



GL Hearn

2012-based Sub-National Population Projections & Economic Forecasts: Implications for Housing Need in Coventry & Warwickshire

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1 INTRODUCTION

- 1.1 GL Hearn and Justin Gardner Consulting prepared a Joint Strategic Housing Market Assessment for the Coventry & Warwickshire Housing Market Area (HMA). This was commissioned jointly by the local authorities of Coventry, Warwick, Rugby, Nuneaton and Bedworth and North Warwickshire. The report was published in November 2013.

2012 Sub-National Population Projections

- 1.2 In May 2014 the Office for National Statistics (ONS) published new 2012-based Sub-National Population Projections. These are the first set of population projections published by ONS which fully take into account the results of the 2011 Census. They have been released since the publication of the SHMA in November 2013.
- 1.3 The Sub-National Population Projections (SNPP) take the 2012 Mid-Year Population Estimates, which were published on 26 June 2013, as their starting point. The projected local authority population for each year is calculated by ageing on the population for the previous year, applying assumed local fertility and mortality rates to calculate the number of projected births and deaths, and then adjusting for migration into and out of each local authority. Assumed levels of fertility, mortality and migration for individual local authorities are derived from observed values during the previous five years and are constrained to the assumptions made in the ONS 2012-based national Population Projections. Finally, the Sub-National Population Projections are constrained to the national population projections for England.
- 1.4 The full methodology used by ONS in developing the population projections is set out at:

<http://www.ons.gov.uk/ons/rel/snpp/sub-national-population-projections/2012-based-projections/rpt-snpp-2012-based-methodology-report.html>

This Report

- 1.5 The Government's Planning Practice Guidance on *Housing and Economic Development Needs Assessments* (CLG, March 2014) set out how Objectively Assessed Need (OAN) for housing should be defined. It outlines an approach where the starting point is the latest official population and household projections; but then other factors such as employment trends, affordable housing need and market signals should be considered with the overall assessment of need adjusted where applicable.

- 1.6 The Coventry and Warwickshire Joint SHMA broadly followed the approach in the Draft Planning Practice Guidance. It was published in November 2013 in advance of the finalisation of the Practice Guidance in March 2014.
- 1.7 This report provides an Addendum to the main Joint SHMA Report of November 2013. This Addendum Report has been prepared with two purposes:
- To consider and take account of the 2012 Sub-National Population Projections and derive on this basis updated figures for Objectively-Assessed Need (OAN) for housing within the HMA (and constituent authorities);
 - To consider the potential implications of different levels of employment growth on housing provision within the HMA, including the distribution of housing provision in line with the approach in the Planning Practice Guidance..
- 1.8 The Addendum Report should be viewed alongside the main Joint SHMA Report. It considers the implications of this additional information on housing need in the Coventry and Warwickshire HMA. Projections for need for individual local authorities within this should be regarded as indicative only.
- 1.9 The population projections are produced by ONS. What GL Hearn and Justin Gardner Consulting have undertaken in this report is to derive estimates for household growth and housing need, by applying household formation rates to the population projections and including an allowance for vacant and second homes to project growth in dwellings.
- 1.10 In addition two economic-driven scenarios have been run. The first overlays forecasts for employment growth in Coventry and Warwickshire prepared in 2013 by Cambridge Econometrics. These projections have been supplied by Warwickshire County Council for use in preparing this report. They underpin work which has been undertaken by the Coventry and Warwickshire Local Enterprise Partnership to develop the Strategic Economic Plan. The second overlays economic forecasts from Experian (May 2013) as used in the Joint SHMA Report.
- 1.11 The remainder of the report is structured as follows:
- Section 2: Implications of the 2012 SNPP;
 - Section 3: Economic Forecasts;
 - Section 4: Implications.

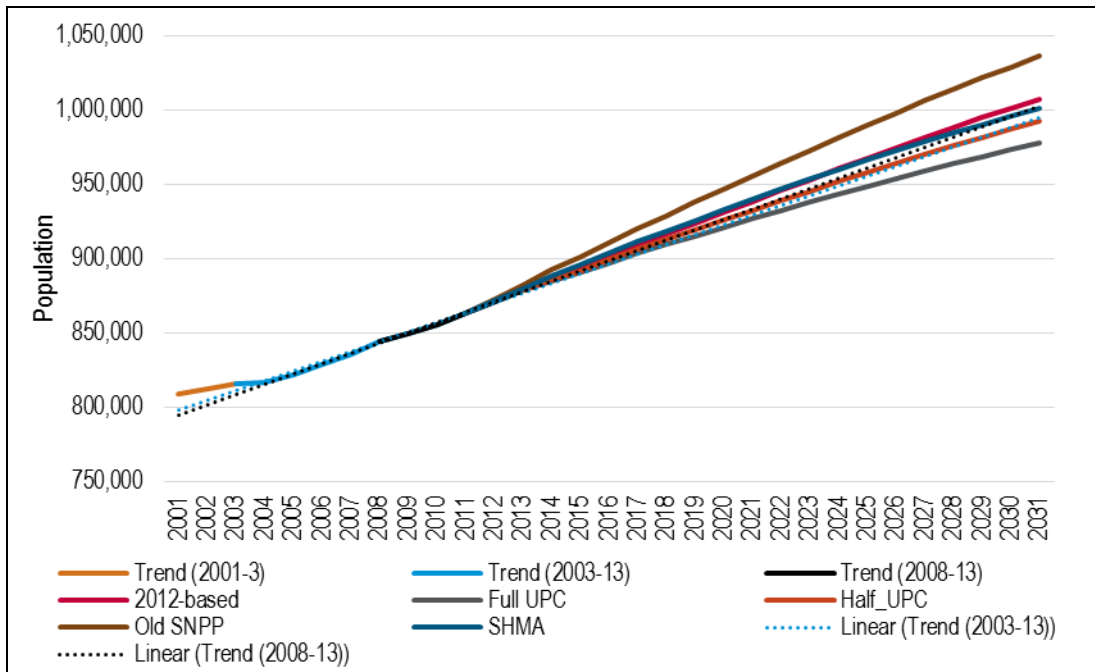
2 IMPLICATIONS OF 2012 SNPP

- 2.1 The latest set of subnational population projections (SNPP) were published by ONS on the 29th May 2014. The new SNPP are largely based on trends in the 2007-12 period (2006-12 for international migration trends). The SNPP are only population projections and do not contain headship rates (which are needed to convert into household estimates). In this report headship rates from earlier (2008- and 2011-based) CLG household projections have therefore been utilised to consider housing need.
- 2.2 On the 26th June 2014, ONS published new mid-2013 population estimates. These have been used in the analysis to replace the projected figures in the 2012-based SNPP. Post 2013, the rates for fertility, mortality and migration have been used as they appear in the 2012-based SNPP.
- 2.3 For consistency with the Coventry and Warwickshire Joint SHMA (GL Hearn, Nov 2013) all analysis looks at the period 2011-31. It should be noted that for all areas, figures are fixed for the 2011-13 period on the basis of data in the ONS mid-year population estimate releases.

Population Change

- 2.4 Figure 1 shows population growth for the Coventry and Warwickshire HMA since 2001 and projected forward under a range of scenarios to 2031. The data shows that the 2012-based SNPP fits comfortably with past trends when looking at either a 5- or 10-year trend; and is notably below the level of population growth expected in the last (2011-based) SNPP published by ONS. The 2011-based SNPP were however 'interim' projections rather than official statistics.
- 2.5 The data also shows that across the HMA, the level of population growth broadly tracks the amended SNPP position as set out in the SHMA (PROJ1A).
- 2.6 It should however be noted that the SHMA took account of Unattributable Population Change (UPC) in reducing the growth shown in the 2011-based SNPP. On one level, this looks like it was a reasonable approach in that the 2012 SNPP projections for population are similar to those in the SHMA; although if the same approach is taken against the 2012-based SNPP then expected levels of population growth come out somewhat lower than shown as past trends.

Figure 1: Past and projected population growth – Coventry/ Warwickshire



Source: ONS/ JGC

2.7 Population change can be compared between the 2012-based SNPP and the SHMA in Figure 2. For the whole HMA the data shows that there is some consistency between the SHMA and 2012-based figures, with the latter being about 5% higher than the projections in the SHMA. However, there are significant difference by location, with Coventry expected to see significantly higher population growth and all other areas being lower (often significantly).

Figure 2: Population growth in the SHMA and 2012-based SNPP (2011-31)

	SHMA	2012-based SNPP	Difference
Coventry	48,760	84,144	35,384
North Warwickshire	4,527	3,782	-746
Nuneaton & Bedworth	18,202	13,189	-5,014
Rugby	26,346	15,647	-10,699
Stratford-on-Avon	15,960	10,683	-5,277
Warwick	23,858	16,754	-7,104
HMA	137,653	144,198	6,546

Source: ONS/ JGC

2.8 The reasons for the differences are firstly due to use of a UPC adjustment in the SHMA and secondly because the 2012-based SNPP has been able to draw on more up-to-date information about population change (notably migration) which for 2011/12 was higher in Coventry than past

trends and lower in most other areas. Data from the mid-2013 population estimates tends to show a similar pattern.

2.9 The population growth figures can also be looked at in terms of population growth rates (as shown in Figure 3 below). The table shows broadly similar rates across the HMA (of 16%-17%) between the SNPP and SHMA Projections, although for different areas there are notable differences.

2.10 The 2012-based SNPP in particular shows a very high level of growth in Coventry relative to any other area, whilst the same comment could be made in regard of Rugby in the SHMA analysis.

Figure 3: Percentage Population Growth 2011-31 from 2011 Base

	Population Growth 2011-31: SHMA Projections	Population Growth 2011-31: 2012-based SNPP
Coventry	15.4%	26.6%
North Warwickshire	7.3%	6.1%
Nuneaton & Bedworth	14.5%	10.5%
Rugby	26.2%	15.6%
Stratford-on-Avon	13.2%	8.8%
Warwick	17.3%	12.2%
HMA	15.9%	16.7%

Source: ONS/ JGC

2.11 The distribution of population growth within the HMA is shown in Figure 4 which compares the proportion of growth in each area from the projections to the 2011 base population. Overall, Coventry is expected to see 58% of all population growth in the HMA in the 2011-31 period in the SNPP. This is despite only 37% of the HMA's population (as of 2011) being in the City.

Figure 4: Distribution of Population Growth in SHMA and SNPP Projections, 2011-31

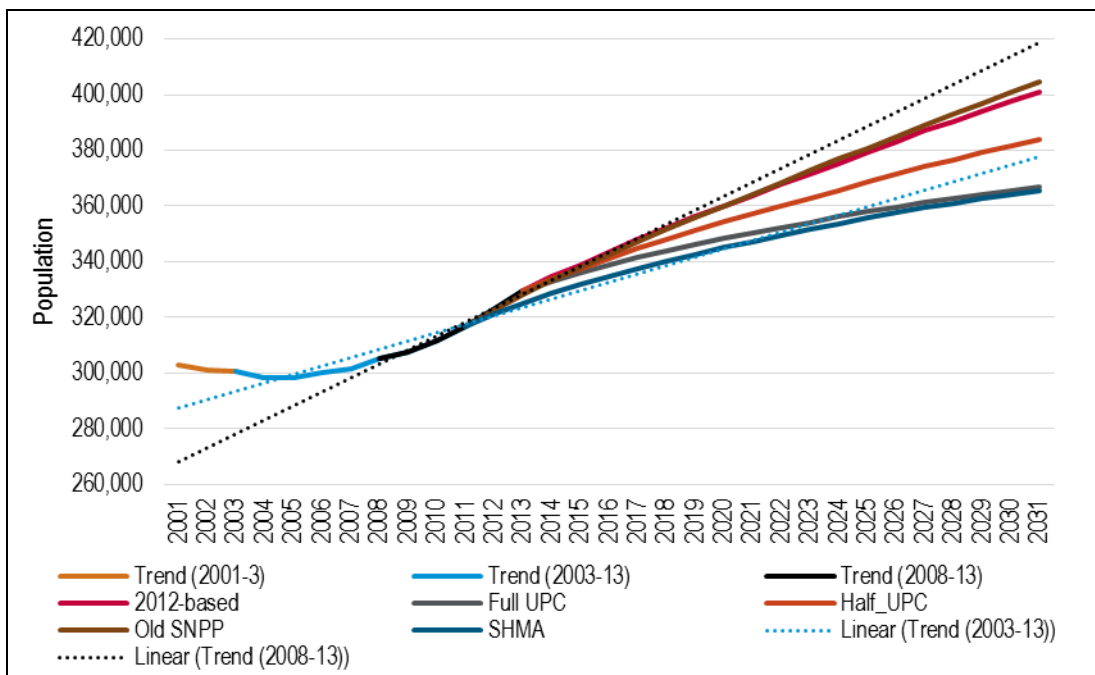
	2011 Population	% of Growth in HMA Population in SHMA Projections	% of Growth in HMA Population in 2012 SNPP Projections
Coventry	36.7%	35.4%	58.4%
North Warwickshire	7.2%	3.3%	2.6%
Nuneaton & Bedworth	14.5%	13.2%	9.1%
Rugby	11.6%	19.1%	10.9%
Stratford-on-Avon	14.0%	11.6%	7.4%
Warwick	15.9%	17.3%	11.6%
HMA	100.0%	100.0%	100.0%

Source: 2011 Census, Demographic Projections

2.12 It is worth studying population growth in Coventry in more detail. Figure 5 shows past trends in population growth along with various projections. Looking at a linear projection of the population trend over the past 5-years, it can be seen that the ONS 2012-based Projections actually sit slightly below this. The SHMA projections (taking account of UPC) are significantly below this level.

2.13 Levels of migration and population growth in Coventry have been recorded by ONS as significant over the past few years, with data for 2011/12 showing a very high level of migration; and data for 2012/13 being higher again.

Figure 5: Past and projected population growth – Coventry



Source: ONS/ JGC

2.14 The HMA projections for population and housing provision are particularly sensitive to the projections for Coventry, because of its size.

Unattributable Population Change

2.15 Changes in population reflect levels of births, deaths and migration (the components of population change). Following the release of data from the 2011 Census, ONS has revisited its estimates for the component of population change over the 2001-11 period (the Inter-Censal period).

- 2.16 Part of the growth in population which was recorded over this period has been ascribed to 'Unattributable Population Change.' At a national level this represents 103,700 persons across England. ONS consider that this is likely to reflect a combination of errors in the following:
- Sampling variability
 - International migration estimates
 - Census population estimates, both in 2001 and 2011
 - Internal migration estimates (at a sub-national level).
- 2.17 ONS has considered the issues as to whether it should adjust the SNPP for Unattributable Population Change. Its *Report on Unattributable Population Change (ONS, Jan 2014)* concluded that it would not be appropriate to do so, on the basis that the scale of the issue was not that substantial and that there was no evidence that there was bias in the trend data which would be expected to continue into the future. In particular ONS concluded that **UPC is unlikely to be seen in continuing national trends** as:
- It is unclear what proportion of the UPC is due to sampling error in the 2001 Census, adjustments made to Mid-Year Population Estimates (MYEs) post the 2001 Census, sampling error in the 2011 Census and or error in the intercensal components (mainly migration);
 - If it is due to either the 2001 Census or 2011 Census then the components of population change will be unaffected;
 - If it is due to international migration, it is likely that the biggest impacts will be seen earlier in the decade and will have less of an impact in the latter years, because of improvements introduced to migration estimates in the majority of these years.
- 2.18 Adjusting projections for UPC would have a downward impact on projected population growth and housing need for some authorities within the HMA; but upwards in others. The greatest impact is on projections for Coventry.
- 2.19 We have sought to interrogate the data to explore this issue. In Coventry the 2011 Census showed a population which was lower than previous ONS estimates, and thus UPC is negative. The potential reasons for this include that the 2001 population was under-estimated; the 2011 was over-estimated (which would seem the least likely); or net migration has been over-estimated. However the additional 2 years of population data we now have continue to suggest relatively rapid population growth in Coventry. The more recent data from ONS Mid-Year Estimates supports the projections for migration for Coventry in the 2012 SNPP. This suggests that migration errors, if there are any, are more likely to be within the earlier part of the 2001-11 period and less likely to affect the most recent population projections. Thus whilst we should accept a greater degree of uncertainty in projecting Coventry's population, there is no clear, defensible basis for making a UPC adjustment to the new SNPP Projections. The core projections in the 2013 SHMA Report did include adjustments to migration based on Unattributable Population Projection.

2.20 For other authorities in the HMA the impacts are less substantial. Whilst we would recognise that the projections are sensitive to UPC, the more recent demographic evidence does support the ONS 2012 SNPP. Again we do not consider that there is a clear, defensible justification for making adjustments to the SNPP; particularly at an HMA level given the similarity of the projections to the trend data. As we have set out in Section 1, we attach greater weight to the projection outputs at an HMA level.

Housing Needs

2.21 It is possible to take the data from the 2012-based SNPP and model levels of housing need from this. This is achieved by applying household formation rate assumptions to the population data. The method used is consistent to that in the SHMA, with all scenarios (other than the very last one – entitled ‘part return to trend’) being based on headship rates which track 2011-based data to 2021 and 2008-based data (rebased) from 2021 to 2031.

2.22 The SHMA suggested a need based on demographic trends for 3,750 dwellings per annum across the HMA (increased slightly to 3,800 in the SHMA conclusions to take account of specific issues in different areas). A similar analysis based on the 2012-based SNPP shows a slightly higher figure for housing need of about 3,900 – 4,000 per annum (again based on projecting forward past demographic trends). This is shown in Figure 6. The additional projections are based on applying household representative rates to the 2012 SNPP population projections, and do not include any adjustments or uplift to take account of other factors (which did influence the ‘SHMA conclusion’ figures).

Figure 6: Estimated Housing Need per Annum – Alternative Demographic-Led Scenarios

Housing Need per Annum	SNPP_Adj (SHMA core output)	Final SHMA conclusion	2012-based SNPP	Part return to trend
Coventry	1,179	1,180	1,885	1,811
North Warwickshire	165	175	159	204
Nuneaton & Bedworth	494	495	394	422
Rugby	658	660	441	453
Stratford-on-Avon	538	570	463	508
Warwick	718	720	564	606
TOTAL (HMA)	3,753	3,800	3,906	4,004

- 2.23 Whilst the projections for population are sensitive to assumed levels of migration; the household projections are also sensitive to assumed levels of household formation.
- 2.24 The approach to modelling household formation in the SHMA (and to derive the need for 3,900 homes per annum identified above) is based on projecting household formation rates in the CLG 2011-based Interim Household Projections to 2021, and the 2008-based Household Projections thereafter.
- 2.25 Whilst the Practice Guidance promotes use of the latest household projections, which at the time of writing are the 2011-based Household Projections; the household formation rates within these are based on trends over the 2001-11 period, and the Practice Guidance indicates that plan-makers may consider sensitivity testing based on alternative assumptions including household formation rates. As the 2011-based Household Projections are trend based, there is a degree to which they project worsening household formation rates amongst key age groups (particularly those in their 20s and 30s) over the period to 2021.
- 2.26 We have run a further sensitivity analysis around household formation trends, modelling a “part return to trend” scenario. This looks in more detail at the specific reasons why headship rates may have diverged from longer-term trends. It looks specifically at individual age groups and the extent these trends have moved away from the figures expected in the 2008-based projections.
- 2.27 The methodology recognises work carried out by the Cambridge Centre for Housing and Planning Research (CCHPR) at Cambridge University which has suggested that part of the divergence in household formation rates from long-term trends is associated with international migration; and part due to the impact of affordability and housing market conditions together with the wider economic climate on levels of household formation.
- 2.28 The “part return to trend” scenario seeks to disaggregate the impact of these factors for each of the local authorities in the HMA, and adjusts household formation rates on the assumption that household formation rates may increase, relative to the trends in the 2011-based Household Projections, as housing market conditions improve.
- 2.29 This scenario effectively attempted to look at the relative level of suppression of household formation in each area taking account of the extent to which particular age groups have moved away from trends and trying to quantify the impact international migration and growth in BME communities has had on household structures. This method shows a higher level of need overall (for about 4,000 homes per annum) although when compared with the core 2012-based SNPP projection the figures are lower in Coventry and higher in other areas. This reflects the greater

impact of international migration on population growth in the City where the evidence suggests that changes in household structures are likely to have been more strongly influenced by international migration, growth in the BME community and student population which typically have include larger households than other groups within the population.

- 2.30 The demographic projections on which the Joint SHMA Report conclusions were based modelled household formation at a 'midpoint' between the trends shown in the CLG 2008- and 2011-based Household Projections. The 'part return to trend' approach is similar, in that it continues to model household formation rates which are expected to sit between those shown in these national projections, but looks at the potential dynamics for different age groups and in different areas in greater detail. It in effect seeks to take a sophisticated approach which takes account of the potential differential impact of international migration in different areas within the HMA, and to estimate the degree to which we may see household formation rates for specific age groups increase.
- 2.31 These projections are based solely on demographic trends. In Section 3 we consider how economic growth may influence demographic changes. In Section 4 we move on to consider other factors including the evidence of affordable housing need and market signals as set out in the SHMA, drawing the evidence together to set out revised findings regarding the Objectively-Assessed Need for Housing.

3 ECONOMIC FORECASTS

3.1 GL Hearn has also been asked to consider how economic growth within the Coventry and Warwickshire Housing Market Area (HMA) might influence future housing needs.

3.2 Economic forecasting is not an exact science, and forecasts are influenced by the assumptions made within them. Inevitably looking over 15+ years there is uncertainty regarding how the economy might perform overall, and in different areas.

3.3 The interaction between economic growth and housing need will be influenced by:

- The nature of employment growth, including the relationship between growth in full- and part-time jobs, and the extent to which some people hold down more than one job;
- Changes in the age structure of the population, the degree to which we see people working for longer because of societal changes and/or changes in state pension ages;
- The relationship between skills needed and those of the resident workforce, and the degree to which levels of unemployment and worklessness change over time;
- Changes to commuting patterns, both within the HMA and with areas outside of it, which can be influenced by differences in population and economic dynamics as well as other factors such as transport investment.

3.4 The complexity of this relationship makes modelling complex and affects the accuracy at which it can be done. However we have sought to consider in this section what level of housing provision might be necessary to support potential levels of employment growth.

3.5 We have considered two sets of forecasts for future employment growth:

- Forecasts from Experian's Regional Planning Service, dated May 2013. These forecasts were considered in the November 2013 Joint SHMA Report;
- Forecasts from Cambridge Econometrics, supplied by Warwickshire County Council, dated August 2013. These forecasts have informed the Local Enterprise Partnership's work in developing the Strategic Economic Plan, and the Coventry and Warwickshire Joint Employment Land Review (Atkins, 2014).

3.6 Econometric forecasts are volatile, particularly at a local authority level. The forecasts considered assume that historical relationships between performance of sectors in a given local authority and the region hold true moving forwards (i.e. if a sector performed in relative terms better in Warwick District in the past, it is projected to continue to do so). They take account of the structure of the local economy and its relative past performance. The forecasts do not however take account of land supply or development constraints; or of initiatives or interventions which might stimulate economic growth (in so far as they may differ in their impact to past interventions).

- 3.7 Taking account of these factors, forecasts are likely to be more reliable at an HMA level than for individual local authorities where specific supply-side factors are likely to have a greater influence on past (and future) performance.
- 3.8 Both sets of forecasts are thus 'Policy Off.' They reflect Cambridge Econometrics and Experian's respective views regarding future economic performance at the time of their preparation in 2013. Neither forecast is inherently 'right' or 'better' – they simply reflect differences in the views of the two economic forecasters regarding the performance of different sectors in the economy. The Experian forecasts considered herein are the same as those considered in the Joint SHMA Report (Nov 2013).

Employment Growth Assumptions

Cambridge Econometrics

- 3.9 The Cambridge Econometrics forecasts make the following assumptions regarding employment growth between 2011-31. GL Hearn considers that greater weight should be attached to the overall HMA findings than those relating to individual authorities, not least as major investment and development projects could influence the future geography of employment growth.

Figure 7: Forecast Employment Growth – Cambridge Econometrics, 2011-31

	Job growth (2011-31)	% increase from 2011
Coventry	25,300	16.6%
North Warwickshire	13,500	32.3%
Nuneaton & Bedworth	6,300	13.8%
Rugby	10,900	21.9%
Stratford-on-Avon	15,700	24.7%
Warwick	18,900	20.9%
HMA	90,500	20.4%
West Midlands		15.7%
UK		13.3%

Source: Cambridge Econometrics¹

- 3.10 The Cambridge Econometrics projections run to 2025. We have assumed that total employment growth over the 2025-31 period is consistent to that projected in the forecasts for the 2019-25 period.

¹ The figures set out in Figure 7 are for total employment. This differs from those for Full-Time Equivalent (FTE) Jobs set out in the Joint Employment Land Review

3.11 These Cambridge Econometrics forecasts are also used in the Coventry and Warwickshire Joint Employment Land Review (ELR). The ELR however uses figure for Full-Time Equivalent jobs whereas the total jobs figures have been considered herein.

Experian

3.12 Experian’s forecasts for employment growth are set out in Figure 8 below. Across the HMA the Experian figures are lower, suggesting employment growth between 2011-31 of 62,600 jobs compared to employment growth of 90,500 forecast by Cambridge Econometrics.

3.13 Experian forecast overall employment growth in the HMA which broadly matches that forecast across the West Midlands, albeit slightly slower than that across the UK as a whole. In contrast, the Cambridge Econometrics forecasts are for stronger relative performance of the HMA compared to either the region or UK.

Figure 8: Forecast Employment Growth – Experian, 2011-31

	2011-31 Total Ch	% Increase from 2001
Coventry	22,600	15.0%
North Warwickshire	9,400	21.3%
Nuneaton & Bedworth	4,400	9.7%
Rugby	6,500	14.0%
Stratford-on-Avon	9,500	15.0%
Warwick	10,300	11.8%
HMA	62,600	14.3%
West Midlands	-	14.3%
United Kingdom	-	14.5%

Source: Experian

Commuting Assumptions

3.14 GL Hearn and JGC have sought to consider the level of housing need which might be needed to support these. In doing so we have taken account of commuting dynamics to derive a Labour Supply Scenario (as we did in the Joint SHMA Report) but also modelled the relationship between jobs and homes based on a 1:1 relationship between growth in residents and employment and jobs at a local authority level.

3.15 In both scenarios we have modelled is some improvement in employment rates moving forwards as the economy recovers and to take account of planned changes to pensionable ages (as we did in the Joint SHMA Report).

3.16 Figure 9 below sets out commuting patterns based on analysis of the 2011 Census.

Figure 9: Commuting Patterns, 2011

	Residents in employment	People working in area	Commuting Ratio
Coventry	138,142	148,921	0.93
North Warwickshire	31,418	39,768	0.79
Nuneaton & Bedworth	60,416	45,509	1.33
Rugby	50,716	47,701	1.06
Stratford-on-Avon	61,377	64,012	0.96
Warwick	70,069	78,236	0.90
HMA	412,138	424,147	0.97

Source: Census (2011)

3.17 These figures can be compared with similar data from the 2001 Census (shown below) which was considered in the Joint SHMA Report (Nov 2013). The key changes are in North Warwickshire, where the 2011 Census data shows a notable level of net in-commuting. This partly reflects the development of large employment sites such as Birch Coppice and Hams Hall in the Borough Boundary. The other main change is in Stratford-on-Avon District, which has gone from being a net exporter of labour to a net importer. This will in part be due to a fairly modest increase in the workforce (linked in part to the ageing of the population) although job creation does look to have been pretty strong (up by over 11,000 in just 10-years).

Figure 10: Commuting Patterns in Coventry/Warwickshire – 2001

	Residents in employment	People working in area	Commuting Ratio
Coventry	125,458	141,927	0.88
North Warwickshire	30,507	29,353	1.04
Nuneaton & Bedworth	56,527	41,971	1.35
Rugby	43,157	43,671	0.99
Stratford-on-Avon	56,358	52,757	1.07
Warwick	62,481	69,105	0.90
HMA	374,488	378,784	0.99

Source: 2001 Census

3.18 As in the SHMA, the labour demand scenario in each case assumes that there is a 1:1 relationship between growth in residents in employment and jobs growth in each authority; whilst the labour supply scenario takes account of commuting patterns (but does not apply any policy adjustments seeking to influence these). For clarity, a commuting ratio in excess of 1 suggests evidence of out commuting of residents for jobs, whilst a ratio less than 1, suggests stronger evidence of people

commuting into an authority area to take up jobs. The modelling approach to commuting is consistent with that in the Joint SHMA Report (Nov 2013).

Implications for Housing Provision

- 3.19 Figures 11 and 12 set out the results of the modelling, setting out economic-led projections for housing need linked to the Experian and Cambridge Econometrics jobs forecasts respectively. The projection linked to the 2012-based SNPP has also been included for reference. We have modelled household formation in these projections based on a ‘part return to trend’ scenario as described in Section 2.
- 3.20 The modelling indicates that at an HMA level, the Experian econometric forecasts result in a modelled need for 3640 - 3750 homes per annum (rounded to the nearest 10) to 2031. This is below the level of need identified based on the 2012 SNPP.

Figure 11: Housing Need per Annum based on Experian Forecasts, 2011-31

	Part return-to-trend		
	2012-based SNPP	Experian Labour demand	Experian Labour supply
Coventry	1,811	1,000	943
North Warwickshire	204	502	432
Nuneaton & Bedworth	422	389	442
Rugby	453	437	452
Stratford-on-Avon	508	778	764
Warwick	606	640	604
TOTAL (HMA)	4,004	3,747	3,636

Source: Experian/ GLH/ JGC

- 3.21 A higher level of housing need is generated in the scenario based on the Cambridge Econometrics’ forecasts. The modelling indicates that in this scenario, 4550 – 4580 homes per year (rounded to the nearest 10) would be needed in the HMA per annum. This scenario models higher net migration to the Coventry and Warwickshire HMA than in the 2012 SNPP to support the forecast growth in jobs.

Figure 12: Housing Need per Annum based on Cambridge Econometrics Forecasts, 2011-31

	2012-based SNPP	CE Labour demand	CE Labour supply
	Homes per Annum (Part Return to Trend)		
Coventry	1,811	1,164	1,060
North Warwickshire	204	583	601
Nuneaton & Bedworth	422	433	513
Rugby	453	575	571
Stratford-on-Avon	508	938	976
Warwick	606	886	825
TOTAL (HMA)	4,004	4,579	4,546

Source: CE/GLH/JGC

- 3.22 The forecasts also raise some geographical issues. Coventry has a younger population on average than other parts of the HMA (as shown by analysis in the main SHMA Report). As Figure 3 demonstrates the SNPP demographic projections also show the strongest population growth in the City. As a result the SNPP Projection see significant growth in the resident working-age population, with growth to a level which exceeds the expected growth in jobs in both economic forecasts. In the Economic-led projections we have thus adjusted migration to reduce growth in the workforce in Coventry. In the Warwickshire authorities, the economic-led projections model stronger migration relative to the SNPP and we therefore adjust upwards the level of migration to support the expected growth in jobs in the economic forecasts. The economic evidence in this forecast thus suggests a different distribution of housing provision within the HMA.
- 3.23 Standing back from the data, the policy issue which is raised relates to the balance between housing and economic growth in and around Coventry, either in regard to a need to focus economic investment in and around Coventry or in regard to ensuring that new employment sites/opportunities are accessible to Coventry residents (or to agree an alternative distribution of housing provision). There are potentially skills and transport-related components to this.
- 3.24 It should be borne in mind that the forecasts shown are simply baseline forecasts for economic growth. In interpreting the modelling in plan-making, the forecast employment growth assumptions should be compared against those in other parts of each Council's evidence base. A detailed interrogation of local economic dynamics, opportunities and risks, should inform planning assumptions regarding future employment growth and the implications of economic growth on housing need.

4 EXAMINING MARKET SIGNALS AND HOUSEHOLD FORMATION RATES

4.1 The Planning Practice Guidance sets out that in determining the Objectively Assessed Need (OAN) for homes, consideration should be given to market signals. In some circumstances this may provide a case for adjusting housing provision.

4.2 The approach advocated recognises that demographic projections are 'trend-based' and the essential question is to what degree is planning on past trends realistic. The Practice Guidance outlines that:

"The housing need number suggested by household projections (the starting point) should be adjusted to reflect appropriate market signals, as well as other market indicators of the balance between the demand for and supply of dwellings

In areas where an upward adjustment is required, plan makers should set this adjustment at a level that is reasonable. The more significant the affordability constraints (as reflected in rising prices and rents, and worsening affordability ratio) and the stronger other indicators of high demand (eg the differential between land prices), the larger the improvement in affordability needed and, therefore, the larger the additional supply response should be.

Market signals are affected by a number of economic factors, and plan makers should not attempt to estimate the precise impact of an increase in housing supply. Rather they should increase planned supply by an amount that, on reasonable assumptions and consistent with principles of sustainable development, could be expected to improve affordability, and monitor the response of the market over the plan period."

Affordability and Market Signals

4.3 Market signals were considered in the Joint SHMA Report. The analysis in the SHMA identified that:

- House prices increased notably in the pre-recession decade, most notably between 2002-6, but remained relatively stable between 2008-12. Over this latter period, taking account of inflation, housing fell in value in real terms suggesting higher supply than demand for market homes. Sales volumes highlighted the notable impact of the credit crunch and wider macro-economic conditions which resulted in a notable drop in effective demand for market housing for sale. The evidence suggested that this had fed through to a fall in residential land values. Land values were however higher in south Warwickshire, based on 2010 data, than other parts of the region;
- Between 2007-12² both lower quartile prices and affordability improved, with the lower quartile house price to income ratio falling by 7% across Warwickshire to 7.65 in 2012; and by 21% to 5.02 in Coventry. Higher affordability pressures were however evident in Stratford-on-Avon District and to a lesser extent Warwick District, compared to other parts of the HMA;
- Housing delivery between 2001-11 (in terms of net completions) significantly exceeded the levels of provision planned within the adopted RSS, by a total of 5,232 dwellings across the

² 2012 being the latest data available at the time

HMA as a whole. Delivery over the 2006-11 period exceeded the proposed level of housing provision within the RSS Phase 2 Panel Report by 12%.

- 4.4 The SHMA analysis considered the need for affordable housing. In doing so, it identify a backlog of affordable housing need of 6,809 households. This included some existing households who needed alternative housing (such as a home of a different size, because of the end of a tenancy or because of affordability issues) as well as some 'concealed' households.
- 4.5 The SHMA analysis also considered overcrowding. It demonstrated that overcrowding has increased over the 2001- 11 decade by 25% measured using the Census Occupancy Rates. This was likely to be partly a function of increasing student households which have higher occupancy ratios (which particularly affects Coventry and Warwick District), partly related to an issue of the balance of the housing stock in some areas (in respect of the mix of housing), particularly in Coventry, and partly an indicator of stress within the market.
- 4.6 Overall the Joint SHMA Report concluded that the market evidence suggested that a deterioration in affordability in the latter part of the period to 2007 plus the downturn in the housing market since that point may have led to some suppression of levels of new household formation. However in looking at the outlook moving forwards, it identified that whilst there were some signs of improvements in housing market conditions, the economy was still struggling to grow; and the likelihood was that household formation rates would remain below long-term trends over a significant proportion of the decade to 2021.
- 4.7 Whilst the rate of growth in UK economic output has picked up over the last year and housing market conditions have improved, housing market activity (measured by sales volumes) remains below levels seen in the decade prior to 2007.

Relating Affordability and Household Formation Rates

- 4.8 It is important to consider how these housing market trends relate through to demographic projections in considering, as the Planning Practice Guidance recommends, whether there is a case for adjusting levels of housing provision in effect to improve affordability over the longer-term.
- 4.9 National research undertaken for the RTPI by the Neil McDonald and Peter Williams at Cambridge University³ indicates a particular effect of the decline in affordability between 2001-11 and the economic recession has been young adults living within a parental home for longer or living in shared accommodation rather than separate accommodation. The impact of this, their research

³ McDonald, N. and Williams, P. (Jan 2014) *Planning for Housing in England: Understanding recent changes in household formation and their implications for planning for housing in England*, RTPI, London.

shows, has been most significant for the 25-34 age group. Similarly we would expect a particular effect of improving affordability of and access to housing to be an increase in household formation amongst this age group.

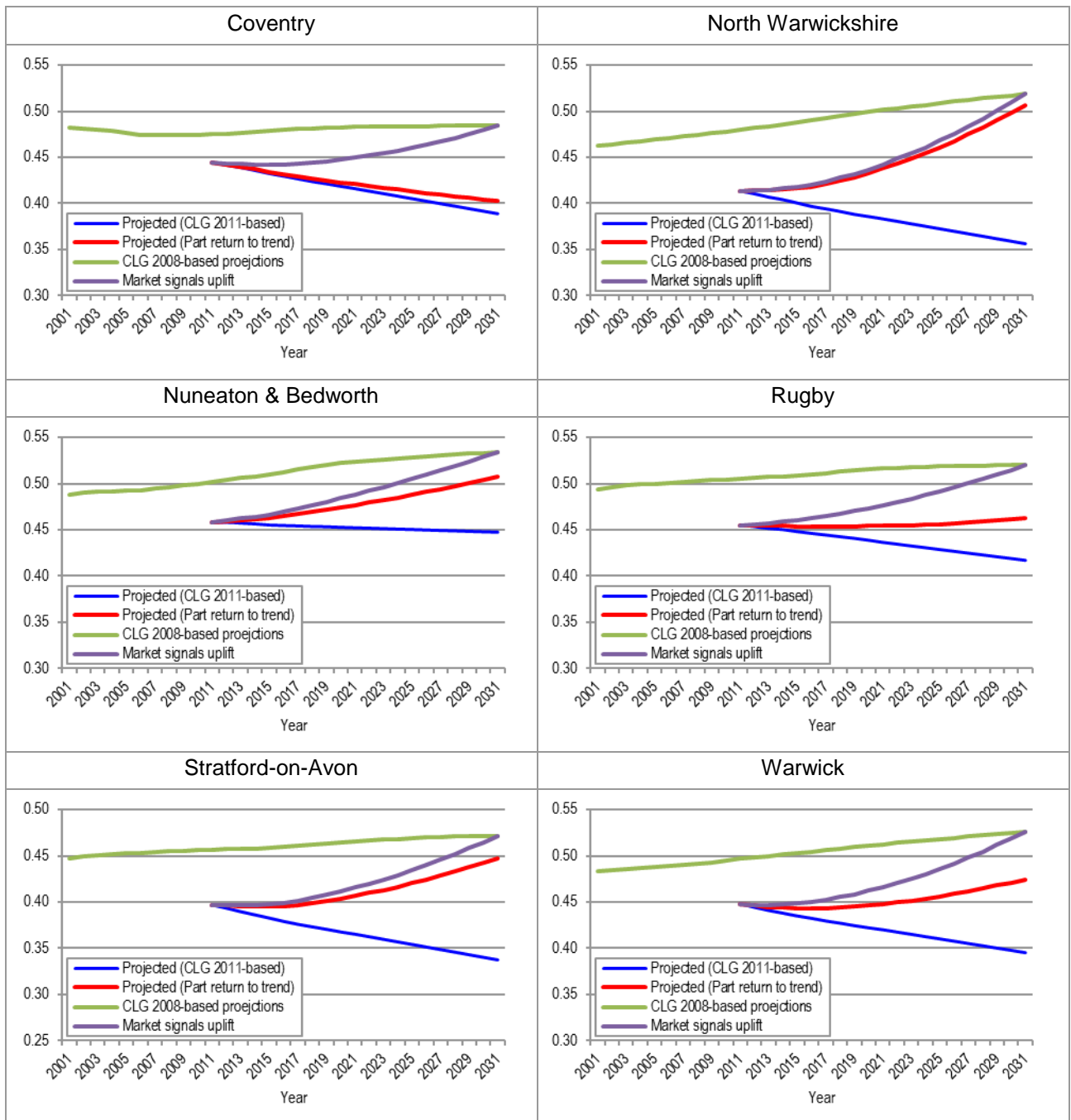
A detailed interrogation of demographic dynamics in Coventry and Warwickshire indicates that in demographic terms, the deterioration in affordability of market housing and the economic recession over the 2001-11 decade is likely to have influenced – at least in part - a decline in household formation rates in younger people, particularly amongst those aged between 25-34.

- 4.10 When we consider age-specific data it is notable that those aged 25-34 have lower headship rates than was expected in the 2008-based projections and in Coventry (because of the impact of international migration on household structures) that even under our part return to trend methodology the improvement moving forward still sees the rate in 2031 to be below the figure for 2011. We have therefore run a sensitivity analysis which considers and seeks to quantify the implication of returning the household formation rates of the 25-34 age group back to the 2008-based level by 2031.
- 4.11 The figure below shows headship rates for people aged 25-34 under a range of different scenarios. The data clearly shows that in the 2011-based projection there was expected to be a continued decrease in formation rates (projecting forward trends seen between 2001-11). This in effect assumes that affordability of housing for younger households would decline further. It seems unlikely that this could be supported as a planning assumption. The core (part-return to trend) projection sees an improvement moving forward. The issue however is particularly one of what degree of improvement would be reasonable to plan for.
- 4.12 We have sought to provide an additional sensitivity analysis which considers the potential implications for housing need should household formation rates for younger households rise more strongly than modelled in the 'part return to trend' household projections considered in Sections 2 and 3. This scenario in effect seeks to consider a scenario in which affordability and access to housing for younger households improves, and quantifies what level of housing provision might be associated with this, all other factors being equal. It models the implications of returning household formation rates over the period to 2031 back to levels envisaged in the 2008-based household projections. This is shown in Figure 13. If achieved, the effect would be to reduce the proportions of shared households and persons within this age group living with parents. We term this sensitivity analysis the 'market signals uplift.'
- 4.13 In reality, other factors such as real growth in disposable income (allowing people to save), the availability of and access to mortgage finance, interest rates and economic confidence will all

influence trends in household formation. There is a complex set of factors at play, and it is difficult to predict how these factors might interact in the future and the impact on household formation rates (in the absence of any supply-side constraints). Furthermore part of the changes in household formation rates between the 2008- and 2011-based projections for this age group may have been due to international migration.

- 4.14 Figure 13 shows the household formation rates modelled for the 24-34 age group in each authorities. The vertical scale represents the proportion of people in this age group who are expected to be a head of a household. The graphs track the approach used in the different projections.

Figure 13: Scenarios for Household Formation Rates amongst those aged 25-34



4.15 The sensitivity analysis indicates that, all other things being equal, an uplift of between 314 – 369 homes per annum across the HMA would support an improvement in affordability and household formation rates amongst younger households, returning household formation rates for this age group to levels projected in the 2008-based Household Projections by 2031.

- 4.16 Most of this uplift is seen in Coventry; this is due to Coventry having seen the least initial uplift in the part return-to-trend methodology (linked to the greater impact on the population of international migration and BME communities).

Figure 14: Modelling Implications of Improved Household Formation Rates of those aged 25-34 in Coventry & Warwickshire HMA

Housing Need per Annum	Housing need with market signals uplift				
	2012-based SNPP	Experian Labour demand	Experian Labour supply	Cambridge Labour demand	Cambridge Labour supply
Coventry	2,056	1,190	1,129	1,291	1,181
North Warwickshire	208	508	437	654	673
Nuneaton & Bedworth	444	411	465	485	567
Rugby	488	473	488	629	625
Stratford-on-Avon	522	794	779	1,027	1,067
Warwick	655	691	653	997	933
TOTAL (HMA)	4,373	4,066	3,950	5,084	5,046

- 4.17 Figure 15 quantifies the scale of uplift in annual housing need shown in this sensitivity analysis. It is derived from comparing Figure 14 with Figures 6, 11 and 12 where household formation rates are modelled based on a 'part return to trend.'

Figure 15: Uplift in Housing Provision with Market Signals Uplift compared to Initial (Part Return to Trend) Modelling

Housing Need per Annum	Uplift from equivalent scenario				
	2012-based SNPP	Experian Labour demand	Experian Labour supply	Cambridge Labour demand	Cambridge Labour supply
Coventry	245	190	186	196	189
North Warwickshire	4	6	5	6	6
Nuneaton & Bedworth	22	22	23	23	24
Rugby	36	35	36	39	39
Stratford-on-Avon	13	16	16	18	18
Warwick	49	50	49	60	58
TOTAL (HMA)	369	319	314	342	335

- 4.18 Changes in household formation rates between the 2008- and 2011-based CLG Projections, as the report has set out, are likely to be partly a function of international migration and partly related to housing market and economic factors. The extent to which household formation rates of those aged 25-34 increase will be influenced by these factors. The demographic analysis in this section is

particularly intended to provide an understanding of the sensitivity of household projections to these factors.

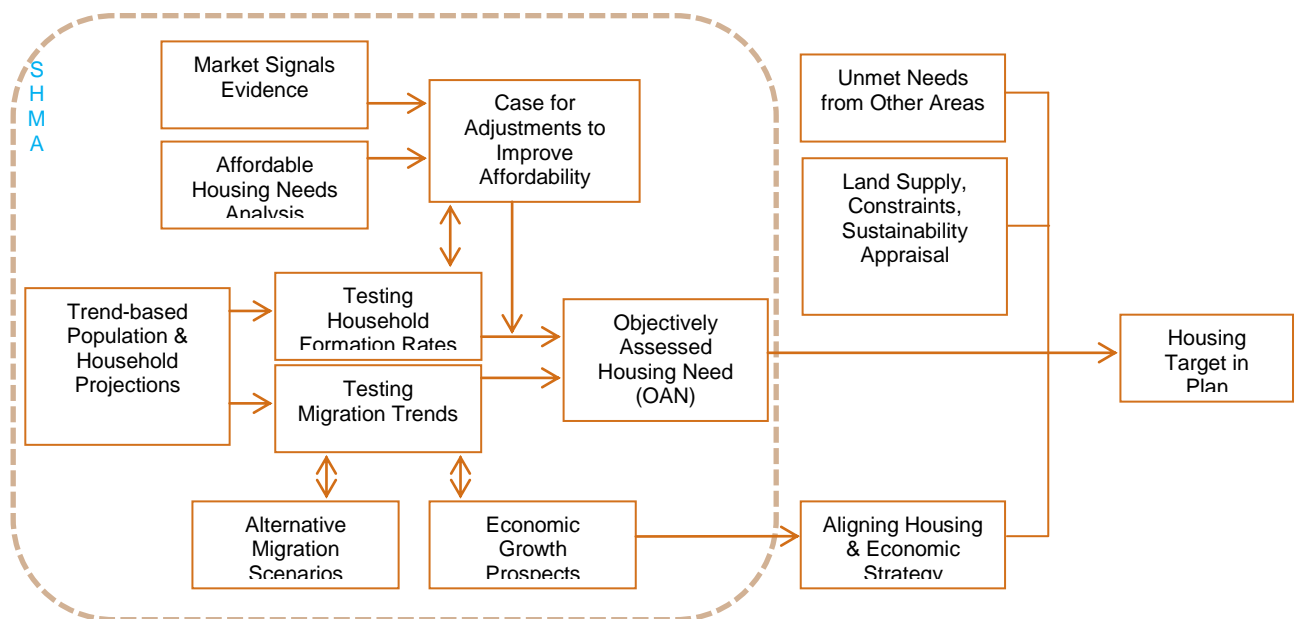
- 4.19 It is difficult to forecast future performance of the housing market and the extent to which affordability for younger households not least given the complexity of factors which may influence future trends. Mortgage lending is increasing, with first-time buyer loans in July 2014 25% up on the previous year. However in the short-term, wage growth remains modest, affecting households ability to save; and over the medium- and longer-term greater regulation of the mortgage market could equally impact on the degree to which we see access to mortgage finance for younger buyers improve. The aggregate impact of these factors is difficult to accurately predict. The Government's stated aspiration is however to improve affordability and increase housing supply⁴. On this basis there is either some case for considering an upwards adjustment to housing provision, setting housing targets as minima, or including a clear monitoring mechanism to ensure that housing supply can be increased should the evidence suggest (moving forwards) that housing demand is exceeding housing supply (or adopting a combination of these).

⁴ HM Government (Nov 2011) *Laying the Foundations – A Housing Strategy for England*

5 IMPLICATIONS

- 5.1 The Government issued Planning Practice Guidance on *Housing & Economic Development Needs Assessments* in March 2014. This sets out that “no one methodological approach or use of a particular dataset will provide a definitive assessment of development need.” It is also clear that “Local Plans should be kept up-to-date, and a meaningful change in the housing situation should be considered in this context, but this does not automatically mean that housing assessments are rendered outdated every time new projections are issued.”
- 5.2 The new SNPP are however the first set of official population projections which have been released which fully take account of the 2011 Census results and which provide projections for population growth over the longer-term (as necessary for strategic planning purposes). The 2011-based Interim Population and Household Projections only ran to 2021.
- 5.3 The Government is due to publish new household projections based on the 2012-based SNPP. We would expect these to be issued in the Autumn. This report therefore in effect seeks to predict what the new household projections might say; to overlay economic forecasts; and to consider the interplay between demographic projections and affordability.
- 5.4 The diagram below seeks to summarise the approach recommended in the Planning Practice Guidance.

Figure 16: Approach to Identifying Housing Needs



Conclusions of the Joint SHMA Report

- 5.5 The Joint SHMA worked through this process. The 2011-based Household Projections indicated an annual need for 4,188 homes between 2011-21. Extending these to 2031 the need reduced slightly to 3,981 homes per year. Updating these for the latest population data reduced the need further to 3,335 homes per year. The Joint SHMA then undertook a sensitivity analysis based on 5 and 10 year migration trends, which indicated a need for between 3,270 – 3,509 homes per annum.
- 5.6 Economic forecasts considered in the SHMA indicated that there could be some need to increase housing provision to support economic growth. The economic-driven scenarios (linked to Experian forecasts) indicated a need for 3,724 – 3,768 homes per annum; which compared to a need for 3,334 homes per annum derived from the main demographic projection. In both cases these figures were modelled based on trends in household formation rates from the 2011-based Household Projections to 2031.
- 5.7 The SHMA interrogated market signals and looked at the impacts of affordability and the housing market downturn/ economic recession on household formation rates. It ran a sensitivity analysis to the main demographic projection (PROJ 1A) using 2008-based headship rates. Its conclusions were based on using 2011-based household formation rates to 2021, and 2008-based household formation rates thereafter. This indicated a need for 3,750 homes per annum across the HMA. This drove the conclusions within the report. The SHMA made some modest adjustments based on the wider evidence considered, which informed its conclusions of a housing need for 3,800 homes per annum across the HMA.

Implications of the 2012 SNPP

- 5.8 The SHMA demographic projections were produced in Summer 2013 just after the 2011-based Interim Household Projections and ONS revised Mid-Year Population Estimates for 2002-10 were issued in April 2013.
- 5.9 Since this point, the use of 2011-based household formation rates and adjustments to demographic projections to take account of Unattributable Population Change have been considered by a number of articles and publications, and through a number of local plan examinations. Key papers include:
- McDonald, N. and Williams, P. for RTPI (Jan 2014) *Planning for Housing in England: Understanding Recent Changes in Household Formation Rates and their Implications for Planning for Housing in England*

- ONS (Jan 2014) *2012 Sub-National Population Projections for England – Report on Unattributable Population Change*

- 5.10 The reasons for UPC are unclear – it is unattributable. There is no right or wrong answer as to how UPC should be considered in demographic projections. However for the reasons set out in Section 2. we consider that it could be difficult to robustly defend adjustments to migration to take account of UPC (as undertaken in the SHMA) based on the approach ONS are now using in the 2012-based SNPP and the justification they have set out for this in the above report dated January 2014.
- 5.11 Our view on this basis would be that the 2012-based SNPP would provide an appropriate starting point projection to use for strategic planning purposes.
- 5.12 In regard to household formation rates, evidence from a range of local plan examinations indicates that the use of household formation rates in the 2011-based Household Projections post 2021 is difficult to justify. The Joint SHMA's conclusions recognised this. The January 2014 paper for the RTPI recommends looking at the issue in greater detail to understand the degree to which variations in household formation rates have been influenced by the recession/ affordability and international migration. The 'Part Return to Trend' Scenario modelled herein seeks to do this, adjusting household formation rates moving forwards on the basis of an assumption that affordability and rates of household formation will for key age groups improve over time.
- 5.13 The core demographic projection set out in this report thus indicates a need for around 4,000 homes per annum across the HMA between 2011-31. This is based on the 2012 SNPP and models household formation rates using a 'part return to trend' methodology (as shown in Figure 6). This can be compared to the Joint SHMA which indicated a need for 3,750 homes per annum. We would consider that provision of 4,000 homes per annum represents a minimum assessment of full housing need across the HMA over the 2011-31 period.

Implications of Wider Evidence and Analysis

Sensitivity to Household Formation Rates

- 5.14 The level of housing need will however be sensitive to trends in migration, new household formation and to economic growth within the Housing Market Area. This report has explored these issues further.
- 5.15 The analysis highlights that household formation rates have fallen over the 2001-11 period, particularly amongst those aged 25-34. The core demographic projections based on the 2012 SNPP model a recovery in household formation rates, except in Coventry where it is considered that international migration has influenced household structures amongst younger households.

- 5.16 The analysis highlights the difficulty in forecasting long-term trends, particularly within Coventry where it is particularly difficult to disaggregate the impact of market factors from demographic changes associated with international migration and growth in Black and Minority Ethnic (BME) Communities.
- 5.17 The need for housing will be sensitive to trends in household formation amongst younger households, which will be influenced in part by wider economic trends. This addendum report explores this further, including by considering what level of housing need would arise should household formation rates for this age group return over the period to 2031 to the levels shown in the 2008-based CLG Household Projections.
- 5.18 This sensitivity analysis around household formation rates indicates that higher household formation rates for younger households would result in stronger housing need and models a scenario for this. This shows a level of housing need for 4,373 homes per annum compared to 4,004 in the 'Part Return to Trend' projections, in particular as it models higher household formation in Coventry. This is based on the 2012 SNPP. The sensitivity analysis highlights that provision of 4,000 homes per annum across the HMA should be regarded as a minimum figure.
- 5.19 However two thirds of the modelled increase in housing provision in the sensitivity analysis relates to the figures for Coventry. Of the HMA authorities, it is most difficult to be precise regarding the future housing need in Coventry. The evidence suggests that international migration and growth within BME communities is likely to have a greater impact on demographic trends in Coventry in other areas. What the sensitivity analysis around headship rates models is an increase in household formation rates to the levels shown in the 2008-based Household Projections. Because of the impact of international migration and concentration of population growth within BME communities, a full recovery in household formation rates for those in their 20s and 30s seems unlikely.
- 5.20 Across the HMA as a whole, the complex interplay of factors which will influence these household formation rates, including the availability of and access to mortgage finance, households' savings, interest rates, as well as the broader interplay between housing need and supply make it difficult to accurately predict whether and to what scale household formation trends for younger households may increase beyond the levels indicated in the 'part return to trend' projection.
- 5.21 This highlights the importance of a "plan, monitor and manage" approach. Where moving forwards there is a sustained long-term trend of increasing housing costs and price-income ratios over time and relative to similar areas and the national trend, this would suggest that housing completions

levels need to rise. It also suggests that the SNPP projections for 4000 homes per annum across the HMA should be treated as a minimum figure.

Interplay between Housing and the Economy

- 5.22 The level of housing need will also be sensitive to economic growth, but the relationship again is a complex one. The relationship between housing and employment growth will however be sensitive to:
- Overall levels of employment growth;
 - The relationship between growth in jobs and growth in the number of people with jobs;
 - Changes to employment rates, including as a result of increasing state pension ages;
 - Changes in commuting patterns, particularly between individual local authorities.
- 5.23 It should be borne in mind that the forecasts shown are simply baseline forecast for economic growth. In interpreting the modelling in plan-making, the forecast employment growth assumptions should be compared against other evidence regarding economic dynamics.
- 5.24 Two economic forecasts have been considered in this report. The Experian econometric forecasts result in a modelled need for 3636 - 4066 homes per annum to 2031. This is below the level of need identified based on the 2012 SNPP. A higher level of housing need is generated in the scenario based on the Cambridge Econometrics' forecasts. The modelling indicates that in this scenario, 4546 - 5084 homes per year would be needed in the HMA. The lower end of the ranges shown is based on the 'Part Return to Trend' approach to modelling household formation and a continuation of existing commuting patterns. The higher end assumes that there is a 1:1 relationship between growth in jobs and residents in employment at a local authority level and that household formation rates for younger households aged 24-34 return by 2031 to the levels shown in the 2008-based Household Projections (as set out in Figure 14).
- 5.25 We would consider that the higher end of this range is unlikely, as given the functional links between areas and the demographic dynamics of the HMA (in particular with a young population structure and projected population growth in Coventry) it is reasonable to assume that there will continue to be a level of commuting between the different authorities in the HMA; and as we have set out it seems unlikely that we would see a full recovery in household formation rates, particularly in the City of Coventry, to the levels shown in the 2008-based household projections.
- 5.26 The level of housing need shown in the 2012 SNPP is potentially capable of accommodating the economic growth envisaged within the Experian economic projections (albeit that it is sensitive to changes in employment rates). However Cambridge Econometrics forecast higher employment

growth. The implication is that housing provision could be higher than shown in the 2012 SNPP, reinforcing the case for treating this as a minimum level of provision.

- 5.27 In developing local plans, we would advise the local authorities to consider how the housing evidence matches their evidence regarding economic prospects, and to adjust as appropriate their conclusions regarding assessed housing need to take account of their detailed local evidence regarding economic growth prospects. The alignment of housing provision with evidence regarding future economic growth potential within plans is required by Paragraph 158 in the NPPF.

Housing Distribution within the HMA

- 5.28 As Figure 3 demonstrates rates of population growth projected in the 2012 SNPP for the 2011-31 period vary between the HMA authorities between 6.1% in North Warwickshire, 15.6% in Rugby and 26.6% in Coventry. These differentials are a reflection in part of differences in demographic structure (with for instance a younger population in Coventry). However in some areas differences in rates of development may also have influenced levels of migration.
- 5.29 The distribution between housing provision within the HMA in the modelling herein compared to that in the SHMA is influenced by the adjustments in the modelling in the Joint SHMA Report to take account of unattributable population change (UPC). This report also highlights differences in the distribution of housing provision across the local authorities based on forecasts for economic growth as against past demographic trends.
- 5.30 Recognising the sensitivity of local authority level projections to migration levels, which can be highly variable year-on-year and are difficult to predict, we would attach greater weight to the HMA conclusions regarding the overall level of housing need across Coventry and Warwickshire. Figures set out herein regarding the need for housing in individual local authorities should be regarded as 'indicative' with greater weight places on figures for housing need across the HMA.
- 5.31 In line with Paragraph 158 within the NPPF, Councils will need to ensure that their strategies for housing and economic growth align with one another. The authorities working together could, taking account of economic evidence, housing land availability and potential investment in infrastructure, consider an alternative distribution strategy for housing to encourage sustainable travel patterns. The Planning Practice Guidance supports this.
- 5.32 In revoking regional strategies, the Government has emphasised that strategic planning is expected to be undertaken by local authorities working together. The next step will be the local authorities to collaboratively agree a distribution of housing within the HMA which takes into account the

demographic and economic-led projections, local evidence regarding economic growth potential as well as land availability and other local issues which are considered relevant.