Vale of Aylesbury Local Plan EiP

Response to the Inspector's initial questions on the HEDNA

1. Question 29 of the Inspector's initial questions set out eight points raised in some of the submissions related to housing targets, the spatial distribution strategy, housing mix and affordable housing. These issues included points concerning the demographic projections and the market uplift for affordability:

> ### Question 29 (extracts)
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> i.   *Whether it is justified to base the housing requirement for VALP solely on an analysis of the "best fit" HMA for the four Buckinghamshire authorities, bearing in mind that Aylesbury Vale itself is fairly evenly split three ways between the Oxford, Milton Keynes and South Bucks HMAs, has a significant relationship with the Luton HMA and directly borders the developed area of Milton Keynes*
>
> iii. *Whether it is justified to adjust the demographic base on which the housing demand is predicated to such an extent that population growth and housing demand counterintuitively projects a downward trend both in opposition to DCLG's upward trend and in contrast to the levels of housing delivery recently achieved in AVDC. (points made concern migration rates, UPC rates, household formation rates and commuting ratios)*
>
> iv. *Whether the market uplift for affordability should be 10% or higher.*

2. Question 51 of the Inspector's initial questions subsequently raised further specific points of clarification relating to the treatment of migration rates and UPC rates:

> ### Question 51 (extract)
>
> *Amongst the eight issues identified [in question 29] was (iii) which included points made concerning migration rates and UPC rates. I note that in paragraph 35 of his report of January 2014, Inspector Kevin Ward found that whilst an over-estimation of migration may play a significant part in the unattributable component of change in the mid-year estimates, there is insufficient basis to conclude that it accounts for 100% of this figure. He found that whilst the Council has concerns as to the assumptions which underpin the projections, there was insufficient evidence to conclude that they are inaccurate to the extent suggested. My understanding is that the Council has made the same kind of adjustment to the (now different) population projections underpinning the presently submitted plan's housing requirements. I need to understand what has changed since 2014 which would lead me to come to a different conclusion to that of Kevin Ward on the soundness of this adjustment to the demographic base for the housing figures.*

3. The Council has asked Opinion Research Services (ORS) to respond to these points to provide the Inspector with the reassurance needed in the context of the detailed points that have been raised, particularly in those submissions identified by the Inspector.

Housing Market Area

4.   The Buckinghamshire functional HMA accurately *"reflects the key functional linkages between where people live and work"* (PPG ID 2a-010) based on the most up-to-date data. This takes account of house prices, household migration and other contextual data.

5.   The functional HMA boundary was identified by the study *"Housing Market Areas and Functional Economic Market Areas in Buckinghamshire and the surrounding areas"* (ORS/Atkins, March 2015), which was commissioned by Aylesbury Vale District Council in partnership with the other Buckinghamshire local planning authorities. The same boundary was confirmed by the subsequent study *"Housing Market Areas in Bedfordshire and surrounding areas"* (ORS, December 2015), which was commissioned by Aylesbury Vale District Council in partnership with another six local planning authorities (Bedford, Central Bedfordshire, Luton, Milton Keynes, North Herts and Stevenage). Both studies engaged with other neighbouring local authorities under the Duty to Cooperate, and their feedback was almost universally supportive.

6.   Both studies recognised that parts of Aylesbury Vale are in three other housing market areas – Luton, Milton Keynes and Oxford – but each of these housing market areas only covers a minority of the Aylesbury Vale population; and in each case, Aylesbury Vale represents only a minority of the housing market area population. It is therefore not necessary for Aylesbury Vale to be involved in the commissioning of any HEDNA or SHMA for these areas, although the Council will continue to work with their neighbours as other studies are prepared.

7.   Whilst the process of establishing which local planning authorities should be involved in the commissioning of the HEDNA was directly informed by the housing market area analysis, the demographic projections, analysis of market signals and deriving the associated Objectively Assessed Housing Need in the HEDNA are considered with reference to the four Buckinghamshire local planning authority areas. Given this context, the HEDNA provides results for the whole of Buckinghamshire county.

8.   It is necessary to establish a "best fit" to administrative boundaries due to much of the data needed to assess overall housing need not being published for smaller geographies. This is recognised by the OAN Technical Advice Note (PAS 2015, para 5.21):

> *It is best if HMAs, as defined for the purpose of needs assessments, do not straddle local authority boundaries. For areas smaller than local authorities data availability is poor and analysis becomes impossibly complex.*

9.   The "best fit" grouping does not change the actual geography of the functional housing market areas that have been identified – it simply provides a pragmatic arrangement for the purposes of establishing the evidence required and developing local policies, as suggested by the PAS technical advice note. However, the HEDNA has identified the overall need for the whole of Aylesbury Vale district, including those areas of Aylesbury Vale that are in other functional housing markets. On this basis, the VALP takes account of the needs of the whole population, as well as those unmet needs identified by neighbouring areas.

Adjustments to the Demographic Base

10. Planning Practice Guidance (PPG) sets out that *"household projections published by the Department for Communities and Local Government should provide the starting point estimate of overall housing need"* (ID 2a-015). The household projections are published on a biennial basis, with information from both the 2012-based and 2014-based projections having informed the HEDNA:

     » The Consultation Draft of the Buckinghamshire HEDNA (January 2016) took the CLG 2012-based household projections as the starting point.

     » The Buckinghamshire HEDNA Update (December 2016) took the CLG 2014-based household projections as the starting point.

11. The CLG 2012-based household projection identified a growth of 18,404 households over the 20-year period 2013-33, which compares to a growth of 21,027 households in the 2014-based projection; so the 2014-based data provides a higher starting point estimate of overall housing need. Nevertheless, the household projection from the Original HEDNA (informed by the 2012-based data) identified a growth of 18,144 households, compared to a growth of 16,934 households in the HEDNA Update (informed by the 2014-based data); so the HEDNA Update identifies a lower rate of demographic growth despite the higher starting point.

12. A number of submissions suggest a fundamental inconsistency in this outcome (see, for example, Regeneris (table 3.2), HBF (page 2), Turley's (para 2.45), Bidwell's (page 4) and Gardner Planning (para 2.37)). However, the changes in the underlying components of the 2012-based and 2014-based data are set out at paragraphs 3.111-3.115 of the HEDNA Update (page 77).

13. In summary, the 2014-based data generally shows lower fertility and higher mortality; fewer births and more deaths. Both of these reduce the projected population growth. The CLG 2014-based household projections also show a lower rate of decline in average household size than the 2012-based data; so whilst households are continuing to get smaller, this is at a slower pace than was previously projected. These factors all contribute to lower household projections.

14. The fundamental driver for the 2014-based projection being higher than the 2012-based figures is the projected rate of migration. An increase in migration trends between 2007-12 (the period which informs the 2012-based data) and 2009-14 (the period for the 2014-based data) has led to higher rates of migration being assumed in the more recent projection. However, the Original HEDNA relied on a different period for establishing migration trends: the 10-year period 2004-14. The HEDNA Update took the period 2005-15, giving a 9-year overlap with the original data. On this basis, whilst changes to the migration period informing the CLG projections led to substantial differences in the migration trends assumed, the Original HEDNA and the HEDNA Update were both based on far more consistent migration data. Furthermore, the HEDNA also sets out fundamental concerns about the reliability of the trend-based data that is used to inform the CLG figures.

Data Quality Concerns

15. Following the 2011 Census, the ONS recognised that there was a problem with the mid-year population estimates for Aylesbury Vale. As a consequence, the ONS applied a downward adjustment of 5,855 persons (known as Unattributable Population Change, UPC) which reduced the population growth estimated for the decade 2001-11 by over a third.

16. The OAN that was considered by Inspector Kevin Ward at the previous examination was based on household projections which assumed that all of the UPC adjustment was a consequence of errors in the migration estimates. Nevertheless, he was not presented with sufficient evidence to support this position. In contrast, the HEDNA presented a detailed analysis of population trends for Aylesbury Vale which considered a wide range of information (HEDNA Update paras 3.11-3.48). This concluded that migration was unlikely to account for 100% of the UPC adjustment, and that at least part of the adjustment was likely to be a consequence of under-enumeration in the 2001 Census. Therefore, the HEDNA's treatment of UPC is fundamentally different to that considered at the previous examination.

17. However, notwithstanding these fundamental differences in approach, the HEDNA did conclude that there were problems with the migration estimates between 2001-2011 and also concluded that these problems continue to affect the official population estimates from 2011 onwards. Whilst these conclusions took account of all relevant sources of robust evidence, and were clearly explained and justified by the HEDNA, the resulting downward adjustment has already been challenged at numerous planning appeals – so further evidence has been presented as part of the Council's response to arguments from appellants. Several submissions to this Examination repeat the same arguments, therefore the Council's relevant proofs from two recent appeals are annexed to this response:

    » Annex 1: Proof of Evidence of Jonathan Lee for an appeal by Gladman Developments Ltd
       Land off Chilton Road, Long Crendon (APP/J0405/W/16/3142524)

    » Annex 2: Proof of Evidence of Jonathan Lee for an appeal by Catesby Estates Ltd
       Land East Buckingham, Stratford Road, Maids Moreton (APP/J0405/W/17/3175193)

    » Annex 3: Rebuttal Proof of Evidence of Jonathan Lee for an appeal by Catesby Estates Ltd
       Land East Buckingham, Stratford Road, Maids Moreton (APP/J0405/W/17/3175193)

18. These proofs set out in detail the approach taken by the HEDNA to establishing the overall housing need, including the issues surrounding data quality concerns. When assessing housing need, PPG recognises that *"no single source will provide a definitive answer"* (ID 2a-014). The HEDNA does not rely on any individual source to justify the adjustments made. Instead, it considers the wide range of factors summarised below which collectively support the downward adjustment made in the HEDNA:

    i)   The 2014-based sub-national population projections (on which the CLG starting point is based) indicate that Aylesbury Vale would fall within the top 10% of all local authorities in England in terms of its population growth, with a rate of growth that is <u>more than double the average</u>.

While that level of growth does not necessarily indicate an error in the projections, at the very least it warrants further investigation (Annex 2 paras 3.30-3.36);

ii)   The ONS has recognised that there was a problem with the mid-year estimates (MYE) between 2001 and 2011 of around 6,000 people. In 2011 it made a downward UPC adjustment of 5,855 for Aylesbury Vale. Of that, the HEDNA concluded that some 2,400 relates to overstatement of net migration during this period (HEDNA Update paras 3.30-3.37);

iii)   This adjustment was needed despite the ONS Migration Statistics Improvement Programme (MSIP) having improved the reliability of migration data nationally. The effect of MSIP in Aylesbury Vale has been to exacerbate the inaccuracies. This is plain to see from the divergence of the MSIP-informed migration estimates post-2005 from the previous MYE (HEDNA Update figure 20);

iv)   It is highly unlikely that the error in migration data relates solely to the earlier part of the decade. If the overestimate of 2,400 was attributed to the pre-MSIP years, the effect would be that there was no population growth in Aylesbury Vale during that time: a phenomenon that would be entirely out of kilter with previous population trends and with the post-2005 substantial increase in net migration assumed by the MSIP-adjusted MYEs. It is far more likely that the overestimate is attributable to the period from 2005-11 when the MSIP adjustments substantially increased estimated net migration, which then had to be adjusted downwards to reflect reality after the 2011 Census (Annex 3 paras 11-15);

v)   The post-2011 MYEs show net migration to be exceptionally high in Aylesbury Vale. Between 1991 and 2011, net inward migration exceeded 2,000 in only one year. From 2012 the MYE show it exceeding that figure in every year (HEDNA Update figure 21);

vi)   In the 10 years between 2001 and 2011 there was an increase of 12,390 people, or on average, 1,239 per year. According to the MYE, there was growth of 13,827 people between 2011 and 2015, which equates to 3,457 per year. Taken at face value, the MYE suggest 12% more growth occurred in those four years than in the previous 10 years altogether. The untested MYE for Aylesbury Vale since 2011 bear very little resemblance to the actual population trends it has seen up to 2011, which benefit from calibration against reliable Census data;

vii)   At the time that the HEDNA was prepared, there had been no change in the methodology behind the MYE since the 2011 Census. Any systematic error causing the overstatement in population estimates prior to 2011 would persist in projections of future population. In short, the problem that caused the overestimate up to 2011 has not been resolved;

viii)   The ONS themselves recognise the ongoing uncertainty with the MYE for Aylesbury Vale. They place the latest estimates within a very wide range and confirm that most of their uncertainty is a consequence of the migration data. The MYE suggest 188,707 but ONS's uncertainty measure

indicates that the Aylesbury Vale population range is likely to lie between 181,378 and 196,036. The majority (68%) of the uncertainty over the population relates to international migration data which means that there is uncertainty as to the migration data to the tune of 9,967 people. ONS uncertainty in its estimates appears to be increasing year-on-year. In 2016 the uncertainty relating to net international migration in Aylesbury Vale amounts to 12,835 people (Annex 3 paras 16-18);

ix)   ONS's 'empirical confidence interval' reveals that based on 1,000 simulations, the vast majority (935) identify a population estimate that was lower than the current MYE for 2016. Just 65 yielded a population that was higher than the MYE. The simulations yield a similar conclusion for 2015. All of this indicates that there is considerable uncertainty as to the migration figures in the MYE and that this has likely resulted in the overstatement of population growth (Annex 3 paras 19-21);

x)   In light of the fact that the MYE for 2001-2011 are known to have been too high, and given the MSIP-adjusted MYEs were higher still, consideration was given to other administrative data, including the Patient Record, school census and pensions data. Each piece of administrative data suggests that the population is not growing as fast as suggested by the MYEs. While the Patient Register is not a measure of population (it is normally higher than the actual population), one would expect it to normally grow in proportion with the population. While the population and Patient Register showed this expected correlation in 2011, and so looks about right, by 2015 the correlation has inverted, with the Patient Register sitting below the 2015 population estimate. The Patient Register indicates a 2011 - 2015 population growth of 9,680 which is close to the growth of 9,464 in the HEDNA (paras 3.38-3.41 of the HEDNA and Annex 2 paras 3.16-3.21);

xi)   House-building rates for the period 2011-15 also indicate that the population is not growing as fast as the MYEs suggest. In that time, 4,446 dwellings were delivered. Allowing for a vacancy rate of 3.7% and an average household size of 2.46 persons per dwelling, this suggests that some 10,525 (4,446 x 96.3% x 2.46) have been accommodated in those new homes, rather than the 13,827 shown in the MYEs. In light of the administrative data showing slower growth rates than anticipated by the MYE, the housing delivery rates further indicate that the MYEs for the period since 2011 are too high (Annex 3 paras 22-26);

xii)   More recently, the ONS has issued revised mid-year estimates for the period 2012-2016 following further improvements to the methodology (the most significant change relating to international out migration), and this has reduced the official population estimate for mid-2016 by 433 persons. Further improvements are planned relating to the treatment of students in domestic migration estimates, which may be introduced when the mid-2017 estimates are published this year;

xiii)   There is also an ONS research project ongoing to provide population estimates based on administrative data without depending on Census data being rolled-forward from year-to-year. Whilst the Statistical Population Dataset (SPD) does not yet provide official population estimates, it is likely that this will become the preferred measure for population estimates once it is fully developed. Currently, the methodology tends to over-estimate population in certain age groups, in particular males of working age. For Aylesbury Vale, the SPD estimated a population of 183,343 persons in mid-2015, a figure that is broadly consistent with the base population of 184,526 persons assumed by the HEDNA. This compares to the original MYE of 188,707 persons and the revised MYE of 188,312 persons for the same year. In other words, the SPD (which is currently known to typically overestimate population) identifies considerably fewer people than the official estimates and is actually lower than the HEDNA estimate.[1]

19. Critically, it is not only one factor that is cause for concern. There are many factors, all of which consistently identify that the MYEs for the period since 2011 are too high. Taken in the context of the ONS already having corrected the MYEs from 2001-2011 with a substantial downward adjustment following the 2011 Census, it is evident that it would be wrong to rely on the latest MYE in Aylesbury Vale uncritically.

20. The HEDNA gave careful consideration to the accuracy of the MYE and the resulting CLG projections; and reached the conclusion that a downward adjustment was required. The adjustment is based on reasonable and plausible assumptions that are supported by robust evidence explained in the HEDNA. That is precisely the type of exercise envisaged by the PPG. Without those adjustments, the household projections would significantly overestimate population growth in Aylesbury Vale. That is the problem with the CLG starting point. The approach taken in the HEDNA to adjusting the CLG projections is both clearly allowed for in the PPG, is reasonable and must be preferred.

21. As noted above, the HEDNA has been directly challenged at a number of planning appeals with evidence being presented by a range of different experts, including Nexus Planning, Regeneris and Lichfields; however, following lengthy discussion of the issues at each appeal, Inspectors have consistently supported the HEDNA approach. Whilst none of these appeals can or should provide a replacement for the Local Plan process, the arguments and evidence remain the same and the Inspectors' decisions from the appeals summarised below are clearly relevant:

i)   In the Castlemilk appeal in July 2017 (APP/J0405/V/16/3151297), the Secretary of State accepted the recommendation of his Inspector and found the HEDNA to be *"a reasonable basis on which to calculate the 5 year HLS for the purposes of these proposals"*. The Inspector in that case rejected challenges to the HEDNA approach to adjusting MYE on account of data quality issues relating to migration and also rejected a proposed 15% uplift for market signals;

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[1] https://www.ons.gov.uk/census/censustransformationprogramme/administrativedatacensusproject/administrativedatacensusresearchoutputs/sizeofthepopulation/researchoutputsestimatingthesizeofthepopulationinenglandandwales2016release

ii)   In the Long Crendon appeal decision of August 2017 (APP/J0405/W/16/3142524), the Inspector found that while the HEDNA's OAN figure was untested, it was *"based on reasonable and plausible assumptions"* and was the appropriate figure to use in the assessment of housing land supply. In respect of the main issues in dispute, namely issues surrounding data quality; migration rates and market signals uplift, she was *"satisfied on the basis of the evidence that I heard that in the 2011 census the ONS Mid Year Estimates (MYE) were overestimates"*; that *"for the purposes of this appeal the use of long term trends for calculating migration levels is an acceptable approach"* and that *"the use of a 10% uplift is reasonable"*;

iii)   In the Winslow appeal decision of November 2017 (APP/J0405/W/15/3137920), the Secretary of State found the HEDNA Update to represent *"the most reasonable basis on which to calculate the 5 year HLS for the purpose of determining this appeal"*;

iv)   In the Stratford Road appeal decision of February 2018 (APP/J0405/W/17/3175193), the Inspector *"was presented with a substantial amount of evidence and heard a considerable amount of discussion about the HEDNA"*. He agreed that *"it is entirely reasonable to look at other evidence about the realism of the 2014-based projections, and to make adjustments if necessary in light of this"* and went on to conclude that *"whilst none of those sources of information could be relied on individually to provide a sound basis for projecting future population growth, collectively they support the downward adjustment made in the HEDNA"*.

22.   PPG recognises that *"establishing future need for housing is not an exact science"* (ID 2a-014). Using the standard methodology set out in the existing PPG, the HEDNA provides a *"thorough but proportionate"* assessment (ID 2a-005) which takes proper account of the particular local circumstances that are relevant to Aylesbury Vale, and establishes a robust and objective assessment of housing need.

Migration Trends

23.   Aside from the underlying data quality issues, the HEDNA projections are based on 10-year migration trends in preference to the short-term 5-year trends on which the ONS sub-national population projections are based. The reasons for this are set out in detail at paras 3.73-3.82 of the HEDNA Update. There are a number of representations which relate to the most appropriate trend period to use for migration, and there is clearly a range of different views:

  »   Barton Wilmore (para 2.29) and Pegasus (Chelmer report para 6.1) are both supportive of the use of 10-year trends;

  »   SPRU is critical of the use of 10-year trends (para 2.23 and 3.4), but choose to rely on the most recent GLA "central" population projection as the basis for their calculations, which in turn is based on 10-year trends;

  »   Bidwell's (page 4 para 2) and Indigo Planning (para 2.11) are both critical of 10-year trends; and Turley's (figure 7.1) consider both 5-year and 10-year trends but prefer the short-term figures;

» Regeneris (para 3.72), Lichfields (para 2.5) and Nexus Planning (para 34) all take the SNPP 5-year trends as a starting point and then inflate them further through incorporating more recent MYE into their projections, thereby compounding the reliance on the MYE. This is despite all three being involved in extended debates about these issues at separate planning appeals.

24. In planning for the long-term provision of housing, longer term migration trends should be preferred to short-term trends which are more likely to capture and roll forward a peak or trough in migration levels. The use of longer-term trends is supported by the Planning Advisory service (PAS), by academic experts in demographic analysis and has been endorsed by Local Plan and s.78 Inspectors elsewhere.

Household Formation Rates

25. The HEDNA makes an upward adjustment of 135 dwellings (over the plan period) to account for concealed and homeless households not counted by the household projections. A comparably sized (but different) adjustment is made in representations from Regeneris (para 3.74), Barton Wilmore (para 2.42) and Nexus Planning (para 77).   The adjustments made in these representations are to household formation rates and range between approximately 90 and 110 extra dwellings (4-6 dwellings per annum).

26. Chilmark consider that response is inadequate since it does not address what they describe as *"a clear record of persistent under-delivery"* (Chilmark S1 para 37). The HEDNA considers the issue of backlog at paras 7.88-7.91 and concludes that all needs are properly counted within the OAN. This approach is consistent with the Zurich Assurance vs Winchester Council Judgment (March 2014, para 94-95).

27. Further information on the approach to household formation are set out in Annex 1 paras 3.89-3.103.

Aligning Jobs and Workers

28. The HEDNA considers the alignment between future jobs growth and workers, and the approach taken to a number of detailed assumptions has been criticised in a number of representations.

29. A key point of difference is the reliance on commuting ratios instead of commuting rates, as used by the HEDNA (HEDNA Update para 7.41). This issue has been raised by Regeneris (para 3.99), Barton Wilmore (paras 3.16-3.18 and 5.11) and Pegasus (para 4.29 of their Chelmer report). All argue that it is appropriate to hold the commuting ratio constant across the plan period to establish the overall housing need when aligning jobs and workers. Nevertheless, this ratio does not necessarily remain constant over time. A substantial increase in jobs tends to reduce the ratio whereas the ratio tends to increase when there is a substantial increase in resident workers.

30. Reliance on a fixed commuting ratio assumes a positive correlation between the number of jobs created locally and the level of out commuting (i.e. the more jobs created locally, the higher the number of out-commuters). It would be far more logical to assume that a higher number of jobs created locally would lead to a lower number of workers commuting to work elsewhere (i.e. a negative correlation between the

number of jobs created locally and the level of out-commuting). There is no justification for a higher number of jobs being created locally needing a higher level of out-commuting to align jobs and workers.

31. The use of commuting <u>rates</u> is inherently preferable to commuting ratios as it considers the growth of jobs separately from the growth of resident workers. This approach has been used consistently by ORS when assessing housing need for all of its HEDNA and SHMA work, and has recently been accepted by Local Plan Inspectors in Luton, Stevenage and East Hertfordshire, and was specifically endorsed by the Local Plan Inspector in Cheshire East (see Annex 1 paras 2.43-2.44).

32. Regeneris identify further concerns about a number of the HEDNA labour force assumptions (para 3.90-3.103). Whilst Regeneris agree that the assumptions underlying the HEDNA calculations are consistent with those underlying the Oxford Economics projection which informed the economic growth analysis, they continue to challenge the HEDNA analysis. These issues were considered at length at the Long Crendon appeal, where the Inspector clearly endorsed the HEDNA approach in favour of the analysis put forward by Regeneris. The issues raised are addressed in Annex 1 (see Annex 1, in particular paras 2.57-2.61).

33. SPRU also criticise the employment analysis in the HEDNA at paragraphs 2.60-2.71. They object to the HEDNA economic activity rates and reference two figures from the HEDNA to support the "substantive impact" of the HEDNAs approach. They note that the economically active residents in AVDC is projected to increase by 13,906 (HEDNA figure 92) but suggest that the total population aged 15+ will only increase by 8,401 persons (HEDNA figure 45). However, figure 45 relates to Chiltern. Figure 43 provides the equivalent table for Aylesbury Vale, which shows an increase of 17,300 persons aged 15-75. Allowing for those in the group still in full time education and those who have retired, there is clearly no inconsistency with the 13,906 increase in economically active residents.

Other Matters Concerning Population Adjustments

34. Pegasus group (CALA rep para 5), Lichfields (para 2.3) and Barton Wilmore (para 2.22) all level concerns about the lack of consistency in the way in which the HEDNA approached the demographics for different parts of Buckinghamshire when establishing migration trends. However, the HEDNA is entirely consistent in its approach.

35. The estimates of migration for all four districts are based on the overall change in population and the level of natural change recorded (births minus deaths) between 2005-2015. Any change that is not attributed to natural growth is counted as migration. The data for all districts was based on the most recent ONS population estimates available at that time for the population in 2005 and 2015, and ONS data on births and deaths. The only variation to this standardised approach was the use of alternative population estimates for the overall Aylesbury Vale population, which was necessary and justified as discussed above.

36. With regard to the example of Wycombe and Aylesbury Vale, it is not the case that the issues *"cancel one another out"* as Pegasus suggest (para 5). After the ONS implemented their Migration Statistics Improvement Program (MSIP) following the issues highlighted by the 2011 census (and associated UPC

adjustment), this seemed to correct Wycombe's data quality issues, since changes in the Patient Register after 2011 were roughly in line with the population change enumerated by the post MSIP Mid-Year Estimates. In contrast, this was not the case in Aylesbury Vale, where the problems seem to persist, or have even been exacerbated by the measure. As such, it is not appropriate to combine the districts together and make a single adjustment, as they demonstrably do not all experience the same issues.

Responding to Market Signals

37. The HEDNA proposed a market signals adjustment of around 15% across Buckinghamshire HMA. This was based on a comprehensive review of the market signals indicators as set out by PPG (ID 2a-019; HEDNA Update pages 148-156) with the HMA indicators considered in the context of relevant comparisons with other areas of similar demographic and economic characteristics (PPG ID 2a-020).

38. The HEDNA recognised that indicators for the local HMA covering the southern Buckinghamshire districts (Chiltern, South Bucks, Wycombe) were considerably more acute than the indicators for the Aylesbury Vale local HMA. As a consequence, the HEDNA proposed an increase of 20% for the southern Buckinghamshire districts and 10% for Aylesbury Vale, which combined to give the overall HMA-wide adjustment of 15%.

39. There are a number of representations which relate to the most appropriate uplift in response to market signals, and there is clearly a range of different views:

» Pegasus group (CALA rep para 31) broadly support the 10% uplift proposed;

» SPRU (pages 14-19) argue that an uplift of 20% is appropriate, based largely on the LPEG recommendations, but adopt a 10% uplift when establishing their proposed OAN (table 11);

» Lichfields (para 2.8) take the view that considering the national housing need, an uplift of 15% would be appropriate. However, their approach is entirely inconsistent with the PPG; and as discussed at the Stratford Road appeal, an uplift of 15% isn't actually justified, and 9% would be the relevant national uplift needed (Annex 3 paras 56-58);

» Nexus Planning (pages 12 + 13) assert that 15% is a more appropriate figure without any substantive justification. No recommendation is made for the HMA overall and no comparator evidence is provided for the conclusion, despite both being required by PPG;

» Regeneris (pages 34 and 35) consider a 20% adjustment reasonable. However, they apply this adjustment to a figure already increased to support future employment growth (paragraph 3.124) rather than applying it to the demographic *"housing need number suggested by household projections"* as required by PPG (ID 2a-019). Annex 1 paras 3.104-3.113 addresses these points in further detail;

» Barton Wilmore's analysis of market signals (summarised on page 27 of their "HMA Housing Need review") makes no appropriate comparators and bases its conclusion on the LPEG

methodology; however, their application of this methodology concludes that 25% is appropriate for Aylesbury Vale;

» Chilmark Consulting also assert 25% supported by LPEG (Chilmark S1 para 51), again absent any PPG compliant process.

40. In order to provide a wider benchmarking of market signals and the associated responses, we have considered the OAN informing all Local Plans prepared by LPAs across the Wider South East (i.e. the former East of England and South East Government Office Regions) which have been adopted in the last 2 years. We have also included evidence on the OAN informing Local Plans that are currently under examination where the Inspector's final report or an interim view has been published.

41. A summary of the household projection-based estimate of housing need, the final OAN and the percentage uplift is provided in the schedule overleaf, together with any further relevant details of the approach taken in each area. Note that these figures relate to the housing need rather than the final housing target included in each Plan (which is sometimes higher and sometimes lower than the identified housing need). The schedule also provides a summary of each of the market signals indicators that are identified by PPG based on information published for 2016, with the exception of overcrowding which has a base date of 2011. Cells highlighted in blue represent market indicators that are better than the equivalent indicator for Aylesbury Vale, whereas cells highlighted in orange represent indicators that are worse:

» Lower quartile house price and lower quartile affordability based on data published by ONS;

» Average private rent based on data published by VOA;

» Overcrowding based on Census 2011 data;

» Rate of housing delivery 2006-2016 based on data published by CLG.

42. Across the Wider South East, uplifts applied to the household projection-based estimates of housing need range from 0% up to 138%. The highest proportionate uplifts are all associated with aligning jobs and workers, with the lowest such uplift being 29%.

Local Planning Authority	Housing Need			Notes	Market Signals Indicators				
	Household projection-based estimate (dpa)	OAN (dpa)	Overall uplift		Lower quartile house price	Lower quartile afford-ability	Average market rent	Over-crowding	Rate of delivery 2006-16
Aylesbury Vale	879	969	10%		225,000	10.92	909	6.3%	12.5%
OAN based on household projection without any uplift									
Maldon	260	260 (310)	0% (19%)	Although the OAN did not include any uplift, the housing target was increased from 260 to 310 dpa (an uplift of 19%) to align with the planned target for additional jobs and allow for extra migration in future from London	225,000	11.38	802	3.5%	5.8%
Maidstone	883	883	0%	LPA had proposed a 5% uplift but this was removed by the Inspector given that the household projection-based housing need already represented such a large uplift in housing supply	196,000	9.95	816	6.7%	11.1%
Swale	776	776	0%		167,500	8.38	704	6.1%	10.4%
OAN based on household projection with an adjustment for suppressed household formation									
Lewes	460	520	13%		236,000	11.66	1,005	5.9%	6.6%
Crawley	614	675	10%		220,000	9.52	961	9.8%	8.2%
Basingstoke & Deane	813	850	5%		220,000	9.56	936	5.5%	11.0%
Arun	889	919	3%		200,000	11.69	779	6.7%	7.9%
Horsham	628	650	4%	In both areas, the Inspector concluded that no specific adjustment was needed for market signals, but based the OAN on a household projection that included an adjustment for suppressed household formation	278,000	14.45	1,065	5.3%	10.2%
Great Yarmouth	-	420	-		115,000	5.79	536	6.0%	6.4%
OAN based on a specific uplift to the household projection-based estimate of housing need									
Waverley	396	495	25%	LPA proposed to only uplift in response to suppressed household formation; an uplift from 493 to 519 dpa using 2012-based CLG projections. The 2014-based projections reduced the starting point to 396 dpa; but the Inspector proposed a 25% uplift to this figure	310,000	15.54	1,166	4.7%	5.2%
Mid Sussex	730	876	20%	LPA proposed to only uplift in response to suppressed household formation but the Inspector concluded that a further uplift was justified and his interim views recommended an uplift of 20%	260,250	13.17	1,047	5.6%	10.5%
Luton	738	890	20%	Uplift proposed by ORS due to market indicators identifying acute overcrowding and homelessness pressures, despite the area being more affordable	170,000	8.48	788	15.4%	4.8%

Local Planning Authority	Housing Need			Notes	Market Signals Indicators				
	Household projection-based estimate (dpa)	OAN (dpa)	Overall uplift		Lower quartile house price	Lower quartile afford-ability	Average market rent	Over-crowding	Rate of delivery 2006-16
OAN based on a specific uplift to the household projection-based estimate of housing need (continued)									
East Hertfordshire	736	836	14%	Uplift proposed by ORS due to market indicators identifying high house prices and rents and substantial affordability pressures	275,000	13.10	1,020	6.2%	9.7%
Brighton & Hove	1,373	1,506	10%		244,000	11.51	1,295	17.1%	4.4%
Adur	295	325	10%	LPA did not propose any increase, but a 10% uplift was agreed to be appropriate during the course of the Examination	235,500	12.44	866	5.6%	4.8%
Eastleigh	549	604	10%	The Plan wasn't found sound, but the Inspector's report concluded that an uplift of 10% would have been appropriate	210,000	10.18	834	5.0%	9.0%
South Cambridgeshire	879	967	10%	This is the uplift proposed based on additional work that was requested by the Inspector, but no further views have been given about whether or not the OAN has now been accepted	262,000	11.03	932	3.9%	13.6%
OAN based on an uplift to align jobs and workers with no further uplift for market signals									
Vale of White Horse	432	1,028	138%	The Inspector discussed whether or not the jobs number was realistic, but concluded that it provided a reasonable basis for aligning workers despite it yielding a number that was substantially higher than the household projection-based estimate of housing need	255,000	10.08	1,019	4.9%	10.9%
Cambridge	503	700	39%	A market signals uplift of 30% was proposed based on additional work that was requested by the Inspector, but as this yielded a number that was lower than the jobs based figure it was the jobs number that was taken as the OAN without any further uplift for market signals. No further views have been given by the Inspector about whether or not the OAN has now been accepted	320,000	13.32	1,118	14.1%	13.7%
Test Valley	450	588	31%	No specific market signals uplift proposed, but consider jobs uplift would provide sufficient response	215,000	10.30	975	4.0%	11.4%
Canterbury	620	800	29%	Market signals uplift of more than 10% proposed and tested at 20%, but Inspector did not consider it appropriate to apply a market signals uplift cumulative to the jobs uplift	210,000	11.10	968	7.6%	9.3%

43. The only effective way to compare the OAN across different authorities is to consider the overall rate of growth in relation to the existing dwelling stock. The following chart identifies the rate of growth necessary to meet the housing need based on household projections together with the uplifts applied for market signals (including suppressed household formation) and aligning jobs and workers.

44. It is clear that the rate of growth identified for Aylesbury Vale based on the OAN (1.25% per year) is higher than many other plans areas the Wider South East, and is around 20% higher than the 1.05% needed nationally to deliver 250,000 dwellings each year.
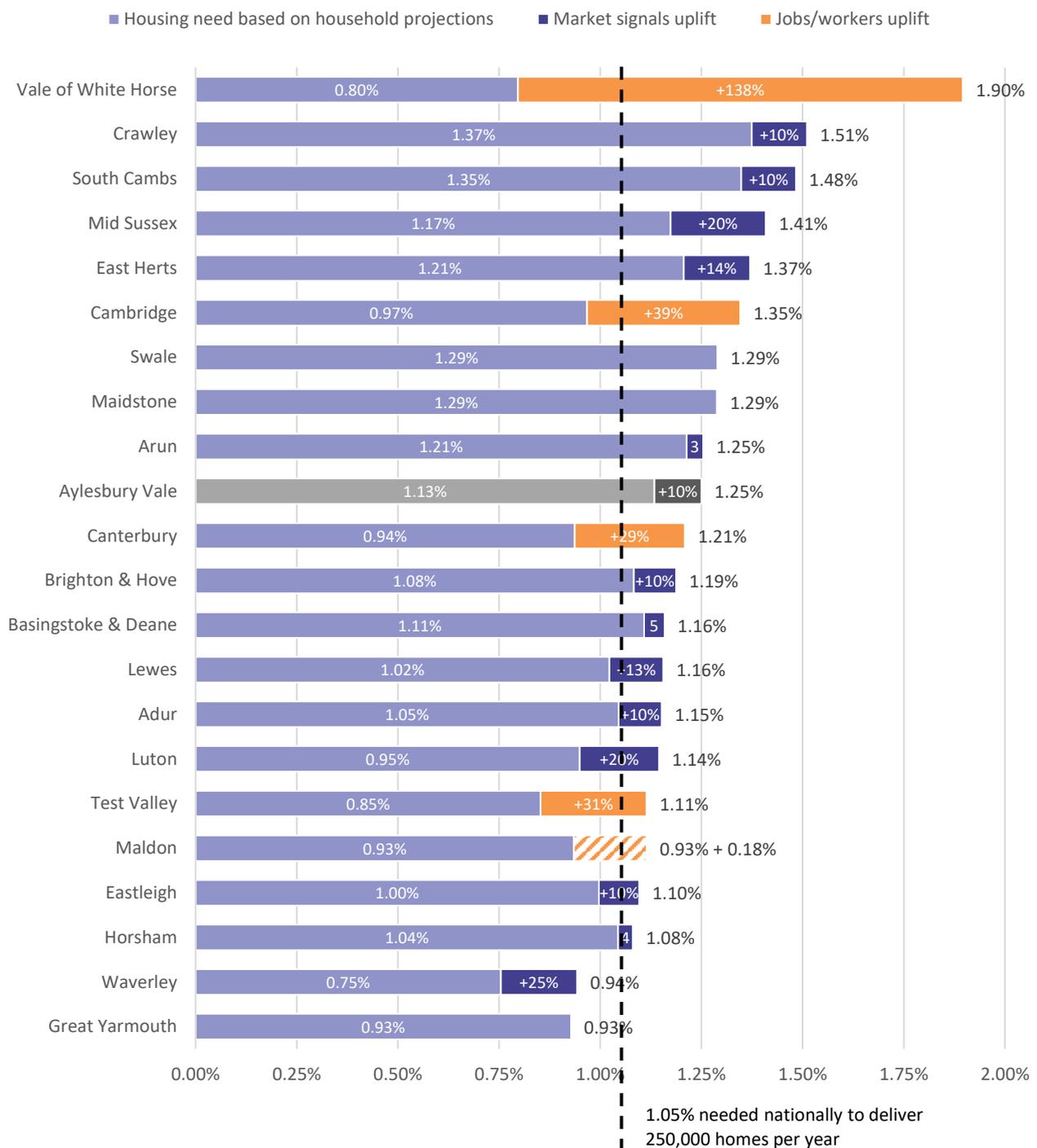
Impact of the Uplift on Affordability

45. Work undertaken for the National Housing and Planning Advisory Unit (NHPAU) based on the Reading Affordability Model identified the following key elasticities when modelling house prices:[2]

> *The key elasticities in the model are presented below:*
>
> > ***Income Elasticity***: *The elasticity of house prices with respect to real incomes is approximately 2.0. In other words, a 1% rise in real incomes would increase house prices by 2%, holding all other influences constant. This elasticity is determined by the income elasticity of demand and the price elasticity of demand. Since the income elasticity of demand is 1 the 1% increase in income increases the demand by 1%. Since the supply is fixed in the short-term, the adjustment comes from changes in price: the price will increase in order to reduce the demand to its initial level and restore market equilibrium. The required price increase depends on the price elasticity of demand, which is -0.5. Hence, to offset the 1% increase of demand the price will eventually increase by 2%.*
> >
> > ***Interest Rate Elasticity***: *If interest rates rise by one per cent, house prices will fall. This fall will differ across the regions, e.g. in London the fall in prices in the second year will be approximately 6%, in the Midlands 3% and in the North 1%.*
> >
> > ***Housing Stock Elasticity***: *The long-run elasticity of house prices with respect to the housing stock is estimated as -2. That is if housing stock increases by 1%, house prices will fall by about 2%.*
> >
> > ***Elasticity of house price with respect to Household formation***: *If the number of households increases by 1%, then house prices will increase by about 2%.*

46. The HEDNA Update projected an increase of 16,933 households in Aylesbury Vale, which represented an increase of 23.7% over the 20-year period 2013-2033. On the basis of every 1% increase in households increasing house prices by 2%, the model would suggest that this level of household growth would lead to house prices increasing by 47.5% above inflation – but that assumes that no additional dwellings were provided.

47. The proposed OAN for Aylesbury Vale is 19,385 dwellings, which represents an increase of 26.2% over the 20-year period 2013-2033. On the basis of every 1% increase in dwellings reducing house prices by 2%, the model would suggest that this level of housing delivery would lead to house prices reducing by 52.4% after taking account of inflation – but that assumes that there was no increase in households.

48. Taking the 23.7% increase in households and the 26.2% increase in dwellings together (and assuming no change in incomes or interest rates or any other factors that might influence house prices), the model suggests that there would be an overall reduction of 4.9% in real house prices after inflation. On this basis, the house price affordability ratio would also reduce by 4.9% (given that it is assumed that there is no change in income).

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[2] http://webarchive.nationalarchives.gov.uk/20121029114150/http://www.communities.gov.uk/documents/507390/pdf/1345079.pdf

49. The Office for Budget Responsibility (OBR) has recently published results of further modelling which considers this relationship.[3] This report sets out the income elasticity and the housing supply elasticity in the context of other studies:

Table 3.1: UK house price elasticities from the literature

Study	Income elasticity	Supply elasticity	Last data point used
[per household]			
This model	2.7	-1.1	2013 q4
Meen (2013)	2.8	-1.7	2009 q4
[per capita]			
Muellbauer/ Murphy (1997)	2.6	-2.2	1994
Cameron/ Muellbauer/ Murphy (2006)	1.6	-1.6	2003
[unscaled]			
This model, re-estimated without number of households	2.3	-1.2	2013 q4
OECD (2011)	2.9	-2.1	2010 q1
Meen (2009)	2.1	-1.5	2007 q2

Note: See section 7 for full references

The elasticity of house prices to income is consistent with the literature, but the elasticity of prices to supply is low. This may be due to mis-measurement of supply in the model. As explained in paragraph 2.11, we use the owner-occupied housing stock for the variable hshh. However, there has been rapid expansion of the supply of buy-to-let rental property in recent years, which may be an increasingly close substitute for owner-occupation.

50. The housing supply elasticity in other studies has ranged from -1.5 to -2.2, which is consistent with the 2.0% identified by the NHPAU work (which was based on a version of the model produced by Professor Meen). However, the latest OBR model suggests a weaker relationship between house prices and housing supply – though recognises that this may be associated with the supply of buy-to-let properties which their model does not include.

51. However, it is important to recognise that these elasticities relate to regional or national models and would not apply to an individual local authority area in isolation. Therefore, any conclusions would depend on all local authorities adopting a similar approach across a region-wide basis. Furthermore, the relationship between housing supply and house prices is uncertain, and this was recognised in the original Barker report and subsequent studies – so any conclusions must be considered in that context.

52. In summary, the OAN proposed for Aylesbury Vale should lead to a reduction in house prices and an improvement in affordability of around 5% might be expected – but the extent of improvement that is actually realised would be inherently uncertain and will inevitably depend on a wide range of factors. Nevertheless, based on reasonable assumptions, the proposed OAN and the resulting increase to planned housing supply could be expected to improve affordability.

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[3] http://budgetresponsibility.org.uk/docs/dlm_uploads/WP06-final-v2.pdf

Standard Methodology

53. Several representations have made reference to the "Standard Methodology" that the Government has proposed, that is included within the draft revised version of the NPPF. This suggests an adjustment of 40% to the household projections for Aylesbury Vale. Whilst the representations recognise that the standard methodology does not apply and that the Vale of Aylesbury Local Plan will be examined under the current NPPF and PPG, many suggest that the standard methodology "points the way forward".

54. Nevertheless, the proposed adjustment is not only a response to market signals. It would cover vacant and second homes as well as any allowance for C2 bedspaces in addition to an uplift for market signals. The HEDNA Update allows for:

   » 651 vacant or second homes when converting from households to dwellings;

   » 135 dwellings for concealed households and suppressed household formation;

   » 1,666 dwellings to ensure alignment between jobs and workers; and

   » 1,023 bedspaces for older persons needing residential care.

55. Therefore, there is an overall allowance for 3,475 dwellings in addition to the 16,933 household projection; which represents an overall uplift of 20.5%. Whilst this remains less than the 40% proposed by the draft standard methodology, it is clear that the overall uplift comprises more than the 10% market signals response.

56. The comparative information about those authorities across the Wider South East identify that many have market signals indicators that are more acute than Aylesbury Vale. Despite this, the majority have been found sound based on an OAN that includes a market signals uplift of 10% or less, and the OAN figures for most areas represent lower rates of growth than that the HEDNA identified for Aylesbury Vale. The HEDNA provides a robust assessment of OAN based on the existing NPPF and PPG under which the evidence is being tested.

Summary of views set out in Participant Statements relating to the HEDNA and OAN

Issue	Buckinghamshire HEDNA Update 2016	Regeneris	Lichfields	Pegasus (Chelmer Report)	SPRU	Barton Willmore	Indigo Planning	Nexus Planning
Population projections	Use 10-year migration trends and take account of issues affecting local demography; including unrealistic Mid-Year Estimates for Aylesbury Vale. 10 year trend 2005-15 suggests a growth of 34,800 persons over the 20-year period 2013-33.	Uses SNPP 2014 5/6 year adjusted for recent MYEs (short term trend). Also tests long-term trend 2002-15.	Uses SNPP 2014 5/6 year adjusted for recent MYEs.	Supportive of 10-year trends. Adjusts SNPP 2014 to reflect 10-year migration trend 2005-15.	Critical of 10-year migration trends. Prefer GLA 2016-based central scenario; which uses trends from the 10-year period 2006-16.	Uses 10-year trend 2005-15.	Not discussed.	Uses SNPP 2014 5/6 year adjusted for recent MYEs.
Household projections	Use the CLG 2014-based household representative rates. Growth of 847 household per year over the 20-year period 2013-33.	Long-term trend (02-15) = 755 dpa Short term trend (SNPP adjusted for post 2014 MYEs) = 1,120 dpa	Range of 1,010-1,309 dpa based on different assumptions. Prefers 1,137 dpa based on SNPP adjusted for MYE.	1,189 dpa based on long-term migration trends.	Growth of 1,089 hh / 1,131 dwellings per year based on GLA 2016-based central scenario.	1,070 HH/1,113 dpa.	Unadjusted CLG 2014 household projection starting point of 1,051 hh / 1,084 dpa.	1,142 HH per annum incorporating 25-34 adjustment. 1,186 dwellings per annum.
Suppressed household formation	Specific adjustment to ensure needs at the start of the period are captured. Household projection-based estimate of housing need increased by 135 dwellings in AV.	Based on adjustment to household formation rates for population aged 25-34 with uplift of 105-110 dpa. Long-term trend = 860 dpa. Short-term trend = 1,230 dpa.	No adjustment.	Representation accepts HEDNAs 135 dwellings.	No adjustment.	1,168 HH / 1,214 dpa based on adjustment to household formation rates for population aged 25-44, based on LPEG recommendations (+101 dpa).	Agrees with HEDNA's 135 dwellings.	Based on adjustment to household formation rates for population aged 25-34 (50% return to 2008-based rates).
Housing market signals	Recognise need for uplift to the household projection-based estimate of housing need. Propose 10% uplift in response to market signals, which includes the allowance for suppressed household formation.	Propose 15% uplift in response to market signals, which includes the allowance for suppressed household formation, applied to the figure assessed to support employment growth.	Proposes 15% uplift as minimum in response to market signals.	Propose 10% uplift to 1,189 demographic model in response to market signals.	Propose 20% uplift in response to market signals, based on LPEG recommendations, although 10% used in SPRU summary table 11 (1,131 +10% = 1,244).	Propose 25% uplift in response to market signals based on LPEG recommendations, applied cumulatively to the allowance for suppressed household formation.	No adjustment.	Proposes 15% uplift as minimum in response to market signals, applied cumulatively to the allowance for suppressed household formation.
Housing-jobs balance	The HEDNA Update identifies that 1,666 dwellings (2013-33, = 83 dpa) is likely to yield 2,412 extra workers based on OBR changes to economic activity rates. Commuting rates held constant based on 2011 Census data.	1,070 dpa to ensure sufficient workers for projected jobs growth.	1,137 dpa demographic-led projection is sufficient to meet jobs growth.	1,189 demographic-led projection is sufficient to meet jobs growth as projected by OE.	Notes higher jobs growth identified by EEFM. Discusses lack of provision for employment growth in London and Milton Keynes.	1,113 dpa demographic-led projection is sufficient to meet jobs growth.	Agrees with HEDNA employment based calculation of 1,666 dwellings = 83 dpa.	No adjustment.
Objectively Assessed Housing Need	969 dwellings per annum for Aylesbury Vale. 2,276 dwellings for Buckinghamshire.	1,230 dpa. (1,070 employment figure + 15%).	1,300 dpa. (1,137 + 15% market signals).	1,308 dpa. (1,189 + 10% market signals)	1,370 dpa stated at SPRU report (para 3.6) Calculation shows 1,131 + 20% market signals, which yields 1,357 dpa	1,518 dpa. (1,214 + 25% market signals) Rounded to 1,520 dpa.	1084 dpa + 7 dpa suppressed hh adjustment + 83 dpa employment uplift = 1,174 dpa.	1,364 dpa. (1,186 + 15% market signals)
Affordable housing need	The SHMA identifies the range of housing required using a whole market approach which relates directly to household projections and the OAN.	Critical of levels in the VALP but does not provide any alternative figures.	Critical of HEDNA assessment but does not provide any alternative figures.	Not discussed.	Not discussed.	Not discussed.	Not discussed.	Critical of levels chosen by the VALP, prefers HEDNA "top end of range" figure, providing affordable housing to all Housing Benefit claimants.
Unmet needs from elsewhere	The HEDNA identifies the Objectively Assessed Need for the housing market area. The study does not seek to identify where the identified needs should be met. Any unmet needs from other areas would be identified by the relevant Local Planning Authority and considered under the Duty-to-Cooperate.	Need to consider Milton Keynes and pressures from London.	Unmet need should be higher as consider that the HEDNA underestimates the OAN for the rest of Buckinghamshire.	Unmet need should be higher as consider that the HEDNA underestimates the OAN for the rest of Buckinghamshire, along with unmet need for Luton.	Unmet need should be reduced as consider that the HEDNA overestimates the unmet need for the rest of Buckinghamshire when calculated against GLA figures. Extra 307 dpa (SPRU para 3.7) from GLA figures, rather than 401 (1,370 plan target minus 969 HEDNA OAN for AV, cited at para SPRU para 3.8) or 410 (SPRU table 11, added to plan target of 1,370, which already includes 401 dpa unmet need).	Unmet need should be higher as consider that the HEDNA underestimates the OAN for the rest of Buckinghamshire.	Unmet need should be higher as consider that the HEDNA underestimates the OAN for the rest of Buckinghamshire.	Unmet need should be higher as consider that the HEDNA underestimates the OAN for the rest of Buckinghamshire.