

North Worcestershire Councils

Bromsgrove Local Plan

Housing Need Assessment - Report in
response to Inspector's Interim Conclusions

29th August 2014

Bromsgrove District Council

Bromsgrove Local Plan

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1 Introduction

- 1.1 This report sets out the results of new work undertaken to assess future housing need for Bromsgrove.
- 1.2 Initial joint hearing sessions were held on the 16th and 17th June 2014 into the examination of the Bromsgrove District Plan (BDP) and the Borough of Redditch Local Plan No.4. These sessions addressed the topics of objectively assessed housing need, the Duty to Co-operate and the timing and scope of the future Green Belt Review.
- 1.3 With regard to housing need, the evidence presented by the two Councils to the hearing sessions consisted primarily of the February 2012 SHMA plus appendices and a report by AMION Consulting (North Worcestershire Housing Need April 2014) with a demographic paper by Edge Analytics attached as an appendix.
- 1.4 The AMION report (NWHN report) presented a number of possible 'core' scenarios for assessing future housing need including:
- an ONS Sub-National forecast 'benchmark';
 - a 'Natural Change' scenario – with zero migration;
 - trend-based migration-led scenarios – assuming a continuation of recent migration patterns; and
 - 'employment-constrained' scenarios based on projections of the levels of population (and therefore migration if these projections exceed forecast natural change) that will be required to sustain forecast jobs in the area.
- 1.5 A series of 'sensitivity scenarios' (SS) were then presented using modified assumptions regarding various factors. These included:
- **SS1** – incorporating revised assumptions into all the core scenarios regarding household headship rates;
 - **SS2** – incorporating modified assumptions regarding future economic activity and unemployment rates into the 'employment-constrained' core scenarios;
 - **SS3** - as SS2 but based on new labour market research into the degree to which overall labour market conditions (i.e. tightening or loosening) will impact upon future activity and employment rates; and
 - **SS4** - applied to the '10-year migration-led core scenario and assuming an increased level of in-migration as a result of growth in the rest of the conurbation.
- 1.6 The report concluded that for North Worcestershire SS3 and SS4 were considered to provide the most realistic reflection of likely labour market and demographic realities. The net dwelling requirements for the Plan period of these household forecasts and the benchmark 2010 Sub-National Population Projection (2010 SNPP) forecasts were then calculated for each of the three North Worcestershire districts. Bromsgrove District Council's (BDC) assessment of housing need as presented to the inquiry was based on the latter 2010 SNPP forecasts.

- 1.7 The Inspector published his Interim Conclusions on 17th July 2014. While in the case of Redditch he concluded that there were no fundamental issues and that the remaining hearing sessions could continue as planned, he identified that further work was needed for Bromsgrove to determine the objectively assessed housing needs figure. In summary his conclusions were that:
- in line with the relevant national policy guidance, employment trends should be taken into account. The demographic-led scenarios (i.e. SS4 and 2010 SNPP) failed to take into account the implications of projected changes in the labour market and therefore could not be relied upon;
 - however, the preferred jobs-led scenario SS3 lacked robustness because it did not take account of the potential for future jobs growth to affect local commuting patterns; and
 - given that the Planning Policy Guidance (PPG) states that wherever possible, local needs information should be informed by the latest available information, there may be potential to take into account data from the most recent 2012-based Sub-National Population Projections (2012 SNPP) in the further work.
- 1.8 In order to meet these requirements, BDC has re-commissioned Edge Analytics to provide the following inputs:
- an updated demographic scenario using 2012 SNPP;
 - a re-run of the jobs-led Core Scenarios using latest population data; and
 - a re-run SS3, incorporating additional sensitivity analyses of at least three different levels of a reduction in commuting levels over the plan period.
- Since the production of the previous report, a new version of the population projection modelling software (POPGROUP) has been released. This amends the way in which internal migration is modelled in each scenario and has been used for the new inputs.
- 1.9 In addition, BDC has produced an assessment of market signals as advised by Paragraph: 019 of the National Planning Policy Guidance (NPPG).
- 1.10 AMION Consulting has also been re-commissioned to produce a report reviewing all of the above inputs and setting out a justified new objectively assessed housing needs figure for the period 2011-2030 that takes account of likely employment trends.
- 1.11 This report therefore continues in the following sections:
- Section 2 - sets out the revised core scenarios – the jobs-led and 2012 SNPP scenarios;
 - Section 3 - presents the new sensitivity scenarios – that assess the impact of changes in commuting ratios on the jobs-led Scenarios;
 - Section 4 - summarises the market signals analysis undertaken by BDC; and
 - Section 5 - sets out the conclusions from this additional work, including consideration of the dwelling requirement for the Plan period.

The report also includes two appendices, as follows:

- Appendix A Edge Analytics report presenting the revised forecasts; and
- Appendix B Bromsgrove DC report on market signals.

2 The Revised Core Scenarios

2.1 Introduction

- 2.1.1 This section reports on the revised jobs-led core and 'benchmark' scenario results for Bromsgrove. A full description of the methodologies used, the underpinning assumptions and the results is included at Appendix A.

2.2 The Scenarios

- 2.2.1 In line with the Inspector's recommendations, that "employment trends should be taken into account", revised core jobs-led scenarios have been produced by Edge Analytics. These differ from those projections in the earlier NWHN AMION report through the incorporation of data from the most recent 2012-based Sub-National population projections and the use of a new version of the POPGROUP modeling software.
- 2.2.2 These jobs-led 'core' scenarios use economic forecasts for each district that have been produced by Cambridge Econometrics, Oxford Economics and Experian. The demographic implications of each jobs scenario have been examined. Prior to 2012 these scenarios are constrained to the level of population growth according to the ONS Mid-Year Population Estimates to 2012. From 2012 to 2030 they are constrained by the growth in employment forecast for the period by each of the three economic forecasts. While the economic forecasts vary, each is considered to be up-to-date and realistic and representative. Accordingly, a further calculation has been produced presenting the mean results arising from use of the three forecasts.
- 2.2.3 It is important to benchmark any growth alternatives against the latest 'official' population projection. The most recent official projection is the ONS 2012-based SNPP, released in May 2014. The 'SNPP-2012' scenario replicates this official population projection.
- 2.2.4 The 'SNPP-2010' based scenario for Bromsgrove, is included for comparison. The population is re-scaled to the 2012 mid-year population estimate (MYE) to ensure consistency across scenarios and the 2010-based growth trajectory is continued thereafter. It therefore differs from the NWHN report 'SNPP-2010' scenario. This enables the different scenarios to be more easily compared from a consistent base year and does not alter the underlying assumptions or growth trajectory.

2.3 The Results

- 2.3.1 A summary of the results for each of the three core jobs-led scenarios and the two SNPP 'benchmarks' is provided in Table 1. It summarises the change in population and household numbers from 2006–2030 ranked according to the scale of expected change over the projection period.

- 2.3.2 The table also shows the average annual net migration associated with the population change, the estimated annual level of household growth over the projection period and finally the average annual dwelling requirement. The latter has been calculated using a 'vacancy rate' which is applied as an uplift to the household forecasts. The uplift rates used are 2.3% up to 2011 and 2.83% thereafter - derived by Edge Analytics from analysis of Council Tax statistics.
- 2.3.3 The most recent official population projection, the 2012-based SNPP, results in *lower* population growth than the earlier 2010-based SNPP. Under the 'SNPP-2012' scenario, the population grows by 12.4% over the forecast period, compared to 15.4% under the 'SNPP-2010' scenario. This results in a lower annual dwelling requirement of 263 dwellings per year, compared to 308 dwellings per year under the 'SNPP-2010' scenario.
- 2.3.4 The three jobs-led scenarios result in the highest population growth of the five scenarios, with an average of 26.0% and ranging from 24.6% under the 'Jobs-led Cambridge' scenario to 28.5% under the 'Jobs-led Oxford' scenario. These higher levels of population growth are driven by the higher net migration, which is required to sustain the labour force in line with the forecast growth in job numbers. The result is an average annual dwelling requirement of 457 ranging from 436 dwellings per year under the 'Jobs-led Cambridge' scenario to 495 dwellings under the 'Jobs-led Oxford' scenario.

Table 1: Bromsgrove Jobs-led Core Scenarios and Benchmark Forecast Summary 2006-30 (ranked in order of population change)							
Core scenario	Change 2006 - 2030				Average per year		
	Population change	Population change %	H'holds change	H'holds change %	Net Migration	H'holds	Dwellings
Jobs-led Oxford	26,126	28.5	11,364	30.7	1,217	473	495
Jobs-led Experian	22,760	24.8	10,096	27.2	1,094	421	441
Jobs-led Cambridge	22,550	24.6	9,981	26.9	1,091	416	436
<i>Jobs-led Average</i>	<i>23,812</i>	<i>26.0</i>	<i>10,480</i>	<i>28.3</i>	<i>1,134</i>	<i>437</i>	<i>457</i>
SNPP-2010	14,153	15.4	6,990	18.9	779	291	308
SNPP-2012	11,404	12.4	5,941	16.0	659	248	263

3 The Impact of Changes in Commuting Patterns

3.1 Introduction

- 3.1.1 The Inspector in his Interim Conclusions indicated that demographic scenarios were an unreliable base for future projections of housing need. However, he also considered that the NWHN report's 'preferred' jobs-led scenario (SS3) lacked robustness as, while it was informed by an analysis of employment trends, it assumed a fixed commuting ratio throughout the 2012-

30 period and therefore failed to take account of the probability that jobs growth would lead to changes in commuting patterns.

- 3.1.2 This section reports on the revised SS3 and a series of further sensitivity scenarios applied to SS3 to assess the impact of changes in commuting ratios

3.2 The Sensitivity Scenarios

- 3.2.1 Three key parameters determine the balance of migration (and hence population change) that is required to match the size of the labour force and the anticipated jobs growth:

- economic activity rates;
- unemployment rate; and
- commuting ratio – defined as the ratio of the resident workforce to the number of jobs in an area. Therefore a commuting ratio greater than 1.0 indicates net out-commuting and a ratio less than 1.0 a net in-commute.

- 3.2.2 The 'core' jobs-led scenarios assumed that these were constant over the forecasting period. In reality they will change and as a consequence so will the relationship between jobs growth and population growth (and therefore housing demand).

- 3.2.3 Accordingly, two further sets of projections were produced for the NWHN report using modified assumptions regarding activity and unemployment rates in order to provide more realistic forecasts. The second of these projections (SS3) used labour market research to model the variation in unemployment rates and economic activity rates across age-bands that might arise as a result of changing economic conditions (e.g. tightening or loosening labour markets). Commuting ratios were held constant. A revised SS3 is presented in this section using an updated 2011 Census commuting ratio of 1.18, which was not available at the time of the NWHN report.

- 3.2.4 However, as previously noted, the Inspector expressed concern about the fixed commuting ratio used in SS3. Accordingly, four additional sensitivity analyses, in which the commuting ratio has been incrementally reduced over the forecast period, have been produced. These are:

- **SS3a:** from 1.18 in 2011 to 1.06 by 2030 (based on a replication of the reduction of 0.12 in net out commuting that occurred between the 2001 and 2011 Censuses – from 1.30 to 1.18);
- **SS3b:** from 1.18 in 2011 to 1.08 by 2030 (based on the commuting ratio that would result if the 2011 resident workforce total remained constant but the number of jobs increased in line with the Cambridge or Experian forecasts);
- **SS3c:** from 1.18 in 2011 to 1.04 by 2030 (based on the commuting ratio that would result if the 2011 resident workforce total remained constant but the number of jobs increased in line with the Oxford Economics forecast); and
- **SS3d:** from 1.18 in 2011 to 1.00 by 2030 (based on a balanced Bromsgrove labour market).

- 3.2.5 The economic activity rate and unemployment assumptions in each of the above remain consistent with those used in SS3.

3.3 The Results

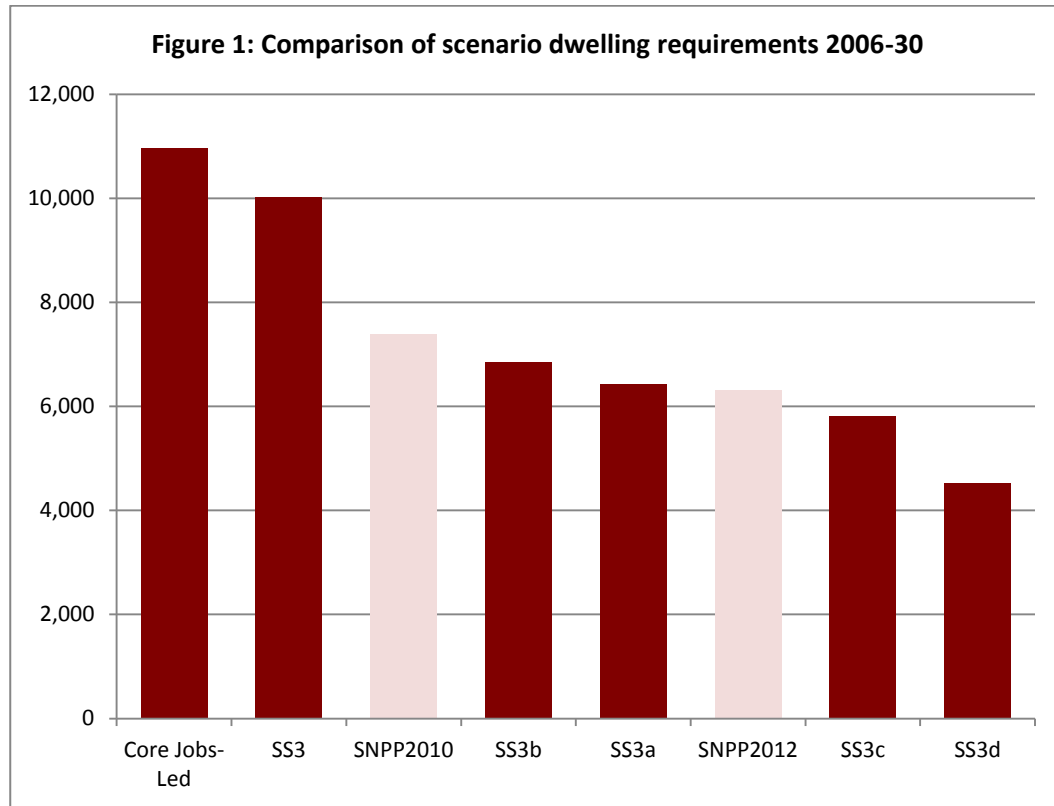
- 3.3.1 Table 2 presents the results of SS3 which involves the application of alternative unemployment and economic activity rate assumptions to the three jobs-led core scenarios presented in Section 2. The commuting ratio remains fixed at 1.18 throughout the forecast period (as in the 'core' scenarios). The changes made to the unemployment rate and economic activity rates result in a lower dwelling requirement than under the jobs-led 'core' scenario alternatives – a reduction from 457 dwellings per annum (10,973 in total) to 417 (10,018) under the 'jobs-led average'.

Table 2: Bromsgrove Sensitivity Scenario 3 Forecast 2006 - 2030								
	Sensitivity Scenario 3							Core Scenario
	Change 2006 - 2030				Average per year			Dwellings
	Population change	Population change %	H'holds change	H'holds change %	Net Migration	H'holds	Dwellings	
Jobs-led Oxford	23,477	26	10,403	28	1,116	433	454	495
Jobs-led Experian	20,244	22	9,182	25	998	383	402	441
Jobs-led Cambridge	20,043	22	9,070	24	995	378	397	436
<i>Jobs-led Average</i>	<i>21,254</i>	<i>23</i>	<i>9,552</i>	<i>26</i>	<i>1,036</i>	<i>398</i>	<i>417</i>	<i>457</i>

- 3.3.2 The four additional sensitivity scenarios produced in response to the Inspector's concerns regarding the fixed commuting ratio used in SS3 are summarised in Table 3. These commuting ratio adjustments inevitably result in lower population growth and consequently a significantly lower dwelling requirement.

Table 3: Bromsgrove - SS3 Commuting Ratio adjustments: Dwelling requirement change 2006-30						
Scenario	Average Annual Dwelling Requirement Change 2006 - 2030					
	Core Jobs-Led	Sensitivity Scenario 3	Sensitivity Scenario 3a	Sensitivity Scenario 3b	Sensitivity Scenario 3c	Sensitivity Scenario 3d
<i>Commuting Ratio</i>	<i>1.18 (Fixed)</i>	<i>1.18 (Fixed)</i>	<i>1.18 – 1.06</i>	<i>1.18 – 1.08</i>	<i>1.18 – 1.04</i>	<i>1.18 – 1.00</i>
Jobs-led Oxford	495	454	301	319	275	220
Jobs-led Experian	441	402	253	271	228	175
Jobs-led Cambridge	436	397	249	266	223	171
Jobs-led Average	457	417	268	285	242	189
Jobs-led Average - Total Dwellings	10,973	10,018	6,429	6,850	5,809	4,529

- 3.3.3 SS3a, SS3b and SS3c reduce the commuting ratio incrementally from 1.18, maintaining the net out-commute but reducing the proportion of the resident labour force that commutes out of Bromsgrove. In SS3d the commuting ratio has been reduced to 1.00, indicating a balance between the resident labour force and the number of jobs in Bromsgrove.
- 3.3.4 The range of scenarios involving reductions in commuting ratios result in dwelling requirements ranging from 189 dwellings per annum (equivalent to a total of 4,529) between 2006 and 2030 to 285 (6,850) under SS3b. These are substantially below the core jobs-led scenario and the unadjusted SS3 as can be seen in Figure 1 which also includes for comparative purposes the 'benchmark' SNPP-2010 and SNPP-2012 scenarios.



4 Market Signals

- 4.1 NPPG (2014) advises that local authorities ensure their assessment of need has been adjusted to reflect appropriate market signals regarding the balance between the demand for and supply of housing in their areas. It suggests that six factors should be reviewed. These are: land prices; house prices; rents; affordability; rate of development; and overcrowding.
- 4.2 BDC has reviewed the above and their findings are briefly summarised here. Their full report is attached as Appendix B.

Land prices

- 4.3 Although the assessment of land prices is particularly sensitive to changes in the market and dependent on a range of assumptions, the Bromsgrove District and Redditch Borough Local Plan Viability Study found that “land values vary dramatically depending upon the development characteristics (size and nature of the site, density permitted, etc.) and any affordable or other development contribution.” The study assumed a value of £750,000 per hectare (£300,000 per acre) for residential land.
- 4.4 The Study also recognised the importance of ‘hope values’ and their effect on landowners’ decisions when seeking to release land for development. By way of example, the Study

acknowledges that long-term land-owning families and estates take a different approach to releasing land from those organisations that are shorter term owners.

House prices

Based on the Department for Communities and Local Government data series live table 586 (itself based on Land Registry data) covering the period 1996 to 2012, Bromsgrove District has consistently demonstrated higher house prices than the national average and Worcestershire average. Although how house price changes are viewed and compared can alter their interpretation, the NPPG states that higher house prices and long term rises tend to indicate an imbalance between the demand for housing and its supply.

As an alternative indicator to absolute price, the report assesses proportional price changes on the basis that “a comparatively high price may indicate either comparatively high demand (an attractive area, better housing stock) or low supply (possibly due to planning constraints). The report concludes that Bromsgrove’s median house prices, when indexed to 1996 prices, have been growing at a slower rate compared to prices in Worcestershire and England.

With regard to supply, the report recognises that the “housing market is experiencing issues around supply as there are fewer properties for sale since the recession in 2008.” Moreover, the Land Registry’s Paid Price Data for Bromsgrove District reinforces this trend as it shows that almost 50% fewer properties were sold in 2013 than 2004. Data for the first seven months of 2014 indicate a similar position to 2013.

Rents

The Bromsgrove Market Signals report states that “average (median) private rents in Bromsgrove District during the period April 2013 to March 2014 were £625 per month, ranging from £460 per month for one bedroom to £1,050 for a four or more bed house.” This is based on evidence from the Valuation Office Agency (VOA) Private Rental Market Statistics. The report concludes that average rental values in Bromsgrove District are overall 5% higher than the national average, and that affordability within the private rental market sector has worsened in Bromsgrove District since 2011. However, the report acknowledges that further research on local housing supply is required to fully explain why rental prices are increasing.

Affordability

Whilst recognising that the ratio of house prices to earnings is one measure of the relative affordability of home ownership, the Market Signals report concludes that housing affordability is a significant problem in Bromsgrove District, where a consistently high ratio of lower quartile house prices to lower quartile earnings has been observed since 1997. Moreover, the report acknowledges that Bromsgrove District is currently ranked the 99th least affordable District in the Country (out of 362 authorities). According to the National Housing Federation, “the historic lack of supply has priced out local residents of Bromsgrove District who earn lower quartile wages from living in the District.”

Rate of development

When considering the number of net dwelling permissions versus the housing requirement (delivery target) in Bromsgrove District over the 2001/2002 to 2013/2014 period, the report concludes that the council has not restricted the supply of housing and has delivered the permissions sought by the development industry. However, while assessing the number of net dwelling completions versus the housing requirement in Bromsgrove District over the 2001/2002 to 2013/2014 period, completions have failed to match the required target since 2007/2008. The report suggests that this may be in part caused by the “ability to secure development finance; market conditions to secure maximum return on both land and development; and development or planning permissions being gained speculatively to demonstrate the potential value of site.”

Overcrowding

As one of a number of key indicators on overcrowding, the homelessness position in Bromsgrove appears to be similar to regional and national trends and is not considered by the report to be an acute problem.

With regard to occupancy rates, the report considers that the percentage of overcrowded households in Bromsgrove is generally lower than in other comparator authorities, and that this suggests that households in Bromsgrove are not disproportionately affected by having to accommodate more persons per room than is normally acceptable.

Using 2011 Census data, the report concludes that Bromsgrove has relatively low levels of concealed households compared to the averages for the West Midlands region and England as a whole.

Summary

In summary, the BDC review finds that the strongest market signal is ‘affordability’ and the report demonstrates it has very close links to house prices and rates of development. While land supply (and therefore development rates) are only two of a number of factors affecting affordability (macroeconomic conditions being a particularly important causal factor), the report suggests that “this market signal is sufficiently strong enough to warrant an upward adjustment to baseline projections”.

5 Conclusions

- 5.1 The further Sensitivity Scenarios (SS) developed (in response to the Inspector’s advice) to refine the original SS3 use varying assumptions regarding future changes in commuting ratios. Of these, SS3d which assumes a perfectly balanced labour market in Bromsgrove by 2030, is considered to be unrealistic. A mean of the remaining three scenarios (SS3a, 3b and 3c) is considered to provide the most realistic reflection of likely labour market and demographic realities.

- 5.2 Table 4 translates these, and, for 'benchmark' purposes, the SNPP 2012 forecasts (which are used by Experian in its economic forecasts), into net dwelling requirement figures for the plan period.
- 5.3 The relationship between households and dwellings is modelled using a 'vacancy rate' which is applied as an uplift to the household forecasts. The uplift rates have been derived by Edge Analytics from analysis of Council Tax statistics.
- 5.4 To ensure that there is no under-supply of housing prior to the plan period (2011-2030) a base date of 2006 has been used and completions for period 2006-2011 have been factored in to derive a net new dwelling requirement for Bromsgrove for the period 2011 – 2030 of 5,540 - equivalent to 292 per annum. This is comparable to the SNPP2012 'benchmark figure of 5,280 (278 per annum).
- 5.5 However, in order to finalise the objective assessment of housing need, market signals should also be considered. There is a lack of guidance in both NPPF and the PPG as to how any increase (or indeed decrease) in the housing need figure should be factored in. We do, however, concur with the findings of the BDC review (as summarised in Section 5) that affordability issues, in particular, would appear to warrant some uplift in the 5,540 figure.

Table 4: Net Dwelling Requirements 2011 – 2030 – comparison with NWHN report conclusions					
Scenario	Forecast Household-Change (2006-2030) (a)	Forecast Dwelling Requirement – factoring in vacancy and second home rates (2006-30) (b)	Housing Delivered Net 2006 – 2011 (5 years) (c)	Dwelling requirements 2011 - 2030 (19 years)	
				Net Dwelling requirement (Rounded) (d) = (b) – (c)	Net Annual Average Dwelling Requirement (Rounded) (d) / 19
NWHN Report 'Preferred' Scenarios (April 2014)					
Sensitivity Scenario 3 (average case)	10,292	10,580	823	9,760	510
Sensitivity Scenario 4	7,458	7,667	823	6,840	360
SNPP-2010	7,018	7,215	823	6,390	340
Updated Scenarios					
Sensitivity Scenario 3 (average case)	9,552	10,018	823	9,200	484
Sensitivity Scenario 3a (average case)	6,061	6,429	823	5,610	295
Sensitivity Scenario 3b (average case)	6,470	6,850	823	6,030	317
Sensitivity Scenario 3c (average case)	5,458	5,809	823	4,990	262
Sensitivity Scenario 3d (average case)	4,213	4,529	823	3,710	195
Mean Sensitivity Scenarios 3a - c (average case)	5,996	6,362	823	5,540	292
SNPP 2012	5,941	6,107	823	5,280	278

Appendix A - Edge Analytics report presenting the revised forecasts

Bromsgrove Population & Household Forecasts

Scenario Results

August 2014

For the attention of Bromsgrove District Council

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Acknowledgements

Demographic statistics used in this report have been derived from data from the Office for National Statistics licensed under the Open Government Licence v.1.0.

The authors of this report do not accept liability for any costs or consequential loss involved following the use of the data and analysis referred to here, which is entirely the responsibility of the users of the information presented in this report.

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1. Introduction

Context

- 1.1 In March 2014, Edge Analytics provided the North Worcestershire Councils (Bromsgrove, Redditch and Wyre Forest) with a series of demographic forecasts. A range of scenarios were developed using the latest demographic evidence, including trend-based forecasts and the most recent official population projection from the Office for National Statistics (ONS), the 2010-based sub-national population projection (SNPP). Using employment forecasts from Cambridge Econometrics, Oxford Economics and Experian, three ‘jobs-led’ scenarios were developed to examine the demographic implications of alternative jobs-growth trajectories.
- 1.2 Additional analysis was also conducted to evaluate the sensitivity of the forecasts to:
- Household headship rate variations (referred to as ‘Sensitivity Scenario 1’);
 - Economic activity rate and unemployment variations (referred to as ‘Sensitivity Scenarios 2 and 3’);
 - Internal migration assumptions (referred to as ‘Sensitivity Scenario 4’).
- 1.3 The demographic forecasts produced by Edge Analytics were used by Amion Consulting to produce the ‘North Worcestershire Housing Need’ report (April 2014)¹. The Bromsgrove District Plan (BDP)² and the Borough of Redditch Local Plan No.43 were subject to Examination in Public in June 2014.
- 1.4 The Inspector published his Interim Conclusions in July 2014⁴, in which he requested that further work be carried out to determine the objectively assessed housing need figure for Bromsgrove. Specifically, the Inspector felt that ‘Sensitivity Scenario 3’ did not present a robust assessment of need as it did “not

¹ http://www.bromsgrove.gov.uk/cms/PDF/North_Worcestershire_Housing_Need.pdf

² <http://www.bromsgrove.gov.uk/cms/environment-and-planning/planning/strategic-planning/bromsgrove-district-plan.aspx>

³ <http://redditch.whub.org.uk/cms/environment-and-planning/planning-services/planning-policy/development-plan/emerging-local-plan-no4.aspx>

⁴ http://www.bromsgrove.gov.uk/cms/pdf/Red_Brom_Inspector.pdf

take into account the potential for jobs growth to affect local commuting patterns” (paragraph 40 of the Interim Conclusions).

Requirements

- 1.5 Bromsgrove District Council (BDC) has requested that Edge Analytics provide an update to previously-provided work, using the latest demographic statistics for Bromsgrove.
- 1.6 Since the original March 2014 report was produced, the ONS has released the 2012-based SNPP5, replacing the 2011-based ‘interim’ SNPP and the earlier 2010-based SNPP. ‘Travel to Work’ statistics from the 2011 Census have also been published in full, providing an updated ‘commuting ratio’ for Bromsgrove6.
- 1.7 BDC has specifically requested that:
- (a) The 2012-based SNPP scenario is included as the new ‘official’ population projection;
 - (b) The ‘jobs-led’ scenarios and ‘Sensitivity Scenario 3’ scenarios are re-run using the updated commuting statistics;
 - (c) Additional sensitivity analysis is conducted to examine how altering the commuting ratio impacts the dwelling requirements of the ‘Sensitivity Scenario 3’ scenarios.
- 1.8 A further change that has occurred since the production of the previous report is the release of the latest version of the population projection modelling software, POPGROUP. For POPGROUP v.4, changes have been made to the way in which internal migration is modelled in each scenario (for further information on POPGROUP, refer to Appendix A).

Approach

- 1.9 Edge Analytics has used POPGROUP (v.4) technology to develop the new range of demographic scenarios for Bromsgrove. The 2012-based SNPP is included, as is the earlier 2010-based SNPP for comparison. The three ‘jobs-led’ scenarios (based on employment forecasts from Cambridge

⁵ 2012-based SNPP for England, ONS, 29th May 2014 http://www.ons.gov.uk/ons/dcp171778_363912.pdf

⁶ <https://www.nomisweb.co.uk/census/2011/wu02uk>

Econometrics, Oxford Economics and Experian) have been produced using the latest commuting data and most recent demographic statistics.

- 1.10 A range of 'sensitivity' scenarios has also been produced. 'Sensitivity Scenario 3' has been re-produced, using the updated commuting data (for consistency with the March 2014 report, the scenario name is kept the same). Four additional sensitivity scenarios have been developed, based on 'Sensitivity Scenario 3', examining the impacts of a reducing commuting ratio on the resulting dwelling requirement.
- 1.11 All the scenarios have been run from a start year of 2012 to a 2030 horizon. Historical data are included for the 2001–2012 period.

Report Structure

- 1.12 In Section 2, the scenarios are defined. The scenario results are presented in Section 3.
- 1.13 Detail on the assumptions underpinning the scenarios and the POPGROUP methodology can be found in the Appendix.

2. Scenario Definition

- 2.1 Five 'core' scenarios and five 'sensitivity' scenarios have been produced for Bromsgrove using POPGROUP (v.4) technology. In each of the scenarios, the implied number of households has been derived using household headship rates, from the 2008-based and 2011-based DCLG household models (using the 'Index' approach). For detail on the household assumptions, and the other assumptions underpinning the scenarios, refer to Appendix B.

Core Scenarios

Official Projections

- 2.2 In the development and analysis of population forecasts, it is important to benchmark any growth alternatives against the latest 'official' population projection. The most recent official projection is the ONS 2012-based SNPP, released in May 2014. The '**SNPP-2012**' scenario replicates this official population projection.
- 2.3 The '**SNPP-2010**' scenario, which replicates the ONS 2010-based SNPP for Bromsgrove, is included for comparison. The population is re-scaled to the 2012 mid-year population estimate (MYE) to ensure consistency across scenarios and the 2010-based growth trajectory is continued thereafter. This enables the different scenario alternatives to be more easily compared from a consistent base year and does not alter the underlying assumptions or growth trajectory.

Jobs-led Scenarios

- 2.4 In a 'jobs-led' scenario, population growth is determined by the number of jobs available within an area. POPGROUP evaluates the impact of a particular jobs growth trajectory by measuring the relationship between the number of jobs in an area, the size of the labour force and the size of the resident population. Migration is used to balance the relationship between the size of the population's labour force and the forecast number of jobs. A higher level of net in-migration will occur if there is insufficient

population and resident labour force to meet the forecast number of jobs. A higher level of net out-migration will occur if the population is too high relative to the forecast number of jobs.

2.5 The following jobs-led scenarios have been developed:

- **'Jobs-led Oxford'**: Population growth is determined by an annual net change in jobs numbers as defined in the 'Oxford Economics' employment forecast for Bromsgrove.
- **'Jobs-led Experian'**: Population growth is determined by an annual net change in jobs numbers as defined in the 'Experian' employment forecast for Bromsgrove.
- **'Jobs-led Cambridge'**: Population growth is determined by an annual net change in jobs numbers as defined in the 'Cambridge Econometrics' employment forecast for Bromsgrove.

2.6 The jobs growth figures used in each of these scenarios for the forecast period (2012–2030) are shown in Figure 1.

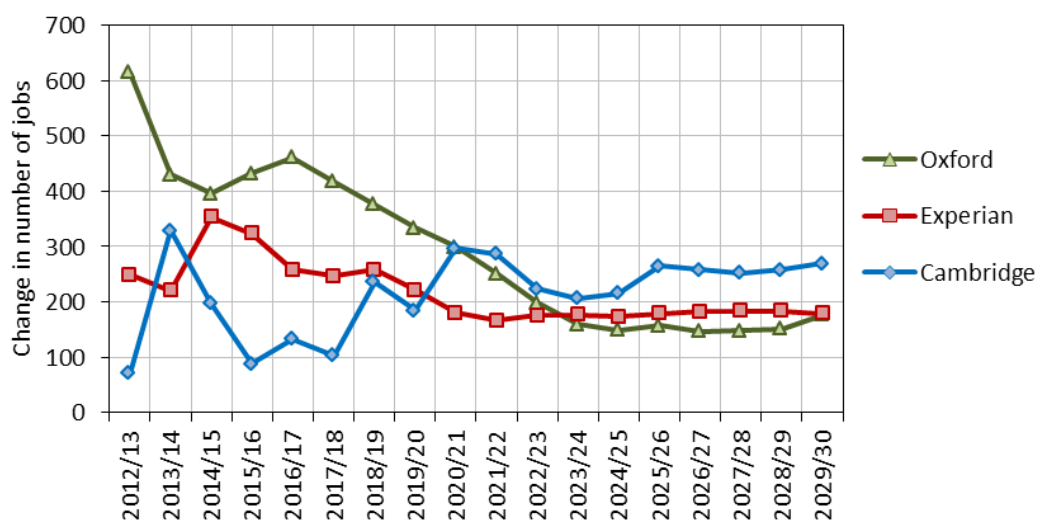


Figure 1: Jobs growth trajectories used in the POPGROUP model for Bromsgrove.
Source: Cambridge Econometrics, Oxford Economics, Experian.

2.7 Three key data items are required to run jobs-led scenarios. Economic activity rates provide the basis for calculating the size of the labour force within the population. A commuting ratio and an unemployment rate control the balance between the size of the labour force and the number of jobs within an area. In the core scenarios, these assumptions are fixed throughout the forecast period (2012-2030). See Appendix B for detail on these assumptions.

Sensitivity Scenarios

- 2.8 In the March 2014 report, two jobs-led sensitivity analyses were developed: 'Sensitivity Scenario 2' and 'Sensitivity Scenario 3'.
- 2.9 BDC has requested that '**Sensitivity Scenario 3**' be re-produced here using the updated 2011 Census commuting ratio of 1.18⁷. In this sensitivity scenario, the economic activity rates have been altered in line with the three employment forecasts, using data supplied by AMION Consulting (consistent with the March 2014 report). The unemployment rate has been altered using an index based on the Experian employment forecast (supplied by AMION Consulting and consistent with the March 2014 report).
- 2.10 As the Inspector expressed concern about the fixed commuting ratio used in 'Sensitivity Scenario 3', four additional sensitivity analyses have been produced. In these sensitivities, the commuting ratio has been incrementally reduced over the forecast period:
- '**Sensitivity Scenario 3a**': from 1.18 in 2011 to 1.06 by 2030.
 - '**Sensitivity Scenario 3b**': from 1.18 in 2011 to 1.08 by 2030.
 - '**Sensitivity Scenario 3c**': from 1.18 in 2011 to 1.04 by 2030.
 - '**Sensitivity Scenario 3d**': from 1.18 in 2011 to 1.00 by 2030.
- 2.11 The economic activity rate and unemployment assumptions are consistent with 'Sensitivity Scenario 3'. For detail on assumptions used in the sensitivity scenarios, refer to Appendix B.

⁷ In the March 2014 report, a 2011 commuting ratio of 1.19 was derived from Census tables as the 'Travel to Work' statistics had not been released.

3. Scenario Results

Core Scenarios

- 3.1 A summary of the results for each of the five core scenarios is provided in the form of a chart (Figure 2) and an accompanying table (Table 1). The chart illustrates the trajectory of population change resulting from each scenario. The table summarises the change in population and household numbers from 2012–2030 that results from each scenario. The scenarios are ranked (high to low) according to the expected population change over the projection period. The table also shows the average annual net migration associated with the population change, the average annual jobs growth and the average annual dwelling requirement.
- 3.2 The most recent official population projection, the 2012-based SNPP, results in lower population growth than the earlier 2010-based SNPP. Under the ‘SNPP-2012’ scenario, the population grows by 9.4% over the forecast period, compared to 12.3% under the ‘SNPP-2010’ scenario. This results in a lower annual dwelling requirement of 254 dwellings per year, compared to 314 dwellings per year under the ‘SNPP-2010’ scenario.
- 3.3 The three jobs-led scenarios result in the highest population growth of the five scenarios, ranging from 21.2% under the ‘Jobs-led Cambridge’ scenario to 25.0% under the ‘Jobs-led Oxford’ scenario. These higher levels of population growth are driven by higher annual net migration, which is required to sustain the labour force in line with the forecast growth in job numbers. The average annual net migration ranges from 1,285 to 1,453 per year under the jobs-led scenarios. This level of population growth produces an average annual dwelling requirement of 485 dwellings per year under the ‘Jobs-led Cambridge’ scenario to 564 dwellings per year under the ‘Jobs-led Oxford’ scenario.

Bromsgrove: Core Scenario Results

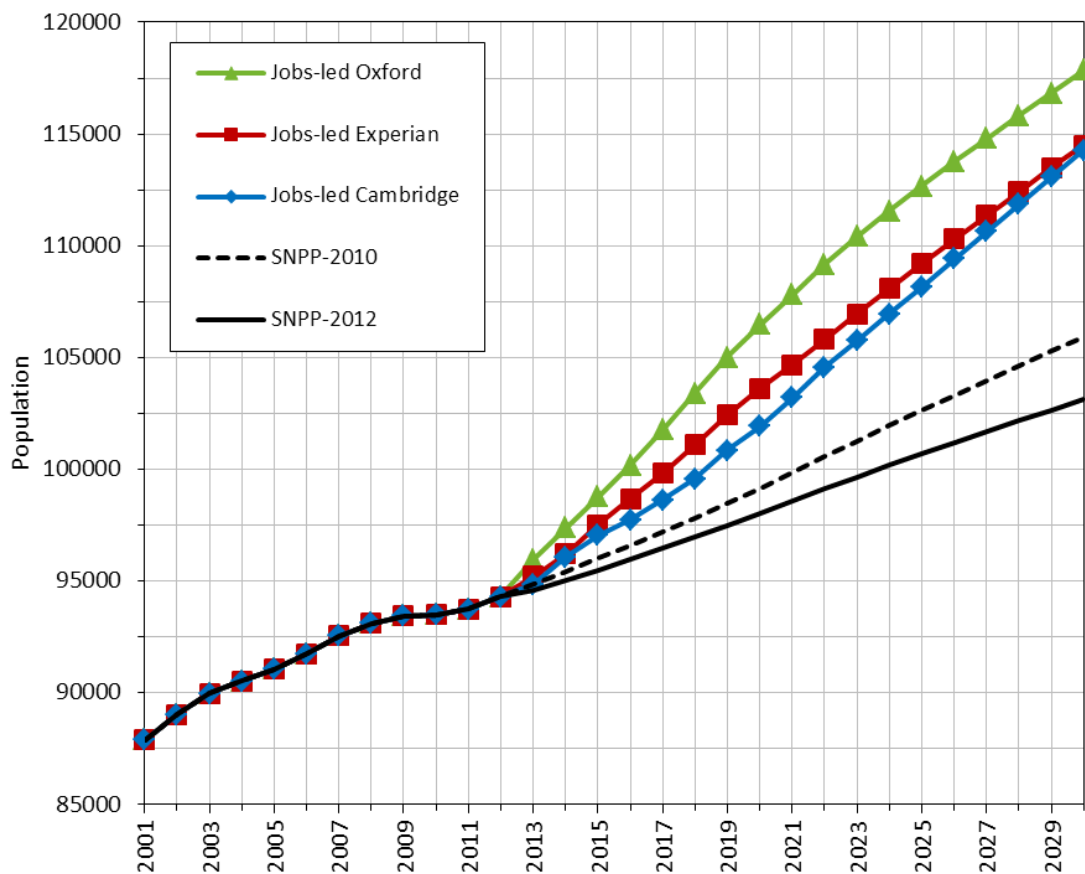


Figure 2: Bromsgrove scenario forecasts: population growth 2012-2030

Table 1: Bromsgrove scenario forecast summary 2012-2030 (ranked in order of population change)

Scenario	Change 2012 - 2030				Average per year		
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Jobs
Jobs-led Oxford	23,575	25.0%	9,874	25.6%	1,453	564	294
Jobs-led Experian	20,209	21.4%	8,607	22.3%	1,289	492	217
Jobs-led Cambridge	19,999	21.2%	8,491	22.0%	1,285	485	215
SNPP-2010	11,602	12.3%	5,501	14.3%	868	314	37
SNPP-2012	8,853	9.4%	4,452	11.5%	709	254	-55

Sensitivity Scenarios

- 3.4 Three key parameters determine the balance of migration (population change) that is required to match the size of the labour force and the anticipated jobs growth: economic activity rates, the unemployment rate and the commuting ratio. In the core scenarios, these three assumptions have been ‘fixed’ throughout the forecast period (2012–2030).
- 3.5 In reality, and in the assumptions that have been applied in the respective economic forecasts from Cambridge Econometrics, Oxford Economics and Experian, these three assumptions change over time and have an important effect upon the relationship between population growth and jobs growth (and therefore upon the derived dwelling requirement).
- 3.6 In ‘Sensitivity Scenario 3’, the three jobs-led scenarios have been run with alternative unemployment and economic activity rate assumptions. The commuting ratio remains fixed at 1.18 throughout the forecast period, as in the ‘core’ scenarios. The unemployment and economic activity rate assumptions are consistent with ‘Sensitivity Scenario 3’ presented in the March 2014 report (see Appendix B for further detail). The changes made to the unemployment rate and economic activity rates result in a lower dwelling requirement than under the jobs-led ‘core’ scenario alternatives (Table 2).

Table 2: Bromsgrove ‘Sensitivity Scenario 3’ dwelling requirements

Scenario	Average Annual Dwelling Requirement 2012–2030	
	Core Scenario	Sensitivity Scenario 3
Jobs-led Oxford	564	509
Jobs-led Experian	492	439
Jobs-led Cambridge	485	433

- 3.7 As the Inspector expressed concern about the fixed commuting ratio used in ‘Sensitivity Scenario 3’, four additional sensitivity analyses have been produced. In ‘Sensitivity Scenario 3a’, ‘Sensitivity Scenario 3b’ and ‘Sensitivity Scenario 3c’, the commuting ratio has been incrementally reduced from 1.18, maintaining the net out-commute but reducing the proportion of the resident labour force that commutes out of Bromsgrove. In ‘Sensitivity Scenario 3d’ the commuting ratio has been reduced to 1.00, indicating a balance between the resident labour force and the number of jobs in Bromsgrove.
- 3.8 These commuting ratio adjustments result in lower population growth (Table 3) for each of the jobs-led scenarios and therefore a lower dwelling requirement (Table 4). The ‘Sensitivity Scenario 3’

alternative dwelling requirements are summarised in Figure 3.

Table 3: Bromsgrove 'Sensitivity Scenario 3' alternatives: population growth

Scenario	Population Change 2012–2030					
	Core Scenario	Sensitivity Scenario 3	Sensitivity Scenario 3a	Sensitivity Scenario 3b	Sensitivity Scenario 3c	Sensitivity Scenario 3d
<i>Commuting Ratio</i>	<i>Fixed</i>	<i>Fixed</i>	<i>1.18 to 1.06</i>	<i>1.18 to 1.08</i>	<i>1.18 to 1.04</i>	<i>1.18 to 1.00</i>
Jobs-led Oxford	25.0%	22.2%	11.8%	13.0%	10.0%	6.3%
Jobs-led Experian	21.4%	18.8%	8.7%	9.9%	6.9%	3.4%
Jobs-led Cambridge	21.2%	18.6%	8.5%	9.7%	6.8%	3.2%

Table 4: Bromsgrove 'Sensitivity Scenario 3' alternatives: dwelling requirements

Scenario	Average Annual Dwelling Requirement 2012–2030					
	Core Scenario	Sensitivity Scenario 3	Sensitivity Scenario 3a	Sensitivity Scenario 3b	Sensitivity Scenario 3c	Sensitivity Scenario 3d
<i>Commuting Ratio</i>	<i>Fixed</i>	<i>Fixed</i>	<i>1.18 to 1.06</i>	<i>1.18 to 1.08</i>	<i>1.18 to 1.04</i>	<i>1.18 to 1.00</i>
Jobs-led Oxford	564	509	306	329	270	198
Jobs-led Experian	492	439	242	265	208	137
Jobs-led Cambridge	485	433	236	259	202	132

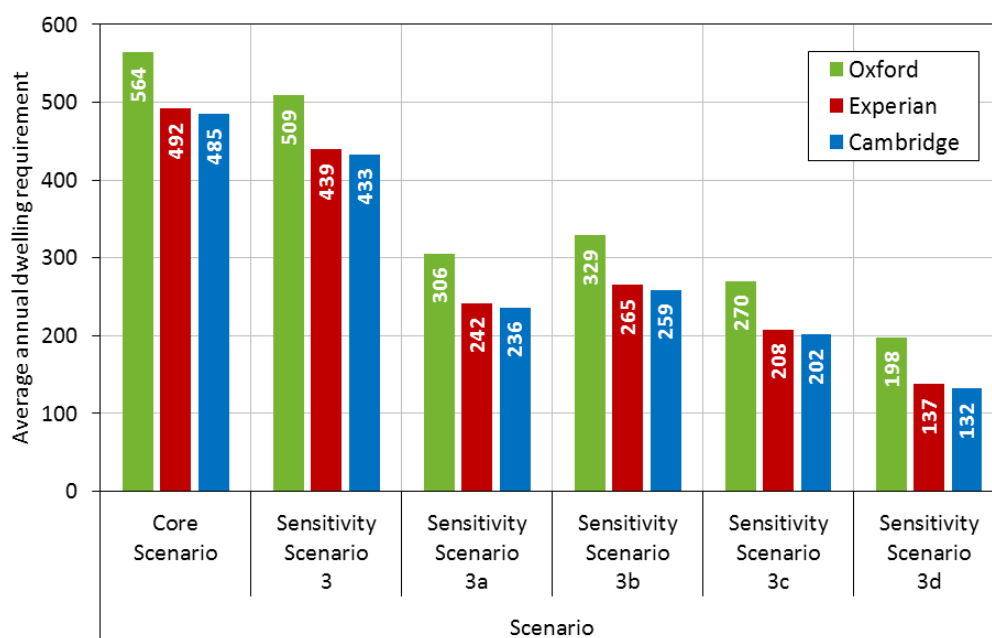


Figure 3: Bromsgrove sensitivity scenario: dwelling requirement summary 2012-2030

Appendix A

POPGROUP Methodology

Forecasting Methodology

- A.1 Evidence is often challenged on the basis of the appropriateness of the methodology that has been employed to develop growth forecasts. The use of a recognised forecasting product which incorporates an industry-standard methodology (a cohort component model) removes this obstacle and enables a focus on assumptions and output, rather than methods.
- A.2 Demographic forecasts have been developed using the POPGROUP suite of products. POPGROUP is a family of demographic models that enables forecasts to be derived for population, households and the labour force, for areas and social groups. The main POPGROUP model (Figure 4) is a cohort component model, which enables the development of population forecasts based on births, deaths and migration inputs and assumptions.
- A.3 The Derived Forecast (DF) model (Figure 5) sits alongside the population model, providing a headship rate model for household projections and an economic activity rate model for labour-force projections.
- A.4 The latest development in the POPGROUP suite of demographic models is POPGROUP v.4, which was released in January 2014. A number of changes have been made to the POPGROUP model to improve its operation and to ensure greater consistency with ONS forecasting methods.
- A.5 The most significant methodological change relates to the handling of internal migration in the POPGROUP forecasting model. The level of internal in-migration to an area is now calculated as a rate of migration relative to a defined 'reference population' (by default the UK population), rather than as a rate of migration relative to the population of the area itself (as in POPGROUP v3.1). This approach ensures a closer alignment with the 'multi-regional' approach to modelling migration that is used by ONS.
- A.6 For detail on the POPGROUP methodology, please refer to the POPGROUP v.4 user manual, which can be found at the POPGROUP website: <http://www.ccsr.ac.uk/popgroup/index.html>

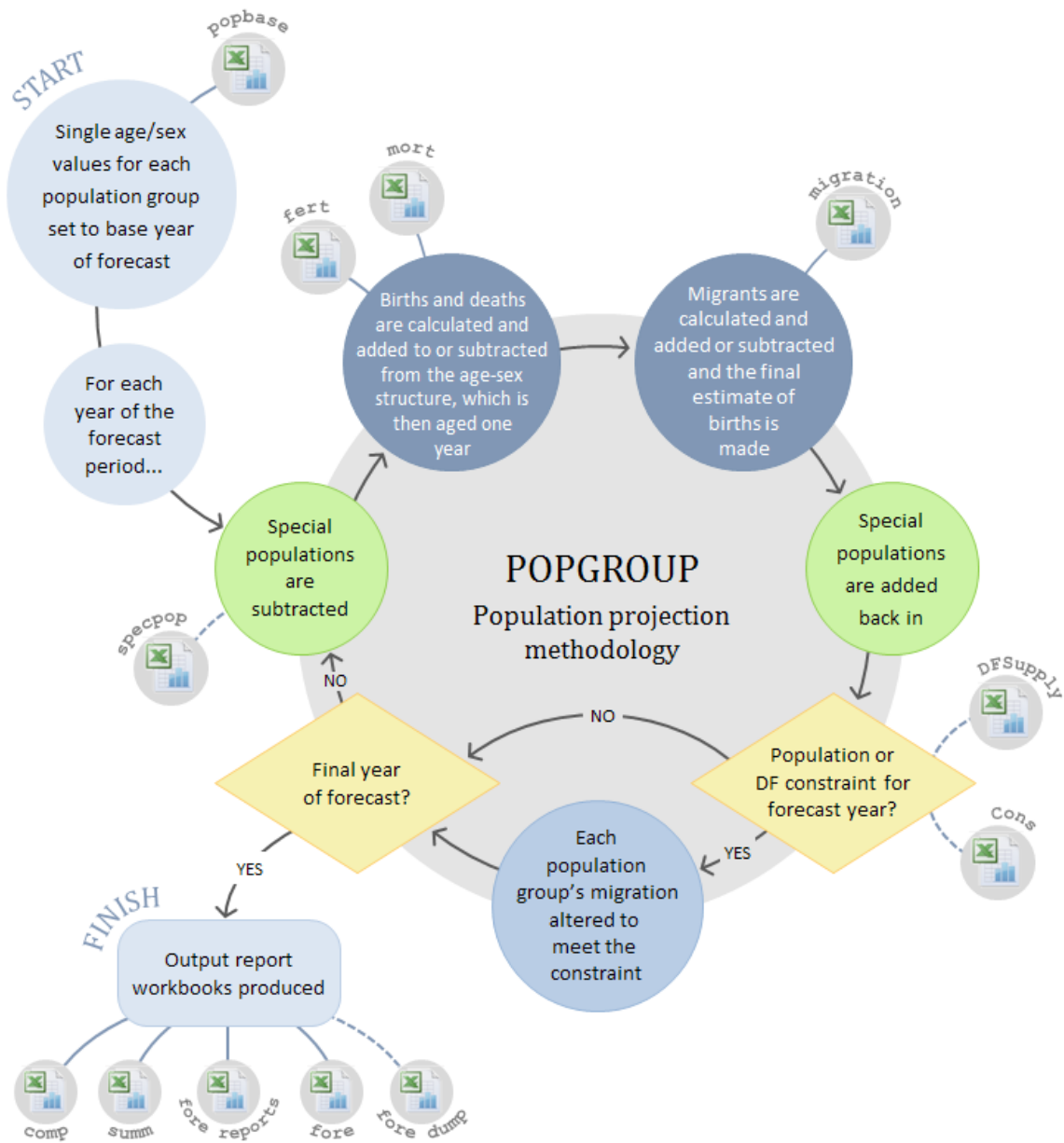
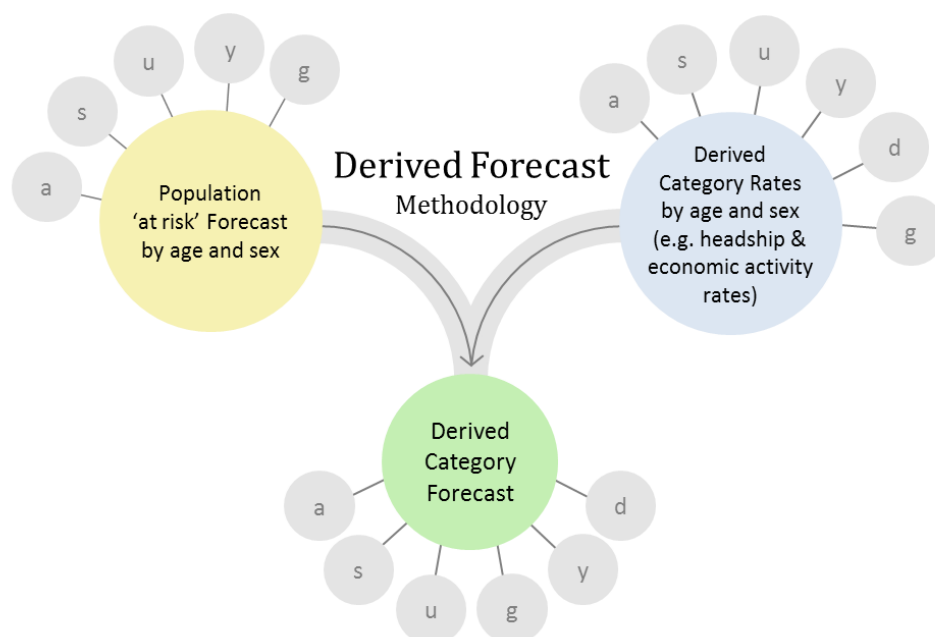


Figure 4: POPGROUP population projection methodology.



$$D_{a,s,u,y,d,g} = \frac{P_{a,s,u,y,g} R_{a,s,u,y,d,g}}{100}$$

- D* Derived Category Forecast
- P* Population 'at risk' Forecast
- R* Derived Category Rates
- a* Age-group
- s* Sex
- u* Sub-population
- y* Year
- d* Derived category
- g* Group (usually an area, but can be an ethnic group or social group)

Figure 5: Derived Forecast (DF) methodology

Appendix B

Data Inputs & Assumptions

Introduction

- B.1 Edge Analytics has developed a suite of demographic scenarios for Bromsgrove using POPGROUP (v.4).
- B.2 The POPGROUP model draws data from a number of sources, building an historical picture of population, households, fertility, mortality and migration on which to base its scenario forecasts. Using the historical data evidence for 2001–2012, in conjunction with information from the ONS 2012-based sub-national population projections (SNPP), a series of assumptions have been derived which drive the scenario forecasts.
- B.3 In the following sections, a narrative on the data inputs and assumptions underpinning the scenarios is presented.

Population, Births & Deaths

Population

- B.4 In each scenario, historical population statistics are provided by the mid-year population estimates for 2001–2012, with all data recorded by single-year of age and sex. These data include the revised mid-year population estimates for 2002–2010, which were released by the ONS in May 2013. The revised mid-year population estimates provide consistency in the measurement of the components of change (i.e. births, deaths, internal migration and international migration) between the 2001 and 2011 Censuses.
- B.5 In the ‘SNPP-2010’ scenario, future population counts are provided by single-year of age and sex to ensure consistency with the trajectory of the official 2010-based sub-national population projection (SNPP). The ‘SNPP-2010’ scenario is scaled to ensure consistency with the 2012 mid-year population estimate total, following its designated growth trend thereafter. This enables the different scenario

alternatives to be more easily compared from a consistent base year and does not alter the underlying assumptions or growth trajectory.

- B.6 In the 'SNPP-2012' scenario, future population counts are provided by single-year of age and sex to ensure consistency with the trajectory of the official 2012-based SNPP.

Births & Fertility

- B.7 In each scenario, historical mid-year to mid-year counts of births by sex from 2001/02 to 2011/12 have been sourced from ONS Vital Statistics.
- B.8 In the 'SNPP-2010' and 'SNPP-2012' scenarios, future counts of births are specified to ensure consistency with the official projections. In the other scenarios, a 'local' (i.e. area-specific) age-specific fertility rate (ASFR) schedule, which measures the expected fertility rates by age and sex in 2013/14, is included in the POPGROUP model assumptions. This is derived from the ONS 2012-based SNPP.
- B.9 Long-term assumptions on changes in age-specific fertility rates are taken from the ONS 2012-based SNPP.
- B.10 In combination with the 'population-at-risk' (i.e. all women between the ages of 15–49), the area-specific ASFR and future fertility rate assumptions provide the basis for the calculation of births in each year of the forecast period.

Deaths & Mortality

- B.11 In each scenario, historical mid-year to mid-year counts of deaths by age and sex from 2001/02 to 2011/12 have been sourced from ONS Vital Statistics.
- B.12 In the 'SNPP-2010' and 'SNPP-2012' scenarios, future counts of deaths are specified to ensure consistency with the official projections. In the other scenarios, a 'local' (i.e. area-specific) age-specific mortality rate (ASMR) schedule, which measures the expected mortality rates by age and sex in 2013/14 is included in the POPGROUP model assumptions. This is derived from the ONS 2012-based SNPP.
- B.13 Long-term assumptions on changes in age-specific mortality rates are taken from the ONS 2012-based SNPP.

- B.14 In combination with the ‘population-at-risk’ (i.e. the total population), the area-specific ASMR and future mortality rate assumptions provide the basis for the calculation of deaths in each year of the forecast period.

Migration

Internal Migration

- B.15 In all scenarios, historical mid-year to mid-year estimates of in- and out-migration by five year age group and sex from 2001/02 to 2011/12 have been sourced from the ‘components of change’ files that underpin the ONS mid-year population estimates. These internal migration flows are estimated using data from the Patient Register (PR), the National Health Service Central Register (NHSCR) and Higher Education Statistics Agency (HESA).
- B.16 In the ‘SNPP-2010’ and ‘SNPP-2012’ scenarios, future counts of internal migrants are specified, to ensure consistency with the official projections.
- B.17 The jobs-led scenarios calculate their own internal migration assumptions to ensure an appropriate balance between the population and the targeted increase in the number of jobs that is defined in each year of the forecast period. A higher level of net internal migration will occur if there is insufficient population to meet the jobs target. The profile of internal migrants is defined by an age-specific migration rate (ASMigR) schedule, derived from the ONS 2012-based SNPP.
- B.18 In the case of internal in-migration, the ASMigR schedule of rates is applied to an external ‘reference’ population (i.e. the population ‘at-risk’ of migrating into the area). This is different to the other components (i.e. births, deaths and international migration), where the schedule of rates is applied to the area-specific population. In the case of Bromsgrove, the reference population is defined as the total population of the districts where 70% of the in-migrants to the region⁸ come from.

⁸ ‘Region’ defined here as the districts comprising the Worcestershire Local Enterprise Partnership (LEP) and the Greater Birmingham and Solihull LEP.

International Migration

- B.19 Historical mid-year to mid-year counts of total immigration and emigration from 2001/02 to 2011/12 have been sourced from the 'components of change' files that underpin the ONS mid-year population estimates. Any 'adjustments' made to the mid-year population estimates to account for asylum cases are included in the international migration balance.
- B.20 Implied within the international migration component of change in all scenarios is an 'unattributable population change' (UPC) figure, which ONS identified within its latest mid-year estimate revisions. The POPGROUP model has assigned the UPC to international migration as it is the component with the greatest uncertainty associated with its estimation.
- B.21 In all scenarios, future international migration assumptions are defined as 'counts' of migration. In the 'SNPP-2010' and 'SNPP-2012' scenarios, the international in- and out-migration counts are drawn directly from the official projections. In the jobs-led scenarios, international migration counts are taken from the ONS 2012-based SNPP (i.e. counts are consistent with the 'SNPP-2012' scenario). An ASMiGR schedule of rates from the ONS 2012-based SNPP is used to distribute future counts by single year of age.

Households & Dwellings

- B.22 The 2011 Census defines a household as:

“one person living alone, or a group of people (not necessarily related) living at the same address who share cooking facilities and share a living room or sitting room or dining area.”⁹

- B.23 A dwelling is defined as a unit of accommodation which may comprise one or more household spaces (a household space is the accommodation used or available for use by an individual household).
- B.24 For each scenario, the household and dwelling implications of the population growth trajectory have been evaluated through the application of headship rate statistics, communal population statistics and a dwelling vacancy rate. These data assumptions have been sourced from the 2001 and 2011 Censuses and the 2008-based and 2011-based household projection models from the Department for Communities and Local Government (DCLG).

⁹ <http://www.ons.gov.uk/ons/guide-method/census/2011/census-data/2011-census-user-guide/glossary/index.html>

Household Headship Rates

B.25 Household headship rates define the likelihood of a particular household type being formed in a particular year, given the age-sex profile of the population in that year. Household-types are modelled within a 17-fold classification (Table 5).

Table 5: Household type classification

ONS Code	DF Label	Household Type
OPM	OPMAL	One person households: Male
OPF	OPFEM	One person households: Female
OCZZP	FAMC0	One family and no others: Couple: No dependent children
OC1P	FAMC1	One family and no others: Couple: 1 dependent child
OC2P	FAMC2	One family and no others: Couple: 2 dependent children
OC3P	FAMC3	One family and no others: Couple: 3+ dependent children
OL1P	FAML1	One family and no others: Lone parent: 1 dependent child
OL2P	FAML2	One family and no others: Lone parent: 2 dependent children
OL3P	FAML3	One family and no others: Lone parent: 3+ dependent children
MCZDP	MIX C0	A couple and one or more other adults: No dependent children
MC1P	MIX C1	A couple and one or more other adults: 1 dependent child
MC2P	MIX C2	A couple and one or more other adults: 2 dependent children
MC3P	MIX C3	A couple and one or more other adults: 3+ dependent children
ML1P	MIX L1	A lone parent and one or more other adults: 1 dependent child
ML2P	MIX L2	A lone parent and one or more other adults: 2 dependent children
ML3P	MIX L3	A lone parent and one or more other adults: 3+ dependent children
OTAP	OTHHH	Other households
TOT	TOTHH	Total

- B.26 The household headship rates used in the POPGROUP modelling have been taken from the DCLG 2008-based and 2011-based household projections. The 2011-based household projections were released for local authority districts in England in April 2013, superseding the 2008-based model. However, as the 2011-based household model is underpinned by the 2011-based SNPP, the headship rate assumptions have only been published for the 2011–2021 period.
- B.27 For the forecasting analysis presented in this report, the 2011-based headship rate assumptions are applied to 2021 but, thereafter, rates of change in household formation that are consistent with the previous 2008-based household model are applied (the ‘index’ approach). This approach is consistent with the ‘Option C’ approach used in the previous North Worcestershire project.

Communal Population

- B.28 Household projections in POPGROUP exclude the population 'not-in-households' (i.e. the communal/institutional population). These data are drawn from the DCLG 2011-based household projection, which uses statistics from the 2011 Census. Examples of communal establishments include prisons, residential care homes and student halls of residence.
- B.29 For ages 0–74, the number of people in each age group 'not-in-households' is kept fixed throughout the forecast period. For ages 75–85+, the proportion of the population 'not-in-households' is recorded. Therefore, the population not-in-households for ages 75–85+ varies across the forecast period depending on the size of the population.
- B.30 The dwelling numbers derived through POPGROUP therefore do not include the housing requirement of any of the people included in the population 'not-in-households' statistics, as they are excluded from the household calculation.

Vacancy Rate

- B.31 The relationship between households and dwellings is modelled using a 'vacancy rate', sourced from the 2011 Census. A vacancy rate of 2.8% has been applied, fixed throughout the forecast period.
- B.32 Using this vacancy rate, the 'dwelling requirement' of the household growth trajectory resulting from each scenario has been evaluated.

Labour Force & Jobs

- B.33 For each scenario (excluding the jobs-led scenarios), the labour force and jobs implications of the population growth trajectory have been evaluated through the application of three key data items: economic activity rates, a commuting ratio and an unemployment rate.
- B.34 In the jobs-led scenarios, these three data items are used to determine the population growth required by a particular jobs growth trajectory.

Economic Activity Rates

- B.35 The proportion of the population that are 'economically active' (i.e. the labour force) includes both those that are employed and those that are unemployed. Economic activity rates determine the level of labour force participation associated with a particular age-sex category.
- B.36 The economic activity rates (by sex and five year age group for ages 16-74) used in all the scenarios are based on the latest statistics from the 2011 Census, published in November 2013. The 2011 Census statistics include an open-ended 65+ age categorisation, so economic activity rates for the 65–69 and 70–74 age groups have been estimated using a combination of Census 2011 tables, disaggregated using evidence from the 2001 Census.
- B.37 A comparison of the 2001 and 2011 Census economic activity rates for Bromsgrove is shown in Figure 6 and Table 6. Economic activity rates increased in all but the youngest age group for females between 2001 and 2011. For men, economic activity rates decreased in the younger age groups but increased for ages 50+.
- B.38 In the 'core' scenarios, the economic activity rates are fixed at 2011 levels throughout the forecast period.
- B.39 In the 'sensitivity' scenarios, changes have been made to the economic activity rates. In line with the previously produced 'Sensitivity Scenario 3', the 2011 Census economic activity rates have been modified; firstly, to account for planned changes to the SPA; and secondly to ensure consistency with the assumptions being made within the Cambridge Econometrics, Oxford Economics and Experian employment forecasts. These changes have been made following recommendations from AMION Consulting and are presented in Figure 7 and Table 7.

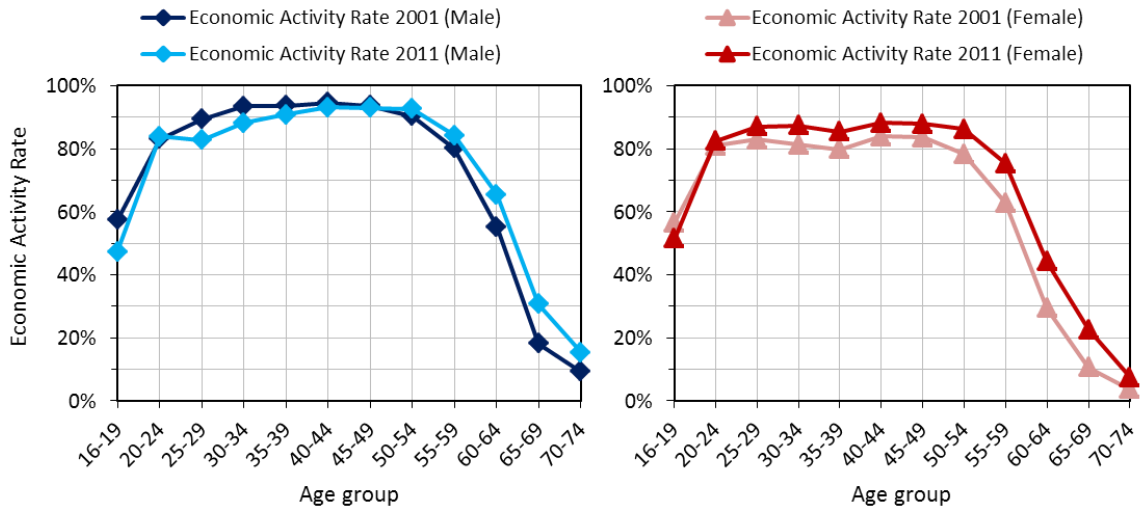
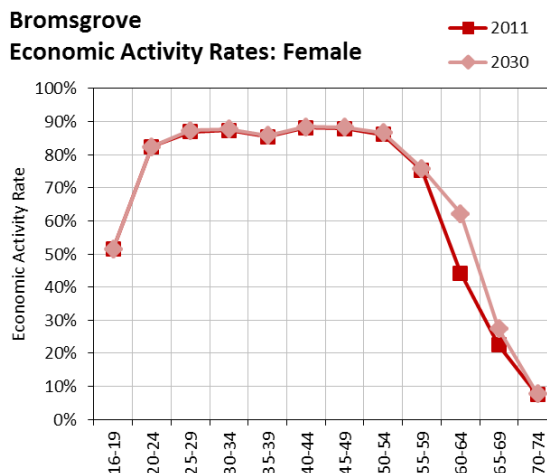
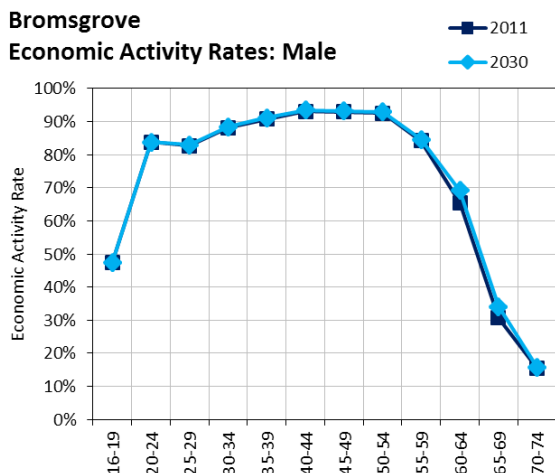


Figure 6: 2001 and 2011 Census economic activity rate comparison.

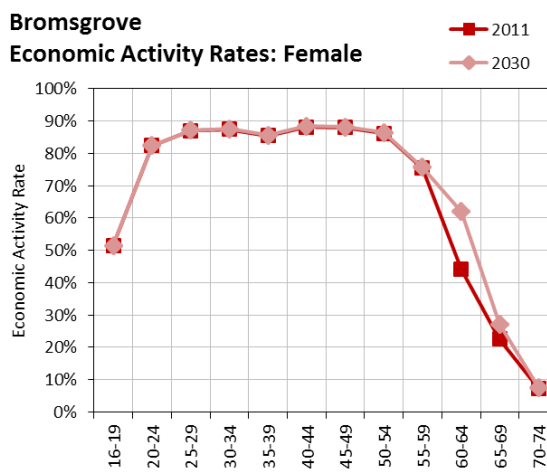
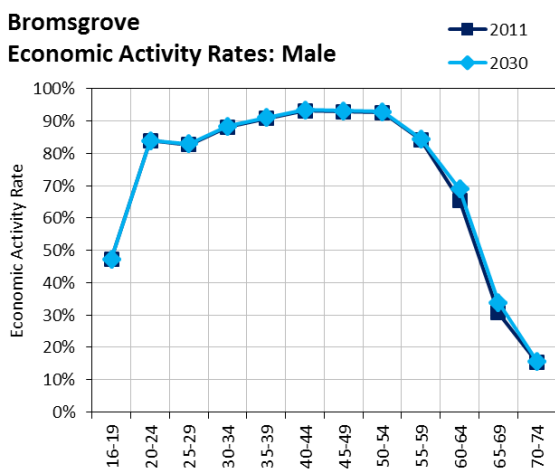
Table 6: Comparison of 2001 and 2011 Economic Activity Rates. Source: 2001 and 2011 Censuses

Sex	Male			Female		
Age	2001	2011	Change 2001-2011	2001	2011	Change 2001-2011
16-19	57.3%	47.3%	-18%	56.4%	51.5%	-9%
20-24	83.1%	83.9%	1%	80.9%	82.4%	2%
25-29	89.3%	82.7%	-7%	82.9%	87.0%	5%
30-34	93.5%	88.1%	-6%	81.2%	87.4%	8%
35-39	93.6%	90.8%	-3%	79.7%	85.4%	7%
40-44	94.6%	93.2%	-2%	83.9%	88.1%	5%
45-49	93.7%	92.9%	-1%	83.5%	87.9%	5%
50-54	90.3%	92.6%	3%	78.2%	86.2%	10%
55-59	80.0%	84.3%	5%	62.8%	75.4%	20%
60-64	55.2%	65.5%	19%	29.3%	44.1%	51%
65-69	18.1%	30.7%	69%	10.6%	22.5%	113%
70-74	9.2%	15.3%	66%	3.7%	7.4%	101%

Oxford Forecasts



Experian Forecasts



Cambridge Forecasts

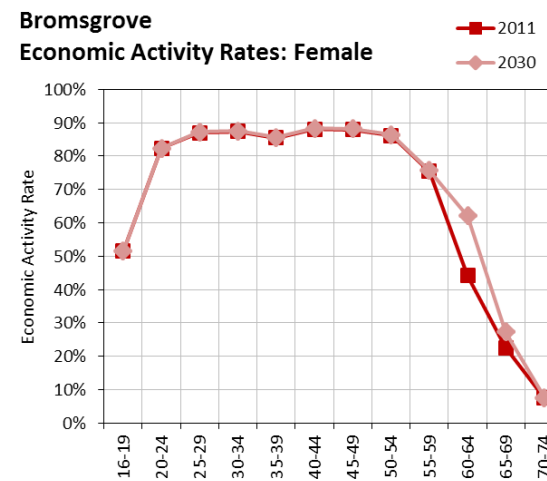
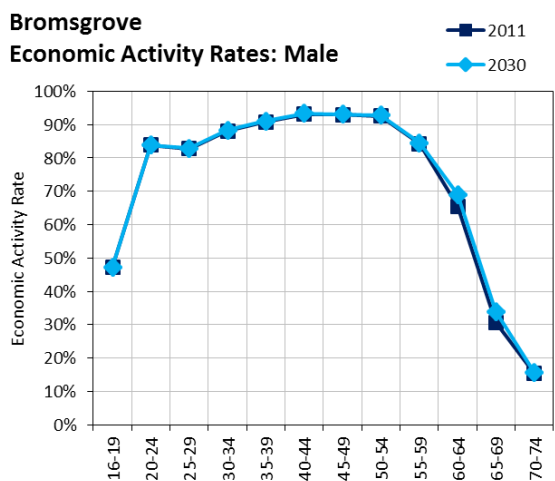


Figure 7: Sensitivity scenario economic activity rate profiles.

Table 7: Sensitivity Scenario economic activity rate adjustments

OXFORD						
Sex	Male			Female		
Age	2011	2030	Change 2011–2030	2011	2030	Change 2011–2030
16-19	47.3%	47.3%	0%	51.5%	51.5%	0%
20-24	83.9%	83.9%	0%	82.4%	82.4%	0%
25-29	82.7%	83.0%	0%	87.0%	87.3%	0%
30-34	88.1%	88.5%	0%	87.4%	87.7%	0%
35-39	90.8%	91.2%	0%	85.4%	85.8%	0%
40-44	93.2%	93.5%	0%	88.1%	88.5%	0%
45-49	92.9%	93.3%	0%	87.9%	88.3%	0%
50-54	92.6%	93.0%	0%	86.2%	86.6%	0%
55-59	84.3%	84.7%	1%	75.4%	75.8%	1%
60-64	65.5%	69.2%	6%	44.1%	62.2%	41%
65-69	30.7%	34.0%	11%	22.5%	27.3%	21%
70-74	15.3%	15.7%	2%	7.4%	7.7%	4%

EXPERIAN						
Sex	Male			Female		
Age	2011	2030	Change 2011–2030	2011	2030	Change 2011–2030
16-19	47.3%	47.3%	0%	51.5%	51.5%	0%
20-24	83.9%	83.9%	0%	82.4%	82.4%	0%
25-29	82.7%	82.9%	0%	87.0%	87.2%	0%
30-34	88.1%	88.3%	0%	87.4%	87.6%	0%
35-39	90.8%	91.0%	0%	85.4%	85.7%	0%
40-44	93.2%	93.4%	0%	88.1%	88.3%	0%
45-49	92.9%	93.1%	0%	87.9%	88.1%	0%
50-54	92.6%	92.8%	0%	86.2%	86.4%	0%
55-59	84.3%	84.5%	0%	75.4%	75.6%	0%
60-64	65.5%	69.0%	5%	44.1%	62.0%	41%
65-69	30.7%	33.9%	11%	22.5%	27.2%	21%
70-74	15.3%	15.5%	1%	7.4%	7.6%	3%

CAMBRIDGE						
Sex	Male			Female		
Age	2011	2030	Change 2011–2030	2011	2030	Change 2011–2030
16-19	47.3%	47.3%	0%	51.5%	51.5%	0%
20-24	83.9%	83.9%	0%	82.4%	82.4%	0%
25-29	82.7%	82.9%	0%	87.0%	87.2%	0%
30-34	88.1%	88.3%	0%	87.4%	87.6%	0%
35-39	90.8%	91.0%	0%	85.4%	85.7%	0%
40-44	93.2%	93.4%	0%	88.1%	88.3%	0%
45-49	92.9%	93.2%	0%	87.9%	88.2%	0%
50-54	92.6%	92.9%	0%	86.2%	86.5%	0%
55-59	84.3%	84.5%	0%	75.4%	75.7%	0%
60-64	65.5%	69.0%	5%	44.1%	62.1%	41%
65-69	30.7%	33.9%	11%	22.5%	27.2%	21%
70-74	15.3%	15.6%	1%	7.4%	7.6%	3%

Commuting Ratio

- B.40 The commuting ratio, together with the unemployment rate, controls the balance between the number of workers living in a district (i.e. the resident labour force) and the number of jobs available in the district. A commuting ratio greater than 1.0 indicates that the size of the resident workforce exceeds the number of jobs available in the district, resulting in a net out-commute. A commuting ratio less than 1.0 indicates that the number of jobs in the district exceeds the size of the labour force, resulting in a net in-commute.
- B.41 From the 2011 Census Travel to Work statistics, published by ONS in July 2014, a commuting ratio of 1.18 has been derived for Bromsgrove. Comparison with the corresponding value from the 2001 Census (Table 8) shows that there has been a reduction in the net out-commute between the two Censuses.

Table 8: Commuting ratio comparison

Bromsgrove		2001 Census	2011 Census
Workers	<i>a</i>	43,295	46,251
Jobs	<i>b</i>	33,195	39,077
Commuting Ratio	<i>a/b</i>	1.30	1.18

Note: 2001 data from Census Table T101 – UK Travel Flows; 2011 data from Census Table WU02UK - Location of usual residence and place of work by age.

- B.42 In the ‘core’ scenarios, the commuting ratio has been fixed at the 2011 Census value of 1.18 throughout the forecast period.
- B.43 In ‘Sensitivity Scenario 3’, the commuting ratio is also fixed at the 2011 Census value.
- B.44 In the commuting ratio sensitivity scenarios (Sensitivity Scenarios 3a to 3d), the commuting ratio has been incrementally reduced over the forecast period. These changes have been made in light of recommendations made by the Inspector and following discussion with BDC.
- B.45 The following changes have been made to the commuting ratio:
- **‘Sensitivity Scenario 3a’:** In this sensitivity, the commuting ratio is reduced from 1.18 to 1.06 by 2030. This reduction (-0.12) is a continuation of the reduction seen historically in the commuting ratio between the 2001 and 2011 Censuses (see Table 8).

- **'Sensitivity Scenario 3b'**: In this sensitivity, the commuting ratio is reduced to 1.08 by 2030. This is the commuting ratio that would result if the size of the resident number of 'workers' did not increase from the 2011 value of 46,251, but the number of jobs increased in line with either the Cambridge Econometrics or Experian employment forecasts (+3,870 and +3,903 jobs respectively 2012–2030).
- **'Sensitivity Scenario 3c'**: In this sensitivity, the commuting ratio is reduced to 1.04 by 2030. This is the commuting ratio that would result if the size of the resident number of 'workers' did not increase from the 2011 value of 46,251, but the number of jobs increased in line with the Oxford Economics employment forecast (+5,297 jobs 2012–2030).
- **'Sensitivity Scenario 3d'**: In this sensitivity, the commuting ratio is reduced to 1.00 by 2030. A commuting ratio of 1.0 indicates that the number of jobs in the district is matched by the number of workers.

Unemployment Rate

- B46 The unemployment rate, together with the commuting ratio, controls the balance between the size of the labour force and the number of jobs available within an area. In the jobs-led scenarios, the unemployment rate is used in combination with the commuting ratio and the economic activity rates to determine the population growth required by the defined jobs growth trajectory.
- B.47 Unemployment statistics from NOMIS provide an indication of the variation in the unemployment rate since 2004/05. Whilst sampling issues introduce some uncertainty to the data, a 5-year and a 9-year average are presented to give an indication of how unemployment has altered during the recessionary period (Table 9).

Table 9: Historical unemployment rates

Bromsgrove	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	5-year Average (2008/09–2012/13)	9-year Average (2004/05–2012/13)
Unemployment Rate (%)	4.1	3.3	-	4.5	5.5	6.4	7.6	5.8	3.7	5.8	5.1

Note: Unemployment rates are for July–June (source: Annual Population Survey, NOMIS)

- B.48 In the ‘core’ scenarios, an average unemployment rate of 5.1% for ages 16+ has been calculated from the APS unemployment statistics for the nine-year period 2004/05–2012/13 (Table 9). The unemployment rate is fixed throughout the forecast period.
- B.49 In the ‘sensitivity’ scenarios, the unemployment rate has been altered over the forecast period from start value of 5.8% (the 5-year average unemployment rate 2008/09–2012/13, see Table 9. These modifications have been made using an index based on the Experian employment forecast (supplied by AMION Consulting).

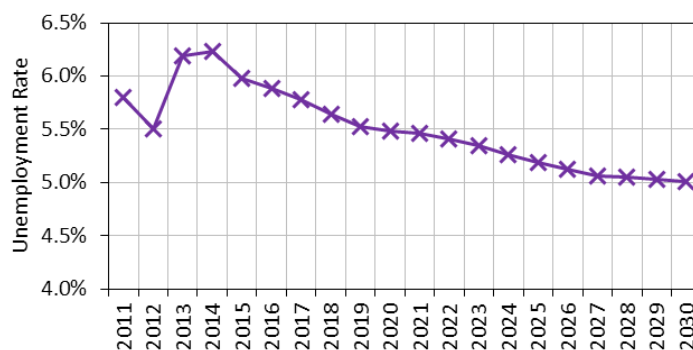


Figure 8: Unemployment rate profile for sensitivity scenarios

Appendix B - Bromsgrove DC report on market signals



Bromsgrove
District Council

www.bromsgrove.gov.uk

Assessing housing need in Bromsgrove District

Market Signals

Bromsgrove District Council
August 2014

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Appendix One: Comparator Market Signals for Bromsgrove District

Appendix Two: Comparator Market Signals for Bromsgrove District in rank order

0. Introduction

0.1 The NPPF (2012) requires local authorities to identify the objectively assessed housing needs for their area, including the housing market area/s the local authority might fall within. As part of this process the NPPG (2014) guides local authorities to ensure their assessment of need has been adjusted to reflect appropriate market signals and indicators of the balance between the demand for and supply of housing. The guidance clearly sets out six market signals to consider:

- 1) Land Prices;
- 2) House Prices;
- 3) Rents;
- 4) Affordability;
- 5) Rate of Development; and
- 6) Overcrowding.

0.2 This report examines market signals that affect the housing market to assess the extent to which they indicate a supply and demand imbalance in Bromsgrove District. The conclusions of this report will help establish to whether a further adjustment is required to projection-based housing figures to determine the objectively assessed housing need.

0.3 Guidance in the NPPG recommends that local market signals be assessed against comparable local authority areas within the housing and economic market area, especially where they demonstrate similar demographic and economic characteristics. For this reason the report analyses a total of 15 areas which are considered to have the greatest housing and economic market area linkages to Bromsgrove, these are: Birmingham, Dudley, East Staffordshire, Lichfield, Malvern Hills, Redditch, Rushcliffe, Solihull, South Staffordshire, Stratford-on-Avon, Wychavon and Wyre Forest. Two tables can be found in Appendix One and Appendix Two which provide a simple but useful tool in which to compare the 15 areas. A higher ranking in the Appendix Two table displays a stronger market signal and therefore a relatively poorer performing housing market on that indicator.

0.4 The inclusion of Worcestershire and England as comparators allows Bromsgrove to be compared against national trends. Rushcliffe Borough is the only local authority in the list that is not located in the West Midlands. It has been included in the benchmark list because it is considered to be part of a 'family' of local English authorities that have similar social, economic and environmental characteristics. Rushcliffe also demonstrates planning parallels to Bromsgrove; it is adjacent to the large urban area of Nottingham and it too has large areas of designated Green Belt to protect it from neighbouring urban sprawl.

1.0 Land Prices

- 1.1 Assessing land prices is significantly more difficult than other indicators due to the fact that this type of information is market sensitive and is dependent on many assumptions. Fortunately evidence prepared to support the Bromsgrove District Plan does provide some local analysis, however this data is not immediately comparable with the limited national data available. Chapter Six of the Bromsgrove District and Redditch Borough Local Plan Viability Study¹⁰ considered the values of different types of land. Due to the limited availability of data on residential land prices it has not been possible to provide comparative analysis with other local authorities.
- 1.2 The value of land relates closely to the alternative use or uses to which it can be put and will range considerably from site to site; however, as the Viability Study was high level, it looked at the three main uses, being: agricultural, residential and industrial. The study also considered the amount of uplift (to provide a competitive return to the landowner) that may be required to ensure that land will come forward for development.
- 1.3 The study considered general figures from the VOA relating to residential land values. It found that land values vary dramatically depending upon the development characteristics (size and nature of the site, density permitted etc.) and any affordable or other development contribution.
- 1.4 Using VOA figures to establish residential land value, the study gave a figure for Birmingham of £1,235,000 per hectare. The study stated that this an indicative value that can only provide broad guidance and it is likely that values for land with planning consent and ready for immediate build with no planning contributions or servicing requirement, are in fact higher.
- 1.5 The VOA Property Market Report values used by the Viability Study are based on the assumption that land is situated in a typically greenfield, edge of centre/suburban location for the area and it has been assumed that services

¹⁰ HDH Planning (2014) Local Plan Viability Study

are available to the edge of the site and that it is 'ripe' for development with planning permission being available. The values provided assume two storey construction with density, s106 provision and affordable housing ratios to be based on market expectations (although not necessarily the policy requirements) for the locality. The report cautions that the values should be regarded as illustrative rather than definitive and represents typical levels of value for sites with no abnormal site constraints and a residential planning permission of a type generally found in the area. It is important to note that these values are net – that is to say they relate to the net developable area and do not take into account open space that may form part of the scheme.

1.6 The Viability Study also sought information about values from residential land currently on sale in the area. Unfortunately very little land is being marketed at the moment (2014), so the Study consulted agents operating in the area who suggested prices from about £500,000/ha (£200,000/acre) to about £1,500,000/ha (£600,000/acre).

1.7 The study assumed a value of £750,000 per hectare (£300,000 per acre) for residential land.

EXISTING USE	LAND PRICES (£/ha)
Residential	£750,000*
Industrial	£450,000
Retail	£6,000,000
Agricultural	£25,000
Paddock	£50,000

Table 4.0: Existing Land Prices (£/ha) (Source: HDH Planning (2014) Local Plan Viability Study) *net developable.

1.8 The planning system can have a significant impact on the viability of land and its value. Supporting the Bromsgrove District Plan is the Worcestershire CIL¹¹ and Local Plan Viability Studies which investigate the impact the planning system has on the viability of development. Of particular interest to this report

¹¹ HDH Planning (2013) Worcestershire CIL Viability Study

is the CIL's sensitivity to house price changes and its effects on land prices¹². Representations made to the Worcestershire CIL Viability Study stated that a charging levy will simply reduce the land price received by landowners and thus prevent the release of land and undermine the delivery of new homes. Uncertainty in the planning system both nationally and locally was also considered to have an impact on the 'hope value' of greenfield sites adjacent to urban areas¹³. Hope values are particularly important when seeking to release land for development and can affect landowners' decisions.

- 1.9 For example, it is well recognised that long term land-owning families and estates take a different approach to releasing land from those organisations that are shorter term owners. A land-owning family may take the view that if the terms offered now are not sufficient that it will wait for perhaps two or three generations before revisiting the site – whereas a shorter term landowner may want to see land released in the current or next plan period¹⁴.

¹² Chapter 10 of the Worcestershire CIL Viability Study 2013

¹³ Affordable Housing Viability Study - Appendix 5: Thornes Chartered Surveyors letter (Page 87)

¹⁴ Chapter 13 of the Worcestershire CIL Viability Study 2013 (Page 120)

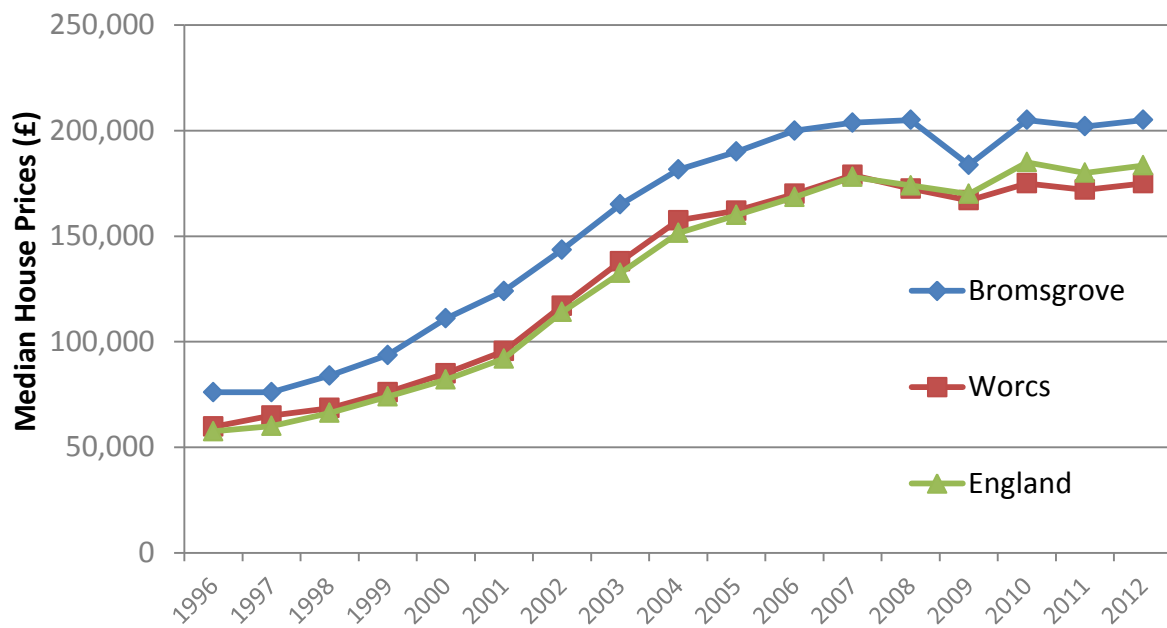
2.0 House Prices

- 2.1 The NPPG and recent guidance published by PAS and prepared by Peter Brett Associates¹⁵ state that longer term changes in house prices may indicate an imbalance between the demand for and supply of housing. Specifically the NPPG suggests using mix-adjusted prices and/or House Price Indices; however these are not available for the majority of the comparator areas. It is possible to establish a Worcestershire trend, however, as other datasets will demonstrate further on in the report, there are noticeable differences between the six Worcestershire authorities.
- 2.2 Fortunately there are two sources of publicly available data that provide district level median house prices; these are the 'Land Registry Price Paid Data' covering the period January 1994 to June 2014; and the Department Communities and Local Government data series live table 586, which is based upon Land Registry data, covering the period 1996 to 2012. Whilst the Paid Price data is more up to date it requires a significant amount of analysis before it can provide simple comparative analysis (as per CLG data), for this reason CLG data (e.g. 2012 data) is used as the latest position for analysis.

¹⁵ Peter Brett Associates for PAS (2014) Objectively Assessed Need and Housing Targets

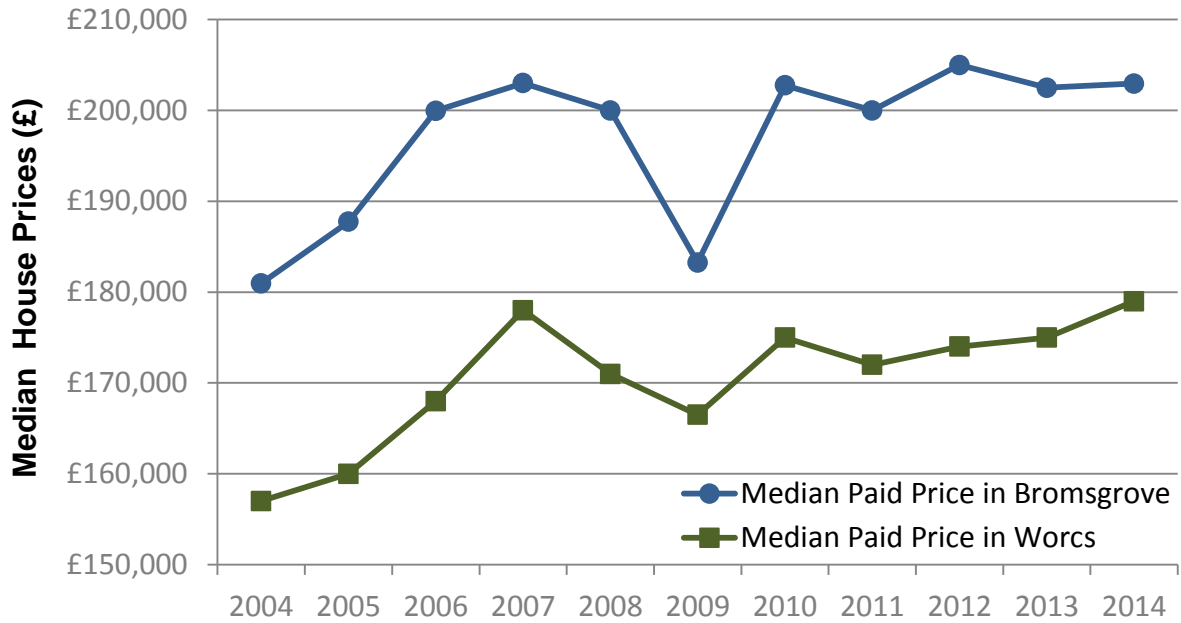
2.3 These datasets, as illustrated in Figures 1.0, and 1.1, show how Bromsgrove District has consistently demonstrated higher house prices than the national average and the Worcestershire average. In 2012, the median house price in the District was some £21,500 higher than the national equivalent. It further outstrips the median house price in 2013 in Worcestershire by £21,500.

**Figure 1.0: Median House Prices Based on Land Registry Data
(CLG Live table 586, August 2014)**



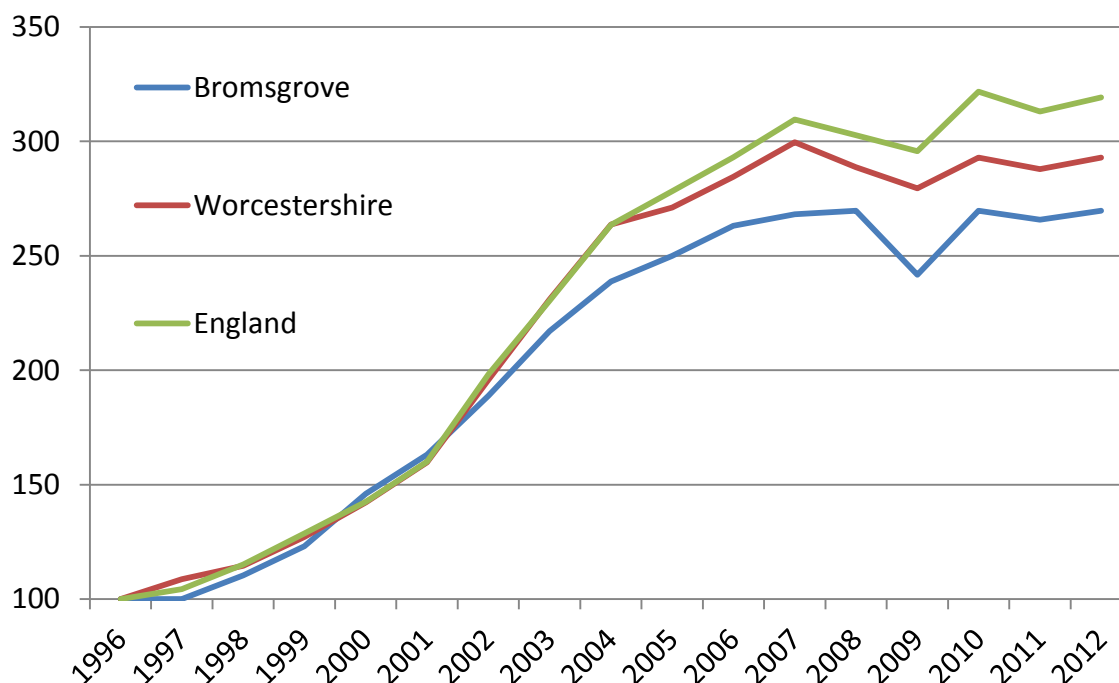
2.4 The NPPG states higher house prices and long term rises tend to indicate an imbalance between the demand for housing and its supply. Figures 1.0 and 1.1 demonstrate median house prices in Bromsgrove District have outstripped the regional and national average constantly for the past 16 years.

**Figure 1.1: Average Paid Price per year, 2004 to 2014
(Land Registry Paid Price Data, August 2014)**



2.5 Over the 16 year period since 1996, national houses prices have increased 219%, whilst Bromsgrove District has seen a lower increase over the same time frame at 170%, as demonstrated in Figure 1.2. However it is worth noting that the median house price for Bromsgrove District in 1996 (£76,000) was already significantly greater than the national average (£57,500). To put this into a national perspective, median house prices in Bromsgrove District are very similar to the county averages for East Sussex (118th) and Essex (120th), located in South East England.

**Figure 1.2: Proportional median house price change, 1996 to 2012
(CLG Live table 586)**



2.6 Whilst median house prices in 2013 were higher in Bromsgrove than the majority of the 15 comparator areas (Appendix Two), recently published guidance¹⁶ explains that **proportional price changes** are generally a better indicator than absolute price, because a comparatively high price may indicate either comparatively high demand (an attractive area, better housing stock) or low supply (possibly due to planning constraints). However the technical guidance explains that if prices in an area are rising faster than elsewhere, this suggests that supply is tightening compared to other places – unless for some reason the area is becoming more desirable over time. As discussed in the preceding paragraphs, Figure 1.2 shows Bromsgrove’s median house prices when indexed to 1996 prices have been growing at a slower rate compared to prices in England and Worcestershire.

2.7 Therefore how you view and compare the figures alters your interpretation. Using the NPPG, house price changes would appear to be demonstrating that an imbalance between supply and demand of housing has occurred. It would also appear there has been and continues to be significant competition for

¹⁶ Peter Brett Associates for PAS (2014) Objectively Assessed Need and Housing Targets
10

housing in Bromsgrove District and this has forced up the price of properties to its current level. However using the more recent PAS guidance and comparing proportional house price change, prices in Bromsgrove District have not risen as steeply as across the county or nationally. Analysis at Appendix Two also shows that median house price change mirrors growth rates experienced in the nearest neighbouring local authority areas of Birmingham, Dudley, Redditch, Solihull and Wyre Forest. This would indicate that house price rises are not a response to a constraint in supply, but a more regional effect through the desirability of locations in this part of the West Midlands, coupled with more general rises in house prices.

- 2.8 PAS guidance reminds LPAs that whilst proportional price changes may be lower in a district, it may still be the case that the planning system is still increasingly undersupplying demand. Depending on how buyers and sellers respond to price changes ('elasticities'), a local constraint may only show as a reduction in the volume of development, with little or no impact on local prices. For this reason, the level of housing completions is a good indicator of the severity of planning constraints. To get a better insight, it will be necessary to analyse the supply of housing in the District to establish whether a lack of supply is contributing to the high prices. This is considered in the Rate of Development section of the report.

Housing market and property sales

- 2.9 The current housing market is experiencing issues around supply as there are fewer properties for sale since the recession in 2008. This observation is supported by the Land Registry's Paid Price Data for Bromsgrove District which shows almost 50% fewer properties were sold in 2013 than 2004. Data for the first seven months of 2014 indicate a similar position to 2013. It is argued that the low levels of new build and the reluctance by homeowners to move is limiting availability, while demand is taking up what stock there is to buy. Further growth in demand, with no proportionate increase in supply is likely to push prices further upward¹⁷.

¹⁷ Hometrack (2013) Pressure on house prices set to remain in near future

Figure 1.3: Number of properties sold in Bromsgrove District, 2004 to 2013 (Land Registry Paid Price data, August 2014)

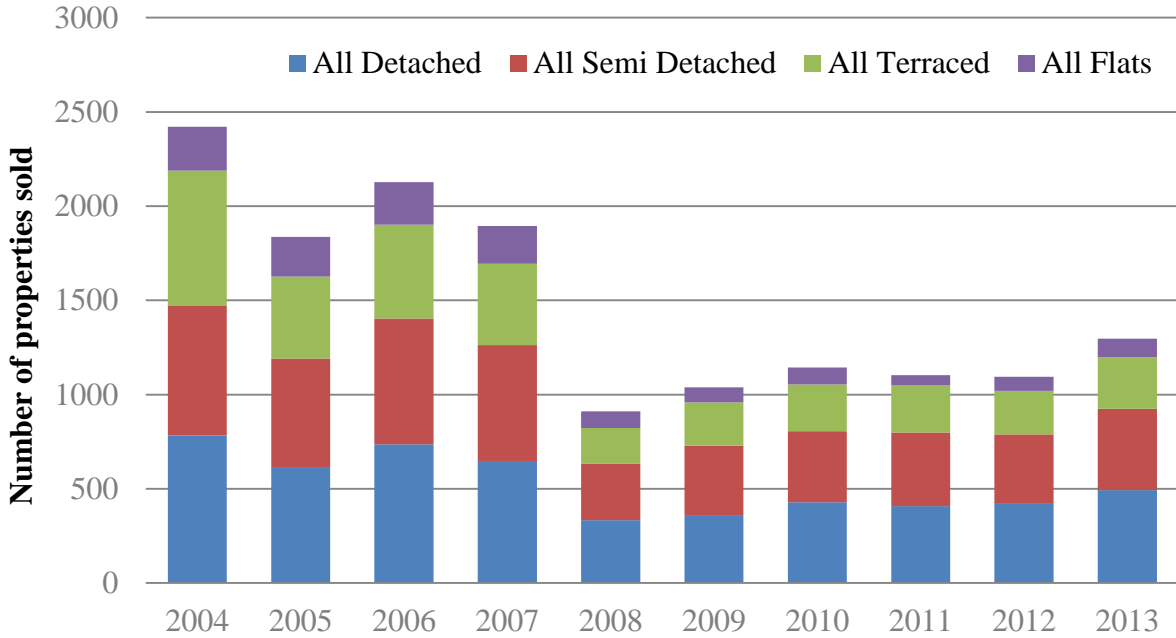
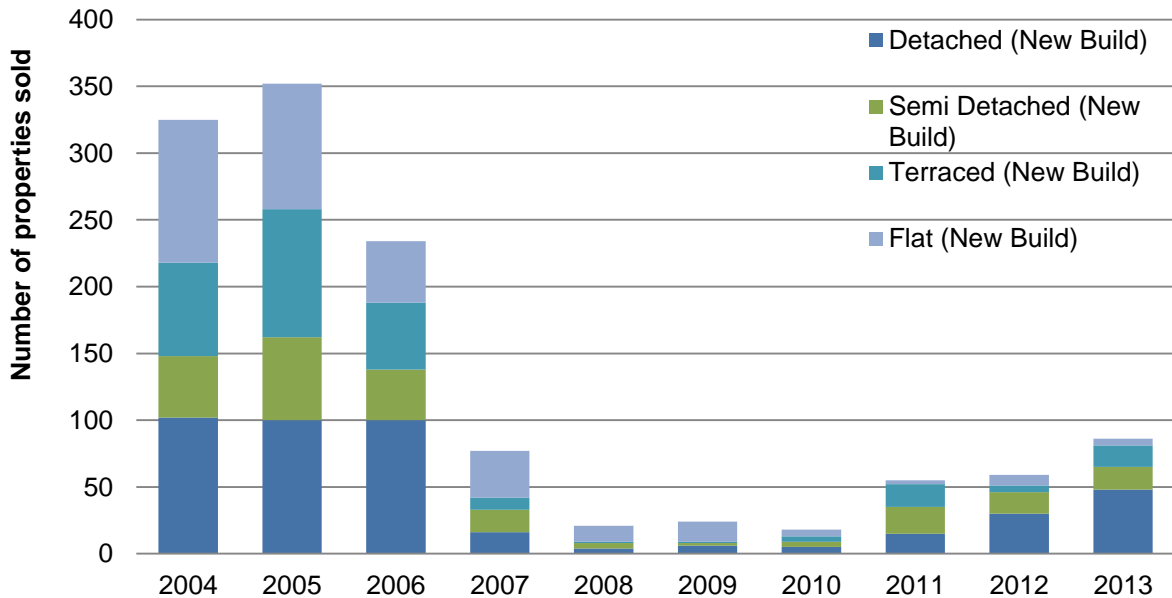


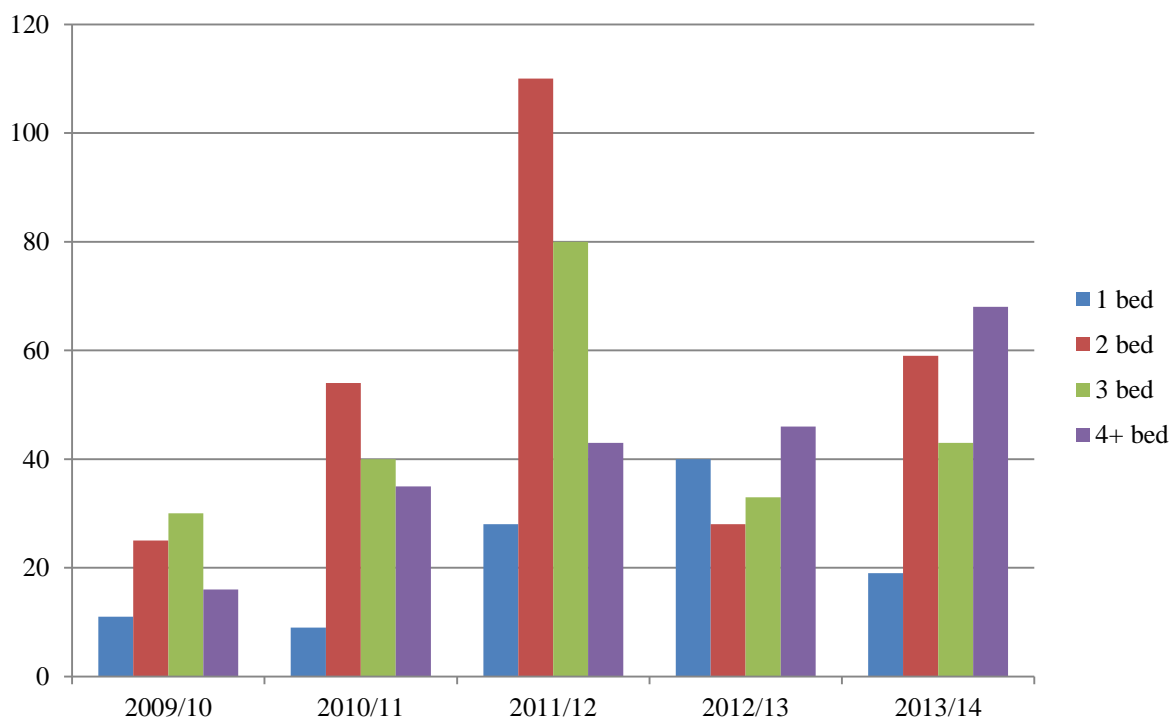
Figure 1.4: Number of new build properties sold in Bromsgrove District, 2004 to 2013 (Land Registry Paid Price data, August 2014)



2.10 The Government has introduced measures to stimulate the housing market through the Help to Buy scheme, which is directly driving demand for new

build properties and thus improving confidence in the sector, helping to increase supply. Commentators agree that this has had a positive effect on supply however levels of new supply (new build) are still relatively low in Bromsgrove compared to previous years, as demonstrated by Figure 1.4. The greatest source of potential supply comes from existing homeowners and investors. First time buyers represent net new demand and play a critical role in house price growth¹⁸. Nationally the house building industry is responding to current market dynamics by concentrating on three and four bed properties - accounting for over 70% of all starts nationally - aimed at those trading up with existing equity¹⁹.

Figure 1.5: Gross completions by no. of bedrooms



Source: BDC Housing Database

2.11 Figure 1.5 examines completions by number of bedrooms in recent years. It reveals that the number of homes built with four or more bedrooms has steadily increased, however the number of homes of other sizes has fluctuated. The number of properties with two bedrooms has, in general (with the exception of 2012/13), accounted for a large proportion of all new dwellings built in Bromsgrove. This reflects the Council's policy to encourage

¹⁸ Affordable Housing Viability Assessment (2011) Appendix 3: Current and projected economic conditions

¹⁹ Hometrack (2013) Pressure on house prices set to remain in near future

smaller homes to meet local needs. Whilst Figure 1.4 shows that since 2012, detached new build dwellings have accounted for the majority of new build completions, comparison with local data in Figure 1.5 would suggest that these a mixture of dwelling sizes are being constructed as detached dwellings, and not solely the largest 4+ bedroomed properties.

2.12 The average time on the market illustrates the relative health of different markets across the country. In London the time on the market is close to four weeks while away from the capital it is over nine weeks, although it appears the Midlands is now showing signs of improvement.

Figure 1.6: Average time of property on market (weeks); Source: Hometrack (August 2014): Pressure on house prices set to remain in near term

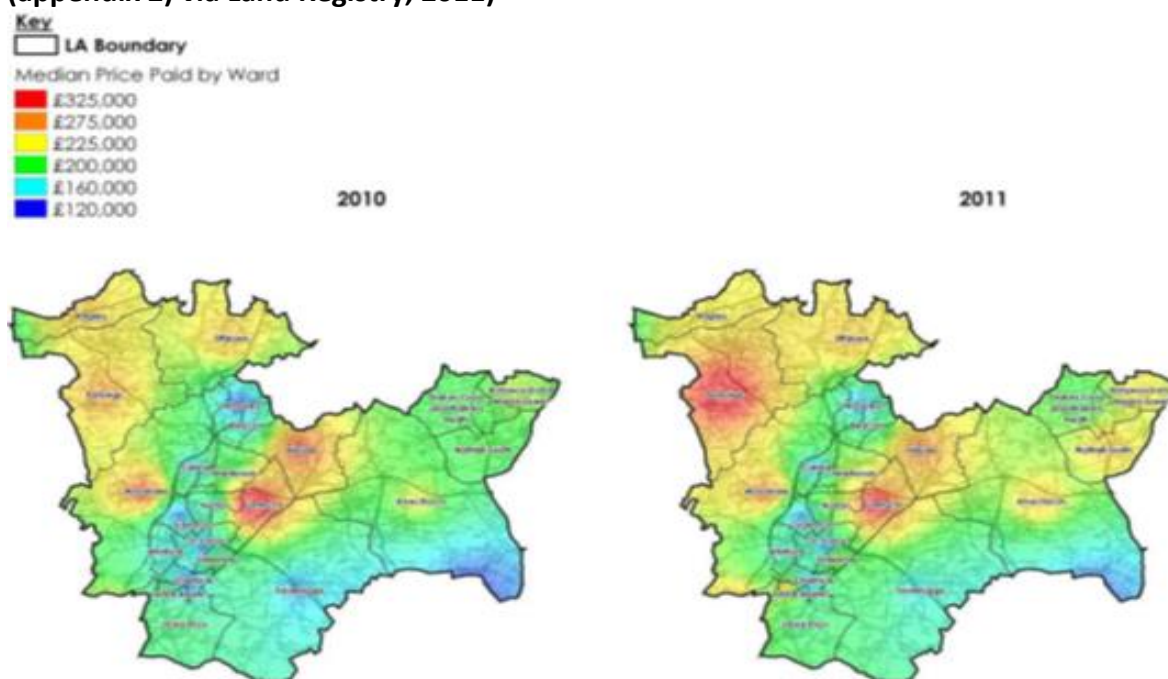


2.13 Hometrack consider that boosting the housing supply to ease the pressure on prices can only come from two areas; 1) more house building or 2) more owners willing to put their homes on the market. The local reality is that a sustained supply response to ease the current pressure on house prices looks unlikely in the near term. The most likely outcome is that the pricing of new supply will accelerate to a point where demand reduces and sales levels

decline. At this point, agents will need to start re-aligning prices to maintain turnover and income²⁰.

2.14 At a very local level, the Worcestershire Strategic Housing Market Assessment (Appendix 2: Bromsgrove), published in 2012, spatially maps the distribution of median house prices during 2010 and 2011 in Bromsgrove. It is evident that rural areas command a significantly higher median price than urban areas, especially in those areas that border the West Midlands conurbation to the north of the District. The SHMA found that there was general stability in house prices from sales between 2010 and 2011. The Furlongs ward in the west of the district shows a slight increase, however this it was argued was potentially reflecting a number of larger properties being sold in that ward in 2011, compared with the previous year.

Figure 1.7: Geographical distribution of median price paid (Worcestershire SHMA, 2012 (appendix 2) via Land Registry, 2011)²¹



2.15 It is important to establish the effect general affordability (section 4.0) and the rate of development (section 5.0) in Bromsgrove District is having on house price growth.

²⁰ Hometrack (2013) Pressure on house prices set to remain in near future

²¹ Due to the complexities involved in spatially analysing Land Registry data, this report has not been able to plot 2012 data.

2.16 Further detailed analysis of house prices is available in the recently published Local Plan Viability Study (2014) and in particular Chapter Four: Residential Property Market and the Affordable Housing Viability Assessment (2012) - Appendix 3: Current and Projected Economic Conditions.

3.0 Rents

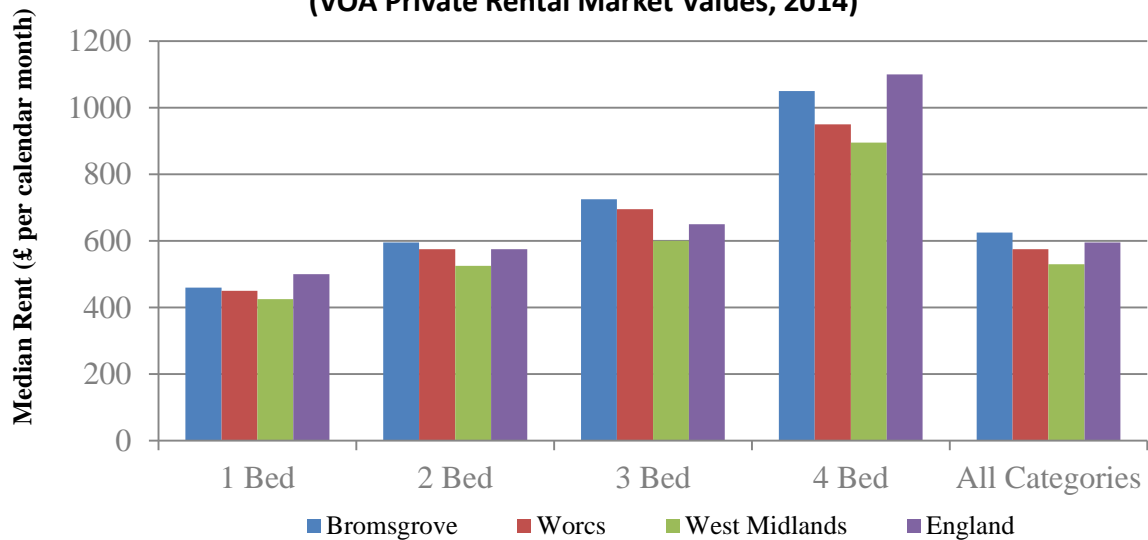
- 3.1 The NPPG indicates high and increasing rents in an area are a further market signal of stress in the housing market. A significant amount of information on this topic is already available in the Local Plan Viability Study (2014) and in particular Chapter Four: Residential Property Market and in the Affordable Housing Viability Assessment (2012) - Appendix 3: Current and Projected Economic Conditions. This report does not seek to duplicate this information but provide an overview of the current rental market, specifically focusing on the private sector. To some extent affordable rents and social rents are examined in section 4.0 under the general topic of affordability.
- 3.1 Average (median) private rents in Bromsgrove District during the period April 2013 to March 2014 were £625 per month, ranging from £460 per month for one bedroom to £1,050 for a four or more bed house²². Average rental values in Bromsgrove District are overall 5% higher than the national average and Bromsgrove District is currently the 165th (out of 371 areas) most expensive local authority in which to rent in the country²³. This is broadly consistent with the median rental price for England in 184th position.
- 3.2 Unlike Land Registry and CLG house price data, the Valuation Office Agency (VOA) statistics are only available for three years, but they show that median rents in Bromsgrove District have increased 5% since 2011, compared with 4.4% nationally and 4.5% in Worcestershire. This highlights that affordability within the private rental market sector has worsened in Bromsgrove District albeit broadly in line with county and national trends. It is difficult to establish why this trend is occurring in isolation of other factors. Similar to house prices, it will be necessary to examine local housing supply to help build a picture of why rental prices are increasing. Other factors such as problems accessing finance since the recession might also be preventing new households from owning properties; examining affordability problems in section three will be a key indicator in this respect.

²² VOA Private Rental Market Statistics – March 2014 (tables 2.3, 2.6 and 2.7)

²³ VOA Private Rental Market Statistics – March 2014 (table 2.7)

3.3 Whilst Bromsgrove appears to be mirroring the national average, Figure 2.0 shows 2-bed and 3-bed properties are commanding higher rental prices than county, regional and national averages. This trend might be the result of low levels of new build which is putting increased pressure on 2-bed and 3-bed rental prices; analysis of rates of development will be useful in this respect.

**Figure 2.0: Median Rent Values April 2013 to March 2014
(VOA Private Rental Market Values, 2014)**



3.4 The rental market does not appear to be demonstrating a strong market signal as the increase in rental prices are broadly in line with those at county and regional levels. Further detailed analysis of rents by some of the larger settlements within Bromsgrove District is available in the recently published Local Plan Viability Study (2014) and in particular Chapter Four: Residential Property Market.

4.0 Affordability

- 4.1 There are a number of different indicators of housing affordability, and the **ratio of house prices to income** is a key indicator of the relative affordability of home ownership. The ratio of house prices to earnings is one measure of how affordable it is to buy a property. The higher the ratio, the less affordable it is for households to get onto the property ladder.²⁴
- 4.2 The NPPG is useful in this respect as it guides local authorities to assess affordability by comparing costs against the ability to pay. Measuring the ratio between lower quartile house prices and lower quartile earnings is considered an appropriate measure to assess relative affordability of housing.

Measuring Affordability

- 4.3 It is also important to consider affordability using a measure that directly addresses the implications of housing costs for living standards. For example:
1. Do families have enough to pay for their housing costs as well as other essentials, such as food and transport?; and
 2. Are housing costs taking up a large proportion of income that households are having to cut back other essentials considered necessary as part of achieving a basic standard of living?²⁵
- 4.4 The cost of meeting a basic living standard is calculated by the minimum income standard. This standard quantifies the cost of essentials that families themselves deem necessary to participate in society, including food, drink, clothing, transport and healthcare but does not include luxuries. Table 3.0 shows what families of different sizes typically spend on housing as a proportion of their income in England. It particularly highlights the higher proportion of income required to rent privately when compared to other tenures.

²⁴ Please note that a significant proportion of households contain more than one earner and consequently ratios based solely on individual earnings may overstate the extent of affordability difficulties.

²⁵ Resolution Foundation (2013) Home Truths: How affordable is housing for Britain's ordinary working families? - www.resolutionfoundation.org/media/media/downloads/Home_Truths_2.pdf

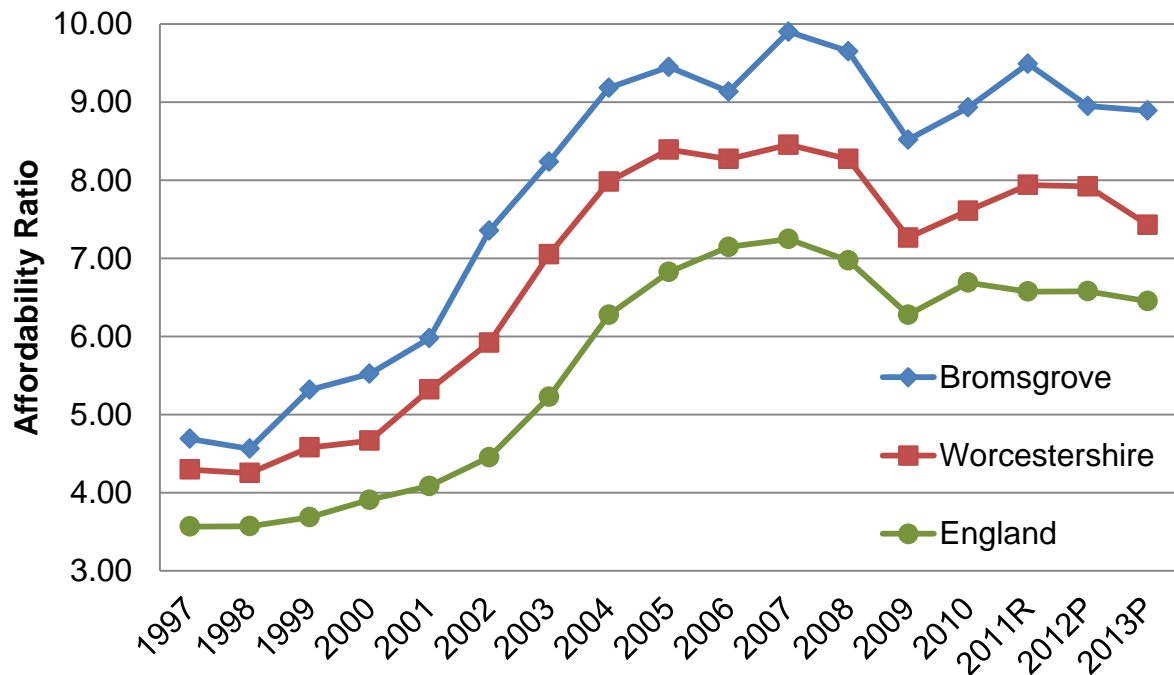
	Couple with no children	Couple with 1 child	Couple with 2 children	Couple with 3+ children	Single with no children	Single with children
Social Renter	21%	21%	17%	16%	29%	22%
Private Renter	33%	28%	27%	26%	38%	32%
Owns with Mortgage	22%	23%	25%	22%	31%	24%

Table 3.0: Housing cost to income ratios by family type and housing tenure for low to middle income households in England (Source: Resolution Foundation, Home Truths 2013 page 17; Note: the table excludes those who own their property outright)

Affordability levels

- 4.5 Figure 3.0 illustrates that housing affordability is a significant problem in Bromsgrove District. Since 1997, the ratio of lower quartile house prices to lower quartile earnings has been consistently high within the District. The ratio for Bromsgrove has increased significantly during the period albeit with a notable drop and plateau since the recession took effect in 2009. In 2012, the lower quartile house price to earnings ratio was 8.89 in Bromsgrove District; significantly greater than the national ratio at 6.45 and the Worcestershire ratio of 7.43.
- 4.6 It is clear that Bromsgrove is far in excess of the national ratio and it highlights a significant constraint on peoples' ability to access housing in Bromsgrove District, with house price increases far outstripping earnings increases. Putting these figures into context, Bromsgrove District is currently ranked the 99th least affordable District in the country (out of 362 authorities).

Figure 3.0: Lower Quartile Earnings to Lower Quartile Values 1997 to 2013 (CLG Live table 576)



R = Figures have been revised due to revisions in ASHE data.

P = Figures are provisional and may change when the table is updated next year to reflect revisions in ASHE data.

4.7 The 'Home Truths West Midlands'²⁶ 2014 report estimates a deposit of £47,000 is required to access an 80% mortgage to buy an average (mean) priced house in Bromsgrove. The average deposit for an 80% mortgage in the West Midlands is £34,676, with higher deposit levels than Bromsgrove only necessary in Solihull, Warwick District and Stratford-on-Avon District.

4.8 The same study also undertook a benchmarking exercise to understand the levels of income required for entry to different tenures in Bromsgrove, this analysis can be seen in table 3.1. A household income of over £38,000 per annum is required to purchase a lower quartile property (assuming a 3.5 income to mortgage ratio and a 10% deposit). In order to afford an average 2-bed apartment within the authority, a household income above £26,000 per annum is required (assuming that 25% of income is spent on rent).

²⁶ National Housing Federation (2014) Home Truths West Midlands 2013/14

4.9 It is evident that with an average (median) gross annual income of £23,364²⁷, many residents wanting to buy a property in Bromsgrove on their own will struggle to access anything other than affordable rented (2 bed dwelling) and social rented properties without considerable deposits.

Affordability Benchmark	Annual Income required in Bromsgrove
To Purchase LQ house (10% deposit)	£38,375
To Privately Rent LQ 2 bed dwelling (25% income)	£27,034
Privately Rent 3 bed dwelling (25% income)	£33,142
To access a 2 bed Affordable Rent (80% of market value) dwelling (25% income)	£21,627
To access a 3 bed Affordable Rent (80% of market value) dwelling (25% income)	£26,513
To access a Social Rent dwelling (25% income)	£16,628

Table 3.1: Affordability benchmarks – Annual Income required

4.10 Considering the rate of change in the measure of lower quartile earnings compared to lower quartile house prices in Bromsgrove District over time, indicates trends of increasing house prices against wages. The affordability ratio has increased by 90% between 1996 and 2013 compared to 81% nationally. Commentators would argue this is a function of housing demand outstripping housing supply in Bromsgrove District, for example, the National Housing Federation state that a historic lack of supply has priced out local residents of Bromsgrove District who earn lower quartile wages from living in the District.

Relationship to other market signals and factors

4.11 The 2012 Affordable Housing Viability Study²⁸ recognises that while there is a strong causal link between affordability and housing market prices, other market conditions, and particularly the cost and availability of finance (including interest rates), are also important factors driving house price inflation.

²⁷ Home Truths West Midlands, February 2014 via Annual Survey of Hours and Earnings (ASHE), Office for National Statistics (ONS) 2012

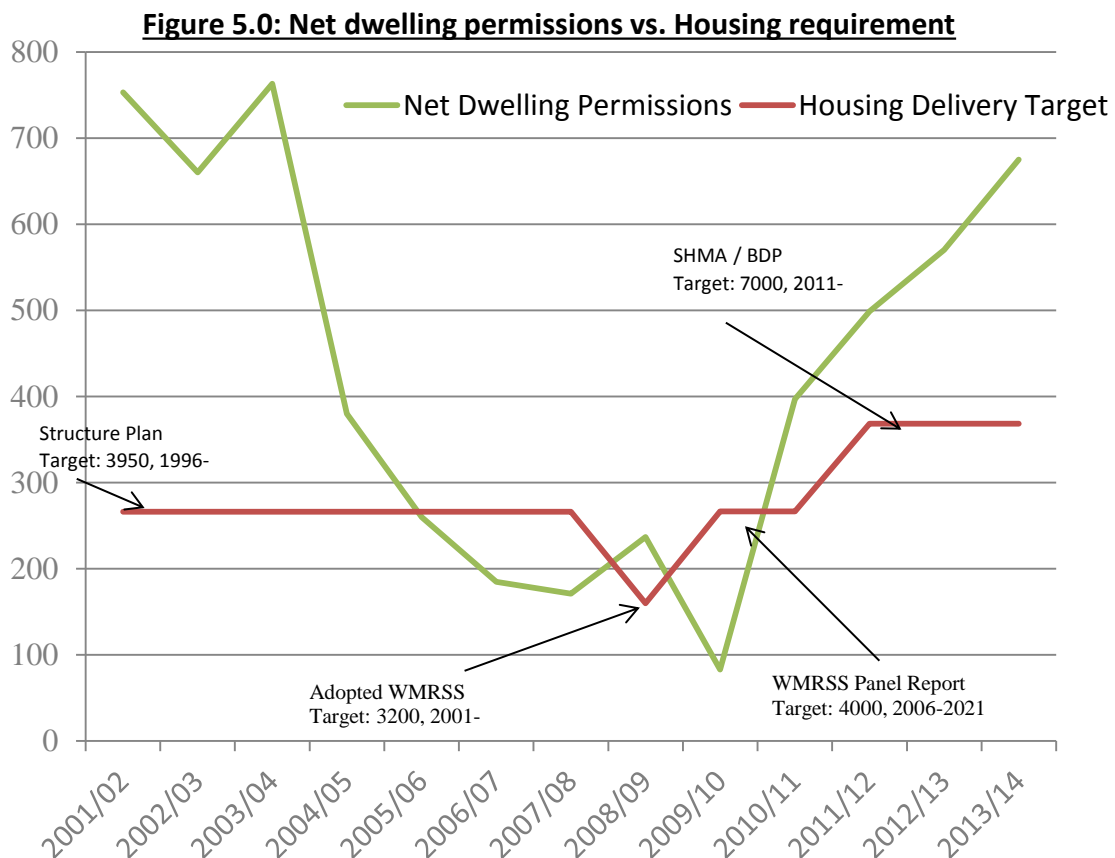
²⁸ Levvel (2012) Affordable Housing Viability Study - Appendix 3: Current and Projected Economic Conditions

- 4.12 The assessment believes the sub-prime crisis in the USA which led to an international recession is proof that house prices generally and the prices of starter homes in particular, had reached an unsustainable level. In order to enable affordability to return to the market, further falls in prices are required. The Affordable Housing Viability Study stated, *“if we are to return to our suggested 3.5 times income analysis then prices in the UK would need to fall a further 14%”*. Putting this into a local context and using latest data (as illustrated in table 3.0), it would appear that either the average (median) gross annual income for Bromsgrove residents would need to increase approximately 65% to allow persons to purchase a lower quartile property, or the average (median) lower quartile house prices would need to decrease by approximately 40%. The level of change required is so substantial that it would require very high levels of housing supply across the entire housing market area and potentially beyond, supported by favourable macroeconomic factors and planning conditions.
- 4.13 The affordability problem in Bromsgrove appears to reflect the situation, on average, in the West Midland and England, however it demonstrates a significant market stress.

5.0 Rate of Development

5.1 The NPPG indicates that another market signal to be considered is the rate of development. The purpose of this indicator is to discern whether house building has kept pace with demand in the local area.

5.2 The first suggested measure is to look at the flow of new permissions expressed as a number of units per year relative to the planned number. Figure 5.0 demonstrates that the net number of permissions issued in Bromsgrove District has varied dramatically over the period for which data is available from 2001/2 to 2013/14. The peak year was 2003/4 when 763 net new homes were granted planning permission. In contrast, only 83 net dwellings received planning permission in 2009/10, correlating with the depths of the international recession which took hold in the late 2000s.



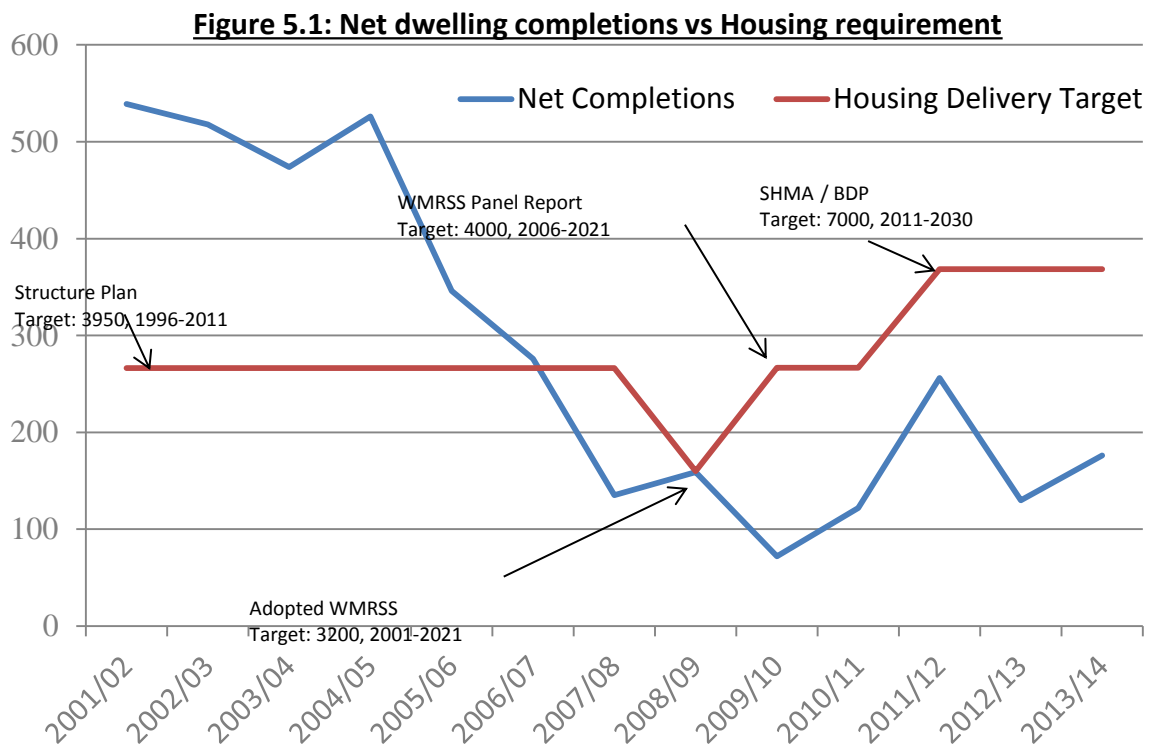
Source: BDC Housing Database

5.3 Due to a large oversupply of housing in relation to the Worcestershire Structure Plan target, a moratorium on new private housing development was

introduced in 2003. This was subsequently lifted in January 2010 in response to the higher housing target for Bromsgrove in the RSS Panel Report, and from this point onwards, permissions have risen sharply.

5.4 The number of permissions issued has exceeded the relevant housing target for 9 out of 13 years during the monitoring period. This demonstrates that despite the imposition of a housing moratorium between mid-2003 and early 2010, the Council cannot be viewed to have overly restricted the supply of housing and has delivered the permissions sought by the development industry.

5.5 The second suggested measure for considering development rates is the flow of actual completions per year relative to the planned number, as depicted in Figure 5.1. Net completions in Bromsgrove District have fluctuated over the monitoring period, although there has been a general downward trend since the high of 2004/05 when 526 net new dwellings were completed.

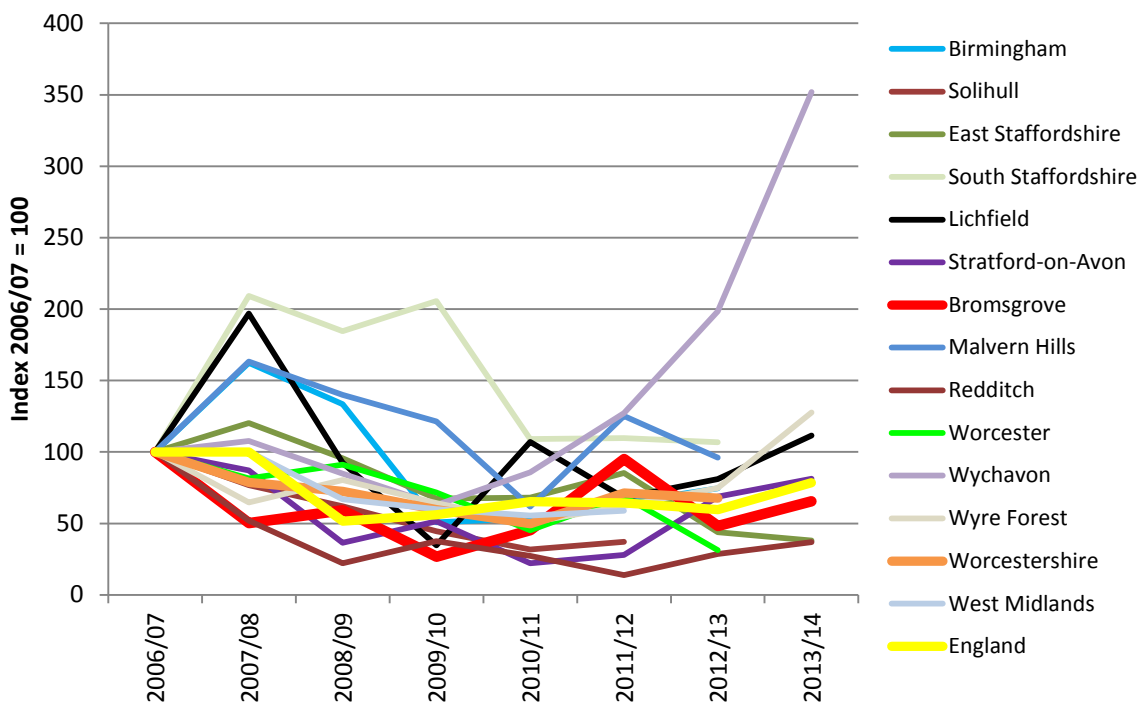


Source: BDC Housing Land Availability Reports

5.6 It is clear that completions exceeded the respective housing target for the first part of the monitoring period, up until 2007/08. However, from this point onwards, completions have failed to match the required target. Comparing

Figure 5.0 with 5.1, it can be seen that the Council has permitted sufficient dwellings to meet and exceed the housing target in the majority of years. It is therefore clear that there are other factors at play which are preventing all of the permitted dwellings from being converted into completions in that or subsequent years (allowing for a time lag whilst permissions come forward and for the phased development of larger sites). These factors are likely to include; ability to secure development finance, market conditions to secure maximum return on both land and development or planning permissions being gained speculatively to demonstrate the potential value of site.

Figure 5.2: West Midlands Housing Completions 2006/07-2013/14 (indexed)



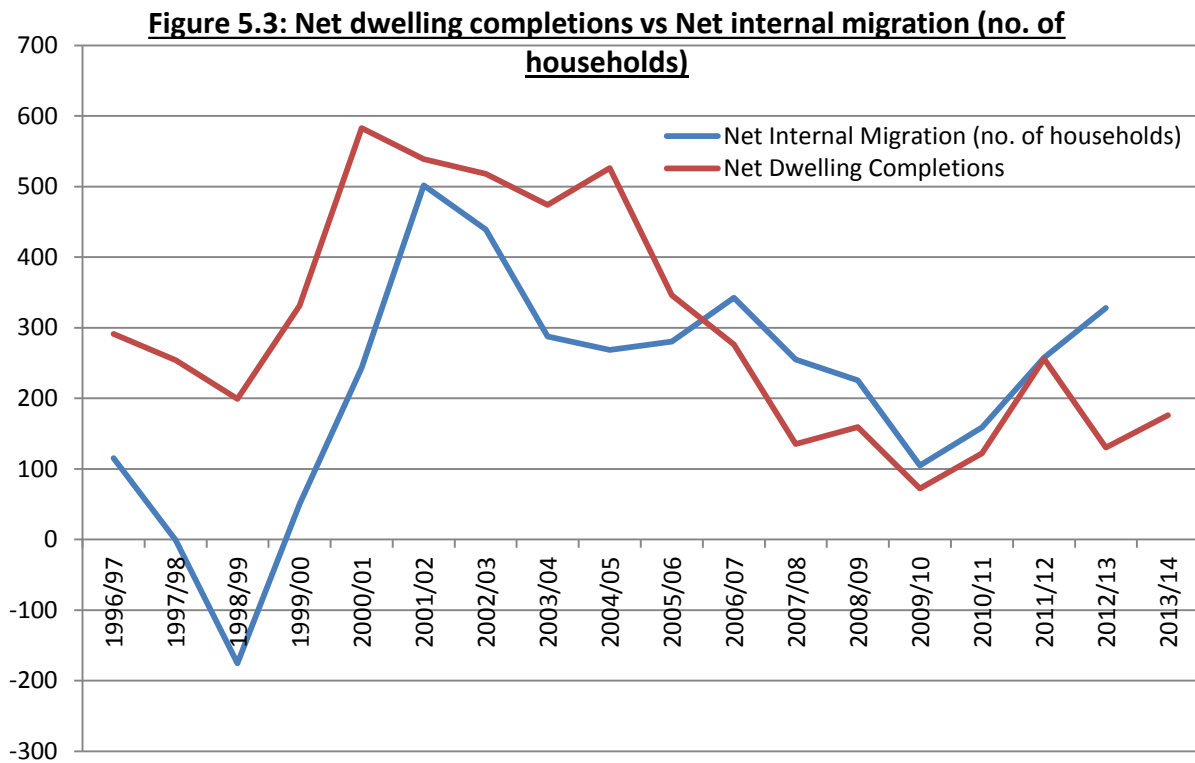
Source: Mott MacDonald - Net Housing Completions in West Midlands
 N.B. 2013/14 completions data was not available for all authorities.

5.7 Comparison with other West Midlands authorities' performance on dwelling completions is useful to deduce whether dwelling completions have been constrained by market forces or by more local factors. Figure 5.2 indexes net dwelling completions to a base of 2006/07 for a number of West Midlands authorities, plus county, region and national figures to compare Bromsgrove District's performance. It can be seen that the district's performance (shown in bold red) has been restricted over this period, but it is clear that many other authorities in the county and region have also struggled to reach pre-recession levels of development.

5.8 The NPPG states that if the historic rate of development shows that actual supply falls below planned supply, future supply should be increased to reflect the likelihood of under-delivery of a plan. It is clear that sufficient planning permissions for new dwellings have been available to meet and exceed the required target for the majority of recent years, however these are not being converted into new dwelling completions, meaning the actual house building performance in the district is lagging behind desired levels. Figure 5.2 would suggest that this situation is not unique to Bromsgrove, as over recent years the majority of the comparison Councils have struggled to achieve past high levels of delivery.

Household formation and migration

5.9 The recent PBA/PAS guidance explains, that ‘under supply’ in the context of the NPPF means house building was less than demand or need, which are not necessarily equal to the housing target. The impact of under-supply works not only through suppressed household formation rate, but also through suppressed migration. The guidance note states the latter effect is very common, as demonstrated from the close correlation between housing completions and net migration. The argument goes that if housing land is in short supply, households will be prevented from moving into the area or will be priced out or forced out of the area.



Source: ONS Internal Migration by Local Authorities in England and Wales

5.10 Figure 5.3 takes net internal migration figures (the main driver of population change in Bromsgrove) and uses a conversion figure of 2.4 persons to convert the total number of internal migrants into a proxy for the total number of households who are moving in and out of the district. This allows a more direct comparison between migration and dwelling completions. The graph demonstrates that there is a broad correlation between the two measures but in the early/mid 2000s there is some divergence, with a lag between the dwelling completions mini-peak in 2004/05 and the internal migration mini-peak in 2006/07. The period between 2006/07 and 2012/13 is interesting as the number of households moving into the district exceeded the numbers of dwellings being completed.

5.11 It is difficult to interpret what this correlation tells us, as we do not know precisely what effect a higher dwelling completion rate may have had on migration. The aspirations of would-be in-migrants into the area and out-migrants forced out are not known as, by definition, they live elsewhere.

6.0 Overcrowding

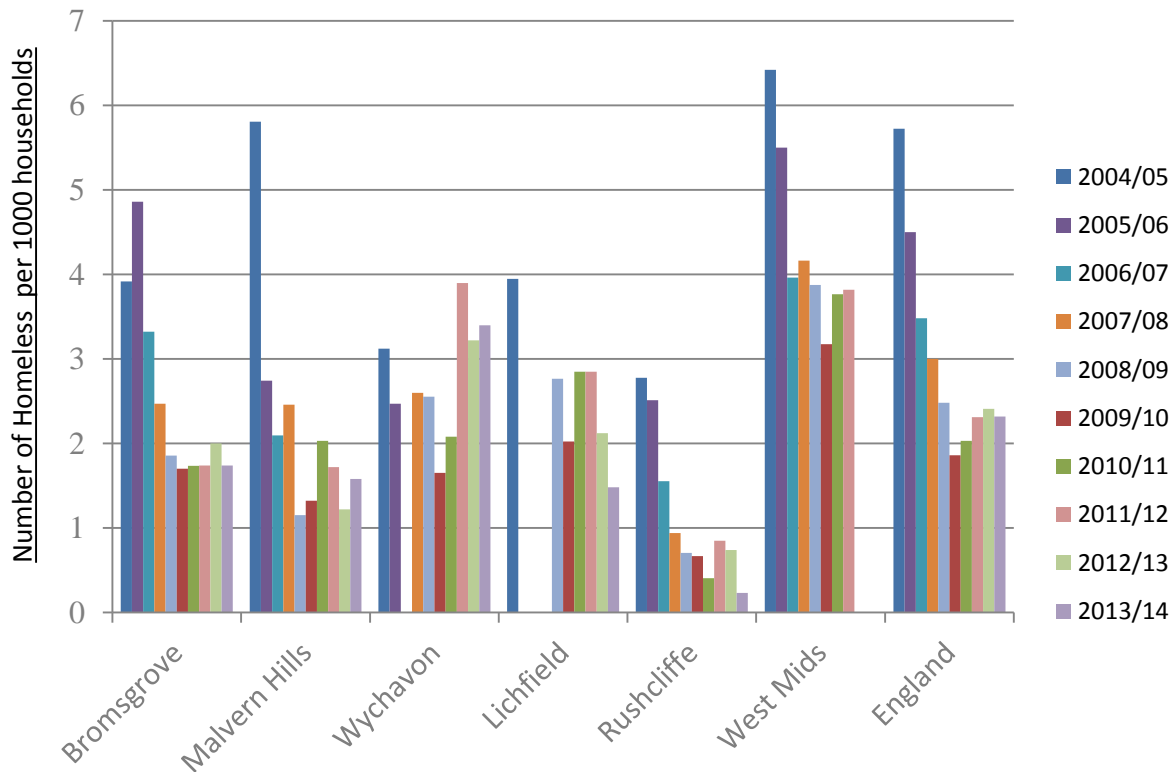
- 6.1 Indicators on overcrowding, concealed and shared households, homeless and numbers in temporary accommodation demonstrate un-met need for housing. The NPPG states that longer term increases in the number of such households may be a signal to consider increasing planned housing numbers²⁹. The following sections investigate the situation in Bromsgrove relative to other local authorities and the national average.

Homelessness

- 6.2 Homelessness data produced by CLG is collected by local authorities each quarter.
- 6.3 Data is available for the period 2004/05 to 2013/14 for both homelessness indicators (total homeless and total in temporary accommodation). Data for comparator authorities, namely Malvern Hills and Wychavon within the county of Worcestershire, and Lichfield and Rushcliffe which share many characteristics with Bromsgrove District have also been collected. Data for England and the West Midlands has also been extracted and are shown where meaningful comparisons can be drawn.
- 6.4 Overall, homelessness statistics as illustrated in Figure 6.1 reveals a general declining trend in the number of homeless persons in Bromsgrove District, although the decline appears to have plateaued in recent years. The most up-to-date data for 2013/14 reveals that 1.74 persons per 1000 households were homeless in the district. This figure is higher than in Malvern Hills, Lichfield and Rushcliffe, but lower than in Wychavon and the national figures for England. The highest figures recorded for the district were in 2005/06 when there were 4.86 homeless persons per 1000 households. This was higher than the England average, but lower than the regional average for the West Midlands.

²⁹ NPPG Paragraph: 020 Reference ID: 2a-020-20140306

Figure 6.1: Homelessness 2004/05 - 2013-14

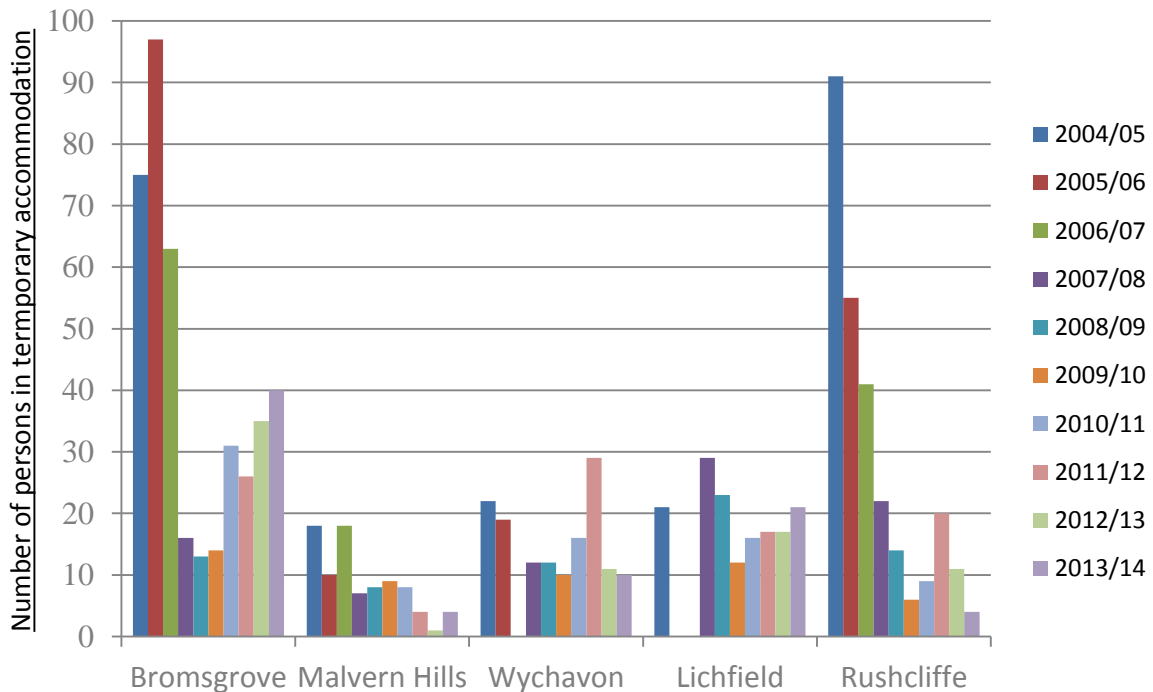


Source: CLG Table 784: Local Authorities' action under the homelessness provisions of the 1985 and 1996 Housing Acts: financial years 2004-05 to 2013-14, by Local Authority

6.5 Moving to consider the number of homeless persons in temporary accommodation, actual figures provide the most comprehensive dataset across the monitoring period and hence data for England and the West Midlands have not been included for comparison as these numbers are in the thousands.

6.6 The trend in Bromsgrove as shown in Figure 6.2 shows a similar, if more pronounced trend than Figure 6.1 for overall homelessness. Whilst numbers have fallen since their high at the start of the monitoring period in 2004/05 and 2005/06 (75 and 97 persons respectively), a fall in the last decade has been followed by a gradual minor increase from 2010/11 to 2013/14. The number of persons housed in temporary accommodation in Bromsgrove exceeds those in the comparator authorities in 2013/14.

Figure 6.2: Homeless persons in temporary accommodation 2004/05 - 2013/14



Source: CLG Table 784: local authorities' action under the homelessness provisions of the 1985 and 1996 Housing Acts: financial years 2004-05 to 2013-14, by local authority

6.7 In summary, the homelessness position in Bromsgrove appears to be similar to regional and national trends. Whilst absolute numbers of both homeless persons and those living in temporary accommodation have fallen, overall the figures have been on the increase since approximately 2009. Bromsgrove also has slightly higher levels of homelessness than its comparator authorities, but with the number of homeless persons per 1000 households remaining below 2 persons for the last 6 years, the issue is not an acute one

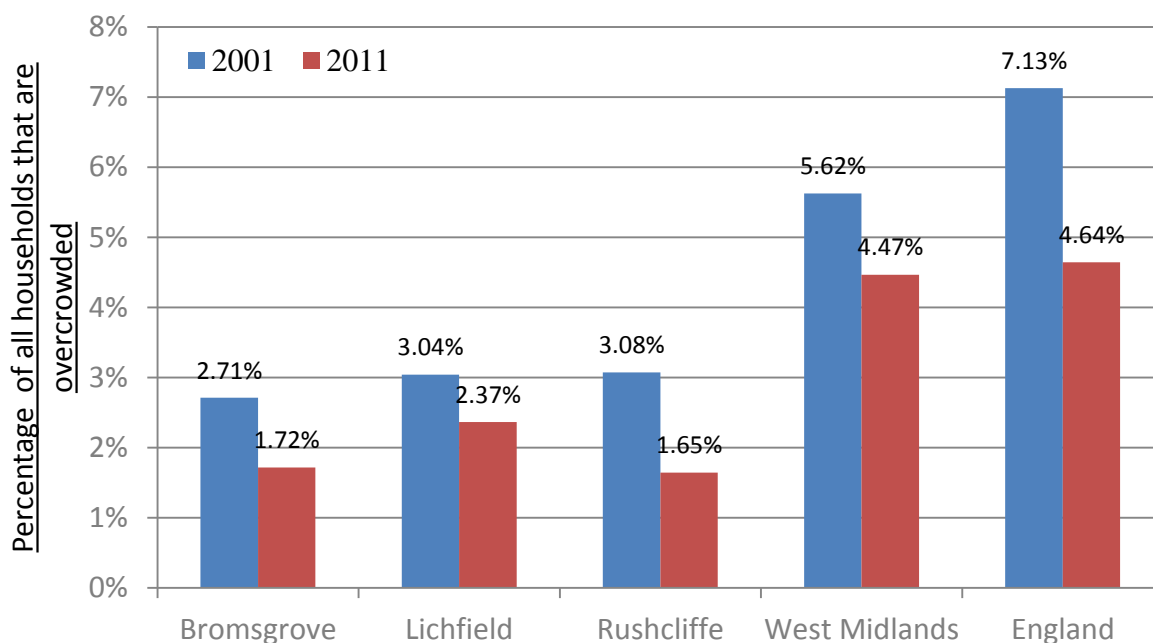
Occupancy Rates

6.8 The NPPG also indicates that occupancy ratings and concealed households are two further statistical indicators of overcrowding and hence, unmet need.

6.9 Occupancy ratings use the number of bedrooms in a home, which provide a measure of whether a household's accommodation is overcrowded or under occupied. The number of bedrooms required (based on a standard formula) is subtracted from the number of bedrooms present to obtain the occupancy rating. An occupancy rating of -1 implies that a household has one less

bedroom than required, whereas +1 implies that they have one more bedroom than the standard requirement.

Figure 6.3: Occupancy rating as an indicator of overcrowding



Source: ONS Census Data: Occupancy Rating 2001 (Table UV59) and 2011 (Table QS412EW)

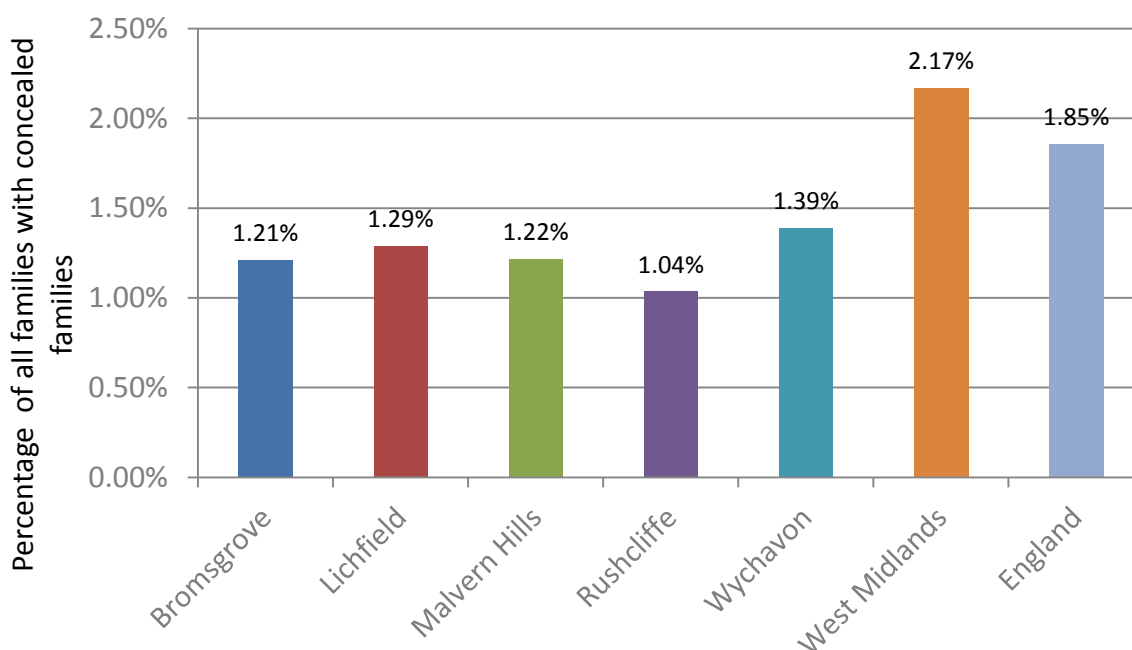
6.10 The data presented in Figure 6.3 shows the percentage of households with an Occupancy Rating of -1 or less, indicating overcrowding. Comparison between 2001 and 2011 Census data clearly shows a decline in overcrowding across all sample local authorities and at regional and national level. In Bromsgrove specifically, overcrowding has fallen by one percentage point. Overall it can be seen that the percentage of overcrowded households in Bromsgrove is generally lower than in other similar authorities. This would suggest that households in Bromsgrove are not disproportionately affected by having to accommodate more persons per room than is normally acceptable.

Concealed households

6.11 Data at local authority level on concealed families was only available in the 2011 Census so a comparison over time is not available. A concealed family is a family living in a multi-family household in addition to the primary family, such as a young couple living with parents or grandparents living with their offspring. Comparison with other local authorities in Figure 6.4 reveals that

Bromsgrove has a similar low percentage of concealed households (1.21%) to Malvern Hills and Lichfield, with Rushcliffe having a marginally lower percentage and Wychavon being marginally higher. Bromsgrove and all of the comparator authorities have a lower percentage than the West Midlands region and England. In summary, the 2011 Census data reveals that Bromsgrove has 340 concealed families living in Bromsgrove District which is below regional and national averages.

Figure 6.4: Concealed families - 2011



Source: ONS Census 2011: Concealed family status (Table ID: LC1110EW)

7.0 Summarising Market Signals in Bromsgrove District

- 7.1 The purpose of the report is to examine the housing market and to assess whether market signals indicate an imbalance in supply and demand in Bromsgrove District. This then provides a basis to assess whether a further adjustment is required to projection-based figures to determine the objectively assessed housing need.
- 7.2 It is clear from this report and the suite of evidence supporting the Bromsgrove District Plan that Bromsgrove District is demonstrating mixed market signals with some more pronounced than others. It is a complicated narrative as indicators can be both a cause and an effect; however it is evident that the macroeconomic environment is a constant theme throughout. Factors such as problems accessing finance are having a dramatic impact on the general health of the housing market, and it appears to be equally impacting indicators relating to both price (land, rent and house) and quantity of new housing units provided (delivery rates and overcrowding).
- 7.3 Locally, market signals indicate Bromsgrove DC and its wider housing and economic market areas are struggling to match housing demand with housing supply. This is having the effect of pushing up rental values and house prices albeit in line with national trends, but the effect on house prices is more notable. This is causing affordability problems, especially for those with lower quartile wages seeking to buy properties even at the cheaper end of the market in the lower quartile price range. Whilst the number of net dwelling permissions has improved from its low in 2009 when the moratorium was still in place, this is not being translated into actual completions. Figure 5.2 demonstrates this situation is not unique to Bromsgrove.
- 7.4 An important factor to consider is whether household formation and migration rates have been suppressed as a result of low rates of development, as per recent guidance³⁰. The guidance indicates that if housing land is in short supply, households will be prevented from moving into the area or will be

³⁰ Peter Brett Associates for PAS (2014) Objectively Assessed Need and Housing Targets

priced out or forced out of the area. Figure 5.4 demonstrates there is a broad correlation between net housing completions and internal migration, of particular note is the period between 2006 and 2013 as it shows the number of households moving into the district exceeded the numbers of dwellings being completed. This would appear to demonstrate that migration into the area could be putting pressure on house prices and general affordability, however it is difficult to know precisely what effect a higher dwelling completion rate may have had on migration.

- 7.5 Unfortunately it has not been possible to establish a comprehensive assessment of land prices in the area. It is however evident that the planning system along with the macroeconomic environment and local hope values are key to the release of land, which in turn will help to meet housing need and demand as well as improve local affordability problems. The most significant of all these issues is thought to be the local planning environment, where about 90% of Bromsgrove District is designated Green Belt.
- 7.6 The report finds that overcrowding and the rental market are demonstrating average market signals to those experienced nationally. Locally, there appears to be an acute issue in relation to 2-bed and 3-bed private rental properties however this is considered to be the effect of other market signal indicators. Improvements in development rates and general issues of affordability (house prices and local household incomes) would help to improve this situation.

To what extent to does this affect the objectively assessed housing needs?

- 7.7 In the context of the NPPG, a worsening trend in any of these indicators will require upward adjustment to planned housing numbers compared to ones based solely on household projections. The NPPG does not provide a set formula on how to estimate the precise impact of an increase in housing supply, instead it guides authorities to balance reasonable assumptions consistent with the principles of sustainable development, to promote a level of housing that could be expected to improve affordability.³¹

³¹ NPPG Paragraph: 020 Reference ID: 2a-020-20140306

7.8 The strongest market signal is 'affordability' and the report demonstrates it has very close links to house prices and the rate of development. Putting this into the context of the NPPF and NPPG, it would appear that the District's affordability problem is significant and that this would warrant an upward adjustment to baseline projections.

Appendix One: Comparator Market Signals for Bromsgrove District

LA no.	AREA	House Prices (CLG Live table 586)		Rents (VOA Private Market Rental Statistics)		Affordability Ratio (CLG Live table 576)		Overcrowding (Census 2011 Room Occupancy)		Homelessness (CLG Live table 784 (P1e Returns))	
		Median (2013)	% Change (1998- 2013)	Median Monthly Rent 2013	% Change (2011- 2014)	Ratio 2013	% Change (1998- 2012)	% of Housing Over- Occupied (2011)	Change 2011-2011 (% points)	Indices of Homeless households (2013/14)	Change (2004/05- 2013/14)
1	Birmingham	128500	176	550	5%	5.27	0.78	8.87	-0.69	7.56	-0.35
2	Bromsgrove	205000	170	625	5%	8.89	0.9	0.0172	-1	1.74	-0.56
3	Dudley	129995	160	525	6%	6.23	0.6	0.0361	-1.02	1.15	-0.76
4	East Staffordshire	135000	195	495	4%	5.75	0.89	0.0312	-0.79	1.63	-0.52
5	England	183500	219	595	4%	6.45	0.81	0.0464	-2.48	2.32	-0.59
6	Lichfield	182000	189	595	4%	7.13	0.61	0.0237	-0.68	1.48	-0.63
7	Malvern Hills	200000	208	610	6%	7.6	0.27	0.0173	-1.55	1.58	-0.73
8	Redditch	145250	174	575	10%	7.04	0.98	0.0423	-1.97	2.8	-0.75
9	Rushcliffe	192500	183	542	-1%	8.58	0.99	0.0165	-1.43	0.23	-0.92
10	Solihull	200000	174	700	4%	8.33	1	0.0263	-1.31	5.86	-0.38
11	South Staffordshire	177000	195	595	8%	6.5	0.44	0.0216	-1.18	0.6	-0.83
12	Stratford upon Avon	245000	206	725	7%	8.89	0.61	0.0163	-1.5	1.62	-0.23
13	Worcestershire	175000	193	575	5%	7.43	0.73	0.0252	-1.62	-	-
14	Wychavon	194998	193	650	10%	8.26	0.75	0.0222	-1.13	3.4	0.09
15	Wyre Forest	146925	177	525	5%	7.18	0.87	0.0238	-1.75	3.05	-0.46

* data not available for Worcestershire

Appendix Two: Comparator Market Signals for Bromsgrove District in rank order

RANK	House Prices (CLG Live table 586)		Rents (VOA Private Market Rental Statistics)		Affordability Ratio (CLG Live table 576)		Overcrowding (Census 2011 Room Occupancy)		Homelessness (CLG Live table 784 (P1e Returns))	
	Median (2013)	% Change (1998-2013)	Median Monthly Rent 2013	% Change (2011-2014)	Ratio 2013	% Change (1998-2012)	% of Housing Over-Occupied	Change 2011-2011 (% points)	Indices of Homeless households (2012/13)	Change (2004-2013)
1	Stratford upon Avon	England	Stratford upon Avon	Wychavon	Bromsgrove	Solihull	Birmingham	England	Birmingham	Wychavon
2	Bromsgrove	Malvern Hills	Solihull	Redditch	Stratford upon Avon	Rushcliffe	England	Redditch	Solihull	Stratford upon Avon
3	Malvern Hills	Stratford upon Avon	Wychavon	South Staffordshire	Rushcliffe	Redditch	Redditch	Wyre Forest	Wychavon	Birmingham
4	Solihull	South Staffordshire	Bromsgrove	Stratford upon Avon	Solihull	Bromsgrove	Dudley	Worcestershire	Wyre Forest	Solihull
5	Wychavon	East Staffordshire	Malvern Hills	Malvern Hills	Wychavon	East Staffordshire	East Staffordshire	Malvern Hills	Redditch	Wyre Forest
6	Rushcliffe	Wychavon	England	Dudley	Malvern Hills	Wyre Forest	Solihull	Stratford upon Avon	England	East Staffordshire
7	England	Worcestershire	South Staffordshire	Bromsgrove	Worcestershire	England	Worcestershire	Rushcliffe	Bromsgrove	Bromsgrove
8	Lichfield	Lichfield	Lichfield	Wyre Forest	Wyre Forest	Birmingham	Wyre Forest	Solihull	East Staffordshire	England
9	South Staffordshire	Rushcliffe	Worcestershire	Birmingham	Lichfield	Wychavon	Lichfield	South Staffordshire	Stratford upon Avon	Lichfield
10	Worcestershire	Wyre Forest	Redditch	Worcestershire	Redditch	Worcestershire	Wychavon	Wychavon	Malvern Hills	Malvern Hills
11	Wyre Forest	Birmingham	Birmingham	England	South Staffordshire	Stratford upon Avon	South Staffordshire	Dudley	Lichfield	Redditch
12	Redditch	Solihull	Rushcliffe	East Staffordshire	England	Lichfield	Malvern Hills	Bromsgrove	Dudley	Dudley
13	East Staffordshire	Redditch	Wyre Forest	Solihull	Dudley	Dudley	Bromsgrove	East Staffordshire	South Staffordshire	South Staffordshire
14	Dudley	Bromsgrove	Dudley	Lichfield	East Staffordshire	South Staffordshire	Rushcliffe	Birmingham	Rushcliffe	Rushcliffe
15	Birmingham	Dudley	East Staffordshire	Rushcliffe	Birmingham	Malvern Hills	Stratford upon Avon	Lichfield	*	*

A higher ranking in this table displays a stronger market signal and relatively poorer performing housing market on that indicator.

* data not available for Worcestershire