections 2006 to 2031 – Total (PROJ 3A)

Area	Population Growth		Housing Numbers		Employment Growth	
	Total	% change	Total	% change	Total	% change
Aylesbury Sub Market	8,969	11.6%	6,491	21.4%	80	0.2%
Rural South Sub-Market	727	1.4%	2,485	11.8%	-3,281	-12.7%
Buckingham Sub Market	1,286	9.8%	1,226	22.5%	-142	-2.1%
Rural North Sub-Market	580	2.0%	1,425	11.9%	-1,782	-12.4%
Aylesbury Vale District	11,562	6.8%	11,628	16.9%	-5,125	-5.9%

PROJ 4A: Zero Employment Growth

14.42 We have also modelled what population and household growth would be required to support existing employment levels (i.e. to maintain the size of the working population). To achieve stable employment levels in each sub-market would require population growth of between 0.5% and 0.6% per annum and housing growth of between 0.8% and 1.0%. Under this projection the housing requirement in the Aylesbury Sub-Market is estimated to be around 41% of the District total – this compares with between 47% and 56% for all of the other sub-area projections. As a consequence the two rural sub-areas show higher housing requirements as a proportion of total housing numbers. This is particularly a function of the older age structure of these areas, meaning that they would require higher levels of net in-migration in order to maintain the size of the working population.

Figure 14.12: Summary of Projections 2006 to 2031 – Annual (PROJ 4A)

Area	Population Growth		Housing Numbers		Employment Growth	
	Total	% change	Total	% change	Total	% change
Aylesbury Sub Market	353	0.5%	257	0.8%	0	0.0%
Rural South Sub-Market	273	0.5%	202	1.0%	0	0.0%
Buckingham Sub Market	62	0.5%	54	1.0%	0	0.0%
Rural North Sub-Market	158	0.6%	114	1.0%	0	0.0%
Aylesbury Vale District	846	0.5%	626	0.9%	0	0.0%

Figure 14.13: Summary of projections 2006 to 2031 – Total (PROJ 4A)

Area	Population Growth		Housing Numbers		Employment Growth	
	Total	% change	Total	% change	Total	% change
Aylesbury Sub Market	8,822	11.4%	6,432	21.2%	0	0.0%
Rural South Sub-Market	6,834	13.6%	5,047	23.9%	0	0.0%
Buckingham Sub Market	1,554	11.8%	1,343	24.6%	0	0.0%
Rural North Sub-Market	3,940	13.9%	2,840	23.8%	0	0.0%
Aylesbury Vale District	21,151	12.5%	15,662	22.8%	0	0.0%

14F DRAWING THE ANALYSIS TOGETHER

14.43 We have sought to draw the analysis together to identify for each of the sub-markets what level of housing might be required under the following scenarios:

- to meet local needs (with zero net migration) in each sub-market (PROJ 3A);
- to maintain consistent employment levels in each sub-market (PROJ 4A);
- to meet identified need/demand based firstly on demographic trends (PROJ1);and
- secondly, based on forecast demand for jobs using both the Cambridge Econometrics (PROJ 5) and Experian (PROJ 6) forecasts.

14.44 Figure 14.14 summarises the forecasts in this way. The forecasts are independent of one another.

Figure 14.14: Sub-Market Projections – Housing Requirements, 2006-31

Housing Requirements 2006-31	Aylesbury Sub-Market	Rural South Sub-Market	Buckingham Sub-Market	Rural North Sub-Market	Aylesbury Vale District
Zero Net Migration (PROJ 3)	6491	2485	1226	1425	11628
	56%	21%	11%	12%	100%
Zero Employment Growth (PROJ 4)	6432	5047	1343	2840	15520
	41%	32%	9%	18%	-
Trend-based Projection (PROJ 1)	9216	3464	1615	1917	16210*
	57%	21%	10%	12%	-
Employment-Led - Cambridge (PROJ 5)	9945	6416	1357	3481	21200
	47%	30%	6%	16%	100%
Employment-Led - Experian (PROJ 6)	11535	7115	1901	3817	24368
	47%	29%	8%	16%	100%
Range by Sub-Market	41-57%	21-30%	6-11%	12-18%	100%

* Sub-Market 3A and 4A projections undertaken separately from District level projections (see para 14.39)

14.45 Figure 14.15 expresses the 25 year housing requirements from Figure 14.14 as annual figures (homes per year).

Figure 14.15: Sub-Market Projections – Housing Requirements per Annum, 2006-31

Housing Requirements 2006-31	Aylesbury Sub-Market	Rural South Sub-Market	Buckingham Sub-Market	Rural North Sub-Market	Aylesbury Vale District
Zero Net Migration (PROJ 3A)	260	99	49	57	465*
Zero Employment Growth (PROJ 4A)	257	202	54	114	621*
Trend-based Projection (PROJ 1)	369	139	65	77	648
Employment-Led - Cambridge (PROJ 5)	398	257	54	139	848
Employment-Led - Experian (PROJ 6)	461	285	76	153	975

* Sub-Market 3A and 4A projections undertaken separately from District level projections

14.46 Next we assess the implications of the projections for each of the four sub-markets. We have rounded figures to the nearest five homes per annum. **It should be noted that the figures set out are averages for the period 2006-31 and do not take account of supply-side factors, including either development that has occurred between 2006-11 or development with planning consent but which has not yet been built.**

14.47 For the Aylesbury Sub Market, the analysis suggests that:

- 260 homes would be required per annum even if there was zero net migration because of changes in the age structure of the population, and this would result in virtually stable employment levels;
- 370 homes a year would be required based on demographic trends; and this would support employment growth of around 0.4% per annum; and
- Between 400 – 460 homes a year would be required to support employment growth at a rate of between 0.5% - 0.7% per annum over the 2006-31 period.

14.48 For the Buckingham Sub Market, the analysis suggests that:

- 50 homes would be required per annum with zero net migration because of changes in the age structure of the population, but this would support a moderate loss of employment of -0.1% per annum. 55 homes a year would be required to keep employment stable;
- Between 55-75 homes a year would be required to support employment growth at a rate of between 0.1% - 0.4% per annum, with the lower end of this range resulting in relatively stable employment levels over the 25 year period (2006-31);
- 65 homes would be required per annum based on past demographic trends; and this would support employment growth of 0.2% per annum.

- 14.49 For the Rural North Sub Market, the analysis suggests that:
- 60 homes would be required per annum with zero net migration because of changes in the age structure of the population, but this would support a loss of employment of around -0.5% per annum;
 - 75 homes would be required per annum based on demographic trends, but this would support a drop in employment of -0.3% per annum;
 - To support employment growth of between 0.3% - 0.4% per annum would require provision of between 140 - 155 homes per annum, (with 115 homes per annum required to maintain stable levels of employment).
- 14.50 For the Rural South Sub Market, the analysis suggests that:
- 100 homes would be required per annum with zero net migration because of changes in the age structure of the population, but this would support a loss of employment of around -0.5% per annum;
 - 140 homes would be required per annum based on demographic trends, but again this would support a drop in employment of -0.3% per annum;
 - To support employment growth of between 0.3 – 0.4% per annum would require provision of between 260 - 285 homes per annum, whilst to maintain existing employment levels within the sub market, 200 homes per annum would be required.
- 14.51 The analysis highlights that because of the demographic structure of the two rural sub-markets, which have an older population structure; much higher levels of housing provision are required to maintain and grow their labour supply.
- 14.52 For reference only we have compared the results of the demographic projections with the housing distribution proposed in the withdrawn 2009 Proposed Submission Core Strategy to allow consideration of the impact of the 'spatial strategy' on the location of housing development within the Vale.
- 14.53 The Aylesbury Vale 2009 Proposed Submission Core Strategy proposed a spatial distribution which was based on the requirements of the South East Plan (the Regional Strategy). It identified that 78% of development in the District was to be directed to Aylesbury (if the North East SDA is excluded, which is in effect an extension to Milton Keynes). The main trend-based projections herein suggest between 47-57% be focused in the Aylesbury Sub Market. The 2009 Submission Draft Core Strategy identified that around 13% of the housing requirement (excluding the North East SDA) should be directed to Buckingham. The main projections herein suggest around 6-10% to be focused at the Buckingham Sub Market.

These percentages would however result in a greater percentage of development being directed to the two Rural Sub Markets than that proposed within the withdrawn Core Strategy.

14.54 To reiterate, it should be noted that the projections are one of a number of factors to be considered in identifying the distribution of housing requirements, alongside:

- Evidence of housing land availability;
- Infrastructure requirements, deliverability and viability;
- Sustainability Appraisal;
- Community and stakeholder consultation; and
- The Plan's spatial strategy.

14.55 As such the above projections should be treated as one of a number of inputs in considering the distribution of development within the District, and not the determinant of it.



15 REQUIREMENTS FOR DIFFERENT SIZES OF HOMES

15A INTRODUCTION & METHODOLOGY

- 15.1 As we have set out there are a range of factors which influence housing demand. These include: the existing housing stock; housing affordability; the accessibility of the area (and relationship to employment locations); demographic changes (including the scale of population growth and changes in the age structure); quality of place; and the economy (in terms of its influence on migration/labour demand and on incomes). These factors play out at different spatial scales and impact aggregate housing demand and demand for different housing products.
- 15.2 This report has considered demographic drivers in detail, including how these relate to economic performance (in terms of its influence on migration trends). In this section we consider in more 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.
- 15.3 The analysis in this section seeks to use the information available 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. **For the purposes of this analysis we have looked at the required household split for PROJ 1, which is the principal trend-based demographic projection.** This is based on 10 year migration trends. Should the Vale of Aylesbury Plan be developed on the basis of an alternative, this will have a moderate impact on the profile of need and demand for different sizes of homes (principally through influencing levels of net in-migration).
- 15.4 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.

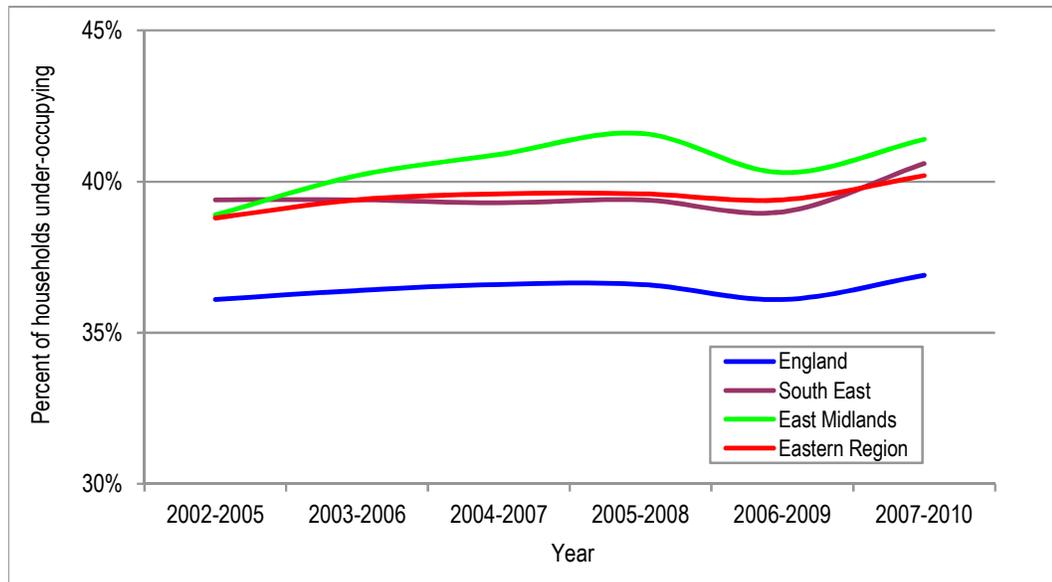
Understanding how Households occupy Homes

- 15.5 As with converting population data into households, it is not a simple task to convert the net increase in the number of households in to a suggested profile for additional housing to be provided. 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.

15.6 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.

15.7 Figure 15.1 demonstrates this, using data from the Survey of English Housing about the proportion of households who under-occupy their dwellings. It can be seen that nationally over a third of households under-occupy with a figure of around two-fifths in each of the South East the East Midlands and Eastern Region. It is also notable that this has not changed to any significant degree over the past few years.

Figure 15.1: Proportion of Households Under-Occupying in England and selected regions



Source: Survey of English Housing 2002-2009

15.8 The data therefore suggests that it would be reasonable for our projection to assume that households of specific ages will broadly continue to occupy dwellings in the same way in the future as they do currently. Our projections for house sizes are developed on this basis. 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 consistent.

15.9 The general methodology is therefore to use the information derived in the projections (in this case PROJ 1 – trend-based) 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). An extract of this is shown in Figure 15.2.

15.10 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 HRP's in each age group changes over time we are also able to estimate the profile of housing that they would be likely to occupy.

15.11 Figure 15.2 shows, for example, that 24.2% of male HRP's aged 25 to 29 live in a home with six or more rooms, for the 45 to 49 age group this figure rises to 69.9%. The age profile of HRP's 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 split into the four housing sub-markets.

Figure 15.2: Extract from ONS Commissioned Table C1236 – Male HRP's in Owner-Occupied Housing by Size of Dwelling (Aylesbury Vale)

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	418	18.9%	326	7.8%	288	5.5%	214	4.2%	172	4.0%
4 rooms	709	32.1%	849	20.3%	689	13.2%	446	8.8%	304	7.1%
5 rooms	547	24.8%	1,085	26.0%	1,167	22.3%	990	19.5%	824	19.1%
6 rooms	318	14.4%	926	22.2%	1,184	22.7%	948	18.7%	820	19.0%
7 rooms	121	5.5%	456	10.9%	757	14.5%	816	16.1%	672	15.6%
8+ rooms	95	4.3%	535	12.8%	1,138	21.8%	1,651	32.6%	1,520	35.3%
Total	2,208	100.0%	4,177	100.0%	5,223	100.0%	5,065	100.0%	4,312	100.0%

Source: ONS Commissioned Table C1236

15.12 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 table below shows the assumptions used to make this conversion. Information in the table has been based on a range of surveys where information about both bedrooms and rooms was collected.

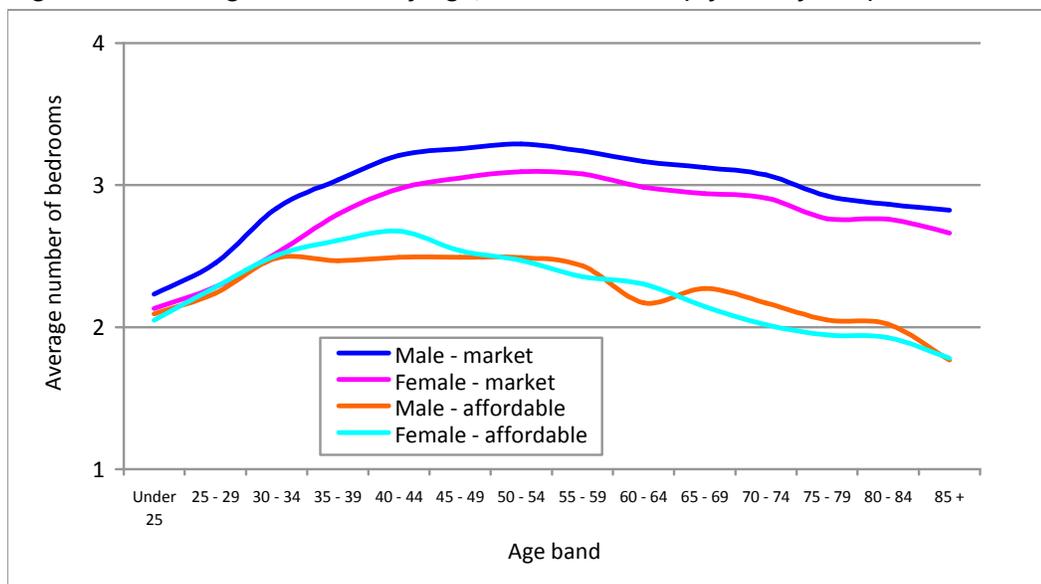
Figure 15.3: Relationship between the Number of Rooms and Number of Bedrooms

Number of rooms	Number of bedrooms				Total
	1 bedroom	2 bedrooms	3 bedrooms	4+ bedrooms	
1-3 rooms	76%	24%	0%	0%	100%
4 rooms	3%	79%	18%	0%	100%
5 rooms	0%	15%	83%	2%	100%
6 rooms	0%	5%	82%	13%	100%
7 rooms	0%	1%	40%	59%	100%
8+ rooms	0%	0%	12%	88%	100%

Source: JGC analysis of Survey Data

15.13 Figure 15.4 shows an estimate of how the average number of bedrooms varies by different ages of HRP and different sexes for the whole of Aylesbury Vale. The figure shows that in the market sector the average size of accommodation rises over time to typically reach a peak around the 50-54 age group. 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 housing dwellings are lower than those for market housing whilst in market housing male HRPs live in larger accommodation for all age groups.

Figure 15.4: Average Bedrooms by Age, Sex and Tenure (Aylesbury Vale)



Source: Derived from ONS Commissioned Table C1236

15.14 One final issue in the analysis is that the Census uses a different definition of household reference person to the CLG 2008-based household projections (upon which our projections are based). In the Census, determining an HRP takes account of economic status and age

whilst the CLG projections automatically assign males as HRP's where a household is headed by a mixed sex couple. We have therefore made further adjustments to the Census data to match the definition of headship used in our projections.

Establishing a Baseline Position

15.15 As of 2011 it is estimated that there are 70,796 households living in Aylesbury Vale. 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 2011, as shown in Figure 15.5.

15.16 The table shows that an estimated 13.4% of households live in affordable housing with 86.6% being in the market sector (the size of the affordable sector has been fixed by reference to an estimate of the number of occupied social rented homes in 2011). The data also suggests that homes in the market sector are generally bigger than in the affordable sector with 77.1% having three or more bedrooms compared to 43.5% for affordable housing.

Figure 15.5: Estimated Profile of Dwellings in 2011 by Size – Aylesbury Vale

Size of housing	Market		Affordable		Total	
	Number	%	Number	%	Number	%
1 bedroom	3,061	5.0%	2,194	23.1%	5,255	7.4%
2 bedrooms	10,985	17.9%	3,177	33.4%	14,162	20.0%
3 bedrooms	28,906	47.2%	3,653	38.5%	32,559	46.0%
4+ bedrooms	18,343	29.9%	476	5.0%	18,819	26.6%
Total	61,296	100.0%	9,500	100.0%	70,796	100.0%
% in tenure	86.6%	-	13.4%	-	100.0%	-

Source: Derived from ONS Commissioned Table C1236

Tenure Assumptions & Projections

15.17 JGC's housing market model has been used to estimate future requirements for different sizes of property over the next 20 years. 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 Figure 15.4 shows). Thus it is necessary to consider what mix of future housing will be in the market and affordable sectors.

15.18 The key assumption here **is not a policy target** but a view on what proportion of new housing *delivered* will be affordable housing. We have assumed that 30% of additional housing will be affordable and 70% market.

- 15.19 The key assumption here is not a policy target but expected delivery. Our assumption is influenced by a range of factors. On the basis of information in the housing needs assessment this does not prevent the Council from setting a higher affordable housing target, but we believe that 30% in current market conditions is probably about the maximum affordable housing delivery likely to be achieved across the District (this does not mean on a site by site basis this may not be exceeded). For consistency we have used the 30% figure consistently across all housing sub-markets.
- 15.20 Over the five year period 2005/6 – 2009/10 a total of 37% of completions were of affordable dwellings, however this figure was particularly influenced by strong delivery of affordable housing in depressed market conditions when funding was available in 2008/9 and 2009/10. The Council's housing trajectory (as at Summer 2011) indicates that 27% of expected delivery on sites included within the trajectory is expected to be of affordable housing. Against this context as assumption of an average of 30% affordable housing delivery over the longer-term seems reasonable and justified.

Projected Changes to Total Stock

- 15.21 Figure 15.6 sets out the estimated number of households of market and affordable housing in each Sub-Market for the key time periods of 2011 and 2031. The figures are based on the household growth projected through our main trend-based projection and assume that 30% of new housing delivery will be in the affordable sector.

Figure 15.6: Estimates of Market and Affordable Housing stock 2011 and 2031 by sub-market

Area	2011				2031			
	Market housing	Aff. housing	Total	Aff. hsg as % of total	Market housing	Aff. housing	Total	Aff. hsg as % of total
Aylesbury Sub-Market	26,703	4,999	31,702	15.8%	31,490	7,050	38,540	18.3%
Rural South Sub-Market	18,932	2,452	21,384	11.5%	20,764	3,237	24,002	13.5%
Buckingham Sub-Market	5,086	592	5,678	10.4%	5,939	958	6,897	13.9%
Rural North Sub-Market	10,575	1,457	12,032	12.1%	11,627	1,908	13,535	14.1%
Aylesbury Vale	61,296	9,500	70,796	13.4%	69,820	13,153	82,974	15.9%

15B FINDINGS: AFFORDABLE HOUSING

15.22 Figure 15.7 estimates the sizes of affordable housing required based on our understanding of demographic trends. The data suggests in the period between 2011 and 2031 that the majority of the requirement is for one and two bedroom homes, although there is also a considerable requirement for three bedroom accommodation.

15.23 This analysis provides a longer-term view of requirements for affordable housing and does not reflect any specific priorities such as for family households in need rather than single people. In addition we would note that one bedroom properties typically offer limited flexibility in accommodating the changing requirements of households, whilst delivery of larger properties can help to meet the needs of households in high priority and to manage the housing stock by releasing supply of smaller properties.

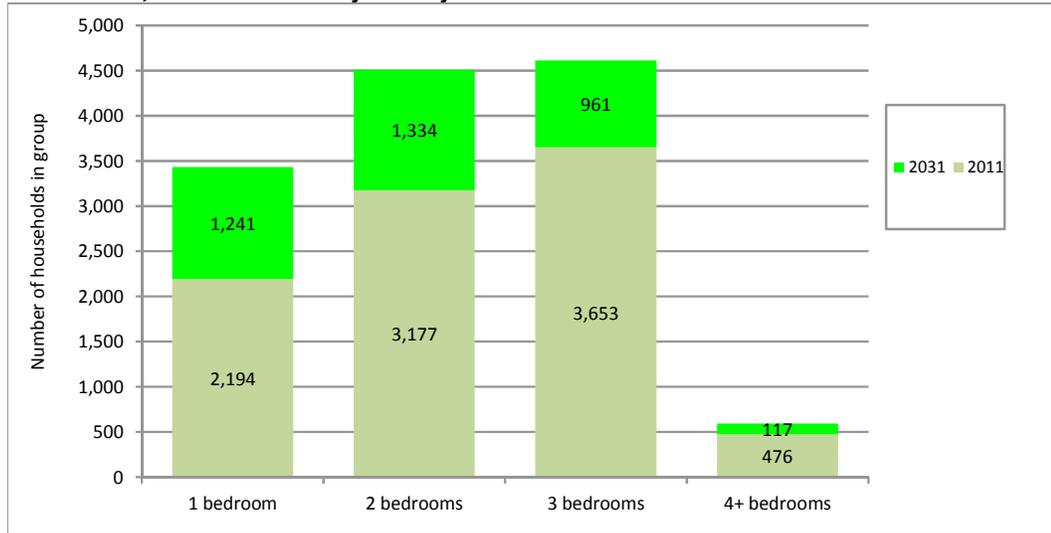
Figure 15.7: Estimated Size of Dwellings Required 2011 to 2031 – Affordable Housing (Aylesbury Vale)

Type/size	2011	2031	Additional homes 2011-2031
1 bedroom	2,194	3,435	1,241
2 bedroom	3,177	4,511	1,334
3 bedroom	3,653	4,614	961
4+ bedroom	476	593	117
Total	9,500	13,153	3,653

15.24 The analysis is based on allocating households housing in accordance with the size of their household. It is perfectly justifiable for the Council to adopt a policy position which seeks to limit provision of 1-bed properties on the basis that these offer limited flexibility and are unsuitable for all households, or alternatively promoting delivery of larger family-sized homes which can create cascading effects through the housing stock.

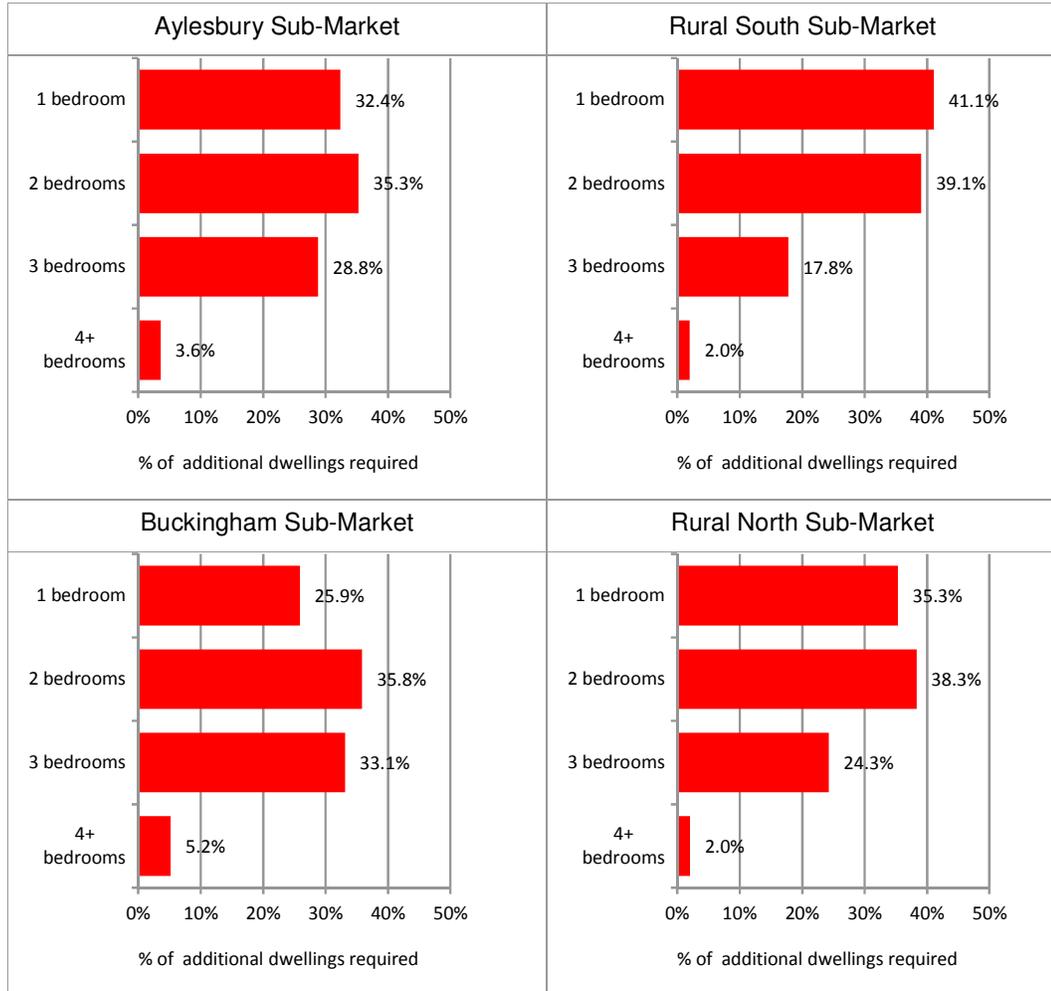
15.25 Figure 15.8 shows how our estimated affordable requirement compares with the stock of affordable housing in 2011.

Figure 15.8: Impacts of Demographic Trends on Affordable Housing Requirements by House Size, 2011 to 2031 – Aylesbury Vale



15.26 Figure 15.9 shows estimated size requirements in the affordable sector in the period 2011 to 2031 for each housing sub-market. In all cases the proportions of smaller units required in the affordable sector is significantly higher than the proportions projected for market housing. Generally the two Rural Sub Markets show a greater requirement for smaller units than either Aylesbury or Buckingham Sub Markets linked to the older age structure of these sub-markets and the existing level of larger homes.

Figure 15.9: Size of Affordable Housing Required 2011 to 2031 – Housing Sub-Markets



15C FINDINGS: MARKET HOUSING

15.27 As we identified in the Part I report, 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 next 20 years, however we have applied a 'cross-check' to the model's findings taking account of the understanding of market dynamics developed, as described in the Part I report.

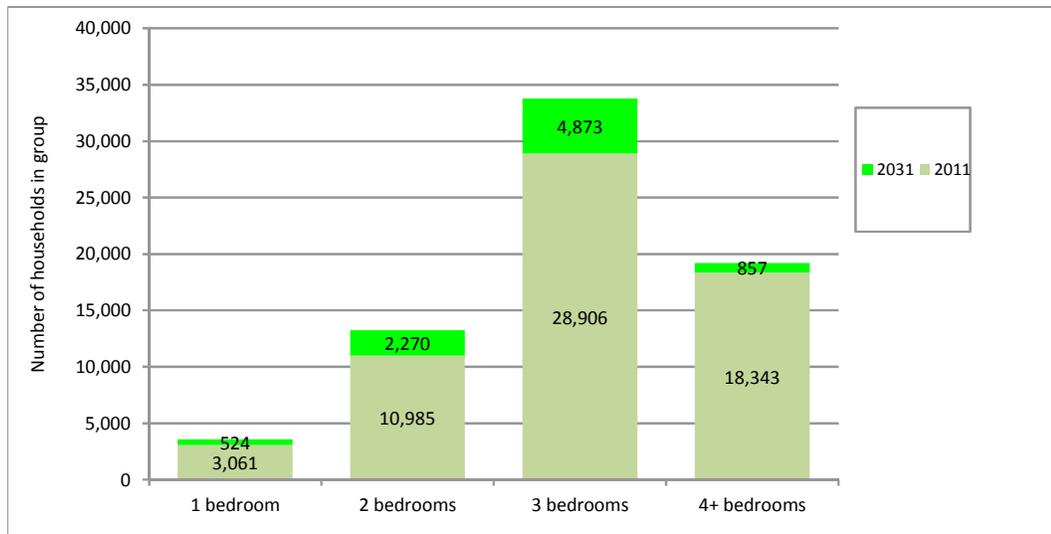
15.28 Figure 15.10 show estimates of the sizes of market housing required from 2011 to 2031 based on demographic trends. The data suggests a requirement for 8,525 additional market units with the majority of these being three bedroom homes.

Figure 15.10: Estimated Size of Dwellings Required 2011 to 2031 – Market Housing (Aylesbury Vale)

Size	2011	2031	Additional homes 2011-2031
1 bedroom	3,061	3,585	524
2 bedroom	10,985	13,255	2,270
3 bedroom	28,906	33,779	4,873
4+ bedroom	18,343	19,200	857
Total	61,296	69,820	8,525

15.29 Figure 15.11 below shows how our estimated market requirement compares with the current stock of housing. The data suggests a slight shift towards a requirement for smaller dwellings relative to the distribution of the existing stock. This is understandable given the ageing of the population.

Figure 15.11: Impacts of Demographic Trends on Market Demand by House Size, 2011 to 2031 – Aylesbury Vale



15.30 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.

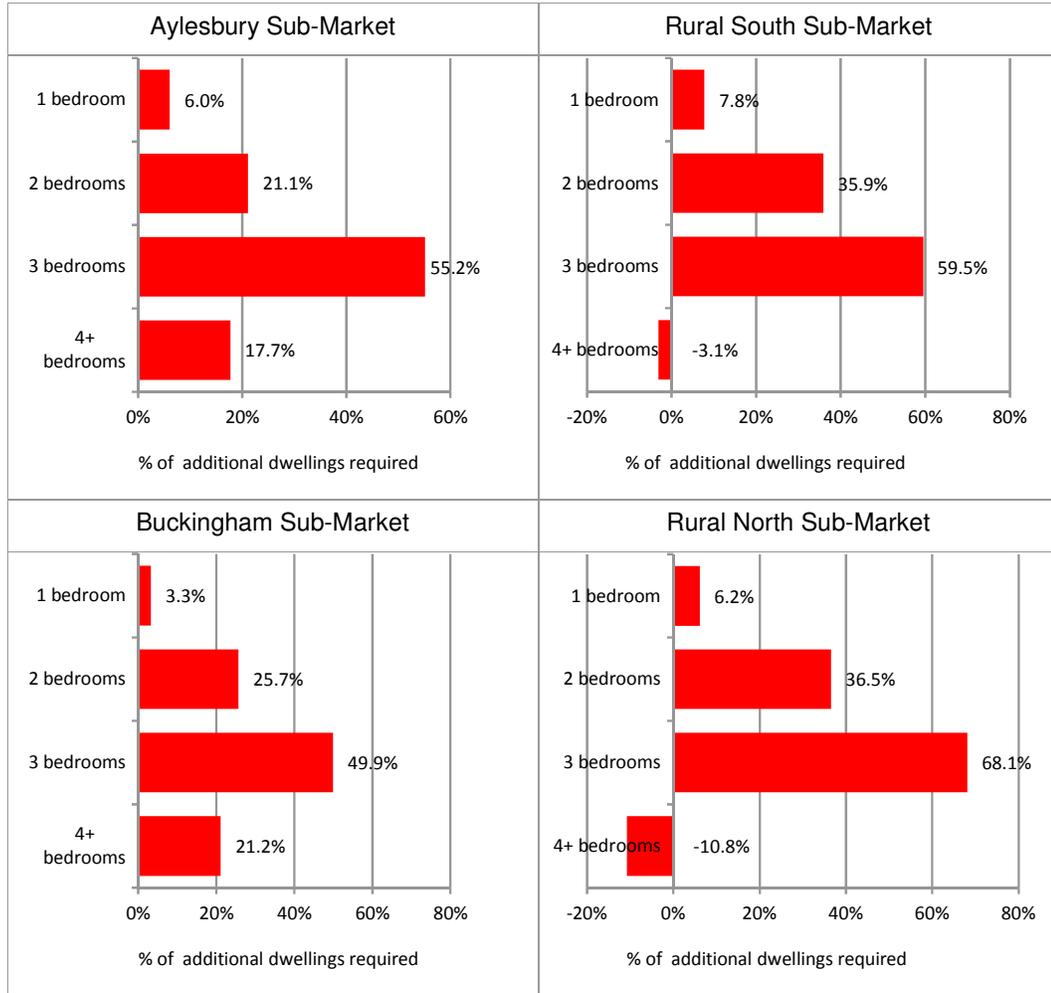
15.31 In the short-term we would expect stronger demand in relative terms for larger family homes (3 or more bedrooms) as the market for smaller properties is restricted by mortgage finance constraints.

15.32 There is already a relatively strong supply of larger properties, with 4 or more bedrooms, in

the District. Over the next 20 years it is anticipated that there will be a continuing market for larger family homes, but the existing stock is expected to make a significant contribution to meeting this demand, as older households either downsize or move away from the area, releasing equity from their existing homes.

- 15.33 Below we have provided estimates of market requirements by size for each individual housing sub-market for the period 2011 to 2031. The data suggests that in general the two Rural Sub Markets will have significant demands for 3 bedroom accommodation but that there is a slight over-supply of 4+ bedroom homes. This arises due to the ageing of the population and information earlier which showed that as households get older they start to live in smaller homes. It is anticipated that existing stock will make a significant contribution to the supply of larger properties in the longer-term, as older households look to downsize or to move elsewhere and release the value from their existing homes.
- 15.34 This however does not mean that the Council should seek to restrict provision of larger homes with 4 or more bedrooms. Our view is that the market is best placed to regulate what types and sizes of homes are delivered.
- 15.35 In both the Aylesbury and Buckingham Sub-Markets there is a significant requirement for 4+ bedroom accommodation.

Figure 15.12: Size of Market Housing required 2011 to 2031 – Housing Sub-Markets



15.36 As the last couple of 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.

15.37 We are of the view that it is appropriate through the planning system to seek to influence the balance of types and sizes of market housing through considering the mix of sites allocated for development rather than specific policies at the district-wide level relating to the proportion of homes of different sizes which are then applied to specific sites. This approach is implicit within PPS3 which requires local planning authorities to set out policies regarding the mix of affordable housing by size but does not require policies to be set for market housing.

Similarly, the core outputs within the SHMA Guidance¹³ do not include estimates of the mix of market housing required. Similarly it recognises that the setting of a site and character of the surrounding area should influence the density of development (and thus housing mix). At the strategic level, a local authority in considering which sites to allocate, a local authority can consider what type of development would likely be delivered on these sites. It can also provide guidance on housing mix implicitly through policies on development densities.

15D OVERALL HOUSING REQUIREMENTS BY SIZE

15.38 If we bring together the analysis of requirements for both market and affordable housing, the resultant mix of housing is shown in Figure 15.13.

Figure 15.13: Housing Mix by Unit Size across Tenures

Housing Requirements, 2011-31	1-bed	2-bed	3-bed	4+ bed	Total
Market Housing	525	2270	4873	857	8525
Affordable Housing	1241	1334	961	117	3653
% Total Housing by Size	14.5%	29.6%	47.9%	8.0%	12178

15.39 Figure 15.13 indicates that an estimated 56% of overall housing need and demand (market and affordable) is for 3- and 4-bedroom properties. On this basis we would recommend that at least 60% of capacity for housing to be on sites suitable for and capable of delivering family housing (recognising that smaller dwellings can also be delivered on these sites).

¹³ CLG (2007) Strategic Housing Market Assessments: Practice Guidance, Version 2

16 SPECIALIST HOUSING REQUIREMENTS

16A INTRODUCTION

16.1 We have established in Section 7 overall housing requirements for different sizes of properties over the next 20 years, however there can be specific groups within the population who require specialist housing solutions or for whom housing needs may differ from the wider population. These groups are considered within this section.

16.2 Estimates of household groups who have particular housing needs is a key output of the SHMA Guidance¹⁴ whilst the draft National Planning Policy Framework identifies that local planning authorities should plan for a mix of housing which takes account of the needs of different groups in the community.

16.3 In consultation with Aylesbury Vale District Council, the following key groups have been identified which may have housing needs which differ from those of the wider population:

- Black and Minority Ethnic (BME) households;
- Older Persons; and
- Students.

16.4 The needs of these groups are considered in this Section.

16B HOUSING NEEDS OF BME HOUSEHOLDS

16.5 Black or Minority Ethnic (BME) households, as a group, are quite often found to have distinct characteristics in terms of their housing needs, or may be disadvantaged in some way.

16.6 In 2001 (the latest date for which robust local information is available) around 8.4% of the population in Aylesbury Vale came from a non-White (British/Irish) background. This however varied considerably by housing sub-market with just over 13% of the population of the Aylesbury Sub-Market being from a BME group compared with less than 4% in each of the two rural sub-markets. The main BME groups are Pakistani and White: Other. In total, around 71% of the total BME population in the district live in the Aylesbury Sub-Market.

¹⁴ CLG (2007) Strategic Housing Market Assessments: Practice Guidance, Version 2

Figure 16.1: Black and Minority Ethnic Population by Housing Sub-Market (2001)

	Aylesbury Sub-Market	Rural South Sub-Market	Buckingham Sub-Market	Rural North Sub-Market	Aylesbury Vale District
White: British	85.50%	95.20%	90.70%	95.50%	90.50%
White: Irish	1.40%	1.00%	0.90%	0.80%	1.10%
White: Other	2.70%	2.10%	3.20%	1.90%	2.40%
Mixed: White and Black Caribbean	0.80%	0.20%	0.20%	0.20%	0.50%
Mixed: White and Black African	0.10%	0.10%	0.10%	0.10%	0.10%
Mixed: White and Asian	0.30%	0.30%	0.40%	0.30%	0.30%
Mixed: Other	0.40%	0.20%	0.30%	0.30%	0.30%
Asian or Asian British: Indian	1.00%	0.30%	0.50%	0.10%	0.60%
Asian or Asian British: Pakistani	4.60%	0.10%	0.30%	0.30%	2.20%
Asian or Asian British: Bangladeshi	0.10%	0.10%	0.00%	0.00%	0.10%
Asian or Asian British: Other Asian	0.40%	0.10%	0.30%	0.10%	0.20%
Black or Black British: Caribbean	1.30%	0.20%	0.60%	0.10%	0.70%
Black or Black British: African	0.30%	0.10%	1.00%	0.10%	0.30%
Black or Black British: Other	0.20%	0.00%	0.10%	0.00%	0.10%
Chinese	0.40%	0.10%	0.70%	0.20%	0.30%
Other ethnic group	0.40%	0.10%	0.60%	0.10%	0.30%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
% non-White (British/Irish)	13.10%	3.80%	8.40%	3.80%	8.40%

Source: ONS

16.7 ONS produces estimates of population change by ethnic group for local authorities. The latest estimates are for 2009. Figure 16.2 shows that the proportion of the population in a BME group is projected to have increased from 8.4% in 2001 to 13.5% in 2009. This represents an increase in the BME population of around 60% in just eight years. Although this information is not available for the sub-markets, we might expect (on the basis of proportions in 2001) the BME population of the Aylesbury Sub-Market to now be in excess of 20% of the total population.

Figure 16.2: Estimated change in Black and Minority Ethnic Population 2001-2009

	2001		2009		Change	
	No.	%	No.	%	No.	%
White: British	149,983	90.5%	148,100	85.4%	-1,883	-1.3%
White: Irish	1,875	1.1%	1,900	1.1%	25	1.3%
White: Other	4,029	2.4%	6,300	3.6%	2,271	56.4%
Mixed: White and Black Caribbean	814	0.5%	1,000	0.6%	186	22.9%
Mixed: White and Black African	175	0.1%	500	0.3%	325	185.7%
Mixed: White and Asian	495	0.3%	900	0.5%	405	81.8%
Mixed: Other	509	0.3%	900	0.5%	391	76.8%
Asian or Asian British: Indian	991	0.6%	2,400	1.4%	1,409	142.2%
Asian or Asian British: Pakistani	3,658	2.2%	4,200	2.4%	542	14.8%
Asian or Asian British: Bangladeshi	101	0.1%	500	0.3%	399	395.0%
Asian or Asian British: Other Asian	409	0.2%	1,100	0.6%	691	168.9%
Black or Black British: Caribbean	1,154	0.7%	1,700	1.0%	546	47.3%
Black or Black British: African	433	0.3%	1,800	1.0%	1,367	315.7%
Black or Black British: Other	141	0.1%	300	0.2%	159	112.8%
Chinese	507	0.3%	1,200	0.7%	693	136.7%
Other ethnic group	474	0.3%	1,000	0.6%	526	111.0%
Total	165,748	100.0%	173,500	100.0%	7,752	4.7%
% non-White (British/Irish)		8.4%		13.5%		61%

Source: ONS

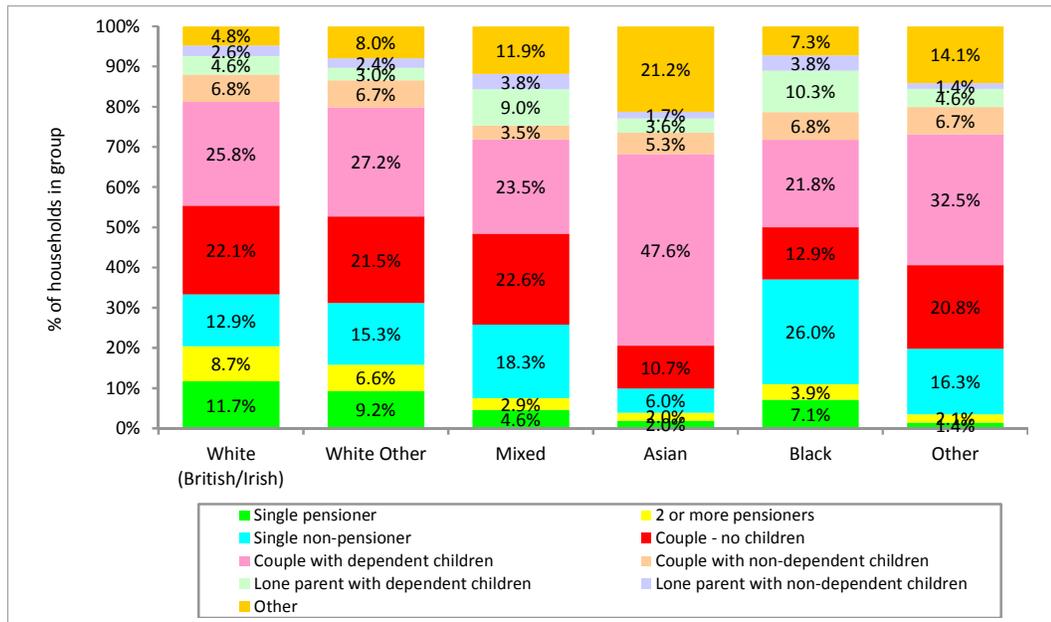
16.8 The strategic growth in BME populations has been in White:Other (which is likely to include migrants from EU A8 accessible countries), followed by people of Indian and African ethnic origin.

Household Characteristics

16.9 We have used 2001 Census data to provide an indication of the characteristics of BME households. This information is dated, but is the best currently available for the whole population.

16.10 There are notable differences between the household characteristics of BME households as against the white British/Irish population. Figure 16.3 suggests that non-White households are less likely than White households to contain only people of pensionable age. Asian households are notable for the large proportion with dependent children (families) and also the highest proportions of 'other' households (which are often larger multi-adult households). Black and Mixed households show high proportions of lone parents.

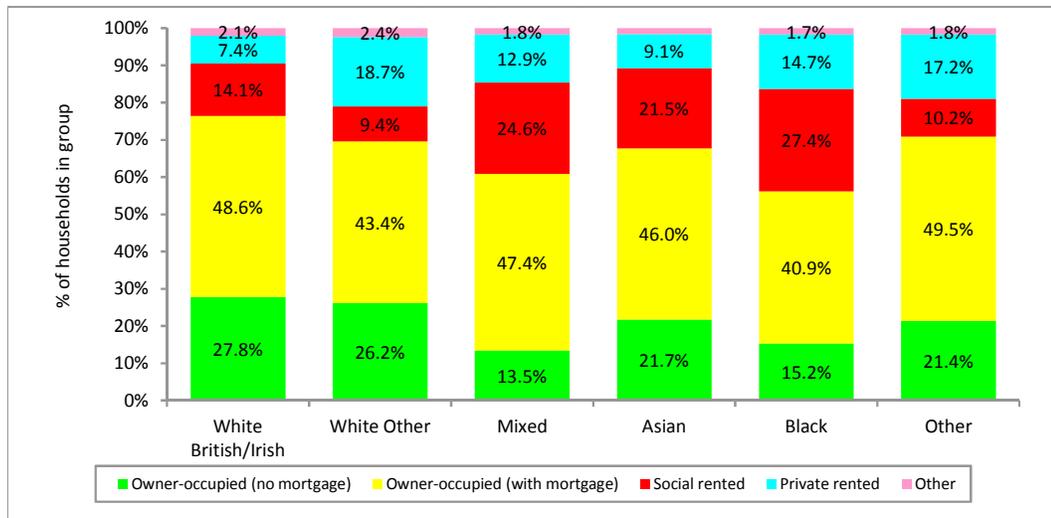
Figure 16.3: Household composition by ethnic group in Aylesbury Vale



Source: 2001 Census data (from NOMIS)

16.11 Figure 16.4 indicates that White (British/Irish) households are the most likely to be owner-occupiers with no mortgage (and owner-occupiers more generally). This is likely in part to be influenced by the age structure of the White population. Black, Mixed and Asian households show high proportions living in social rented housing whilst White: Other and Black households are particularly likely to live in the private rented sector.

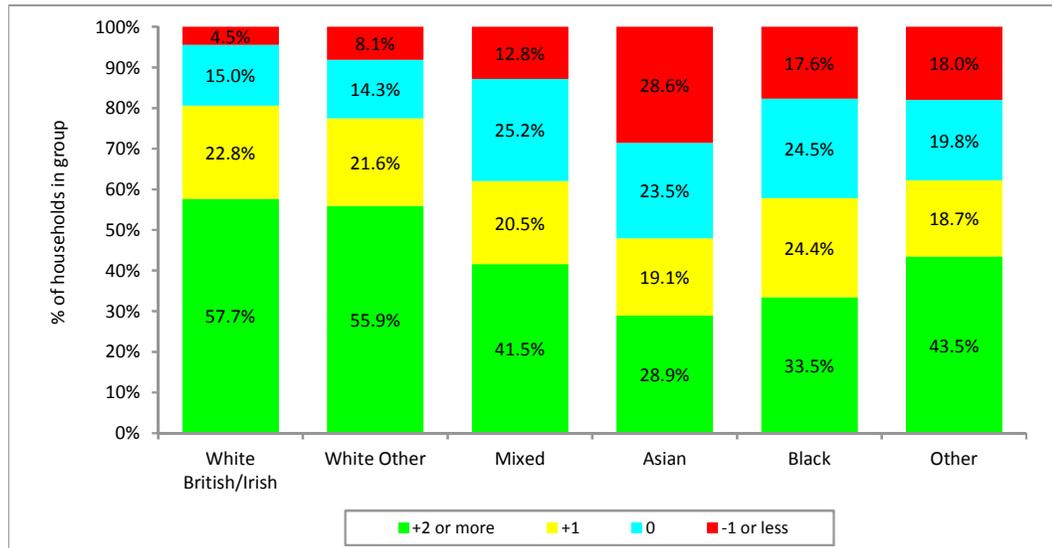
Figure 16.4 Tenure by Ethnic Group in Aylesbury Vale



Source: 2001 Census data (from NOMIS)

16.12 Figure 16.5 shows ‘occupancy ratings’ by BME group; this is based on a person per room standard where a positive figure indicates under-occupancy and negative figures suggest some degree of over-crowding. The figures are not comparable with the more common measure of overcrowding/under-occupation using the bedroom standard but will indicate differences between groups. BME groups are more likely to be overcrowded (i.e. have a negative occupancy rating) than White (British/Irish) households. In particular, the Census data suggests that over a quarter of Asian households are overcrowded - this compares with only 4.5% of the White (British/Irish) group.

Figure 16.5: Occupancy rating by Ethnic Group in Aylesbury Vale



Source: 2001 Census data (from NOMIS)

Housing Register

16.13 The data presented above provides some indication of the differences between households in different BME groups although the information is rather dated and the overall size of the BME population is thought to have grown significantly since the data was collected. One data source we have which is more up to date is the Housing Register.

16.14 At the time of carrying out the needs modelling there were 4,180 households on the register. Not all of these households have provided information about their ethnic group and in total ethnic group data is available for 3,707 households (89% of those registered). The data shows that of those for whom we have information some 82.1% are White (British/Irish). This would suggest that BME households are more likely to be registered for housing than White (British/Irish) households. As of 2009, it was estimated that 86.5% of the population was White (British/Irish) although the number of households being likely to be lower than this due

to generally larger household sizes amongst BME groups.

- 16.15 The data about reasonable preference categories is also interesting and shows some groups being particularly likely to have a priority need. The key group in this regard are Pakistani households which make up 188 of all households registered and of these some 43.1% are in a reasonable preference category – more than double the figure for all households registered.

Figure 16.6: Housing Register Reasonable Preference Category (RPC) by Ethnic Group

BME group	In RPC	Not in RPC	Total	% in RPC
White: British	564	2,438	3,002	18.8%
White: Irish	6	35	41	14.6%
White: Other	24	123	147	16.3%
Mixed: White and Black Caribbean	10	36	46	21.7%
Mixed: White and Black African	5	6	11	45.5%
Mixed: White and Asian	0	10	10	0.0%
Mixed: Other	4	11	15	26.7%
Asian or Asian British: Indian	4	13	17	23.5%
Asian or Asian British: Pakistani	81	107	188	43.1%
Asian or Asian British: Bangladeshi	3	5	8	37.5%
Asian or Asian British: Other Asian	6	27	33	18.2%
Black or Black British: Caribbean	13	56	69	18.8%
Black or Black British: African	15	54	69	21.7%
Black or Black British: Other	5	14	19	26.3%
Chinese	0	2	2	0.0%
Other ethnic group	1	4	5	20.0%
Gypsy/Romany/Irish Traveller	6	19	25	24.0%
Not stated	106	367	473	22.4%
Total	853	3,327	4,180	20.4%

Source: Bucks Home Choice Housing Register March 2011

- 16.16 Finally, we can use this source to look at the locations of BME households registered for housing. Figure 16.7 shows information for all BME households (i.e. excluding White (British/Irish) and those for whom we have no information). The data clearly shows that BME households on the register are far more likely to live in the Aylesbury Sub-Market and also more likely to be in a reasonable preference category.
- 16.17 For all households for whom we have locational information some 91% currently live in Aylesbury with 97% of those in a reasonable preference category also being in the area. This information clearly demonstrates that pressures on affordable housing for BME groups are most acute in the Aylesbury Sub-Market.

Figure 16.7: Housing Register Reasonable Preference Category (RPC) by Ethnic Group

Area	In RPC	Not in RPC	Total	% in RPC
Aylesbury Sub-Market	143	352	495	28.9%
Rural South Sub-Market	1	24	25	4.0%
Buckingham Sub-Market	3	13	16	18.8%
Rural North Sub-Market	0	7	7	0.0%
Other areas/NFA	30	91	121	24.8%
Total	177	487	664	26.7%

Source: Bucks Home Choice Housing Register March 2011

Key Findings for BME Groups

- 16.18 Drawing the analysis together, the BME population in the table appears to have grown quite strongly since 2001, particularly through increases in the White:Other population (which is likely to include Eastern European migrants) and the population of African and Indian ethnicity. The latest estimate is that BME groups make up 13.5% of the Vale's population.
- 16.19 BME households appear to be typically younger and less likely to be owner occupiers than the White (British/Irish) population. BME households are also more likely to be overcrowded, and this is particularly true of Asian household.
- 16.20 There are 664 BME households on the Bucks Home Choice Housing Register in March 2011 of which 177 (27%) were found to be in a reasonable preference category.
- 16.21 The implications of this are more for housing strategy than planning, and suggest a need to consider particularly how the needs of Pakistani households are met within the local housing market, to explore the reasons for higher levels of overcrowding in BME communities and how this can be addressed. It will also be important to consider the role which the Private Rented Sector plays in meeting needs of new migrant communities and the standards of housing in this sector. Investigating these issues in greater detail may assist development of strategic housing policies.

16C HOUSING NEEDS OF OLDER PEOPLE

- 16.22 The SHMA Guidance recognises the need to provide housing for older people as part of achieving a good mix of housing. A key driver of change in the housing market over the next 20 years is expected to be the growth in the population of older persons (aged 65 and over).
- 16.23 Indeed as population projections show earlier in this document (in Section 10), the number of

older people is expected to increase significantly over the next few years. In this section we draw on a range of sources including our projection work, data from POPPI (Projecting Older People Population Information) and some 2001 Census data to provide context (e.g. around under-occupation).

Current Population of Older Persons

16.24 Below we have provided some baseline population data about older persons and compared this with other areas. The data for Aylesbury Vale has been taken from our main trend-based projection (PROJ 1) (which allows us to look at the housing sub-markets) with the comparable data for England and the South East region being based on the 2008 ONS population projections.

16.25 The data shows that, when compared with both the South East and to a lesser extent England, the district has a slightly lower proportion of older persons. In 2011 it is estimated that 21.6% of the population of Aylesbury Vale is aged 60 or over. There are notable differences by sub-markets with only 18.6% of the population of the Aylesbury Sub Market being aged 60 and over, compared with around a quarter in each of the two rural sub-markets.

Figure 16.8: Older person population in Aylesbury Vale and selected areas (2011)

Age band	Aylesbury Sub Market	Rural South Sub Market	Buckingham Sub Market	Rural North Sub Market	Aylesbury Vale District	South East	England
0-14	20.8%	18.0%	18.8%	18.2%	19.4%	17.5%	17.4%
15-29	15.8%	15.3%	18.6%	15.8%	15.9%	18.7%	20.1%
30-44	24.7%	18.8%	20.1%	17.3%	21.4%	20.1%	20.4%
45-59	20.0%	23.1%	22.3%	23.9%	21.7%	20.1%	19.5%
60-74	12.0%	16.4%	13.1%	16.8%	14.1%	15.1%	14.6%
75+	6.7%	8.4%	7.1%	8.1%	7.4%	8.6%	8.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% 60+	18.6%	24.8%	20.2%	24.8%	21.6%	23.7%	22.6%

Future Changes in the Population of Older Persons

16.26 As well as providing a baseline position for the proportion of older persons in the District we can use our housing requirement projections to provide an indication of how this might change in the future (and by housing sub-market). Below we have presented information from our main trend-based projection (PROJ 1) about how the population in each of the broad age

bands discussed above is likely to change.

16.27 Figure 16.9 below shows population change for the whole of Aylesbury Vale. Under our trend-based projections, the population is expected to increase by 9.2% over the 20-year period. However the two older person age groups see far higher levels of population growth with the number aged 60 to 74 expected to rise by 41% and the number aged 75 and over by around 90%. The increase in the population aged 60 and over is in excess of total estimated population growth over this period (an overall decrease in population is projected for the age groups aged up to 60).

Figure 16.9: Trend-based (PROJ 1) population change 2011 to 2031 by 5 Year Age Bands

Age group	Population 2011	Population 2031	Change in population	% change from 2011
Under 15	34,091	31,870	-2,221	-6.5%
15-29	27,859	29,697	1,838	6.6%
30-44	37,580	34,265	-3,315	-8.8%
45-59	38,203	36,150	-2,053	-5.4%
60-74	24,855	35,115	10,260	41.3%
75+	13,079	24,789	11,710	89.5%
Total	175,666	191,886	16,219	9.2%

16.28 In looking at the various sub-markets we see that the same trends tend to emerge. Overall the projections suggest stronger overall population growth in the two urban Sub Market Areas – this means that the ageing of the population is likely to be experienced more acutely in the two rural sub-markets.

Figure 16.10: Trend-based (PROJ 1) population change 2011 to 2031 by five year age bands (Aylesbury and Rural South sub-markets)

Age group	Aylesbury Sub Market				Rural South Sub Market			
	Population 2011	Population 2031	Change in population	% change from 2011	Population 2011	Population 2031	Change in population	% change from 2011
Under 15	16,925	15,593	-1,332	-7.9%	9,306	8,624	-681	-7.3%
15-29	12,824	15,719	2,895	22.6%	7,895	7,491	-404	-5.1%
30-44	20,083	15,376	-4,708	-23.4%	9,730	9,987	258	2.7%
45-59	16,289	20,452	4,163	25.6%	11,913	8,412	-3,501	-29.4%
60-74	9,734	15,848	6,115	62.8%	8,449	10,754	2,305	27.3%
75+	5,416	9,954	4,538	83.8%	4,342	8,208	3,866	89.0%
Total	81,271	92,942	11,672	14.4%	51,635	53,477	1,843	3.6%

Figure 16.11: Trend-based (PROJ 1) population change 2011 to 2031 by five year age bands (Buckingham and Rural North sub-markets)

Age group	Buckingham Sub Market				Rural North Sub Market			
	Population 2011	Population 2031	Change in population	% change from 2011	Population 2011	Population 2031	Change in population	% change from 2011
Under 15	2,555	2,689	133	5.2%	5,304	4,964	-340	-6.4%
15-29	2,520	2,264	-256	-10.2%	4,621	4,223	-398	-8.6%
30-44	2,730	2,941	211	7.7%	5,036	5,961	925	18.4%
45-59	3,025	2,959	-67	-2.2%	6,977	4,329	-2,649	-38.0%
60-74	1,779	2,615	836	47.0%	4,893	5,898	1,005	20.5%
75+	964	1,843	879	91.2%	2,357	4,784	2,426	102.9%
Total	13,574	15,310	1,736	12.8%	29,189	30,158	968	3.3%

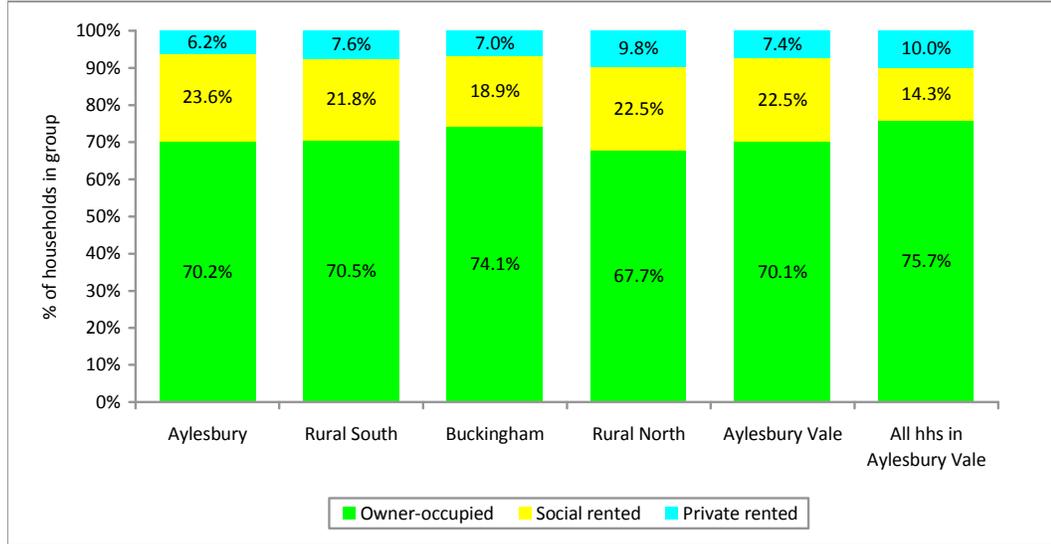
Characteristics of Older Persons Households

16.29 We have used 2001 Census data to explore in a bit more detail some characteristics of older person households. The data has been provided additionally for each of the four sub-markets.

16.30 Figure 16.12 shows the tenure of older person households (defined as households where all people are over pensionable age). The data shows that whilst the vast majority of older person households are owners there are a significant proportion living in social rented housing. Overall, the data suggests that 22.5% of older person households live in social rented housing; this compares with 14.3% of all households in the District.

16.31 Given that the number of older people is expected to increase significantly in the future this would suggest (if occupancy patterns remain the same) that there will be considerable demand for affordable housing from the ageing population. Further analysis of data for the whole of Aylesbury Vale suggests that single pensioners are far more likely to live in social rented housing than households with two or more pensioners. With projected decreases in household sizes and increases in single pensioner households this suggests that the ageing of the population may result in additional older households falling into housing need.

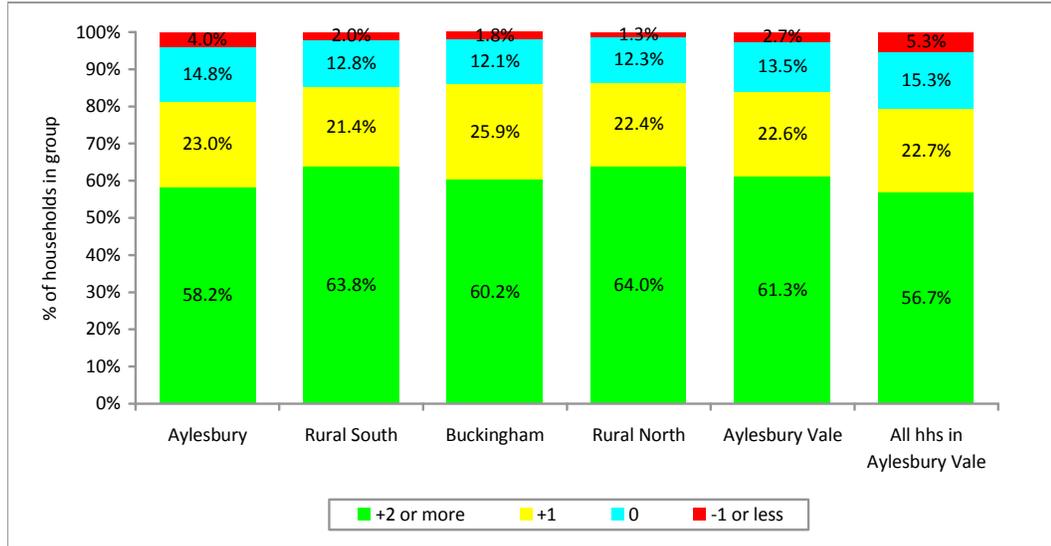
Figure 16.12: Tenure of older person households in Aylesbury Vale



Source: 2001 Census data (from NOMIS)

16.32 A key theme that is often brought out in Housing Market Assessment work is the large proportion of older person households who under-occupy their dwellings. Data from the Census allows us to investigate this using the occupancy rating. The Census data suggests that older person households are more likely to under-occupy their housing than other households in the District. In total 61.3% have an occupancy rating of +2 or more (meaning there are at least two more rooms than people in the household). This compares with 56.7% for all households in the District. Further analysis suggests that under-occupancy is far more common in households with two or more pensioners than single pensioner households.

Figure 16.13: Occupancy rating by older person households in Aylesbury Vale



Source: 2001 Census data (from NOMIS)

16.33 It is of interest to study the above information by tenure. Figure 16.14 shows the number of pensioner households who had an occupancy rating of +2 or more in each of the three broad tenure groups in 2001. Whilst the majority of older person households with an occupancy rating of +2 or more were in the owner-occupied sector, there were 700 properties in the social rented sector occupied by pensioner only households with an occupancy rating of +2 or more. This may therefore present some opportunity to reduce under-occupation.

Figure 16.14: Pensioner households with occupancy rating of +2 or more by tenure in Aylesbury Vale (Census 2001)

Pensioner households	Single pensioner	2 or more pensioners	All pensioner only households
Owner-occupied	3,049	3,621	6,670
Social rented	401	299	700
Private rented	286	138	424
All tenures	3,736	4,058	7,794

Source: 2001 Census data (from NOMIS)

16.34 It should however be recognised that many older households in the private sector will have built up equity in their existing homes. In the private sector many older households may be able to afford a larger home than they need (and thus under-occupy housing). Some may look to downsize to release equity from homes to support their retirement (or may move away from the area to cheaper parts of the country), however we would expect many older households to still require family housing with space to allow friends and relative to come to stay.

Health-related Population Projections

- 16.35 In addition to providing projections about how the number and proportion of older people is expected to change in the future we can look at the likely impact on the number of people with specific illnesses or disabilities. For this we have used POPPI data which provides a baseline position for 2010 and projects forward to 2030. Although the projection figures are linked back to the 2008-based ONS projections (which differ slightly from our own projections) the information will still provide a good indication of the types of changes likely in the future and therefore the potential impact on housing requirements for specialist accommodation or additional support services.
- 16.36 The projections from POPPI of older households with health issues are shown in Figure 8.15 below – in all cases the figures relate to the population aged 65 and over. The figures from POPPI are based on prevalence rates from a range of different sources and whilst these might change in the future (e.g. as general health of the older person population improves) the estimates are likely to be of the right order.
- 16.37 Figure 16.15 shows that all of the illnesses/disabilities are expected to increase significantly in the future although this would be expected given the increasing population. In particular there is projected to be a large rise in the number of people with dementia (up 121%) with falls requiring hospital treatment, hearing impairment and mobility problems all expected to increase by over 90%.

Figure 16.16 Estimated population change for range of health issues (2010 to 2030)

Type of illness/disability	2010	2030	Change	% increase
Limiting long-term illness	10,699	19,745	9,046	84.5%
Depression	2,290	4,022	1,732	75.6%
Severe depression	719	1,326	607	84.4%
Dementia	1,809	3,994	2,185	120.8%
Activities affected by previous heart attack	1,302	2,314	1,012	77.7%
Activities affected by previous stroke	611	1,116	505	82.7%
Bronchitis/emphysema	449	793	344	76.6%
Fall (number per year)	7,010	13,117	6,107	87.1%
Falls requiring hospital treatment (per year)	542	1,070	528	97.4%
Visual impairment	2,294	4,314	2,020	88.1%
Hearing impairment	11,058	21,658	10,600	95.9%
Mobility problems	4,815	9,463	4,648	96.5%
Obesity	6,974	11,648	4,674	67.0%
Diabetes	3,314	5,798	2,484	75.0%

Source: POPPI Website (2011)

- 16.38 In addition to projections about disabilities the POPPI data provides estimates of change in the number of older persons living alone and also a projection of the care home population.
- 16.39 The POPPI projections suggests that the number of people age 65 and over living alone in Aylesbury Vale will increase by around 8,000 from 2010 to 2031 – an increase of 84%. The care home population is expected to more than double from 950 in 2010 to 2,173 in 2030. This latter projection does not take account of whether provision for this scale of increase will be provided.

Implications of the Ageing Population for Housing Provision

- 16.40 The older person population of Aylesbury Vale is not particularly large when compared with regional figures; however, the population aged 60 and over is projected to increase significantly up until 2031. Generally the two rural sub-markets of the District have the highest proportion of older persons and in the future these areas are expected to most acutely see the ageing of the population.
- 16.41 Firstly we should point out that the projections of requirements for different types and sizes of housing in Section 7 take account of the projected changes in the population of older persons and the growth in single person older households (primarily as a result of improvements in life expectancy). The housing market model used in Section 7 however takes account of how older households typically occupy housing, including tendencies of these groups towards under-occupation (particularly in the private sector). Growth in the older population within Aylesbury Vale over the next 20 years will result in a decline in household sizes, which is one of the drivers of overall housing requirements considered in this report.
- 16.42 Older persons are more likely to under-occupy homes. In the market sector there is a very limited ability to influence this. In the affordable sector, there may be potential to reduce (or seek to limit potential growth in) under-occupation and the Council may wish to consider providing support and incentives to social housing occupiers to downsize. This will help to release larger affordable homes for younger households.
- 16.43 An analysis of older person households suggest that they are particularly likely to live in social rented housing. With the projected increases in older persons there may therefore be additional pressure on the affordable housing stock from such households.
- 16.44 Our analysis also suggests that the growing older population (particularly in the oldest age groups) will result in growth in households with specialist housing needs. Some households

will require support. Typically the greatest support needs are for alterations to properties (such as to bathrooms, showers and toilets, provision of emergency alarms or help maintaining homes). Many of these can be resolved in situ through adaptations to existing properties.

- 16.45 The growing older population will however likely lead to some increase in requirements for specialist housing solutions. The analysis above suggests a 120% growth in older population with dementia, and 97% increase in the older population with mobility problems. From a planning point of view, some of these people will require specialist housing such as sheltered or extra care provision.
- 16.46 The analysis also suggests that the care home population can be expected to increase by over 1200 persons between 2010-30. Care homes do not count as housing on the use class schedule; however an issue for the Council to consider is the extent to which it wishes to older persons accommodated within extra care housing as opposed to residential/ nursing homes. The former (depending on the level of care) may could towards housing numbers.

16D HOUSING NEEDS OF STUDENTS

- 16.47 There are two universities with a presence in Aylesbury Vale District, the University of Buckingham, the only independent university in the UK; as well as a small presence from the University of Bedfordshire which runs nursing and midwifery courses from a base at Oxford Road in Aylesbury.
- 16.48 The University of Bedfordshire's presence is relatively small. We understand that the campus caters for around 300 students but that of these, at any one time, around half will be on placements in the partner hospitals at High Wycombe and Stoke Mandeville. Around 30% of students live within Hospital accommodation, with the remainder residing either in private accommodation or at home. The University itself owns no accommodation in Aylesbury. In discussion with the University's Director of Estates, we understand that the University has no proposals for further investment at Aylesbury at present. Thus we would expect the impact of the University on the housing market at Aylesbury moving forward to be relatively limited, based on the information available.
- 16.49 The University of Buckingham delivers undergraduate degree programmes in two years, in contrast to most universities which deliver similar courses over three years. The University has expanded significantly and currently has around 1,000 students. The University's Campus Development Framework (July 2011) indicates that the University requires "a flexible framework to provide the necessary facilities for the current number of students increasing to

1500 full-time students and finally, to 2000 students on campus.” The Development Framework provides around 560 student bedspaces on-campus.

- 16.50 The University currently has nominations on between 30-40 private rented properties in the town. Our understanding is that they are now seeking to increase this, with an aim of accommodating an additional 100 students in privately-owned accommodation within the town in the forthcoming academic year.
- 16.51 From discussions with the University of Buckingham, we understand that the University plans to expand significantly. The University is also considering options for the development of additional student accommodation.
- 16.52 The University has developed a Campus Development Framework which makes provision for delivery of an additional 450 student bedspaces on campus, mostly on the Right Bank site. It should be noted that this currently does not have any planning policy status.
- 16.53 Thus the expansion of the University, dependent on provision and delivery timing of additional student accommodation, could result in additional demand for market housing in Buckingham in the short-term and drive rental growth in the Private Rented Sector.
- 16.54 The impact of growth in the University of Buckingham on housing requirements will depend on future growth in student numbers. On the basis of the numbers in the Development Framework, student numbers are projected to increase by up to 1000 students and University accommodation by 560. This could result in up to an additional 450 students being accommodated in the private sector. The size of student households can vary, but assuming an average of 3 students per household (on the basis that some may live at home), we estimate that this could result in housing demand for up to an additional 150 properties in Buckingham. Given the size of the town, this could create demand pressures in the Private Rented Sector.
- 16.55 The impact on the Private Rented Sector of growth in the University will also be influenced by the relative phasing of student growth and delivery of new University student accommodation. The alternative is the provision (or allocation of) sites for additional student accommodation.

17 EMPLOYMENT LAND REQUIREMENTS

17A FORECAST METHODOLOGY

- 17.1 This section considers the economic forecasts from Experian and Cambridge Econometrics and uses these to derive projections of employment land requirements for strategic planning purposes. The forecasts are then used to consider in further detail sectoral growth prospects.
- 17.2 We have used a synthesis approach to employment land demand forecasting that takes account of both the local context, from an economic and commercial development perspective, as well as the wider macro-economic context.
- 17.3 Existing historical data provided by AVDC has been analysed and is modelled to benchmark an 'expected' demand assessment.
- 17.4 This is then used alongside the two independent forecasts: Cambridge Econometrics and Experian - for the District to ascertain the future potential demand for land given the scale of employment projected. The demand modelling is based on the SERPLAN¹⁵ assumptions.
- 17.5 The detailed forecast methodology can be described as follows:
- Firstly the forecast employment change by sector has been analysed, with a land forecasting model used to allocate employment to office, industrial, warehouse and other use classes.
 - These forecasts of employment growth by use class are converted to forecasts of floorspace requirements using employment densities. We have assumed employment densities of 17.9 sq.m per employee for offices, 31.8 sq.m per employee for industrial uses and 40.1 sq.m per employee for warehousing in line with SERPLAN¹⁶ assumptions.
 - To calculate forecasts of employment land, standard ratios of employment floorspace to site areas by use class (plot ratios) have been used. We assume a plot ratio of 0.3 for offices and 0.45 for industrial uses, which are in line with CLG guidance on Employment Land Studies¹⁷.
 - This approach has been used to provide initial forecasts of employment land requirements. These have been expressed in terms of net and gross requirements. In forecasting net figures, JOP Consulting has deducted job losses from job gains. The

¹⁵ London and South East Regional Planning Conference. Occupancy levels are standard ratios used in employment land studies and density levels are sourced from SERPLAN 'Use by Business'.

¹⁶ London and South East Regional Planning Conference. Occupancy levels are standard ratios used in employment land studies and density levels are sourced from SERPLAN 'Use by Business'.

¹⁷ CLG (2004) Employment Land Reviews – Guidance Note

gross figures include job gains only, as identified in the forecasts.

- This approach has been used to forecast employment land requirements for both 2000-8 (looking backwards) and for 2010-26 (looking forwards). The backward-looking analysis has been compared with estimated employment land take-up (in terms of net completions and gross completions).
- The actual and predicted take-up of employment land between 2000-8 have been compared (in gross and net terms), and of past predicted to actual take-up applied to predicted demand between 2010-26 to provide a synthesis forecast of employment land requirements.

17.6 It is very important to highlight that there some serious constraints and issues concerning the approach to measuring demand. These include:

- That the forecasts used are limited in terms of measuring internal churning in the economic system – that is, what is measured is change in the level of employment but it does not inform us how that change takes place and there are occasions where changes in employment may be small but that the land requirement may be substantially greater. Qualitative information where available is therefore an important calibrating factor in the estimating process;
- That population projections are at best weak and at worst potentially misleading in terms of providing a base for measuring land requirement for employment purposes. Clearly for aggregate land requirements that includes housing then the population projections come into their own but as a basis on which to determine employment land demand then it is not appropriate other than to define perhaps local capacity constraints (and as such, 'limits' for demand). In particular the dynamics relating to current and expected Travel To Work patterns are a major consideration and it is very difficult to robustly factor into the analysis.

17.7 Whilst for the purposes of calculating employment land requirements, historical take up rates of land is a key benchmark for estimation purposes there are fundamental issues concerning the timeliness and quality of data potentially available. That is:

- Historical data driven estimates will lack the necessary sophistication required to provide a full understanding of the change in demand in that they lack any explanatory variables that influence or change demand schedules – the current economic climate is a case in point;
- The quality of the data collected can often be inconsistent and of serious concern which undermines the whole basis of the forecast based on historical take up of land;

- It is not clear to what extent the data identifies net demand – that is, demand that takes into account issues such as displacement (which is evident although not considered unduly significant here); and
- There is a significant likelihood that there are rogue values in the data.

17.8 These and other associated issues provide very important perspectives on the estimation process and the limitations therein. Critically the policymaker should not be lulled into a false sense of security that generating an estimated level of demand is nothing other than a calculated guess based on the best information available at the time of analysis. **Put simply it is not possible to calculate a definitive figure on the level of future demand for employment land; at best the estimation process provides a realistic and robust guide and nothing more. In the current climate this cannot be over-emphasised.**

17.9 Despite these caveats, this section goes through a systematic process of estimating the potential demand for land in Aylesbury Vale over the next 25 years or so which will be sufficiently robust to support policy formation for this period. It should be noted here that the average land requirement will be skewed towards the later part of the planning period given the economic climate already apparent (as described in Section 3).

17.10 For the same reasons as described in Section 3, forecasts are provided for employment land demand between 2010-26 based on both the Experian and Cambridge Econometrics forecasts as the Experian forecasts only run to 2026. We then separately consider employment land requirements arising from the Cambridge forecast over the longer-term to 2031.

17B FORECASTS USING EXPERIAN DATA

17.11 The table below shows the results of modelling the forecast employment change using the Experian dataset. The forecasts are for net change in employment and the resultant net changes in land required.

Figure 17.1: Land Requirement based on Experian Forecasts

Experian Forecasts		
Aylesbury Vale	Employment	Land Requirement (ha)
2000 - 08	4520	-5.37
2010 - 26	9060	62.52

Source: Experian / JOP Consulting

17.12 During 2000 – 08 period employment increased by about 4,500 FTE but the projected land

requirement was negative because of the inter-sector changes in employment. Basically there were significant losses in manufacturing (ie -2,020 jobs) compared to employment gains mainly in the public sector and financial/ business services sector. The losses in manufacturing tended to overwhelm the net land requirement locally which in this case was negative (ie -5.4ha). The projected gross land requirement for the 2000 – 08 period was 29ha.

- 17.13 Looking at actual land take up during this period then the records held by AVDC indicate that actual land take up during this period was 24ha. This result seems somewhat high in relation to actual job generation during this period although is fairly consistent with the projected gross demand estimate generated through the modelling.
- 17.14 The Experian forecast for the period 2010 – 26 indicate gains of just over 9,000 FTE jobs across all sectors bar agriculture. This yields a total land requirement of 62.5ha over the 16 year period – an average of around 3.9ha net new land per annum¹⁸.
- 17.15 As we identified in Section 3, compared to the analysis of the immediate past then the job numbers look highly optimistic especially given the current public sector austerity measures being adopted by the current Government and the uncertainty associated with trend growth forecast for the UK in general.

17C FORECASTS USING CAMBRIDGE ECONOMETRICS DATA

- 17.16 The following section is modelled on the same basis and time period adopted for Experian and are therefore consistent though not necessarily directly comparable (see below). A first important point to note is that the CE forecast total employment change for the 2010 – 2026 period in Aylesbury is 8200 jobs – some 10% less than the Experian results.
- 17.17 Additionally, these forecasts are not directly comparable – the difference in real terms is much more significant. The CE forecast analysis is not FTE based – it is nominally based. By implication the results are biased upwards in relation to the Experian results.
- 17.18 As we identified in Section 11, adjusting the CE forecast results to equate to an FTE base would reduce the total by approximately 15%. This would reduce the CE forecast to an increase of 7,000 in employment over the 2010 – 26 period, some 23% less than the forecast by Experian.

¹⁸ All but the Agri sector are forecast to grow during this period which would imply barely any turnover land to deduct from this total.

17.19 Whilst we have not adjusted for FTE for the modelling work the results below include an FTE equivalent estimate in brackets. The logic of this is that utilising FTE in the modelling process could be misleading in that it is not clear whether a part time job combines to reduce actual space requirements. In turn it would seem important to underpin the analysis with the aggregate job totals even where this is likely to have a positive bias on the results.

Figure 17.2: Land Requirement based on Cambridge Econometrics Forecast

CE Forecasts		
Aylesbury Vale	Employment	ha requirement
2000 - 08	9000	8.4ha (7.1ha)
2010 - 26	8200	43.8ha (37.2ha)

Source: CE / JOP Consulting

17.20 According to the CE forecasts employment increased by 9,000 during the 2000-08 period – roughly double the estimates by Experian with projected land requirement of 8.4ha. Again the inter-sector dynamics of change dampen down the overall projected demand for land – the gross demand approaching 40ha but losses in the manufacturing sector (as per Experian) reducing the net requirement to 8.4ha. That said this is a very different picture to that portrayed through the Experian results albeit again the local land take-up data appears at odds with both sets of projections.

17.21 For the 2010-26 period the 8,200 increase in employment yields a land requirement of near 44ha which is 2.74ha net new land per annum. Adjusted for FTE then this drops to 37.2ha or 2.3ha per annum. These figures are net.

17.22 As we described in Section 11, in real terms the two forecasts are very different. According to Experian in overall terms the recession has no impact on the long term growth trend in Aylesbury. According to CE the world changes very significantly pre and post recession¹⁹. Growth is not linear at all according to CE where it effectively halves post recession growth in relative and absolute terms. It is our view that this postulates a much more realistic picture of the future Aylesbury economy.

17.23 This lends support towards using the CE results for this exercise. Figure 17.3 below then uses both the past results and the CE forecasts to provide a synthesis forecast of employment land demand.

¹⁹ According to CE employment growth between 2000 – 08 was 12.5%; projected growth between 2010 – 26 is forecast at near 11% but with double the time period. Growth rates by Experian for the same periods are 7% and 20% respectively.

Figure 17.3: Forecast Land Requirements –Net and Gross

CE Forecast Land Requirement 2010 - 2026		Net	gross
Employment		8220	8850
A Take up (ha)	Predicted (forecast modelled)	43.8	44
B Take up (ha)	Predicted (modelled past actual 2000 - 08)	8	39
C Take up (ha)	Actual (2000 – 08)	24	114 ²⁰
D Take up (ha)	Past base forecast [ie (C/B)*A]	128	129

Source: CE / GL Hearn

17.24 Using the past base results then this would imply that actual land take-up in gross terms running at some three times the forecast net demand looking at the pre-recession period.

17.25 Interestingly though actual take up (ie 24ha) between 2000-8 is very consistent with the predicted forecast modelled result (ie 43.8ha, i.e. almost double over twice the time period).

17D EXTENDING THE ANALYSIS TO 2031

17.26 The analysis up to now has been **conditional on the Experian forecasts which run to 2026** therefore the analysis has concentrated on this period. However the CE forecasts do run to 2031 therefore it is possible to extend the analysis. The results below replicate the previous analysis but cover the 20 year period of 2011 – 31.

Figure 17.4: Forecast Land Requirements 2011 – 2031

Forecast Land Requirement 2011 - 31		Net
Employment		11380
Take up (ha)	Predicted (forecast modelled)	60

17.27 This yields an average annual take-up rate of 3ha per annum over the 20 year planning period (net) – slightly less than for the 2010 – 26 period (noting here that this is not based on a mid-point estimate but actual outturn of the CE forecast). However this is remarkably consistent with the actual outturn for the 2000-08 period²¹ and gives a reasonable level of confidence in these results (noting though the marked difference in the economic climate between the two periods).

17.28 To give an indication of the robustness of our projections we have compared this with past net

²⁰ Predicted gross equivalent given the actual levels recorded.

²¹ Extrapolating the actual outturn for the 2000 -08 would yield a projected demand of 60ha. This is a huge coincidence but nevertheless a significantly important benchmark for the purposes here. Whilst there is an argument here that stock levels should increase alongside this predicted demand level this could be deemed excessive relative to current and already suggested stock levels.

completions, making high level assumptions on plot ratios from data on net change in floorspace. We estimate a requirement of between 50-80 ha in net terms over a 20 year period based on estimated completions between 2000-8 and 2000-10 respectively. A net forecast at the lower end of this spectrum seems realistic given the economic outlook and projections of sectoral performance.

17E TOWARDS EMPLOYMENT LAND POLICIES

- 17.29 We have drawn together conclusions regarding employment land provision in support of plan-making.
- 17.30 Whilst the preferred forecast base are those produced by CE, it is apparent from these results that the two forecasts together provide what is ostensibly a lower and upper band for employment land demand. On this basis a mid-point approach would suggest delivery (i.e. take-up) of some 53ha (net) over the 16 year planning period to 2026 which yields an annual allocation of 3.3ha per annum.
- 17.31 Looking separately at the 2011-31 period, this yields an average annual take-up rate of 3ha per annum over the 20 year planning period (net) – slightly less than the 3.3ha per annum forecast for the 2010 – 26 period. Looking at both time periods gives us a range for demand for between 60-66 ha (net) between 2011-31.
- 17.32 The non-linear nature of the forecasts however suggests that employment land demand will be weaker over the first half of the proposed planning period, with above average demand following in the second half of the planning period. This provides a potential justification for a phasing policy in respect of employment land supply.
- 17.33 Given what has been identified in terms of benchmark planning levels these results would suggest planning towards 128ha total stock on the basis that this would be delivering around 53ha of developed land over the period to 2026. This is necessary to provide a choice of sites and support competition in the market. However this stock level is arguably very high and could be managed down marginally – for our purposes here we would target c.110ha gross over the period to 2031 and include a clear monitoring mechanism in the Plan.
- 17.34 This compares to a land supply of sites allocated within the Local Plan (without a planning consent or with an outline consent only) of 61 hectares. In broad terms, the level of employment land provision recommended is similar to that provided for in the now withdrawn Proposed Submission Core Strategy (2009).

- 17.35 For comparative purposes the Council's previous Employment Land Study²² identified a requirement for between 24-77ha in addition to the existing supply of committed Local Plan sites (40ha) resulting in a total requirement for comparative purposes of 64 – 117 ha. However this Study looked at floorspace/ land demand in net terms only, and does not appear to have accounted for demand arising from churn within the local market.
- 17.36 The Council should consider allocating land on the basis of 3 gestation periods including:
- Short Term -20% which defined as immediate and is effectively deliverable within 12 months;
 - Medium Term - 50% of land which is intermediate which can be brought forward within 3 years; and
 - Longer Term - 30% of land which is longer term which has two strategic roles of replacing which has been developed or redeveloped as well as providing a contingency element and identifying long term speculative opportunities.
- 17.37 Our broad recommendations for employment land provision are demand-based, and we would advise the Council to consider further supply-side issues relating to the availability and quality of employment land provision across the Vale. The levels of potential employment land demand identified should also be considered, moving forward, in light of the Council's decisions regarding housing requirements.

²² Roger Tym & Partners (2008) *Aylesbury Vale Employment Land Study*

18 BRINGING THE EVIDENCE TOGETHER

18A INTRODUCTION

- 18.1 In this concluding section we have sought to bring together the work undertaken to consider what this means for the development of policies within the Vale of Aylesbury Plan.
- 18.2 The draft National Planning Policy Framework which the Government published in July 2011²³ provides an important context in considering how the Plan is developed. The draft NPPF sets out that Local Plans should meet objectively-assessed development needs (for both housing, employment and other uses) unless the adverse impacts of doing so would significantly and demonstrably outweigh the benefits when assessed against the NPPF as a whole. It clearly states that the Government's intention is that individual local authorities should meet their assessed development needs (as opposed to development needs being distributed through a regional planning mechanism). This shift in national policy has potentially significant implications for Aylesbury Vale, as the Vale was formerly part of the Milton Keynes South Midlands (MKSM) Growth Area which was intended to provide housing, employment (and supporting infrastructure) to meet not just local but regional housing needs.
- 18.3 However the draft NPPF does propose a 'duty to cooperate' to ensure that some element of strategic planning is retained across local authority boundaries both in meeting development needs and in supporting the delivery of key infrastructure. The draft NPPF proposes that one of the tests of soundness for local plans will be whether they meet their own needs *and any under-provision from neighbouring local authorities*. In this section we have sought to consider these issues. In light of current market conditions we have also sought to consider what the realistic 'capacity' of the local market is to accommodate housing development to ensure that any housing requirement policies set out by the Council are deliverable (again as required by national policy).
- 18.4 The chapter is structured to consider housing requirements, the relationship between housing numbers and employment, and employment land requirements. It then moves on to consider high level options for how housing development might be distributed to the different sub-markets across the Vale and to assess requirements for different types and sizes of homes and consider the implications of this for planning policy.

²³ CLG (July 2011) *Draft National Planning Policy Framework*

18B CONSIDERING THE FUTURE HOUSING REQUIREMENT

- 18.5 The draft NPPF identified that local authorities should plan on the basis of meeting the full requirements for market and affordable housing in their areas where possible. Through the Part II Report we have considered a number of scenarios for housing requirements in Aylesbury Vale over the period from 2006 to 2031. In this final section to bring the analysis together to consider what we believe to be a realistic range for future housing provision from a technical perspective.
- 18.6 Firstly, it is important to recognise that there are a range of factors which can and will influence housing need and demand, including housing market dynamics, future economic performance and demographic trends. Thus there is no 'right or wrong' answer and as the approach adopted through this assessment has illustrated, projection assumptions can have very different impacts on what level of housing is identified as required. Our approach to addressing these issues has been to develop a number of projections, which allow us to understand the underlying drivers, and to consider projections not just based on past population trends (which will be influenced by past housing development rates) but to consider how population dynamics might respond moving forward to forecast employment growth.
- 18.7 In determining a housing target for inclusion within the Vale of Aylesbury Plan, the Council will also need to consult with local communities and other stakeholders, consider whether the infrastructure to support development is feasible and can be viably delivered, obtain other technical evidence and undertake a Sustainability Appraisal which assesses the social, economic and environmental implications of alternative options for the level and distribution of development.
- 18.8 The Government's (CLG) official projections indicate a requirement for 18,600 households (19,020 new homes) between 2006-31 (760 per annum). These are based on population trends pre-2008 and do not take account of more recent evidence. The projections developed as part of this Report are summarised in Figure 10.1 below.
- 18.9 If more recent population trends (and particularly migration levels) are considered, the level of homes required over the 25 year period falls between 16,200 homes (based on migration trends over the last 10 years, PROJ 1) to 17,100 homes (based on 10 year migration trends, PROJ 2).

- 18.10 It is useful to look at the components of the population dynamics. Without any net migration into the District, 11,620 homes will still be required over the 25 year period (2006-31). This is because people will live longer, a growing population of older people will reduce household sizes (meaning more homes are required to house a given population) and as new households will form from within the existing population, for instance as children seek to move out of parents homes or shared housing.
- 18.11 A zero net migration scenario is not however that realistic, as in reality it is not possible in the market sector to control who buys homes. Thus trying to restrict the supply of homes to this level would be likely to exacerbate affordability problems for local people, as some in-migrant households would be likely to have stronger financial circumstances.
- 18.12 The variations between the projections are particularly influenced by assumptions on future levels of migration to and from the Vale. As PROJ 1 and PROJ 2 indicate, projections based on five year migration trends result in a requirement for 17,130 homes (PROJ 2) whilst longer-term ten year migration trends results in a requirement for 16,210 homes (PROJ 1). We would expect five year migration trends to be higher given the impact of the Labour Government's Growth Area policies.
- 18.13 A key question which arises is what is a reasonable assumption for migration moving forward. While people move homes for a range of reasons, over a number of years levels of migration are likely to be influenced by employment growth. We have thus sought to examine the relationship between housing and employment.
- 18.14 As the age structure of the Vale's population is expected to get older over the next 20 years, it is estimated that 15,500 homes are required between 2006-31 (PROJ 4) just to keep the numbers of people in work (the level of labour supply) constant. This seems to us to be a realistic 'floor level' for housing provision as supply below this level could clearly harm the local economy.
- 18.15 This scenario is important also as it highlights that a key driver of housing requirements in the Vale over the next 20 years will be a growing older population: as people currently in the workforce move into retirement age, and life expectancy improves, more homes will be required to support employment growth. Thus net in-migration to the Vale will be necessary to support the local economy.
- 18.16 For the purposes of providing an assessment of future need and demand for homes, which takes account of both demographic and economic factors, we turn to Projections 5 and 6. These projections have considered how many homes would be required to support the two

employment forecasts. The Experian forecast (PROJ 6) would result in a need for 24,400 homes. This Experian forecast, in broad terms, projects employment growth in the Vale over the next 20 years (2011-31) at similar rates to those achieved in the pre-recession period (2000-8). This appears quite optimistic. The Cambridge forecast (PROJ 5) would result in a need for 21,200 homes between 2006-31. We regard this forecast as perhaps more realistic for the Vale in light of current economic circumstances.

Figure 18.1: Summary of Projections 2006 to 2031 – Total

Projection	Population Growth		Housing Numbers (Net)		Labour Supply	
	Total	% change	Total	% change	Total	% change
Main Projections						
Past Population Trends (10 Year Average) (PROJ 1)	22,715	13.4%	16,210	23.6%	900	1.0%
Past Population Trends (5 Year Average) (PROJ 2)	24,940	14.7%	17,130	24.9%	2,100	2.4%
Zero Employment Growth (PROJ 4)	21,040	12.4%	15,520	22.5%	0	0.0%
Forecast Employment Growth (Cambridge) (PROJ 5)	34,945	20.7%	21,200	30.8%	7,830	8.9%
Forecast Employment Growth (Experian) (PROJ 6)	42,615	25.2%	24,370	35.4%	11,938	13.6%
Projections for Comparison Only						
Zero Net Migration (PROJ 3)	11,595	6.9%	11,620	16.9%	-5,085	-5.8%
Past Housing Delivery (PROJ 7)	28,735	17.0%	18,700	27.2%	4,140	4.7%
South East Plan	48,663	28.8%	26,900	39.1%	15,048	17.2%
ONS/CLG	28,500	16.8%	19,020	27.6%	-	-

*consistent labour supply figures for ONS/CLG projection are not available

18.17 In summary estimated housing need/demand based on past demographic trends would be between 16,200 - 17,200 homes between 2006-31 (650 – 690 homes per annum). However because of the demographic dynamics, this would support relatively moderate increases in the working-age population. Our economic-based projections indicate that housing need/demand would fall between 21,200 – 24,400 homes between 2006-31. Around 15,500 homes would be required between 2006-31 just to maintain 2006 employment levels, because of changes in the age structure of the population over the projection period.

18.18 For comparison purposes, if past rates of housing delivery in the Vale were maintained, 18,700 homes would be required between 2006-31. As a further comparison, delivering the

levels of housing required by the South East Plan (and rolling this forward to 2031) would require 26,900 homes over this period: higher than in any of the other projections.

Upside and Downside Risks to the Projections

- 18.19 There are both upside and downside risks to the assessment. The downside risks relate to the continuing impact of mortgage finance constraints and to macro-economic factors including the prospect of an increase in interest rates or further economic turmoil. There are a number of upside factors.
- 18.20 Firstly it is worth considering that while the Cambridge Econometrics forecast on which this is based represents what we might consider to be a realistic forecast for employment growth at the current time, economic forecasts have been revised downwards significantly during and since the recession and there is an argument that we should plan to provide for more homes than proposed in PROJ5 (Cambridge Econometrics) if housing supply is not going to constrain labour supply and thus economic growth. However it should be borne in mind that higher levels of economic growth than indicated in this scenario could be achieved through a reduction in out-commuting and an increase in the jobs density within the Vale (although recognising that this appears challenging given the geography of the area and current earnings differentials).
- 18.21 The other key upside risk relates to wider regional dynamics. It should be recognised that the projections are based on assessed need/demand within the Vale, and do not take account of any displacement impacts from under-provision of housing elsewhere. In light of proposals within the draft National Planning Policy Framework (NPPF) we consider this further below.

Rebasing the Projections to 2011

- 18.22 The projections of population and housing requirements cover the 25 year period between 2006 and 2031. However we are already at 2011. We have therefore sought to rebase the projections, discounting them to take into account the level of housing development (net completions).
- 18.23 There is a strong justification within Aylesbury Vale for re-basing the housing numbers to 2011, based on historic completions (net) between 2006-11, on the basis that this provides a sensible and easily understandable approach for forward planning. This has been done for each of the scenarios as indicated in Figure 18.2 below:

Figure 18.2: Summary of Projected Housing Requirements (Rebased), 2011-31

Projection	Projected Housing Needed 2006-31	Housing Delivered 2006-11	Housing Required 2011-31	
			Total	Per Year
Main Projections				
Past Population Trends (10 Year Average) (PROJ 1)	16,210	3730	12,480	624
Past Population Trends (5 Year Average) (PROJ 2)	17,130	3730	13,400	670
Zero Employment Growth (PROJ 4)	15,520	3730	11,790	590
Forecast Employment Growth (Cambridge) (PROJ 5)	21,200	3730	17,470	874
Forecast Employment Growth (Experian) (PROJ 6)	24,370	3730	20,640	1032
Projections for Comparison Only				
Zero Net Migration (PROJ 3)	11,620	3730	7890	395
Past Housing Delivery (PROJ 7)	18,700	3730	14,970	749
South East Plan	26,900	3730	23,170	1,158
ONS/CLG	19,020	3730	15,290	765

- 18.24 On the basis of the projections developed, we would consider that a realistic range of options for housing provision to further test (based on the projections developed) would fall between PROJ 4 at the lower end based on supporting stable employment levels, and PROJ 6 at the higher end based on the Experian economic projections. This would represent delivery of between 11,800 – 20,700 homes (590 – 1035 homes per annum).
- 18.25 Of these figures, 7,336 homes could be delivered on sites included within the Council's current housing trajectory. This includes current allocated sites, sites with planning consent for residential development and other deliverable sites. This reduces the amount of further land required for development over the period to 2031 to between 4,500 – 13,500 homes.
- 18.26 In considering a potential housing target, it is however appropriate to draw attention to further questions. Firstly, given that housing completions have been running at an average of 746 homes per annum (net) over the past five years, the higher end of this range would require housing delivery at a rate 39% above this on average over the 2011-31 plan period. How realistic is this? Secondly, the proposals within the draft NPPF to require local authorities to consider and under-provision of housing in neighbouring areas where these areas are unable to meet their housing needs (because of nationally-significant environmental or infrastructure

constraints) and where it is feasible to do so. On this basis, is there likely to be a justification for a higher relative target given development constraints in some surrounding Districts?

Deliverability Questions

- 18.27 National policy, both the draft NPPF and PPS12²⁴, makes clear that a Local Plan must be viable and deliverable. In considering the housing requirement for Aylesbury Vale, and particularly the higher numbers in the two economic-driven scenarios (PROJ 5 and PROJ 6), it is appropriate to consider whether there are any caps on the rate at which housing could realistically be delivered in Aylesbury Vale.
- 18.28 There are clearly a range of factors which will influence delivery rates. At a national level, housing delivery was strongest in the 1960s bolstered by significant construction of homes by local authorities (and New Town Corporations). Against this context, the level of housebuilding is clearly influenced by the funding models and finance available to support delivery of affordable housing. However it is also affected by levels of market demand. These are currently subdued, with the evidence in this report indicating that sales in 2010 (as indicative of 'effective market demand') down over 40% on trends in the decade to 2007. However, as we have discussed, the housing market is somewhat dysfunctional at the present time (see Part I Report) and key underlying drivers – particularly demographic trends – remain.
- 18.29 In assessing what rates of housing delivery might be feasible over the longer-term, there is clearly some uncertainty regarding over what period and to what extent housing market conditions may improve. This does introduce a degree of uncertainty into this analysis.
- 18.30 However it is possible to provide a comparative assessment relative to completions rates in different parts of the South East. We have used CLG data on completions between 2004-11 to provide an analysis below of delivery rates over 5 year periods (2004-9 and 2006-11 recognising that the latter will be more impacted by the credit crunch). These are expressed as a proportion of the households in the local authority in 2008.
- 18.31 The analysis indicates that across the South East completions have represented housing growth of around 0.7% - 0.8% per annum. The highest performing local authority has been Winchester which has delivered housing at a rate of 2.8% growth per annum over the last five years, however second lies Milton Keynes at 1.8% growth per annum. However there are

²⁴ CLG (2008) *Planning Policy Statement 12: Local Spatial Planning*

very few local authorities (with the exception of Milton Keynes) which have delivered housing growth consistently at a rate of more than 1.3% per annum.

Figure 18.3: Comparison of Housing Delivery Rates in South East Local Authorities (as % of 2008 households) – Highest Delivering Authorities

Completions as % 2008 Households	Completions - 2004-9	Completions 2006-11
South East	0.8%	0.7%
Winchester	1.9%	2.8%
Milton Keynes	1.8%	1.8%
Basingstoke & Deane	1.3%	1.5%
Rushmoor	1.3%	1.3%
Maidstone	1.1%	1.2%
Dartford	1.3%	1.2%
Aylesbury Vale	0.9%	1.1%
Crawley	0.9%	1.1%
Eastleigh	1.3%	1.0%
Swale	1.0%	1.0%
Reigate & Banstead	1.1%	1.0%
Slough	1.2%	1.0%
Isle of Wight	1.0%	1.0%
Ashford	1.1%	0.9%
Hampshire	0.9%	0.9%
Vale of Wight Horse	0.9%	0.9%
West Oxfordshire	1.3%	0.9%
Runnymede	0.8%	0.9%
Chichester	0.9%	0.8%

Source: CLG Housing Completions/ 2008 Household Estimates

- 18.32 We can translate these percentage figures into what this means for housing delivery in Aylesbury Vale. Our analysis indicates that over the last five years, Aylesbury Vale has delivered housing growth at a rate of around 1.1% per annum, with housing completions of 746 per annum.
- 18.33 If South East Plan housing numbers were delivered (equivalent to 26,900 over 20 years) this would represent a rate of housing growth in the Vale at a rate of 1.9% per annum. Within the South East region, only Winchester and Milton Keynes have been delivering at these rates in recent years. Given the proximity to and market inter-relationships with Milton Keynes, we would question whether housing growth at a rate of 1.9% as advocated in the South East Plan could in reality have ever been achieved.

- 18.34 Turning to consider the projections set out in this report, PROJ 6 (Experian) is the highest and represents delivery of an average of 1,032 homes per annum. This would represent housing growth of 1.5%. As the table above shows, there are some local authorities which have been delivering homes at this rate in recent years, however there are relatively few of them. From a market capacity perspective, we would thus regard delivery of housing at this rate as feasible but ambitious. It would be influenced by factors outside of the Council's control (principally macro-economic conditions and access to mortgage finance).
- 18.35 PROJ 5, based on the Cambridge Forecast, represents a rate of housing delivery of 875 per annum. This is 17% above past delivery rates (based on the last five years). It represents a rate of housing growth of 1.2% per annum. As Figure 10.3 indicates there are a number of local authorities which have been delivering housing at this rate (even taking account of current market conditions). Our high-level analysis would not therefore indicate any particular risks to the capacity of the market to deliver at this rate.
- 18.36 In addition to these market factors relating to deliverability, the deliverability of different levels of potential housing development will also be influenced by the availability of land for development, the potential to viably deliver supporting infrastructure, the views of the local community and other stakeholders and the findings of Sustainability Appraisal (which will need to assess alternative development options).

Under-provision in Neighbouring Areas

- 18.37 The draft of the National Planning Policy Framework (NPPF) proposes to introduce a presumption in favour of sustainable development. An important element of this is planning on meeting assessed development requirements. However the NPPF is also expected to introduce a duty to cooperate, including in addressing development needs which cannot wholly be met within the area in which they arise. Thus the inability of surrounding local authorities to meet their own development needs might result in pressure to accommodate additional development in Aylesbury Vale.
- 18.38 We have not researched need/demand and emerging supply policies in surrounding areas in detail, but in general terms would consider that under provision of housing against assessed needs might occur within a number of surrounding local authorities where Metropolitan Green Belt is considered a strategic constraint to meeting development needs. In most other cases (from a high-level assessment) it would appear surrounding authorities have other options for development locations that they can choose to deliver.

- 18.39 Assessing whether any undersupply against assessed requirements might arise in surrounding local authorities is a difficult task, as firstly we need a consistent baseline (and in this Study we have only development projections for Aylesbury Vale) and secondly, we have not undertaken a detailed assessment of potential land capacity as well as development and infrastructure constraints in these areas.
- 18.40 However for the purposes of undertaking a high-level assessment, it would seem reasonable to conclude that each of the local authorities could (should they decide to) retain Regional Strategy (RS) housing numbers. By comparing these against the latest national projections (as these can be used to provide a consistent benchmark), we can consider where any under-provision against identified needs might arise.
- 18.41 In Figure 18.4 below we therefore provide a high-level assessment by comparing Regional Strategy housing targets (for the 2006-26 plan period) to the CLG's latest 2008-based Household Projection (again over the same timescale). This is undertaken for selected adjacent local authorities where there is a functional relationship with Aylesbury Vale (based on 2001 commuting patterns). The analysis undertaken is high level, and it should be noted that we are comparing households in the projection with dwellings in the RS target. Nonetheless it should provide an indication of the scale of any under- or over-provision set against the household projections.

Figure 18.4: Comparison between RSS Targets and Projected Household Growth

	RSS Target 2006-26	CLG 2008 Household Projection	Difference
Milton Keynes	41360	33180	8180
Dacorum	10000*	10400	-400
Wycombe	7800	9870	-2070
Chiltern	2900	5200	-2300
Cherwell	13400	12950	450
South Oxfordshire	10940	8830	2110

*Source: GL Hearn (*based pro-rata on 2001-21 figures from East of England Plan)*

- 18.42 We have focused on areas where there is a significant differential between the demand projections and housing supply policies, recognising that small variations of under 500 homes over 20 years are unlikely to have a material impact on the housing market, and are well within the error margins of the projections.
- 18.43 The analysis indicates that in the south of the county, housing targets in Wycombe and Chiltern Districts did fall short of identified requirements. Combined the under-provision in these areas in the South East Plan equated to around 225 homes per annum. However the

opposite is true in other surrounding districts. In South Oxfordshire and particularly Milton Keynes, proposed housing targets were above the projected housing requirements.

- 18.44 Against this context and in light of the 'duty to cooperate', we would recommend that AVDC liaise with these two authorities to identify and consider any areas of mismatch between assessed need/demand and realistic and deliverable supply policies. However this does not fundamentally affect the robustness of the work undertaken, as the economic driven projections developed (PROJ 5 and PROJ 6) represent a higher level of housing growth relative to the base demographic projections developed (PROJ 1 and PROJ 2). An inability of surrounding districts (particularly those to the south with Green Belt constraints) might steer the District Council towards the upper end of the range of projections developed, subject to consideration of the views of local community and other stakeholders and the feasibility of delivering supporting infrastructure and other studies outcomes as well as Sustainability Appraisal.
- 18.45 Turning to consider these issues at a wider regional level, the capacity of London to meet housing need/demand arising is constrained by the availability of land for development. While Aylesbury Vale does to some extent form part of a separate housing market, the nature and inter-relationships between housing market areas in the South East, we would consider that there is some validity in arguing that Aylesbury Vale should 'play its part' in helping to address this. However if taken forward, this would be as a similar role of all areas surrounding London.
- 18.46 However as we have identified above, Aylesbury Vale over the last five years has already had a relatively high rate of housing growth. It has therefore been contributing disproportionately relative to other parts of the South East and Eastern Regions (as you might expect for a former growth area) to addressing demand displaced from London. The trend-based projections (PROJ 1 and PROJ 2) inherently assume that it would continue to do so.

Growth of the University of Buckingham

- 18.47 This report has identified that growth of the student population at the University of Buckingham could influence housing requirements in the Vale over the next 20 years. The impact on the housing market (and projections of housing requirements) will depend on the extent to which additional students are accommodated in halls or other student accommodation.
- 18.48 On the basis of the numbers in the University's Development Framework, student numbers are projected to increase by up to 1000 students and University accommodation by 560. This

could result in up to an additional 450 students being accommodated in the private sector. The size of student households can vary, but assuming an average of 3 students per household (on the basis that some may live at home), we estimate that this could result in housing demand for up to an additional 150 properties in Buckingham. Given the size of the town, this could create demand pressures in the private rented sector in the town.

- 18.49 There is some uncertainty as to what extent this growth in students may materialise, and how growth in the student population and growth in student accommodation may be phased. This will affect the impact on housing requirements. Moreover given changes in University funding at a national level (although not impacting on Buckingham directly) there is some uncertainty regarding future demand for student places. Reflecting these factors we have not include housing demand arising from student growth at Buckingham (estimated as up to 150 homes in the medium-term) within the projections and this should be considered separately in assessing future growth levels at Buckingham.

Drawing the Analysis Together

- 18.50 On the basis of the analysis undertaken, we consider that the main projections developed should be further tested through consultation with local communities, stakeholders and the wider plan-preparation process. These are:

- PROJ 1: Past Population Trends (10 Year Average)
- PROJ 2: Past Population Trends (5 Year Average)
- PROJ 4: Zero Employment Growth
- PROJ 5: Forecast Employment Growth (Cambridge)
- PROJ 6: Forecast Employment Growth (Experian)

- 18.51 Housing requirements arising from growth in the student population at Buckingham, and how these can be best met, should be considered separately from this.

18C CONSIDERING THE FUTURE DISTRIBUTION OF HOUSING

- 18.52 In the past, the distribution of housing development has been particularly informed by the 'spatial strategy' within regional/county and local plans, and the availability of suitable land. These remain relevant factors in considering where development is located, particularly with a view to supporting sustainable development including access to employment, services and public transport.

- 18.53 The draft NPPF indicates that market factors should also be taken into account as well, emphasising in paragraph 27 that strategies for housing (and other land uses) should ‘take full account of relevant market and economic signals such as land prices to inform judgement about levels of demand.’
- 18.54 There are a number of factors to consider in addressing the distribution of land. In this Part II Report we have considered demographic trends, potential economic performance and past supply trends. This needs to be brought together with evidence of land availability, views from parishes and the local community regarding aspirations for development, and the spatial strategy of the Plan and Sustainability Appraisal.
- 18.55 Figure 18.5 brings together the projections with the analysis of net completions between 2006-11 to rebase selected projections at a sub-market level to 2011. It should be noted that **this does not take account of development which has planning consent but has yet to be built** (the development pipeline).

Figure 18.5: Sub-Market Projections, 2011-31

Housing Requirements 2011-31	Aylesbury Sub-Market	Rural South Sub-Market	Buckingham Sub-Market	Rural North Sub-Market	Aylesbury Vale District
Trend-based Projection (PROJ 1)	6928	2665	1385	1501	12477
	56%	21%	11%	12%	100%
Zero Employment Growth (PROJ 4A)	4144	4248	1113	2424	11787
	35%	36%	9%	21%	100%
Employment-Led - Cambridge (PROJ 5)	7657	5617	1127	3065	17467
	44%	32%	6%	18%	100%
Employment-Led - Experian (PROJ 6)	9247	6316	1671	3401	20635
	45%	31%	8%	16%	100%
Range by Sub-Market	35-56%	21-36%	6-13%	12-21%	100%
10 Year Completions	58%	7%	20%	15%	100%
Completions & Delivery Pipeline	59%	17%	12%	12%	100%

- 18.56 It is interesting to consider how the housing distribution arising from the various projections compares to past completions. Past completions have been focused more towards the Aylesbury and Buckingham Sub-Markets, with particularly low house-building in relative terms in the Rural South Sub-Market. There could be potential to increase the provision of housing within the Rural South Sub-Market in particular based on evidence of need/demand. The

highest house prices in the District are within the Rural South Sub-Market. This will require further consideration as the Vale of Aylesbury Plan is developed.

- 18.57 To reiterate, there are however a range of factors beyond the analysis of need and demand which should be brought together to identify a sustainable strategy for provision of housing within the District through the process of preparing the Vale of Aylesbury Plan.

18D CONSIDERING POLICIES FOR HOUSING MIX

Affordable Housing

- 18.58 An assessment of housing need is a statutory requirement to support affordable housing policies. Its purpose is to establish that the 'need' for affordable housing cannot be met by existing or planned supply, and hence that there is an additional requirement for affordable housing.
- 18.59 The housing needs analysis presented within the Part I Report identifies a net need for 588 affordable homes per annum over the next five years (2011-16). The needs assessment was carried out using the Basic Needs Assessment Model recommended in the Government's SHMA Practice Guidance²⁵. This needs figure takes into account affordable housing in the development pipeline which is expected to be delivered between 2011-16. If this is excluded, the level of housing need rises to 851 affordable homes per annum.
- 18.60 This level of need is relatively high compared to what can realistically be delivered. Between 2005/6 – 2009/10 a total of 37% of completions were of affordable dwellings, however this figure was particularly influenced by strong delivery of affordable housing in depressed market conditions when funding was available in 2008/9 and 2009/10. Clearly, higher levels of housing supply will support higher levels of delivery of affordable housing.
- 18.61 While a significant deficiency in affordable housing is identified, in practice some households who are unable to secure affordable housing within the Vale are able to live within the Private Rented Sector supported by housing benefit, It seems likely that the Private Rented Sector will continue to be used to some degree to make up for a shortfall of genuine affordable housing.
- 18.62 In regards to setting an affordable housing target, Aylesbury Vale District Council had a Viability Study undertaken in 2009²⁶. This concluded that viability would support a district-wide

²⁵ CLG (2007) *Strategic Housing Market Assessments: Practice Guidance, Version 2*

²⁶ Adams Integra (2009) *LDF Affordable Housing Viability Study*

target of 35% affordable housing provision on sites of over 15 dwellings (with a 70:30 split between affordable rented and intermediate housing).

- 18.63 On strategic sites of over 1,999 dwellings, it identified that 40% affordable housing might be feasible. On small sites, it recommended that 20% affordable housing could be secured on schemes of 5-14 dwellings and a financial contribution could be sought from schemes of less than 5 dwellings. Specific targets for affordable housing will need to be set once the Council has determined how much housing provision it wishes to plan for.
- 18.64 PPS3 requires local authorities to set out policies for the mix of affordable housing in their plans. We have sought to identify affordable housing requirements over the longer-term using a demographic-driven model (as presented in Section 7). This identifies that a split of additional housing requirements by the sizes of homes, with 34% requiring 1-bed properties, 37% requiring 2-bed properties, 36% requiring 3-bed properties and 3% requiring properties with four or more bedrooms. The market model provides a tenure breakdown for each of the Sub-Markets. However taking account of levels of need, existing supply and turnover of properties and issues associated with the management of the stock, we consider that the Council would be justified in implementing a policy target requiring 20-25% 1-bed properties, 35% 2-bed properties, 30% 3-bed properties and 10% of properties with 4 or more bedrooms.

Overall Housing Mix

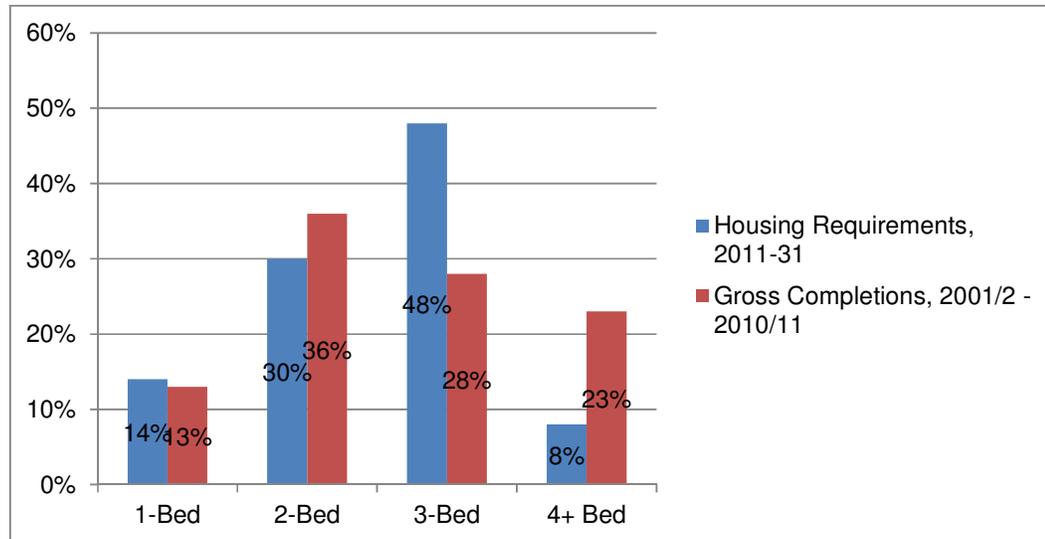
- 18.65 In Section 15 we set out expected need/demand for different sizes of homes. It should be recognised that demand for different sizes of property needs to be considered alongside the overall housing requirement, as this will influence levels of migration. Figure 18.6 below outlines the findings of our analysis (based on PROJ 1) in relation to market housing. This indicates that demographic trends would result in a slight shift in demand towards two and three-bed properties and a lower requirement for properties with four or more bedrooms. The latter is particularly influenced by strong existing levels of supply and demographic trends.

Figure 18.6: Findings of the Market Modelling in regard to Market Housing

	Market Housing Mix, 2006	Market Housing Mix, 2026	% of New Homes Required
1-bed	5.0%	5.1%	6.1%
2-bed	17.9%	19.0%	26.6%
3-bed	47.2%	48.4%	57.2%
4-bed	29.9%	27.5%	10.1%

- 18.66 At a sub-market level we would attach less weight to the demographic analysis and more to market factors in considering the mix of market housing. We would expect market demand for larger housing (particularly 4+ bed) to be relatively stronger in the Rural Sub-Markets, albeit that is likely to play off against an old and ageing population in these areas where provision of smaller homes for these households can release larger homes for other groups (families).
- 18.67 We are of the view that it is appropriate through the planning system to seek to influence the balance of types and sizes of market housing principally through the allocation of a mix of sites which can be developed to provide a range of housing rather than specific policies relating to the proportion of homes of different sizes which is applied at a site level. This approach is implicit within PPS3 which requires local planning authorities to set out policies regarding the mix of affordable housing by size but does not require policies to be set for market housing. Similarly, the core outputs within the SHMA Guidance²⁷ do not include estimates of the mix of market housing required.
- 18.68 If we combine the analysis for market and affordable housing we can estimate total need/demand by tenure over the 2011-31 period.

Figure 18.7: Estimated Housing Requirements 2011-31 & Past Completions, 2001/2 – 2020/11



18.69 In broad terms we consider that the significant provision of smaller dwellings over the last decade (where 1 and 2 bed properties made up 50% of gross completions) needs to be redressed, with greater provision made for family housing. The analysis would indicate a

²⁷ CLG (2007) Strategic Housing Market Assessments: Practice Guidance, Version 2

greater requirement for 3-bed properties in particular. In seeking to deliver an appropriate mix of sites, we consider at least 65% of capacity should be on sites capable of accommodating family housing (recognising that smaller dwellings can also be delivered on these sites).

- 18.70 Emerging national policy is likely to allow the Council to determine its own policies regarding housing development densities. Density policies should be considered in light of the mix of housing sought and portfolio of sites to be brought forward through the Plan.

18E EMPLOYMENT LAND PROVISION

- 18.71 We have drawn together conclusions regarding employment land provision in support of plan-making. The report has focused on forecasting employment demand, and (as with housing) has not considered 'supply-side' factors such as the quantity or quality of current employment land within the District or employment development proposals with planning consent.
- 18.72 Whilst the economic forecasts produced by Cambridge Econometrics appear more realistic, the two forecasts from Cambridge and Experian together provide what is ostensibly a lower and upper band for employment land demand. On this basis a mid-point approach would suggest targeting delivering (i.e. take-up) of some 53ha (net) over the 16 year planning period to 2026 which yields an annual allocation of 3.3ha per annum. Looking separately at the 2011-31 period, this yields an average annual take-up rate which is slightly lower at 3ha per annum over the 20 year planning period (net). This gives us a range for demand for between 60-66 ha (net) between 2011-31.
- 18.73 The non-linear nature of the forecasts however suggests that employment land demand will be weaker over the first half of the proposed planning period with above average demand following in the second half of the planning period. This provides a potential justification for a phasing policy in respect of employment land supply.
- 18.74 Given what has been identified in terms of benchmark planning levels these results would suggest planning towards 128ha total stock (in terms of gross land allocations) on the basis that this would be delivering around 53ha of developed land over the period to 2026. This is necessary to provide a choice of sites and support competition in the market. However this stock level is arguably very high and could be managed down marginally – for our purposes here we would target c.110ha gross over the period to 2031 and include a clear monitoring mechanism in the Plan.

- 18.75 This compares to a land supply of sites allocated within the Local Plan (without a planning consent or with an outline consent only) of 61 hectares. In addition there is further employment land with planning consent. In broad terms, the level of employment land provision recommended is similar to that provided for in the now withdrawn Core Strategy. This seems realistic given that around two thirds of forecast employment growth is in activities which are expected to require employment land (which we would expect to be higher than in a pre-recession forecast).
- 18.76 For comparative purposes the Council's previous Employment Land Study²⁸ identified a requirement for between 24-77ha in addition to the existing supply of committed Local Plan sites (40ha) resulting in a total requirement for comparative purposes of 64 – 117 ha. However this Study looked at floorspace/ land demand in net terms only, and does not appear to have accounted for demand arising from churn within the local market.
- 18.77 The Council should consider planning for employment land on the basis of 3 gestation periods including:
- Short Term -20% which defined as immediate and is effectively deliverable within 12 months;
 - Medium Term - 50% of land which is intermediate which can be brought forward within 3 years; and
 - Longer Term - 30% of land which is longer term which has two strategic roles of replacing which has been developed or redeveloped as well as providing a contingency element and identifying long term speculative opportunities.
- 18.78 This Study has not however considered the capacity and quality of existing employment sites, which would need to be addressed in informing future land allocations. We understand that the Council intends to prepare an updated assessment of employment land supply is undertaken to inform the allocation of land within the Plan.

²⁸ Roger Tym & Partners (2008) *Aylesbury Vale Employment Land Study*