



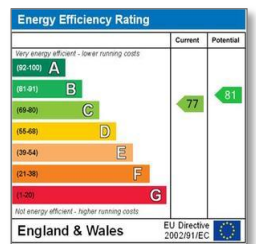
Bath and North East Somerset

Strategic Housing Market Assessment Update 2013

Addendum 1a to the Draft SHMA: Future Projections

July 2013

Bath & North East Somerset Council



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Addendum 1a: Future Projections

Updated SHMA analysis incorporating newly published data

Introduction

1. Opinion Research Services (ORS) was commissioned by Bath and North East Somerset (BANES) Council to undertake a Strategic Housing Market Assessment Review, including a study of current and future housing requirements and housing need. A consultation draft of the SHMA update was published by the Council in March 2013.
2. In the period since the consultation draft was published, the Office for National Statistics (ONS) has published a range of additional, updated and revised statistics; and these include:
 - » Further results from the 2011 Census of Population
 - » Mid-Year Population Estimates for the period 2002-11, revised in the light of the 2011 Census
 - » Adjusted components of population change for the period 2001-02 to 2010-11
3. Given the importance and relevance of this additional data, the Council has asked ORS to update the SHMA analysis to take account of this more up-to-date evidence. As the Council's Local Plan is currently under Examination and the SHMA forms an important part of the evidence base, this additional analysis has been published as an Addendum to the draft SHMA in order to minimise any possible confusion about where the analysis has been updated.
4. In addition to taking account of the newly published data, this Addendum also seeks to address some concerns raised in representations to the Inspector for the current Examination in Public (in particular in relation to the transparency of the analysis) by providing further information about the derivation of the SHMA Core Outputs.

Current and Future Population

5. The original ONS Mid-2011 Population Estimate suggested that BANES had an overall population of 182,121 people; but the 2011 Census suggested that the actual population for the area was 176,016 people, 6,105 fewer than previously estimated. The draft SHMA took account of this difference through assuming a reduction in net international migration to the district which assumed uniform international migration each year over the period 2001-11.
6. The ONS has now revised their Mid-Year Population Estimates in the light of the 2011 Census, and has published adjusted components of population change for the 10-year intercensal period. This data entirely supercedes the analysis presented in Figure 42 of the Draft SHMA, which provided the basis for establishing the trend-based migration scenarios for the population and household projections that were originally produced.
7. Figure 1 presents the revised data that has now been published, detailing the components of population change for the BANES area over the last 10 years.

Figure 1: Components of population change, revised in the light of the 2011 Census (Source: ONS Mid-Year Estimates, revised. Note: “Other Changes” includes adjustments for asylum seekers, prisoners, armed forces and other unattributable changes. All figures presented unrounded for transparency, but should only be treated as accurate to the nearest 100)

Year	Births	Deaths	Natural Change	UK Migration		International Migration		Other Changes	Migration and Other Changes	Total Change
				In	Out	In	Out			
2001-02	1,654	1,667	-13	10,388	9,903	1,734	1,074	-471	+674	+661
2002-03	1,660	1,704	-44	11,096	10,229	2,034	1,884	-431	+586	+542
2003-04	1,622	1,716	-94	11,188	10,337	2,073	2,169	-437	+318	+224
2004-05	1,638	1,718	-80	10,962	10,328	2,568	1,982	-451	+769	+689
2005-06	1,758	1,598	+160	11,331	11,274	2,314	2,152	-449	-230	-70
2006-07	1,790	1,628	+162	12,177	11,851	2,400	1,010	-447	+1,269	+1,431
2007-08	1,786	1,575	+211	11,628	11,163	2,011	1,306	-451	+719	+930
2008-09	1,765	1,611	+154	11,032	11,131	2,147	1,947	-460	-359	-205
2009-10	1,724	1,645	+79	11,515	11,351	2,537	1,414	-459	+828	+907
2010-11	1,892	1,567	+325	11,395	11,163	2,722	1,526	-482	+946	+1,271
10-year Average	1,729	1,643	+86	11,271	10,873	2,254	1,646	-454	+552	+638
5-Year Averages										
2001-06	1,666	1,681	-14	10,993	10,414	2,145	1,852	-448	+423	+409
2002-07	1,694	1,673	+21	11,351	10,804	2,278	1,839	-443	+542	+563
2003-08	1,719	1,647	+72	11,457	10,991	2,273	1,724	-447	+569	+641
2004-09	1,747	1,626	+121	11,426	11,149	2,288	1,679	-452	+434	+555
2005-10	1,765	1,611	+153	11,537	11,354	2,282	1,566	-453	+445	+599
2006-11	1,791	1,605	+186	11,549	11,332	2,363	1,441	-460	+681	+867
Lowest Net Migration	1,666	1,681	-14	10,993	10,414	2,145	1,852	-448	+423	+409
Highest Net Migration	1,791	1,605	+186	11,549	11,332	2,363	1,441	-460	+681	+867

8. The high-, mid- and low-trend migration scenarios that were presented in the Draft SHMA have been updated in the context of the above data. The original mid-trend migration scenario was based on a 5-year average, and the high- and low-trend scenarios based on 3-year averages; but in the light of feedback raised in representations to the EiP, the updated analysis has been based on longer periods (10 years and 5 years respectively) to provide a more stable basis for the projections.
9. Figure 2 details the assumed migration levels for each scenario. Given that no further data is available about “Other Changes”, these are incorporated by adjusting the primary flows on a proportionate basis.

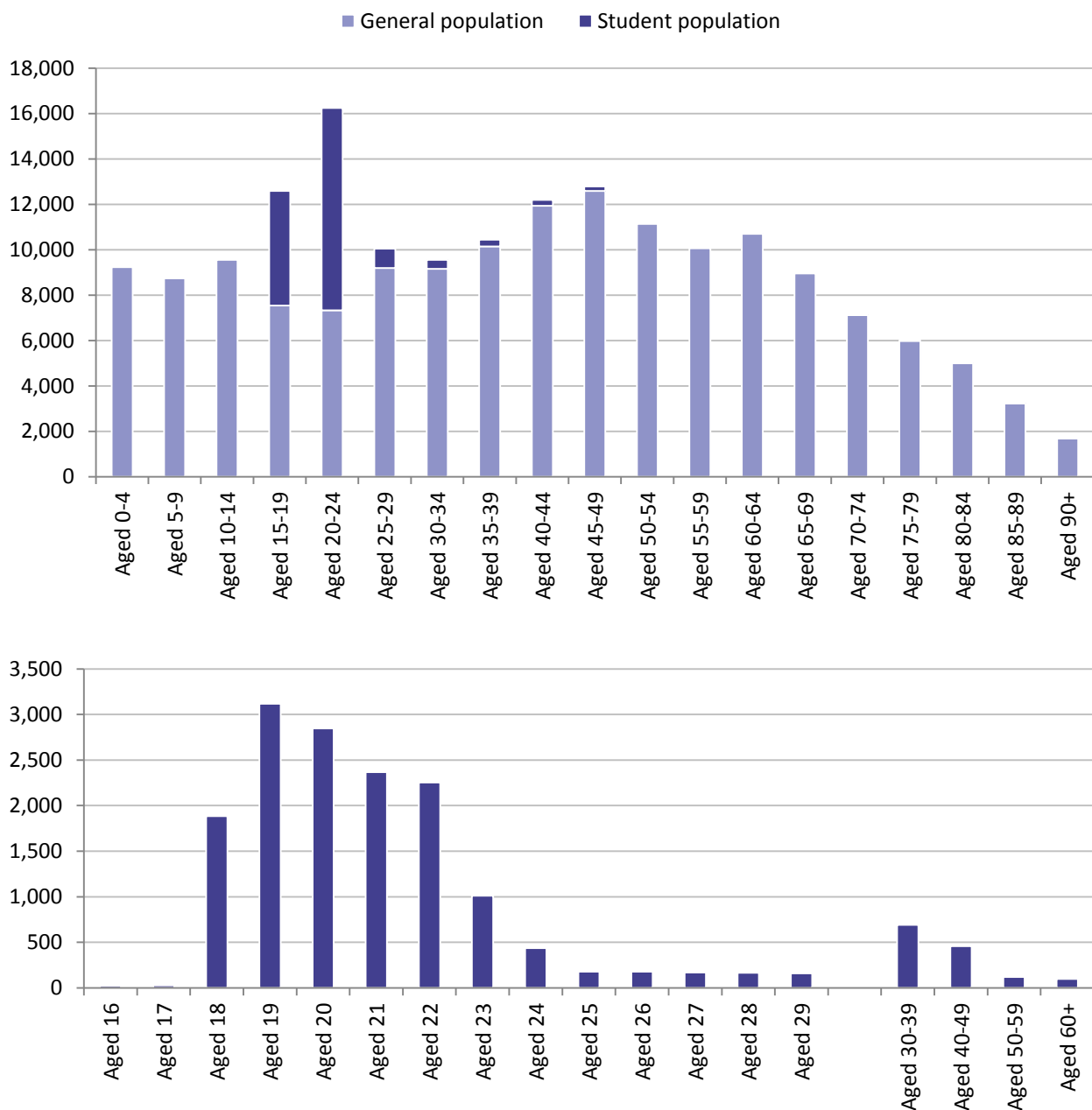
Figure 2: Assumed migration flows for population projections based on high-, mid- and low-trend migration scenarios

Scenario	Base Data					Adjusted Flows				Migration and Other Changes
	UK		International		Other Changes	UK		International		
	In	Out	In	Out		In	Out	In	Out	
High-trend	11,549	11,332	2,363	1,441	-460	11,350	11,527	2,323	1,466	+681
Mid-trend	11,271	10,873	2,254	1,646	-454	11,075	11,063	2,215	1,675	+552
Low-trend	10,993	10,414	2,145	1,852	-448	10,799	10,598	2,107	1,884	+423

Population Projections

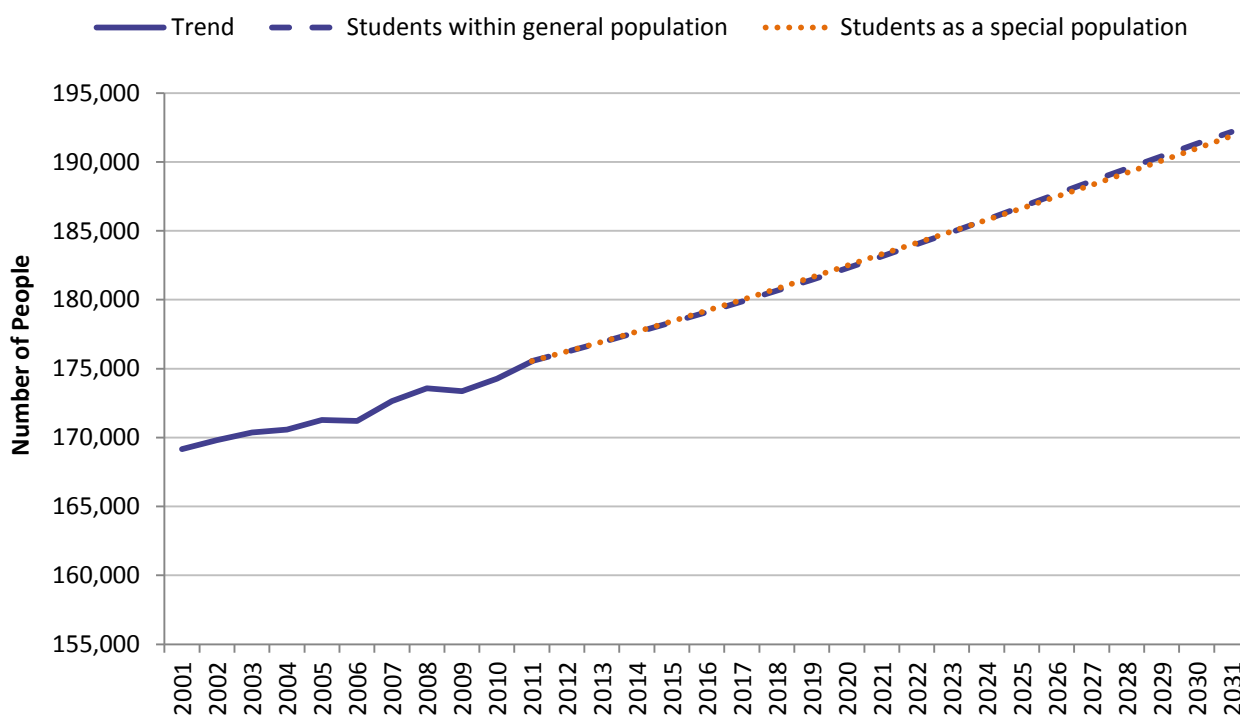
10. The population projections have been produced using the PopGroup software (developed by Manchester University). The analysis is informed by a range of assumptions which have been determined on the basis of the most up-to-date information about the population in the BANES area, with particular regard to the student population and its impact on local demographics.
11. At this stage, detailed information about the age structure of the student population from the 2011 Census has yet to be published at local authority level. We have therefore estimated the distribution for BANES based on information that has been published about the number of students in broad age groups, together with more detailed information about student ages across the South West region and the age structure of the general population in BANES based on the Mid-2011 Population Estimate.

Figure 3: BANES General population and Student population by Age for 2011 (Source: Overall population based on ONS Mid-2011 Estimate, revised. Student population distribution calculated based on 2011 Census data)



12. In the light of queries raised by the Inspector, we have sought to present the population projections in a transparent way on the basis of two different approaches.
- » The first approach counts the student population as **part of the general population**, and the rates and distribution patterns for migration and fertility reflect local data (including students).
 - » The second approach counts the student population as **a special population**, where the size and structure of the student population does not change over the course of the projection and the rates and distribution patterns for migration and fertility are adjusted accordingly.
13. Figure 4 shows the total projected population on the basis of the two approaches. On the basis that the student population remains constant then either approach can be used appropriately – providing that the assumptions regarding rates and distribution patterns for migration and fertility reflect the appropriate local data. Both approaches show the number of people increasing from 175,500 up to 192,200 over the period 2011 to 2031, an overall increase of 16,600 persons (based on the Mid-trend Migration scenario).

Figure 4: Population projections 2011-31 based on Mid-trend Migration comparing students as part of the general population with students as a special population



14. For the purposes of the SHMA, it is assumed that the student population will remain constant – so the revised population projections have been calculated including students within the general population.
15. Figure 5 and Figure 6 show the overall population projections for the three migration-based scenarios over the period 2011-31 and the projected 5-year age cohorts by gender. The projections range from 189,300 based on the Low-trend Migration scenario up to 195,100 based on the High-trend Migration scenario, which represent 20-year increases of 13,700 persons and 19,600 persons respectively (a range of 5,800 persons between the two scenarios).
16. The revised data leads to projections based on the revised High-, Mid- and Low-trend Migration scenarios being far closer than the scenarios identified by the data that informed the original Draft SHMA.

Figure 5: Population projections 2011-31 comparing High-, Mid- and Low-trend Migration scenarios

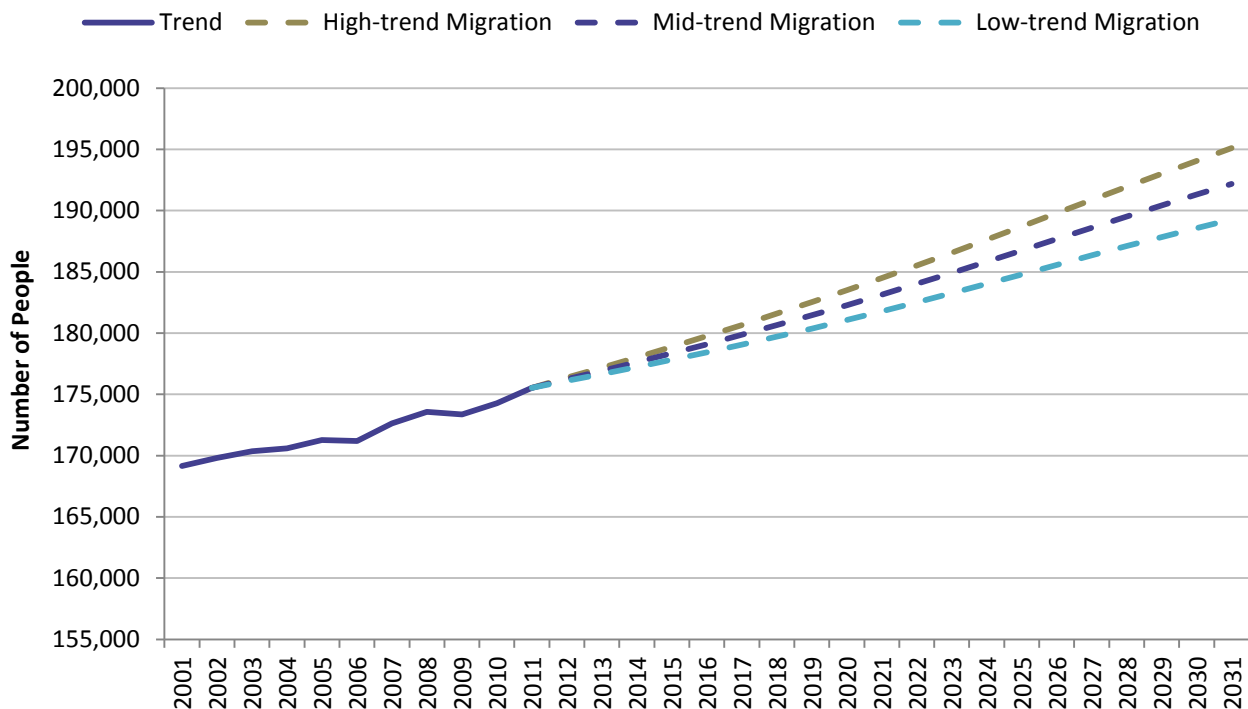


Figure 6: Population projections 2011-31 by gender and 5-year age cohort based on High-, Mid- and Low-Trend Migration scenarios (Note: Figures rounded to nearest 100. All calculations based on unrounded data)

Age	2011			2031 High-trend Migration			2031 Mid-trend Migration			2031 Low-trend Migration		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Aged 0-4	4,800	4,500	9,200	5,100	4,800	10,000	5,100	4,800	9,800	5,000	4,700	9,700
Aged 5-9	4,500	4,200	8,700	5,200	4,900	10,100	5,200	4,800	10,000	5,100	4,800	9,800
Aged 10-14	4,900	4,700	9,600	5,100	4,700	9,900	5,100	4,700	9,800	5,000	4,600	9,700
Aged 15-19	6,300	6,300	12,600	6,300	5,900	12,200	6,200	5,800	12,100	6,200	5,800	11,900
Aged 20-24	8,200	8,000	16,200	9,900	8,700	18,600	9,800	8,600	18,400	9,700	8,500	18,100
Aged 25-29	5,300	4,800	10,100	7,400	5,400	12,800	7,200	5,300	12,600	7,100	5,200	12,300
Aged 30-34	4,800	4,800	9,600	7,000	5,700	12,700	6,800	5,500	12,300	6,500	5,400	11,900
Aged 35-39	5,100	5,300	10,400	7,200	6,100	13,300	6,900	6,000	12,800	6,600	5,800	12,400
Aged 40-44	6,000	6,200	12,200	6,000	5,300	11,300	5,800	5,200	11,000	5,500	5,100	10,700
Aged 45-49	6,300	6,500	12,800	4,900	4,900	9,800	4,700	4,800	9,500	4,600	4,700	9,300
Aged 50-54	5,500	5,700	11,200	4,900	5,000	9,900	4,800	4,900	9,700	4,600	4,800	9,500
Aged 55-59	4,900	5,200	10,100	4,900	5,100	10,000	4,800	5,100	9,900	4,800	5,000	9,800
Aged 60-64	5,200	5,500	10,700	5,400	5,500	10,900	5,400	5,500	10,800	5,300	5,400	10,700
Aged 65-69	4,300	4,700	9,000	5,300	5,500	10,800	5,200	5,500	10,700	5,200	5,500	10,700
Aged 70-74	3,300	3,800	7,100	4,300	4,700	9,000	4,300	4,700	9,000	4,300	4,700	9,000
Aged 75-79	2,700	3,300	6,000	3,600	4,200	7,800	3,600	4,200	7,800	3,600	4,200	7,800
Aged 80-84	2,100	2,900	5,000	3,400	4,100	7,500	3,400	4,100	7,500	3,400	4,200	7,500
Aged 85-89	1,200	2,100	3,200	2,200	2,900	5,100	2,200	2,900	5,100	2,200	2,900	5,100
Aged 90+	500	1,200	1,700	1,300	2,200	3,400	1,300	2,200	3,500	1,300	2,200	3,500
Total	85,900	89,600	175,500	99,400	95,700	195,100	97,600	94,600	192,200	95,900	93,400	189,300

Economic Activity

17. On the basis of the population projections, it is possible to estimate the future labour force given economic activity rates by age and gender.
18. Figure 7 shows the economic activity rates in 2011 for the general population and student population by gender and age. This data is based on information from the 2011 Census, but as not all detailed data has yet to be published at local authority level we have estimated the distribution for BANES based on information that has been published about economic activity across broad age groups, together with more detailed information across the South West region and the age structure of the general population in BANES based on the Mid-2011 Population Estimate.

Figure 7: Economic activity rates in 2011 for the general population and student population by age and gender
(Note: Age distribution based on 2011 Census. Student population includes school children aged 16-17. All figures presented unrounded for transparency, but should only be treated as accurate to the nearest 100)

Age	General Population						Student Population (including school children aged 16-17)					
	Male			Female			Male			Female		
	Total	EA	Rate	Total	EA	Rate	Total	EA	Rate	Total	EA	Rate
Aged 16-17	191	170	89.1	122	102	83.8	1,883	460	24.4	1,929	666	34.5
Aged 18-19	1,088	1,011	92.9	997	870	87.3	2,441	822	33.7	2,560	1,114	43.5
Aged 20-21	1,293	1,212	93.8	1,281	1,102	86.1	2,540	681	26.8	2,675	955	35.7
Aged 22-24	2,256	2,135	94.7	2,249	1,944	86.5	1,890	511	27.0	1,812	612	33.8
Aged 25-29	4,814	4,580	95.2	4,473	3,793	84.8	490	176	35.9	364	144	39.6
Aged 30-34	4,583	4,343	94.8	4,499	3,747	83.3	196	75	38.2	200	78	38.9
Aged 35-39	5,102	4,792	93.9	5,326	4,420	83.0	124	53	42.4	174	69	39.4
Aged 40-44	5,911	5,522	93.4	6,020	5,143	85.4	109	53	48.9	156	70	44.8
Aged 45-49	6,232	5,778	92.7	6,399	5,548	86.7	83	43	52.5	110	53	47.9
Aged 50-54	5,438	5,036	92.6	5,598	4,853	86.7	32	21	65.0	47	22	46.9
Aged 55-59	4,885	4,209	86.2	5,207	3,985	76.5	19	11	59.8	23	9	39.8
Aged 60-64	5,244	3,430	65.4	5,526	2,341	42.4	15	6	41.7	17	4	21.4
Aged 65-69	4,260	1,258	29.5	4,518	898	19.9	14	4	24.5	11	1	12.1
Aged 70-74	3,298	480	14.6	3,813	340	8.9	7	1	15.5	7	1	9.6
Aged 75+	6,424	349	5.4	9,439	267	2.8	12	1	10.0	14	1	7.3
Total	61,019	44,305	-	65,466	39,354	-	9,854	2,918	-	10,100	3,798	-

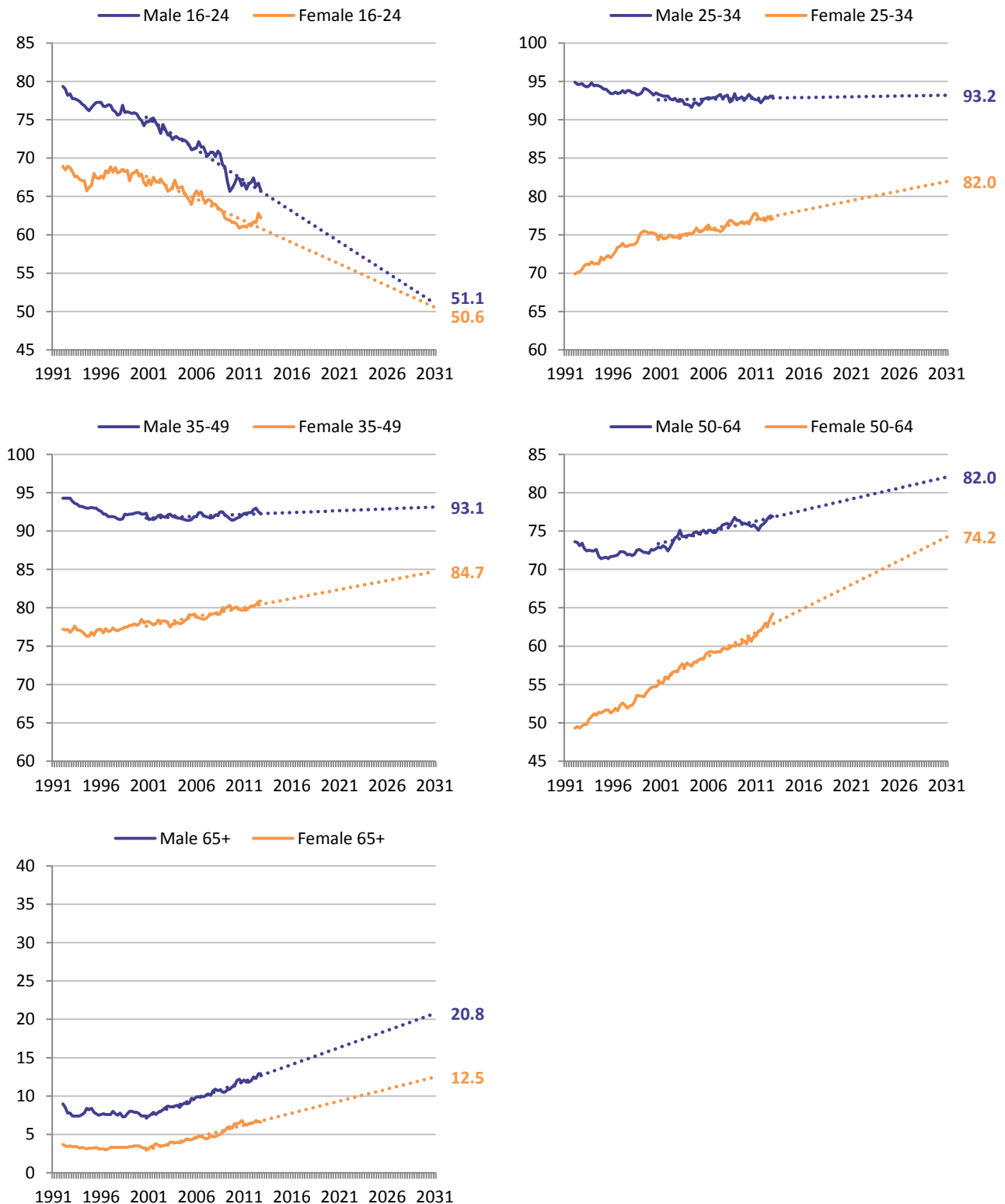
19. By applying these economic activity rates to the population projections, we can establish the associated labour force (Figure 8).

Figure 8: Labour force projections to 2031 based on High-, Mid- and Low-Trend Migration scenarios (Note: Figures calculated by applying 2011 Economic Activity Rates rates to age distributions from ONS Mid-Year Population Estimate for 2011 and Projected Population for 2031. Figures rounded to nearest 100. All calculations based on unrounded data)

Labour Force <i>based on 2011 Economic Activity Rates</i>	High-trend Migration	Mid-trend Migration	Low-trend Migration
2011	89,800	89,800	89,800
2031	96,200	93,900	91,700
Total change 2011-31	+6,300	+4,100	+1,900

20. It is apparent that the migration-led projections would yield an increase in labour force ranging from 1,900 up to 6,300 additional workers over the 20-year period to 2031. Nevertheless, economic activity rates are unlikely to remain constant as illustrated by past trends. Figure 9 shows economic activity rates by age and gender for the UK over the last 20 years, based on data from the Labour Force Survey. The charts also show a linear trend for each series based on data recorded since 2001.

Figure 9: Economic Activity Rate long-term UK trends by age and gender (Source: Labour Market Statistics based on Labour Force Survey. Note: Linear trendlines based on data for period since 2001 added to illustrate possible future trends)



21. On the basis of data from the Labour Force Survey and 2011 Census, it is clear that economic activity rates across all age groups aged 25+ have tended to increase (in particular over the period since 2001). This is especially the case for the female workforce and workers aged 50+. The reduction in participation rates for those aged 16-24 is primarily as a consequence of the increased numbers remaining in full-time education.
22. The most recent economic activity rate projections produced by the ONS were published in January 2006 and covered the period to 2020 (“Projections of the UK labour force, 2006 to 2020” by Vassilis Madouros; published in ONS Labour Market Trends, January 2006); however these figures suggested substantially lower changes in activity rates than have actually been experienced over the last decade. Furthermore, recent research from the Institute for Fiscal Studies (IFS) and University College London concluded that:
- “Future increases in the state pension age will lead to a substantial increase in employment”*
[\(\[http://www.ifs.org.uk/pr/spa_pr_0313.pdf\]\(http://www.ifs.org.uk/pr/spa_pr_0313.pdf\)\).](http://www.ifs.org.uk/pr/spa_pr_0313.pdf)
23. It is difficult to extrapolate future economic activity rates, given that the analysis is inherently complex and dependent on a range of demographic, socio-economic and structural changes in the labour market. Furthermore, the SHMA is not a detailed labour force study – but it is clearly necessary to take account of changing future participation rates when considering the likely future workforce.
24. In the absence of any recent data from the ONS, future participation rates have been calculated using a time trend analysis for each population subgroup. The analysis uses ordinary least squares (OLS) regression, based on the quarterly data for the period 2001 (Q1) to 2013 (Q1); and the outputs from the analysis are summarised in Figure 10.
25. To establish future participation rates, the analysis has assumed that the proportionate change projected for UK rates has an equivalent impact on the rates for the general population in BANES. Nevertheless, the rates have been kept constant for those aged under 25 (as participation rates for the student population have been calculated separately) and those aged 75 or over (to avoid unrealistic assumptions about participation rates from the very elderly). The analysis has also assumed that participation rates for students of all ages remains constant at 2011 levels.

Figure 10: Projected economic activity rates for the general population and student population by age and gender
 (Note: Rates for general population aged 25+ based on equivalent UK trend-based projections (orange cells).
 Rates for general population aged 16-24 and all student population held constant (light blue cells))

Age and Gender	UK				BANES			
	Trend 2011	Trend 2031	Change	% Change	General Population		Student Population	
					2011	2031	2011	2031
Males 16-24	67.1	51.1	-16.0	-24%	93.8	93.8	28.3	28.3
Males 25-34	92.8	93.2	+0.4	+0%	95.0	95.4	36.6	36.6
Males 35-49	92.2	93.1	+1.0	+1%	93.3	94.3	47.3	47.3
Males 50-64	76.3	82.0	+5.7	+8%	81.4	87.6	58.0	58.0
Males 65-74	11.9	20.8	+8.9	+75%	23.0	40.2	21.5	21.5
Males 75+					5.4	5.4	10.0	10.0
Females 16-24	61.8	50.6	-11.3	-18%	86.4	86.4	37.3	37.3
Females 25-34	77.0	82.0	+5.0	+6%	84.0	89.5	39.3	39.3
Females 35-49	80.0	84.7	+4.7	+6%	85.2	90.2	43.5	43.5
Females 50-64	61.8	74.2	+12.4	+20%	68.5	82.2	40.0	40.0
Females 65-74	6.2	12.5	+6.3	+101%	14.9	29.9	11.1	11.1
Females 75+					2.8	2.8	7.3	7.3

26. Using these adjusted rates, we can estimate the labour force for each of the population projections.
27. As previously noted, the SHMA assumed that the student population would remain constant over the period to 2031. This was on the basis that any growth in student numbers would be accommodated in an equivalent growth in bedspaces in halls of residence, and therefore there would be no impact on the future number of households and dwellings required. Nevertheless, any growth in student population would contribute towards the future labour force – so it is important that this is considered here. We understand that the number of students enrolled at the University of Bath is likely to increase by a minimum of 2,431 and a maximum of 4,419 over the period to 2026; although no further growth is planned for the period 2026-31. Not all of these students will be resident in BANES, but it has been assumed that approximately 65% will live in the local area and be accommodated in halls of residence. This population has therefore been factored in to the projection scenarios for the purposes of estimating the future labour force.
28. On this basis, Figure 11 shows that the work force is likely to increase between 10,700 and 15,900 workers over the 20-year period to 2031.

Figure 11: Labour force projections to 2031 based on High-, Mid- and Low-Trend Migration scenarios (Note: Figures calculated by applying 2011 Economic Activity Rates to age distributions from ONS Mid-Year Population Estimate for 2011 and projected trend-based Economic Activity Rates to the Projected Population for 2031, taking account of the additional growth in student population. Student population includes school children aged 16-17. All figures presented unrounded for transparency, but should only be treated as accurate to the nearest 100)

Age	2011			2031 High-trend Migration			2031 Mid-trend Migration			2031 Low-trend Migration		
	Total	Rate	EA	Total	Rate	EA	Total	Rate	EA	Total	Rate	EA
GENERAL POPULATION												
Males 16-24	4,717	93.8	4,425	6,465	93.8	6,065	6,268	93.8	5,879	6,067	93.8	5,691
Males 25-34	9,412	95	8,938	13,782	95.4	13,144	13,334	95.4	12,716	12,886	95.4	12,289
Males 35-49	17,096	93.3	15,952	17,768	94.3	16,752	17,064	94.3	16,089	16,372	94.3	15,436
Males 50-64	15,580	81.4	12,686	15,071	87.6	13,195	14,881	87.6	13,029	14,693	87.6	12,864
Males 65-74	7,629	23.0	1,755	9,543	40.2	3,832	9,517	40.2	3,822	9,490	40.2	3,811
Males 75+	6,447	5.4	350	10,396	5.4	564	10,400	5.4	564	10,404	5.4	565
Females 16-24	4,370	86.4	3,778	4,633	86.4	4,005	4,475	86.4	3,869	4,314	86.4	3,729
Females 25-34	8,943	84	7,516	10,494	89.5	9,390	10,293	89.5	9,211	10,089	89.5	9,028
Females 35-49	17,582	85.2	14,972	15,900	90.2	14,334	15,528	90.2	14,000	15,155	90.2	13,663
Females 50-64	16,338	68.5	11,183	15,562	82.2	12,794	15,344	82.2	12,615	15,126	82.2	12,436
Females 65-74	8,450	14.9	1,256	10,202	29.9	3,053	10,159	29.9	3,040	10,115	29.9	3,027
Females 75+	9,468	2.8	268	13,398	2.8	379	13,445	2.8	380	13,494	2.8	381
STUDENT POPULATION												
Males 16-24	8,754	28.3	2,474	10,693	28.3	3,022	10,257	28.3	2,899	9,820	28.3	2,775
Males 25-34	686	36.6	251	838	36.6	307	804	36.6	294	769	36.6	282
Males 35-49	315	47.3	149	385	47.3	182	369	47.3	175	353	47.3	167
Males 50-64	66	58	38	80	58.0	47	77	58.0	45	74	58.0	43
Males 65-74	21	21.5	5	26	21.5	6	25	21.5	5	24	21.5	5
Males 75+	12	10.0	1	14	10.0	1	14	10.0	1	13	10.0	1
Females 16-24	8,976	37.3	3,347	10,964	37.3	4,088	10,517	37.3	3,921	10,070	37.3	3,755
Females 25-34	564	39.3	222	689	39.3	271	661	39.3	260	633	39.3	249
Females 35-49	440	43.5	191	538	43.5	234	516	43.5	224	494	43.5	215
Females 50-64	87	40	35	107	40.0	43	102	40.0	41	98	40.0	39
Females 65-74	18	11.1	2	22	11.1	2	21	11.1	2	21	11.1	2
Females 75+	14	7.3	1	17	7.3	1	17	7.3	1	16	7.3	1
TOTAL	145,985	-	89,793	167,587	-	105,711	164,088	-	103,083	160,590	-	100,454
Net Change 2001-31	-	-	-	+21,602	-	+15,918	+18,103	-	+13,290	+14,605	-	+10,661

Communal Establishments

29. Prior to considering household projections, it is necessary to identify the household population and separate out the population assumed to be living in Communal Establishments.
30. The 2011 Census identified 6,039 persons living in Communal Establishments in the BANES area. This is broadly consistent with the 5,972 persons identified by the CLG 2011-based household projections. Therefore, the age-gender distribution of the Communal Establishment population has been based on CLG data uplifted so that the total population is in line with the 2011 Census.
31. Consistent with the CLG approach, we have assumed that the number of people aged under 75 living in Communal Establishments will remain constant over the projection period; however, it is the proportion of people aged 75 or over that is held constant by gender.
32. Figure 12 shows the breakdown between the household population and the population living in Communal Establishments for each of the three scenarios.

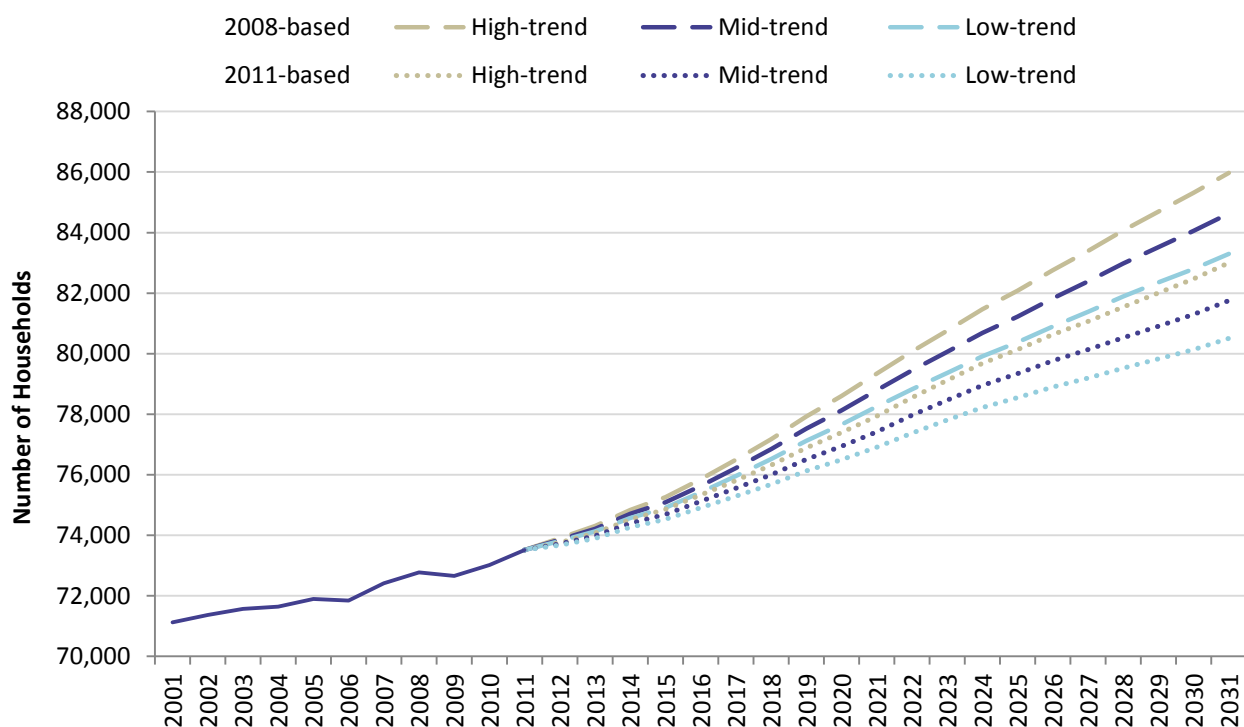
Figure 12: Population projections to 2031 by gender and 5-year age cohort based on High-, Mid- and Low-Trend Migration scenarios (Note: Communal Establishment population held constant for population aged under 75 (light blue cells), and held proportionately constant for population aged 75 or over (orange cells). Household population and Total population figures rounded to nearest 100. Communal Establishment population rounded to the nearest 10. All calculations based on unrounded data)

Age	2011			2031 High-trend Migration			2031 Mid-trend Migration			2031 Low-trend Migration		
	HH	CE	Total	HH	CE	Total	HH	CE	Total	HH	CE	Total
Aged 0-4	9,200	20	9,200	10,000	20	10,000	9,800	20	9,800	9,600	20	9,700
Aged 5-9	8,700	20	8,700	10,100	20	10,100	9,900	20	10,000	9,800	20	9,800
Aged 10-14	9,300	250	9,600	9,600	250	9,900	9,500	250	9,800	9,400	250	9,700
Aged 15-19	10,300	2,290	12,600	9,900	2,290	12,200	9,800	2,290	12,100	9,600	2,290	11,900
Aged 20-24	15,400	870	16,200	17,700	870	18,600	17,500	870	18,400	17,200	870	18,100
Aged 25-29	9,800	280	10,100	12,500	280	12,800	12,300	280	12,600	12,000	280	12,300
Aged 30-34	9,400	150	9,600	12,600	150	12,700	12,200	150	12,300	11,800	150	11,900
Aged 35-39	10,300	110	10,400	13,200	110	13,300	12,700	110	12,800	12,300	110	12,400
Aged 40-44	12,100	80	12,200	11,200	80	11,300	10,900	80	11,000	10,600	80	10,700
Aged 45-49	12,700	80	12,800	9,700	80	9,800	9,500	80	9,500	9,200	80	9,300
Aged 50-54	11,200	60	11,200	9,800	60	9,900	9,600	60	9,700	9,400	60	9,500
Aged 55-59	10,100	40	10,100	10,000	40	10,000	9,900	40	9,900	9,700	40	9,800
Aged 60-64	10,700	60	10,700	10,800	60	10,900	10,700	60	10,800	10,700	60	10,700
Aged 65-69	8,900	80	9,000	10,700	80	10,800	10,700	80	10,700	10,600	80	10,700
Aged 70-74	7,000	100	7,100	8,900	100	9,000	8,900	100	9,000	8,900	100	9,000
Aged 75-79	5,900	130	6,000	7,600	170	7,800	7,600	170	7,800	7,600	170	7,800
Aged 80-84	4,700	290	5,000	7,100	420	7,500	7,100	420	7,500	7,100	420	7,500
Aged 85-89	2,500	720	3,200	4,000	1,090	5,100	4,000	1,090	5,100	4,000	1,100	5,100
Aged 90+	1,300	400	1,700	2,700	760	3,400	2,700	770	3,500	2,700	780	3,500
Total	169,500	6,040	175,500	188,200	6,960	195,100	185,200	6,950	192,200	182,300	6,940	189,300

Household Projections

33. The Census identified that BANES had a total population of 176,000 persons on 27 March 2011, of which 170,000 formed the household population (96.6%) with the remaining 6,000 resident in communal establishments. There were a total of 73,500 households with at least one usual resident, therefore an average household size of 2.31 persons.
34. The ONS Mid-2011 Population Estimate identified that BANES had a total population of 175,500 persons at the end of June 2011, which suggests a household population of around 169,500 persons. By applying the headship rates (by age and gender) from the CLG 2008-based household projections, the ONS Mid-2011 Population Estimate translates to 74,600 households with an average household size of 2.27 persons. The headship rates from the CLG 2011-based household projections translate to 73,300 households in 2011, with an average household size of 2.31 persons.
35. It would appear that the CLG 2011-based headship rates provide a more realistic basis in the context of the current population. Nevertheless, it could be argued that the current economic circumstances are unrealistically suppressing household formation and if new households were more readily able to form and live independently, then headship rates might return to the levels assumed in the 2008-based projections. Conversely, it could be argued that the 2008-based headship rates were perhaps inflated by the availability of credit in the period before the recession; and more prudent lending may constrain household formation and headship rates in future.
36. Given this context, the analysis has therefore considered the impact of both 2008-based and 2011-based headship rates on the projected number of households based on the High-, Mid- and Low-trend Migration scenarios, after taking account of the population assumed to be living in Communal Establishments (Figure 13). The figures for 2011 have been rebased to 73,500 households for each scenario, to ensure consistency with the Census.

Figure 13: Household projections 2011-31 comparing High-, Mid- and Low-trend Migration scenarios



37. Figure 14 summarises the projected number of households for each of the three migration-led population scenarios and each of the two headship rates.
38. This has then been converted to a dwelling requirement, taking the proportion of dwellings with no usual residents from the 2011 Census and assuming that this rate remains constant over the period to 2031. Any empty properties reintroduced into the stock would therefore contribute to the overall additional housing requirement identified.
39. On this basis, the “objectively assessed need” for housing in the BANES area ranges from 7,300 dwellings up to 12,900 dwellings over the 20-year period to 2031; equivalent to a rate of between 360 and 650 dwellings per year.

Figure 14: Household projections to 2031 based on High-, Mid- and Low-Trend Migration scenarios and 2008-based and 2011-based Headship Rates (Note: Figures rounded to nearest 100. All calculations based on unrounded data)

	2008-based Headship Rates			2011-based Headship Rates		
	High-trend Migration	Mid-trend Migration	Low-trend Migration	High-trend Migration	Mid-trend Migration	Low-trend Migration
Households						
2011	73,500	73,500	73,500	73,500	73,500	73,500
2031	86,000	84,600	83,300	83,000	81,800	80,500
Net change	+12,500	+11,100	+9,800	+9,500	+8,200	+7,000
Dwellings						
Additional occupied dwellings	12,500	11,100	9,800	9,500	8,200	7,000
Dwellings with no usual residents	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
Total dwelling requirement	12,900	11,500	10,200	9,800	8,600	7,300
Annual average dwelling requirement	650	580	510	490	430	360

Summary of Key Findings

40. Figure 15 provide a summary of the key outputs presented throughout this Addendum to the Draft SHMA.

Figure 15: Population, labour force and household projections to 2031 based on High-, Mid- and Low-Trend Migration scenarios (Note: Figures rounded to nearest 100. All calculations based on unrounded data)

	High-trend Migration	Mid-trend Migration	Low-trend Migration
Population Projections			
2011	175,500	175,500	175,500
2031	195,100 +19,600	192,200 +16,600	189,300 +13,700
Labour Force Projections			
2011	89,800	89,800	89,800
2031 <i>Future Economic Activity Rates held constant at 2011 rates</i>	96,200 <i>+6,300</i>	93,900 <i>+4,100</i>	91,700 <i>+1,900</i>
2031 <i>Future Economic Activity Rates projected based on UK-trends</i>	105,700 +15,900	103,100 +13,300	100,500 +10,700
Household Projections			
2011	73,500	73,500	73,500
2031 <i>Future Headship based on rates from CLG 2008-based projections</i>	86,000 +12,500	84,600 +11,100	83,300 +9,800
2031 <i>Future Headship based on rates from CLG 2011-based projections</i>	83,000 +9,500	81,800 +8,200	80,500 +7,000
Dwelling Requirement			
2011-31 <i>Future Headship based on rates from CLG 2008-based projections</i>	+12,900 <i>650 per annum</i>	+11,500 <i>580 per annum</i>	+10,200 <i>510 per annum</i>
2011-31 <i>Future Headship based on rates from CLG 2011-based projections</i>	+9,800 <i>490 per annum</i>	+8,600 <i>430 per annum</i>	+7,300 <i>360 per annum</i>

Summary of Key Findings

- » *Population projections based on the Mid-trend Migration scenario show the number of people increasing from 175,500 up to 192,200 over the period 2011 to 2031, an overall increase of 16,600 persons*
- » *The projections to 2031 range from 189,300 (based on the Low-trend Migration scenario) up to 195,100 (based on the High-trend Migration scenario) which represent 20-year increases of 13,700 persons and 19,600 persons respectively, with a range of 5,800 persons between the two scenarios*
- » *Based on current economic activity rates, the labour force is projected to increase to between 1,900 and 6,300 additional workers by 2031*
- » *On the basis that economic activity rates will continue to increase informed by recent trends (increasing the number of workers in older age-cohorts and female workers of all ages), the labour force is likely to increase to between 101,900 and 107,100 workers by 2031, equivalent to an additional 12,100-17,300 extra workers*
- » *The number of people aged under 75 living in Communal Establishments is assumed to remain constant, however it is assumed that the proportion of population aged 75 or over living in Communal Establishments is held constant by gender. This implies that the Communal Establishment population would increase by around 900 bedspaces over the 20-year period to 2031*
- » *The number of households is projected to increase to between 80,500 (based on the Low-trend Migration scenario with 2011-based Headship Rates) up to 86,000 (based on the High-trend Migration scenario with 2008-based Headship Rates) which represent 20-year increases of 7,000 households and 12,500 households respectively, with a range of 5,500 households between the two scenarios*
- » *The “objectively assessed need” for housing in the BANES area ranges from 7,300 dwellings up to 12,900 dwellings over the 20-year period to 2031; equivalent to a rate of between 360 and 650 dwellings per year*

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