LICHFIELDS

North Essex Authorities - Joint Strategic (Section 1) Plan Examination – Matters Statement

Our ref 16048/MS/SFU
Date 4 December 2017
From Lichfields on behalf of David Wilson Homes Eastern

Subject Matter 3 - Meeting Housing Needs (Policy SP3)

1.0 Background

1.1 Lichfields has been instructed by David Wilson Homes Eastern ("DWH") to prepare Matters Statements for the North Essex Authorities Joint Strategic (Section 1) Plan [JSP].

1.2 This statement sets out the response of DWH to Matter 3: Meeting Housing Needs (Policy SP3), addressing issues in the PBA Study (EB/018) ("the Study") and focuses upon how this applies to the district of Braintree, where DWH has a live development proposal at Hatfield Peverel. This statement does not address how the JSP housing requirement and underpinning evidence relates to two other North Essex local authorities.

2.0 Question 1: Does the Peter Brett Associates Objectively Assessed Housing Need Study, Nov 2016 update [the PBA Study, EB/018] appropriately define the housing market area? If it does not, what are the consequences for the policy SP3 housing requirement figures?

2.1 DWH considers that the Housing Market Area (HMA) has been appropriately defined.

3.0 Question 2: Are the proposed overall housing requirement in policy SP3 of 43,720 dwellings (2,186dpa), and the constituent requirement figures of 14,320 (716dpa) for Braintree, 18,400 (920dpa) for Colchester and 11,000 (550dpa) for Tendring, based on a sound analysis of the available and relevant evidence, and do they reflect the full, objectively-assessed need for housing over the period 2013-2033?

3.1 The PBA Study has applied the 2014-based household projection figures for 2013-37 to the shorter plan period of 2013-33 for which the projections figures are slightly lower. The correct figures are shown in Table A2.1 at Appendix 2 to this Matters Statement.

In particular:
(a) Is the PBA Study justified in using a baseline household growth figure of 445dpa for Tendring, rather than using the 625dpa figure from the 2014 based DCLG household projections?

3.2 No comment.

(b) Is the PBA Study justified in not making any adjustments to the household formation rates used in the 2012- and 2014-based DCLG household projections?

3.3 Household formation rates have reduced in many locations across the country, and whilst this can be partly explained by reference to some changes in population, there is also significant concern that rates have been affected by housing undersupply and wider economic changes that, if perpetuated, would not be consistent with a measurement of housing need that aligns with paragraph 9 of the NPPF. The PPG ID2a-015 advises that adjustments may be required to respond to worsening affordability. In this regard, it is common ground that in Braintree affordability has worsened and justifies a market signals uplift. An approach can therefore be taken that adjusts formation rates or, alternatively, ensures that the uplift for market signals to improve affordability will in doing so be sufficient to address any suppression.

3.4 For the purposes of considering matters in Braintree, DWH considers that the market signals uplift should be greater than proposed by the Council's evidence and this in turn would address any matters relating to suppression. Were an increased uplift not be made, it would be necessary to make an adjustment to formation rates.

(c) Is the PBA Study justified in not making any adjustments to its household growth estimates to take account of out-migration from London?

3.5 Yes.

(d) Is the PBA Study justified in applying a market signals uplift of 15% for Braintree and Tendring, and in making no market signals adjustment for Colchester?

3.6 DWH considers that the market signals uplift for Braintree is not justified.

3.7 The PPG sets out a clear two-stepped process to addressing market signals within the calculation of OAHN:

1 Firstly, to determine **whether** a market signals uplift is necessary. This is set out in PPG ID2a-019 within the first sub-paragraph as follows:

"Appropriate comparisons of indicators should be made… A worsening trend in any of these indicators will require upward adjustment to planned housing numbers compared to ones based solely on household projections."

2 Secondly, when a market signals uplift is required, to identify at **what scale** this should be set, with guidance advising that it should be set at a level that could be expected to improve affordability. This is set out in PPG ID2a-019 within the second and third sub-paragraphs as follows:

"In areas where an upward adjustment is required, plan makers should set this adjustment at a level that is reasonable… they should increase planned supply by an amount that, on reasonable assumptions and consistent with principles of sustainable development, could be expected to improve affordability, and monitor the response of the market over the plan period."

3.8 There is common ground with regard to stage 1, i.e. that a market signals uplift should be applied in Braintree. However, DWH disagrees with the Study as to the scale of that uplift.

3.9 The Study (para 5.100) concludes on a 10-15% uplift for market signals for Braintree. Its reasons for justifying this uplift are derived from conclusions set out at para 5.92-97. In this regard, it is noted that:

1 The Eastleigh Local Plan Inspector's Report was published in 2015, and drew upon affordability data put forward by representors which was published in 2014. Affordability in Eastleigh has worsened (both resident and workplace-based lower quartile) (see Appendix 1 to this Matters Statement), and it no longer forms an appropriate benchmark for 10%;

2 Similarly, the Uttlesford Local Plan Inspectors report is also outdate (from 2014[1]). This would have also been based on affordability data which was, at best, from 2013 or 2014. As shown in Appendix 1, affordability in Uttlesford has worsened since the Inspector's report was published, and, more recent evidence published by Uttlesford District Council to underpin its new Local Plan proposes an uplift of 20%[2]. Uttlesford is therefore also not an appropriate comparator for benchmarking uplifts.

3.10 The Study's judgement is thus in any event undermined by the limited benchmarks (four in total – Eastleigh, Uttlesford, High Peak and Canterbury) of which two are significantly out-of-date[3].

3.11 Most fundamentally, the Study has not directly engaged with the PPG requirement to consider what scale of uplift could, on reasonable assumptions, be expected to improve affordability. There is no evidence in the Study to show that 15% would be sufficient to improve affordability in Braintree.

3.12 In its response to Question 3 below, DWH sets out how an alternative approach to considering market signals supports the need for an increased uplift, and in doing so reveals that a 15% uplift for Braintree is likely to be inadequate and will lead to an ongoing worsening in affordability.

(e) Are the PBA Study's findings on job-led housing need justified, having regard to the economic models on which they are based and the assumptions embedded in those models?

3.13 DWH is content with the approach on employment in respect of Braintree.

(f) Is the PBA Study justified in concluding that there is no reason to adjust the objectively-assessed housing need figures in order to meet affordable housing need?

3.14 Braintree Council seeks to ensure that 30% affordable housing is achieved on site located in and adjacent to the main towns and 40% in all other areas (Braintree District Council Local Plan – Publication Draft Final, Policy LP33). At this rate of delivery, the 212 dpa target would equate to 30% of the Study's 716 dpa figure. This might suggest that, broadly, no further uplift would be required in order for affordable housing needs to be addressed.

3.15 However, the Study's position is only justified if the affordable housing need figure is correct, and as will be demonstrated in response to Question 4 below, the SHMA (EB/019) applies an

[1] Even earlier than the Eastleigh Inspector's Report
[2] The ORS SHMA proposes an uplift of 20% for Uttlesford as well as the other local authorities in West Essex and East Hertfordshire.
[3] For reasons set out above, were those Inspector's findings (Eastleigh and Uttlesford) to be updated it is unlikely that the same conclusion would be reached due to the change in circumstances (i.e. further worsening of affordability) that has occurred.

incorrect approach to income thresholds which, when corrected, increases the net annual need figure for affordable housing would be at minimum 376dpa which, at a 30%-40% proportion of market housing, would mean a need for between 940 and 1,253 dwellings per annum.

3.16 The Kings Lynn judgment[4] confirms that whilst affordable housing need does not have to be met in full (as this might be unrealistic) "*the consideration of an increase to help deliver the requirement number of affordable homes … is consistent with 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*" (our emphasis). The degree of uplift that is appropriate to address these needs is considered in response to Question 3 below.

4.0 Question 3: Should the Section 1 Plan make provision for higher or lower housing requirement figures, and if so, what is the justification for the alternative figures?

4.1 Yes, for Braintree, DWH considers that the Plan should base its housing requirement on an OAN figure of c.850dpa. This conclusion is based on the following:

Demographic-led needs

4.2 The DCLG 2014-based household projections are the starting point. Addressing the point made in para 3.1 above, these should be applied to the plan period of 2013-33, which is growth of 620 households per annum, as shown in Appendix Table A2.1, rather than the figure of 606 used in the PBA Study which applies to a longer period. Converted into dwellings[5] this gives a figure of 632 dwellings per annum for Braintree[6].

Market Signals

4.3 It is common ground that an uplift is required in Braintree. DWH therefore does not present a review of market signals.

4.4 The second step (in the second and third sub-paragraphs of the PPG ID2a-020) is to consider the scale of improvement in affordability needed, and the supply uplift necessary, which must relate firstly to the significance of affordability constraints and should be such that "*on reasonable assumptions and consistent with principles of sustainable development, could be expected to improve affordability.*"

4.5 There are various approaches to be adopted to this:

1 Looking at **national benchmarks**: As summarised in Appendix 2, various reports prepared independently by academics, on behalf of Government and by the National Housing and Planning Advice Unit (NHPAU) are in agreement that to improve affordability, uplift is needed on past delivery and the household projections. The scale of this varies. However, the research indicates (nationally) between a 21% and 44% uplift on the household projections. Applied to 632 dpa this would give a range of between **765 and 910 dpa** for Braintree.

[4] Kings Lynn & West Norfolk BC v SSCLG [2015] EWHC 2464 (Admin)
[5] Using vacant/second home data from the latest DCLG Council Tax Base data
[6] The CLG household projections show households over the period 2013-33 is 14 households per annum higher than the period 2013-37. However my assessment shows that using the shorter period gives a figure only 12 dwellings per annum higher than the SHMA because DWH use a slightly lower vacancy rate.

2 **Modelling of affordability** outcomes by estimating future house prices and wages suggests that at least 850 dpa are needed just to broadly maintain affordability in the long-term. This conclusion is based on modelling that is included at Appendix 2, and which applies a house price elasticity (of -2.0) in relation to increases in housing stock over and above that needed to match household growth, in the context of forecasts of price and wage growth. The above conclusion is predicated on the assumption that the gap between wages and house prices begins to close (arguably an optimistic assumption), and delivery in excess of this would clearly be needed to bring about any improvement in affordability.

3 **Benchmarking with the Government's Standard Methodology**. This applies an uplift of 29% For Braintree, the proposed new methodology gives a figure of 835 dpa (albeit based on a different time period for the projections of 2016-2026).

4 **Reality Check:** A judgement has to be made on what scale of uplift is realistic and could be reasonably expected to occur[7]. Appendix 2 includes analysis that sense checks different scales of growth against past and planned delivery, recognising that demand for housing is not limited to net household growth but to the wider scale of housing. This sense checking shows stock growth of 1.3 – 1.5% (associated with 850 dpa) is well below what many recently adopted Local Plans have assumed.

4.6 Overall, it is concluded that a market signals uplift up to 850dpa (a 34%) uplift[8] is one that could be reasonably expected to improve affordability and is clearly realistic in terms of the ability to absorb this level of housing growth within the wider market.

Employment Needs

4.7 DWH puts forward no alternative evidence on employment needs and does not consider an uplift is necessary beyond that which would be necessary for market signals.

Affordable Housing

4.8 For reasons set out under Question 4, the affordable housing need is concluded to be 376dpa. At 30%-40% rates of delivery would imply between 940 and 1,253 dwellings per annum. 850dpa would support a higher rate of affordable housing delivery and thus enable a greater proportion of affordable housing need to be addressed, reflecting that it should have an important influence on the OAN.

Concluded OAN

4.9 Overall, DWH concludes that the OAN figure for Braintree is c.850dpa. This is a figure that:

- Meets projected population and household growth
- Could reasonably be expected to improve affordability
- Is realistic, being a percentage of stock growth lower than in many other locations and in adopted post-NPPF plans
- Provides a significant uplift to help meet affordable housing needs, properly assessed.

[7] As required by PPG ID2a-003
[8] Only a fraction higher than the 30% uplift advanced by PBA at Cambridge

In particular:
(a) Should the requirement figures reflect those proposed by CAUSE (2,005dpa overall, comprising 624dpa for Braintree, 831dpa for Colchester and 550dpa for Tendring)?

4.10 See response above.

(b) Should the requirement figures reflect those proposed by the Home Builders' Federation (2,540dpa overall, comprising 762dpa for Braintree, 1,002dpa for Colchester and 776dpa for Tendring)?

4.11 See response above.

(c) Should the requirement figures be reviewed to reflect the criticisms made by Barton Willmore in their Technical Review of [each] Council's Housing Need Evidence Base (July 2017), commissioned by Gladman Developments Ltd?

4.12 See response above.

Question 4: Are the affordable housing need figures set out in the HDH Planning and Development Strategic Housing Market Assessment Update, December 2015 [EB/019], (212dpa for Braintree, 267dpa for Colchester and 151dpa for Tendring) based on a sound analysis of the available and relevant evidence?

4.13 Before turning to the two specific issues identified in the Inspector's questions, it is considered that there is a fundamental problem with the approach of EB/019 to its calculation of affordable housing need, which for Braintree is estimated at 212 net affordable homes per annum.

Household Income

4.14 The SHMA's conclusions are based on the assumption that 35% of gross household income will be spent on housing (SHMA page 151). It states that this was because it was "*agreed as reflecting current market practise by stakeholders and the consultation event*" and "*primary data on the proportion of income spent on private rents … indicates this is the situation…within the HMA*" (SHMA page 152). The SHMA goes on to undertake sensitivity testing for income thresholds ranging from 25-40%.

4.15 I disagree with the SHMA's use of a 35% income threshold, in light of the findings of a number of Inspectors, for example:

1 In East Hampshire, the Council proposed to use a 30% income threshold for affordable housing needs. The East Hampshire Local Plan Inspector (CD XX) stated that:

"instead of planning positively to help assuage acute housing affordability pressures by, say increasing supply, the SHMA appears to advocate an approach which down plays demand. It may well be that, in order to live in a decent home, people are forced to spend more. However, it is not right, in my view, to plan on the basis that it is acceptable for those in need to have their already limited incomes squeezed just so they can live in a decent home (and the need for affordable housing reduced for the purposes of plan making)." (CD XX para 18).

This is effectively what the SHMA is doing by referencing the current level of income spent on affordable housing. Households in Braintree may currently be forced to spend up to 35% of their income on housing, but this does not justify a continuation.

2 In Eastleigh, the Local Plan Inspector (para 33 of his Interim Findings) stated that:

"I see no justification for the Council assuming that more than 30% of income could reasonably be spent on housing. Some households may be forced to do so, but that does not make it a justified approach to assessing need."

Residual income

4.16 In West Oxfordshire, a 35% threshold was accepted[9] but it was specifically noted as being higher than that "*commonly adopted*". It was justified by the specific evidence of the Oxfordshire SHMA which had shown that a household in Oxfordshire spending 35% of its income on housing would have a greater residual income than a household on the national average income spending 25% of its income on housing.

4.17 For Braintree, a similar assessment has been undertaken (See Table A3.1 at Appendix 3). It shows that nationally, a household spending 25% of its income on housing would have a residual income of £18,000. In Braintree, this level of residual spending would be equivalent to a household spending 30% of its income on housing, but certainly not 35%, in which case a household would have a residual income of just under £14,000.

4.18 Furthermore, ONS publish detailed data on family spending and this reveals total household spending is 10% higher in the East compared to England (see Table A3.2 at Appendix 3). This could be interpreted as the cost of living in the region being 10% higher than nationally.

4.19 Applied to the residual incomes, this shows that when taking into account the increased cost of living, the residual income using 35% of income spent on housing decreases to £12,662; around a third lower than the national using a 25% income threshold (See Table A3.3 at Appendix 3). The below shows that when taking account of regional differences in the cost of living, an income threshold for the purposes of assessing affordable housing needs of between 25% and 30% in Braintree would be comparable to 25% at the national level.

The cost of housing in Braintree

4.20 The lower quartile annual gross household income in Braintree is given in the SHMA at Figure 2.9 - £16,734. A household spending 35% of its income on housing would therefore be able to afford an annual rent of £5,857, or £488 per month.

4.21 Figure 3.10 of the SHMA shows that entry-level rents for one bedroom properties in Braintree is £525 per month. Entry level rents for two bedroom homes are £680, 3-beds £875 and four-beds £1,100 per month. Therefore, even at 35%, no households on lower quartile incomes would be able to afford any market housing.

4.22 Figure 3.11 of the SHMA shows that a household on lower quartile income in Braintree would be able to afford the monthly cost of a 1 or 2 (possibly 3) bed social rented home, or a 1-bed affordable rented home. 2-bed affordable rented homes cost just over £500 per month, and all other tenures/larger homes are more expensive than this.

[9] The Inspector's Preliminary Findings Part 1, stated "*In my experience, the 35% threshold is higher than thresholds commonly adopted in this type of exercise elsewhere, but is justified for the reasons set out in the SHMA*."

4.23 This further highlights that even under the SHMA's restrictive definition of those in affordable housing need (i.e. using 35% of household income), the range of housing accessible to such households is extremely limited.

An appropriate benchmark for Braintree

4.24 Taking into account all of the above, the income threshold should, at its very most, be 30%, although in reality for a household to have a residual income on par with a national equivalent (taking account of differences in the cost of living), the threshold is likely to be in the range of 25-30%.

4.25 On this basis the net affordable housing need per annum in Braintree would be 376 per annum, rising to 625 at a 25% threshold (as per Table A7/1a on page 152 of the SHMA). This has obvious implications for the approach adopted by the PBA Study in concluding no uplift is necessary.

In particular:
(a) Is the estimate of 5,462 newly-forming households annually, at Stage 2 of the analysis, consistent with the findings of the PBA Study?

4.26 No comment.

(b) Having regard to the definition of affordable housing in the NPPF Glossary, is there justification for excluding single adults under 35 from those considered to be in need of affordable housing (at the "Refining the model in a local context" stage of the analysis), if they can afford shared accommodation in the private rented sector or can afford the LHA shared room rate?

4.27 This is not an approach commonly adopted in SHMAs. Combined with the approach identified above, it results in affordable housing needs being underestimated.

5.0 Question 5: Should policy SP3 make it clear that the five-year supply of housing land must include an appropriate buffer in accordance with NPPF paragraph 47?

5.1 Yes, Policy SP3 should make clear that the five year supply must include an appropriate buffer. This approach accords with the Framework [§47] and will increase the prospects of sufficient sites coming forward to provide the necessary number of houses to tackle long-term persistent under-delivery.

6.0 Question 6: How will any undersupply of housing against the relevant requirement since 2013 be accounted for in the Section 1 Plan?

6.1 No comment.

7.0 Question 7: Should policy SP3 include mechanisms for:
(a) review of the housing delivery strategy in the event of a failure to maintain the required level of housing supply?

7.1 DWH considers that Local Plans should identify a housing supply and spatial strategy that follows the guidance in the PPG (3-020-023 and 3-025) so that by identifying deliverable and

developable sites (with proper consideration of constraints) and with realistic assumptions about lead-in times, build rates - it is resilient to the potential risks of non-delivery.

7.2 However, it is a clear requirement in para 14 for Plans to incorporate "*sufficient flexibility to adapt to rapid change*". With a spatial strategy reliant on large-scale sites, the risks of non-delivery (or slower delivery) are self-evident.

7.3 Other local plans have sought to address the need for flexibility by incorporating a Reserve Site policy[10] which achieves this without necessitating unnecessary plan reviews. The Stratford Example is at Appendix 4.

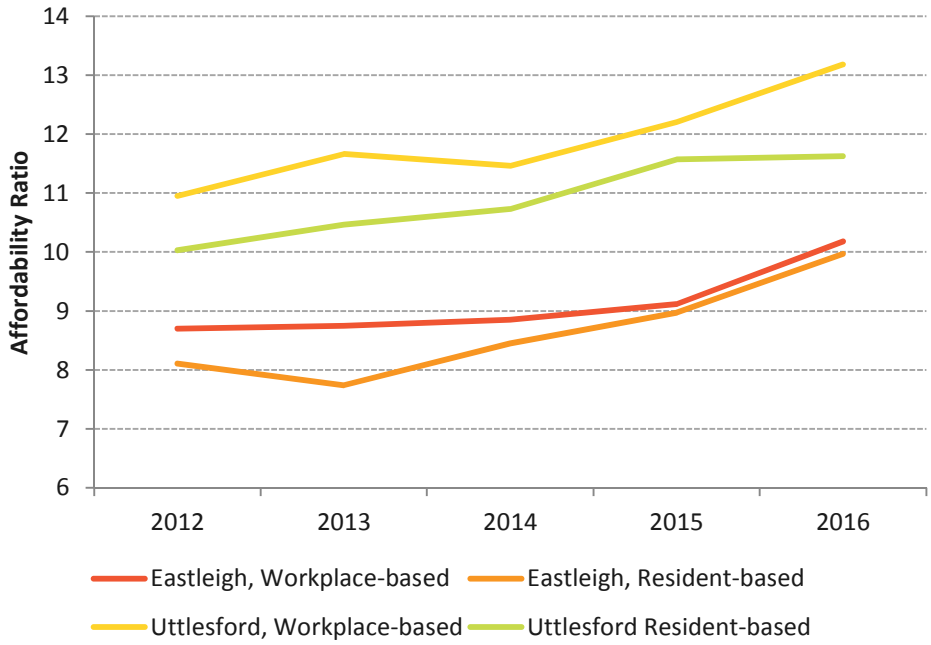
(b) review of the housing requirement figures in order to provide for possible future unmet need from other local authority areas?

7.4 No comment.

[10] One example is the adopted Stratford-on-Avon Core Strategy incorporates a 20% reserve sites allowance, to be identified through site allocations so that, in the event of a shortfall in housing supply, there are plan led solutions. The Inspector's Report endorsed the concept of reserve sites as a mechanism for providing the necessary flexibility, but increased the Council's allowance of 10% to 20%, and concluded (para 69): *"Ultimately there would be no jeopardy from adopting this approach. If reserve sites are not needed to fulfil these roles they do not need to come forward, but they would be available to provide a flexible response to any identified need."*

Appendix 1: Affordability in Eastleigh and Uttlesford

Figure 1.1 Change in Affordability Ratio (Lower Quartile) for Eastleigh and Uttlesford - 2012-16



Source: ONS

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Appendix 2: Analysis underpinning DWH's Objectively Assessed Housing Need

Demographic Starting Point

Table A2.1 DCLG 2014-based Household Projections 2013-33

	2013	2033	Change	Annual
Braintree	62,368	74,766	12,398	620
Chelmsford	70,964	84,351	13,387	669
Colchester	73,593	90,698	17,105	855
Total	**206,925**	**249,815**	**42,890**	**2,145**

Source: Lichfields based on DCLG

Market Signals

Literature Review

Barker Review

1 The Barker Review of Housing Supply[11] was a seminal report that continues to influence government policy. Published in 2004 and using a baseline figure of 140,000 private sector dwelling starts in 2002-03, the report concluded that to reduce the long term price trend from 2.7% per annum seen prior to 2004, to the 1.1% per annum seen as an average across the EU, would require an increase of 120,000 additional private homes per annum, totalling 260,000 per annum to 2026, alongside an increased provision of social sector housing. The Barker Review concluded that such a level would be necessary for "*improving the housing market*" and ensure that "*affordability is increasingly improved over time*" (paras 1.39 and 1.40).

2 In making such a recommendation, the Review acknowledged that this was in excess of projected rates of household formation (at that point estimated at 179,000 per annum). Even today, with household projections in England at around 210,000 households per annum[12] and equating to around 215,000 dwellings per annum (incorporating a notional 2.5% vacancy rate), the 260,000 dwellings per annum concluded within the Barker Review as necessary to increasingly improve affordability would represent a national average uplift of **20.9**% above the demographic projection.

3 Flowing from the Barker Review, Government commissioned the development of an Affordability model by Reading University, designed to relate affordability to housing supply in the medium to long term. The key findings from the 2007 version of the model was that the elasticity of house prices with respect to housing stock is found to be relatively high, at -2.0 i.e. a 1% increase in stock at the regional level leads to a 2% fall in house prices, everything else being equal. This has informed much subsequent work by Government.

National Housing & Planning Advice Unit (NHPAU)

4 The NHPAU was founded by Government as a direct response to the recommendations of the Barker Review. In October 2007, it published work entitled 'Developing a target range for the

[11] 'Review of Housing Supply, Delivering Stability: Securing our Future Housing Needs' (March 2004), Kate Barker - http://news.bbc.co.uk/nol/shared/bsp/hi/pdfs/17_03_04_barker_review.pdf

[12] CLG 2014-based household projections, which at the national level represent the same level of annual growth projected in the earlier 2012-based household projections.

supply of new homes across England'[13] flowing from analytical modelling (using the Reading University model) on the impact of the Government's housing supply target for housing affordability prospects over the medium and long-term. Its conclusion was that a supply range from a minimum of 240,000 dpa (the Government's annual target at that point) and a high 280,000 dpa should be tested (Table 18), going on to identify (para 4.68):

"NHPAU believes that there is a realistic possibility of stabilising the affordability of market housing over the long-term if a supply target for 270,000 net additions to stock, in the right place and of the right type can be adopted through the planning system for delivery before or by 2016."

5 At 270,000 dwellings per annum, this would represent a national average 25.6% uplift above the bare demographic projection of the 2014-based household projections.

6 Crucially, the NHPAU concluded that if stabilising affordability in each region is the goal, then the most efficient way to achieve that is to proportionately increase supply in the areas where affordability is most severe. Thus it focussed 80% of its uplifts (over the then RSS targets) across the South East, the South West and the East of England.

Bramley & Watkins

7 Academic research by Bramley & Watkins14 has looked at the potential for modelling housing markets at a local level to inform planning decisions. One aspect it considers is affordability impacts of supply changes at the sub-regional level. It includes modelled scenarios that conclude "very high" increases in supply (over other elements within the model) across the South East, defined as 35%, can deliver notable improvements to affordability, including some improvement to affordability in London. This implies that high uplifts just short of 35%, such as around 25% in high value areas surrounding London, would be sufficient to address affordability at a local level (i.e. without spill-over benefits to surrounding areas).

8 Interestingly, this methodological approach is applied by Bramley to a review of the Bristol Area SHMA for Business West15. It concludes that an uplift of 50-60% is appropriate compared to 7.5% suggested by the SHMA.

House of Lords Select Committee on Economic Affairs

9 In July 2016, the House of Lords Select Committee on Economic Affairs published their report 'Building More Homes'16 which was the output of the House of Lords' inquiry into the housing market. It reflects on past failure to build sufficient numbers of homes, highlighting how supply has substantially undershot the recommended amounts within the Barker Review. It also draws upon evidence provided to the inquiry by HM Treasury (HMT) which indicated (para 81) that "The modelling suggests that in order to keep the house prices to earnings ratio constant,

[13] 'Developing a target range for the supply of new homes across England' (October 2007), NHPAU - http://webarchive.nationalarchives.gov.uk/20120919132719/http://www.communities.gov.uk/documents/housing/pdf/523984.pdf

[14] 'Housebuilding, demographic change and affordability as outcomes of local planning decisions; exploring interactions using a sub-regional model of housing markets in England' (2 October 2014) Bramley & Watkins, Heriot Watt University (Published in Progress in Planning 2015) - https://pureapps2.hw.ac.uk/portal/en/publications/housebuilding-demographic-change-and-affordability-as-outcomes-of-local-planning-decisions(23dfd394-4dc7-406d-ad05-3ee18fdd8497).html

[15] Business West: Wider Bristol Housing Market Area Strategic Housing Assessment 2015: Commentary by Bramley http://initiativewest.co.uk/content/uploads/2015/12/Final-Bramley-WoE-SHMA-critique-30Nov2015.pdf

[16] 'Building more homes' 1st Report of Session 2016–17 (15 July 2016) House of Lords Select Committee on Economic Affairs (HL Paper 20) - http://www.publications.parliament.uk/pa/ld201617/ldselect/ldeconaf/20/20.pdf

somewhere between 250,000 and 300,000 homes per year need to be built." albeit the report goes on to note (footnote 91) that "Due to low interest rates building 250,000–300,000 homes above may now be insufficient to keep the price: earnings ratio constant"

10 Ultimately based on the evidence brought to the inquiry, the select committee concluded that:

"To address the housing crisis at least 300,000 new homes are needed annually for the foreseeable future."

11 At 300,000 dwellings per annum, this represents a **39.5**% uplift on the 2014-based household projection equivalent, and although at the upper end of the range identified by HMT, the qualification within the report suggests it would be the figure necessary to keep the affordability ratio constant.

Redfern Review

12 The Redfern Review[17] was an independent review of the causes of falling home ownership, and associated housing market challenges. Published in November 2016, it was informed by a housing market model and built by Oxford Economics which looked at the impacts of different supply assumptions on prices and home ownership. The review ultimately concludes (para 33):

"…looking forward, if the number of households in the UK were to grow at around 200,000 per year, new supply of 300,000 dwellings per year over a decade would be expected to cut house price inflation by around 5 percentage points (0.5 percentage points a year)… In other words boosting housing supply will have a material impact on house prices, but only if sustained over a long period."

13 The accompanying report by Oxford Economics18 identifies that "To put downward pressure on prices new supply would need to outstrip underlying household formation". It actually models a boost in housing supply of 100,000 above their baseline forecast of 210,000 dwellings per annum, concluding that 310,000 dpa "helps to keep prices in check" up to 2026, albeit still rising marginally. Although no corresponding analysis is presented on the affordability ratio (i.e. accounting for changes in income over that period), the adoption of 310,000dpa as a figure to keep prices in check would represent a 44.2% uplift over the demographic baseline suggested by the 2014-based projections. A lower percentage would be sufficient to hold affordability constant if household incomes increased in a corresponding manner

<u>Affordability Modelling</u>

14 The Office for Budget Responsibility (OBR) produced Working Paper No.6 Forecasting House Prices in July 2014. The report identifies the following with regards to future average earnings growth and median house price growth (the components of an affordability ratio) in paragraph 3.12:

[17] 'The Redfern Review into the decline of home ownership' (16 November 2016) - http://www.redfernreview.org/wp-content/uploads/2016/01/TW082_RR_online_PDF.pdf
[18] 'Forecasting UK house prices and home ownership' (November 2016) Oxford Economics - http://www.redfernreview.org/wp-content/uploads/2016/11/20161114-Redfern-Review-modelling-paper.pdf

"Using some long-run assumptions for real income growth (2.2 per cent a year, including growth in the number of households of 1 per cent a year) and housing supply (keeping pace with the number of households), and assuming the housing discount rate and wage share variable are stationary, the model predicts around 3.3 per cent real house price growth a year in steady state. In addition, assuming consumer price inflation in line with the Bank of England's 2 per cent target implies 5.3 per cent a year nominal house price growth in steady state."

15 The University of Reading's affordability model found a high price elasticity (-2.0) in relation to increases in stock at regional level in England, implying in-effect that for every 1% increase in supply (with housing supply keeping pace with the household projections), relative prices would be expected to fall by 2%.

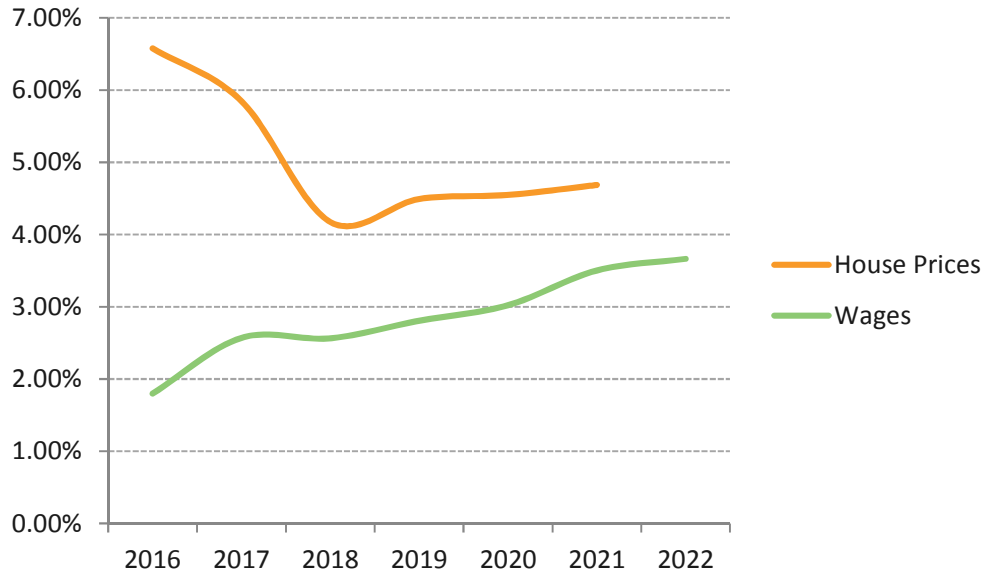
16 There has been some change in forecast growth in wages and house prices since then, the most recent (at the time of preparation) being OBR's March 2017 economic outlook. Alongside its publication, OBR publishes a range of data tables which include house prices and wage growth forecasts. These are shown in Table A2.2 and Figure A2.2.

Table A2.2 OBR March 2017 Forecasts for Wage and House Price growth

	Q4 2016	Q4 2017	Q4 2018	Q4 2019	Q4 2020	Q4 2021	
House Prices	6.57%	5.85%	4.17%	4.49%	4.55%	4.69%	
	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Wages	1.80%	2.57%	2.56%	2.81%	3.02%	3.50%	3.66%

Source: OBR – Accompanying charts and tables to March 2017 Economic Outlook (Chart 3.21, Table 1.6 – CD XX)

Figure A2.1 OBR March 2017 Forecasts for Wage and House Price growth



Source: Lichfields based on OBR. Note: House Prices refers to growth in Q4 of each year. Wages refer to growth in year ending (i.e. 2015/16, 2016/17, etc).

17 These forecasts only run to 2021/22 – the horizon of OBR's forecast. As such, it is necessary to make some assumptions about change beyond this period. Therefore I have modelled two scenarios:

a A long-term forecast where wage and house price growth continue post 2021/22 at their level in the latest year of OBR's forecast (i.e. house prices continue to grow at 4.7% per annum and wages continue to growth at 3.7% per annum); and

b A sensitivity scenario, which assumes post-2021 house price growth will fall to a level in line with wage growth, i.e. wages and house prices will both grow at the same rate (3.7%) per annum[19].

18 For the purposes of this assessment we have used lower quartile workplace-based affordability (as at 2016 this stands at 9.6 in Braintree). For completeness, outputs are presentd using the lower quartile resident-based ratio, and the resident and workplace based median affordability ratios at Appendix 2A.

19 We use this modelling to test the implied outcome s (in affordability terms) of the SHMA's concluded OAHN, before going to consider what scale of housing is required to achieve different outcomes (e.g. maintaining affordability at its current level).

20 The SHMA concludes on an OAHN for Braintree of 716 dpa (2013-37, although the Council has sought to apply this over the period 2013-33). Applied over 20 years this would imply a total figure of 14,320, of which 1,114 units have already been delivered, leaving a residual requirement of 13,206, or 777 dwellings per annum over the remainder of the plan period (from 2016/17 to 2032/33). At this rate of delivery, the outcomes for Braintree are shown in Table A2.3. It shows lower quartile workplace-based affordability would worsen to 10.3 by 2021, and 11.3 under the long-term forecast. If the gap between wages and house prices narrowed, over the long-term affordability would be marginally improved (from the 2012 position, albeit still worse than in 2016) to 10.0.

Table A2.3 Affordability outcomes under SHMA – Lower quartile workplace-based affordability

	Affordability Ratio in…		
	2016 (current)	2021 (end of OBR forecast period)	2033 (end of plan period)
Long-term forecast (growth constant post-2021/22)	9.6	10.3	11.3
Sensitivity – house price and wage growth aligned	9.6	10.3	10.0

Source: Lichfields analysis

21 Table A2.4 shows the outcomes in 2021 and 2033 according to varying scales of housing growth in Braintree (over the period 2013-33). It shows that in the short term, supply in excess of 850 dpa would be needed to maintain affordability at its current level; this is in part a reflection of the fact that OBR forecast wage growth to be low (and rising) in the immediate future, whereas house price growth remains relatively high, as shown in Figure A2.1.

22 Over the long term, outputs depend on whether the current gap between wages and house prices persists (in which case affordability would be worse) or this gap closes. For example, at 800 dpa, if the gap between wage and house price growth were sustained affordability would be 10.7 by 2033 (a worsening compared to the 2016 position), however if the gap was narrowed and the two were aligned, affordability would decline slightly in the long term to 9.5. A decline would be in line with the Government's objectives, but would not result in an actual fall in house prices.

[19] This is arguably an optimistic assumption as there is evidence – going back to the Barker Review to suggest that house prices will tend to rise faster than wages (ie affordability will worsen) if housing supply grows pegs with household growth.

Table A2.4 Affordability outcomes under different scenarios– Lower quartile workplace-based affordability

dpa (2013-33)		Affordability Ratio in…		
		2016	2021	2033
SHMA OAN (716 dpa)	Long-term forecast	9.6	10.3	11.0
	Sensitivity			9.8
750 dpa	Long-term forecast		10.3	11.0
	Sensitivity			9.8
775 dpa	Long-term forecast		10.2	10.9
	Sensitivity			9.7
800 dpa	Long-term forecast		10.1	10.7
	Sensitivity			9.5
825 dpa	Long-term forecast		10.1	10.6
	Sensitivity			9.4
850 dpa	Long-term forecast		10.1	10.4
	Sensitivity			9.3

Source: Lichfields analysis

23 Table A2.5 summarises the outcomes across all indicators based on delivering 850 dpa (full outputs are shown in Appendix 6). This is the scale at which, across most indicators, affordability would be broadly maintained at its current level over the long term if wage growth and house price growth became aligned post-2022. If the existing gap between wage growth and house price growth were to persist in the longer term, clearly an even greater uplift would be required even just to maintain affordability at its current level, however this could be kept under review in line with PPG (ID 2a-020) which states that having made an uplift for market signals, plan-makers should monitor the market over the plan period.

Table A2.5 Summary of OBR Affordability Modelling across all affordability indicators (850 dpa 2013-33)

	Current	Affordability in 2033, 850 dpa	
Lower-quartile, workplace-based	9.6	10.4	9.3
Lower-quartile, resident-based	8.9	9.6	8.6
Median, workplace-based	8.6	9.3	8.3
Median, resident-based	8.0	8.6	7.7

Source: Lichfields

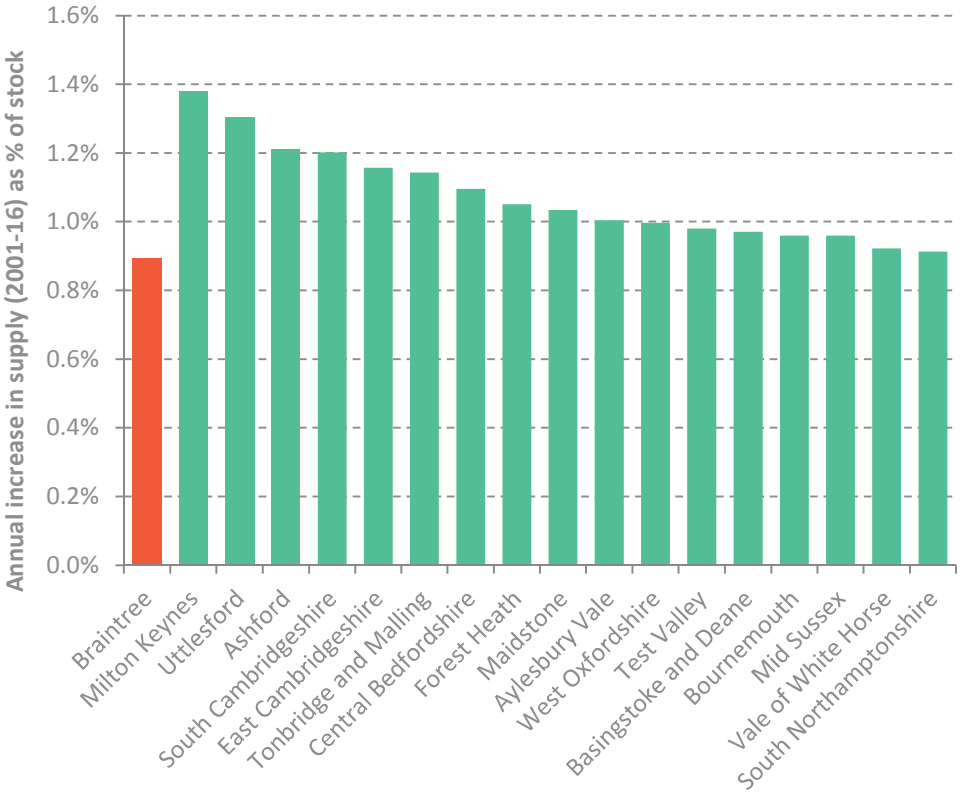
Sense-checking – scenarios that could reasonably be expected to occur

24 However, the PPG states that plan-makers should not consider purely hypothetical scenarios, only those that could reasonably be expected to occur. Given this, it is necessary to consider below whether an increased scale of growth in response to market signals or affordable housing need is reasonable.

25 To assess what could be considered reasonable, a benchmarking supply as a percentage of stock increase is a proportionate approach. Figure A2.2 below shows the rates of past housing delivery achieved in areas similar (in demographic, socio-economic and housing market terms) to Braintree based on a percentage of stock. This approach to measurement is appropriate because household growth will typically comprise only a small proportion of stock turnover (and sales of

new housing), and the scale of demand for new dwellings (which para 159 of the NPPF says should be catered for in OAHN, and which will influence prices and affordability) will emerge from within the existing stock as well as from newly forming households and in-migrants.

Figure A2.2 Historic Housing Delivery (as a % of Stock)



Source: Lichfields base don DCLG Live Table 100 and Live Table 122

26 The benchmarking shows that Braintree has delivered less housing than the average rate for many comparable areas. There is clearly scope for Braintree to increase its housing delivery, whilst remaining within the realms of reasonableness in the context of what similar areas have delivered historically.

27 It should be noted that in order to achieve the Government's target of 300,000 homes per annum, past build rates nationally would need to increase significantly. Therefore, while comparing past trends with what could be conceived as 'reasonable', this should be considered an absolute minimum given the step-change in housing delivery needed nationally in the future.

28 We can also sense-check the figures against stock growth rates in adopted post-NPPF plans, which, as expected, include rates of growth in excess of past delivery (reflecting the NPPF requirement to 'boost significantly' housing supply).

29 Cherwell in Oxfordshire has the highest growth rate of 1.82%; a rate which was clearly deemed to be deliverable by the Inspector. Swindon has an adopted target which equates to 1.72% of stock, again a rate which was deemed deliverable. Milton Keynes and Taunton Deane (in Somerset) have adopted targets of just over 1.6%, while East Cambridgeshire has an adopted target of just below 1.6%.

Table A2.6 Adopted housing targets in post-NPPF plans

	Adopted Annual Housing Target	Stock 2016	Annual Growth Rate
Cherwell	1,140	62,402	1.82%
*Mid Sussex**	*1,026*	*61,878*	*1.66%*
Taunton Deane	850	52,840	1.61%
Milton Keynes	1,750	108,981	1.61%
Swindon	1,625**	94,374	1.72%
East Cambridgeshire	575	36,971	1.56%

Source: Housing targets - respective Local Plans. Stock - DCLG Council Tax Base data. *Based on Inspector's Interim Findings/Main Modifications. **Total housing target 2011-2026 22,000 dwellings (1,467 dpa), however Policy SD2 of Local Plan states average annual housing delivery from 2016-2026 will be higher at 1,625 dpa

30 The above figures only cover areas with adopted plans, which represent only around one-third of all local authorities. It does not include plans currently undergoing examination or any areas which have yet to submit plans, hence should not be viewed as an exhaustive list of areas with high growth rates. For example in Mid Sussex, the Inspector, in his interim findings[20], concluded that the District can and should deliver 1,026 dpa; this equates to 1.66% growth per annum.

31 Furthermore, there are a number of areas without plans which are likely to see high rates of housing growth, for example Peterborough, Bedford, Southampton, Reading, Harlow and parts of Greater Manchester. As more areas progress through to adoption of their plans, the number of plans across England with high rates of housing growth will inevitably increase.

32 Delivery of 850dpa, as we have concluded upon, would represent stock growth in Braintree of 1.33% per annum (based on a 2016 stock of 63,907 dwellings as per Council Tax data). This is clearly reasonable and could be expected to occur.

Table A2.10 Stock growth and equivalent dwellings in Braintree

Stock growth rate	Dwellings
0.90%	575
0.95%	607
1.00%	639
1.05%	671
1.10%	703
1.15%	735
1.20%	767

Stock growth rate	Dwellings
1.25%	799
1.30%	**831**
1.35%	**863**
1.40%	895
1.45%	927
1.50%	959

Source: Lichfields based on DCLG Council Tax base data 2016

[20] Mid Sussex Local Plan Inspectors Interim Findings on the housing requirement p.10 – "*I consider that both the full OAN of 876 dpa and 150 dpa of Crawley's unmet need can and should be accommodated in the District Plan, and that this can be achieved sustainably without conflicting with policies in the Framework. The evidence also demonstrates that the market can sustain such figures*".

Appendix 2A Affordability Modelling Assumptions and Outputs

Table A2A.1 Background data for baseline workings

Indicator	Figure	Source
Projected Household Growth 2013-33	620	DCLG 2014-based Projections
Equivalent Dwellings	632	Household Projections and 2016 Council Tax Base Data
Dwellings in 2016	63,907	DCLG Council Tax Base Data 2016
Completions 2013/14	182	Braintree DC/Table 5.2 of MS Evidence
Completions 2014/15	409	
Completions 2015/16	523	
Total completions 2013-16	1,114	
Total need 2013-33	12,640	= 632 * 20
Residual Requirement	11,526	= 12,640 - 1,114
Annually (over 17 years)	678	= 11,526 / 17

Table **Error! No text of specified style in document.**.1 Baseline Assumptions - using lower-quartile workplace-based earnings

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2016-33	2013-13	2013-33 pa
Baseline	Dwellings	63,907	64,585	65,263	65,941	66,619	67,297	67,975	68,653	69,331	70,009	70,687	71,365	72,043	72,721	73,399	74,077	74,755	75,433	11,526	12,640	632
Lower-quartile, workplace-based	House Prices	£195,000																				
	Earnings	£ 20,363																				
	Ratio	9.58																				
Forecast (OBR March 2017)	House Prices		5.8%	4.2%	4.5%	4.5%	4.7%															
	Earnings		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%														
Long-term forecast (constant post 2021-22)	House Price Growth		5.8%	4.2%	4.5%	4.5%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%			
	Earning Growth		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	House Prices	£195,000	£206,399	£215,013	£224,669	£234,885	£245,890	£257,410	£269,470	£282,094	£295,310	£309,146	£323,629	£338,792	£354,664	£371,280	£388,675	£406,884	£425,947			
	Earnings	£ 20,363	£ 20,886	£ 21,422	£ 22,022	£ 22,688	£ 23,482	£ 24,342	£ 25,234	£ 26,158	£ 27,116	£ 28,110	£ 29,140	£ 30,207	£ 31,313	£ 32,461	£ 33,650	£ 34,882	£ 36,160			
	Affordability Ratio	9.6	9.9	10.0	10.2	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.6	11.7	11.8			
Sensitivity - House and Wage growth aligned post-2022	House Price Growth		5.8%	4.2%	4.5%	4.5%	4.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	Earning Growth		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	House Prices	£195,000	£206,399	£215,013	£224,669	£234,885	£245,890	£254,897	£264,234	£273,914	£283,947	£294,349	£305,131	£316,309	£327,896	£339,907	£352,358	£365,266	£378,646			
	Earnings	£ 20,363	£ 20,886	£ 21,422	£ 22,022	£ 22,688	£ 23,482	£ 24,342	£ 25,234	£ 26,158	£ 27,116	£ 28,110	£ 29,140	£ 30,207	£ 31,313	£ 32,461	£ 33,650	£ 34,882	£ 36,160			
	Affordability Ratio	9.6	9.9	10.0	10.2	10.4	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5			

Source: Lichfields

Figure 1.2 Affordability Modelling Outputs - LQ Workplace based affordability

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2016-33	2013-13	2013-33 pa
Baseline	Dwellings	63,907	64,585	65,263	65,941	66,619	67,297	67,975	68,653	69,331	70,009	70,687	71,365	72,043	72,721	73,399	74,077	74,755	75,433	11,526	12,640	632
Lower-quartile, workplace-based	House Prices	£195,000																				
	Earnings	£ 20,363																				
	Ratio	9.58																				
Forecast (OBR March 2017)	House Prices		5.8%	4.2%	4.5%	4.5%	4.7%															
	Earnings		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%														
	House Price Growth		5.8%	4.2%	4.5%	4.5%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%			
Long-term forecast (constant post 2021-22)	Earning Growth		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	House Prices	£195,000	£206,399	£215,013	£224,669	£234,885	£245,890	£257,410	£269,470	£282,094	£295,310	£309,146	£323,629	£338,792	£354,664	£371,280	£388,675	£406,884	£425,947			
	Earnings	£ 20,363	£ 20,886	£ 21,422	£ 22,022	£ 22,688	£ 23,482	£ 24,342	£ 25,234	£ 26,158	£ 27,116	£ 28,110	£ 29,140	£ 30,207	£ 31,313	£ 32,461	£ 33,650	£ 34,882	£ 36,160			
	Affordability Ratio	9.6	9.9	10.0	10.2	10.4	10.5	10.6	10.7	10.8	10.9	11.0	11.1	11.2	11.3	11.4	11.6	11.7	11.8			
Sensitivity - House and Wage growth aligned post-2022	House Price Growth		5.8%	4.2%	4.5%	4.5%	4.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	Earning Growth		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	House Prices	£195,000	£206,399	£215,013	£224,669	£234,885	£245,890	£254,897	£264,234	£273,914	£283,947	£294,349	£305,131	£316,309	£327,896	£339,907	£352,358	£365,266	£378,646			
	Earnings	£ 20,363	£ 20,886	£ 21,422	£ 22,022	£ 22,688	£ 23,482	£ 24,342	£ 25,234	£ 26,158	£ 27,116	£ 28,110	£ 29,140	£ 30,207	£ 31,313	£ 32,461	£ 33,650	£ 34,882	£ 36,160			
	Affordability Ratio	9.6	9.9	10.0	10.2	10.4	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.5			
SHMA OAN		**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	13,206	14,320	716
Total dwellings		63,907	64,684	65,461	66,237	67,014	67,791	68,568	69,345	70,122	70,898	71,675	72,452	73,229	74,006	74,783	75,559	76,336	77,113			
Dwelling change compared to baseline			0.15%	0.30%	0.45%	0.59%	0.73%	0.87%	1.01%	1.14%	1.27%	1.40%	1.52%	1.65%	1.77%	1.88%	2.00%	2.12%	2.23%			
Effect on house prices			-0.31%	-0.61%	-0.90%	-1.19%	-1.47%	-1.74%	-2.02%	-2.28%	-2.54%	-2.80%	-3.05%	-3.29%	-3.53%	-3.77%	-4.00%	-4.23%	-4.45%			
Long-term forecast (constant post 2021-22)	House Prices		£205,767	£213,710	£222,649	£232,098	£242,279	£252,919	£264,039	£275,661	£287,807	£300,502	£313,770	£327,638	£342,133	£357,283	£373,119	£389,672	£406,974			
	New AR		9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.5	10.6	10.7	10.8	10.8	10.9	11.0	11.1	11.2	11.3			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£205,767	£213,710	£222,649	£232,098	£242,279	£250,450	£258,909	£267,667	£276,733	£286,119	£295,836	£305,895	£316,310	£327,093	£338,256	£349,814	£361,780			
	New AR		9.9	10.0	10.1	10.2	10.3	10.3	10.3	10.2	10.2	10.2	10.2	10.1	10.1	10.1	10.1	10.0	10.0			
		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**817**	817	817	817	817	817	817	817	817	817	817	817	817	817	817	817	817	13,889	15,003	750
Total dwellings		63,907	64,724	65,541	66,358	67,175	67,992	68,809	69,626	70,443	71,260	72,077	72,894	73,711	74,528	75,345	76,162	76,979	77,796			
Dwelling change compared to baseline			0.22%	0.43%	0.63%	0.83%	1.03%	1.23%	1.42%	1.60%	1.79%	1.97%	2.14%	2.32%	2.48%	2.65%	2.81%	2.98%	3.13%			
Effect on house prices			-0.43%	-0.85%	-1.26%	-1.67%	-2.07%	-2.45%	-2.83%	-3.21%	-3.57%	-3.93%	-4.29%	-4.63%	-4.97%	-5.30%	-5.63%	-5.95%	-6.27%			
Long-term forecast (constant post 2021-22)	House Prices		£205,510	£213,181	£221,827	£230,965	£240,811	£251,093	£261,831	£273,045	£284,757	£296,988	£309,762	£323,104	£337,038	£351,593	£366,795	£382,674	£399,261			
	New AR		9.8	10.0	10.1	10.2	10.3	10.3	10.4	10.4	10.5	10.6	10.6	10.7	10.8	10.8	10.9	11.0	11.0			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£205,510	£213,181	£221,827	£230,965	£240,811	£248,642	£256,744	£265,127	£273,800	£282,773	£292,056	£301,662	£311,600	£321,883	£332,523	£343,532	£354,923			
	New AR		9.8	10.0	10.1	10.2	10.3	10.2	10.2	10.1	10.1	10.1	10.0	10.0	10.0	9.9	9.9	9.8	9.8			
		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**846**	846	846	846	846	846	846	846	846	846	846	846	846	846	846	846	846	14,382	15,496	775
Total dwellings		63,907	64,753	65,599	66,445	67,291	68,137	68,983	69,829	70,675	71,521	72,367	73,213	74,059	74,905	75,751	76,597	77,443	78,289			
Dwelling change compared to baseline			0.26%	0.51%	0.76%	1.01%	1.25%	1.48%	1.71%	1.94%	2.16%	2.38%	2.59%	2.80%	3.00%	3.20%	3.40%	3.60%	3.79%			
Effect on house prices			-0.52%	-1.03%	-1.53%	-2.02%	-2.50%	-2.97%	-3.43%	-3.88%	-4.32%	-4.75%	-5.18%	-5.60%	-6.01%	-6.41%	-6.80%	-7.19%	-7.57%			
Long-term forecast (constant post 2021-22)	House Prices		£205,325	£212,799	£221,235	£230,147	£239,751	£249,776	£260,238	£271,157	£282,555	£294,451	£306,869	£319,831	£333,361	£347,486	£362,230	£377,623	£393,693			
	New AR		9.8	9.9	10.0	10.1	10.2	10.3	10.3	10.4	10.4	10.5	10.5	10.6	10.6	10.7	10.8	10.8	10.9			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£205,325	£212,799	£221,235	£230,147	£239,751	£247,337	£255,182	£263,294	£271,683	£280,357	£289,329	£298,606	£308,200	£318,123	£328,385	£338,997	£349,974			
	New AR		9.8	9.9	10.0	10.1	10.2	10.2	10.1	10.1	10.0	10.0	9.9	9.9	9.8	9.8	9.8	9.7	9.7			
		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**876**	876	876	876	876	876	876	876	876	876	876	876	876	876	876	876	876	14,892	16,006	800
Total dwellings		63,907	64,783	65,659	66,535	67,411	68,287	69,163	70,039	70,915	71,791	72,667	73,543	74,419	75,295	76,171	77,047	77,923	78,799			
Dwelling change compared to baseline			0.31%	0.61%	0.90%	1.19%	1.47%	1.75%	2.02%	2.28%	2.55%	2.80%	3.05%	3.30%	3.54%	3.78%	4.01%	4.24%	4.46%			
Effect on house prices			-0.61%	-1.21%	-1.80%	-2.38%	-2.94%	-3.50%	-4.04%	-4.57%	-5.09%	-5.60%	-6.10%	-6.60%	-7.08%	-7.55%	-8.02%	-8.48%	-8.92%			
Long-term forecast (constant post 2021-22)	House Prices		£205,133	£212,403	£220,621	£229,300	£238,655	£248,412	£258,589	£269,204	£280,277	£291,827	£303,876	£316,445	£329,557	£343,237	£357,508	£372,398	£387,934			
	New AR		9.8	9.9	10.0	10.1	10.2	10.2	10.2	10.3	10.3	10.4	10.4	10.5	10.5	10.6	10.6	10.7	10.7			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£205,133	£212,403	£220,621	£229,300	£238,655	£245,987	£253,565	£261,397	£269,492	£277,859	£286,507	£295,445	£304,683	£314,233	£324,104	£334,307	£344,854			
	New AR		9.8	9.9	10.0	10.1	10.2	10.1	10.0	10.0	9.9	9.9	9.8	9.8	9.7	9.7	9.6	9.6	9.5			
		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**905**	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	15,385	16,499	825
Total dwellings		63,907	64,812	65,717	66,622	67,527	68,432	69,337	70,242	71,147	72,052	72,957	73,862	74,767	75,672	76,577	77,482	78,387	79,292			
Dwelling change compared to baseline			0.35%	0.70%	1.03%	1.36%	1.69%	2.00%	2.31%	2.62%	2.92%	3.21%	3.50%	3.78%	4.06%	4.33%	4.60%	4.86%	5.12%			
Effect on house prices			-0.70%	-1.39%	-2.07%	-2.73%	-3.37%	-4.01%	-4.63%	-5.24%	-5.84%	-6.42%	-7.00%	-7.56%	-8.12%	-8.66%	-9.19%	-9.72%	-10.23%			
Long-term forecast (constant post 2021-22)	House Prices		£204,948	£212,021	£220,029	£228,482	£237,596	£247,094	£256,996	£267,316	£278,075	£289,290	£300,982	£313,172	£325,880	£339,129	£352,943	£367,347	£382,366			
	New AR		9.8	9.9	10.0	10.1	10.1	10.2	10.2	10.2	10.3	10.3	10.3	10.4	10.4	10.4	10.5	10.5	10.6			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£204,948	£212,021	£220,029	£228,482	£237,596	£244,682	£252,003	£259,564	£267,375	£275,444	£283,779	£292,389	£301,284	£310,473	£319,965	£329,772	£339,904			
	New AR		9.8	9.9	10.0	10.1	10.1	10.1	10.0	9.9	9.9	9.8	9.7	9.7	9.6	9.6	9.5	9.5	9.4			
		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**935**	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	15,895	17,009	850
Total dwellings		63,907	64,842	65,777	66,712	67,647	68,582	69,517	70,452	71,387	72,322	73,257	74,192	75,127	76,062	76,997	77,932	78,867	79,802			
Dwelling change compared to baseline			0.40%	0.79%	1.17%	1.54%	1.91%	2.27%	2.62%	2.97%	3.30%	3.64%	3.96%	4.28%	4.59%	4.90%	5.20%	5.50%	5.79%			
Effect on house prices			-0.80%	-1.58%	-2.34%	-3.09%	-3.82%	-4.54%	-5.24%	-5.93%	-6.61%	-7.27%	-7.92%	-8.56%	-9.19%	-9.80%	-10.41%	-11.00%	-11.58%			
Long-term forecast (constant post 2021-22)	House Prices		£204,756	£211,626	£219,415	£227,636	£236,500	£245,731	£255,347	£265,363	£275,797	£286,666	£297,989	£309,786	£322,076	£334,880	£348,221	£362,122	£376,606			
	New AR		9.8	9.9	10.0	10.0	10.1	10.1	10.1	10.1	10.2	10.2	10.2	10.3	10.3	10.3	10.3	10.4	10.4			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£204,756	£211,626	£219,415	£227,636	£236,500	£243,333	£250,386	£257,668	£265,185	£272,945	£280,957	£289,228	£297,767	£306,583	£315,684	£325,082	£334,784			
	New AR		9.8	9.9	10.0	10.0	10.1	10.0	9.9	9.9	9.8	9.7	9.6	9.6	9.5	9.4	9.4	9.3	9.3			

Source: Lichfields

Figure 1.3 Affordability Modelling Outputs - LQ Resident based affordability

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2016-33	2013-13	2013-33 pa
Baseline	Dwellings	63,907	64,585	65,263	65,941	66,619	67,297	67,975	68,653	69,331	70,009	70,687	71,365	72,043	72,721	73,399	74,077	74,755	75,433	11,526	12,640	632
Lower-quartile, workplace-based	House Prices	£195,000																				
	Earnings	£ 21,999																				
	Ratio	8.86																				
Forecast (OBR March 2017)	House Prices		5.8%	4.2%	4.5%	4.5%	4.7%															
	Earnings		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%														
	House Price Growth		5.8%	4.2%	4.5%	4.5%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%			
Long-term forecast (constant post 2021-22)	Earning Growth		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	House Prices	£195,000	£206,399	£215,013	£224,669	£234,885	£245,890	£257,410	£269,470	£282,094	£295,310	£309,146	£323,629	£338,792	£354,664	£371,280	£388,675	£406,884	£425,947			
	Earnings	£ 21,999	£ 22,564	£ 23,143	£ 23,792	£ 24,510	£ 25,369	£ 26,298	£ 27,261	£ 28,260	£ 29,295	£ 30,368	£ 31,481	£ 32,634	£ 33,829	£ 35,068	£ 36,353	£ 37,685	£ 39,065			
	Affordability Ratio	8.9	9.1	9.3	9.4	9.6	9.7	9.8	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9			
Sensitivity - House and Wage growth aligned post-2022	House Price Growth		5.8%	4.2%	4.5%	4.5%	4.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	Earning Growth		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	House Prices	£195,000	£206,399	£215,013	£224,669	£234,885	£245,890	£254,897	£264,234	£273,914	£283,947	£294,349	£305,131	£316,309	£327,896	£339,907	£352,358	£365,266	£378,646			
	Earnings	£ 21,999	£ 22,564	£ 23,143	£ 23,792	£ 24,510	£ 25,369	£ 26,298	£ 27,261	£ 28,260	£ 29,295	£ 30,368	£ 31,481	£ 32,634	£ 33,829	£ 35,068	£ 36,353	£ 37,685	£ 39,065			
	Affordability Ratio	8.9	9.1	9.3	9.4	9.6	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7			
SHMA OAN		**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	13,206	14,320	716
Total dwellings		63,907	64,684	65,461	66,237	67,014	67,791	68,568	69,345	70,122	70,898	71,675	72,452	73,229	74,006	74,783	75,559	76,336	77,113			
Dwelling change compared to baseline			0.15%	0.30%	0.45%	0.59%	0.73%	0.87%	1.01%	1.14%	1.27%	1.40%	1.52%	1.65%	1.77%	1.88%	2.00%	2.12%	2.23%			
Effect on house prices			-0.31%	-0.61%	-0.90%	-1.19%	-1.47%	-1.74%	-2.02%	-2.28%	-2.54%	-2.80%	-3.05%	-3.29%	-3.53%	-3.77%	-4.00%	-4.23%	-4.45%			
Long-term forecast (constant post 2021-22)	House Prices		£205,767	£213,710	£222,649	£232,098	£242,279	£252,919	£264,039	£275,661	£287,807	£300,502	£313,770	£327,638	£342,133	£357,283	£373,119	£389,672	£406,974			
	New AR		9.1	9.2	9.4	9.5	9.6	9.6	9.7	9.8	9.8	9.9	10.0	10.0	10.1	10.2	10.3	10.3	10.4			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£205,767	£213,710	£222,649	£232,098	£242,279	£250,450	£258,909	£267,667	£276,733	£286,119	£295,836	£305,895	£316,310	£327,093	£338,256	£349,814	£361,780			
	New AR		9.1	9.2	9.4	9.5	9.6	9.5	9.5	9.5	9.4	9.4	9.4	9.4	9.4	9.3	9.3	9.3	9.3			
		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**817**	817	817	817	817	817	817	817	817	817	817	817	817	817	817	817	817	13,889	15,003	750
Total dwellings		63,907	64,724	65,541	66,358	67,175	67,992	68,809	69,626	70,443	71,260	72,077	72,894	73,711	74,528	75,345	76,162	76,979	77,796			
Dwelling change compared to baseline			0.22%	0.43%	0.63%	0.83%	1.03%	1.23%	1.42%	1.60%	1.79%	1.97%	2.14%	2.32%	2.48%	2.65%	2.81%	2.98%	3.13%			
Effect on house prices			-0.43%	-0.85%	-1.26%	-1.67%	-2.07%	-2.45%	-2.83%	-3.21%	-3.57%	-3.93%	-4.29%	-4.63%	-4.97%	-5.30%	-5.63%	-5.95%	-6.27%			
Long-term forecast (constant post 2021-22)	House Prices		£205,510	£213,181	£221,827	£230,965	£240,811	£251,093	£261,831	£273,045	£284,757	£296,988	£309,762	£323,104	£337,038	£351,593	£366,795	£382,674	£399,261			
	New AR		9.1	9.2	9.3	9.4	9.5	9.5	9.6	9.7	9.7	9.8	9.8	9.9	10.0	10.0	10.1	10.2	10.2			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£205,510	£213,181	£221,827	£230,965	£240,811	£248,642	£256,744	£265,127	£273,800	£282,773	£292,056	£301,662	£311,600	£321,883	£332,523	£343,532	£354,923			
	New AR		9.1	9.2	9.3	9.4	9.5	9.5	9.4	9.4	9.3	9.3	9.3	9.2	9.2	9.2	9.1	9.1	9.1			
		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**846**	846	846	846	846	846	846	846	846	846	846	846	846	846	846	846	846	14,382	15,496	775
Total dwellings		63,907	64,753	65,599	66,445	67,291	68,137	68,983	69,829	70,675	71,521	72,367	73,213	74,059	74,905	75,751	76,597	77,443	78,289			
Dwelling change compared to baseline			0.26%	0.51%	0.76%	1.01%	1.25%	1.48%	1.71%	1.94%	2.16%	2.38%	2.59%	2.80%	3.00%	3.20%	3.40%	3.60%	3.79%			
Effect on house prices			-0.52%	-1.03%	-1.53%	-2.02%	-2.50%	-2.97%	-3.43%	-3.88%	-4.32%	-4.75%	-5.18%	-5.60%	-6.01%	-6.41%	-6.80%	-7.19%	-7.57%			
Long-term forecast (constant post 2021-22)	House Prices		£205,325	£212,799	£221,235	£230,147	£239,751	£249,776	£260,238	£271,157	£282,555	£294,451	£306,869	£319,831	£333,361	£347,486	£362,230	£377,623	£393,693			
	New AR		9.1	9.2	9.3	9.4	9.5	9.5	9.5	9.6	9.6	9.7	9.7	9.8	9.9	9.9	10.0	10.0	10.1			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£205,325	£212,799	£221,235	£230,147	£239,751	£247,337	£255,182	£263,294	£271,683	£280,357	£289,329	£298,606	£308,200	£318,123	£328,385	£338,997	£349,974			
	New AR		9.1	9.2	9.3	9.4	9.5	9.4	9.4	9.3	9.3	9.2	9.2	9.2	9.1	9.1	9.0	9.0	9.0			
		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**876**	876	876	876	876	876	876	876	876	876	876	876	876	876	876	876	876	14,892	16,006	800
Total dwellings		63,907	64,783	65,659	66,535	67,411	68,287	69,163	70,039	70,915	71,791	72,667	73,543	74,419	75,295	76,171	77,047	77,923	78,799			
Dwelling change compared to baseline			0.31%	0.61%	0.90%	1.19%	1.47%	1.75%	2.02%	2.28%	2.55%	2.80%	3.05%	3.30%	3.54%	3.78%	4.01%	4.24%	4.46%			
Effect on house prices			-0.61%	-1.21%	-1.80%	-2.38%	-2.94%	-3.50%	-4.04%	-4.57%	-5.09%	-5.60%	-6.10%	-6.60%	-7.08%	-7.55%	-8.02%	-8.48%	-8.92%			
Long-term forecast (constant post 2021-22)	House Prices		£205,133	£212,403	£220,621	£229,300	£238,655	£248,412	£258,589	£269,204	£280,277	£291,827	£303,876	£316,445	£329,557	£343,237	£357,508	£372,398	£387,934			
	New AR		9.1	9.2	9.3	9.4	9.4	9.4	9.5	9.5	9.6	9.6	9.7	9.7	9.7	9.8	9.8	9.9	9.9			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£205,133	£212,403	£220,621	£229,300	£238,655	£245,987	£253,565	£261,397	£269,492	£277,859	£286,507	£295,445	£304,683	£314,233	£324,104	£334,307	£344,854			
	New AR		9.1	9.2	9.3	9.4	9.4	9.4	9.3	9.2	9.2	9.1	9.1	9.1	9.0	9.0	8.9	8.9	8.8			
		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**905**	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	15,385	16,499	825
Total dwellings		63,907	64,812	65,717	66,622	67,527	68,432	69,337	70,242	71,147	72,052	72,957	73,862	74,767	75,672	76,577	77,482	78,387	79,292			
Dwelling change compared to baseline			0.35%	0.70%	1.03%	1.36%	1.69%	2.00%	2.31%	2.62%	2.92%	3.21%	3.50%	3.78%	4.06%	4.33%	4.60%	4.86%	5.12%			
Effect on house prices			-0.70%	-1.39%	-2.07%	-2.73%	-3.37%	-4.01%	-4.63%	-5.24%	-5.84%	-6.42%	-7.00%	-7.56%	-8.12%	-8.66%	-9.19%	-9.72%	-10.23%			
Long-term forecast (constant post 2021-22)	House Prices		£204,948	£212,021	£220,029	£228,482	£237,596	£247,094	£256,996	£267,316	£278,075	£289,290	£300,982	£313,172	£325,880	£339,129	£352,943	£367,347	£382,366			
	New AR		9.1	9.2	9.2	9.3	9.4	9.4	9.4	9.5	9.5	9.5	9.6	9.6	9.6	9.7	9.7	9.7	9.8			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£204,948	£212,021	£220,029	£228,482	£237,596	£244,682	£252,003	£259,564	£267,375	£275,444	£283,779	£292,389	£301,284	£310,473	£319,965	£329,772	£339,904			
	New AR		9.1	9.2	9.2	9.3	9.4	9.3	9.2	9.2	9.1	9.1	9.0	9.0	8.9	8.9	8.8	8.8	8.7			
		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**935**	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	15,895	17,009	850
Total dwellings		63,907	64,842	65,777	66,712	67,647	68,582	69,517	70,452	71,387	72,322	73,257	74,192	75,127	76,062	76,997	77,932	78,867	79,802			
Dwelling change compared to baseline			0.40%	0.79%	1.17%	1.54%	1.91%	2.27%	2.62%	2.97%	3.30%	3.64%	3.96%	4.28%	4.59%	4.90%	5.20%	5.50%	5.79%			
Effect on house prices			-0.80%	-1.58%	-2.34%	-3.09%	-3.82%	-4.54%	-5.24%	-5.93%	-6.61%	-7.27%	-7.92%	-8.56%	-9.19%	-9.80%	-10.41%	-11.00%	-11.58%			
Long-term forecast (constant post 2021-22)	House Prices		£204,756	£211,626	£219,415	£227,636	£236,500	£245,731	£255,347	£265,363	£275,797	£286,666	£297,989	£309,786	£322,076	£334,880	£348,221	£362,122	£376,606			
	New AR		9.1	9.1	9.2	9.3	9.3	9.3	9.4	9.4	9.4	9.4	9.5	9.5	9.5	9.5	9.6	9.6	9.6			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£204,756	£211,626	£219,415	£227,636	£236,500	£243,333	£250,386	£257,668	£265,185	£272,945	£280,957	£289,228	£297,767	£306,583	£315,684	£325,082	£334,784			
	New AR		9.1	9.1	9.2	9.3	9.3	9.3	9.2	9.1	9.1	9.0	8.9	8.9	8.8	8.7	8.7	8.6	8.6			

Source: Lichfields

Figure 1.4 Affordability Modelling Outputs - Median Workplace based affordability

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2016-33	2013-13	2013-33 pa
Baseline	Dwellings	63,907	64,585	65,263	65,941	66,619	67,297	67,975	68,653	69,331	70,009	70,687	71,365	72,043	72,721	73,399	74,077	74,755	75,433	11,526	12,640	632
Lower-quartile, workplace-based	House Prices	£250,000																				
	Earnings	£ 29,095																				
	Ratio	8.59																				
Forecast (OBR March 2017)	House Prices		5.8%	4.2%	4.5%	4.5%	4.7%															
	Earnings		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%														
	House Price Growth		5.8%	4.2%	4.5%	4.5%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%			
Long-term forecast (constant post 2021-22)	Earning Growth		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	House Prices	£250,000	£264,614	£275,657	£288,037	£301,135	£315,243	£330,013	£345,474	£361,659	£378,603	£396,341	£414,910	£434,348	£454,698	£476,000	£498,301	£521,647	£546,086			
	Earnings	£ 29,095	£ 29,843	£ 30,607	£ 31,466	£ 32,416	£ 33,552	£ 34,781	£ 36,055	£ 37,375	£ 38,745	£ 40,164	£ 41,635	£ 43,160	£ 44,741	£ 46,380	£ 48,079	£ 49,840	£ 51,666			
	Affordability Ratio	8.6	8.9	9.0	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	10.0	10.1	10.2	10.3	10.4	10.5	10.6			
	House Price Growth		5.8%	4.2%	4.5%	4.5%	4.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
Sensitivity - House and Wage growth aligned post-2022	Earning Growth		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	House Prices	£250,000	£264,614	£275,657	£288,037	£301,135	£315,243	£326,791	£338,762	£351,171	£364,035	£377,370	£391,194	£405,524	£420,379	£435,778	£451,741	£468,289	£485,443			
	Earnings	£ 29,095	£ 29,843	£ 30,607	£ 31,466	£ 32,416	£ 33,552	£ 34,781	£ 36,055	£ 37,375	£ 38,745	£ 40,164	£ 41,635	£ 43,160	£ 44,741	£ 46,380	£ 48,079	£ 49,840	£ 51,666			
	Affordability Ratio	8.6	8.9	9.0	9.2	9.3	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4			

SHMA OAN		**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	13,206	14,320	716
Total dwellings		63,907	64,684	65,461	66,237	67,014	67,791	68,568	69,345	70,122	70,898	71,675	72,452	73,229	74,006	74,783	75,559	76,336	77,113			
Dwelling change compared to baseline			0.15%	0.30%	0.45%	0.59%	0.73%	0.87%	1.01%	1.14%	1.27%	1.40%	1.52%	1.65%	1.77%	1.88%	2.00%	2.12%	2.23%			
Effect on house prices			-0.31%	-0.61%	-0.90%	-1.19%	-1.47%	-1.74%	-2.02%	-2.28%	-2.54%	-2.80%	-3.05%	-3.29%	-3.53%	-3.77%	-4.00%	-4.23%	-4.45%			
Long-term forecast (constant post 2021-22)	House Prices		£263,804	£273,988	£285,447	£297,561	£310,614	£324,255	£338,512	£353,411	£368,983	£385,259	£402,269	£420,049	£438,632	£458,056	£478,358	£499,580	£521,762			
	New AR		8.8	9.0	9.1	9.2	9.3	9.3	9.4	9.5	9.5	9.6	9.7	9.7	9.8	9.9	9.9	10.0	10.1			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£263,804	£273,988	£285,447	£297,561	£310,614	£321,090	£331,935	£343,162	£354,786	£366,819	£379,276	£392,174	£405,526	£419,350	£433,662	£448,479	£463,820			
	New AR		8.8	9.0	9.1	9.2	9.3	9.2	9.2	9.2	9.2	9.1	9.1	9.1	9.1	9.0	9.0	9.0	9.0			

		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**817**	817	817	817	817	817	817	817	817	817	817	817	817	817	817	817	817	13,889	15,003	750
Total dwellings		63,907	64,724	65,541	66,358	67,175	67,992	68,809	69,626	70,443	71,260	72,077	72,894	73,711	74,528	75,345	76,162	76,979	77,796			
Dwelling change compared to baseline			0.22%	0.43%	0.63%	0.83%	1.03%	1.23%	1.42%	1.60%	1.79%	1.97%	2.14%	2.32%	2.48%	2.65%	2.81%	2.98%	3.13%			
Effect on house prices			-0.43%	-0.85%	-1.26%	-1.67%	-2.07%	-2.45%	-2.83%	-3.21%	-3.57%	-3.93%	-4.29%	-4.63%	-4.97%	-5.30%	-5.63%	-5.95%	-6.27%			
Long-term forecast (constant post 2021-22)	House Prices		£263,475	£273,309	£284,394	£296,109	£308,732	£321,915	£335,681	£350,058	£365,073	£380,753	£397,131	£414,235	£432,101	£450,760	£470,250	£490,608	£511,873			
	New AR		8.8	8.9	9.0	9.1	9.2	9.3	9.3	9.4	9.4	9.5	9.5	9.6	9.7	9.7	9.8	9.8	9.9			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£263,475	£273,309	£284,394	£296,109	£308,732	£318,772	£329,160	£339,906	£351,025	£362,529	£374,431	£386,746	£399,487	£412,671	£426,311	£440,425	£455,029			
	New AR		8.8	8.9	9.0	9.1	9.2	9.2	9.1	9.1	9.1	9.0	9.0	9.0	8.9	8.9	8.9	8.8	8.8			

		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**846**	846	846	846	846	846	846	846	846	846	846	846	846	846	846	846	846	14,382	15,496	775
Total dwellings		63,907	64,753	65,599	66,445	67,291	68,137	68,983	69,829	70,675	71,521	72,367	73,213	74,059	74,905	75,751	76,597	77,443	78,289			
Dwelling change compared to baseline			0.26%	0.51%	0.76%	1.01%	1.25%	1.48%	1.71%	1.94%	2.16%	2.38%	2.59%	2.80%	3.00%	3.20%	3.40%	3.60%	3.79%			
Effect on house prices			-0.52%	-1.03%	-1.53%	-2.02%	-2.50%	-2.97%	-3.43%	-3.88%	-4.32%	-4.75%	-5.18%	-5.60%	-6.01%	-6.41%	-6.80%	-7.19%	-7.57%			
Long-term forecast (constant post 2021-22)	House Prices		£263,237	£272,819	£283,634	£295,060	£307,374	£320,225	£333,638	£347,638	£362,250	£377,501	£393,421	£410,039	£427,386	£445,494	£464,398	£484,132	£504,735			
	New AR		8.8	8.9	9.0	9.1	9.2	9.2	9.3	9.3	9.3	9.4	9.4	9.5	9.6	9.6	9.7	9.7	9.8			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£263,237	£272,819	£283,634	£295,060	£307,374	£317,099	£327,156	£337,556	£348,311	£359,433	£370,934	£382,828	£395,129	£407,850	£421,006	£434,612	£448,684			
	New AR		8.8	8.9	9.0	9.1	9.2	9.1	9.1	9.0	9.0	8.9	8.9	8.9	8.8	8.8	8.8	8.7	8.7			

		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**876**	876	876	876	876	876	876	876	876	876	876	876	876	876	876	876	876	14,892	16,006	800
Total dwellings		63,907	64,783	65,659	66,535	67,411	68,287	69,163	70,039	70,915	71,791	72,667	73,543	74,419	75,295	76,171	77,047	77,923	78,799			
Dwelling change compared to baseline			0.31%	0.61%	0.90%	1.19%	1.47%	1.75%	2.02%	2.28%	2.55%	2.80%	3.05%	3.30%	3.54%	3.78%	4.01%	4.24%	4.46%			
Effect on house prices			-0.61%	-1.21%	-1.80%	-2.38%	-2.94%	-3.50%	-4.04%	-4.57%	-5.09%	-5.60%	-6.10%	-6.60%	-7.08%	-7.55%	-8.02%	-8.48%	-8.92%			
Long-term forecast (constant post 2021-22)	House Prices		£262,991	£272,312	£282,848	£293,975	£305,968	£318,477	£331,525	£345,134	£359,329	£374,137	£389,584	£405,698	£422,509	£440,047	£458,344	£477,434	£497,351			
	New AR		8.8	8.9	9.0	9.1	9.1	9.2	9.2	9.2	9.3	9.3	9.4	9.4	9.4	9.5	9.5	9.6	9.6			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£262,991	£272,312	£282,848	£293,975	£305,968	£315,368	£325,084	£335,125	£345,503	£356,229	£367,316	£378,775	£390,620	£402,863	£415,518	£428,598	£442,120			
	New AR		8.8	8.9	9.0	9.1	9.1	9.1	9.0	9.0	8.9	8.9	8.8	8.8	8.7	8.7	8.6	8.6	8.6			

		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**905**	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	15,385	16,499	825
Total dwellings		63,907	64,812	65,717	66,622	67,527	68,432	69,337	70,242	71,147	72,052	72,957	73,862	74,767	75,672	76,577	77,482	78,387	79,292			
Dwelling change compared to baseline			0.35%	0.70%	1.03%	1.36%	1.69%	2.00%	2.31%	2.62%	2.92%	3.21%	3.50%	3.78%	4.06%	4.33%	4.60%	4.86%	5.12%			
Effect on house prices			-0.70%	-1.39%	-2.07%	-2.73%	-3.37%	-4.01%	-4.63%	-5.24%	-5.84%	-6.42%	-7.00%	-7.56%	-8.12%	-8.66%	-9.19%	-9.72%	-10.23%			
Long-term forecast (constant post 2021-22)	House Prices		£262,753	£271,822	£282,088	£292,926	£304,610	£316,788	£329,482	£342,713	£356,506	£370,885	£385,875	£401,502	£417,795	£434,781	£452,492	£470,958	£490,213			
	New AR		8.8	8.9	9.0	9.0	9.1	9.1	9.1	9.2	9.2	9.2	9.3	9.3	9.3	9.4	9.4	9.4	9.5			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£262,753	£271,822	£282,088	£292,926	£304,610	£313,695	£323,080	£332,775	£342,789	£353,133	£363,819	£374,858	£386,261	£398,042	£410,212	£422,785	£435,775			
	New AR		8.8	8.9	9.0	9.0	9.1	9.0	9.0	8.9	8.8	8.8	8.7	8.7	8.6	8.6	8.5	8.5	8.4			

		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**935**	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	15,895	17,009	850
Total dwellings		63,907	64,842	65,777	66,712	67,647	68,582	69,517	70,452	71,387	72,322	73,257	74,192	75,127	76,062	76,997	77,932	78,867	79,802			
Dwelling change compared to baseline			0.40%	0.79%	1.17%	1.54%	1.91%	2.27%	2.62%	2.97%	3.30%	3.64%	3.96%	4.28%	4.59%	4.90%	5.20%	5.50%	5.79%			
Effect on house prices			-0.80%	-1.58%	-2.34%	-3.09%	-3.82%	-4.54%	-5.24%	-5.93%	-6.61%	-7.27%	-7.92%	-8.56%	-9.19%	-9.80%	-10.41%	-11.00%	-11.58%			
Long-term forecast (constant post 2021-22)	House Prices		£262,508	£271,315	£281,302	£291,841	£303,205	£315,040	£327,368	£340,209	£353,586	£367,521	£382,038	£397,161	£412,918	£429,333	£446,437	£464,259	£482,829			
	New AR		8.8	8.9	8.9	9.0	9.0	9.1	9.1	9.1	9.1	9.2	9.2	9.2	9.2	9.3	9.3	9.3	9.3			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£262,508	£271,315	£281,302	£291,841	£303,205	£311,965	£321,008	£330,343	£339,981	£349,930	£360,201	£370,805	£381,752	£393,055	£404,724	£416,771	£429,211			
	New AR		8.8	8.9	8.9	9.0	9.0	9.0	8.9	8.8	8.8	8.7	8.7	8.6	8.5	8.5	8.4	8.4	8.3			

Source: Lichfields

Figure 1.5 OBR Affordability Modelling Outputs - Median Resident-based affordability

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2016-33	2013-13	2013-33 pa
Baseline	Dwellings	63,907	64,585	65,263	65,941	66,619	67,297	67,975	68,653	69,331	70,009	70,687	71,365	72,043	72,721	73,399	74,077	74,755	75,433	11,526	12,640	632
Lower-quartile, workplace-based	House Prices	£250,000																				
	Earnings	£ 31,458																				
	Ratio	7.95																				
Forecast (OBR March 2017)	House Prices		5.8%	4.2%	4.5%	4.5%	4.7%															
	Earnings		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%														
	House Price Growth		5.8%	4.2%	4.5%	4.5%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%			
Long-term forecast (constant post 2021-22)	Earning Growth		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	House Prices	£250,000	£264,614	£275,657	£288,037	£301,135	£315,243	£330,013	£345,474	£361,659	£378,603	£396,341	£414,910	£434,348	£454,698	£476,000	£498,301	£521,647	£546,086			
	Earnings	£ 31,458	£ 32,266	£ 33,093	£ 34,022	£ 35,049	£ 36,277	£ 37,605	£ 38,983	£ 40,411	£ 41,891	£ 43,426	£ 45,016	£ 46,666	£ 48,375	£ 50,147	£ 51,984	£ 53,888	£ 55,862			
	Affordability Ratio	7.9	8.2	8.3	8.5	8.6	8.7	8.8	8.9	8.9	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8			
	House Price Growth		5.8%	4.2%	4.5%	4.5%	4.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
Sensitivity - House and Wage growth aligned post-2022	Earning Growth		2.6%	2.6%	2.8%	3.0%	3.5%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%			
	House Prices	£250,000	£264,614	£275,657	£288,037	£301,135	£315,243	£326,791	£338,762	£351,171	£364,035	£377,370	£391,194	£405,524	£420,379	£435,778	£451,741	£468,289	£485,443			
	Earnings	£ 31,458	£ 32,266	£ 33,093	£ 34,022	£ 35,049	£ 36,277	£ 37,605	£ 38,983	£ 40,411	£ 41,891	£ 43,426	£ 45,016	£ 46,666	£ 48,375	£ 50,147	£ 51,984	£ 53,888	£ 55,862			
	Affordability Ratio	7.9	8.2	8.3	8.5	8.6	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7			

SHMA OAN		**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	777	13,206	14,320	716
Total dwellings		63,907	64,684	65,461	66,237	67,014	67,791	68,568	69,345	70,122	70,898	71,675	72,452	73,229	74,006	74,783	75,559	76,336	77,113			
Dwelling change compared to baseline			0.15%	0.30%	0.45%	0.59%	0.73%	0.87%	1.01%	1.14%	1.27%	1.40%	1.52%	1.65%	1.77%	1.88%	2.00%	2.12%	2.23%			
Effect on house prices			-0.31%	-0.61%	-0.90%	-1.19%	-1.47%	-1.74%	-2.02%	-2.28%	-2.54%	-2.80%	-3.05%	-3.29%	-3.53%	-3.77%	-4.00%	-4.23%	-4.45%			
Long-term forecast (constant post 2021-22)	House Prices		£263,804	£273,988	£285,447	£297,561	£310,614	£324,255	£338,512	£353,411	£368,983	£385,259	£402,269	£420,049	£438,632	£458,056	£478,358	£499,580	£521,762			
	New AR		8.2	8.3	8.4	8.5	8.6	8.6	8.7	8.7	8.8	8.9	8.9	9.0	9.1	9.1	9.2	9.3	9.3			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£263,804	£273,988	£285,447	£297,561	£310,614	£321,090	£331,935	£343,162	£354,786	£366,819	£379,276	£392,174	£405,526	£419,350	£433,662	£448,479	£463,820			
	New AR		8.2	8.3	8.4	8.5	8.6	8.5	8.5	8.5	8.5	8.4	8.4	8.4	8.4	8.4	8.3	8.3	8.3			

		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**817**	817	817	817	817	817	817	817	817	817	817	817	817	817	817	817	817	13,889	15,003	750
Total dwellings		63,907	64,724	65,541	66,358	67,175	67,992	68,809	69,626	70,443	71,260	72,077	72,894	73,711	74,528	75,345	76,162	76,979	77,796			
Dwelling change compared to baseline			0.22%	0.43%	0.63%	0.83%	1.03%	1.23%	1.42%	1.60%	1.79%	1.97%	2.14%	2.32%	2.48%	2.65%	2.81%	2.98%	3.13%			
Effect on house prices			-0.43%	-0.85%	-1.26%	-1.67%	-2.07%	-2.45%	-2.83%	-3.21%	-3.57%	-3.93%	-4.29%	-4.63%	-4.97%	-5.30%	-5.63%	-5.95%	-6.27%			
Long-term forecast (constant post 2021-22)	House Prices		£263,475	£273,309	£284,394	£296,109	£308,732	£321,915	£335,681	£350,058	£365,073	£380,753	£397,131	£414,235	£432,101	£450,760	£470,250	£490,608	£511,873			
	New AR		8.2	8.3	8.4	8.4	8.5	8.6	8.6	8.7	8.7	8.8	8.8	8.9	8.9	9.0	9.0	9.1	9.2			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£263,475	£273,309	£284,394	£296,109	£308,732	£318,772	£329,160	£339,906	£351,025	£362,529	£374,431	£386,746	£399,487	£412,671	£426,311	£440,425	£455,029			
	New AR		8.2	8.3	8.4	8.4	8.5	8.5	8.4	8.4	8.4	8.3	8.3	8.3	8.3	8.2	8.2	8.2	8.1			

		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**846**	846	846	846	846	846	846	846	846	846	846	846	846	846	846	846	846	14,382	15,496	775
Total dwellings		63,907	64,753	65,599	66,445	67,291	68,137	68,983	69,829	70,675	71,521	72,367	73,213	74,059	74,905	75,751	76,597	77,443	78,289			
Dwelling change compared to baseline			0.26%	0.51%	0.76%	1.01%	1.25%	1.48%	1.71%	1.94%	2.16%	2.38%	2.59%	2.80%	3.00%	3.20%	3.40%	3.60%	3.79%			
Effect on house prices			-0.52%	-1.03%	-1.53%	-2.02%	-2.50%	-2.97%	-3.43%	-3.88%	-4.32%	-4.75%	-5.18%	-5.60%	-6.01%	-6.41%	-6.80%	-7.19%	-7.57%			
Long-term forecast (constant post 2021-22)	House Prices		£263,237	£272,819	£283,634	£295,060	£307,374	£320,225	£333,638	£347,638	£362,250	£377,501	£393,421	£410,039	£427,386	£445,494	£464,398	£484,132	£504,735			
	New AR		8.2	8.2	8.3	8.4	8.5	8.5	8.6	8.6	8.6	8.7	8.7	8.8	8.8	8.9	8.9	9.0	9.0			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£263,237	£272,819	£283,634	£295,060	£307,374	£317,099	£327,156	£337,556	£348,311	£359,433	£370,934	£382,828	£395,129	£407,850	£421,006	£434,612	£448,684			
	New AR		8.2	8.2	8.3	8.4	8.5	8.4	8.4	8.4	8.3	8.3	8.2	8.2	8.2	8.1	8.1	8.1	8.0			

		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**876**	876	876	876	876	876	876	876	876	876	876	876	876	876	876	876	876	14,892	16,006	800
Total dwellings		63,907	64,783	65,659	66,535	67,411	68,287	69,163	70,039	70,915	71,791	72,667	73,543	74,419	75,295	76,171	77,047	77,923	78,799			
Dwelling change compared to baseline			0.31%	0.61%	0.90%	1.19%	1.47%	1.75%	2.02%	2.28%	2.55%	2.80%	3.05%	3.30%	3.54%	3.78%	4.01%	4.24%	4.46%			
Effect on house prices			-0.61%	-1.21%	-1.80%	-2.38%	-2.94%	-3.50%	-4.04%	-4.57%	-5.09%	-5.60%	-6.10%	-6.60%	-7.08%	-7.55%	-8.02%	-8.48%	-8.92%			
Long-term forecast (constant post 2021-22)	House Prices		£262,991	£272,312	£282,848	£293,975	£305,968	£318,477	£331,525	£345,134	£359,329	£374,137	£389,584	£405,698	£422,509	£440,047	£458,344	£477,434	£497,351			
	New AR		8.2	8.2	8.3	8.4	8.4	8.5	8.5	8.5	8.6	8.6	8.7	8.7	8.7	8.8	8.8	8.9	8.9			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£262,991	£272,312	£282,848	£293,975	£305,968	£315,368	£325,084	£335,125	£345,503	£356,229	£367,316	£378,775	£390,620	£402,863	£415,518	£428,598	£442,120			
	New AR		8.2	8.2	8.3	8.4	8.4	8.4	8.3	8.3	8.2	8.2	8.2	8.1	8.1	8.0	8.0	8.0	7.9			

		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**905**	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	15,385	16,499	825
Total dwellings		63,907	64,812	65,717	66,622	67,527	68,432	69,337	70,242	71,147	72,052	72,957	73,862	74,767	75,672	76,577	77,482	78,387	79,292			
Dwelling change compared to baseline			0.35%	0.70%	1.03%	1.36%	1.69%	2.00%	2.31%	2.62%	2.92%	3.21%	3.50%	3.78%	4.06%	4.33%	4.60%	4.86%	5.12%			
Effect on house prices			-0.70%	-1.39%	-2.07%	-2.73%	-3.37%	-4.01%	-4.63%	-5.24%	-5.84%	-6.42%	-7.00%	-7.56%	-8.12%	-8.66%	-9.19%	-9.72%	-10.23%			
Long-term forecast (constant post 2021-22)	House Prices		£262,753	£271,822	£282,088	£292,926	£304,610	£316,788	£329,482	£342,713	£356,506	£370,885	£385,875	£401,502	£417,795	£434,781	£452,492	£470,958	£490,213			
	New AR		8.1	8.2	8.3	8.4	8.4	8.4	8.5	8.5	8.5	8.5	8.6	8.6	8.6	8.7	8.7	8.7	8.8			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£262,753	£271,822	£282,088	£292,926	£304,610	£313,695	£323,080	£332,775	£342,789	£353,133	£363,819	£374,858	£386,261	£398,042	£410,212	£422,785	£435,775			
	New AR		8.1	8.2	8.3	8.4	8.4	8.3	8.3	8.2	8.2	8.1	8.1	8.0	8.0	7.9	7.9	7.8	7.8			

		2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2016-33**	**2013-13**	**2013-33 pa**
Residual requirement (dpa)			**935**	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	935	15,895	17,009	850
Total dwellings		63,907	64,842	65,777	66,712	67,647	68,582	69,517	70,452	71,387	72,322	73,257	74,192	75,127	76,062	76,997	77,932	78,867	79,802			
Dwelling change compared to baseline			0.40%	0.79%	1.17%	1.54%	1.91%	2.27%	2.62%	2.97%	3.30%	3.64%	3.96%	4.28%	4.59%	4.90%	5.20%	5.50%	5.79%			
Effect on house prices			-0.80%	-1.58%	-2.34%	-3.09%	-3.82%	-4.54%	-5.24%	-5.93%	-6.61%	-7.27%	-7.92%	-8.56%	-9.19%	-9.80%	-10.41%	-11.00%	-11.58%			
Long-term forecast (constant post 2021-22)	House Prices		£262,508	£271,315	£281,302	£291,841	£303,205	£315,040	£327,368	£340,209	£353,586	£367,521	£382,038	£397,161	£412,918	£429,333	£446,437	£464,259	£482,829			
	New AR		8.1	8.2	8.3	8.3	8.4	8.4	8.4	8.4	8.4	8.5	8.5	8.5	8.5	8.6	8.6	8.6	8.6			
Sensitivity - House and Wage growth aligned post-2022	House Prices		£262,508	£271,315	£281,302	£291,841	£303,205	£311,965	£321,008	£330,343	£339,981	£349,930	£360,201	£370,805	£381,752	£393,055	£404,724	£416,771	£429,211			
	New AR		8.1	8.2	8.3	8.3	8.4	8.3	8.2	8.2	8.1	8.1	8.0	7.9	7.9	7.8	7.8	7.7	7.7			

Source: Lichfields

Appendix 3: Income Thresholds for Affordable Housing

Table A3.1 Residual incomes under different levels of income spent on affordable housing - England compared to Braintree

	LQ Monthly Rents (All dwellings)	Rent (pa)	% of income used	Income Required	Residual income
England	£500	£6,000	25%	£24,000	£18,000
Braintree	£625	£7,500	25%	£30,000	£22,500
	£625	£7,500	30%	£25,000	£17,500
	£625	£7,500	35%	£21,429	£13,929

Source: Lichfields based on VOA Private Rental Market Statistics

Table A3.2 Extract from ONS Household Expenditure data (Table A33) - Total Spending for England and East Region

Table A33
Household expenditure by countries and regions
UK, financial year ending 2014 to financial year ending 2016

	England	East
	E92000001	E12000006
Total expenditure	**537.60**	**572.00**

Source: ONS

Table A3.3 Residual income, adjusted for regional cost of living

	%of income spent on housing	Residual income	Adjusted for Regional cost of living
England	25%	£18,000	~
Braintree	25%	£22,500	£20,455
Braintree	30%	£17,500	£15,909
Braintree	35%	£13,929	£12,662

Source: Lichfields based on ONS

LICHFIELDS

Appendix 4: Extract from Policy CS.16 of the Stratford-on-Avon Core Strategy

D. Phasing and Delivery

The accompanying Housing Trajectory Table shows how the housing requirement will be delivered. The provision of new homes will be monitored at least annually to ensure the trajectory is being met and to assess the housing land supply. The calculation of 5 year housing land supply as set out in the latest Authority Monitoring Report (AMR) will provide the mechanism for managing housing delivery and updating the Housing Trajectory to bring forward additional sites if required.

The Site Allocations Plan will identify Reserve Housing Sites providing flexibility to ensure that the District can meet in full its agreed housing requirement (the share of the housing needs arising in the Coventry and Warwickshire Housing Market Area to 2031) and/or to respond to the need to meet housing need arising outside the Coventry and Warwickshire Housing Market Area (HMA). The location of any reserve sites will take account of the settlement pattern and the overall balance of distribution of development set out in Policy CS.15. Reserve sites will have the capacity to deliver up to 20% of the total housing requirement to 2031. Reserve sites will be released in the following circumstances:

- *To rectify any identified shortfall in housing delivery in order to maintain a 5 year supply of housing land in Stratford-on-Avon District;*
- *To contribute to meeting any identified additional need for housing in relation to a net growth in jobs at Jaguar Land Rover arising from development of the employment allocation at Gaydon Lighthorne Heath;*
- *To contribute to meeting within the District any identified shortfall in housing across the Coventry and Warwickshire HMA as demonstrated through the agreed outcomes of ongoing joint working between the Coventry and Warwickshire local planning authorities;*
- *To contribute to meeting any housing needs arising outside the Coventry and Warwickshire HMA that it is accepted through co-operation between the relevant councils as needing to be met within the HMA and most appropriately being met within the District.*

In accordance with Policy CS.17, the Council will bring forward a review of the Core Strategy if it is evident that the required scale of additional housing site provision is beyond that which can properly be addressed within the context of the Site Allocations Plan process.