OAN Sensitivity Testing - Western Berkshire Housing Market Area

Bracknell Forest Council
Reading Borough Council
West Berkshire Council
Wokingham Borough Council

Final Report
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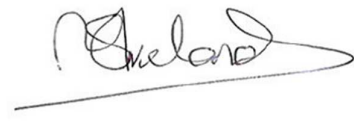
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Limitations

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1   SUMMARY

1.1   The local authorities which comprise the Western Berkshire HMA (Bracknell Forest, Reading, Wokingham and West Berkshire) have commissioned GL Hearn to considers the findings of the 2016 Berkshire (including South Bucks) SHMA regarding the objectively-assessed need for the Western Berkshire Housing Market Area (HMA) against more recent data, undertaking sensitivity analysis and testing where appropriate.

1.2   The update relates only to the Western Berkshire HMA and considers more recent demographic data, including the 2014-based Household Projections and the latest Mid-Year Population Estimates (MYE); as well as up-to-date economic forecasts from Oxford Economics (OE) and Cambridge Econometrics (CE). These forecasts have been interrogated and tested by GL Hearn in considering what future economic growth might be expected.

1.3   The report considers the objectively assessed housing need (OAN) based on the methodology set out in Planning Practice Guidance at the time of writing. It also considers the implications of the Government's proposals for a new standard methodology for calculating housing need in Appendix A.

1.4   For the avoidance of doubt, an OAN figure is not the housing target. It is an input to determining or reviewing housing targets in local plans alongside wider evidence. Housing targets in local plans will be informed by the OAN but will also take into account wider factors such as sustainability, infrastructure constraints and land availability; together where appropriate with unmet needs of other areas, primarily within the relevant housing market area.

Housing Need

1.5   Housing needs are those of the Western Berkshire Housing Market Area (HMA), which comprises the local authorities of Bracknell Forest, Reading, Wokingham and West Berkshire. Housing need refers to the overall need for both market and affordable housing. Housing needs have been considered in this report using the framework set out by Government in national planning policies, which seeks to significantly boost the supply of housing to improve affordability.

1.6   The report has started out by considering trend-based demographic projections; and then considered whether there is a case for adjusting the assessed housing need – to either support economic growth, or improve affordability (taking account of evidence from market signals and of affordable housing need).

1.7   A time period from 2013 to 2036 is used in order to be consistent with the 2016 SHMA. At the time of publication of that document, the latest available Mid-Year Population Estimates were for 2013.

Demographic Analysis

1.8   The latest official household projections are CLG 2014-based Household Projections (published in July 2016, which are the starting point for considering housing need. Including an allowance for vacant property, the official projections expect an increase of around 46,200 dwellings (2,008 dpa) between 2013 and 2036. This sees 18.8% household growth, based on a 13.2% increase in population.

Table 1:   Starting Point Demographic Projections (2013-36)

	Bracknell Forest	Reading	West Berkshire	Woking-ham	HMA
Household Growth per annum (as published)	482	515	377	561	1,936
Dwellings Growth per annum	494	541	391	582	2,008

1.9   Consideration has been given to the latest mid-year population estimates, and longer-term 10 year population trends. GL Hearn consider that both the official projections (2014-based) rebased to reflect the latest data and the 10-year trends provide an appropriate basis for understanding the demographic-led housing need. These projections set out a range of population growth of 12.8 - 13.2% (see Table 11). They provide a set of parameters for how the population could be expected to grow on a trend basis.

1.10   GL Hearn however consider that an adjustment should be made to household formation rates for younger age groups, addressing some evidence of suppression in the historical trends – in particular in West Berkshire and Bracknell Forest - and in line with national policy supporting an improved ability of younger households to form. We have therefore modelled a demographic adjustment which returns the household formation rate (HFR) of those aged 25-44 half way back to those shown in the 2008-based Household Projections by 2036.

1.11   Applying these rates to the rebased 2014-based Household Projections and 10-year Migration Scenario results in a demographic-led need for between 2,121 and 2,135 dwellings per annum across the HMA for the 2013 to 2036 period. The conclusions on the demographic need for individual authorities are shown below.

Table 2:   Demographic Need including Headship Adjustment (dpa 13-36)

	Bracknell Forest	Reading	West Berkshire	Wokingham	HMA
Rebased SNPP with Headship Adjustment	522	542	436	621	2121
10-year migration with Headship Adjustment	430	413	583	709	2135

1.12   The distribution of housing need within the HMA is influenced in part by migration dynamics within the HMA and also the timeframe from which the trends are drawn. The more recent trends show a higher need in Bracknell Forest and Reading. Conversely the longer term trends show a higher need in West Berkshire and Wokingham. These two projections should realistically be regarded as a range.

Supporting Economic Growth

1.13   To inform this sensitivity testing report, GL Hearn purchased forecasts for the Western Berkshire HMA from Oxford Economics and Cambridge Econometrics to inform this assessment. These have been assessed and compared against one another, and brought together with an interrogation of local economic dynamics including through engagement with each of the councils and the Thames Valley Berkshire LEP to inform conclusions on the economic growth expected.

1.14   The baseline forecasts show a growth of employment of between 35,200 – 61,200 jobs over the period 2016-36. The period from 2016 is considered as population data exists to 2016, and the projections run from this point forward.

1.15   GL Hearn have concluded that for Bracknell Forest, Reading and Wokingham it would be reasonable to consider the average of the two forecasts as a realistic assessment of economic growth potential for the purposes of assessing housing need. However in West Berkshire we consider that there was some justification to adopt the more positive of the two forecasts (CE and OE respectively), taking account of the conclusions of our own demographic analysis which show that population growth could be stronger than in the 2014-based SNPP.

1.16   In modelling housing need, we triangulated different data sources relating to future changes in economic participation; and considered existing commuting dynamics and levels of double jobbing. The core modelling assumptions maintain 2011 census commuting patterns and double-jobbing and use the 2016 SHMA employment rate assumptions, which sit centrally against other available forecasts. Migration is adjusted to support the level of employment growth expected.

1.17   The core economic-led scenario modelled shows a need for housing of 2,750 dpa across the Housing Market Area (Table 3). This is 37% above the demographic starting point and 29-33% above our conclusions on the demographic need.

Table 3:   Economic-Led Housing Need

LPA	Basis	Jobs (2016-36)	Jobs pa	Homes (dpa)
Bracknell Forest	Midpoint	12,000	600	630
Reading	Midpoint	16,400	810	759
West Berkshire	Cambridge Econometrics	7,100	355	556
Wokingham	Midpoint	13,700	685	801
Western Berkshire HMA		49,200	2,450	2,746

Source: CE, OE and GL Hearn Modelling

1.18   At a local authority level, findings on the economic-led need exceed the demographic-led need in Bracknell Forest, Reading and Wokingham. In West Berkshire it sits within the range (436 – 583 dpa) shown.

Affordable Housing Need and Market Signals

1.19   The report has considered the need for affordable housing using the Basic Needs Assessment Model recommended in the Planning Practice Guidance PPG (2015). [1] Using the available information, it identifies a net need for 1,328 affordable homes per annum across the HMA for the 2013-36 period using the core modelling assumptions, and includes sensitivity analysis considering alternative thresholds for the proportion of income households spend on housing.

1.20   Using the core assumptions, the greatest absolute level of affordable housing need was located in Reading (503 affordable dwellings per annum) and Wokingham (453 affordable dwellings per annum); with Bracknell Forest and West Berkshire requiring 191 and 180 affordable dwellings per annum respectively.

1.21   The theoretical overall housing provision required to meet the affordable housing need based on existing policies for the proportion of housing to be delivered has been assessed, in line with the PPG. This shows that between 3,040 – 7,217 dpa could notionally be required. It provides evidence that upward adjustments to the demographic starting point to boost affordable housing delivery should be considered. However the OAN needs to set at a level which is deliverable, can be supported by additional population and households; and it should be recognised that the affordable housing need is sensitive to market housing costs (and therefore increases in market housing supply supporting improvements in affordability).

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[1] https://www.gov.uk/guidance/housing-and-economic-development-needs-assessments

1.22   The analysis of market signals points to house prices which are generally above the national and regional trends. The one exception is Reading whose median prices are overall less expensive than the regional equivalent. This is driven by lower cost terraced and flatted properties the sale of which are more prevalent than across the region.

1.23   The evidence points to affordability pressures across the whole housing market area but in particular Wokingham and Bracknell Forest, where entry level house prices (lower quartile) are at least 11 times lower quartile earnings. Drawing the market signals and affordable housing needs evidence together, GL Hearn concludes that a 10% adjustment to the demographic starting point would be warranted in Reading and West Berkshire, a 15% adjustment in Bracknell Forest and 20% uplift in Wokingham. The results of this are shown in Table 4 below.

Table 4:   Housing Need to Address Market Signals and Affordable Housing Need

	Demographic Starting Point	Uplift for Market Signals and AH	Housing Need (dpa)
Bracknell Forest	494	15%	568
Reading	541	10%	595
West Berkshire	391	10%	430
Wokingham	582	20%	698
HMA	2008		2292

1.24   At an HMA level, the economic-led need results in a need for 2,750 dpa which would support a stronger upward adjustment from the demographic starting point and in doing so could be expected to support an improvement in affordability. The economic-led need is higher than that shown in Table 4 in all cases.

1.25   GL Hearn however consider that a higher adjustment taking account of the affordable housing evidence in West Berkshire District should be considered, against a context whereby the 2014-based SNPP sees the lowest population growth of local authorities in the region; and there is a realistic prospect that the affordable housing need could be met in full. This would yield a need for 600 dpa.

Drawing the Evidence Together

1.26   The demographic need, economic-led need and affordable housing and market signals evidence is brought together in drawing conclusions and considering the OAN. It is the economic-led need which drives the housing need at an HMA level and in Bracknell Forest, West Berkshire and Wokingham. However in West Berkshire, GL Hearn considers that both the demographic-led need and economic-led need is influenced by low population growth expected in the 2014-based SNPP. We consider that there is a strong basis in planning positively for considering a modestly higher housing need for 600 dpa to support broader improvements in affordability and affordable housing

delivery. On this basis the analysis in this report would point the following levels of objectively-assessed housing need:

Table 5:   Conclusions on OAN, 2013-36

	OAN (dpa)
Bracknell Forest	630
Reading	759
West Berkshire	600
Wokingham	801
HMA	**2,790**

1.27   The OAN conclusions arising through the sensitivity analysis in this report across the HMA are 2% lower than shown in the 2016 SHMA for the Western Berkshire HMA. There is an increase in the need in Reading (699 to 759 dpa), a similar figure in Bracknell Forest (630 vs. 635 dpa), but a reduction in Wokingham (894[2] to 801 dpa), and West Berkshire (665 to 600 dpa).

1.28   The Practice Guidance in Paragraph 2a-016 sets out that assessments of OAN should be informed by the latest available information and local plans should be kept up-to-date; but is clear that a meaningful change in the housing situation should be considered in this context, and this does not automatically mean that housing assessments are rendered outdated every time new projections are issued. The scale of changes shown in the sensitivity testing herein need to be considered in this context.

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[2] Figure which has arisen from appeal's consideration of 2016 SHMA

2   INTRODUCTION

Context and Overview

2.1   The local authorities across Berkshire together with Thames Valley Berkshire Local Enterprise Partnership (LEP) worked together in 2015/16 to prepare a Strategic Housing Market Assessment ("the 2016 SHMA"). This defined two housing market areas – a Western Berkshire HMA; and Eastern Berkshire HMA which extended to include South Bucks. It went on to assess the overall objectively assessed need (OAN) for housing, and to consider the needs for different types of homes and housing needs of different groups within the population.

2.2   Since the preparation of the 2016 SHMA, new 2014-based official population projections (May 2016) and household projections (July 2016) have been released. There is also a range of other more recent data available, including house price and affordability data and more recent economic forecasts.

2.3   The Practice Guidance in Paragraph 2a-016 sets out that assessments of OAN should be informed by the latest available information and local plans should be kept up-to-date; but is clear that a meaningful change in the housing situation should be considered in this context, and this does not automatically mean that housing assessments are rendered outdated every time new projections are issued.

2.4   Against this context, the four authorities in the Western Berkshire HMA – Bracknell Forest, Reading, West Berkshire and Wokingham Councils – together with the Local Enterprise Partnership, have commissioned GL Hearn to consider the latest evidence and what this indicates regarding OAN for housing in the Western Berkshire HMA through sensitivity testing. The report has been prepared by a consultancy team comprising GL Hearn and Justin Gardner Consulting (JGC).

Figure 1:   Housing Market Area covering Berkshire authorities
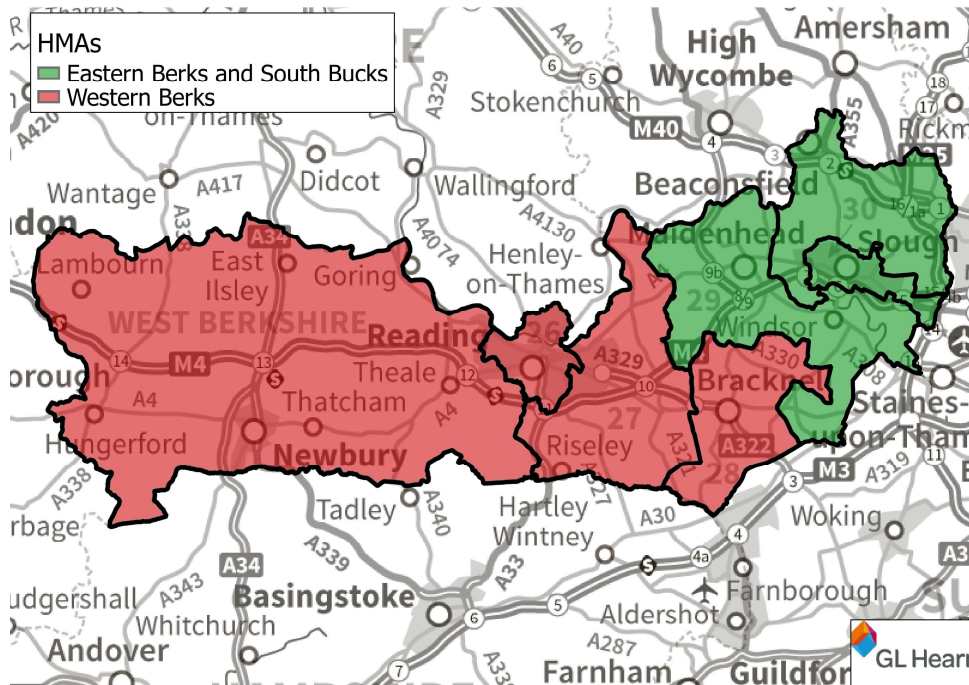
2.5   This report considers the objectively assessed need for housing over the period to 2036. It uses a consistent time period (2013-36) to the 2016 SHMA. The methodology used in this report responds to the National Planning Policy Framework (NPPF), which sets out Government's objective to significantly boost housing supply and improve affordability; and current Planning Practice Guidance (PPG) on *Housing and Economic Development Needs Assessments.*[3]

2.6   Housing need in the context of this report thus "*refers to the scale and mix of housing and the range of tenures that is likely to be needed in the housing market area over the plan period – and should cater for the housing demand of the area and identify the scale of housing supply necessary to meet that demand.*"[4] Need thus relates to both market and affordable housing, and needs arising from both the local population and as a result of in-migration to an area.

2.7   Government has consulted on proposals for a new standardised methodology for assessing housing need in *Planning for the Right Homes in the Right Places: Consultation Proposals (Sept 2017).* This is intended to be simpler, quicker and more transparent, and takes forward the sentiment of recommendations made to Government by the Local Plans Expert Group (LPEG).[5] The report sets out the figures arising from the application of the Government consultation

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[3] https://www.gov.uk/government/collections/planning-practice-guidance

[4] PPG ID: 2a-003-20140306

[5] See www.lpeg.org. Note there are differences in the methodology proposed by Government from the LPEG Proposals

methodology for information/ comparative purposes and based on the current available data in Appendix A. This has been taken forward by Government in the draft updated NPPF (March 2018).

2.8   However the draft NPPF (March 2018) sets out that for plans submitted to Government within 6 months of the publication of the updated NPPF, the existing methodology within the 2012 NPPF and 2015 Planning Practice Guidance can be used.

2.9   It should be emphasised that OAN figures do not represent housing targets. This report considers housing need, based on Government guidance at the time of writing, which is intended to provide an input to plan-making alongside wider evidence including on land availability, environmental and other development constraints and infrastructure. The local authorities within the Western Berkshire HMA have been working together to meet housing needs across the Housing Market Area, as set out in the Western Berkshire Spatial Planning Framework which was published in December 2016.[6] The authorities will need to continue working together in planning for housing provision across the housing market area.

National Planning Policy Framework and Guidance

NPPF

2.10   The 2012 National Planning Policy Framework (NPPF)[7] sets out the Government's planning policies for England. This was considered in the 2016 SHMA, and therefore is summarised briefly here. This report has been prepared against the context and policies set out in the 2012 NPPF.

2.11   The Framework sets a presumption in favour of sustainable development whereby Local Plans should meet objectively assessed development needs, with sufficient flexibility to respond to rapid change, unless the adverse impacts of doing so would significantly or demonstrably outweigh the benefits or policies within the Framework (including policies relating to Green Belt and other nationally and internationally significant landscapes and environmental designations) indicate that development should be restricted.

2.12   Section 6 sets out policies relating to housing. Within this, Paragraph 47 sets out that to boost significantly the supply of homes, local planning authorities should use their evidence base to ensure that their local plans meet the full objectively-assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in the Framework.

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[6] http://info.westberks.gov.uk/CHttpHandler.ashx?id=44630&p=0

[7] CLG (March 2012) National Planning Policy Framework

2.13   Guidance is also provided on plan-making, with Paragraph 159 setting out requirements for the evidence base relating to housing provision; Paragraphs 173-177 dealing with deliverability; and Paragraphs 178-181 emphasising the need for local authorities to work together to address strategic cross-boundary issues, of which housing provision is likely to be one.

2.14   The Government has indicated its intention to update the NPPF in Spring 2018 and has published a draft NPPF in March 2018. The authorities will need to take account of any changes in national planning policies and associated guidance on the publication of an updated NPPF.

Planning Practice Guidance

2.15   Guidance on *Assessment of Housing and Economic Development Needs* is set out by Government, which deals with how objectively assessed housing need should be defined. It provides a framework against which evidence-base studies such as this are assessed at local planning examinations and planning appeals, and thus the methodology which needs to be followed.

2.16   The PPG methodology was set out in the 2016 SHMA and is available online.[8] It is framed by Government's objective to significantly boost housing supply. It outlines that estimating future need for housing is not an exact science, and that there is no one methodological approach or dataset which will provide a definitive assessment of need. However it strongly recommends the use of the methodology set out therein.[9]

2.17   The PPG sets out that there may be instances where these official projections require adjustment to take account of factors affecting local demography or household formation rates, in particular where there is evidence that household formation rates are or have been constrained by supply.

2.18   It then goes on to outline that:

> *"The housing need number suggested by household projections (the starting point) should be adjusted to reflect appropriate market signals, as well as other indicators of the balance between the demand for and supply of dwellings....*
>
> *"In areas where an upward adjustment [to the assessment of housing need] is required, plan makers should set this adjustment at a level that is reasonable. The more significant the affordability constraints (as reflected in rising prices and rents, and worsening affordability ratio) and the stronger other indicators of high demand (e.g. the differential between land prices), the larger the improvement in affordability needed and, therefore, the larger the additional supply response should be."*

2.19   The PPG is clear that market signals are intended to warrant consideration of an adjustment from the starting point demographic projection (ID 2a-019-20140306). The 'starting point' demographic

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[8] https://www.gov.uk/government/collections/planning-practice-guidance

[9] PPG ID: 2a-005-20140306

projections used in this report are the 2014-based Household Projections. The PPG does not provide a formula for how an adjustment for market signals should be quantified. It simply sets out that it should be 'reasonable.'

2.20   The Guidance also states that affordable housing need should be calculated and considered in the context of its likely delivery as a proportion of mixed market and affordable housing. It outlines that an increase in the total housing figures included in the local plan should be considered where it could help deliver the required number of affordable homes.[10] Case law has clarified that the consideration of an increase to boost affordable housing delivery is necessary in drawing conclusions on OAN.[11]

2.21   The Guidance indicates that job growth trends and/or economic forecasts should be considered having regard to the growth in working-age population in the housing market area. It sets out that where the supply of working age population that is economically active (labour force supply) is less than the projected job growth, this could result in unsustainable commuting patterns (depending on public transport accessibility and other sustainable options such as walking and cycling) and could reduce the resilience of local businesses. In such circumstances, plan makers will need to consider how the location of new housing and infrastructure development could help to address these problems. Increasing housing provision could be one such approach.

2.22   Drawing the above together the OAN of the housing market area is thus influenced by the demographic need for housing, with upward adjustments where appropriate to take account of market signals and affordable housing need and/or to support economic growth.

2.23   The Guidance is clear that the assessment of need should be realistic and should be based on future scenarios that could be reasonably expected to occur. It specifically sets out that the assessment of need should not take account of supply-side factors or development constraints. These are relevant in bringing evidence together in the plan-making process.

2.24   Where there is not an up-to-date housing requirement within the development plan, case law has established that the need to be used in assessing five year land supply in these (interim) circumstances is the objectively-assessed housing need.[12]

Planning for the Right Homes in the Right Places

2.25   Government undertook a consultation entitled *Planning for the right homes in the right places.* [13]This ran from September – November 2017. It consulted on proposals for a new standardised

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[10] PPG ID 2a-029-20140306

[11] *Kings Lynn & West Norfolk vs. SSCLG & Elm Park Holdings Ltd* [2015] EWHC 2464 (Admin)

[12] R vs City and District of St Albans, EWCA Civ. 1610

methodology for assessing housing need which, if taken forward, would replace that in the PPG. This does not form Government policy, and therefore the figures arising from it cannot be relied upon in planning appeals, at the current time. However the Government has indicated that it intends to adopt the standard methodology and it has been taken forward in draft revisions to the NPPF and Planning Practice Guidance issued by Government in March 2018.

2.26   An assessment of the indicative implications of the methodology on housing need in the Western Berkshire HMA are set out in Appendix A. The figures may change in due course on release of further information on affordability ratios (the release of 2017 data is scheduled for April 2018) and household projections (2016-based Household Projections are due in September 2018).

2016 Berkshire SHMA OAN Findings

2.27   The 2016 Berkshire and South Bucks Strategic Housing Market Assessment ("the 2016 SHMA") was commissioned by the Berkshire local authorities and Thames Valley Berkshire LEP and prepared by a consultancy team comprising GL Hearn, Wessex Economics and Justin Gardner Consulting. The consultancy team engaged with a range of local stakeholders in defining housing market geographies, housing market and economic dynamics, and economic growth potential. It built on the detailed analysis and evidence base prepared for the Thames Valley Berkshire Strategic Economic Plan.[14] This report provides sensitivity testing where appropriate elements of the analysis in the 2016 SHMA.

Demographics

2.28   The demographic starting point in the 2016 SHMA was 2012-based ONS population and CLG household projections. These showed a housing need for 2,293 dwellings per annum (dpa) across the Western Berkshire HMA.

2.29   A series of sensitivity analysis were undertaken considering longer-term migration trends, the potential implications of Unattributable Population Change (UPC) and migration interactions with London (informed by the assumptions in the 2013 London SHMA). These showed that the housing need based for the Western Berkshire HMA from these scenarios could fall between 2,051 – 2,551 dpa. The official projections (updated to take account of ONS 2013 Mid-Year Population Estimates) sat in the middle of this range. The evidence indicated that in the longer-term, and particularly during the early 2000s, migration could have been over-estimated.

2.30   The 2016 SHMA considered that there was a need to make an initial upward adjustment to migration taking account of the assumptions in the 2015 London Plan, the modelling assumptions

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13 https://www.gov.uk/government/consultations/planning-for-the-right-homes-in-the-right-places-consultation-proposals

14 http://www.thamesvalleyberkshire.co.uk/documents?page=1&folder=192&view=files

for which assumed increased net out-migration from London post 2017, in order to ensure that no housing need went uncounted. It adjusted net migration upwards relative to the base 2012-based demographic projections to take account of this.

2.31   The 2016 SHMA analysis however showed that higher migration than this would be necessary to support the Western Berkshire HMA's economy, taking account of expected economic growth and the changes in the age structure of the population to 2036.

Supporting Economic Growth

2.32   The 2016 SHMA considered the interaction between potential employment growth and housing need taking account of historical employment trends across a number of timeframes, as well as September 2013 Cambridge Econometrics forecasts, which aligned to the LEP's Strategic Economic Plan and the associated evidence base. It did not however simply take the forecasts as a given: the Consultancy Team assessed the scale and distribution of economic growth across Berkshire, building on the evidence base, benchmarking and business engagement undertaken in the development of the Strategic Economic Plan, together with further analysis of local economic trends and growth potential, consideration of commercial market dynamics and planned investment, and engagement with the Berkshire authorities, the LEP and its consultants, SQW.

2.33   The Western Berkshire HMA experienced very rapid employment growth in the 1980s; employment declined in the economic slowdown of the late 1980s/early 1990s, before rapid recovery from around 1993, which came to an abrupt halt with the bursting of the dot.com bubble around 2000. Since then employment growth has been steady but much less rapid than in the 1980s and 1990s. The Strategic Economic Plan Evidence base indicated that the growth rates which Berkshire's now more mature economy could achieve would not be as strong as those seen within the 'growth phase' and London was competing for the forms of tech investment which historically would have gone to Berkshire. It also identified issues associated with geography, including the under-bounded nature of Reading[15]; and a shift in the office market towards town centre locations.

2.34   In relating employment growth and housing need, assumptions were made regarding people with more than one job, and commuting patterns. On a policy-off basis, the modelling assumed that current levels of double jobbing and the commuting balance are maintained moving forwards. Employment rates were modelled to take account of recent trends and the added future impetus provided by changes to state pension age.

2.35   For the Western Berkshire HMA as a whole, the evidence justified a further upward adjustment to migration to support economic growth; but no further upward adjustment was required in Bracknell

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[15] In the sense that Reading's urban area extends beyond the Reading Borough boundaries

Forest to support jobs growth. Its analysis balanced housing and economic growth across the HMA, in line with the PPG.

Improving Affordability

2.36   The need for affordable housing was assessed in Section 6 of the 2016 SHMA.. This included an assessment of affordable housing need following the methodology in the PPG paragraph 24 (ID: 2a-024-20140306), to quantify the number of households who require support in meeting their housing needs. A need for 1,263 affordable homes per year was identified, based on current housing costs and incomes. Sensitivity analysis considering different assumptions on what proportion of income households could expect to spend on housing was set out.

2.37   The 2016 SHMA concluded that the affordable housing evidence therefore provided some basis for considering higher levels of overall housing provision; and this was considered alongside the market signals evidence in drawing conclusions.

2.38   The 2016 SHMA set out to assess market signals considering whether there was a case for adjusting housing provision, in effect to improve affordability over time where there is evidence that in the past there has been a supply/demand imbalance.

2.39   The analysis of the market signals at that time clearly pointed to affordability pressures across the Western Berkshire HMA. The 2016 SHMA therefore considered it appropriate to consider an upward adjustment to the demographic assessment of housing need to improve affordability over time.

2.40   It was considered that in respect of demographics, the key impact of an improvement in affordability and affordable housing delivery would be an increase in younger households' ability to form, and associated reduction in households sharing and living with parents. This was within a context whereby adjustments had already been made to migration (from London and to support economic growth).

Drawing the Evidence Together

2.41   The 2016 SHMA drew conclusions on OAN drawing together the above factors. It worked on the principle that we should be planning for housing to be occupied, and therefore upward adjustments from the starting point in an OAN calculation would need to be supported by either increased migration to an area or increased household formation.

2.42   In drawing conclusions it set to disaggregate the adjustments made to help explain the basis of the figures, but it should be recognised that there are clear overlaps between issues which the SHMA team was fully aware of. Upwards adjustments to migration (for instance through enhanced in-

migration from London) would support workforce growth within the recipient authority and could thus support its economy. Similarly the upwards adjustments relating to London and economics would support the delivery of additional market and affordable housing.

2.43   For the Western Berkshire HMA, from a starting point demographic need for 2,293 dpa, based on the 2012-based Household Projections, the following adjustments were made:

- Higher migration from London – 124 additional dpa (+5.4pp on baseline)
- Higher migration to support economic growth – 154 additional dpa (+ 6.7pp)
- To address supressed household formation – 64 additional dpa (+ 2.8pp)
- To improve affordability – 220 additional dpa (+9.6pp)

2.44   Combined these resulted in an objectively assessed housing need (OAN) of 2,855 dpa across the Western Berkshire HMA, which was a substantial 25% above the demographic starting point. Conclusions for individual authorities and how these were derived are set out in Table 6.

Table 6:   Conclusions on Full Objectively Assessed Housing Need by Local Authority and HMA, 2013-36

	2012-based Household Projection	London Uplift	Economic Uplift	Reversing Suppressed Household Formation	Improving Affordability	OAN
Bracknell Forest	535	24	0	32	44	635
Reading	541	68	33		57	699
West Berkshire	537	14	35	32	47	665
Wokingham	680	18	86		72	856
Western Berkshire HMA	**2,293**	**124**	**154**	**64**	220	**2,855**

2.45   The aggregate impact of the 2016 SHMA's adjustments from the demographic starting point in drawing conclusions ranged from 29% in Reading and 26% in Wokingham to 24% in West Berkshire and 19% in Bracknell Forest.

2.46   Given that there are now more recent demographic projections available, together with more recent evidence/ forecasts for economic growth and house price and other market signals data; it is an appropriate point now at which to review and update the 2016 SHMA findings. This report takes a slightly different presentational approach in drawing OAN findings, taking into account some of the criticisms levelled at the 2016 SHMA at public inquiries since its preparation.

Report Structure

2.47   The remainder of the report is structured as follows:

- Section 2: Trend-based Demographic Projections

- Section 3: Economic-led Projections
- Section 4: Affordable Housing Need
- Section 5: Market Signals
- Section 6: Conclusions.

3   TREND-BASED DEMOGRAPHIC PROJECTIONS

3.1   In this section consideration is given to evidence of housing need based on past demographic trends.

3.2   The PPG sets out that *'household projections published by the Department for Communities & Local Government should provide the starting point estimate of overall housing need'*.[16] The CLG projections are directly linked to ONS Sub-national Population Projections (SNPP). These, the PPG sets out, are statistically robust and based on nationally consistent assumptions. However, the PPG also identifies [2a-014] that '*establishing future need for housing is not an exact science. No single approach will provide a definitive answer'* and in 2a-017 notes that '*plan makers may consider sensitivity testing, specific to their local circumstances'* identifying that in some circumstances alternative assumptions on migration and household formation rates may be appropriate, where these can be clearly explained and justified based on established sources of robust evidence.

3.3   Furthermore, the PPG notes [2a-016] that '*where possible, local needs assessments should be informed by the latest available data.*' This is relevant as new ONS Mid-Year Population Estimates having been published since the release of the last SNPP.

Past Demographic Trends

3.4   Figure 2 and Table 7 below profile demographic trends across the Western Berkshire HMA over the last 10 years (2006-16). Population growth has been influenced by a combination of natural change (births minus deaths) and migration; although within ONS data there is also a small other changes category (mainly related to armed forces and prison populations) and an Unattributable population change (UPC).[17] We have focused on trends over the last 10 years as this is the period for which data quality is better.

3.5   The analysis shows positive net international migration to the HMA, with internal migration (from within the UK) varying year-on-year, being positive in some years (implying net in-migration) and negative in others.

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[16] PPG ID 2a-015-20140306

[17] UPC is an adjustment made by ONS to mid-year population estimates where Census data has suggested that population growth had either been over- or under-estimated in the inter-Census years. Because UPC links back to Census data a figure is only provided for years up to 2011.

Figure 2: **Components of Population Change, mid-2006 to mid-2016 – Western Berkshire HMA**
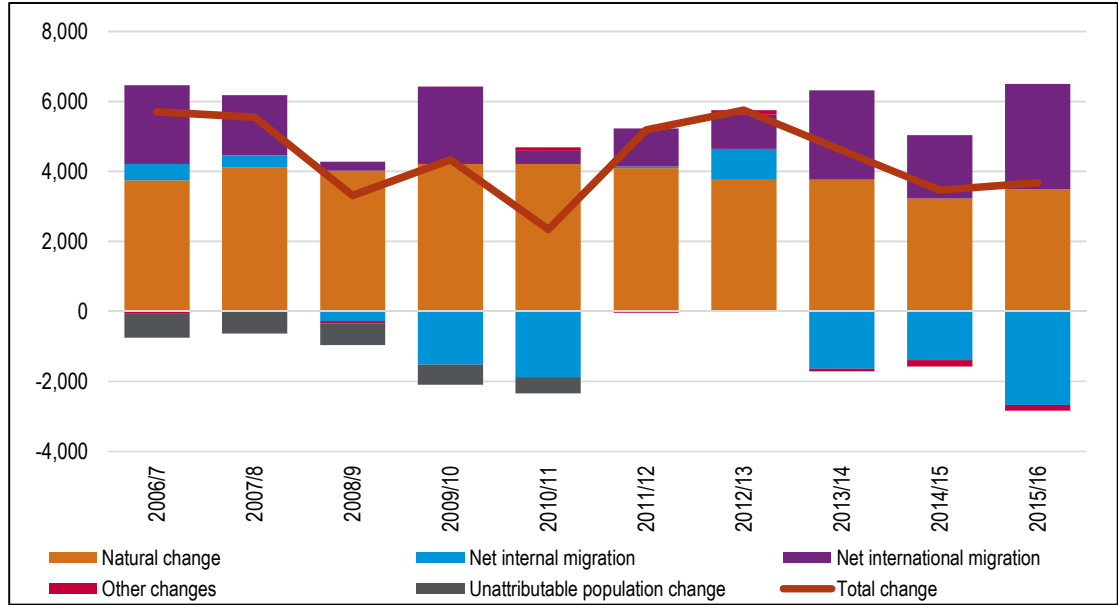
Source: ONS

Table 7: **Components of population change, mid-2006 to mid-2016 – Western Berkshire HMA**

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (Unattributable)	Total change
2006/7	3,754	466	2,245	-46	-711	5,708
2007/8	4,120	341	1,724	-9	-626	5,550
2008/9	4,019	-284	257	-53	-623	3,316
2009/10	4,215	-1,522	2,206	11	-574	4,336
2010/11	4,221	-1,881	368	103	-467	2,344
2011/12	4,094	50	1,089	-40	0	5,193
2012/13	3,787	863	980	125	0	5,755
2013/14	3,770	-1,637	2,550	-78	0	4,605
2014/15	3,233	-1,391	1,814	-185	0	3,471
2015/16	3,492	-2,673	3,018	-159	0	3,678

Source: ONS 2016 MYE (June 2017)

Demographic Starting Point

3.6 The latest official projections are the CLG 2014-based household projections published in July 2016. These projections were underpinned by ONS (2014-based) subnational population projections (SNPP) – published in May 2016. The table below sets out levels of household growth expected by the CLG household projections in the 2013-36 period.

3.7 Across the HMA, the CLG household projections show household growth of about 44,500 [18]– this is a 19% increase. Growth is projected to be highest in Bracknell Forest (23.3% growth) and notably lower in West Berkshire (13.7%).

Table 8: Household change 2013 to 2036 (2014-based CLG household projections)

Area	Households 2013	Households 2036	Change in households	% change
Bracknell Forest	47,479	58,561	11,082	23.3%
Reading	64,048	75,901	11,853	18.5%
West Berkshire	63,220	71,889	8,669	13.7%
Wokingham	61,707	74,620	12,913	20.9%
Western Berkshire HMA	236,454	280,971	44,517	18.8%

Source: CLG 2014-based household projections, published 2017

3.8 Data from the 2014-based household projections can be compared with equivalent information from the previous release (2012-based CLG household projections) – this is shown in the table below. Overall, it is clear that the more recent projections show a lower level of household growth across the HMA, although figures are higher in Reading. Across the HMA, the 2014-based projections show household growth some 12% lower than the figures from the 2012-based release.

Table 9: Comparing 2012- and 2014-based Household Projections

Household Growth, 2013-36	2012-based	2014-based	Difference (2014-based – 2012-based)
Bracknell Forest	11,973	11,082	-891
Reading	11,403	11,853	450
West Berkshire	11,838	8,669	-3,169
Wokingham	15,228	12,913	-2,315
Western Berkshire HMA	50,442	44,517	-5,925

Source: CLG household projections, published 2015 and 2017

3.9 Whilst the 2014-based data is the latest 'official' population projection and therefore forms the starting point for analysis in line with the PPG, it is worth testing the assumptions underpinning the projections to see if they are broadly reasonable in the local context. This involves considering both

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[18] Household figures are translated to homes /dwellings later in this report by including a vacancy rate (see paragraph 3.48).

the population projections (the SNPP from ONS) and also the way CLG have converted this data into households.

2014-based Subnational Population Projections (SNPP)

3.10   The latest SNPP were published by ONS on the 25th May 2016. They replaced the 2012-based projections. Subnational population projections provide estimates of the future population of local authorities, assuming a continuation of recent local trends in fertility, mortality and migration which are constrained to the assumptions made for the 2014-based national population projections. The new SNPP are largely based on trends in the 2009-14 period (2008-14 for international migration trends).

3.11   The SNPP are not forecasts and do not attempt to predict the impact that future government or local policies, changing economic circumstances or other factors might have on demographic behaviour. The primary purpose of the subnational projections is to provide an estimate of the future size and age structure of the population of local authorities in England. These are used as a common framework for informing local-level policy and planning in a number of different fields as they are produced in a consistent way.

3.12   Table 10 below shows projected population growth from 2013 to 2036 in the HMA and individual local authorities. The population of the HMA is projected to grow by around 77,500 people between 2013-36; this is a 13% increase. Population growth is projected to be strongest in Bracknell Forest and weaker in West Berkshire.

Table 10:   Projected population growth (2013-2036) – 2014-based SNPP

Area	Population 2013	Population 2036	Change in population	% change
Bracknell Forest	116,567	139,021	22,454	19.3%
Reading	159,247	179,667	20,420	12.8%
West Berkshire	155,394	166,355	10,961	7.1%
Wokingham	157,866	181,572	23,706	15.0%
Western Berkshire HMA	589,074	666,615	77,541	13.2%

Source: ONS and CLG demographic projections, published 2017

Sensitivity Testing: Alternative Demographic Scenarios

3.13   The SNPP is based on short term migration trends (2009-14 for internal migration and 2008-14 for international migration) with figures being constrained to totals in the ONS national population projections. Levels of migration and population growth have however been variable over time. On this basis it would be reasonable to consider alternative scenarios through sensitivity testing in line with Paragraph 2a-017 in the PPG.

3.14   The sensitivity scenarios take account of longer-term migration trends and also the 'Unattributable' component of population change within ONS population data for the 2005-11 period. Additionally, data from the ONS 2015 mid-year population estimates (MYE) is considered.

3.15   The analysis below therefore considers three potential sensitivities to the 2014-based SNPP figures. These can be described as:

- Rebased SNPP – considering implications of 2015 and 2016 Mid-Year Population Estimates;
- 10-Year Migration Trends;
- 10 Year Migration Trends adjusted for UPC.

3.16   The basis of each of these projections is described below.

Rebased SNPP

3.17   This projection takes assumptions from the 2014-based SNPP, but overwrites the population projection figures for 2015 and 2016 by those in the ONS Mid-Year Population Estimates (by age and sex) as there is data on population growth available and it is not therefore necessary to project it. Moving forward from 2016, this projection uses the same birth and death rates as contained in the 2014-based SNPP and the actual projected migration figures (by age and sex). Due to age structure differences in the MYE compared to the projection, this does mean that population growth from 2016 onwards does not exactly match that in the actual projections as published.

10-year migration

3.18   This projection uses information about migration levels in the 10-year period (2006-16). The projection does not just look at the migration figures and roll these forward, but recognises that migration can be variable over time as the age structure changes. With international migration, this projection also takes account of the fact that ONS are projecting for international net migration to decrease in the longer-term[19]. To address this, the methodology employed looks at the share of migration in each local authority compared to the share in the period feeding into the 2014-based SNPP (which is 2009-14 for internal migration and 2008-14 for international migration). Where the share of migration is higher in the 10-year period, the projection applies an upward adjustment to migration, and vice versa.

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[19] ONS projections for international migration are not trend based but reflective of their expert panel's view on the likely scale of international migration taking into account historical trends. They do not explicitly take account of Government policy or Brexit.

10-year migration adjusted for Unattributable Population Change (UPC)

3.19   As shown earlier there is a modest level of Unattributable Population Change (UPC) in the ONS data for the HMA. In this instance UPC is negative: this suggests that the components of change feeding into the SNPP may have over-estimated migration and population growth.

3.20   This sensitivity projection takes the outputs from the long-term (10-year) migration scenario and makes an additional adjustment to migration for UPC. For the purposes of analysis, it has been assumed that UPC is a one-off adjustment and takes account of the age structure as shown by ONS.

3.21   Whilst making an adjustment for UPC could be an alternative scenario, it is not considered, on its own, to be a robust alternative to the SNPP. UPC may relate in part to migration, but could also relate to inaccuracies in Census data. It is not possible to precisely attribute it; not to clearly identify in which years any errors in migration figures have arisen. Due to changes in the methods used by ONS to measure migration it is most probable that any errors are focused on earlier periods (notably 2001-6) and therefore a UPC adjustment for more recent data would not be appropriate. On this basis, whilst it is not considered that UPC should be included on its own as a projection to take forward into the modelling of objectively assessed need it is considered that there is merit in looking at UPC when also considering longer-term trends.

Outputs from Sensitivity Testing – Population Growth

3.22   Table 11 below shows the estimated level of population growth in the SNPP and the alternative projections developed. Taking the HMA as a whole, the SNPP shows population growth (2013-36) of 13.2%. This figure decreases slightly when more recent population and migration data is included in the modelling (i.e. 2015 and 2016 MYE data). When looking at 10-year trends the projected population growth is virtually identical to the SNPP (again a 13.2% increase) and with an adjustment for UPC the figure comes down very slightly, to show population growth of 12.5%.

Table 11:   Projected Population Growth (2013-2036) – alternative scenarios – Western Berkshire HMA

	Population 2013	Population 2036	Change in population	% change
2014-based SNPP	589,074	666,616	77,542	13.2%
Rebased SNPP	589,074	664,756	75,682	12.8%
10-year migration	589,074	667,094	78,020	13.2%
10-year migration (+UPC)	589,074	662,870	73,796	12.5%

Source: Various demographic projections including ONS SNPP (2017)

3.23   The tables below show the same range of scenarios for each of the local authorities. It is notable that the highest level of population growth varies depending on the area studied. The SNPP is the highest projection in Bracknell Forest, with a UPC adjusted projection being highest in Reading. In both West Berkshire and Wokingham, the highest projection is when linked to 10-year migration trends.

Table 12:   Projected population growth (2013-2036) – alternative scenarios – Bracknell Forest

	Population 2013	Population 2036	Change in population	% change
2014-based SNPP	116,567	139,021	22,454	19.3%
Rebased SNPP	116,567	137,986	21,419	18.4%
10-year migration	116,567	132,537	15,970	13.7%
10-year migration (+UPC)	116,567	127,396	10,829	9.3%

Source: Various demographic projections

Table 13:   Projected population growth (2013-2036) – alternative scenarios – Reading

	Population 2013	Population 2036	Change in population	% change
2014-based SNPP	159,247	179,667	20,420	12.8%
Rebased SNPP	159,247	177,725	18,478	11.6%
10-year migration	159,247	170,663	11,416	7.2%
10-year migration (+UPC)	159,247	182,454	23,207	14.6%

Source: Various demographic projections

Table 14:   Projected population growth (2013-2036) – alternative scenarios – West Berkshire

	Population 2013	Population 2036	Change in population	% change
2014-based SNPP	155,394	166,355	10,961	7.1%
2014-based SNPP (+MYE)	155,394	167,114	11,720	7.5%
10-year migration	155,394	176,051	20,657	13.3%
10-year migration (+UPC)	155,394	175,850	20,456	13.2%

Source: Various demographic projections

Table 15:   Projected population growth (2013-2036) – alternative scenarios – Wokingham

	Population 2013	Population 2036	Change in population	% change
2014-based SNPP	157,866	181,572	23,706	15.0%
Rebased SNPP	157,866	181,932	24,066	15.2%
10-year migration	157,866	187,843	29,977	19.0%
10-year migration (+UPC)	157,866	177,171	19,305	12.2%

Source: Various Demographic projections

Appropriateness of alternative scenarios

3.24   Having developed a range of scenarios based on alternative migration assumptions, it is appropriate to consider which are the most appropriate to use when taking the data forward into estimates of housing need.

3.25   Given the migration interactions between authorities, it is important that consistent assumptions are drawn at a housing market area level on the appropriate population scenarios to take forward in drawing conclusions on the demographic-led need for housing.

3.26   The SNPP projections are based on official projections which are identified in the PPG as the starting point for analysis of housing need. The rebased SNPP takes into account the latest demographic data. However, the projections for migration are based on trends between 2008/9 – 2014 which included a period of recession (2008-9) and weak housing market conditions (2009-12), and was a period over which there was under-delivery of housing in the HMA and its constituent authorities.

3.27   GL Hearn considers that the projection linked to 10 year migration trends should be given some weight. It has become fairly common practice in assessments such as this for a 10 year migration scenario to be considered through sensitivity testing, as the longer time period from which the projections are drawn reduces the impact of year-on-year variance, and impact of relatively weaker or stronger housing market conditions. A 10 year period from 2006-16 includes a period between 2006-8 at the height of a housing market cycle, a period of housing market downturn, and a recovery a relatively stable market conditions since 2013.

3.28   The Planning Advisory Service (PAS) set out at paragraph 6.23-6.25 in its 2015 Report on OAN[20] that:

> *The base period used in the latest official projections, 2007-12, is especially problematic. The period covers all of the last recession, in which migration was severely suppressed as many households were unable to move due to falling incomes and tight credit. Therefore the official projections may underestimate future migration - so that they show too little population growth for the more prosperous parts of the country, which have been recipients of net migration in the past. If so, by the same token the projections will also overestimate population growth for areas with a history of net out-migration.*
>
> *For all these reasons, in assessing housing need it is generally advisable to test alternative scenarios based on a longer reference, period, probably starting with the 2001 Census (further back in history data may be unreliable). Other things being equal, a 10-to-15 year base period should provide more stable and more robust projections than the ONS's five years. But sometimes other things will not be equal, because the early years of this long*

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[20] Peter Brett Associates (July 2015) *Objectively Assessed Need and Housing Targets, PAS.*

period included untypical one-off events as described earlier. If so, a shorter base period despite its disadvantages could be preferable.

On a more general point, there are many kinds of unusual events which may have impacted on population and household growth in the reference period, whether that period is five, 10 or 15 years.

3.29   UPC over the 2001-11 period is negative, meaning that there was either an under-estimation of population by the 2011 Census or an over-estimation of migration in the inter-censal period (2001-11). ONS notionally ascribe UPC to individual years between 2001-11, and the UPC adjusted scenario assumes that this represents an over-estimation of migration and makes adjustments on this basis to migration figures from 2006-11. This results in an assumed slightly lower historical migration which when projected forward sees slightly lower population growth than in the (unadjusted) 10 year migration scenario.

3.30   UPC indicates that there is potential that migration between 2001-11 could have been over-estimated in Bracknell Forest and Wokingham (and to a very modest degree West Berkshire), but could have been under-recorded in Reading. However the 2016 SHMA concluded that it would not be appropriate to adjust the 2012 SNPP to take account of UPC, as it is unclear if UPC is related fully to migration, and, more importantly, due to changes in the methods used by ONS to measure migration it is most probable that any errors in migration data are focused on earlier periods (notably 2001-6) and therefore a UPC adjustment for more recent data would not be appropriate.

3.31   The potential influence of UPC on demographic trends means that it would not be possible to develop particularly accurate projections based on 15 year migration trends. It is noted that including adjustments for UPC within projections is not an approach universally supported by planning inspectors or indeed adopted by ONS. It is the case that any errors due to UPC may now be quite historic (and potentially associated with data prior to 2006). This suggests that UPC would be unlikely to have a significant impact on the 10-year migration trend projection, given that this looks at data in the 2006-16 period. Hence, on balance, it is not recommended that the UPC adjustment is fed into conclusions about OAN.

3.32   This report therefore continues to look at all four scenarios, to illustrate the relative impact of these on housing need; however in drawing conclusions on the demographic-led need, the rebased 2014-based SNPP, and 10 year migration (without a UPC adjustment) represent the core scenarios which should be considered. This takes account of the emphasis of the PPG on using the latest official projections but some evidence that in parts of the HMA these projections may have been influenced by housing under-delivery in the base period from which the projections are made (2008/9-2014).

3.33   At a HMA level these preferred scenarios produce a relatively narrow range of population growth (12.8% to 13.2%). However, at a local authority level the variation is much greater the choice between these two therefore becomes one principally of distribution. In the context of the conclusions of this report, this is however a moot point given that the economic-led need for housing requires further upward adjustments to migration.
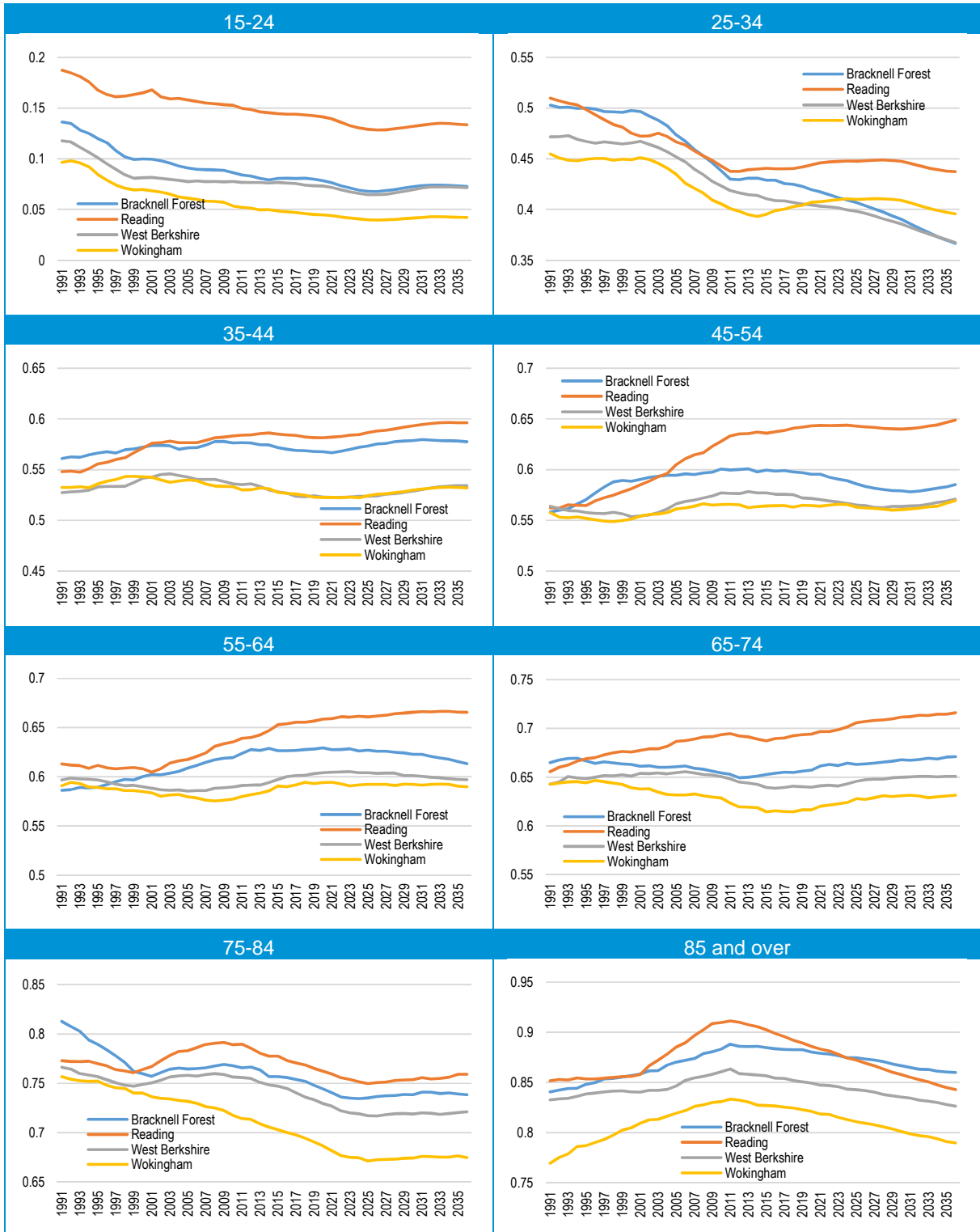
Household Formation Rates

3.34   Having studied the population size and the age/sex profile of the population, the next step in the process is to convert this information into estimates of the number of households in the area. To do this the concept of Household Representative Rates (HRR) is used. HRRs can be described in their most simple terms as the number of people who are counted as heads of households (or in this case the more widely used Household Reference Person (HRP)).

3.35   In June 2016, CLG published a new set of (2014-based) household projections – the projections contain two core analyses. The Stage 1 household projections project HRRs based on data from the 1971, 1981, 1991, 2001 and 2011 Censuses with outputs for age, sex and marital status. For younger age groups greater weight was given in the CLG projections methodology to the dampened logistical trend than the simple logistics trend; the effect of which is to give greater weight to the shorter-term trends.

3.36   The Stage 2 household projections consider household types and the methodology report accompanying the projections is clear that these projections are based on just two data points – from the 2001 and 2011 Census. Overall outputs on total household growth are constrained to the totals from the Stage 1 Projections. This means that both sets of projections show the same level of overall household growth (when set against the last set of SNPP) but some of the age specific assumptions differ. Differences can however occur between the Stage 1 and 2 headship rates when modelled against different population projections (due to differences in the age structure).

3.37   Overall, it is considered that the Stage 1 projections should be favoured over the Stage 2 figures for the purposes of considering overall household growth; this is for two key reasons: a) the Stage 1 figures are based on a long-term time series (dating back to 1971 and using 5 Census data points) whereas the Stage 2 figures only look at two data points (2001 and 2011) and b) the Stage 2 figures are constrained back to Stage 1 values, essentially meaning that it is the Stage 1 figures that drive overall estimates of household growth in the CLG household projections themselves. The analysis to follow therefore focuses on Stage 1 figures.

3.38   Figure 3 below shows how Stage 1 household formation rates differ for different age groups. It is evident from the analysis that household formation amongst households in their late 20s and early

30s fell slightly over the 2001-11 decade. For Reading and Wokingham, the projections are however showing that there will not be any notable further reduction in the short-to-medium terms (with any reduction only apparent after about 2031), whilst in Bracknell Forest and West Berkshire the downward trend continues, albeit at a slightly slower rate.

3.39   The 2014-based household projections also expect household formation rates amongst older age groups to fall over time. Given improving life expectancy this 'trend' looks to be reasonable (as it would be expected that more people would remain living as couples for longer.

Figure 3: Projected household formation rates by age of head of household – Western Berkshire HMA Authorities

Source: Derived from CLG Household Projections, 2017

Sensitivity Testing Household Formation Assumptions

3.40   The PPG in Para 2a-017 states that it may be sensible to undertake sensitivity testing around household formation rates; and sets out that the household formation rates may in some circumstances have been suppressed historically by an under-supply of housing and worsening affordability (Para 2a-015). Against this context, GL Hearn have considered trends in household formation in the 2014-based Household Projections.

3.41   Figure 3 shows that in a number of areas within the HMA, household formation rates for younger households have fallen. Research by the late Alan Holmans[21] has suggested that this is likely in part by increasing international migration and in part by economic factors and affordability. On page 5 of his research, Professor Holmans identified that:

> *'The working assumption in this study is that a considerable part but not all of the 375,000 shortfall of households relative to trend was due to the state of the economy and the housing market. 200,000 is attributed to over-projection of households due to the much larger proportion of recent immigrants in the population, whose household formation rates are lower than for the population as a whole. This effect will not be reversed. The other 175,000 is attributed to the economy and the state of the housing market and is assumed to gradually reverse'.*

3.42   Broadly what Dr Holmans was saying is that about half of changes to household formation seen nationally are due to market factors and about half due to international migration.

3.43   International migration has been an important component of demographic trends in each of the four HMA authorities, as the components of change analysis in Appendix B show, and international migration is therefore likely to have contributed to a fall in household formation amongst younger households.

3.44   Research by Neil McDonald and Christine Whitehead[22] has taken forward the Holmans' research to consider the 2012-based Household Projections. The assumptions on household formation in the 2014-based Household Projections are very similar to these. Their research identified that changes in household formation amongst younger households are not just related to the recession and housing market factors, but to levels of student debt, impacts of welfare reform, changes in types of employment, and higher numbers of couple households than previously projected, as well as the impacts of international migration on changing household structures. The implication of all of this is that the household formation assumptions in the 2008-based Household Projections, which pre-dated the 2011 Census, should be considered too high and it is unrealistic to assume a 'full return' to these.

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[21] Holmans, A. (2013) *New estimates of housing demand and need in England, 2011-31, TCPA, London.*

[22] McDonald, N. and Whitehead, C. (Nov 2015) *New estimates of housing requirements in England, 2012 to 2037.*

3.45   Nonetheless, based on an analysis of trends and the projections for household formation in Bracknell Forest, GL Hearn consider that there is a basis for adjusting upwards the household formation rates. We have therefore modelled a demographic adjustment which sees a 'part return to trend' in household formation amongst those aged 25-44, with household formation rates for the 25-34 and 35-44 age groups returning half way to those shown in the 2008-based Household Projections by 2033. This approach was recommended in a report by the Local Plan Expert Group[23] as a positive adjustment which would support improvements in affordability. The adjustment has been applied to both the 25-34 and 35-44 age groups with outputs being provided in the following section.

3.46   These headship adjustments are modelled in drawing conclusions on both the demographic and economic-led need for housing in this report.

Demographic-led Housing Need – Core Scenarios

3.47   The series of tables below bring together outputs in terms of household growth and housing need using the 2014-based HRRs as published and with the adjusted headship rates for the 25-34 and 35-44 age groups.

3.48   To convert households into dwellings, the data includes an uplift to take account of vacant and second homes. This has been based on 2011 Census data, consistent with the 2016 SHMA, with the rates applied for each local authority being shown below:

- Bracknell Forest – 2.5%;
- Reading – 4.9%;
- West Berskhire – 3.7%; and
- Wokingham – 3.6%.

3.49   The Council Tax Register (CTR) could have been used as an alternative source (which would be more up-to-date). However an analysis of the CTR data suggests that there is some potential for this to under-count vacant homes, where properties are vacant but have not been registered as such for Council Tax purposes. This Study therefore takes a cautious view and uses the 2011 Census data. A level of vacant homes is necessary to allow for movement within the housing stock and repair/ improvements to properties.

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[23] LPEG (March 2016) Report to the Communities Secretary and to the Minister of Housing and Planning

Table 16: **Projected housing need – range of demographic based scenarios and 2014-based HRRs – Western Berkshire HMA**

	House-holds 2013	House-holds 2036	Change in house-holds	Per annum	Dwellings (per annum)
2014-based SNPP	236,447	280,979	44,531	1,936	2,008
Rebased SNPP	236,447	279,571	43,124	1,875	1,944
10-year migration	236,447	279,837	43,390	1,887	1,956
10-year migration (+UPC)	236,447	277,923	41,476	1,803	1,872

Source: Various demographic projections Projected housing need – range of demographic based scenarios and part-return to trend HRRs – Western Berkshire HMA

	House-holds 2013	House-holds 2036	Change in house-holds	Per annum	Dwellings (per annum)
2014-based SNPP	236,447	284,918	48,471	2,107	2,185
Rebased SNPP	236,447	283,511	47,064	2,046	2,121
10-year migration	236,447	283,821	47,373	2,060	2,135
10-year migration (+UPC)	236,447	281,733	45,286	1,969	2,044

Source: Various Demographic projections

3.50   Table 17 below show a summary of the need for each local authority. Figures are only provided for the overall need (in dwellings per annum). This includes the allowance for vacant and second homes.

Table 17: **Projected housing need – range of demographic based scenarios – Local Authorities**

	Bracknell Forest		Reading	
	2014-based HRRs	Part-return to trend	2014-based HRRs	Part-return to trend
2014-based SNPP	494	545	541	573
Rebased SNPP	471	522	510	542
10-year migration	381	430	383	413
10-year migration (+UPC)	274	317	553	587
	West Berkshire		Wokingham	
2014-based SNPP	391	438	582	627
Rebased SNPP	388	436	575	621
10-year migration	531	583	660	709
10-year migration (+UPC)	528	578	518	562

Source: Various demographic projections

2016-based National Population Projections

3.51   On the 26th October 2017, ONS published 2016-based National Population Projections. These project notably lower population growth than in the previous (2014-based) set, with the UK population projected to be 2 million fewer in mid-2041. This is driven by lower assumptions about future birth rates and international migration, and an assumption of a slower rate of increase in life expectancy. The key differences are:

- ONS's long-term international migration assumptions have been revised downwards to 165,000 pa (beyond mid 2022) compared to 185,000 in the 2014-based Projections. This is based on a 25-year average;
- The latest projections assume that women will have fewer children, with the average number of children per woman expected to be 1.84 compared to 1.89 in the 2014-based Projections; and
- ONS is no longer assuming a faster rate of increase in life expectancy of those borne between 1923 and 1938, based on more recent evidence. Life expectancy still increases, just not as fast as previously projected.

3.52   The table below shows the projected population change in England for the period 2013-36. Population growth is now projected to be around 18% lower than projected in the 2014-based Projections.

3.53   It is not possible to be precise about the impact the new projections will have for individual local authority areas (or the HMA). However, because Sub-National Population Projections prepared by ONS are reconciled with those for the UK as a whole (reflecting the ONS' assumptions that there will be lower long-term international migration and lower improvements in life expectancy), it would be reasonable to expect that 2016-based SNPP and Household Projections will in due course show substantially lower growth than the current (2014-based) SNPPs and Household Projections if all other factors remain equal.

Table 18:   Projected Population Growth in England (2013-36)

	Population 2013	Population 2036	Change in population	% change
2014-based	53,865,817	62,403,948	8,538,131	15.9%
2016-based	53,865,817	60,905,479	7,039,662	13.1%

Source: ONS SNPP, published 2015 and 2017

3.54   A comparison can also be made of the migration data which will feed into the 2016-based projections. They will be informed by internal migration over the preceding 5 years and international migration over the preceding 6 years (constrained to the assumptions in the national projections). Our analysis below indicates that relative to the 2014-based SNPP, the migration assumptions would be of lower net in-migration to Bracknell Forest, but higher net in-migration to Wokingham. Net out-migration from Reading and West Berkshire would be lower (albeit to a lesser extent). With the exception of Reading, the direction of travel is similar to that shown by the 10 year migration

projection (i.e. higher migration relative to the 2014-based SNPP in West Berkshire and Wokingham, and lower migration in Bracknell Forest).

Table 19: Migration over the Input Period to different ONS Population Projections

		Input Period to 2012 SNPP	Input Period to 2014 SNPP	Input Period to 2016 SNPP
Bracknell Forest	Internal Net	84	229	-9
	International Net	395	306	332
	Total Net	480	535	324
Reading	Internal Net	-1440	-1298	-1411
	International Net	644	845	1204
	Total Net	-796	-453	-207
West Berkshire	Internal Net	313	-3	-19
	International Net	-235	-284	-184
	Total Net	78	-287	-203
Wokingham	Internal Net	383	247	481
	International Net	511	375	284
	Total Net	894	622	765

GLA Demographic Projections

3.55   As well as presenting data from the 2014-based CLG household projections and a range of sensitivities, the opportunity has been taken to source other independent projections, specifically, the recent projections developed by the GLA, published in July 2016.

3.56   The GLA 2016-round demographic projections set out a number of projections for all local authorities across England, including a 10-year migration projection using the latest MYE data. Table 18 shows the estimated levels of housing need in the HMA arising from both GL Hearn's 10-year migration modelling and the equivalent GLA projection.

3.57   It can be observed that overall, the GLA figures result in a housing need which is somewhat higher than the GL Hearn projections. Across the HMA GLA figures are some 14% higher, although this pattern is not observed in all areas (the GL Hearn figures are higher in West Berkshire and Wokingham).

Table 20: **Per annum housing need (2013-36) – including Vacancy Allowance (10-year migration trends)**

	GL Hearn	GLA
Bracknell Forest	381	521
Reading	383	572
West Berkshire	531	499
Wokingham	660	638
Western Berkshire HMA	1,956	2,230

Source: GLA and demographic projections

3.58 It is difficult to precisely attribute why there is such a notable difference between the GL Hearn projections and the GLA projections, since both use the same base data on migration (2007-16) and use the same starting point (ONS 2016 Mid-Year Population Estimates). Both sets of figures use Stage 1 household formation rates, and thus the differences principally result from how migration is modelled moving forwards. JGC has provided an analysis and commentary in Appendix C.

3.59 Overall, the GLA projection can be used as a point of reference; however, the household growth numbers emanating from this source look to be on the high side in the Western Berkshire HMA, and are difficult to understand given some of the background data feeding into the analysis.

Drawing Conclusions on the Demographic-led Need for Housing

3.60 The above analysis can be brought together to consider the need for housing based on the demographic evidence.

3.61 The starting point housing need is for 2,008 dpa, using the 2014-based Household Projections as published. This comprises a need for 494 dpa in Bracknell Forest, 541 dpa in Reading, 391 dpa in West Berkshire and 582 dpa in Wokingham.

3.62 However there is a strong basis for taking into account the latest demographic information – 2015 and 2016 Mid-Year Population Estimates – and rebasing the SNPP to take these into account, in line with Paragraph 2a-017 in the PPG. This results in a need for 2,121 dpa.

3.63 Consideration should also however be given to the 10 year migration trend projections prepared by GLH/JGC with adjusted household formation rates. This shows a need for 2,135 dpa across the Western Berkshire HMA. This is relatively similar to the need arising from the rebased SNPP, of 2,121 dpa – a difference of 1%. However these two scenarios (as set out in Table 17) produce different distributions of the need between the four Western Berkshire local authorities, and in these terms should realistically be considered as a range:

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C:\Users\lbassett\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\ZDZLVLZZ\Western Berkshire OAN Sensitivity Report (16.03.18 Final).docx

- Bracknell Forest – 430 – 522 dpa
- Reading – 413 – 542 dpa
- West Berkshire – 436 – 583 dpa
- Wokingham – 621 – 709 dpa

3.64 We conclude that these figures above (as set out in Table 17) should be considered as the demographic-led need for housing, resulting in a need for between 2,121 – 2,135 dpa across the HMA. Whilst this produces a fairly wide range for individual authorities, it reflects the year-on-year variance in migration trends at a local authority level.

4   ECONOMIC-LED PROJECTIONS

4.1   In this section, consideration is given to economic growth and how this may influence the level and/or distribution of housing need across the Western Berkshire HMA.

4.2   In line with the PPG it is necessary to consider whether there is a need to plan for a higher level of population growth across the HMA (relative to the trend-based demographic projections) in order to accommodate expected growth in the economy and employment.

4.3   The relationship between economic growth and housing need is complex. Future economic performance is difficult to accurately predict in the short-term, let alone looking 20 years into the future. There are then a range of factors which influence the relationship between economic growth and housing need, including:

- Productivity Growth – such as through improvements in skills, technology and capital investment. This influences the relationship between overall economic growth and the creation of jobs.
- Double Jobbing – which influences the relationship between the number of jobs and people, as some people have more than 1 job.
- Employment Rates – describing the number of people in different age groups who are in employment. These can change over time. The trend over the last 15 years or so has been of increasing women and older persons in the workforce. Changes to State Pension Age can be expected to further increase employment rates moving forwards.
- Commuting – which influences the relationship between where people live and work. Commuting distances have generally been increasing. For any area this factor can clearly flex to take account of local differences in labour supply and demand.

Characteristics of the Berkshire Economy

4.4   A comprehensive assessment of the performance and growth potential of the Berkshire economy is set out in Thames Valley Berkshire Local Enterprise Partnership's Strategic Economic Plan (March 2014) and the supporting evidence base. It identifies Berkshire as a high value added, advanced economy; but an economy which has matured after rapid growth in both the 1980s and 1990s and seen slower growth since 2002.

4.5   It identified three distinctive and inter-related dimensions which distinguish the Berkshire economy from that of other areas:

- The importance of technology-based activity
- The significance of internationalisation
- The role of corporates

4.6   The Strategic Economic Plan evidence base sets out that the Berkshire economy is the most strongly internationally-orientated and competitive economy outside London but is one which is strongly related to that of London. It is the 'strongest tech-based economy' in the UK, with its

particular strength lying in the IT sector, both hardware and software. However, there is evidence that employment in the sector has significant numbers of people in non-technological occupations such as sales and management. The role of large corporations is a distinctive element of the economic make-up of Berkshire with over 200 European or global HQ operations in the Thames Valley Berkshire area. Many of these have been located in Berkshire for a long time, and are major employers in strategically important sectors such as pharmaceuticals, petrochemicals, energy, food, and IT.

4.7   Critically the Strategic Economic Plan identifies that **the Berkshire economy has matured**, with growth having slowed since 2002. In a mature economy the SEP evidence base identifies that it is harder to achieve the same percentage rates of growth as achieved in the "growth phase" without significant investment to boost international competitiveness. This is an important factor to understand in interpreting future projections/ forecasts against past trends; and is based on a detailed and rigorous analysis of Berkshire's economy together with extensive business and stakeholder engagement.

4.8   The Strategic Economic Plan and 2016 SHMA evidence recognised a number of major infrastructure investment projects – including Crossrail, Heathrow Western Access, rail electrification, and the M4 Smart Motorway scheme, but concludes that with the exception of Crossrail, these would help maintain competitive advantage rather than support a step change in its relative competitive position.

4.9   It identified that whilst Berkshire has a strong competitive position for large scale employment in IT and telecoms (the 'infrastructure and communications sector'), for technology development, London now has a distinctive edge and is now a more powerful competitor for the types of business that were the source of much of Berkshire's employment growth in the 1980s and 1990s. London is now very much targeting tech-sector growth. This can be expected to influence Berkshire's future economic performance.

4.10   The SEP and 2016 SHMA identified sound reasons why future performance locally can be expected to be weaker than seen in some periods historically as the economy matures. The slower rate of growth seen over the period since 2003 is thus the more likely to continue.

4.11   The 2016 SHMA also considered how commercial dynamics and infrastructure investment was expected to influence the spatial distribution of growth and investment. Major infrastructure investment is focused along the M4/Crossrail Corridor improving accessibility from this area to London; and major new office floorspace development is being delivered in Reading which coupled with a shift from business parks to 'in town' office demand was expected to influence the distribution of future employment growth within the Western Berkshire HMA relative to historical trends.

Structure of the Economy

4.12   GL Hearn has sought to analyse the structure of employment in the Western Berkshire authorities using a location quotient analysis.

4.13   The location quotient analysis shown in the table below identifies sectors where there is a proportionally high representation of jobs in an area. A positive location quotient (greater than 1.0) means there is a higher representation of jobs in that sector in that Borough compared to the general proportion of jobs in that sector across the South East region (and visa versa). Sectors highlighted in green are particularly strongly represented; with sectors shown in red showing a comparative under-representation.

Table 21:   Location Quotient for Key Sectors, HMA Authorities vs South East

	Bracknell Forest	Reading	West Berkshire	Woking-ham	Western Berks
C : Manufacturing	0.37	0.30	1.78	0.66	0.81
F : Construction	0.67	0.46	0.98	0.68	0.70
G : Wholesale and retail trade	1.23	0.94	1.07	0.73	0.98
H : Transportation and storage	0.69	0.95	0.61	0.53	0.71
I : Accommodation & food service	0.57	0.85	0.76	0.87	0.78
J : Info and comms	1.80	2.39	2.22	2.96	2.37
K : Financial & insurance activities	0.50	1.71	0.73	0.30	0.88
L : Real estate activities	1.15	0.71	1.27	0.73	0.95
M : Professional, scientific & tech	2.22	1.27	0.91	1.44	1.39
N : Admin & support services	1.19	1.05	0.90	1.17	1.07
O : Public admin & defence	0.51	1.26	1.01	0.39	0.84
P : Education	0.78	0.58	0.83	1.32	0.86
Q : Human health & social work	0.65	1.13	0.52	0.60	0.75
R : Arts, entertainment & rec	1.02	0.63	0.97	0.89	0.86
S : Other service activities	0.87	0.97	1.15	1.06	1.02

Source: BRES 2016

4.14   The HMA has a particular concentration (specialism) of employment in the following sectors:

- Information and Communications; and
- Professional, scientific and technical activities.

4.15   In addition there is a strength in Finance and Insurance in Reading; and Manufacturing in West Berkshire.

Interrogating Economic Growth Potential

4.16   To inform the SHMA Update, GL Hearn has purchased the following forecasts in October 2017:

- Cambridge Econometrics (CE), August 2017
- Oxford Economics (OE), October 2017

4.17   Forecasts provide a tool which can be used to interrogate and understand economic growth potential, but should not be used uncritically. They are mathematical models and should be interrogated alongside other information, including from stakeholder engagement, in drawing conclusions on economic growth potential.

4.18   Two sets of forecasts were purchased to allow us to compare and contrast their outputs. The two models work in different ways. The third company which provides local authority forecasts for economic performance is Experian, but the starting point for Experian's model is the latest official population projections and the way in which that model works results in this being a significant driver of its results on employment growth. In assessing housing need, this created particular problems of circularity and GL Hearn have therefore not purchased Experian data for use in this or other recent OAN studies.

4.19   Figure 4 shows the historical data on employment trends in the forecast datasets. Employment grew relatively strongly across the HMA through the 1980s and over the period from 1996-2003 prior to the bursting of the 'dot com' bubble. Employment fell during the last recession, but has continued to grow since. Some modest differences arise in employment numbers between the two datasets.

4.20   Overall trends in employment have particularly been influenced by performance of the Information and Communications; and Financial and Business Service sectors.

Figure 4:   Historical Employment Growth – Western Berkshire HMA
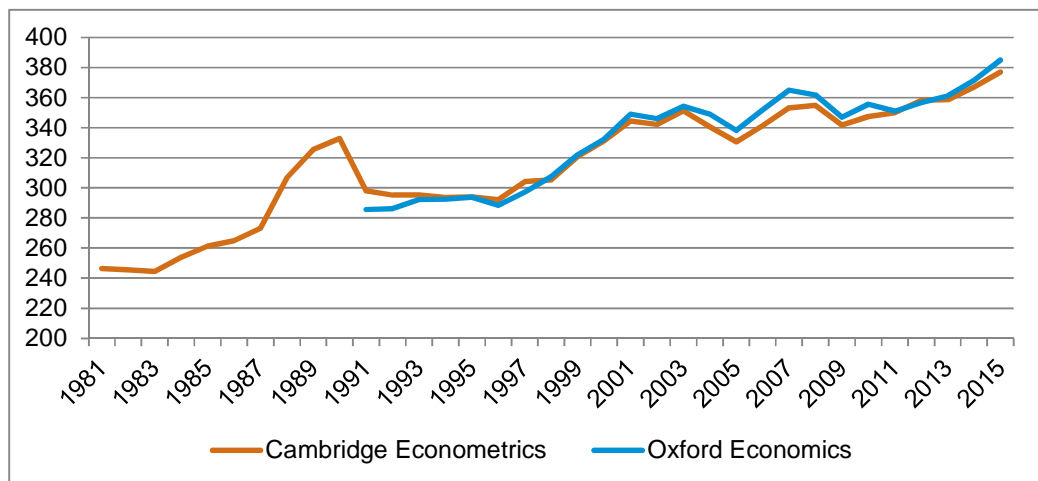
Source: CE and OE, 2017

4.21   Overall trends in employment have particularly been influenced by performance of the Information and Communications; and Financial and Business Service sectors.

4.22   We have considered jobs growth from 2016 forwards, as we have demographic data which charts population growth to 2016, and it is from this point forward that our economic-led projections for housing need to run from.

Overall Employment Growth

Cambridge Econometrics Forecasts

4.23   Cambridge Econometrics (CE) shows a growth across the HMA of 35,200 jobs over the period 2016-36. This represents a compound annual growth rate (CAGR) of 0.4% pa, which compares with their forecasts for 0.3% pa growth across the South East and 0.4% pa across the UK.

4.24   In absolute terms, the greatest jobs growth in the Cambridge forecasts is expected in Reading and Wokingham. However relative to the size of the different local authorities' economies, Wokingham is expected to see the strongest growth (0.5% pa) and West Berkshire the weakest (0.3% pa).

**Table 22:   Economic Growth – Cambridge Econometrics**

CE Jobs	Bracknell Forest	Reading	West Berks	Woking-ham	Western Berks HMA
2016	72,339	117,620	109,654	95,113	394,726
2036	79,135	128,379	116,743	105,620	429,877
Change 2016-36	6,796	10,759	7,089	10,507	35,151
Per Annum	340	538	354	525	1,758
CAGR	0.4%	0.4%	0.3%	0.5%	0.4%
Historic CAGR (1993-2010)	0.4%	-0.3%	2.1%	1.9%	1.0%

Source: CE

4.25   The table above shows the forecast growth rate compared to the historic growth rate in each of the HMA authorities over the 1993-2010 period, as this period represents the most recent full market cycle. The HMA over this period saw an average of 1.0% growth pa.

4.26   The historic growth trend varied across the HMA authorities with Reading seeing an overall decline in jobs numbers over this period while West Berkshire and Wokingham both saw strong growth of 2.1% per annum and 1.9% per annum respectively. The figure below shows that these two authorities were less impacted by the two downturns (one in 2003, and one from 2008). These are discussed further below.

4.27   Figure 5 shows the future forecasts of jobs growth from Cambridge Econometrics and how these compare with past trends. The forecasts for jobs growth in Wokingham and to a lesser extent West

Berkshire appear somewhat modest relative to historical performance. However most forecasters in GL Hearn's experience are not projecting future employment growth at the rate seen historically, linked to weaker global growth, changing demographics, and improvements in productivity amongst other factors.

Figure 5: Total Jobs Growth – Cambridge Econometrics
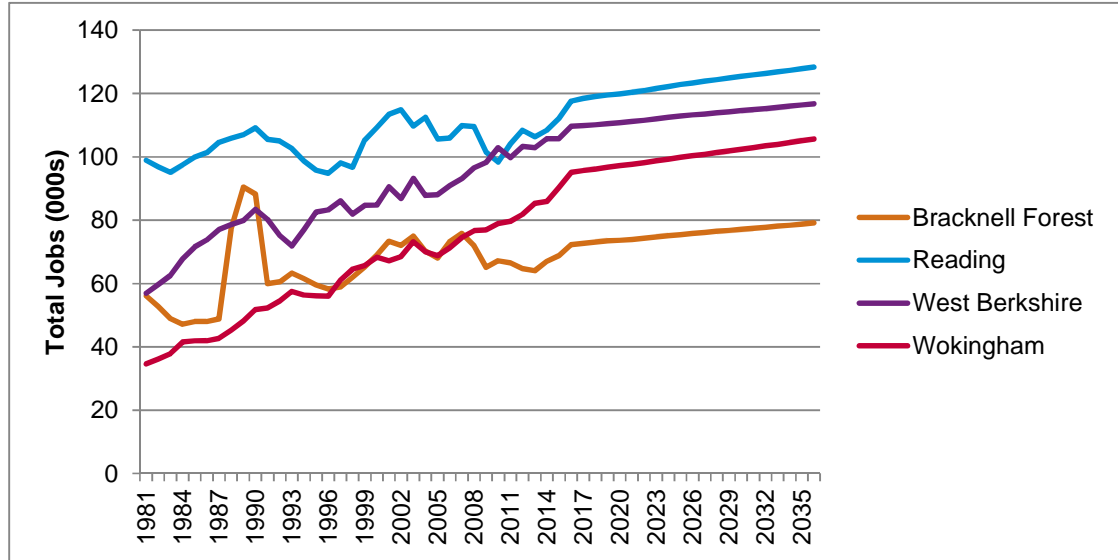
Source: CE

4.28 In Bracknell Forest the data shows considerable growth in employment in the late 1980s and fall a few years later. This is most likely due to a mis-recording of data in the manufacturing sector rather than an actual rapid change in jobs over this period.

4.29 The table below analyses more recent jobs growth, and the extent of recovery from the last recession. It shows that in recent years, the strongest absolute growth in jobs has been in Wokingham and West Berkshire, with a net loss of jobs in Bracknell Forest. The loss of jobs in Bracknell Forest is in part associated with the Bracknell Town Centre Regeneration Project and it is expected than many of these jobs have or will return with the opening of the Lexicon Centre (September 2017).

Table 23: Comparison of Recent Jobs Growth – Cambridge Econometrics

	Jobs 2003	Jobs 2007	Jobs 2016	2003-2016	2007-2016
Bracknell Forest	75,000	75,800	72,300	-2,700	-3,500
Reading	109,800	109,800	117,600	7,900	7,800
West Berkshire	93,200	93,100	109,700	16,400	16,600
Wokingham	73,100	74,500	95,100	22,000	20,600

Source: CE

Oxford Economics

4.30   The Oxford Economics (OE) forecast as shown in Table 25 set out a growth of 61,200 jobs across the HMA over the period 2016-36 – considerably higher than the CE forecast (35,200). This represents a growth rate of 0.7% pa, which compares with their forecasts for 0.5% pa growth across the South East.

4.31   In absolute terms, the greatest jobs growth in the Oxford forecasts is expected in Reading (21,700 growth over the 20 year period), Bracknell Forest (17,200) and Wokingham (16,900). Jobs growth in West Berkshire is expected to be much more modest (5,400).

4.32   Relative to the size of the different local authorities' economies, Bracknell Forest is expected to see a significant 1.1% pa growth, whilst West Berkshire is expected to see much more modest growth than the other authorities (0.2% pa).

Table 24:   Economic Growth – Oxford Economics

OE Jobs	Bracknell Forest	Reading	West Berks	Woking-ham	Western Berks HMA
2016	73,887	115,739	110,990	95,603	396,219
2036	91,078	137,486	116,327	112,534	457,426
Change 2016-36	17,191	21,747	5,337	16,931	61,207
Per Annum	860	1,087	267	847	3,060
CAGR	1.1%	0.9%	0.2%	0.8%	0.7%
Historic CAGR (1993-2010)	1.0%	-0.2%	2.4%	1.9%	1.2%

Source: OE

4.33   The OE data shows a similar historic trend to that of CE. This shows strong growth in all the HMA authorities throughout the 1990s with two downturns in 2003 and 2007 particularly impacting jobs numbers in Bracknell Forest and Reading, and having less impact on jobs numbers in West Berkshire and Wokingham. This is reflected in the historic growth trend (1993-2010) shown in the OE data.

Figure 6:   Total Jobs Growth – Oxford Economics
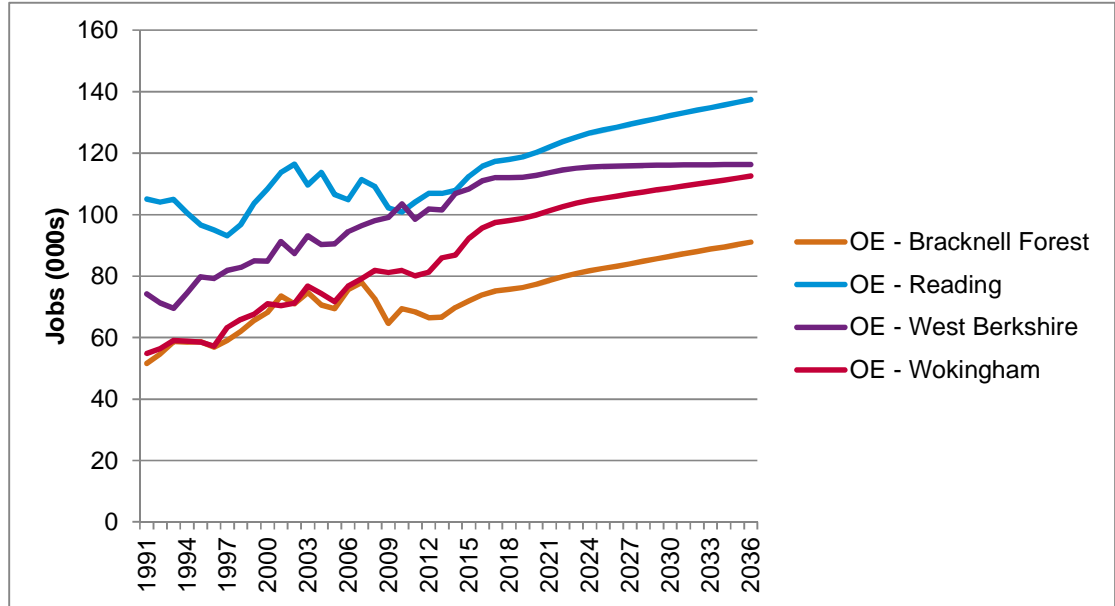
Source: OE

4.34   As with the CE data, the OE data shows that Bracknell Forest is the only one of the HMA authorities which has seen overall jobs losses over the 2007-16 period. Reading has seen relatively modest growth, with West Berkshire and Wokingham seeing more substantial growth over these periods.

Table 25:   Comparison of Recent Jobs Growth – Oxford Economics

	2003 Jobs	2007 Jobs	2016 Jobs	2003-2016 Jobs Change	2007-2016 Jobs Change
Bracknell Forest	74,700	77,900	73,900	-800	-4,000
Reading	109,600	111,400	115,700	6,100	4,300
West Berkshire	93,100	96,500	111,000	17,900	14,500
Wokingham	76,800	79,100	95,600	18,900	16,500

Source: OE, 2017

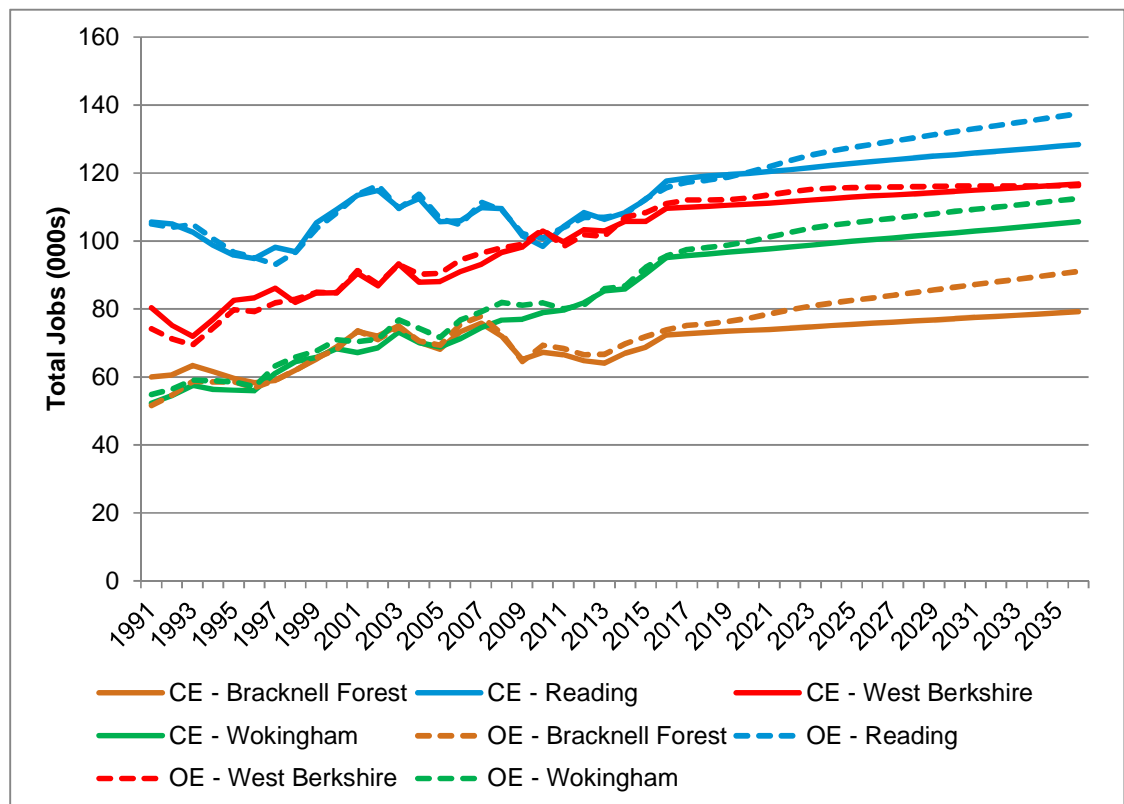*Comparison of the CE and OE Forecasts*

4.35   The CE and OE forecasts thus show fairly similar historic trends in total employment numbers over the period since the early 1990s to 2016. There are some discrepancies due to data sources used but also how the different econometric models work to forecast growth at national and regional levels and disaggregate these to the local authority level.

4.36   Figure 7 shows the Oxford Economics forecast showing considerably higher growth than Cambridge in three of the four HMA authorities with only West Berkshire having a similar growth rate in the two forecasts.

Figure 7:   Comparison of Forecasts, 1991-2036

Source: CE and OE

4.37   The table below shows a comparison of the growth rates in the CE and OE forecasts for the HMA authorities and the HMA as a whole. This shows the difference between the HMA authorities is much greater in the OE forecast than the CE forecast. The CE forecast points to fairly similar growth rate across the HMA – ranging from 0.3% to 0.5% per annum. In comparison, the OE forecast shows a much wider range in growth rates across the HMA authorities with Bracknell Forest (1.1% pa) seeing a higher growth rate than *any* of the other authorities and the HMA growth rate (0.7%); as well as notably stronger growth in Reading and Wokingham as well. The employment growth rate in the Oxford forecast in Reading and Bracknell Forest is double that expected by Cambridge. The forecasts are influenced by the economic structure in different areas, and how these sector are expected to perform alongside past performance and projected demographic growth.

Table 26: Comparison of Forecast Growth, 2016-36

CE Jobs	Bracknell Forest	Reading	West Berks	Woking-ham	Western Berks HMA
CE Jobs Growth	6,796	10,759	7,089	10,507	35,151
CE Growth Rate	0.4%	0.4%	0.3%	0.5%	0.4%
OE Jobs Growth	17,191	21,747	5,337	16,931	61,207
OE Growth Rate	1.1%	0.9%	0.2%	0.8%	0.7%

Source: CE and OE

4.38   The larger differential between the forecasts for each of the HMA authorities in the OE forecast result in a much stronger jobs growth in Bracknell Forest compared to elsewhere in the HMA in that forecast. This reflects the structure of the local economy and the predicted strong national growth in sectors where Bracknell Forest has an over representation (as explained further below). Oxford Economics also take specific account of Bracknell Town Centre regeneration within the forecasts. The two tables below show the impact of the CE forecast and the OE forecast on total jobs in 2016 to 2036 and how this affects the proportion of jobs in each HMA authority over this period.

4.39   The CE forecast shows the proportion of HMA jobs in each authority remains reasonably stable over the 2013-36 period.

Table 27: Proportion of HMA Jobs, 2016-36 – Cambridge Econometrics

	Bracknell Forest	Reading	West Berks	Wokingham	Western Berks HMA
2016 Jobs	72,339	117,620	109,654	95,113	394,726
2016 %	18.3%	29.8%	27.8%	24.1%	100.0%
2036 Jobs	79,135	128,379	116,743	105,620	429,877
2036 %	18.4%	29.9%	27.2%	24.6%	100.0%
2016-36 Jobs	6,796	10,759	7,089	10,507	35,151
2016-36 %	19.3%	30.6%	20.2%	29.9%	100.0%

Source: CE

4.40   Conversely, the OE forecast shows a declining share of the HMA's employment in West Berkshire, and growth in other areas but particularly in Reading and Bracknell Forest.

Table 28: Proportion of HMA Jobs, 2016-36 – Oxford Economics

	Bracknell Forest	Reading	West Berks	Wokingham	Western Berks HMA
2016 Jobs	73,887	115,739	110,990	95,603	396,219
2016 %	**18.6%**	**29.2%**	**28.0%**	**24.1%**	**100.0%**
2036 Jobs	91,078	137,486	116,327	112,534	457,426
2036 %	**19.9%**	**30.1%**	**25.4%**	**24.6%**	**100.0%**
2016-36 Jobs	17,191	21,747	5,337	16,931	61,207
2016-36 %	**28.1%**	**35.5%**	**8.7%**	**27.7%**	**100.0%**

Source: OE

Sectoral Analysis

4.41 The following two tables show the sectoral compound annual growth rates in the Western Berkshire authorities and the South East over the 2016-36 period, as shown in the CE and OE forecasts. This allows comparison of the two forecasts on a sectoral level. It shows the forecast level of growth in each sector for each of the three authorities and allows comparison against the other areas to see which sectors are forecast particularly strong or weak levels of growth in the Borough.

4.42 The first table shows the growth rates in the CE forecast. Agriculture, mining and quarrying and electricity, gas and water are small sector in terms of total employment; and we have therefore focused analysis on other sectors.

4.42 The strongest comparative growth is expected to be in Financial and business services (FBS); and information and communications – those sectors in which the HMA has particular strengths. For information and communications, the strongest growth is expected to be in West Berkshire and Wokingham; whereas Bracknell Forest is expected by Cambridge to see the strongest FBS growth.

4.43 This shows a particularly strong growth in the Financial and business services sector in Bracknell Forest (1.2% per annum) and Wokingham (1.0% per annum)compared to the other areas (0.8% across the HMA, 0.6% in the South East) and 0.4% per annum nationally. Bracknell Forest has a much higher growth rate than any of the other HMA authorities. This reflects the Borough's comparative strength in this sector as shown in the location quotient analysis. This sector is by far the largest in Bracknell Forest – comprising 34% of total employment – and as such the forecast growth in this sector has a considerable impact on overall jobs growth in the Borough.

4.44 The forecast growth in the Information and communications sector is lower in Bracknell Forest than the other HMA authorities. This reflects the particularly high representation of this sector in the other HMA authorities – as shown in the location quotient analysis – compared to Bracknell Forest and

the regional and national rates. Construction and Government services are expected to see relatively stronger performance in West Berkshire.

Table 29: Annual Growth Rates for Key Sectors, 2016-36 – Cambridge Econometrics

	Bracknell Forest	Reading	West Berks	Woking-ham	HMA	South East
Agriculture etc	-0.5%	-0.5%	-0.2%	-0.4%	-0.3%	-0.4%
Mining & quarrying	-5.3%	-5.3%	-2.8%	-4.2%	-4.2%	-3.4%
Manufacturing	-2.0%	-1.9%	-1.8%	-2.1%	-1.9%	-1.7%
Electricity, gas & water	0.4%	0.7%	0.8%	0.7%	0.7%	0.7%
Construction	0.4%	0.4%	0.8%	0.3%	0.5%	0.5%
Distribution	0.0%	0.3%	0.0%	0.0%	0.1%	0.2%
Transport & storage	0.3%	0.1%	0.3%	0.0%	0.1%	0.0%
Accommodation & food services	0.5%	0.5%	0.5%	0.5%	0.5%	0.6%
Information & communications	0.3%	0.6%	0.9%	0.9%	0.7%	0.5%
Financial & business services	1.2%	0.6%	0.4%	1.0%	0.8%	0.6%
Government services	0.2%	0.5%	0.7%	0.5%	0.5%	0.5%
Other services	0.3%	0.3%	0.3%	0.7%	0.4%	0.4%
Total	0.4%	0.4%	0.3%	0.5%	0.4%	0.3%

Source: CE

4.45 The table below shows the annual growth rates by sector as shown in the OE forecasts. What is notable about the Oxford forecast is that they expect significantly stronger growth across a range of sectors. The greatest differentials are for construction, distribution, and other services.

4.46 Bracknell Forest in the Oxford forecasts sees strong growth in employment in construction, distribution, accommodation and food, financial and business services, and Government services which significantly exceed Oxford's regional forecasts. Reading and Wokingham are forecast to see a number of sectors grow more strongly than is expected across the region. In contrast West Berkshire is expected to see comparatively weak performance across a range of sectors.

Table 30: Annual Growth Rates for Key Sectors, 2016-36 – Oxford Economics

	Bracknell Forest	Reading	West Berks	Woking-ham	HMA	South East
Agriculture etc	-0.9%	-0.9%	-1.0%	-1.0%	-1.0%	-1.0%
Mining & quarrying	-3.5%	-3.5%	-3.5%	-3.5%	-3.5%	-3.5%
Manufacturing	-1.5%	-1.5%	-1.4%	-1.6%	-1.5%	-1.5%
Electricity, gas & water	-1.0%	-1.1%	-1.2%	-1.2%	-1.2%	-1.2%
Construction	1.7%	1.5%	0.9%	1.5%	1.3%	1.2%
Distribution	1.1%	0.8%	0.1%	0.7%	0.7%	0.4%
Transport & storage	0.4%	0.5%	0.0%	0.4%	0.3%	0.2%
Accommodation & food services	1.2%	1.0%	0.5%	0.9%	0.9%	0.6%
Information & communications	0.9%	0.9%	0.8%	1.2%	1.0%	0.9%
Financial & business services	1.5%	1.3%	0.7%	1.3%	1.2%	1.0%
Government services	0.5%	0.5%	-0.3%	0.4%	0.3%	0.2%
Other services	1.1%	1.0%	0.7%	1.1%	1.0%	0.8%
Total	1.1%	0.9%	0.2%	0.8%	0.7%	0.5%

Source: OE

4.47   The two sets of forecasts show a notable difference in the expected growth rates for distribution and construction, reflecting their different views on how these sectors are likely to perform.

Assessing the Forecasts

4.48   The analysis above shows that the OE forecast shows a disproportionately high forecast jobs growth in Bracknell Forest over the period 2016-36. This appears disproportionately high when compared to both the historic jobs growth trend in the Borough, and to the forecast jobs growth in the other HMA authorities. It is also notable that West Berkshire shows notably lower relative economic growth in both the Cambridge and Oxford Economics forecasts.

4.49   In this next section we assess the reasons for the differences between the forecasts and assess the validity of the two forecasts against a range of alternative data.

Methodological Differences

4.50   CE's projections are baseline economic projections based on historical growth in each of the local authorities relative to the South East region or UK (depending on which area it has the strongest relationship with), on an industry-by-industry basis. The projections assume that those relationships continue into the future. Thus, if an industry in the local authority outperformed the industry in the region (or UK) as a whole in the past, then it will be assumed to do so in the future. Similarly, if it underperformed the region (or UK) in the past then it will be assumed to underperform the region (or UK) in the future. The data on employees in employment by industry are taken from the BRES and the earlier Annual Business Inquiry (ABI).

4.51   The CE forecasts further assume that economic growth in the local authority is not constrained by supply-side factors, such as population and the supply of labour or floorspace/land. Therefore, no explicit assumptions for population, activity rates and unemployment rates are made in the projections. They assume that there will be enough labour (either locally or through commuting) with the right skills to fill the jobs. This is a key difference between the CE and the OE forecasts.

4.52   Cambridge at a national level have however assumed that the population grows in line with "low migration variant" in the national (2014-based) ONS population projections.

4.53   The OE forecasts' starting point for producing employment forecasts for a local authority is the determination of workplace-based employees in employment in each broad sector. There are two key sources for this – ONS Workforce Jobs (WFJ) and the Business Register and Employment Survey (BRES). The OE forecasts are produced within a fully-integrated system, which makes assumptions about migration, commuting and activity rates when producing employment and population forecasts. Within the OE model, migration is expected to grow or decline in parallel with the employment total. This ensures that the relationship between the labour market outlook and the population outputs are inter-linked.

4.54   The OE forecasts, like the CE forecasts, are based on a global view of growth which is translated to the UK, then the South East region and then each local authority within the region. However, how the national level of growth is translated to a regional and local authority level differs from sector to sector. Some of the sectors are driven predominantly by population estimates, others by total employment in the area and the remainder by the sector's performance relative to the regional performance.

4.55   The methods of sectoral projection are as follows, each of which are forecast based upon recent trends:

- Agriculture - share of the regional employment
- Mining and quarrying - share of the regional employment
- Manufacturing - share of the regional employment
- Electricity, gas, and steam - share of the regional employment
- Water supply; sewerage, waste management - share of the regional employment
- Construction - location quotient (LQ) based upon total employment
- Wholesale and retail trade - LQ based upon consumer spending
- Transportation and storage - LQ based upon consumer spending
- Accommodation and food service activities - LQ based upon consumer spending
- Information and communication - share of the regional employment
- Financial and insurance activities - share of the regional employment
- Real estate activities - LQ based upon total employment
- Professional, scientific and technical activities - LQ based upon total employment
- Administrative and support service activities - LQ based upon total employment
- Public administration and defence - LQ based upon sectoral employment per population
- Education - LQ based upon sectoral employment per population

- Human-health and social-work activities- LQ based upon sectoral employment per population
- Arts, entertainment and recreation - LQ based upon consumer spending
- Other service activities LQ based upon consumer spending

4.56 Population growth and consumer spending thus influence employment across a range of sectors.

4.57 Oxford Economics' national forecasts are based on their own demographic assumptions, which assume average net migration which is below that in the central variant 2014-based Population Projections; and thus at a national level this is not a significant difference between the projections.

4.58 GL Hearn's analysis does however suggest that comparatively stronger population growth in the 2014-based SNPP in Bracknell Forest; and conversely relatively weak population growth in West Berkshire is impacting on the Oxford Economics forecast outputs in particular.

Relating Economic Growth and Housing Need

4.59 The relationship between economic growth and housing need is complex and influenced by commuting dynamics between areas, changes in economic participation – including people working for longer and retiring later – together with the potential for a small proportion of people to hold down more than one job.

Overall Job Growth

4.60 Table 31 below shows the annual forecast growth in the number of jobs in each area from each of the two forecasts between 2016-36. Whilst the demographic outputs and housing need conclusions in this report look at needs in the 2013-36 period, it is not necessary to project population growth between 2013-16 as there is data available from ONS Mid-Year Population Estimates. The projections herein are thus only variable from 2016 onwards.

Table 31: Annual Average Jobs Growth, 2016-36

	Cambridge Econometrics	Oxford Economics
Bracknell Forest	340	860
Reading	540	1090
West Berkshire	350	270
Wokingham	530	850
Western Berkshire HMA	1,760	3,060

Source: Cambridge Econometrics and Oxford Economics (figures rounded to nearest 10)

4.61 The forecasts for jobs growth vary notably between the two forecasts. Both are therefore modelled to provide to show the potential range of housing need arising. Our initial assumption is to take a

midpoint position on jobs growth between the two forecasts, before considering the issue further in drawing conclusions later in this section.

Double jobbing

4.62   The analysis considers that a number of people may have more than one job (double jobbing). This can be calculated as the number of people working in the local authority divided by the number of jobs.

4.63   Data to estimate double jobbing has been taken from the Annual Population Survey and uses an average over the period since 2004. This period of time has been used to reflect relatively high error margins associated with data for individual years at local authority level. Double jobbing assumptions for each local authority are as follows:

- Bracknell Forest – 3.7%;
- Reading – 3.4%;
- West Berkshire – 4.3%; and
- Wokingham – 3.7%.

Commuting dynamics

4.64   As well as recognising that some people may have more than one job, the analysis takes account of commuting patterns. Where an area sees more people out-commute for work than in-commute it may be the case that a higher level of increase in the economically active/working population would be required to provide a sufficient workforce for a given number of jobs (and vice versa where there is net in-commuting).

4.65   The core analysis in this report uses commuting data from the Census and assumes that the relationships seen in 2011 remain the same going forward. This is consistent with the 2016 SHMA. The commuting ratios applied to each local authority are shown below:[24]

- Bracknell Forest – 1.04;
- Reading – 0.90;
- West Berkshire – 0.94 and
- Wokingham – 1.18.

4.66   Invariably in reality there is potential for commuting patterns to change over time. This will be influenced by a range of factors including housing growth in different areas, jobs growth and transport investment which changes accessibility. Within this HMA, there is potential that transport improvements such as the M4 Smart Motorway, the opening of the Elizabeth Line (Crossrail) and improvements in service frequencies on the Waterloo-Reading rail line could influence commuting

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[24] A ratio above 1 implies a degree of out-commuting and below 1 is in-commuting

patterns. However the nature of commuting changes is difficult to accurately predict given the range of influences and the potential for flows both in and out of authorities within the Western Berkshire HMA authorities to change. These will issues to monitor over time.

Economic Participation Rates

4.67   The relationship between jobs growth and population is also influenced by changes in economic participation. Trends are of growing employment rates driven in particular by growing numbers of women in the workforce and people working longer (linked to growing life expectancy and health and changes in State Pension Age). The extent of changes is however difficult to precisely predict.

4.68   The approach taken in this report is to derive a series of age and sex specific employment rates and use these to estimate how many people in the population will be working as projections develop. Employment rates describe the proportion of people who are 'in employment.'

4.69   To derive a robust set of modelling assumptions we have therefore sought to interrogate and compare assumptions on economic participation used in the 2016   SHMA with two alternative published sources:

- Office for Budget Responsibility Fiscal Sustainability Report (Jan 2017)
- Experian[25]

4.70   We have also considered the assumptions used by Oxford Economics in their forecasts for the Western Berkshire HMA.

4.71   In using the OBR, Experian and OE data, it should be noted that the rates are for economic activity rather than employment, and hence an additional consideration of how unemployment might change is necessary. However, as of 2016 (the point at which projections become variable) it was the case across the Western Berkshire HMA, that unemployment was already at very low levels. Hence any future changes are likely to be modest and therefore no additional adjustments for unemployment have been applied.

4.72   The Office for Budget Responsibility (OBR) models economic participation using 2014-based ONS projections, modelling labour market entry and exit rates using averages over the 19 years to 2015, and making adjustments to exit rates to take account of State Pension Age changes. What the OBR Report does is apply its economic participation assumptions to the 2014-based Population Projections to calculate employment.

4.73   Experian similarly take account of the 2014-based ONS projections and more recent data on participation rates by age and gender. They project activity rates (similarly for age and gender

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[25] Experian (August 2017) *Comparison between Experian and OBR Participation Rates*

groups) taking into account trends and announced State Pension Age changes, as well as expected cohort effects which they expect to increase female participation rates; and expected changes in behaviour associated with improved longevity and health, changes to the pattern of working; and structure of the economy.

4.74   The level of job growth (growth in residents in employment) estimated by OBR is significantly lower than from any of the main forecasting houses with growth in residents in employment of about 2,000,000 from 2014-35 compared with a figure in excess of 3,480,000 by Cambridge Economics and 4,000,000 in the most recent Experian forecast for the United Kingdom. This is influenced by their demographic and economic participation assumptions. This means that the OBR employment/activity rate figures cannot realistically be used when testing job growth levels from forecasts, as they relate to a completely different set of national assumptions.

4.75   The OBR projections include a cohort effect which results in a reduction in economic participation in some younger age groups. This contrasts clearly with trends of increasing economic participation amongst these age groups. An example of this can be seen for the male age groups from 35-49, where OBR has a decrease in the activity rate of 0.4%-1.5% moving forward from 2016. The past trend data for this age group (drawn from the Annual Population Survey) actually shows a modest upward trend since 2004 (see Figure 8 below).

**Figure 8:   Change to economic activity rate of males aged 35-49 since 2004 – United Kingdom**
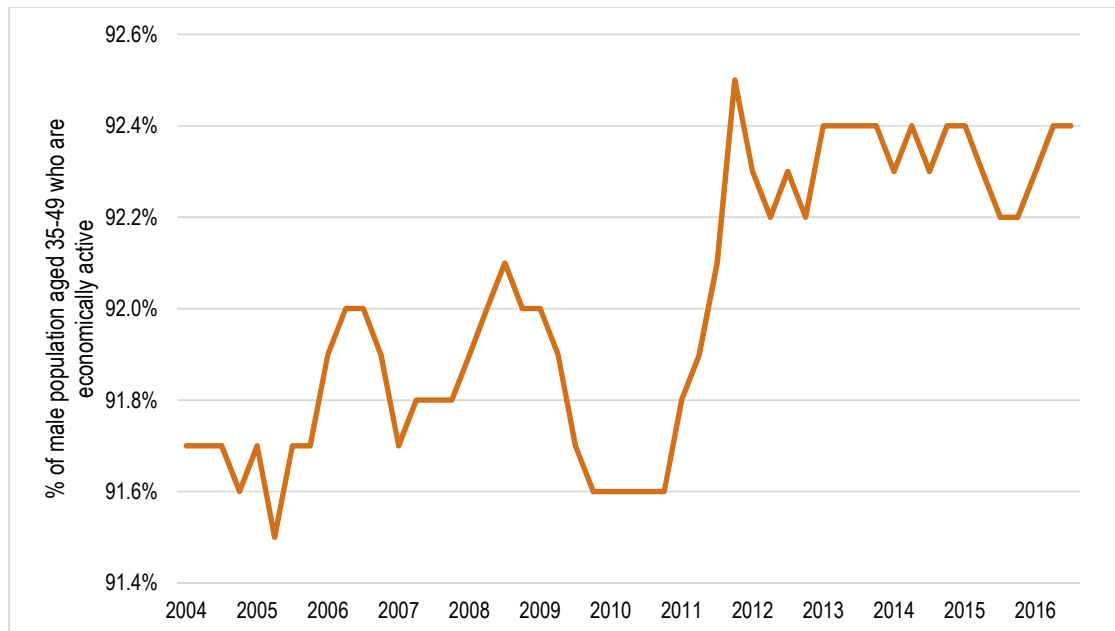
Source: Annual Population Survey, 2004-2017

4.76   Furthermore, there are economic factors which are not captured within the OBR model but which are captured for instance by Experian. The Experian projections take account not only of State Pension Age changes but socio-economic drivers, including:

- Expected improvements in the participation of females in older age groups as evidenced by today's participation rates of younger cohorts (who will age into those older groups);
- Expected changes in behaviour connected with improved longevity and health; changes to patterns of work (allowing older people to continue working under more flexible arrangements); and changes in the industrial composition of the economy (especially the shift to services). Improving health and longevity will result in a need for people to build up savings for a longer retirement.

4.77   Oxford Economics publish data on their assumptions on the resident employment rate (16+) within their published data and this can therefore be compared alongside the other sources. The figure below provides an example of the differences as they relate to Bracknell Forest Borough. The consultancy team has undertaken a similar analysis for the other authorities. For the purposes of assessing housing need, it is the change in the economic participation rate between 2006-36 which is relevant.

Figure 9:   Variance in Employment Rate Assumptions – Bracknell Forest
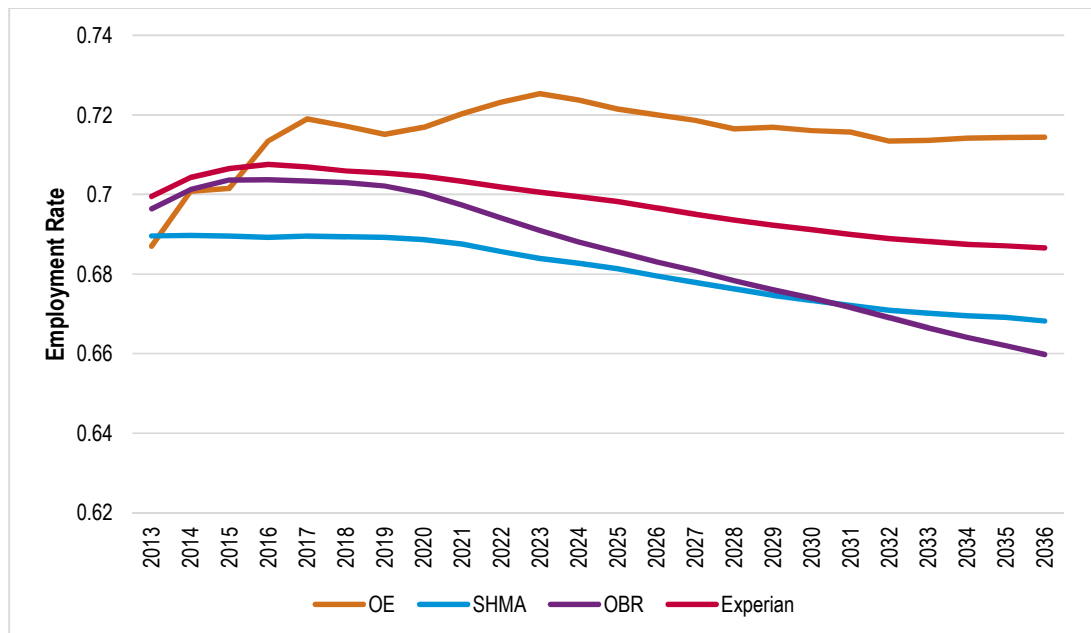
4.78   Our comparative analysis between data sources leads us to conclude that the OBR assumptions are overly pessimistic. The 2016 SHMA assumptions sit within the range of possibilities, and it is considered that these should be preferred as a basis for drawing conclusions on the housing provision. Sensitivity analysis using the other forecast assumptions is set out.

Summary of assumptions and sensitivities

4.79   The table below sets out the range of assumptions used to look at the link between jobs and population growth/housing need. The various sensitivities are also highlighted.

Table 32:   Assumptions used in modelling of link between jobs and homes in Western Berkshire

Topic	Core assumption	Sensitivities
Double jobbing	Data from APS for the period since 2004	-
Commuting patterns	Based on 2011 Census	-
Employment/economic activity rates	2016 SHMA assumptions	OBR and Experian assumptions

Housing Need linked to Job-Growth Forecasts

4.80   In assessing the economic-led housing need, migration assumptions have been adjusted for each local authority to increase the economically active population/ population in employment to match the assumed workforce required. The changes to migration have been applied on a proportionate basis: the methodology assumes that the age/sex profile of both in- and out-migrants is the same as underpins the SNPP with adjustments being consistently applied to both internal (domestic) and international migration. Adjustments are made to both in- and out-migration (e.g. if in-migration is increased by 1% then out-migration is reduced by 1%). Once the level of working (economically active) population matches the job growth forecast the population (and its age structure) is modelled using the adjusted headship rates (i.e. it includes the 'part return to trend' in household formation for those aged 25-44).

4.81   Table 33 below sets out estimates of housing need required to support each of the job forecasts. This shows that to support the Cambridge forecasts would require between 2,229 – 2,567 dpa; with 2,943 – 3,292 dpa required to support the Oxford forecast based on the core assumptions set out. Our core conclusions sit centrally within this range.

Table 33:   Economic-led Housing Need – Sensitivity Analysis on Jobs Growth and Economic Participation

Jobs Forecast	Economic Participation	Bracknell Forest	Reading	West Berks	Woking-ham	Western Berks
Cambridge	Experian	453	582	531	663	2,229
	2016 SHMA	465	601	556	697	2,319
	OBR	525	650	629	762	2,567
Oxford	Experian	747	858	488	850	2,943
	2016 SHMA	794	917	508	905	3,125
	OBR	826	931	585	950	3,292

Source: Demographic projections

4.82   Noting that the analysis above indicates that in theory a higher level of housing provision might be necessary to support the Oxford Economics (OE) forecasts, it is important to bear in mind that Oxford Economics themselves make assumptions on economic participation within their model which influences their assumptions on economic growth. If the outputs on population and household growth are taken from OE's model, and then converted to provide outputs on housing need (including adjustments for vacant homes), the following outputs are derived:[26]

Table 34:   Integrated Outputs of Oxford Economics Model – Per annum (16-36)

	Bracknell Forest	Reading	West Berks	Wokingham	Western Berks
OE Household Growth per annum, 2016-36	493	719	345	627	2,184
OE Population Growth per annum, 2016-36	544	743	392	651	2,330

Source: Oxford Economics, 2017

4.83   This does not point to a particular upside associated with the Oxford Economics forecast outputs relative to the conclusions drawn on the demographic need, and indicates that if their own assumptions relating economic growth to demographics are used, there is not a particular upside associated with meeting the housing need arising from their forecasts.

Bringing the Evidence Together

4.84   There is inevitably some uncertainty regarding future employment growth and changes in economic participation. However the PPG sets out that consideration should be given to whether higher housing provision is needed to support the economy, relative to the demographic-led projections.

4.85   GL Hearn has considered in this section forecasts from two of the three companies which prepare economic forecasts at local authority district level. Experian jobs forecasts have not been used as these are driven particularly by demographics, creating particular issues of circularity in assessing OAN. We have been mindful to these issues.

4.86   Our analysis has compared the Oxford Economics and Cambridge Econometrics forecasts for the HMA and constituent local authorities. Both of these forecasting 'houses' assume at a national level that population growth will be lower than in the ONS 2014-based national population projections. At a local level, Oxford Economics forecasts stronger employment growth than Cambridge Econometrics across the HMA.[27]

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[26] The Population assumptions are modelled using the Part Return to Trend headship adjustment

[27] In West Berkshire the Cambridge forecasts are stronger, but in the other authorities Oxford Economics forecasts are stronger

4.87   Inevitably in this area there are particular potential issues regarding circularity with demographics influencing the economic forecast, which then influence demographics. However it is an area which the PPG requires us to consider these issues. Applying OEs own assumptions on the relationship between employment and demographics would lead to a position where the OE forecasts (at 2,330 dpa) could be accommodated with a similar level of housing provision to the CE forecasts (at 2,319 dpa) at an HMA level. Figures for individual authorities are shown in Table 35.

Table 35:   Comparing Key Economic-led Scenarios for Housing Need and the Demographic Need (dpa 2013-26)

	Bracknell Forest	Reading	West Berks	Wokingham	Western Berks
Demographic Need	430-522	413-522	436-583	621-709	2135
OE Population	544	743	392	651	2,330
OE, 2016 SHMA Participation Assumptions	794	917	508	905	3,125
CE, 2016 SHMA Participation Assumptions	465	601	556	697	2,319
Midpoint between Forecasts, 2016 SHMA Participation Assumptions	630	759	532	801	2,722

4.88   In drawing conclusions from the above analysis, GL Hearn considers that it is important to consider the differences between the two forecasts; and to bring this together with local intelligence and understanding of economic growth potential. We have therefore engaged with the individual local authorities to understand what it going on 'on the ground' as well as discussing economic dynamics with the Berkshire LEP. The analysis below considers dynamics in each local authority.

Bracknell Forest

4.89   Oxford Economics forecasts show employment growth of 17,200 over the 2016-36 period, equating to a growth rate of 1.1% pa. This forecast is out-of-kilter with Bracknell Forest's recent historical performance, with the evidence suggesting employment has declined in the Borough since 2003. Whilst the forecast is partly informed by the opening of the Lexicon Centre, it forecasts growth which GL Hearn considers it too high across a range of sectors.

4.90   Cambridge Econometrics instead shows employment growth of 6,800 jobs over the period to 2036 representing a growth rate of 0.4% pa. We consider that there is some potential for the economy to perform more strongly than this, with stronger growth possible in IT and Communications as well as resulting from the regeneration of the town centre and opening of the Lexicon Centre.

4.91   GL Hearn conclude that it would be reasonable to expect employment growth of around 12,000 jobs between 2016-36 i.e. the average between the OE and CE forecasts, and to monitor employment performance moving forwards.

Reading

4.92   For Reading, Cambridge forecast 10,800 jobs between 2016-36 (0.4% pa) and Oxford Economics forecast 21,800 jobs (0.9% pa). There is a significant difference between the forecasts and both are more positive than historical growth (-0.2 – -0.3%, 1993-2010).

4.93   Reading is seeing a substantial level of office development in the Town Centre and at business park locations. Accessibility will be improved with Crossrail and delivery of a station at Green Park. Overall employment growth is expected to be driven particularly by growth in financial and business services and information and communications employment, office-based sectors which underpin the area's economic strength. There have been a number companies moving to Reading from other areas over the last few years, including from West Berkshire and Basingstoke. Some growth in retail and leisure activities, health and education is also expected; with employment in manufacturing expected to contract slightly.

4.94   Overall GL Hearn considers that the average of the two forecasts would represent a realistic assessment of economic growth potential for the purposes of assessing housing need. This equates to a growth of around 820 jobs per annum.

West Berkshire

4.95   Oxford Economics forecast employment growth of 5,300 in West Berkshire (2016-36) equivalent to 0.2% pa. Cambridge Econometrics are more positive, expecting employment growth of 7,100 jobs (0.3% pa). In both cases, the forecasts are for relatively more modest employment growth than other parts of the HMA. Projected relatively modest population growth feeds particularly into the Oxford Economics' forecast.

4.96   The District is home to internationally-significant research establishments at AWE Burghfield and Aldermaston which are local economic drivers. Information and communications and Financial and Business Services have traditionally been strong and employment will continue to grow, but investment is increasingly being focused elsewhere, including in London and Reading, affecting the rate of growth which is expected to be significant more modest than seen historically. Some growth in retail and leisure activities, health and education is also expected; with employment in manufacturing expected to contract.

4.97   The District is further from London and is not expected to benefit from transport infrastructure improvements as some other parts of the HMA.

4.98   GL Hearn consider that it be reasonable to adopt the more positive view on economic performance shown in the Cambridge forecasts in drawing conclusions on the economic-led housing need. This equates to jobs growth of 7,100 between 2016-36.

Wokingham

4.99   For Wokingham Borough, Cambridge Econometrics forecast employment growth of 10,500 between 2016-36 (0.5% pa). Oxford Economics forecast growth of 16,900 jobs (0.8% pa).

4.100   Financial and business services and the information and communications sectors, as with other areas, are expected to drive overall employment growth. A new Science Park is being developed by Reading University, adjoining the M4, which will support growth including in Life Sciences. Town Centre regeneration is underway in Wokingham but this is expected to contributed modestly to net growth in jobs.

4.101   GL Hearn conclude that it would be reasonable to expect employment growth of around 13,700 jobs between 2016-36 i.e. the average between the OE and CE forecasts, and to monitor employment performance moving forwards.

Drawing the Evidence Together

4.102   Based on our analysis above, we conclude that employment growth of 52,400 can be expected between 2016-36 across the HMA. To support this, based on our core assumptions, provision of 2,850 dpa would be required.

Table 36:   Conclusions on Economic-led Housing Need

LPA	Basis	Jobs (2016-36)	Jobs pa	Homes (dpa)
Bracknell Forest	Midpoint between the Jobs Forecasts	12,000	600	630
Reading	Midpoint between the Jobs Forecasts	16,400	810	759
West Berkshire	Cambridge Econometrics	7,100	355	556
Wokingham	Midpoint between the Jobs Forecasts	13,700	685	801
Western Berkshire HMA		49,200	2,450	2,746

5 AFFORDABLE HOUSING NEED

5.1 The PPG (2a-022) describes the calculation of affordable housing need as relating to *"the number of households and projected households who lack their own housing or live in unsuitable housing and who cannot afford to meet their housing needs in the market. This calculation involves adding together the current unmet housing need and the projected future housing need and then subtracting this from the current supply of affordable housing stock."*

5.2 The PPG sets out a model for assessing affordable housing need. This model largely replicates the model set out in previous SHMA Practice Guidance (2007). It draws on a number of sources of information including Census data, demographic projections, house prices/rents and income information. Paragraph 14 of the PPG (2a-014) sets out that:

"Plan makers should avoid expending significant resources on primary research ... They should instead look to rely predominantly on secondary data (e.g. Census, national surveys) to inform their assessment which are identified within the guidance".

5.3 The affordable housing needs model is based largely on housing market conditions (and particularly the relationship of housing costs and incomes) at a particular point in time – the time of the assessment; together with the existing supply of affordable housing (through relets of current stock) which can be used to meet affordable housing need. What this means is that changes in entry-level market housing costs over time will influence the scale of affordable housing need.

5.4 Given the range of data available, a base date of 2016 is used in the assessment of affordable housing need herein. For the purposes of consistency with the end date of demographic projections and in drawing conclusions on OAN, data is presented as per annum data for the period 2016-36. The analysis does not seek to fully recalculate levels of affordable need from the 2016 SHMA research: it provides an update of this using new information where available.

Data Sources and Input Data

5.5 A full assessment of affordable housing need was carried out in the 2016 SHMA. The methodology used in the previous assessment is largely unchanged for this study and full details can be found in the 2016 SHMA. Specifically, this assessment seeks to update the following variables:

- Housing costs (private sector rent levels) – drawing on the latest Valuation Office Agency data covering a 12-month period to March 2017;
- Income data – taking account of new data about local incomes (including information from the Annual Survey of Hours and Earnings (2016) and small area income estimates from ONS (published in October 2015);
- Estimates of the number of newly forming households – this is a direct output of the demographic modelling included herein; and

- Estimates of the supply of affordable housing from relets – taken from Continuous Recording of Lettings data (CoRe) up to 2016.

5.6   Other more minor changes have been made: for example estimates of the current need for affordable housing have been updated but this does not substantially change the figures. The text below therefore discusses the main updating undertaken in the assessment.

Rent Levels

5.7   An important part of the study is to establish the entry-level costs of housing. In previous assessments, it has been established that incomes required to access private rented properties are lower than those for owner occupation. Private rents are therefore considered in assessing entry-level market housing costs.

5.8   The affordable housing needs assessment compares rents with the incomes of households to establish what proportion of households can meet their needs in the market, and what proportion require support and are thus defined as having an 'affordable housing need.'

5.9   The entry-level costs of housing have been established from Valuation Office Agency (VOA) data. For the purposes of analysis (and to be consistent with Paragraph 25 of the PPG (2a-025)), lower quartile (LQ) rents have been taken to reflect the entry-level point into the market – the data covers a 12-month period to March 2017. Table 35 below shows LQ rents by size of dwelling in each area; across all dwelling sizes, LQ rents vary from £750 per month in Bracknell Forest and Reading, up to £900 in Wokingham.

Table 37:   Lower Quartile private rents by size and location (year to March 2017) – per month

	Bracknell Forest	Reading	West Berkshire	Wokingham
Room only	£363	£426	£400	£342
Studio	£575	£620	£550	£625
1 bedroom	£675	£750	£650	£750
2 bedrooms	£875	£895	£795	£950
3 bedrooms	£950	£1,045	£950	£1,200
4+ bedrooms	£1,300	£1,500	£1,400	£1,595
All dwellings	£750	£750	£778	£900

Source: Valuation Office Agency (2017)

5.10   The figures present above can be compared with equivalent data from the previous assessment of affordable housing need (which used data for the year to September 2014). This analysis (shown below) identifies that there has been an increase in the overall lower quartile rent over the period since the last affordable needs assessment was carried out, in all areas other than Bracknell Forest (where the overall lower quartile rent has dropped by about £25 per month (3%)).

Table 38: Change in lower quartile private rents (all dwellings) since 2016 SHMA research

	Previous assessment (year to September 2014)	Updated position (year to March 2017)	Change in monthly rent	% change
Bracknell Forest	£775	£750	-£25	-3%
Reading	£650	£750	£100	15%
West Berkshire	£650	£778	£128	20%
Wokingham	£800	£900	£100	13%

Source: Valuation Office Agency, 2017

Affordability Thresholds

5.11   A household is considered able to afford market rented housing in cases where the rent payable would constitute no more than a particular percentage of gross income. The choice of an appropriate threshold is an important aspect of the analysis. The threshold of income to be spent on housing should be set by asking the question *'what level of income is expected to be required for a household to be able to access market housing without the need for a subsidy (e.g. through Housing Benefit)?'*

5.12   CLG 2007 Practice Guidance suggested that 25% of income is a reasonable start point but also notes that a different figure could be used. Analysis of current letting practice suggests that letting agents typically work on a multiple of 40%. Government policy (through Housing Benefit payment thresholds) would also suggest a figure of 40%+ (depending on household characteristics).

5.13   What proportion of households can afford to pay for housing will be influenced in part by household incomes in an area: in an area with higher overall incomes, a greater proportion of income could be spent on housing whilst leaving sufficient remaining income for households to live on, than in an area with lower incomes. Living costs are also relevant.

5.14   Rent levels in the study area are higher than those seen nationally (a lower quartile rent of £500 per month across England) and are some way higher than seen in a number of areas (the lowest lower quartile rents nationally are around £350 per month). If the cheapest areas nationally were to be considered as areas in which households would spend up to '25%' of income on housing, then it is clear that a higher threshold would be reasonable where rents are higher.

5.15   This report considers the impact on housing need of considering a range of income thresholds. However for the purpose of working through the step-by-step derivation of the affordable housing need, a core analysis is set out initially; with sensitivities on alternative income thresholds then considered. The core analysis assumes household spend up to 35% of gross income on housing costs. This is consistent with the 2016 SHMA assumptions, enabling comparison with it, and has

been upheld in a planning appeal with the Inspector concluding that it is not so adrift of normal practice so as to warrant its rejection.[28] Sensitivity analysis has been provided looking at alternative scenarios in the range of 25% to 40%.

Household Incomes

5.16   Data about total household income has been modelled on the basis of a number of different sources of information to provide both an overall average income and the likely distribution of incomes in each area. The key sources of data include:

- ONS modelled income estimates (published in October 2015 with a 2011/12 base) – this information is provided for middle layer super output areas (MSOA) and is therefore used to build up to local authority areas;
- English Housing Survey (EHS) – to provide information about the distribution of incomes; and
- Annual Survey of Hours and Earnings (ASHE) – to assist in looking at how incomes have changed since the ONS base date and to provide an alternative source about how incomes in different areas vary.

5.17   The table below shows average (mean) household incomes modelled for each local authority and compares these to the figures in the 2016 SHMA. It can be seen that the incomes assumed in this report are somewhat higher than previous assessments (up by 8% across the HMA).

Table 39:   Average (mean) income estimates – households

	2014-based estimate	2016-based estimate	% change
Bracknell Forest	£49,586	£53,477	8%
Reading	£42,565	£47,213	11%
West Berkshire	£49,110	£52,788	7%
Wokingham	£58,241	£61,941	6%
Western Berkshire	£49,815	£53,805	8%

Source: Derived from a range of data

5.18   To assess affordability, a household's ability to afford private rented housing without financial support has been studied. The distribution of household incomes is used to estimate the likely proportion of households who are unable to afford to meet their needs in the private sector without support. This analysis brings together the data on household incomes with the estimated incomes required to access private sector housing.

5.19   Different affordability tests are applied to different parts of the analysis depending on the group being studied (e.g. recognising that newly forming households are likely on average to have lower incomes than existing households (this has consistently been shown to be the case in the English Housing Survey and the Survey of English Housing). Assumptions about income levels for specific elements of the modelling are the same as in previous assessments of affordable need.

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[28] APP/W0340/W/15/3141449 Para 158

Newly Forming Households

5.20   The number of newly-forming households has been estimated through the demographic modelling with an affordability test also being applied. This has been undertaken by considering the changes in households in specific 5-year age bands relative to numbers in the age band below 5 years previously to provide an estimate of gross household formation (e.g. the analysis considers the number of households aged under 45 in a particular year and subtracts the number aged under 40 five-years previously. This provides an estimate of the number of new households (i.e. that didn't exist five years earlier). This differs from numbers presented in the demographic projections which are for net household growth.

5.21   The numbers of newly-forming households are limited to households forming who are aged under 45. This is consistent with 2007 CLG Practice Guidance which notes after age 45 that headship (household formation) rates 'plateau'. The PPG does not provide any specific guidance on how to calculate the number of newly forming households. There may be a small number of household formations beyond age 45 (e.g. due to relationship breakdown) although the number is expected to be fairly small when compared with formation of younger households.

5.22   Table 38 below shows estimates of the annual number of newly forming households from the updated demographic modelling and compares figures with those in previous assessments of affordable need. Generally, the figures do not change significantly, with the overall HMA-wide estimate being a reduction in new household formation of about 200 per annum (a 4% reduction).

Table 40:   Estimated number of newly forming households (per annum)

	2016 SHMA estimate	This study
Bracknell Forest	1,029	998
Reading	1,289	1,299
West Berkshire	1,150	1,030
Wokingham	1,335	1,286
Western Berkshire	4,803	4,613

Source: Based on demographic projections

Supply of Affordable Housing from Relets

5.23   The final area of updating is around the supply of affordable housing from relets of current stock. For this analysis, information has been taken from CoRe for the 2013-16 period – the previous assessment looked at data for a two-year period from 2012 to 2014. The table below compares estimates of the supply of social and affordable rented housing in each area. Across the HMA, the estimated future supply of relets is slightly lower than in the 2016 SHMA (1,435 vs. 1,548), although for both West Berkshire and Wokingham the estimates of future relets have gone up slightly. The

figures include a small number of relets of intermediate housing (e.g. shared ownership) – these figures have not been recalculated from the 2016 SHMA.

Table 41:   Estimated future supply of relets/sales of social/affordable/intermediate housing Per Annum

	2016 SHMA	This study
Bracknell Forest	374	316
Reading	564	469
West Berkshire	457	474
Wokingham	153	176
Western Berkshire	1,548	1,435

Source: CoRe

Summary of Information Used

5.24   The table below provides a summary of some of the key sources of information and analysis used in the assessment.

Table 42: Affordable Needs Model – summary of core analysis and sources

Aspect of analysis	Sources	Notes
Lower quartile private sector rents	Valuation Office Agency (VOA) data for the year to March 2017.	Used to establish the entry level cost of housing.
Incomes	ONS small area income estimates, English Housing Survey (EHS), Annual Survey of Hours and Earning (ASHE).	Used to estimate the average household income in 2016 and the distribution of income. Different distributions are developed for different household groups (e.g. newly forming households).
Affordability ratio	Valuation Office Agency (VOA) data for the year to March 2017.	Consideration of the relative cost of housing in the area compared with national benchmarks. In the case of Western Berkshire the analysis suggests that spending 35% of income on housing is an appropriate affordability threshold.
Current need	2011 Census, CLG live table 784 (homelessness), EHS, income and housing cost data.	Analysis using the categories of need set out in 2a-023 and 2a-024 of the PPG (along with affordability testing).
Future need (newly forming households)	Demographic projections – number of newly forming households aged under 45, income and housing cost data.	Analysis consistent with 2a-025 of PPG, including affordability testing.
Future need (existing households)	Continuous Recording of Sales and Lettings (CoRe), income and housing cost data.	Analysis consistent with 2a-025 of PPG, including affordability testing.
Supply of affordable housing (through relets)	Continuous Recording of Lettings and Sales (CoRe) – 2013-16.	Takes account of new-build and transfers as well as including resales of intermediate housing (e.g. shared ownership).

Affordable Housing Needs Assessment

5.25 Affordable housing need has been assessed using the methodology set out in the PPG. This model is summarised in Figure 10 below.

Figure 10: Overview of Affordable Housing Needs Assessment Model
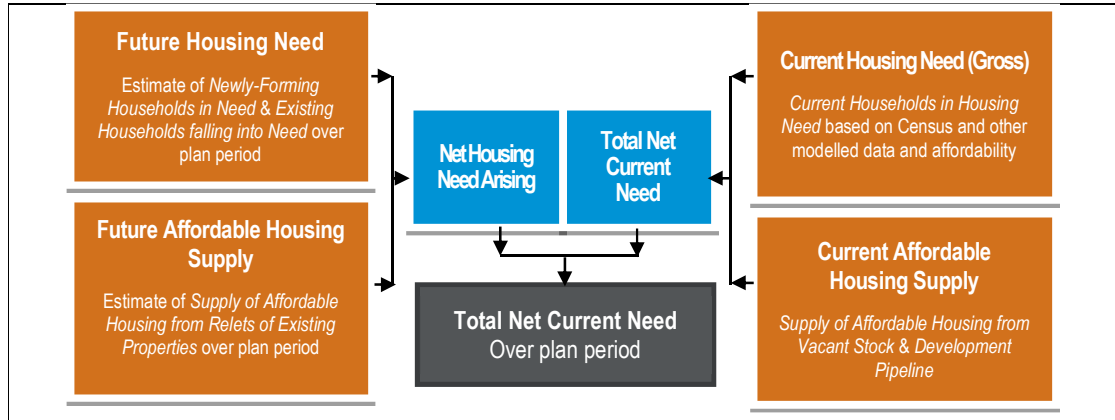
5.26   The table below shows the calculation of affordable housing need based on the core assumption of 35% gross income spent on housing. This excludes supply arising from sites with planning permission (the 'development pipeline') to allow for a comparison with the demographic projections set out in the report. The analysis has been based on meeting affordable housing need over the 20-year period from 2016 to 2036. Whilst most of the data in the model are annual figures, the current need has been divided by 20 to make an equivalent annual figure.[29] The net need is calculated as follows:

Net Need = Current Need + Need from Newly-Forming Households + Existing Households falling into Need – Supply of Affordable Housing

5.27   As the table sets out, the analysis calculates an overall need for affordable housing of 1,328 units per annum over the 20-years to 2036 in the HMA. Net affordable need is particularly high in Reading and Wokingham.

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[29] This does not imply households will wait 20 years to be housed. There will be flows on and off housing registers year-on-year

Table 43: Estimated level of Affordable Housing Need per annum –HMA and local authority

	Current need	Newly forming households	Existing households falling into need	Total Need	Supply from existing stock	Net Need
Bracknell Forest	35	367	104	507	316	191
Reading	115	549	309	972	469	503
West Berkshire	43	400	210	654	474	180
Wokingham	39	492	99	629	176	453
Western Berkshire	233	1,808	722	2,763	1,435	1,328

Source: 2011 Census/CoRe/Projection Modelling and affordability analysis

5.28 Long-term estimates of affordable need should be treated with caution, as these will be influenced by changes in housing costs. By increasing overall housing delivery contributing to an improvement in affordability, the affordable housing need will fall, all other factors remaining equal.

Comparison with Previous Assessment of Affordable Housing Need

5.29 Table 44 below shows estimates of the annual affordable need in this assessment and the 2016 SHMA. It should be noted that the 2016 SHMA examined need over a 23-year period (2013-36) and has been recast to meet the current need over the shorter 20 year period (2016-2036), as 2016 is the base date for this assessment. Considered on a consistent basis looking over the period 2016-36, the analysis shows a slightly higher level of need: this is particularly the case in Reading. Bracknell Forest and West Berkshire show slightly lower levels of need.

Table 44: Comparing assessments of affordable housing need

	2016 SHMA Recast over 20 year period	This study	Difference
Bracknell Forest	233	191	-41
Reading	422	503	81
West Berkshire	195	180	-15
Wokingham	448	453	5
Western Berkshire	1,298	1,328	30

Source: This study and previous (2016 SHMA) assessment

5.30 The changes in affordable need reflect modest changes in the relationship between housing costs and incomes, and changes in affordable housing supply. Nonetheless, it remains the case that there is a notable need for affordable housing in the HMA (and individual local authorities); Councils should therefore seek to maximise the delivery of affordable housing where opportunities arise.

Sensitivity to Income Thresholds

5.31   The PPG does not provide any guidance about what an appropriate threshold for affordability is (i.e. the maximum proportion of income that a household should spend on housing costs). Given the socio-economic profile in the study area, particularly with respect to earnings and the cost of housing, in practice, many households locally will spend more than 25% of their income on housing.

5.32   Whilst a 35% threshold has been used in the core analysis following analysis of the relative costs of housing in the HMA, it is appropriate to consider the sensitivity of the affordable need to what proportion of income households spend on housing. The table below summarises the findings. In particular, we can see that with an assumption of households spending 40% gross income on housing costs, the affordable housing need across the HMA falls to 964 households per annum; whilst assuming a 30% gross income threshold, it increases to 1,751 households per annum.

Table 45:   Estimated Level of Affordable Housing Need (per annum) at Variant Income Thresholds

	@ 25%	@30%	@35%	@40%
Current need	297	264	233	205
Newly forming households	2,561	2,137	1,808	1,536
Existing households falling into need	842	786	722	658
Total Need	3,700	3,186	2,763	2,399
Supply from existing stock	1,435	1,435	1,435	1,435
Net Need	**2,265**	**1,751**	**1,328**	**964**
Bracknell Forest	381	275	191	117
Reading	793	639	503	387
West Berkshire	398	279	180	96
Wokingham	692	558	453	364

Source: 2011 Census/CoRe/Projection Modelling and affordability analysis

Relating Market Signals and Overall Housing Need

5.33   The PPG then sets out in Para 2a-029 that:

"The total affordable housing need should then be considered in the context of its likely delivery as a proportion of mixed market and affordable housing developments, given the probable percentage of affordable housing to be delivered by market housing led developments. An increase in the total housing figures included in the local plan should be considered where it could help to deliver the required number of affordable homes."

5.34   Bracknell Forest currently seek to negotiate 25% affordable housing provision on sites which have a net capacity of 15 or more, but is proposing to increase this to 35% on sites which have a net capacity of 11 or more as part of its Local Plan Review. We have therefore notionally assumed 30% affordable housing delivery. Reading seeks 30% affordable housing on schemes of over 15

dwellings (Policy CP16). Wokingham's 2010 Core Strategy seeks provision of up to 50% affordable housing, and would require 35% provision on its strategic development locations, and 40% on greenfield sites elsewhere. We have assumed an average of 35% affordable housing delivery. In West Berkshire, Core Strategy Policy CS6 requires 30% affordable housing provision on previously-developed land, and 40% on greenfield land on development schemes of 15+ dwellings/ 0.5 ha or above. 30% provision is required on sites of 10-14 dwellings. We have assumed 30% affordable housing delivery.

5.35   Invariably there are some sites which do not deliver policy-compliant affordable housing levels, but set against this there is delivery on land owned by the public sector or registered providers; grant support through the HCA which contributes to affordable housing delivery; rural exception schemes and, in some instances, local housing companies or delivery vehicles which have been established to support increased delivery of affordable housing.

5.36   Applying these delivery percentages to the core affordable housing need figures yields the following notional levels of housing provision to meet the affordable need in full.

Table 46:   Notional Housing Provision to Meet Affordable Housing in Full

Affordable Housing Need	Bracknell Forest	Reading	West Berkshire	Wokingham	HMA
Affordable Housing Need	191	503	180	453	1327
Assumed % Affordable Housing Delivery	30%	30%	30%	35%	
Notional Housing Provision to Meet Affordable Need in Full	637	1677	600	1294	4208

5.37   The notional housing provision to meet the affordable housing need in full which results from applying the assumed proportions of affordable housing delivery in Table 45 to the need figures using different income thresholds is shown in Table 45 as set out in the table below..

Table 47:   Notional Housing Provision to Meet Affordable Housing in Full for different income thresholds

Income Threshold	@ 25%	@30%	@35%	@40%
Bracknell Forest	1270	917	637	390
Reading	2643	2130	1677	1290
West Berkshire	1327	930	600	320
Wokingham	1977	1594	1294	1040

5.38   In interpreting the affordable housing needs evidence and these calculations, it is important to bear in mind the following:

- Firstly, the calculations include existing households – the types of households identified as having a current need include those with insecurity of tenure, overcrowded households, those lacking facilities or with a social/physical impairment which cannot be met *in situ*. This includes households across a range of tenures who are in need (ID 2a-022-20130306 and ID 2a-023-20140306). In moving, these households would release a home for another household. Thus whilst there is a need for affordable housing, there is not a net need for additional housing overall.

- Secondly, it clearly includes supply-side factors – with the estimate of need expected to be compared against the current total affordable housing supply and committed supply of affordable housing (ID-2a-025-20140306), and future supply taking account of relets (ID 2a-026-20140306). This is in contrast to other parts of the methodology where supply-side factors are left aside, and the focus is on *net* growth in households/ dwellings. This is an important consideration when the assessed affordable need is compared against demographic projections and the calculations should be considered as indicative.

5.39   Nonetheless, the scale of affordable housing need does provide some basis for considering higher overall housing provision relative to the conclusions on the demographic-based need for housing.

5.40   Case law has established the appropriate approach in considering affordable housing needs evidence. [30] In this Kings Lynn case, Mr Justice Dove notes the "ingredients" involved in assessing the full OAN, and that this necessitated considering a range of relevant data for which there is no one set methodology and which will involve elements of judgement. He went on to outline how the need for affordable housing should be considered in drawing conclusions on the OAN:

"31 In terms of the first element of the assessment in the first of the sub-bullet points in paragraph 159, namely meeting household and population projections taking account of migration and demographic change, the PPG illustrates that this is a statistical exercise involving a range of relevant data for which there is no one set methodology, but which will involve elements of judgment about trends and the interpretation and application of the empirical material available.

These judgments will arise for instance in relation to whether, for example, adjustments for local demography or household formation rates are required (see paragraph ID 2a-014–20140306), and the extent and nature of adjustments for market signals (see paragraph ID

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[30] *Kings Lynn & West Norfolk vs. SSCLG & Elm Park Holdings Ltd* [2015] EWHC 2464 (Admin)

2aa-018–20140306). Judgment will further be involved in taking account of economic projections in undertaking this exercise.

32 At the second stage described by the second sub-bullet point in paragraph 159, the needs for types and tenures of housing should be addressed. That includes the assessment of the need for affordable housing as well as different forms of housing required to meet the needs of all parts of the community. Again, the PPG provides guidance as to how this stage of the assessment should be conducted, including in some detail how the gross unmet need for affordable housing should be calculated. The Framework makes clear these needs should be addressed in determining the FOAN, but neither the Framework nor the PPG suggest that they have to be met in full when determining that FOAN. This is no doubt because in practice very often the calculation of unmet affordable housing need will produce a figure which the planning authority has little or no prospect of delivering in practice. That is because the vast majority of delivery will occur as a proportion of open-market schemes and is therefore dependent for its delivery upon market housing being developed. It is no doubt for this reason that the PPG observes at paragraph ID 2a-208–20140306 as follows:

"The total affordable housing need should then be considered in the context of its likely delivery as a proportion of mixed market and affordable housing developments, given the probable percentage of affordable housing to be delivered by market housing led developments. An increase in total housing figures included in the local plan should be considered where it could help deliver the required number of affordable homes."

33 This consideration of an increase to help deliver the required number of affordable homes, rather than an instruction that the requirement be met in total, is consistent with the policy in paragraph 159 of the Framework requiring that the SHMA "addresses" these needs in determining the FOAN. They should have an important influence increasing the derived FOAN since they are significant factors in providing for housing needs within an area.

34 Insofar as Hickinbottom J in the case of Oadby and Wigston Borough Council v Secretary of State [2015] EWHC 1879 might be taken in paragraph 34(ii) of his judgment to be suggesting that in determining the FOAN, the total need for affordable housing must be met in full by its inclusion in the FOAN I would respectfully disagree. Such a suggestion is not warranted by the Framework or the PPG for the reasons which I have just set out."

5.41   It is clear from this that the expectation is that it may be necessary, based on the affordable needs evidence to *consider* an adjustment to enhance the delivery of affordable housing, but that this does not need to be necessarily done in a mechanical way whereby the affordable need on its own

dictates the OAN figure. Nonetheless it is clear that affordable housing need may result in upwards adjustments to the OAN, but with consideration given to the overall deliverability of housing.

5.42   GL Hearn considers that there is a strong interaction between affordable housing need and market signals, noting that the scale of affordable housing need is sensitive to housing costs. As an example, a reduction in entry-level market housing costs in Bracknell Forest by 10% would result in the affordable housing need using the core assumptions falling from 227 to 168 households pa (a 26% reduction). This serves to highlight that an improvement in market housing costs relative to incomes, will reduce the need for affordable housing.

Table 48:   Example Sensitivity Analysis – Bracknell Forest

	Core Analysis	10% reduction in housing cost
Current need	40	37
Newly forming households	426	380
Existing households falling into need	135	125
Total need (gross)	601	542
Supply from existing stock	374	374
Net need	227	168

5.43   On this basis we have sought to draw the affordable housing analysis together with the market signals evidence, as set out in the next section, in drawing conclusions.

6   MARKET SIGNALS

6.1   In this section consideration is given to market signals within the Housing Market Area. Para 2a-019 outlines the market signals which should be assessed, and goes on to set out that:

> *"The housing need number suggested by household projections (the starting point) should be adjusted to reflect appropriate market signals, as well as other market indicators of the balance between the demand for and supply of dwellings. Prices or rents rising faster than the national/local average may well indicate particular market undersupply relative to demand."*

6.2   It is clear that a comparative analysis is required. In preparing the analysis herein, GL Hearn has also sought to consider longer-term trends, recognising that for some indicators there can be short-term volatility. We have assessed trends consistent to the input period to the main demographic projections considered (2009-14 for the SNPP as well as a 10 year period 2006-16). We have also been mindful of the base date for the assessment being in 2013, the implication of which is that if there has been an under-delivery since this period (2013-16) against for instance the starting point demographic projections, this would be expected to be made good through the shortfall in the five year land supply calculation, and to additionally adjust for an under-delivery as a market signal over this period could introduce double counting.

Scope of the Update

6.3   Since the preparation of the 2016 SHMA, there has been new data released in a number of areas, and this is what is considered herein. The update thus considers:

- House Prices – drawing on the 2016 Price Paid Data. Our analysis assesses trends over three separate time periods 2013-2016 (since the base date), 2006-2016 (10 years) and 2001-2016 (15 years).
- Private Rental Sector – updating rental trends using the latest Valuation Office Agency Data covering a 5 year period from September 2011 to September 2016.
- Affordability – using the latest median and lower quartile affordability ratio data, considering residence based and workplace-based data, over a 15 year period from 2001.
- Rate of Development – taking account of 2016 completions data and comparing completions against each authorities housing target/ OAN from 2001 to 2016 to understand housing over/ under delivery.

6.4   Furthermore, land prices and overcrowded houses have been included, although the latter figures have not been updated as they are from the 2011 Census data.

Land Prices

6.5   There is limited published data relating to land prices nationally. That which is available was produced by the by the DCLG in February 2015 in a publication entitled *Land value estimates for policy appraisal.* Since 2015 there has been no update to land value estimates and therefore no update available to the figures in the 2016 SHMA.

6.6   Table 49 below demonstrates the land values across the HMA. Values are highest in Wokingham and Bracknell Forest, which are above the South East average, and lower in Reading and West Berkshire. This is influenced by house prices and proximity to London.

Table 49: Post permission residential land value estimates, per hectare

	Value
Bracknell Forest	£4,040,000
Reading	£3,400,000
West Berkshire	£3,355,000
Wokingham	£4,010,000
South East	**£3,600,000**
England excl. London	**£2,100,000**
England incl. London	**£6,900,000**

Source: DCLG, 2015

House Price Analysis

6.7   Using the latest available full year's data form the Land Registry, for 2016, the median house price across the Western Berkshire HMA was £330,000. This was similar to the Berkshire average, and 13.7% above the regional equivalent.

6.8   Reading has the lowest median house price in the HMA (£280,000) whilst Wokingham has the highest (£410,000), with prices in the district notably higher than the other HMA authorities.

Table 50: Absolute and Percentage Change in Median House Prices (2001-2016)

	Median 2016	Q3 2013-2016		Q3 2006-2016		Q3 2001-2016	
		Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
Bracknell Forest	£325,000	£90,500	38%	£125,000	61%	£190,050	136%
Reading	£280,000	£99,625	50%	£116,125	64%	£181,625	157%
West Berkshire	£326,505	£113,000	47%	£117,000	49%	£197,050	125%
Wokingham	£410,000	£150,000	55%	£167,000	65%	£250,000	143%
Western Berkshire HMA	**£330,000**	**£113,281**	**47%**	**£131,281**	**60%**	**£204,681**	**139%**
Berkshire	£340,000	£90,087	35%	£123,646	55%	£196,350	128%
South East	£290,000	£61,000	25%	£91,000	43%	£171,050	132%
England	£212,950	£34,000	18%	£44,500	26%	£122,500	128%

Source: Price Paid Data (2016)

6.9   The table above shows that since Q3 2013, house prices across the Western Berkshire HMA have risen by 47% with increases at a district level varying marginally between 38% in Bracknell Forest and 55% in Wokingham. Absolute increases in house prices have been greatest in Wokingham.

This is likely to have been influenced by an upturn in market activity, supported by the Help-to-Buy Initiative.

6.10   The PPG however advises that consideration is given to longer-term trends. Over the 2006-16 decade, prices increased by 60% across the HMA, representing stronger relative growth than has been seen at a regional (43%) or national level (26%). West Berkshire saw moderately weaker growth (49%), with similar trends across the other three authorities (61%-65%).

6.11   Over a fifteen year period (since 2001), house prices have increased in the HMA authorities by between £181,000 - £250,000, with the strongest absolute growth being in Wokingham with the largest percentage change in Reading.

6.12   Median house prices are influenced by the mix of properties sold. Table 51 provides an analysis which enables consideration of the relative price for comparable properties. It confirms that Wokingham has the highest house prices for all types, with West Berkshire the lowest for all types.

Table 51:   Average House Price by Type of Dwelling (2016)

	Detached	Semi-Detached	Terrace	Flat
Bracknell Forest	£525,000	£378,125	£305,375	£225,000
Reading	£525,000	£365,000	£291,000	£229,950
West Berkshire	£500,000	£337,500	£280,000	£200,000
Wokingham	£550,000	£395,000	£335,000	£245,000
Western Berkshire HMA	£311,250	£335,000	£341,750	£340,000
Berkshire	£317,000	£351,500	£350,000	£355,000
South East	£311,250	£335,000	£341,750	£340,000
England & Wales	£275,000	£295,000	£301,000	£300,000

Source: Price Paid Data (2016)

Rents

6.13   The average Median and lower quartile rents for the Western Berkshire authorities are above the South East average across the Western Berkshire HMA at £992 and £813 per calendar month (pcm) respectively. The data below uses for the latest complete year (2016) as opposed to the latest quarterly data used in the affordable housing chapter.

6.14   As shown in Table 52 below, median rents are highest in Wokingham (£1,100 pcm) followed by Bracknell Forest (£950) and Reading (£880), whilst West Berkshire is the cheapest (£880) area to rent a property in the HMA. As expected, lower quartile rents follow the same pattern: Wokingham has the highest rents (£900) and West Berkshire has the lowest (£750).

6.15 In terms of rental trends, from 2011-2016 median rents have increased the most in Wokingham (23%) whereas lower quartile rents have increased the least (13%) in proportional terms (albeit from a higher base). In proportional terms, it is only median rents in Wokingham which have increased by more than the South East average, albeit absolute increases in Bracknell Forest are also similar to those across the region.

Table 52: Rental Value Trends (2011-2016)

	Median 2011-2016				**LQ 2011-2016**	
	Median 2016	**Absolute Change**	**% Change**	**LQ Rent 2016**	**Absolute Change**	**% Change**
Bracknell Forest	£950	£125	15%	£825	£150	22%
Reading	£925	£150	19%	£775	£175	29%
West Berkshire	£880	£130	17%	£750	£135	22%
Wokingham	£1,100	£205	23%	£900	£105	13%
Western Berkshire HMA	**£992**	**£160**	**19%**	**£813**	**£141**	**21%**
Berkshire	£850	£200	31%	£813	£128	19%
South East	£850	£150	21%	£675	£100	17%
England	£650	£75	13%	£500	£50	11%

Source: VOA Private Rental Data

6.16 The figures below demonstrates the median and lower quartile rental trends from 2011 to 2016. Median rents in Wokingham have increased relatively sharply between 2014-16; whereas for other geographies trends are similar to wider South East benchmarks (albeit from a higher base).

Figure 11: Median Rental Trends (2011-2016)
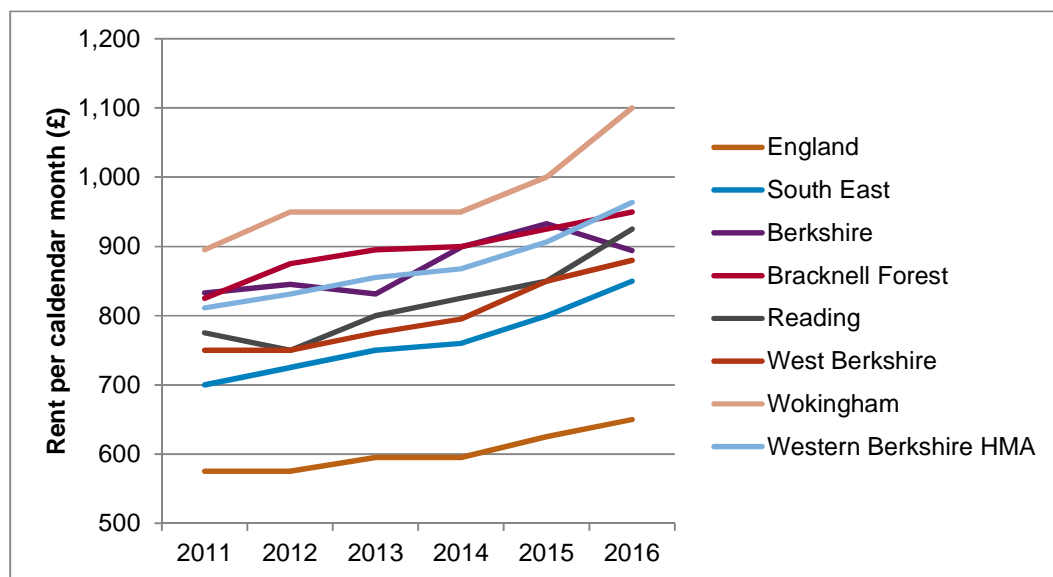
Figure 12: LQ Rental Trends (2011-2016)

Source: VOA Private Rental Data (2016)

6.17   Table 53 below illustrates median rental values for different unit sizes. West Berkshire is the area with the lowest median rental values for studio, 1 bedroom and 2 bedroom units, whereas B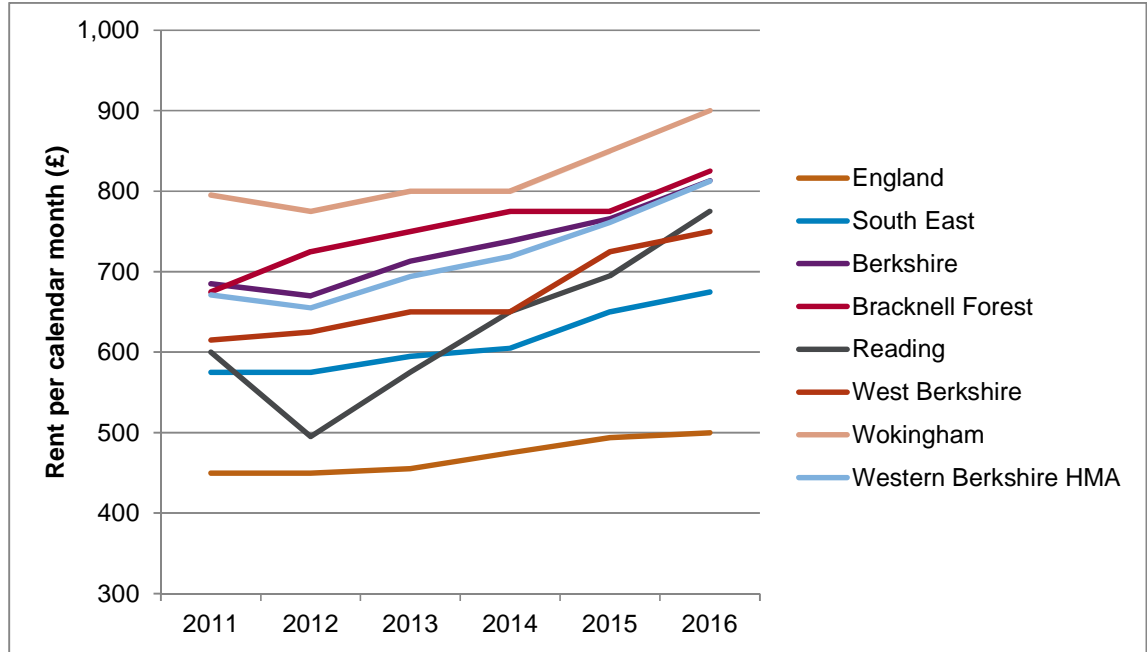racknell Forest has the lowest rental values for 3 bedroom and 4 bedroom units (£1,075 and £1,613 respectively). Median rental values for all unit sizes in the HMA authorities and the Berkshire County are higher than the South East regional and national values, with the exception of the room only rents in Bracknell Forest.

Table 53:   Median rental values for unit size (2016)

	Room	Studio	1 Bed	2 Bed	3 Bed	4+ Bed
Bracknell Forest	£372	£625	£730	£950	£1,075	£1,613
Reading	£471	£698	£825	£995	£1,195	£1,738
West Berkshire	£495	£565	£725	£875	£1,100	£1,750
Wokingham	£427	£650	£795	£1,000	£1,350	£1,750
Western Berkshire HMA	**£441**	**£635**	**£769**	**£955**	**£1,180**	**£1,713**
Berkshire	£444	£610	£788	£999	£1,237	£1,787
South East	£410	£550	£695	£875	£1,075	£1,733
England	£376	£570	£595	£650	£735	£1,300

Source: VOA Private Rental Data (2016)

Affordability Ratios

6.18 The 2016 SHMA considered evidence of affordability by looking specifically at the relationship between median and lower quartile house prices and incomes up to 2013. This report provides an updated analysis considering data to 2016.

6.19 Affordability ratios are considered below in terms of work-place earnings and residence based earnings to take account of the earnings of employees who work in the area; but also the earnings of those who live in the area.

Workplace Based

6.20 Table 54 shows the lower quartile affordability ratio based on the earnings of those working in each authority. It considers the current ratio, and how this has changed over three separate time periods, 2013 to 2016 (3 years), 2006 to 2016 (10 year) and 2001 to 2016 (15 year).

6.21 The lower quartile ratio is highest in Wokingham (12.4), and between 10.3 – 11.1 in the other three authorities. In all cases, this is above the South East (10.0) and national (7.0) averages.

Table 54:   LQ Affordability Trend (workplace earnings)

		2013-2016		2006-2016		2001-2016	
	LQ 2016	Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
Bracknell Forest	11.08	2.96	36%	3.65	49%	4.52	69%
Reading	10.34	2.73	36%	2.47	31%	3.63	54%
West Berkshire	10.82	1.79	20%	2.16	25%	3.83	55%
Wokingham	12.41	2.37	24%	2.64	27%	5.27	74%
Western Berkshire HMA	**11.28**	**2.58**	**30%**	**2.85**	**34%**	**4.48**	**66%**
Berkshire	11.51	2.81	32%	2.91	34%	4.42	62%
South East	9.99	1.50	18%	1.3	15%	3.59	56%
England	6.96	0.45	7%	-0.2	-3%	2.55	58%

Source: DCLG Live Tables: Land Registry Data

6.22 Since 2013, the affordability ratio has increased across all geographies, with the greatest increases seen in Bracknell Forest (2.96 point increase) and Reading (2.7 points). Bracknell Forest and Wokingham have seen the greatest longer-term increases over a 3 year period.

6.23 Over the medium term (2006-2016) Bracknell Forest has seen the largest increase (worsening) in its affordability ratio. However over the longer term (2001-2016) the largest increase was in Wokingham, where lower quartile house prices have increased by 5 times lower quartile earnings.

We have also considered and compared the median price-earnings ratio to identify whether affordability is an issue across the market or within a particular segment. A similar pattern emerges, showing consistent growth in the affordability ratio since 2013 across the HMA, although growth has been slightly slower in West Berkshire.

Table 55:   Median Affordability Trend (workplace earnings)

		2013-2016		2006-2016		2001-2016	
	Median 2016	Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
Bracknell Forest	9.04	2.54	39%	3.15	53%	3.24	56%
Reading	8.40	2.07	33%	1.83	28%	2.49	42%
West Berkshire	9.93	1.91	24%	2.58	35%	3.80	62%
Wokingham	11.24	3.20	40%	3.13	39%	5.06	82%
Western Berkshire HMA	**9.56**	**2.34**	**32%**	**2.58**	**37%**	**3.60**	**60%**
Berkshire	10.21	2.70	36%	2.97	41%	3.98	64%
South East	9.75	1.49	18%	1.06	12%	3.37	53%
England	7.59	0.85	13%	0.90	13%	2.53	50%

Source: DCLG Live Tables: Land Registry Data

6.24   Similarly to lower quartile affordability, Wokingham has the current highest ratio of house prices to earnings ratio with house prices over 11 times higher than average earnings. Again, affordability is greater in Reading (8.40 times earnings). Bracknell Forest, Reading and the Western Berkshire HMA all have affordability ratios below the South East average (9.75 times' earnings).

6.25   The greatest 10 year increase in the affordability ratio (in actual terms) was in Bracknell Forest and Wokingham, with both areas affordability ratio. Over the longer term 2001-2016 period affordability has deteriorated most in Wokingham.

Residence Based

6.26   We have also examined affordability based on the earnings of those residing in each local authority. Note that the longer term analysis is for a slightly shorter period from 2002. This is due to the availability of published data.

6.27   Table 56 below demonstrates the lower quartile affordability trend using residence based earnings. In comparison to workplace earnings, there is very little difference in lower quartile figures for 2016. Wokingham is again the least affordable location in the HMA. Unlike the workplace based figure, the ratio in Reading is more affordable than the South East figure.

6.28   Over all the time periods examined the affordability ratio in Bracknell Forest has seen the largest increase. Over the period 2002 to 2016 the Borough saw an 81% increase in its lower quartile

affordability ratio. In comparison West Berkshire saw the most modest increases in its affordability ratio over all periods considered.

Table 56:   LQ Affordability Trend (residence based earnings)

	LQ 2016	2013-2016		2006-2016		2002-2016	
		Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
Bracknell Forest	11.77	3.44	41%	3.51	42%	5.27	81%
Reading	10.64	2.69	34%	2.58	32%	3.95	59%
West Berkshire	10.36	1.33	15%	1.66	19%	3.03	41%
Wokingham	12.08	3.10	35%	2.84	31%	4.08	51%
Western Berkshire HMA	**11.21**	**2.64**	**31%**	**2.64**	**31%**	**4.08**	**57%**
Berkshire	11.43	2.72	31%	3.03	36%	4.22	59%
South East	9.74	1.54	19%	1.32	16%	3.50	56%
England	7.16	0.59	9%	0.01	0%	2.75	62%

Source: DCLG Live Tables: Land Registry Data

6.29   An analysis of median figures on this basis is shown in Table 57 below. In each case the affordability ratio is lower than the lower quartile equivalent. This demonstrates that affordability pressures are greatest at the lower end of the market.

6.30   The table also shows that Bracknell Forest is the least affordable local authority in the HMA. It has also seen the largest absolute deterioration for all time periods; although the more recent trends in Reading (2013-16) show a higher percentage change, albeit from a much lower base.

Table 57:   Median Affordability Trend (residence based earnings)

	Median 2016	2013-2016		2006-2016		2002-2016	
		Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
Bracknell Forest	10.44	2.81	37%	3.51	51%	4.68	81%
Reading	8.98	2.76	44%	1.71	24%	3.06	52%
West Berkshire	9.68	2.04	27%	2.15	29%	2.95	44%
Wokingham	10.35	2.78	37%	2.91	39%	3.92	61%
Western Berkshire HMA	**9.86**	**2.59**	**36%**	**2.57**	**35%**	**3.65**	**59%**
Berkshire	10.23	2.68	35%	2.75	37%	3.83	60%
South East	9.43	1.54	20%	1.76	23%	3.31	54%
England	7.72	0.96	14%	0.77	11%	2.61	51%

Source: DCLG Live Tables: Land Registry Data

Rate of Development

6.31   GL Hearn has assessed housing delivery compared to housing targets/ OAN figures across three separate time periods, 2013 to 2016 (3 years), 2009 to 2014 (5 years) and 2006 to 2016 (10 years). The table below identifies the percentage of delivery for each authority and the total delivery across the HMA since 2006.

6.32   Housing targets are derived from a range of different documents depending on the time and location. In all cases the target for the period from 2013/14 onwards is taken from the 2016 SHMA, although it should be noted this was not available for this time period. Prior to this, the calculation were based on the following:

- Bracknell Forest - 2006/7 – 2012/13 target of 572 dpa taken from Bracknell Forest Core Strategy DPD (2008);
- Reading - 2006/7 – 2012/13 target of 572 dpa taken from Reading Core Strategy (2008);
- West Berkshire – 2006/7 – 2012/13 target of 525 dpa taken from West Berkshire Core Strategy (2012); and
- Wokingham - 2006/7 – 2007/8 target of 516 dpa taken from Berkshire Structure Plan; from 2008/9 – 2009/10 target of 600 dpa and from 2010/11 – 2012/13 target of 623 dpa both taken from Wokingham Core Strategy (2010).

6.33   There has been an under-delivery of homes in the HMA over all of the time periods considered, and in each of the four authorities. For the purposes of considering adjustment for market signals the input period to the 2014-based SNPP (2009-14) and the 10 year period (2006-16) are the most relevant.

6.34   The 2009-14 year period saw a notable level of under-delivery, influenced by economic / housing market conditions in this period. Wokingham delivered less than half of its housing target (48%), with Bracknell Forest and West Berkshire delivering 58% of their target. Reading delivered a higher 72% of its housing target over this five year period. This resulted in an under delivery of just over 4,900 dwellings for the HMA out of the target 12,000 homes (59%).

6.35   The 10 year period from 2006 to 2016 covered pre and post-recession. Overall, the Western Berkshire HMA has delivered over 24,350 homes since 2006, equating to nearly 80% of housing targets/ OAN figures. The best performing authority over this time period was Reading, with a notable under-delivery in Bracknell Forest.

Table 58: Rate of Development (2006-2016)

	Completions	Target	Under Delivery	% of Delivery
2013-2016				
Bracknell Forest	1,026	1,905	879	54%
Reading	1,747	2,097	350	83%
West Berkshire	1,578	1,995	417	79%
Wokingham	1,580	2,568	988	62%
Western Berkshire HMA	5,931	8,565	2,634	69%
2009-2014				
Bracknell Forest	1,703	2,923	1,220	58%
Reading	2,161	2,987	826	72%
West Berkshire	1,616	2,765	1,149	58%
Wokingham	1,588	3,325	1,737	48%
Western Berkshire HMA	7,068	12,000	4,932	59%
2006-2016				
Bracknell Forest	3,514	5,909	2,395	59%
Reading	5,803	6,101	298	95%
West Berkshire	5,012	5,670	658	88%
Wokingham	4,569	6,669	2,100	69%
Western Berkshire HMA	18,898	24,349	5,451	78%

Source: Annual Monitoring Reports

Overcrowded Housing

6.36 The 2016 SHMA stated that a symptom of affordability pressures, restrictions on access to mortgage finance and housing under-supply (which are all related) is an increase in overcrowded households (including young people living with their parents for longer).

6.37 Overcrowding is based on the number of rooms required for a given household against the number of rooms in their home and where there are too few rooms this would be classed as overcrowding. This is identified through Census data and has not been updated since 2011. Therefore there is no update from the 2016 SHMA.

6.38 Census data identifies that over the 10 year period from 2001 to 2011, all authorities in the HMA, the South East region and across England showed an increase in over-occupied houses. The largest increase was in Reading (2.7%) however Reading has a large student population and there has been a shift towards purpose built halls of residence which this figure could reflect. Bracknell Forest had the lowest growth of 0.2% since 2001. Growth in over occupied houses was higher regionally and nationally than in the HMA, with the exception of Reading, as the Western HMA growth was at 1% compared to the South East (1.5%) and England (1.6%).

Table 59:   Changes in Over Occupied Houses (2001-2011)

	2001	2011	Change
Bracknell Forest	5.9%	6.2%	+0.2%
Reading	11.0%	13.6%	+2.7%
West Berkshire	4.7%	5.0%	+0.3%
Wokingham	3.4%	3.7%	+0.3%
Western Berkshire HMA	6.3%	7.2%	+1.0%
South East	5.9%	7.5%	+1.5%
England	7.0%	8.5%	+1.6%

Source: Census 2001 & 2011

Implications of the Market Signals and Affordable Housing Needs Analysis

6.39   In drawing conclusions, GL Hearn has sought to bring together the evidence on affordable housing and market signals. Our analysis indicates the following:

Bracknell Forest

6.40   House prices and rents are both above the South East average. There has been a significant historical under-delivery of housing, The affordable housing needs evidence would also justify an upward adjustment from the starting point projections.

6.41   The appropriate benchmark against which to assess adjustments for market signals and affordable housing need is the starting point demographic projections, which point to a need for 494 dpa. On the basis of a comparative analysis of the evidence, GL Hearn considers that the evidence would warrant a 10-15% adjustment using the current PPG methodology, resulting in a need for 543 – 568 dpa. A 15% adjustment has been used in drawing conclusions.

Reading

6.42   House prices and rents are below other parts of the HMA, and the median affordability ratio is 8.4 which is below other parts of the HMA. The longer-term historical under-supply of housing is modest (5%) although more recent delivery has slowed. But reflecting Reading's younger population, levels of overcrowding are higher and there is a high level of affordable housing need (503 households pa). This would require provision of nearly nearing 1,700 homes pa to meet in full based on the core modelling assumptions. This is not realistically deliverable.

6.43   The appropriate benchmark against which to assess adjustments for market signals and affordable housing need is the starting point demographic projections, which point to a need for 541 dpa. GL Hearn considers that the evidence would warrant a 10% adjustment using the current PPG methodology, resulting in a need for 595 dpa.

West Berkshire

6.44   House prices and rents are below other parts of the HMA. The lower quartile affordability ratio is similar to that in Reading and Bracknell Forest. The longer-term historical under-supply of housing is 12%. The affordable housing need of 180 dpa, could be met with provision of around 600 dpa.

6.45   The appropriate benchmark against which to assess adjustments for market signals and affordable housing need is the starting point demographic projections, which point to a need for 391 dpa. GL Hearn considers that the evidence would warrant a 10-15% adjustment using the current PPG methodology, resulting in a need for 469 - 450 dpa. It should be borne in mind that there is a notable degree to which these calculations are influenced by low projected demographic growth in the 2014-based SNPP.

Wokingham

6.46   Wokingham sees greater affordability issues than other parts of the HMA, with higher land values; house prices and rents and an LQ affordability ratio of 12.4, which is higher than in the other authorities. In addition, there has been a notable historical under-delivery. An affordable housing need from 453 households per annum is shown, which would require provision of nearly 1300 homes pa to meet in full based on the core modelling assumptions. This is not realistically deliverable.

6.47   GL Hearn considers that given the stronger market signals, a 20% upward adjustment to the demographic starting point projections of 582 dpa would be required using the current PPG methodology, implying a need for 698 dpa.

6.48   Drawing the findings regarding the appropriate market signals adjustments across the HMA equates to an increase in the housing need by 14% across the HMA in response to the market signals evidence. Table 58 below shows than the Housing Need across the HMA resulting from the Market Signals adjustment would be just under 2,300 dpa. The upward adjustments made would support additional market and affordable housing provision.

Table 60:   Housing Need Resulting From Market Signals Adjustment (dpa 2013-36)

	Bracknell Forest	Reading	West Berkshire	Wokingham	**HMA**
2014-based SNPP	494	541	391	582	**2,008**
Recommended Uplift (%)	15%	10%	10%	20%	**14%**
Uplift - Per Annum	74	54	39	116	**284**
Revised Need With Market Signals Adjustment	568	595	430	698	**2,292**

7 CONCLUSIONS

7.1 This final section brings together the evidence from this updated report based on the methodology set out in 2015 Planning Practice Guidance. The report has been prepared to sensitivity test the 2016 SHMA findings, considering the implications of more recent data. The update may be of particular relevance to five year housing land supply calculations in the absence of an up-to-date housing requirement within their development plan. For plan-making, Councils which do not submit local plans for examination within 6 months of the publication of the updated NPPF will need to use the Government's standard methodology for assessing housing need. It should be reiterated that the OAN figure is not the housing target. It is an input to determining or reviewing housing targets in local plans alongside wider evidence. Housing targets in local plans will be informed by the OAN but will also take into account wider factors such as sustainability, infrastructure constraints and land availability; together where appropriate with unmet needs of other areas.

Housing Need

7.2 Housing needs are those of the Western Berkshire Housing Market Area (HMA), which comprises the local authorities of Bracknell Forest, Reading, Wokingham and West Berkshire. Housing need refers to the overall need for both market and affordable housing. Housing needs have been assessed using the framework set out by Government in national planning policies, which seeks to significant boost the supply of housing to improve affordability.

7.3 The report has started out by considering trend-based demographic projections; and then considered whether there is a case for adjusting the assessed housing need – to either support economic growth, or improve affordability (taking account of evidence from market signals and of affordable housing need).

Demographic Analysis

7.4 The latest official household projections are CLG 2014-based Household Projections, which are the starting point for considering housing need. These expect an increase of around 46,200 homes (2,008 dpa) between 2013 and 2036. This sees 18.8% household growth, based on a 13.2% increase in population.

Table 61: Starting Point Demographic Projections (Dwellings 2013 - 2036

	Bracknell Forest	Reading	West Berkshire	Woking-ham	HMA
2014-based Household Projections with Vacancy Rate	494	541	391	582	2,008

7.5   Updating these figures to take account of the latest population estimates (in line with Paragraph 2a-017 of the PPG) decreases the need across the HMA marginally to just 44,700 homes for the same period (1,944 dpa), equivalent to 12.5% household growth; with a 18.2% increase in population.

7.6   The short-term migration trends feeding into the official projections are slightly above projections based on longer-term migration trends. Based on migration trends between 2006-16, a need for 1,956 dpa is shown – marginally above the rebased SNPP Projection. This scenario however shows a slightly different distribution of growth between the four HMA authorities.

7.7   GL Hearn consider that both the official projections (2014-based) rebased to reflect the latest data and the 10-year trends should be used to understand the demographic-led housing need. These projections set out a range of population growth of 12.8 - 13.2%. They provide a set of parameters for how the population could be expected to grow on a trend basis.

7.8   GL Hearn however consider that an adjustment should be made to household formation rates for those aged 25 to 44 in line with national policy supporting an improved ability of younger households to form. The adjustment effectively returns the household formation rate (HFR) of those aged 25-44 half way back to those shown in the 2008-based Household Projections by 2036.

7.9   Applying these rates to the rebased 2014-based Household Projections and 10-year Migration Scenario results in a demographic-led need for between 2,121 and 2,135 dwellings per annum across the HMA for the 2013 to 2036 period. The conclusions which can be drawn on the demographic need for individual authorities are shown below.

Table 62:   Demographic Conclusions with Headship Adjustment (dpa 2013-2036)

	Bracknell Forest	Reading	West Berkshire	Wokingham	HMA
Rebased SNPP with Headship Adjustment	522	542	436	621	2,121
10-year migration with Headship Adjustment	430	413	583	709	2,135

7.10   The distribution of housing need within the HMA is influenced in part by migration dynamics within the HMA and also the timeframe from which the trends are drawn. The more recent trends show a higher need in Bracknell Forest and Reading while longer term trends show a higher need in West Berkshire and Wokingham. These should realistically be regarded as a range.

Supporting Economic Growth

7.11   GL Hearn have purchased forecasts for the Western Berkshire HMA from Oxford Economics and Cambridge Econometrics to inform this assessment. These have been assessed and compared against one another, and brought together with an interrogation of local economic dynamics including through engagement with each of the councils and the Thames Valley Berkshire LEP to inform conclusions on the economic growth expected.

7.12   The baseline forecasts show a growth of employment of between 35,200 – 61,200 jobs over the period 2016-36. The period from 2016 is considered as population data exists to 2016, and the projections run from this point forward.

7.13   GL Hearn have concluded that for Bracknell Forest, Wokingham and Reading it would be reasonable to consider that the average of the two forecasts as a realistic assessment of economic growth potential for the purposes of assessing housing need.

7.14   In West Berkshire we consider that there was some justification to adopt the more positive of the two forecasts from Cambridge Econometrics taking account of the conclusions of our own demographic analysis which show that population growth could be stronger than in the 2014-based SNPP.

7.15   In modelling housing need we triangulated different data sources relating to future changes in economic participation; and considered existing commuting dynamics and levels of double jobbing. The core modelling assumptions maintain 2011 census commuting patterns and double-jobbing and use the 2016 SHMA employment rate assumptions which sit centrally against other available forecasts. Migration is adjusted to support the level of employment growth expected.

7.16   The core economic-led scenario modelled shows a need for housing of 2,850 dpa across the Housing Market Area. This is 37% above the demographic starting point and 29-33% above our conclusions on the demographic need.

Table 63:   Economic-Led Housing Need

LPA	Basis	Jobs (2016-36)	Jobs pa	Homes (dpa)
Bracknell Forest	Midpoint	12,000	600	630
Reading	Midpoint	16,400	810	759
West Berkshire	Cambridge Econometrics	7,100	355	556
Wokingham	Midpoint	13,700	685	801
Western Berkshire HMA		49,200	2,450	2,746

Source: CE, OE and GL Hearn Modelling

7.17   At a local authority level, our findings on the economic-led need exceed the demographic-led need in Bracknell Forest, Reading and Wokingham. In West Berkshire it sits within the demographic range (436 – 583 dpa) shown.

Affordable Housing Need and Market Signals

7.18   The report has considered the need for affordable housing using the Basic Needs Assessment Model recommended in the PPG. Using the available information, it identifies a net need for 1,328 affordable homes per annum across the HMA for the 2013-36 period using the core modelling assumptions, and includes sensitivity analysis considering alternative thresholds for the proportion of income households spend on housing.

7.19   Using the core assumptions, the greatest absolute level of affordable housing need was located in Reading (503 affordable dwellings per annum) and Wokingham (453 affordable dwellings per annum); with Bracknell Forest and West Berkshire requiring 191 and 180 affordable dwellings per annum respectively.

7.20   The theoretical overall housing provision required to meet the affordable housing need based on existing policies for the proportion of housing to be delivered has been assessed, in line with the PPG. This shows that between 3,040 – 7,217 dpa could be required. It provides evidence that upward adjustments to the demographic starting point to boost affordable housing delivery should be considered. However the OAN needs to set at a level which is deliverable, can be supported by additional population and households; and it should be recognised that the affordable housing need is sensitive to market housing costs (and therefore increases in market housing supply supporting improvements in affordability).

7.21   The analysis of market signals points to house prices which are generally above the national and regional trends. The one exception is Reading whose median prices are overall less expensive than the regional equivalent. This is driven by lower cost terraced and flatted properties the sale of which are also prevalent than across the region.

7.22   The evidence points to affordability pressures across the whole housing market area but in particular Wokingham and Bracknell Forest where entry level house prices (lower quartile) are at least 11 times lower quartile earnings. Drawing the market signals and affordable housing needs evidence together, GL Hearn concludes that a 10% adjustment to the demographic starting point would be warranted in Reading and West Berkshire, a 15% adjustment in Bracknell Forest and 20% uplift in Wokingham. The results of this are shown in Table 64 below.

Table 64: Housing Need to Address Market Signals and Affordable Housing Need

	Demographic Starting Point	Uplift for Market Signals and AH	Housing Need (dpa)
Bracknell Forest	494	15%	568
Reading	541	10%	595
West Berkshire	391	10%	430
Wokingham	582	20%	698
HMA	2,008		2,292

7.23   At an HMA level, the economic-led need results in a need for 2,750 dpa (rounded) which would support a stronger upward adjustment from the demographic starting point and in doing so could be expected to support an improvement in affordability. The economic-led need is higher than that shown in Table 64 in all cases.

7.24   GL Hearn however consider that a higher adjustment taking account of the affordable housing evidence in West Berkshire District should be considered, against a context whereby the 2014-based SNPP sees the lowest population growth of local authorities in the region; and there is a realistic prospect that the affordable housing need could be met in full. This would yield a need for 600 dpa.

Implications

7.25   The demographic need, economic-led need and affordable housing and market signals evidence is brought together in drawing conclusions. It is the economic-led need which drives the housing need at an HMA level and in Bracknell Forest, Reading and Wokingham. However in West Berkshire, GL Hearn considers that both the demographic-led need and economic-led need is influenced by low population growth expected in the 2014-based SNPP. We consider that there is a strong basis in planning positively for considering a modestly higher housing need for 600 dpa to support broader improvements in affordability and affordable housing delivery. On this basis we recommend OAN figures as follows:

Table 65: Conclusions on OAN using 2015 PPG Methodology, 2013-36

	OAN (dpa)
Bracknell Forest	630
Reading	759
West Berkshire	600
Wokingham	801
HMA	2,790

7.26   The sensitivity testing herein points to OAN across the HMA are 2% lower than shown in the 2016 SHMA. There is an increase in the need in Reading (699 to 759 dpa), a similar figure in Bracknell

Forest (630 vs. 635 dpa), but a reduction in Wokingham (894[31] to 801 dpa), and West Berkshire (665 to 600 dpa).

7.27   The Practice Guidance in Paragraph 2a-016 sets out that assessments of OAN should be informed by the latest available information and local plans should be kept up-to-date; but is clear that a meaningful change in the housing situation should be considered in this context, and this does not automatically mean that housing assessments are rendered outdated every time new projections are issued. The scale of changes shown in the sensitivity testing herein need to be considered in this context.

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[31] Figure which has arisen from appeal's consideration of 2016 SHMA

Appendices

APPENDIX A: Government "Right Homes in the Right Places" Consultation

In September 2017 the Department for Communities and Local Government (DCLG) published a consultation paper detailing a proposed standardised methodology for assessing housing need. Government has indicated in March 2017 its intention to take this methodology forward in the updating of the NPPF and Planning Practice Guidance.

Overview of the Proposed Approach

The proposed methodology seeks to simplify the approach to assessing housing need. It has three components:

- Setting the baseline;
- An adjustment to take account of market signals; and
- Cap.

The starting point or demographic baseline continues to be the latest official projections. The proposed approach would be to take an average annual household growth over a ten year period.

The baseline household growth is then modified to account for market signals, specifically the local median price of homes relative to local workplace median earnings. This data is published annually by the DCLG with the most recent data from 2016.

In order to ensure that the proposed housing need is deliverable, the housing need is capped. Where Local Plans have been adopted in the last five years, the cap is 40% above the adopted housing target. Where local plans are older than five years, then the OAN is capped 40% above the higher of either the baseline growth from official projections or the annual housing requirement figure currently set out in their local plan (whichever is the higher).

Status of the Proposals

At the current time, these represent consultation proposals which are likely to have elicited significant responses. They have not as yet been formalised as Government policy. At the current time limited weight can therefore be afforded to the proposals in decision making.

In referring to the proposals, GL Hearn would caution that by Summer 2018 the baseline household projections are due to be updated by CLG, and would result in different figures from those set out in the current table issued alongside the consultation by Government. This will take account of more recent migration trends (2010/11-2016), ONS' lower assumptions on international migration to the UK, and lower growth in life expectancy.

Results for the Western Berkshire HMA

For illustrative purposes, we have provided in this appendix a comparison of the OAN arising from the proposed new methodology for the Western Berkshire HMA.

Starting Point

Paragraph 17 of the "Right Homes in the Right Places" consultation document proposes "that projections of household growth should be the demographic baseline for every local authority" having previously stated at paragraph 16 area that "The Office for National Statistics' projections for numbers of households in each local authority are the most robust estimates of future growth".

Currently, the most up-to-date projections are the 2014-based Department for Communities and Local Government (DCLG) household projections published in July 2016. The consultation document proposes "that the demographic baseline should be the annual average household growth over a 10 year period" but is silent as to what period this should be. The associated spreadsheet uses the 2016-26 period.

As shown in Table 64, across the HMA the 2014-based Household Projections show household growth of 19,886 for the 2016-26 period (1988 households per annum). This equates to a 8.2% increase in households.

Table 66:   Projected Annual Household Growth – 2016-2026

Local Authority	Households 2016	Households 2026	Average Annual Change
Bracknell Forest	49,351	54,443	509
Reading	66,130	70,922	479
West Berkshire	64,361	68,335	397
Wokingham	63,723	69,751	603
Western Berkshire HMA	243,565	263,451	1,988

Source: DCLG, 2014-based Sub-National Household Projection, 2016

Note that the proposed methodology does not make any provision to translate households growth in to dwellings. Therefore the official projections result in a need for 1,988 dwellings per annum under the proposed methodology.

As set out in Chapter 2 the 2016-based National Population Projections were released in October 2017. These project a national (UK) population growth of 2 million fewer in mid-2041 than the previous iteration. Although at this stage it is not possible to be accurately predict how the new projections will be translated to individual local authority areas (or the HMA).

Market Signals Adjustment

The second step in the proposed methodology seeks to adjust the demographic baseline to take account of market signals. The adjustment increases the housing need where house prices are high relative to workplace incomes. This uses the published median affordability ratios from the Office for National Statistics the latest of which are from 2016.

Specifically, the adjustment increases the housing need derived from the household projections by 0.25% for every point the affordability ratio is above four (4.0). This is justified on the basis that four is the typical multiple used by mortgage providers to gauge affordability. The equations is as follows:

$$\text{Adjustment factor} = (\text{Local affordability ratio} - 4)/4 \times 0.25$$

As set out in this report the 2016 workplace-based affordability ratios in the HMA range from 9.0 in Bracknell Forest to 11.2 in Wokingham. How these affordability ratios are translated in to an adjustment factor is set out in Table 65 below.

Table 67:   Market Signals Adjustment and OAN

Local Authority	Demographic Baseline	2016 Affordability Ratio	Adjustment Factor	MS Adjusted/ OAN
Bracknell Forest	509	9.04	32%	670
Reading	479	8.40	28%	611
West Berkshire	397	9.93	37%	545
Wokingham	603	11.24	45%	876
Western Berkshire HMA	1,988			2,702

Source: DCLG Affordability Ratio (Numbers have been rounded up)

The market signals adjustment (uncapped) would result in an increase across the HMA of 36% relative to the demographic baseline of 1,988 households per annum. **This equates to 2,702 dwellings per annum.**

Capping

The final stage of the proposed methodology is to cap the OAN to a level which is deliverable. Paragraph 25 of the proposed methodology paper sets out the parameters of this cap setting out that:

> *a) for those authorities that have adopted their local plan in the last five years, we propose that their new annual local housing need figure should be capped at 40 per cent above the annual requirement figure currently set out in their local plan; or*
>
> *b) for those authorities that do not have an up-to-date local plan (i.e. adopted over five years ago), we propose that the new annual local housing need figure should be capped at 40 per cent above whichever is higher of the projected household growth for their area over the plan period (using Office for National Statistics' household projections), or the annual housing requirement figure currently set out in their local plan.*

None of the authorities have adopted strategic plans which are less than five years old.

DCLG's indicative assessment has wrongly applied the cap to West Berkshire as their Site Allocations document was adopted in May 2017; although the calculated OAN (uncapped) is still less than 40% above the adopted figure. No cap is therefore applied.

As Reading's Local Plan is 10 years old then the cap is applied to 40% above the higher of the household projections or their adopted figure. The historic local plan figure is indeed higher than the demographic growth however the market signals adjusted figure is only 14% above their housing requirement but still less than 40% above the demographic growth. No cap is therefore applied.

Similarly Wokingham's Local Plan is 8 years old then the cap is applied to 40% above the higher of the household projections or their adopted figure. The historic local plan figure is again higher than the demographic growth. However the market signals adjusted figure while being more than 40% above the demographic growth (45%) is still only 32% above their housing requirement. Therefore no cap is applied.

As no cap is applied to any of the local authorities then the new methodology results in a need for 2,702 dpa as shown in the previous step.

The proposed methodology would, across the HMA, result in a modestly lower level of housing need at 2700 dpa, 90 dpa lower than our OAN assessment using the current PPG methodology of 2790 dpa   The assessed OAN in this report is below the standard methodology figures in Bracknell Forest and Wokingham; but above it in Reading and West Berkshire.

Table 68:   New OAN and OAN from Proposed Methodology (dpa)

Alternative OAN	Bracknell Forest	Reading	West Berkshire	Wokingham	HMA
OAN from this Report	630	759	600	801	2,790
Proposed Methodology	670	611	545	876	2,702
Difference	-40	148	55	-75	88

APPENDIX B: Components of Population Change in Western Berkshire HMA Authorities

Bracknell Forest

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (Unattributable)	Total change
2001/2	520	-827	661	32	-546	-160
2002/3	649	-647	528	2	-547	-15
2003/4	685	-860	405	27	-543	-286
2004/5	722	-408	513	29	-558	298
2005/6	709	-325	545	8	-528	409
2006/7	847	-272	770	-10	-529	806
2007/8	822	-96	533	1	-507	753
2008/9	821	-129	247	15	-493	461
2009/10	878	189	375	-10	-455	977
2010/11	840	158	223	17	-435	803
2011/12	853	300	224	-15	0	1,362
2012/13	834	362	286	27	0	1,509
2013/14	827	134	481	16	0	1,458
2014/15	741	-40	311	-55	0	957
2015/16	748	-799	469	47	0	465

Reading

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (Unattributable)	Total change
2001/2	717	-1,635	-696	16	829	-769
2002/3	853	-1,647	94	0	855	155
2003/4	975	-1,673	344	-1	875	520
2004/5	929	-1,343	1,880	-5	889	2,350
2005/6	1,138	-1,512	852	-11	914	1,381
2006/7	1,249	-1,619	806	-16	937	1,357
2007/8	1,451	-1,242	587	8	978	1,782
2008/9	1,437	-1,465	-95	-20	1,009	866
2009/10	1,545	-1,896	1,330	-13	1,004	1,970
2010/11	1,644	-1,954	312	-1	1,042	1,043
2011/12	1,501	-644	925	-9	0	1,773
2012/13	1,579	-505	1,015	46	0	2,135
2013/14	1,614	-1,493	1,583	-126	0	1,578
2014/15	1,384	-1,925	1,438	17	0	914
2015/16	1,475	-2,490	1,951	-9	0	927

West Berkshire

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (Unattributable)	Total change
2001/2	437	-844	-209	14	21	-581
2002/3	580	-82	-81	-9	-24	384
2003/4	588	421	-179	27	-7	850
2004/5	625	855	-115	11	-31	1,345
2005/6	692	815	132	1	-25	1,615
2006/7	810	1,229	-32	-21	-37	1,949
2007/8	970	1,024	2	1	-29	1,968
2008/9	846	689	-456	-10	-54	1,015
2009/10	893	235	-194	-2	-28	904
2010/11	880	-129	-570	18	6	205
2011/12	824	-253	-161	-72	0	338
2012/13	658	500	-350	100	0	908
2013/14	668	-368	27	11	0	338
2014/15	554	-70	-158	-38	0	288
2015/16	570	98	108	41	0	817

Wokingham

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (Unattributable)	Total change
2001/2	601	-806	383	-37	-1,030	-889
2002/3	635	-573	346	-13	-1,046	-651
2003/4	761	150	258	89	-1,044	214
2004/5	796	-49	801	103	-1,061	590
2005/6	708	519	783	19	-1,079	950
2006/7	848	1,128	701	1	-1,082	1,596
2007/8	877	655	602	-19	-1,068	1,047
2008/9	915	621	561	-38	-1,085	974
2009/10	899	-50	695	36	-1,095	485
2010/11	857	44	403	69	-1,080	293
2011/12	916	647	101	56	0	1,720
2012/13	716	506	29	-48	0	1,203
2013/14	661	90	459	21	0	1,231
2014/15	554	644	223	-109	0	1,312
2015/16	699	518	490	-238	0	1,469

APPENDIX C: Review of GLA Population Projections

Given that both the GLA and GLH projections are drawing on data for the same period (2006-16) it is clear that the notable differences in the outputs must be methodological. Below we have therefore sought to look in more detail at the GLA methodology (and how this compares with that from GLH). At the outset it should be noted that the GLH method tries to resemble as closely as possible the methodology used by ONS in the SNPP, whereas the GLA method does not.

The GLA highlights 4 key differences between ONS and GLA projections (see: *GLA 2016-based population projections Explanatory note (July 2017)*) [32]. Each of these are discussed below, including how the methodology varies from that used by GL Hearn.

1. Top-down vs bottom-up model hierarchies

The GLA notes that the method used by ONS in the SNPP is to first produce national-level projections and then produce subnational projections that are consistent with these (a top-down approach). The GLA model is however different in that the primary geographic unit is the local authority with results for higher level geographies being produced by aggregating results for the constituent local authorities (a bottom-up approach).

The GL Hearn approach is essentially a 'top-down' approach where all local projections should be consolidated to the national position and adjustments for different migration base periods are based on looking at the share of migration to and from each local authority (broadly speaking, if migration is lower in the 10-year period than the period feeding into the SNPP then it would be expected that a projected level of migration would also be lower and vice versa). Analysis is also carried out to check that there are not substantial differences in the characteristics of migrants in the 10-year/SNPP base period (to test if ONS age/sex specific migration rates need to be adjusted).

Essentially the GL Hearn approach is consistent with the ONS SNPP, in that it takes national projections and seeks to see how population growth might be expected to vary across areas under different scenarios (but always summing to the national total). It is considered that this is a more robust approach than allowing national level data to vary. In particular it should be noted that national projections are based on trends over the previous 25-years and so by using 10-year trends (and not consolidating to the national position) we have the situation where a longer-term local trend is being used to provide outputs for shorter-term national trends.

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[32] https://www.london.gov.uk/sites/default/files/2016-based_projections_wse_results.pdf

2. Length of migration trend used

One difference between the GLA model and ONS is the time period used to look at migration. As noted by GLA, they use three periods (5-, 10- and 15-years) whereas ONS uses data for the past 5-/6-years (years to 2014). It should however be noted (as per the comments above) that ONS also use trends over a 25-year period to get a baseline national position and the past trends over the last 5-/6-years are used as a way of assigning population rather than as actual levels – the GLH approach is consistent with that used by ONS.

3. Rates-based approach to international outmigration

The GLA describes its approach to international outmigration as being 'rates based' and this is explained as 'In the ONS model international outmigration is calculated as an average of six years' migration outflows. In the GLA model international outmigration is calculated dynamically within the model using probabilities based on past outmigration rates (in the same way as domestic migration). This means that international outflows respond to changing population size and structure in the GLA model in a way in which the exogenous static flow approach adopted by ONS does not'.

The GLA model does potentially sound more sophisticated, although the reality is that using this approach does not really see much variation in international out-migration moving forward (and hence not using a 'rates based' approach would probably only have a minor impact). The more important aspect of the GLA approach however is (linked to point 1 above) the fact that the projections are not linked to ONS' views about migration trends. At a national level, ONS project for net migration to fall moving forward (a position confirmed in the 2016-based national projections) and that this trend will play out across individual local authorities.

The GL Hearn approach to international migration follows the ONS approach and simply uses the share of international migration in different periods (e.g. past 10-years vs. 2008-14 (used in the SNPP)) to make adjustments (again with a testing about the profile of migrants). This approach will ensure that the sum of individual local authorities' population growth will match the total population growth projected nationally.

4. Back series used and accounting for unattributable population change

Finally, the GLA notes that it takes a slightly different approach to UPC. However, on reading the GLA material it is not considered that this will have any impact on projections when looking at a 10-year trend projection. This is because GLA appear to only make UPC adjustments up to 2005 (i.e. before the start of the 10-year period) except in the one case of the City of London (which won't be having any real impact on Bracknell Forest).

Overall

There are two reasons why the GLA and GL Hearn projections will differ. The main one is the difference between being top-down and bottom-up. Whilst either method is arguably reasonable, it is considered that a top-down method is preferable. This is simply because from a logical point of view it is reasonable to expect that the population growth of each local authority will sum to the national projected growth. If projections do not sum, they we have the odd situation where we are projecting more (or less) population growth than we are projecting – this is not a useful inconsistency.

The second difference can be put down to international migration. Whilst the GLA discuss international migration in terms of developing a 'rates based' approach we would suggest that the bigger problem (which is linked to the consolidation to a national position) is that ONS project for international migration to fall notably over time, whereas GLA don't. This again builds in an inconsistency with the national position (a position that has been confirmed in the latest round of national projections).

If we look at data for Bracknell Forest (from the ONS components of change which are used by both the GLA and GLH) we find that net migration in the SNPP base period was some 229 people per annum on average. If we look at net migration over the past 10-years (2006-16) it can be seen that net migration is substantially lower (a net out-migration of 19 people). Hence the difference in migration between the SNPP and 10-year trends is around 250 people per annum.

Given that migration over the 10-year period is lower than in the SNPP base period, it seems reasonable (sensible) to expect that any consistent projection would show lower levels of migration and hence population growth. This is indeed the case for GLH, where a lower level of migration is modelled (to reflect ONS data) and hence a lower level of household growth. For the GLA to show higher growth than official projections is somewhat contrary to the data (i.e. lower migration).

Overall, it should be stressed that the GLA use a very different method for projections than either ONS or GLH (who build projections to be consistent with ONS data). Whilst the GLA projections should not be thought of as wrong, there are clear differences that can lead to very different outputs. On balance, an approach (as used by GLH) which seeks to be consistent with ONS/CLG projections should be preferred. As the PPG (2a-017) notes '*The household projections produced by the Department for Communities and Local Government are statistically robust and are based on nationally consistent assumptions.*' GLH seek to maintain these nationally consistent assumptions with their own modelling.