Oxford City - Objectively Assessed Need Update

Oxford City Council

Final Report

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Prepared by

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DATE	ORIGINATORS	APPROVED
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1 INTRODUCTION

Context and Overview

1.1 The local authorities across Oxfordshire worked together in 2013/14 to prepare a Strategic Housing Market Assessment ("the 2014 SHMA"). This defined a single housing market area across the county. It went on to assess the overall objectively assessed need (OAN) for housing, and to consider the needs for different types of homes and housing needs of different groups within the population.

1.2 Since the preparation of the 2014 SHMA, new 2014-based official population projections (May 2016) and household projections (July 2016) have been released. Furthermore 2016-based National Population Projections (October 2017). There is also a range of other more recent data available, including house price and affordability data and more recent economic forecasts.

1.3 A number of the local authorities in Oxfordshire have progressed with developing their local plan on the basis of the numbers set out in the 2014 SHMA. Oxford City Council have commissioned GL Hearn to update the assessment of housing requirement in the City in order to provide an up-to-date evidence base for their local plan preparation. The report has been prepared by a consultancy team comprising GL Hearn, Justin Gardner Consulting (JGC), SQW and Cambridge Econometrics.

1.4 This housing requirement update deals with the objectively assessed need for housing over the period to 2036. The methodology used in this report responds to the National Planning Policy Framework (NPPF) at the time of publication which sets out Government's objective to significantly boost housing supply and improve affordability; and current Planning Practice Guidance (PPG) on *Housing and Economic Development Needs Assessments*.[1] This represents the approach against which Councils which do not have an up-to-date housing requirement within their development plan would need to use in assessing five year land supply at the time of preparation of this report.

1.5 Housing need in the context of this report thus "*refers to the scale and mix of housing and the range of tenures that is likely to be needed in the housing market area over the plan period – and should cater for the housing demand of the area and identify the scale of housing supply necessary to meet that demand*."[2] Need thus relates to both market and affordable housing, and needs arising from both the local population and as a result of in-migration to an area.

1.6 Government has published an updated Planning Practice Guidance which sets out proposals for a new standardised methodology for assessing housing need. The revised NPPF (July 2018) sets out

[1] https://www.gov.uk/government/collections/planning-practice-guidance
[2] PPG ID: 2a-003-20140306

that for plans submitted to Government prior to the 24th of January 2019 the existing methodology within the 2012 NPPF and 2015 Planning Practice Guidance can be used.

1.7 This is not the case in Oxford, therefore the standard methodology should apply. However this is a minimum housing need and local authorities are encouraged to exceed that within the standard methodology. Paragraph 10 of the PPG sets out when a higher figure than the standard method need to be considered. This included but was not limited to:

- where growth strategies are in place, particularly where those growth strategies identify that additional housing above historic trends is needed to support growth or funding is in place to promote and facilitate growth (e.g. Housing Deals);
- where strategic infrastructure improvements are planned that would support new homes;
- where an authority has agreed to take on unmet need, calculated using the standard method, from neighbouring authorities, as set out in a statement of common ground;

1.8 Clearly the first of these considerations applies to Oxford which is part of the Oxfordshire housing and Growth deal which includes a plan for and support the delivery of 100,000 homes by 2031 across the County.

1.9 It should also be emphasised that this report does not set housing targets. Its provides an assessment of housing need, based on Government guidance at the time of writing, which is intended to provide an input to plan-making alongside wider evidence including on land availability, environmental and other development constraints and infrastructure.

1.10 The local authorities within Oxfordshire have been working together to meet housing needs across the Housing Market Area, as set out in the Oxfordshire Housing and Growth deal which was published in November 2017.

National Planning Policy Framework and Guidance

NPPF

1.11 The Ministry of Housing, Communities and Local Government (MHCLG) published a revised National Planning Policy Framework (NPPF) in July 2018. This updated and replaced the March 2012

1.12 Paragraph 60 of the NPPF (2018) states that in determining the minimum number of homes needed the Local Plans should be based on the local housing need assessments conducted using the

standard method as presented in national planning guidance (How is a minimum annual local housing need figure calculated using the standard method?[3]).

1.13 According to the transitional implementation policies as presented in NPPF2 paragraphs 212-217, the standardised requirement is not necessarily applicable in Selby as the Council aims to submit their Local Plan in November 2018, which is at least 2 months before the 24th January 2019 which is the threshold date stated in para 214.

Planning Practice Guidance

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

1.15 The PPG methodology was updated in July and September 2018 and is available online.[4] It is framed by Government's objective to significantly boost housing supply. The PPG represented the formal adoption of the standard methodology although this should be caveated that the standard methodology was also subject to a forthcoming review.

1.16 It is also clear that the OAN derived from the standard methodology is a minimum and there is ample scope and indeed it is encouraged for local authorities to provide housing in excess of this. The PPG[5] sets out the circumstances where this may be appropriate:

"Where additional growth above historic trends is likely to or is planned to occur over the plan period, an appropriate uplift may be considered. This will be an uplift to identify housing need specifically and should be undertaken prior to and separate from considering how much of this need can be accommodated in a housing requirement figure. Circumstances where this may be appropriate include, but are not limited to:

- *where growth strategies are in place, particularly where those growth strategies identify that additional housing above historic trends is needed to support growth or funding is in place to promote and facilitate growth (e.g. Housing Deals);*
- *where strategic infrastructure improvements are planned that would support new homes;*

[3] Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728247/How_is_a_minimum_annual_local_housing_need_figure_calculated_using_the_standard_method.pdf
[4] https://www.gov.uk/government/collections/planning-practice-guidance
[5] https://www.gov.uk/government/guidance/housing-and-economic-development-needs-assessments

- *where an authority has agreed to take on unmet need, calculated using the standard method, from neighbouring authorities, as set out in a statement of common ground;*

In addition authorities should also consider:

- *previous delivery levels. Where previous delivery has exceeded the minimum need identified it should be considered whether the level of delivery is indicative of greater housing need ; and*

- *recent assessments of need, such as a Strategic Housing Market Assessments (SHMA). Where these assessments suggest higher levels of need than those proposed by a strategic policy-making authority, an assessment of lower need should be justified."*

1.17 The standard methodology is described in more detail in the following chapter but to summarise it is three step approach which takes demographic growth, increases this on the basis of local affordability with a final step which caps this increase to ensure deliverability.

2014 Oxfordshire SHMA Findings

1.18 The 2014 Oxfordshire Strategic Housing Market Assessment ("the 2014 SHMA") was commissioned by the Oxfordshire local authorities and prepared by a consultancy team comprising GL Hearn, SQW, CE and Justin Gardner Consulting.

1.19 The consultancy team engaged with a range of local stakeholders in defining housing market geographies, housing market and economic dynamics, and economic growth potential. It built on the detailed analysis and evidence base prepared by CE and SQW in relation to economic growth in the County[6] This update report builds on and selectively updates where appropriate elements of the analysis in the 2014 SHMA but with a focus only on Oxford City.

Demographics

1.20 The demographic starting point in the 2014 SHMA was 2011-based interim ONS population and 2011-based interim CLG household projections. These showed a decline in households within Oxford City of around 1,400 over the period 2011-21.

1.21 A single demographic based sensitivity analysis was undertaken considering the potential implications of the 2012 mid-year population estimates. In the City of Oxford the projection looked

6 https://www.oxfordshire.gov.uk/cms/sites/default/files/folders/documents/communityandliving/ourworkwithcommunities/oxfordshirepartnership/spatialplanninginfrastructure/Oxfordshire%20Economic%20Forecastng%20Final%20Report%202014.pdf

at the actual population change in the 2001-11 period and developed a bespoke model (recognising that the ONS migration estimates for Oxford look to be substantially inaccurate).

1.22 The sensitivity analysis resulted in a household growth of around 5800 over the 2011-21 period. The limitations of the interim projections were particularly notable in the end date of 2021. The 2014 SHMA required to examine growth to 2031 and thus rolled forward these projections based on an examination how likely it is that women will give birth (the fertility rate); how likely it is that people will die (the death rate); and how likely it is that people will move into or out of each local authority.

1.23 In developing these demographic scenarios a further adjustment was made to headship rates recognising the extent to which household formation may have been constrained in the past (possibly due to mortgage finance constraints) and how this constraints is likely to occur in future. The SHMA therefore sought to develop the most realistic scenario moving forward.

1.24 The approach used was based on a trend whereby all household formation rates across all ages being roughly in balance in 2011 and then through to 2031. Some headship rates do change (particularly as a result of people living longer and there being more 'elderly' couple households), but overall this trend would see no further suppression of household formation.

1.25 For the City of Oxford the official projections rolled forward (with adjustments to HFR) resulted in an overall decline of 34 houses over the 2011-2031 period. However the projection which incorporated the 2012 MYE and corrected migration in Oxford resulted in a need for 15,100 homes over the same period.

Supporting Economic Growth

1.26 The 2014 SHMA considered the interaction between potential employment growth and housing need taking account of Cambridge Econometrics baseline forecasts and those adjusted in collaboration with SQW (committed economic growth).

1.27 For the City of Oxford the baseline forecasts set out a growth of almost 8,800 jobs over the 2011 to 2031 period. The committed economic growth scenario almost trebled this to 24,300 jobs over the same period.

1.28 In relating employment growth and housing need, assumptions were made regarding commuting patterns and economic participation. The modelling assumed that 2011 levels of commuting balance are maintained moving forwards. Employment rates were modelled to take account of recent trends (as set out in the Labour Force Survey) and the added future impetus provided by changes to state pension age.

1.29 For Oxfordshire as a whole, the evidence justified a further upward adjustment to migration to support economic growth; but no further upward adjustment was required in the City of Oxford to support jobs growth with the Committed Economic Growth scenario resulting in a need for 14,000 additional homes.

Improving Affordability

1.30 The need for affordable housing was assessed in Section 6 of the 2014 SHMA. This included an assessment of affordable housing need following the methodology in the PPG paragraph 24 (ID: 2a-024-20140306), to quantify the number of households who require support in meeting their housing needs. A need for 2,370 affordable homes per year was identified across the HMA with 1,029 of this arising from the City of Oxford.

1.31 The calculations were based on current housing costs and incomes. Sensitivity analysis considering different assumptions on what proportion of income households could expect to spend on housing was set out and the timeframe in which current housing need was met and the impact of students and their relatively low income.

1.32 Based on the assumption that qualifying housing developments will contribute 50% affordable housing delivery in the City of Oxford the identified need of 1,029 affordable homes per annum would require 2,058 homes overall.

1.33 The 2014 SHMA also assessed market signals considering whether there was a case for adjusting housing provision, in effect to improve affordability over time where there is evidence that in the past there has been a supply/demand imbalance. The market signals analysis clearly pointed to affordability pressures across Oxfordshire with the strongest pressures in the City of Oxford.

1.34 The 2014 SHMA concluded that “The specific circumstances of Oxford in regard to both affordability pressures and need for affordable housing justify a substantial upwards adjustment to the assessed need relative to the projections based on past population change and committed economic growth. This upward adjustment aims to improve the supply-demand balance for housing and improve affordability over the longer-term.”

1.35 It was considered that in respect of demographics, the key impact of an improvement in affordability and affordable housing delivery would be an increase in younger households’ ability to form, and associated reduction in households sharing and living with parents.

Addressing Past Shortfall

1.36 Recognising that there was an under-delivery in recent years and that this would have contributed to the market distress evidenced above. Increasing housing need to address previous under-delivery would also help increase the local labour force and deliver more affordable homes.

1.37 For the City of Oxford the identified shortfall over the 2006-2011 period (the same time period in which the official projections were based) including Strategic Development Area total 528. When this was added to the demographic need then subsequent need identified was 15,663 or 782 per annum.

Drawing the Evidence Together

1.38 The 2014 SHMA drew conclusions on the OAN drawing together the above factors. It identified whether the demographic need with an uplift to address historic under-delivery in each local authority required a further uplift to address economic growth. This was not the case in the City of Oxford.

1.39 However, the specific circumstances of Oxford in regard to both affordability pressures and need for affordable housing justify a substantial upwards adjustment to the assessed need relative to the projections based on past population change and committed economic growth. This upward adjustment aims to improve the supply-demand balance for housing and improve affordability over the longer-term.

1.40 For Oxford the evidence suggests a base demographic need (including provision for addressing the shortfall related to the SDA) for 780 homes per annum. However the evidence points to a clear need for higher housing delivery.

1.41 The 2014 SHMA identified a range from 1,200 – 1,600 homes per annum) reflecting the difficulty in being precise regarding what scale of adjustment is necessary to support. The mid-point of that range results in the provision of 1,400 homes per annum would be appropriate representing a housing growth rate of 2.0% per annum to 2031.

1.42 This is at the higher end of the range of growth rates achieved nationally over the past 15 years and reflects the strong evidence from market signals and affordable housing needs of the need to significantly boost housing supply. This level of provision would meet two-thirds of the identified affordable housing needs.

1.43 At a county wide level the need identified was for 5003 dpa for the period 2011 to 2031. This would equate to a total growth of just over 100,000 homes over the same period.

1.44 Given that there are now more recent demographic projections available, together with more recent evidence/ forecasts for economic growth and house price and other market signals data; it is an appropriate point now at which to review and update the 2014 SHMA findings for Oxford.

Report Structure

1.45 The remainder of the report is structured as follows:

- Section 2: The Standard Methodology
- Section 3: Trend-based Demographic Projections
- Section 4: Assessing Economic Growth
- Section 5: Economic-led housing need
- Section 6: Affordable Housing Need
- Section 7: Market Signals
- Section 8: Conclusions and deriving and OAN and houseing requirment

2 THE STANDARD METHODOLOGY

2.1 The Ministry of Housing, Communities and Local Government published the revised National Planning Policy Framework (NPPF2) in July 2018. The Government had consulted on the revisions to NPPF between March and May 2018.

2.2 NPPF2 Paragraph 60 states that in determining the minimum number of homes needed the Local Plans should be based on the local housing need assessments conducted using the standard method as presented in national planning guidance (How is a minimum annual local housing need figure calculated using the standard method?[7]).

2.3 The standardised methodology in summary takes the official projections as the starting point. This is adjusted on the basis of market signals. However, that adjustment is then capped to 40% above a shifting figure depending on the status of the local authority's local plan.

2.4 It should also be noted that the government intends to consider adjusting the standard methodology to ensure that 300,000 homes are built nationally per year by the mid 2020s. So while we are in a six months transitional period there is some uncertainty over the methodology itself.

Step 1

2.5 The revised Planning Practice Guidance sets out the approach starting with the most up-to-date National Household Projections. At the time of preparation the most up-to-date projections (August 2018) are the 2014-based Department for Communities and Local Government (DCLG) household projections published in July 2016. PPG proposes that *"the most recent official projections need to be used to calculate the average annual household growth over a 10 year period".*

2.6 The latest household projections, the 2016-based household projections, were published by ONS on the 20th of September 2018. These superseded the 2014-based projections and resulted in a substantially reduced number.

2.7 In a recent statement the minister for housing, Kit Malthouse described the results as "weird" and reconfirmed the government's intention to deliver up to 300,000 homes per annum. The reduction was particularly marked in locations such as Cambridge and Oxford where migration took a different form.

2.8 In Oxford, the 2014-based projections show household growth of 5,328 for the 2016-26 period or 533 households per annum). This equates to 9.0% increase in households over the same period.

[7] Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728247/How_is_a_minimum_annual_local_housing_need_figure_calculated_using_the_standard_method.pdf

However the 2016-based projections reduce the household growth over the same period to calculate a negative growth of minus 1 household. However when the period is moved on to the 2018-2028 period a growth of 67 homes or 7 households per annum occurs.

Step 2

2.9 The proposed methodology seeks to adjust the demographic baseline on the basis of market signals. The adjustment increases the housing need where house prices are high relative to workplace incomes. This uses the published median affordability ratios from the Office for National Statistics.

2.10 More specifically this calculation is based on the ratio between median house prices in Oxford and the median earnings of those working in Oxford. For the most recent published year (2017) for which data is available (published on 26th April 2018).

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

Adjustment factor = [(Local affordability ratio - 4) / 4] X 0.25

2.12 In 2017 the median workplace affordability ratio in Oxford was 12.3 (published in May 2018). This equates to an adjustment of 51.9%.

2.13 Applying this to the 2014-based household projections (16-26) would take the housing need to 810 dwellings per annum. Applying this to the estimated 2016-based figures (18-28) would take the housing need to 101 dwellings per annum.

2.14 This reduction of over 700 households per annum on the basis of updated projections clearly illustrates the shortcomings of either the household projections, the standard methodology or both. This is recognised by the MHCLG in their intention to revise the methodology and for ONS to produce variant projections.

Step 3

2.15 The final stage of the proposed methodology is to cap the OAN to a level which is deliverable. This cap will depend on the current status of the plan in each authority as follows:

a) for those authorities that have reviewed their plan (including a review of local housing need) or adopted their plan in the last five years, a cap may be applied to their new annual local

housing need figure at 40% above the average annual requirement figure currently set out in their plan; or

b) for those authorities that have not reviewed their plan (including a review of local housing need) or adopted their plan in the last five years, a cap may be applied to their new annual local housing need figure at 40% above whichever is higher of the projected household growth for their area over the 10 years (using Office for National Statistics' household projections), or the annual housing requirement figure set out in their most recent plan if one exists.

2.16 The latest adopted Local Plan for Oxford is from 2011; we have therefore based the calculations on there being no current local plan. As a result, the standardised requirement for Oxford is ***93 dwellings per annum, based on 2016-based household projections with uplift.*** *Capping the 2014-based household projections results in a need for 746 dpa****.***

2.17 The number calculated by the standard methodology clearly bucks recent trends (as set out in the following chapter). It also results in a nationwide shortfall against the government's stated target of 300,000 new homes per annum.

2.18 It should also be reiterated that the standard methodology is the minimum housing need figure and that local authorities are encouraged to exceed these figures. The rationale for any figures above this could include:

- To meet growth strategies;
- To reflect infrastructure improvements that will support new homes;
- Where an authority has agreed to meet the unmet need from neighbouring authorities;
- Previous level of delivery exceed the identified need; or
- Where an alternative level of need has been assessed and exceeds the standard methodology.

2.19 The "Right homes in the right places" document consultation document also added that "where there is a policy in place to substantially increase economic growth, local planning authorities may wish to plan for a higher level of (housing) growth than our formula proposes".

2.20 It added that a higher number maybe acceptable "as a result of a strategic infrastructure project, or through increased employment (and hence housing) ambition as a result of a Local Economic Partnership investment strategy, a bespoke housing deal with Government or through delivering the modern Industrial Strategy."

2.21 It would also seem reasonable that justification for a higher housing number could be made to ensure additional affordable housing is delivered. The remainder of this report examines a number of these alternatives including alternative demographic evidence, economic growth and affordable housing need.

2.22 However any figure above the 93 dwellings per annum figure becomes a policy choice for the Council until at least the time when the standard methodology is reviewed. Where this is the case this is referred to as a housing requirement or target rather than the OAN.

3 TREND BASED DEMOGRAPHICS

3.1 This section seeks to develop a realistic trend-based demographic projection for Oxford City. It begins by looking at background population statistics before moving on to consider potential future trends in each of the main components of population change (births, deaths and migration (split between in- and out-migration and internal (domestic) and international migration).

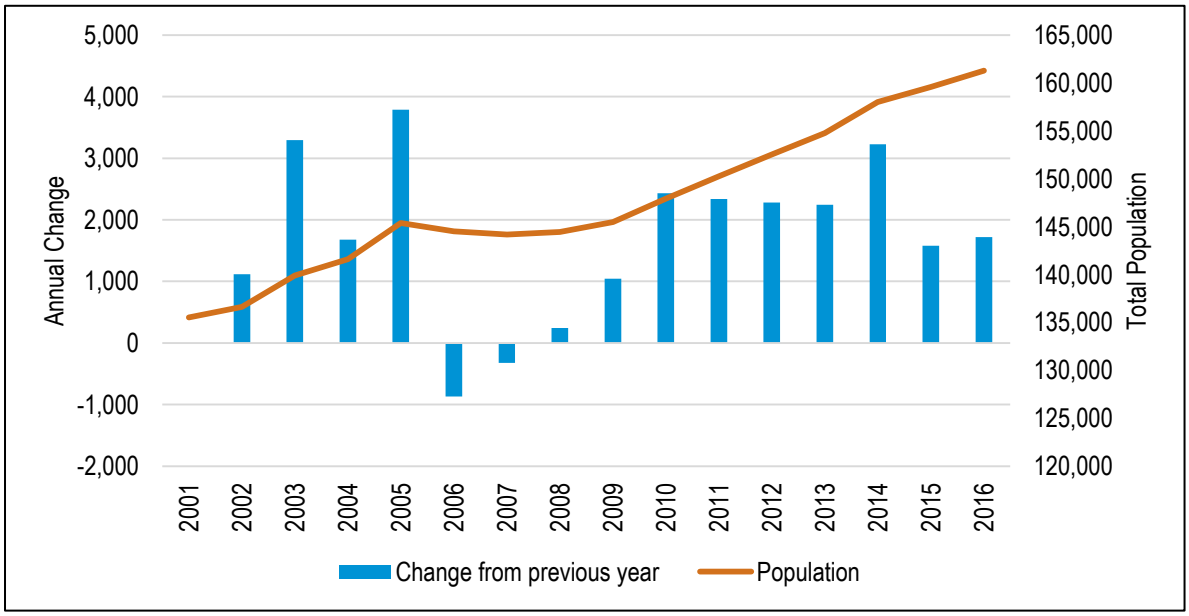
3.2 The analysis seeks to consider what the most appropriate trend-based scenario for demographic growth in the City is, taking account of the data available. Outputs are also provided for a range of sensitivities to indicate the impact of different assumptions on the core scenario developed.

3.3 The analysis then moves on to consider the inter-relationship between population and household growth, and housing need, deriving conclusions on the demographic-led need for housing.

Population Trends

3.4 The figure below shows population growth from 2001 to 2016, using data from ONS mid-year population estimates (MYE). This shows that the City's population grew from 135,500 in 2001 up to 161,300 by 2016. Population growth can be seen to be uneven over the period studied, with some years of higher growth in the 2001-5 period and relatively low growth from 2005 to 2009. Since 2009, population growth has been steadier (albeit with some year-on-year variance).

Figure 1: Population change in Oxford – 2001-16

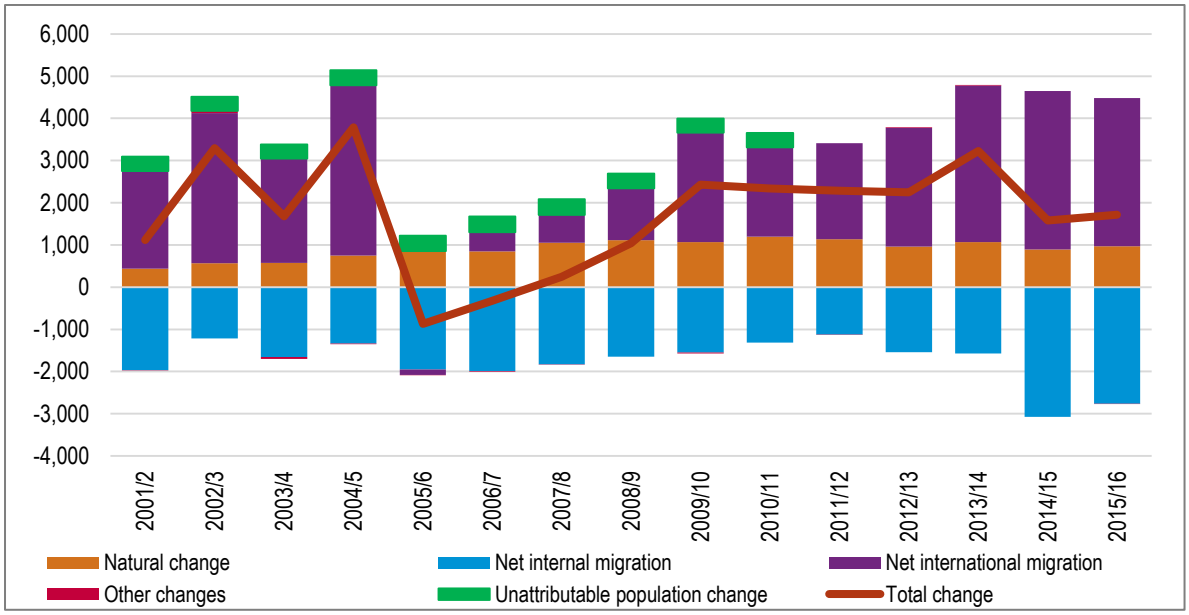


Source: ONS

3.5 The figure and table below show the components of population change in the City over the 2001-16 period. This shows that natural change (births minus deaths) have been fairly constant over time with the main reason for varying levels of population growth (as shown above) being year-on-year changes to net migration. Throughout the period studied there is a positive level of international net in-migration and a net loss of population to other parts of the country (net internal out-migration). This pattern is fairly characteristic of cities and larger urban areas.

3.6 For the period 2001-11 there is also a small positive level of Unattributable Population Change (UPC) which shows that ONS had underestimated population growth in the 2001-11 period. UPC is an adjustment made to bring the population in-line with the 2011 Census results. UPC, which averages about 350 people per annum, is relatively small when compared with many other university towns/cities (in Cambridge for example, UPC amounted to around 1,500 people per annum on average).

Figure 2: Components of population change, mid-2001 to mid-2016 – Oxford



Source: ONS

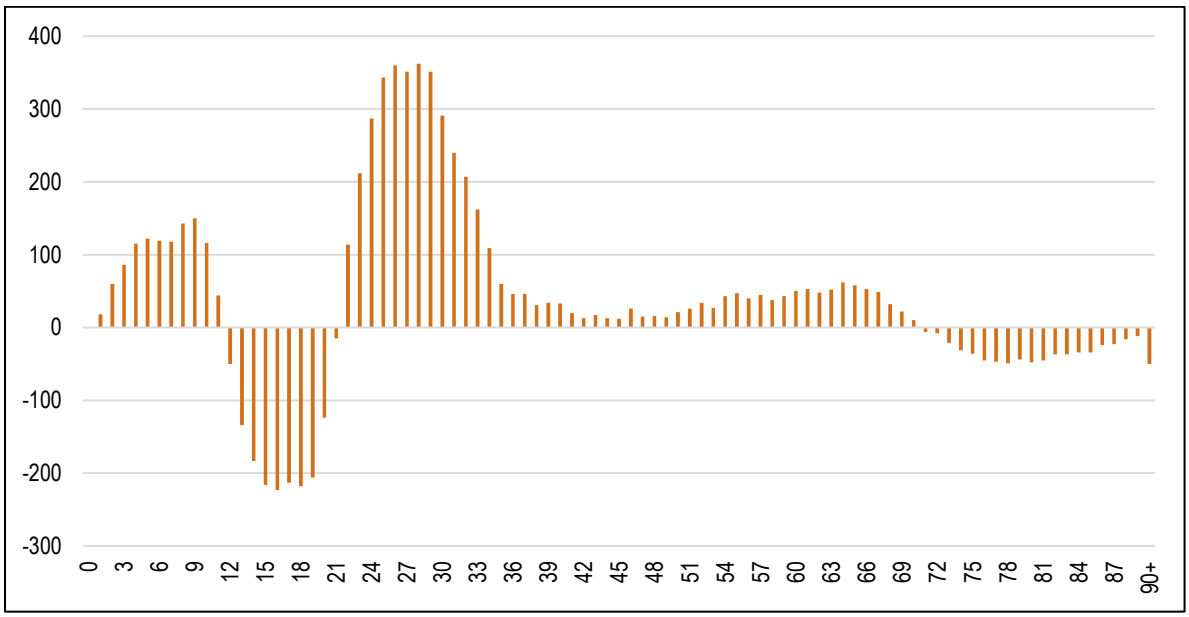
Table 1: Components of population change, mid-2001 to mid-2016 – Oxford

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	436	-1,966	2,313	-12	345	1,116
2002/3	568	-1,218	3,557	52	333	3,292
2003/4	578	-1,653	2,468	-51	334	1,676
2004/5	750	-1,340	4,038	-10	352	3,790
2005/6	855	-1,951	-128	-7	361	-870
2006/7	851	-1,991	455	-10	370	-325
2007/8	1,051	-1,830	662	-7	369	245
2008/9	1,116	-1,650	1,216	7	356	1,045
2009/10	1,069	-1,547	2,590	-22	339	2,429
2010/11	1,195	-1,316	2,102	17	340	2,338
2011/12	1,136	-1,123	2,273	-4	0	2,282
2012/13	963	-1,544	2,811	16	0	2,246
2013/14	1,067	-1,570	3,712	15	0	3,224
2014/15	897	-3,075	3,755	0	0	1,577
2015/16	971	-2,765	3,512	-1	0	1,717

Source: ONS

3.7 The figure below shows the total UPC (2001-11) by age. This suggests that over the 2001-11 period, the ONS MYE had apparently over-estimated the size of the population in age groups from about 12 to 20 (shown as negative in the graph), and underestimated population growth for most age groups in their 20s and 30s. There is also an apparent underestimation in the number of children. There are more minor differences for other age groups with an apparent modest over-estimation of people in their 40s, 50s and 60s, and slight under-estimate for age groups above this.

Figure 3: Age structure of Unattributable Population Change (2001-11) – Oxford



Source: ONS

3.8 ONS Sub-National Population Projections (SNPP) project forward internal migration based on trends over the preceding five years, and international migration over the previous 6 years constrained to the assumptions made in the national projections. The latest official projections at local authority level are 2014-based, and provide a consistent set of projections for local authorities nationally.

3.9 As an alternative to using the short terms trends in the SNPP, a scenario based on trends seen over the past 10-years has often been used in demographic analysis. We have considered whether it is appropriate to base projections on longer-term trends. The levels of migration seen over the 10-year period (2006-16) are lower than seen in the SNPP trend period; hence logically, it would be expected that a 10-year trend projection would show somewhat lower levels of population growth. Levels of migration over the 15-year period (2001-16) are on average higher than over the past 10-years, but lower than the period feeding into the SNPP. Hence any projection linked to 15-year trends would also be expected to show a lower level of population growth than official projections.

3.10 In the case of Oxford we would however note that some of the trends seen over the past 10-years are less stable than the short-term trends (as the analysis of components of change above shows).

3.11 A 15 year migration trend would capture some of the higher migration seen in the 2001-5 period. However, it is not recommended that a 15-year projection would be a robust alternative. There are two main reasons for this:

3.12 Firstly, some of the older migration data may be of a lower quality than more recent information. This will mainly be due to ONS having put in place improvements to the measurement of migration as part of their Migration Statistics Improvement Programme (MSIP).

3.13 The MSIP looked at improving a range of data, including from the International Passenger Survey (IPS). The improvements were started from 2004, with 2006 being the first year for which fully improved data was published (data generally being based on a 3-year rolling average). Hence any data prior to 2006 has the likelihood of being less accurate than later information. For Oxford, this is important given the large impact of international migration on population statistics.

3.14 Secondly, the concern with using historic data is that it is no longer relevant in terms of current trends (i.e. the migration dynamics of the 2001-6 period are not really of use when considering projections from 2016 onwards).

Implications: Overall Population Trends

3.15 Population growth overall has been reasonably steady over the past 7 years or so, and there is a reasonable basis for using projections based on this period for projecting future trends. Looking at short-term trends is consistent with official ONS projections (the subnational population projections (SNPP) which typically look at migration trends over the previous 5-6 years. We have considered 10-year population trends as a standard sensitivity analysis.

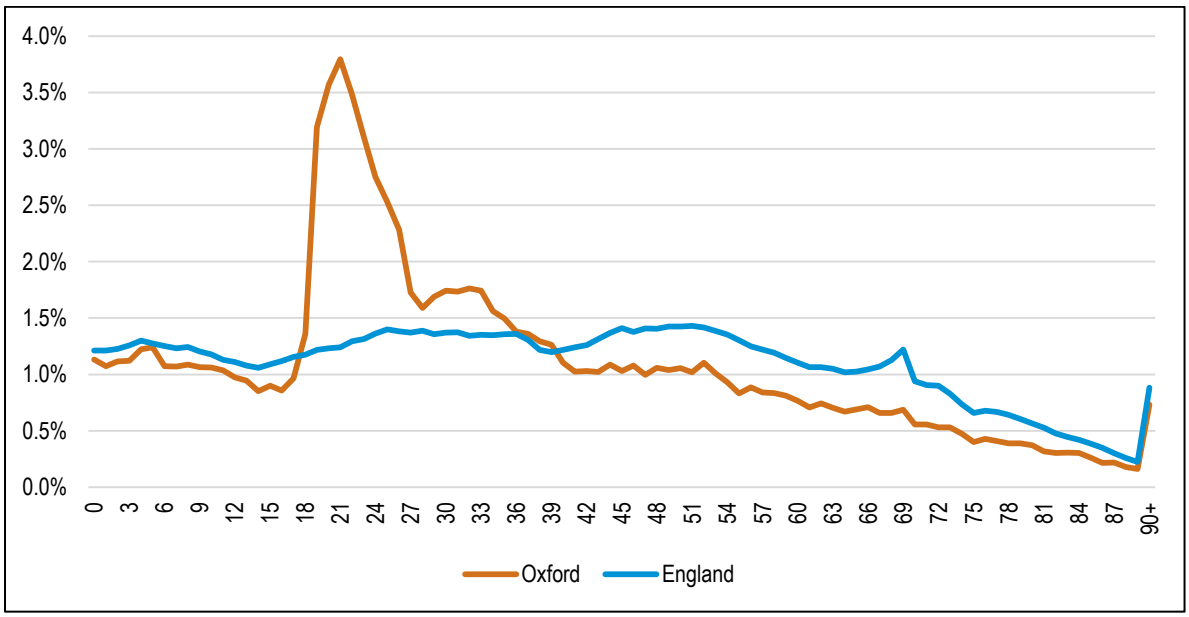
3.16 Longer-term trends in Oxford should however be treated with a degree of caution as the quality of demographic data is likely to be less good. In the longer-term, the UPC evidence suggests that net migration to Oxford could have been under-estimated; but ONS has improved its methodology for modelling migration including taking account of data on students from the Higher Education Statistics Agency (HESA) which means more recent data is likely to be of a better quality.

3.17 It is not therefore recommended in this report to look at 10-year trends (or a longer period) when projecting population growth. However, 10-year trends and a projection taking account of UPC have been included as part of our sensitivity analysis later in this section.

Age Structure

3.18 In keeping with a University City, the age structure of Oxford is younger than average. The largest age groups in the population are of those aged between 18-35, with a particularly high proportion of people aged 19-27. This can be seen in the figure below where the age structure is compared with that for England as a whole. Due to the large student population, Oxford sees a lower proportion of the population for all age groups from about 40 upwards (as well as a smaller proportion of children).

Figure 4: Age structure (2016)



Source: ONS

3.19 It is also possible to look at how the population has changed in the recent past. This analysis has looked at the five-year period from 2011 to 2016: this is partly to reflect earlier comments about using short-term trends, but also because this period allows for a comparison of MYE figures with those from the Patient Register (which is an alternative source of looking at population change).

3.20 Analysis of ONS Mid-Year Population Estimates shows population growth of 11,000 people in the 5-year period. A substantial proportion of this is in the 20-24 age group (increasing by 4,554 people – 41% of the total change). There are also notable increases in the 35-39 and 50-54 age groups – these latter increases look to be due to cohort effects (i.e. a large age group ageing on five years). In the case of 20-24 age group, the main explanation has to be due to migration and this is investigated in more detail later in this section.

Table 2: Population change 2011 to 2016 by age from ONS mid-year population estimates – Oxford

	2011	2016	Change	% change
0-4	9,176	9,140	-36	-0.4%
5-9	7,389	8,928	1,539	20.8%
10-14	7,163	7,849	686	9.6%
15-19	11,775	11,733	-42	-0.4%
20-24	22,380	26,934	4,554	20.3%
25-29	16,736	15,829	-907	-5.4%
30-34	12,883	13,780	897	7.0%
35-39	9,541	10,957	1,416	14.8%
40-44	8,863	8,495	-368	-4.2%
45-49	8,527	8,391	-136	-1.6%
50-54	7,016	8,253	1,237	17.6%
55-59	6,189	6,776	587	9.5%
60-64	5,908	5,791	-117	-2.0%
65-69	4,656	5,489	833	17.9%
70-74	3,738	4,269	531	14.2%
75-79	3,080	3,246	166	5.4%
80-84	2,527	2,580	53	2.1%
85+	2,698	2,851	153	5.7%
Total	150,245	161,291	11,046	7.4%

Source: ONS mid-year estimates

3.21 The table below shows the same information taken from Patient Register (PR) data. This data source shows that the growth in population has been lower than estimated in the MYE (9,800 people compared with 11,000) and that there are also some differences in terms of the age structure of this change. Most notable is that the Patient Register only shows a modest increase in the 20-24 age group, and more notable increases in age groups from 25-34 (where the MYE showed modest changes). There are some agreements between the sources, with notable growth recorded in the 35-39 and 50-54 age groups.

3.22 One further point to note about the Patient Register population estimates are that they show a notably higher level of population overall (regardless of whether looking at the 2011 or 2016 data). This is to be expected, with the PR being accepted as an imperfect measure of overall population. People often being registered with a GP in more than one place due to time lapses in the recording of changes, and this can be particularly influenced by students. However, the patient register data can still be useful at comparing changes over time.

3.23 The difference in the estimated change to the population profile in the two sources studied does cause some concern – this is particularly in terms of the age profile and whether or not the recorded

change to the population aged 20-24 is correct. Whilst arguably for the purposes of a projection, the base population is less important than the assumptions made about future changes, it does remain the case that if any age cohort has been over-estimated, then this cohort may continue to show relatively large population numbers as it moves through time (i.e. those aged 20-24 will be aged 30-34 in 10-years) influencing estimates of housing need.

Table 3: Population change 2011 to 2016 by age from Patient Register data – Oxford

	2011	2016	Change	% change
0-4	9,580	9,110	-470	-4.9%
5-9	7,890	9,080	1,190	15.1%
10-14	7,570	8,340	770	10.2%
15-19	13,950	13,810	-140	-1.0%
20-24	27,230	27,890	660	2.4%
25-29	19,630	21,140	1,510	7.7%
30-34	16,080	17,470	1,390	8.6%
35-39	12,400	13,890	1,490	12.0%
40-44	11,000	10,880	-120	-1.1%
45-49	9,950	10,110	160	1.6%
50-54	8,110	9,430	1,320	16.3%
55-59	6,850	7,530	680	9.9%
60-64	6,360	6,180	-180	-2.8%
65-69	4,820	5,670	850	17.6%
70-74	3,920	4,360	440	11.2%
75-79	3,140	3,330	190	6.1%
80-84	2,590	2,530	-60	-2.3%
85+	2,660	2,750	90	3.4%
Total	173,730	183,500	9,770	5.6%

Source: ONS (Patient Register data)

Implications: Age Structure

3.24 The differences shown between recent population trends using ONS Mid-Year Population Estimates and Patient Register data point to some uncertainty within statistics regarding recent population trends.

3.25 We consider that the MYE should be used to provide a baseline estimate of the size of the population and its structure as of 2016. This is because the MYE are used by ONS for their population statistics and as part of population projections. However, this should be treated with some degree of caution given the analysis of Patient Register data, which shows some quite different patterns of change over the past five years for some age groups.

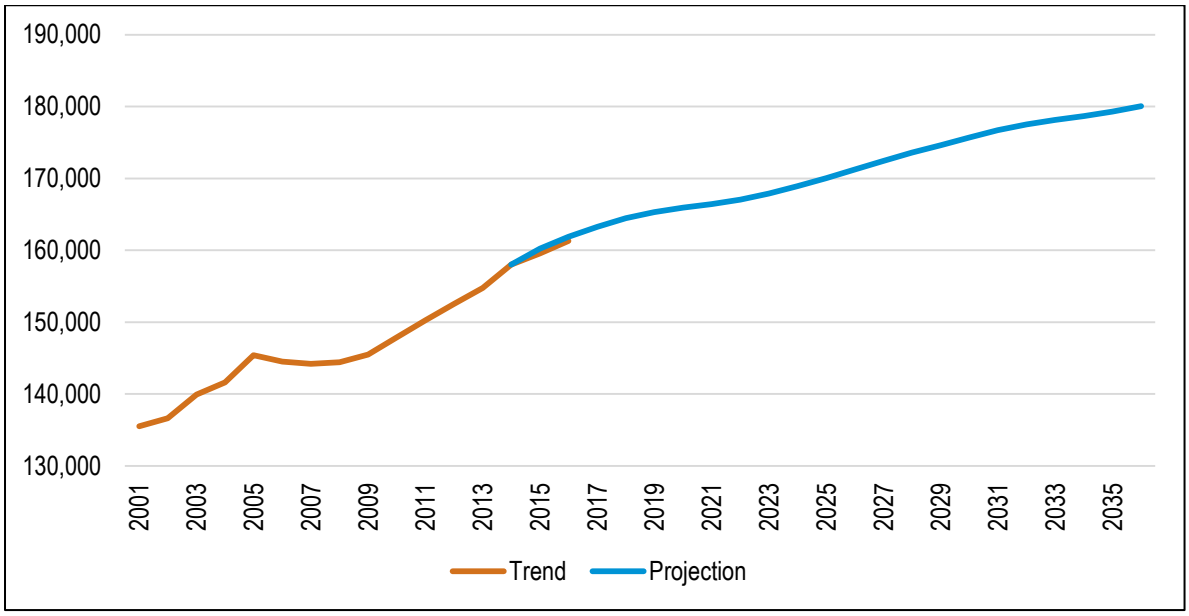
3.26 A sensitivity of using Patient Register data to inform the base population in 2016 is included as one of the sensitivities later in this section.

Official Projections

3.27 Current Planning Practice Guidance (PPG) and indeed the Government's consultation on a standardised methodology for assessing housing need puts great importance on the use of official population and household projections and sets out that these should form the starting point for the assessment of housing need. At the time of writing, the most recent sub-national projections are a 2014-based set published in Spring/Summer 2016. The figure below shows how the population of Oxford is projected to change using these projections in the period to 2036 (as well as an indication of the past trend in population growth that feeds into the projections).

3.28 The analysis shows that future population growth is projected to be at a lower rate than has been seen in the recent past (i.e. the line is not as steep), with the population projected to grow by about 11% from 2016 to 2036 (0.6% per annum). This compares with growth of 1.3% pa over the last 15-years, 1.2% over 10-years and 1.5% if just looking at the past 5-years (2011-16). It is however notable that as of 2016, the level of population shown by the MYE is actually lower than had been projected. Overall the official projections are not unreasonable particularly given growth in the most recent five years.

Figure 5: Past trends and projected future population growth (2014-based SNPP) – Oxford



Source: ONS

3.29 The finding of a lower projected level of population growth moving forwards relative to past population growth rates should not be seen as suggesting that population growth in Oxford is being

projected as too low. There are two main reasons why population growth in the City would be expected to fall below these past trends, these are:

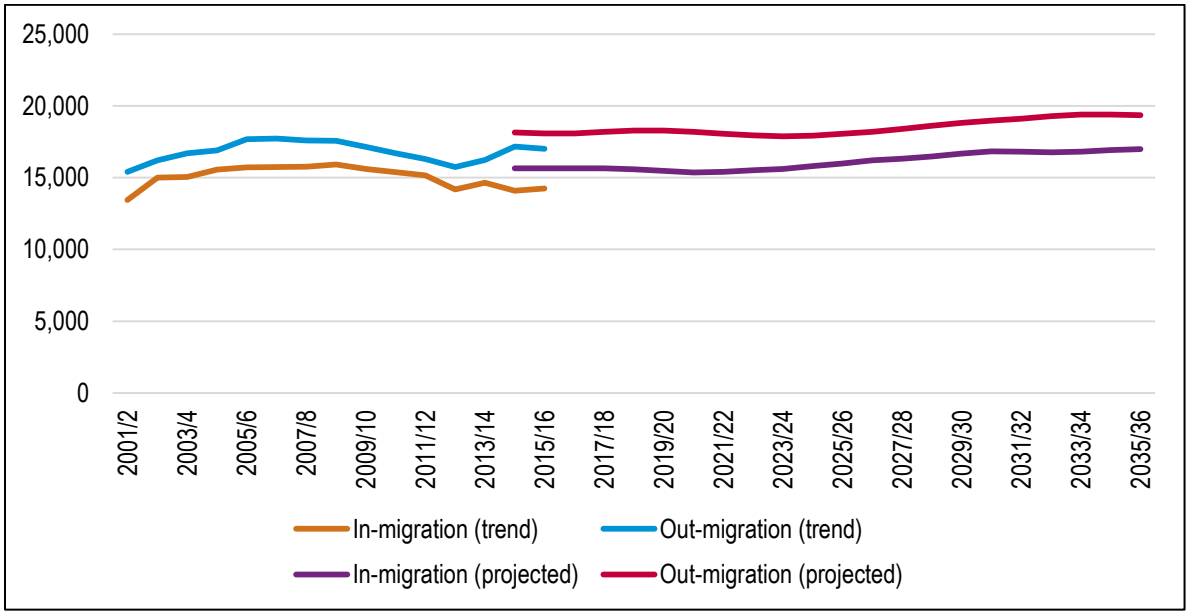
1) The age structure of the City is much younger than seen nationally. These younger age groups (at a national level are projected to see lower population growth than many of the older age groups (say from age 65 and above) and when translated into a population projection the current age structure has a dampening impact on future growth. The methodology used by ONS to project future (internal) migration is based on looking at the flows of people (by age and sex) from one local authority to another. Given that the flows to Oxford are disproportionately of younger people, and these same age groups are expected to see lower levels of population growth at a national level, the methodology over time sees net migration reduce (as there are proportionately fewer people in age groups expected to move to Oxford);
2) More significantly however, is that ONS is projecting for international migration to fall over time. At a national level (for England), net migration in the 2014-based projections is projected to fall from 216,000 people in 2016-17 to around 170,000 from 2020-21 onwards. Given that international migration is the major reason for population growth in the City, this has a notable impact on future estimates of population growth as ONS is expecting less international migration moving forwards than has been the case historically.

3.30 Invariably there is an inter-relationship between these factors and growth of the universities. To investigate these issues further it is necessary first to consider the components of population change – in particular projected migration. The ONS projections look at the in- and out-flows of population separately for each of internal and international migration. A comparison of past trends and future projections is shown below (firstly for internal migration).

Internal migration

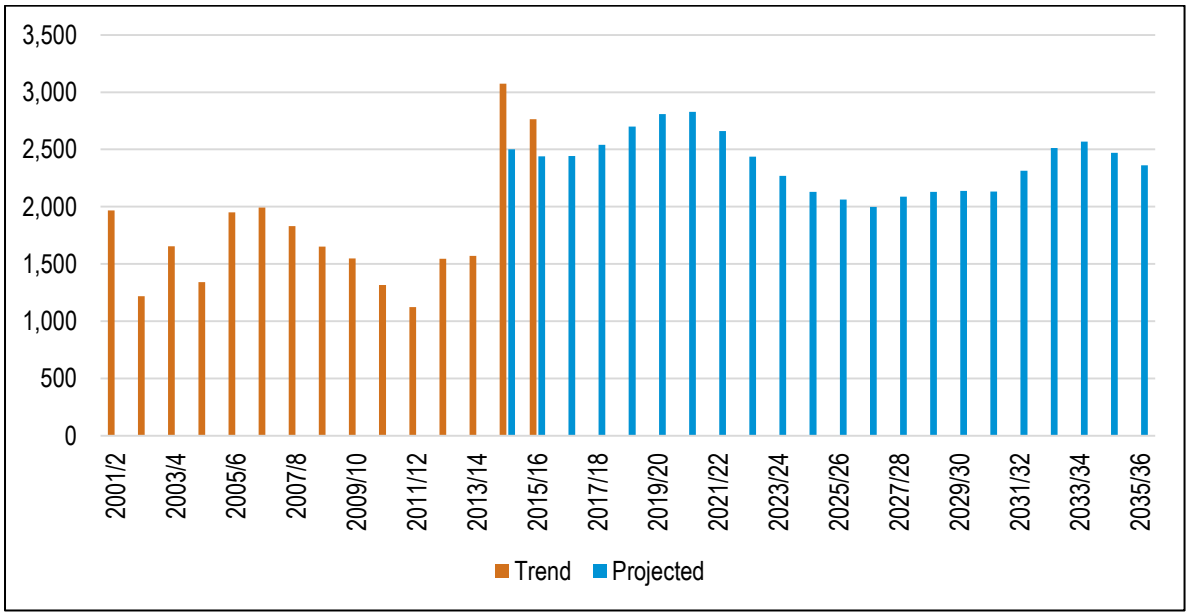
3.31 For internal migration (i.e. moves from one part of the United Kingdom to another), the analysis shows that past trends continually see a gap between in- and out-migration, such that there is a level of net out-migration to other parts of the country. This is typical for larger urban areas and cities, not least reflecting their younger population structure. The projection also reflects this (albeit both in- and out-migration is projected at a higher level than is recorded in the MYE). The level of net out-migration is generally higher in the projections than shown in past trends, although this is consistent with that shown for the past two years (i.e. the two years post-dating the projections). The second figure below shows net out-migration in trends and the projection.

Figure 6: Gross internal in- and out-migration to and from Oxford



Source: ONS

Figure 7: Net internal out-migration from Oxford



Source: ONS (Note this shows a net loss)

Implications: Internal migration

3.32 Looking at the data for internal migration, and taking account of past trends, it looks like the projection of internal net migration is not unreasonable. Whilst levels of net out-migration are typically higher than past trends, it is likely that this is due to the local age structure (and dynamics with other areas). Additionally, it is noted that internal out-migration figures for the past couple of

years are slightly higher, and not inconsistent with the projections. Hence in terms of overall flows and the level of net migration, the SNPP can be seen as realistic. The age structure of migration is discussed later in this document.

3.33 The reason why in- and out-migration are shown to be higher in the future than past trends might suggest is likely to be due to a combination of factors; this includes: overall population levels (both in Oxford and nationally), levels of international migration and the methodology used by ONS.

3.34 Looking at in-migration first, it should be noted that the methodology used by ONS is to consider age/sex specific rates of moves between all local authorities in the Country, and that these rates are based on data for the 2009-14 period. Given that the population nationally has continued to grow, there are essentially more people who might be a migrant to Oxford, and hence projected migration is higher than in the past trends.

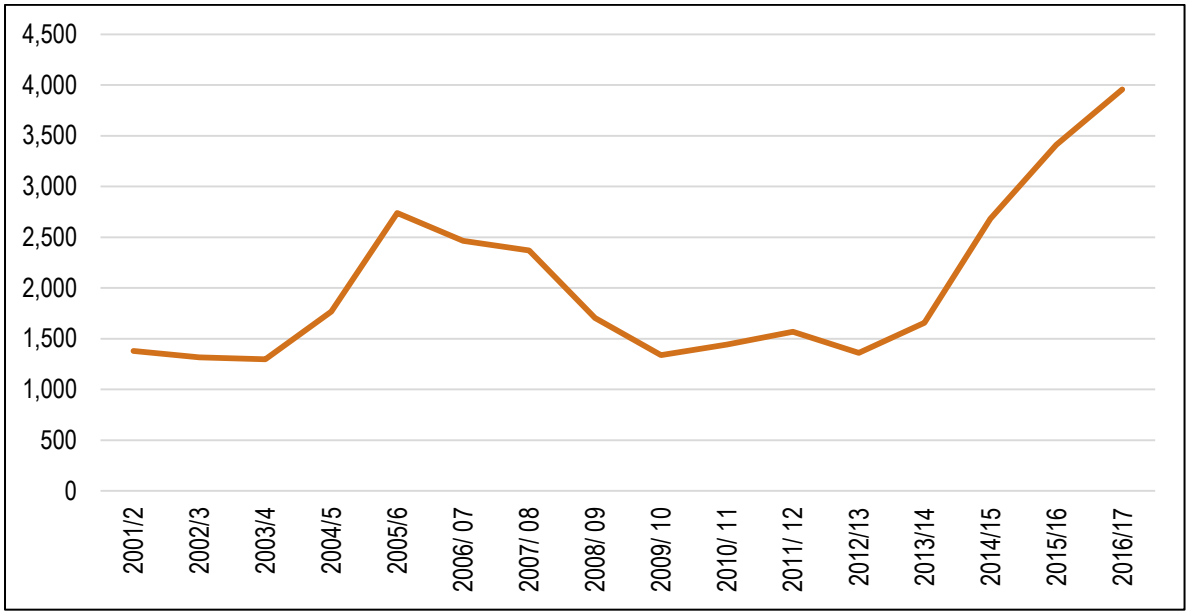
3.35 The differences between past trends and the projection in Oxford are more notable than other areas because domestic in-migration has actually been shown to have declined slightly, the ONS methodology would not pick up on this change, looking solely at the average over the 2009-14 period. Indeed if we compare the level of migration with the size of the UK population, it can be seen that there is little difference in the figures (over the 2009-14 period domestic migration to Oxford represented an average of 0.237 per thousand people moving to Oxford, the first year of the projection (2014/15 has a figure of 0.242) – the difference will most likely be explained by age structure changes and population change in areas from which people are most likely to move to Oxford.

3.36 For domestic out-migration, the same methodology is used by ONS, in this case however it will be the size and age structure of the population that influences the overall level of migration. Because the population of the City has been increasing, it is reasonable (in terms of the ONS methodology) to see a higher level of out-migration. In simple terms, there are more people who could be out-migrants. The discrepancy between past trends and the projection is more pronounced in Oxford (as for in-migration) because the actual recorded level of migration has fallen (albeit increasing in the years since 2014). It is also likely that international migration to the City will have some bearing on future estimates of out-migration, as a number of international in-migrants will in time become domestic out-migrants.

3.37 Additionally, although not likely to be picked up in the 2014-based projections, it is the case that increased housing delivery in other parts of Oxfordshire over the past few years may in part explain the increased level of domestic out-migration seen over the past couple of years. It is not entirely clear form the data about the link between housebuilding and migration, and this is a feature that

could be monitored over time, but it is reasonable to expect that this has had an influence. The figure below shows housing completions in Oxfordshire (excluding Oxford City) from 2001 to 2017.

Figure 8: Housing Completions Across Oxfordshire (excluding Oxford City) – 2001-17



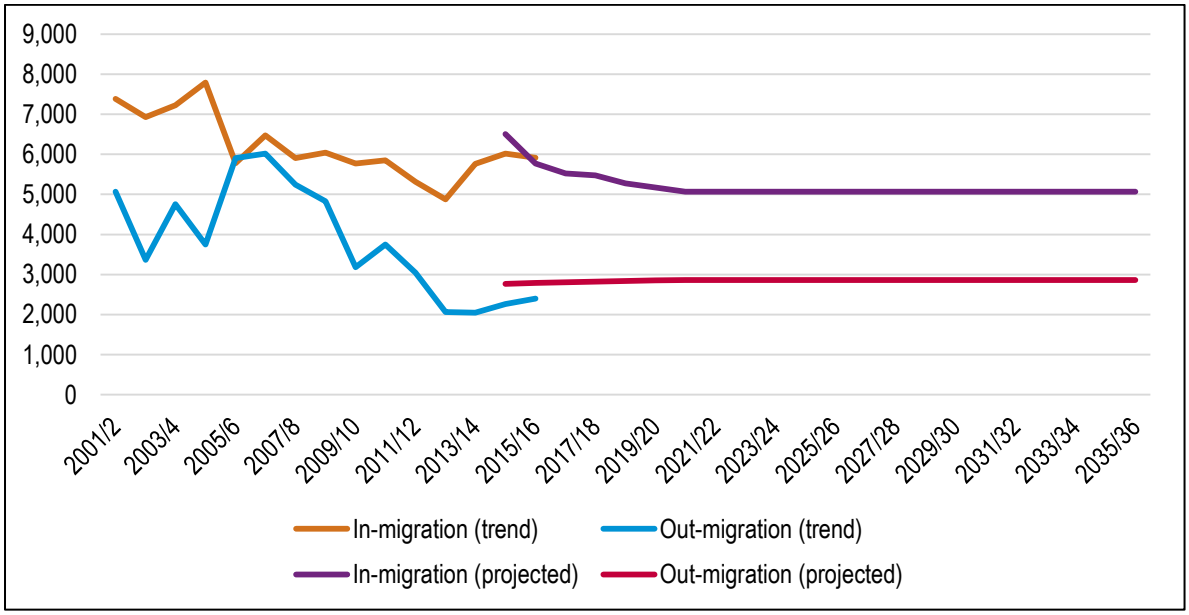
Source: Annual Monitoring Reports

3.38 Overall, the apparent discrepancy between past and projected levels of in- and out-migration looks to be reasonably well explained by the methodology used by ONS, and some of the data sitting behind population estimates and projections. In net terms however, there are no features that can be considered as unexpected.

International migration

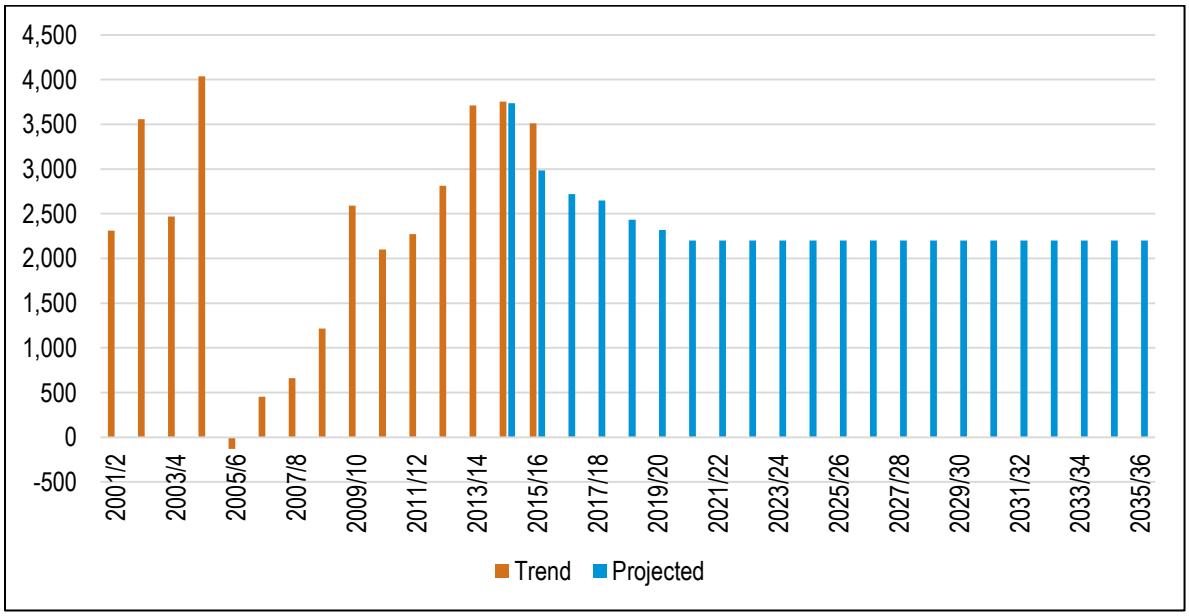
3.39 A similar analysis has been undertaken with regard to international migration. In this case there is generally a gap between in- and out-migration such that there is a notable level of net international in-migration. Again, this is common for cities and large urban areas. When looking at the level of net in-migration, it does look as if there is again a degree of consistency between recent trends and the projection. Net international migration is projected to fall moving forward over the period to 2020/1, but this is a function of projections at a national level, rather than being any specific feature of Oxford.

Figure 9: Gross international in- and out-migration to and from Oxford



Source: ONS

Figure 10: Net international in-migration to Oxford



Source: ONS

Implications: International migration

3.40 As with internal migration, there looks to be a reasonable fit between past trends and the future projection in terms of international migration to- and from- Oxford. Whilst the longer-term projected level of net migration is slightly lower than typical past trends, it is the caser that this is simply following the ONS view that international migration will fall slightly moving forward. Hence in terms

of overall flows and the level of net migration, the SNPP can be considered a realistic projection. As with internal migration, the age structure is discussed later in this document. We also consider assumptions in international migration in the ONS 2016-base national projections later in this section.

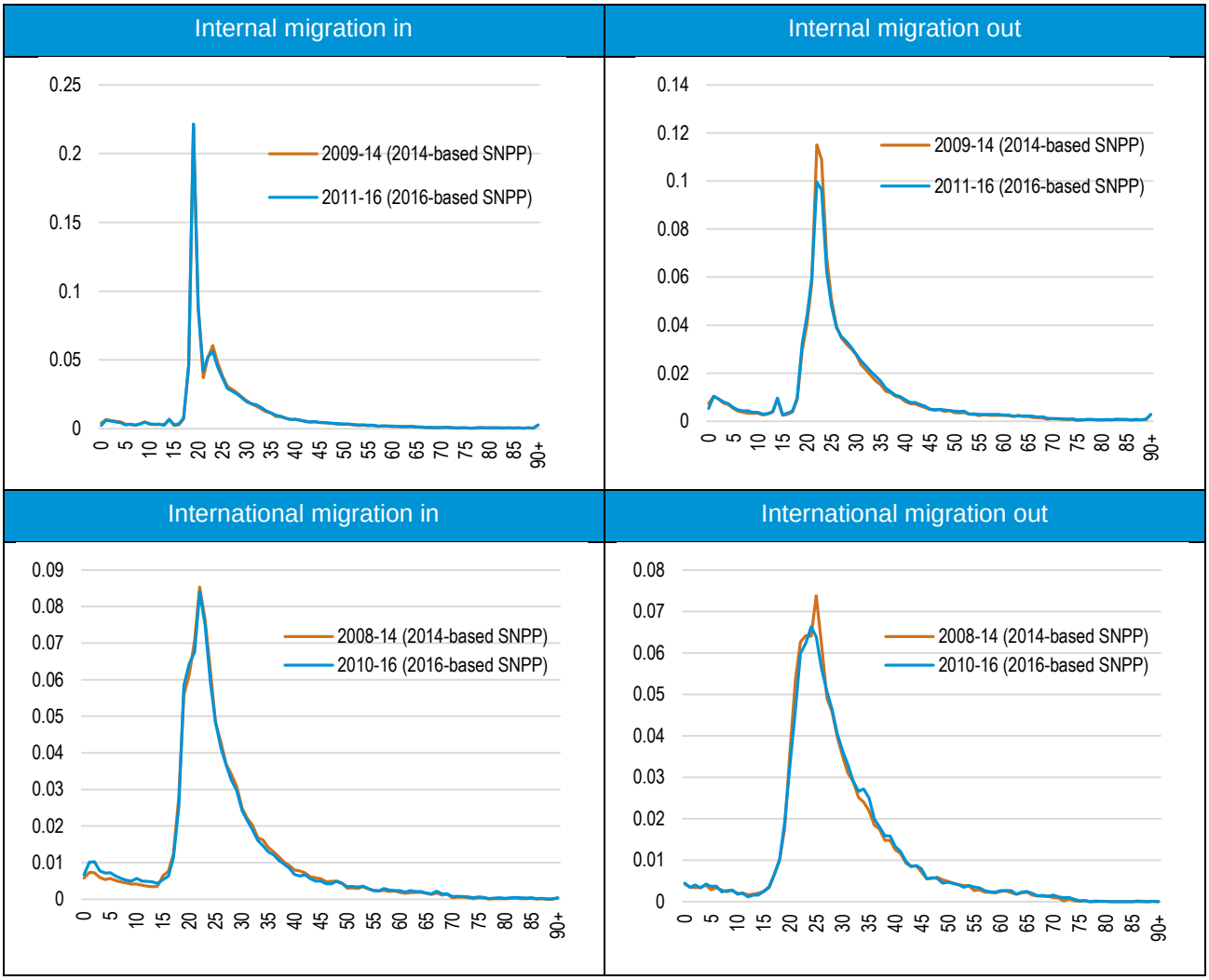
3.41 International migration is a very significant component of population growth in Oxford, and Government policy and economic performance will influence the city's population dynamics. International migration to Oxford could be affected by immigration policies including on work and student visas and it will be important that these issues are monitored over time. However to conclude the official projections look reasonable given the most recent trends.

Age Structure of Migration

3.42 As well as looking at the overall levels of migration (and by type), it is worth considering if there are any notable changes to the age structure of the migration. The figure below compares the age structure of in- and out-migration for both internal and international migration for the period running to 2014 and 2016. These periods are chosen to reflect the fact that data to 2014 will have informed the most recent SNPP, whereas data to 2016 is the latest available (and will in due course inform the next SNPP). The time periods looked at are 5-years for internal migration and 6-year for international migration (consistent with the periods from which the SNPP projections are developed).

3.43 The analysis shows that generally, migration patterns are similar regardless of the time period used. There are some small differences when looking at out-migration (for both internal and international migration). The differences are mainly in relation to lower levels of out-migration of people in their mid-20s – this is consistent with the MYE view that the population aged 20-24 has gown quite notably over the past 5-years.

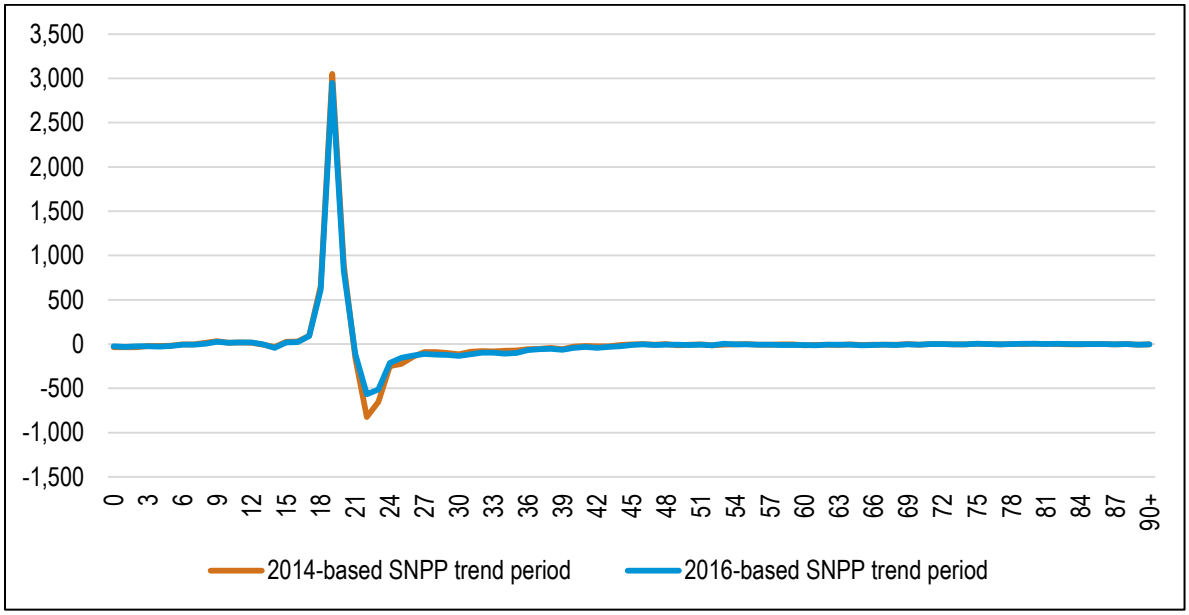
Figure 11: Age structure of migration in different base periods



Source: ONS

3.44 The data for each of in- and out-migration can be brought together to look at net migration by age (as shown in the figure below) and again for the base period feeding into both the 2014- and 2016-based SNPP. This shows very strong net in-migration of people aged 19 and net out-migration from ages 21 onwards. The net out-migration continues for all age groups up to about mid-40s; thereafter in- and out-migration are broadly in balance.

Figure 12: Age structure of net migration in different base periods



Source: ONS

Implications: Age Structure of Migration

3.45 Regardless of the time period studied, the age structure of migrants does not differ substantially. However, to ensure that recent trends evidenced by the MYE are taken account of, we consider that minor adjustments should be made to the future profile of migrant to take account of the latest data.

3.46 Overall this shows that the latest projections will likely show a reduction in the level of net out migration particularly for those in their early 20s. As noted previously it is not suggested that there is any merit in changing the actual levels of migration from those suggested by the 2014-based SNPP.

Taking Account of the latest National Population Projections

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

- ONS' long-term international migration assumptions have been revised downwards to 165,000 pa (beyond mid 2022) compared to 185,000 in the 2014-based Projections. This is based on a 25 year average;
- The latest projections assume that women will have fewer children, with the average number of children per woman expected to be 1.84 compared to 1.89 in the 2014-based Projections; and

- ONS is no longer assuming a faster rate of increase in life expectancy of those borne between 1923 – 1938, based essentially on more recent evidence. Life expectancy still increases, just not as fast as previously projected.

3.48 In due course, the key assumptions at a national level will be translated into the next SNPP, and it is considered reasonable to reflect on the new NPP in Oxford. Key assumptions made are to change both fertility and mortality rates in-line with national changes between the 2014- and 2016-based releases, but it is proposed not to make any further adjustments to international migration. Whilst ONS does not say that the downgrading of migration assumptions is due to Brexit, it is the case that Brexit may well have some impact on international migration moving forward. In the case of Oxford, it is however considered that any impacts will be less noticeable, international migration being more associated with students than in other locations.

Implications: National Population Projections (NPP)

3.49 The latest (2016-based) NPP have made changes to assumptions about birth/death rates and international migration. It is considered reasonable to make adjustments to projections in Oxford to take account of the fertility/mortality assumptions, but not make further changes to migration (other than the small adjustments to age structure as previously discussed). A sensitivity has been provided to look at maintaining the fertility and mortality rates in the 2014-based SNPP and also to modelling reduced long-term international migration.

Core Scenario Development and Sensitivities

3.50 Below we set out some detail behind our main (core) demographic scenario and also present summary findings from a range of sensitivity scenarios. As discussed above, the projections draw on the latest SNPP (2014-based) and are also informed by the 2016-based NPP. Account is also taken of the 2016 mid-year population estimates (MYE).

3.51 There are also some technical adjustments made; the main one (not discussed previously) being to either to include or exclude the consolidation factor used by ONS in the SNPP to ensure consistency between national and local projections (e.g. ensuring that all local projections sum exactly to national figures).

3.52 On the basis of the analysis above, the bullet points below set out our view about the most robust trend-based projection for the City. An indication is also provided about the range of sensitivities that could be developed:

- **2016 base population as shown in the MYE** (sensitivities could take account of Patient Register data);
- **Migration levels for in- and out-migration and internal/international migration to be the same as in the 2014-based SNPP** (sensitivities could take account of more recent trends

(2014-16) and also longer-term trends over the past 10- and 15-years. Sensitivities can also be undertaken around whether levels of migration are treated as fixed, of if they vary over time (as is the case with ONS projections));

- **Adjustments to the age/sex profile of migration to take account of recent trends**. Essentially to look at the base period to 2016 rather than the base period to 2014 (sensitivities here could look at maintaining the 2014-based migration profiles);
- **No adjustments for UPC** (sensitivities could include an adjustment);
- **Adjustments to fertility and mortality rates to be consistent with national changes contained within the 2016-based NPP** (sensitivities could be based on keeping the 2014-based rates);
- **No adjustments to migration to take account of changes suggested in the 2016-based National Population Projections** (sensitivities could test the position if lower levels of international migration are projected); and
- **Removing the ONS consolidation factor** (with including this used as a potential sensitivity).

3.53 Given the number of variables it would be possible to develop a large number of scenarios – based on the discussion above, modelling all possible alternatives would lead to over 200 different projection scenarios. Hence, we have sought to limit the scenarios presented by focussing on changes to our core position.

3.54 To put this core position into context, we have also presented a comparison with the 2014-based SNPP (as published by ONS). The outputs are mainly shown in terms of the population growth projected for the 2016-36 period and age structure changes (largely in summary form).

Outputs from a Range of Scenarios

Our preferred scenario vs. the 2014-based SNPP

3.55 The table below shows estimated population growth in the 2014-based SNPP and our Preferred Scenario. The table shows both overall population and the age structure (plus changes). The analysis shows that the 2014-based SNPP is projecting for population growth of 18,200 in the 2016-36 period, whereas the GLH core scenario has a slightly lower figure of 16,700.

3.56 There are also some differences in the projected age structure change although overall similar patterns are shown. Differences will to some extent be due to a different 2016 base population, with figure from the 2014-based SNPP being those projected by ONS, whereas the GLH figures are based on the MYE.

Table 4: Projected Population change 2016 to 2036 by age – Oxford

	2014-based SNPP			GLH Core Scenario		
	2016	2036	Change	2016	2036	Change
0-4	9,708	9,330	-378	9,140	9,424	284
5-9	9,120	9,132	12	8,928	9,141	213
10-14	7,828	9,433	1,605	7,849	8,932	1,083
15-19	12,616	14,901	2,285	11,733	14,266	2,533
20-24	24,386	27,357	2,971	26,934	27,804	870
25-29	16,035	15,715	-319	15,829	17,743	1,914
30-34	14,233	12,571	-1,662	13,780	14,049	269
35-39	11,186	10,719	-467	10,957	10,728	-229
40-44	8,730	9,819	1,089	8,495	11,658	3,163
45-49	8,571	9,404	833	8,391	7,216	-1,175
50-54	8,296	8,919	622	8,253	7,211	-1,042
55-59	6,880	8,089	1,209	6,776	7,203	427
60-64	5,817	7,101	1,283	5,791	6,543	752
65-69	5,497	6,854	1,357	5,489	6,514	1,025
70-74	4,264	6,340	2,077	4,269	6,144	1,875
75-79	3,259	4,993	1,734	3,246	4,754	1,508
80-84	2,555	3,865	1,310	2,580	3,729	1,149
85+	2,888	5,502	2,614	2,851	4,967	2,116
Total	161,870	180,045	18,175	161,291	178,025	16,734

3.57 The analysis below looks at a selected number of sensitivity scenarios with outputs shown for both overall population growth and the age structure. The age structure is provided in three broad age groups (which can broadly be described as a) children, b) working-age and c) pensionable age.

Sensitivity 1 – Changing the Base Population for 2016

3.58 In the first sensitivity below we have used all of the same assumptions in the core scenario, but have amended the base population in 2016 to take some account of the 2016 Patient Register data. Because the Patient Register cannot be used for total population estimates, the figures are derived by looking at the changes recorded on the PR from 2011 to 2016.

3.59 This shows that changing the base population can have some impact on the forward projections (even if other assumptions are held constant). With the alternative base population, the population is projected to grow by around 18,200 people with some differences in changes for specific age groups (notably changes in the number of children). It should however be noted that the projected position in 2036 is not much different between the two sources.

Table 5: Projected Population change 2016 to 2036 by age – Sensitivity 1 – Baseline population based on Patient Register

	Sensitivity 1 – Baseline population based on Patient Register			GLH core scenario		
	2016	2036	Change	2016	2036	Change
0-15	26,667	29,815	3,148	27,367	29,181	1,814
16-64	115,183	121,950	6,768	115,489	122,736	7,247
65+	18,220	26,503	8,283	18,435	26,107	7,672
Total	160,070	178,268	18,198	161,291	178,025	16,734

Source: Demographic Projections

Sensitivity 2 – Short-term Changes to Migration

3.60 The sensitivity below looks at changing the balance between internal and international migration based on comparing data in the 5/6 year period to 2016 with that for the 5/6 years to 2014 (i.e. the base period leading into the 2014-based SNPP). This shows a lower projected level of population growth. Whilst net migration in the two periods studied is not substantially different, it is the case that there has been a shift towards international migration. Given that ONS are projecting for international migration to fall in the future, this sensitivity therefore sees a disproportionate change to migration (and hence a lower projected population growth).

Table 6: Projected Population change 2016 to 2036 by age – Sensitivity 2 – Based on migration patterns in the 5/6 years to 2016

	Sensitivity 2 – Based on migration patterns in the 5/6 years to 2016			GLH core scenario		
	2016	2036	Change	2016	2036	Change
0-15	27,367	28,566	1,199	27,367	29,181	1,814
16-64	115,489	120,649	5,160	115,489	122,736	7,247
65+	18,435	26,018	7,583	18,435	26,107	7,672
Total	161,291	175,233	13,942	161,291	178,025	16,734

Source: Demographic Projections

Sensitivity 3 – 10-Year Trends (Variable Migration)

3.61 The first of two projections linked to 10-year trends; this projection looks at changing the levels of migration based on comparing those seen in the 10-year period (2006-16) with the 2014-based SNPP base period. This shows a notably lower level of population growth, linked to the fact that migration was lower in the 10-year period than was seen in the 5/6 years to 2014.

Table 7: Projected Population change 2016 to 2036 by age – Sensitivity 3 – Based on migration patterns in the 10-years to 2016

	Sensitivity 3 – Based on migration patterns in the 10-years to 2016			GLH core scenario		
	2016	2036	Change	2016	2036	Change
0-15	27,367	25,723	-1,644	27,367	29,181	1,814
16-64	115,489	111,680	-3,809	115,489	122,736	7,247
65+	18,435	25,546	7,111	18,435	26,107	7,672
Total	161,291	162,949	1,658	161,291	178,025	16,734

Source: Demographic Projections

Sensitivity 4 – 10-year Trends (Fixed Migration)

3.62 This sensitivity also looks at trends in the 10-year period to 2016, but rather than using a rates-based approach (where levels of migration can vary over time) the levels of migration have been fixed at the actual levels observed in the 2006-16 period. This shows a substantially higher level of population growth and is largely driven by an assumption that international migration will not fall over time. Due to age structure changes, ONS project internal net migration to be lower than past trends – these two factors point to this projections seeing substantial population growth.

Table 8: Projected Population change 2016 to 2036 by age – Sensitivity 4 – Based on migration patterns in the 10-years to 2016 (fixed levels)

	Sensitivity 4 – Based on migration patterns in the 10-years to 2016 (fixed levels)			GLH core scenario		
	2016	2036	Change	2016	2036	Change
0-15	27,367	31,456	4,089	27,367	29,181	1,814
16-64	115,489	134,983	19,494	115,489	122,736	7,247
65+	18,435	26,881	8,446	18,435	26,107	7,672
Total	161,291	193,321	32,030	161,291	178,025	16,734

Source: Demographic Projections

Sensitivity 5 – 15-year Trends (Variable Migration) with a UPC adjustment

3.63 This projection looks initially at comparing migration levels over the 15-year period from 2001 to 2016 with those sitting behind the SNPP and making an adjustment based on the different rates (i.e. to allow for variable migration in-line with official projections).

3.64 On top of this, an adjustment has been made for UPC in the 2001-11 period. It is considered to only be appropriate to look at UPC for this longer-term given that UPC is applicable back to 2001, and it is possible that any errors in the measurement of population happened earlier in this decade (2001-

6). This projection shows a relatively low level of projected population growth when compared with the GL Hearn Core projection.

Table 9: Projected Population change 2016 to 2036 by age – Sensitivity 5 – Based on migration patterns in the 15-years to 2016 (variable levels) and a UPC adjustment

	Sensitivity 5 – Based on migration patterns in the 15-years to 2016 (variable levels) and a UPC adjustment			GLH core scenario		
	2016	2036	Change	2016	2036	Change
0-15	27,367	27,127	-240	27,367	29,181	1,814
16-64	115,489	117,209	1,720	115,489	122,736	7,247
65+	18,435	25,216	6,781	18,435	26,107	7,672
Total	161,291	169,552	8,261	161,291	178,025	16,734

Source: Demographic Projections

Sensitivity 6 – Not making changes to birth and death rates as per the NPP

3.65 In this sensitivity, rather than adjusting birth and death rates in-line with the 2016-based National Population Projections, the rates are held constant with those in the 2014-based version (for Oxford). This shows a higher level of population growth with most of the difference being in the 0-15 and 65+ age groups. This is to be expected as the main difference in the 2016-based projections are to reduce fertility rates and also lower the improvements to old age life expectancy.

Table 10: Projected Population change 2016 to 2036 by age – Sensitivity 6 – Not making changes to birth and death rates as per the NPP

	Sensitivity 6 – Not making changes to birth and death rates as per the NPP			GLH core scenario		
	2016	2036	Change	2016	2036	Change
0-15	27,367	30,169	2,802	27,367	29,181	1,814
16-64	115,489	123,023	7,534	115,489	122,736	7,247
65+	18,435	26,964	8,529	18,435	26,107	7,672
Total	161,291	180,157	18,866	161,291	178,025	16,734

Source: Demographic Projections

Sensitivity 7 – Including Population Constraints as in the SNPP

3.66 Sensitivity 7 looks at the impact of the population constraints contained within the 2014-based SNPP. Essentially, ONS develops a series of projections for each local authority and then adds up the population totals (by age and sex) and compares these with national projections.

3.67 Where there are differences in the totals, an adjustment is made to the SNPP to ensure that all local projections sum to the national total – the impact of the constraint applied can see projections either go up or down, depending on the age structure of an area.

3.68 In Oxford, it can be seen that the constraint has a minor downward impact on projected population growth, with differences largely focussed on the 16-64 age group (and potentially linked to student age groups where consolidation factors are often seen to be largest).

Table 11: Projected Population change 2016 to 2036 by age – Sensitivity 7 – Including population constraints as in the SNPP

	Sensitivity 7 – Including population constraints as in the SNPP			GLH core scenario		
	2016	2036	Change	2016	2036	Change
0-15	27,367	29,158	1,791	27,367	29,181	1,814
16-64	115,489	122,173	6,684	115,489	122,736	7,247
65+	18,435	26,112	7,677	18,435	26,107	7,672
Total	161,291	177,443	16,152	161,291	178,025	16,734

Source: Demographic Projections

Sensitivity 8 – Further adjustments to take account of changing international migration assumptions in the NPP

3.69 The final sensitivity developed is to look at the potential impact of taking account of National Population Projections expecting to see a lower long-term level of international migration (reducing from a level of 185,000 people per year net moving to the United Kingdom to 165,000 per annum). If the national assumptions are overlaid on the data for Oxford, it can be seen that this would imply a notably lower level of population growth (of about 14,000 people, compared with 16,700 in the core scenario). The main difference can be seen in the 16-64 age group, although there is also a reduced projected change in the number of children.

Table 12: Projected Population change 2016 to 2036 by age – Sensitivity 8 – Further adjustments to take account of changing international migration assumptions in the NPP

	Sensitivity 8 – Further adjustments to take account of changing international migration assumptions in the NPP			GLH core scenario		
	2016	2036	Change	2016	2036	Change
0-15	27,367	28,642	1,275	27,367	29,181	1,814
16-64	115,489	120,564	5,075	115,489	122,736	7,247
65+	18,435	26,045	7,610	18,435	26,107	7,672
Total	161,291	175,250	13,959	161,291	178,025	16,734

Source: Demographic Projections

Summary of Sensitivities

3.70 The table below brings together the estimated population change under each of the scenarios developed (including the suggested core scenario). The first table summarises the projections

developed and used and it should be noted that the sensitivities provided (other than using the 2014-based SNPP as published) are all based on adjustments from our core scenario.

Table 13: Description of Projections developed and used in this report

Scenario name	Description
GLH Core	Core scenario linking to 2014-based SNPP with adjustments for 2016 MYE, migration age structure, national fertility/mortality projections and removing the ONS consolidation factor.
2014-based SNPP	Population projections from the latest (2014-based) ONS subnational population projections.
S1 – PR 2016	Adjustment to the base population in 2016 to take account of Patient Register data.
S2 – STmig	Adjustments made to take account of short-term changes to the balance between internal/international in- and out-migration. This is the difference between trends in the 5/6 years to 2016 and the 5/6 years to 2014 (as underpin the 2014-based SNPP).
S3 – 10mig(var)	Adjustments made to take account of migration over the past 10-years (2006-16). Levels of migration are variable, as informed by the 2014-based SNPP.
S4 – 10mig(fixed)	Adjustments made to take account of migration over the past 10-years (2006-16). Levels of migration are fixed and modelled at the actual average level seen in the 2006-16 period.
S5 – 15yr(UPC)	Adjustments made to take account of migration over the past 15-years (2001-16). Levels of migration are variable, as informed by the 2014-based SNPP. A further adjustment is made to take account of the Unattributable Population Change (UPC) by age/sex observed in the 2001-11 period.
S6 – BD-NPP	Using the core scenario but returning birth and death rates back to the levels underpinning the 2014-based SNPP for Oxford.
S7 – Constraint	Based on adding back in the population constraint within the 2014-based SNPP.
S8 – NPPmig	Based on modelling (at a local level) the reduced level of long-term international migration projected by ONS at a national level.

3.71 The table below shows that the range of projections developed suggests somewhat different estimates of projected population growth. The full range of sensitivities developed show estimated population growth varying from 1% using 10-year migration trends with a variable level of migration, up to 20% with 10-year trends being fixed at actual past migration levels. Other scenarios sit either slightly above or slightly below the core GLH scenario and generally it can be seen that the GLH core figures sit somewhere in the middle of the range developed. The wide range does however show how difficult it is to project population growth in Oxford, with apparently small changes to assumptions having a potentially substantial impact on the figures.

Table 14: Projected Population Change 2016 to 2036 for a range of scenarios

	2016	2036	Change	% change
GLH Core	161,291	178,025	16,734	10.4%
2014-based SNPP	161,870	180,045	18,175	11.2%
S1 – PR 2016	160,070	178,268	18,198	11.4%
S2 – STmig	161,291	175,233	13,942	8.6%
S3 – 10mig(var)	161,291	162,949	1,658	1.0%
S4 – 10mig(fixed)	161,291	193,321	32,030	19.9%
S5 – 15yr(UPC)	161,291	169,552	8,261	5.1%
S6 – BD-NPP	161,291	180,157	18,866	11.7%
S7 – Constraint	161,291	177,443	16,152	10.0%
S8 – NPPmig	161,291	175,250	13,959	8.7%

Source: Demographic Projections

Potential Growth in Student Numbers

3.72 A key question when looking at demographic trends and projections in Oxford will be about potential changes to student numbers, and if they are captured in the projections. To get an idea of potential changes to the number of students, we have drawn on a study by the Cambridge Centre for Housing and Planning Research (CCHPR) – Assessment of Student Housing Demand and Supply for Oxford City Council (January 2017).

3.73 This study sets out estimates of the growth in the number of students at Oxford Brookes University and the University of Oxford (UoO). The main assumptions used are that there will be a 1%-2% per annum growth for Oxford Brookes, along with a 0.5% per annum increase in undergraduates at the University of Oxford and a 2% per annum increase in postgraduates.

3.74 For the purposes of our study, these figures have been used with an assumption of 1.5% per annum growth at Oxford Brookes (i.e. the middle of the range). Further data has been taken from the Higher Education Statistics Agency (HESA) about the age and different type of student (i.e. under- and post-graduate) for 2016 to provide a base position from which student numbers can be projected.

3.75 The table below shows that the number of students is expected to increase by just under 10,000 in the period from 2016 to 2036, with a slightly higher increase expected for Oxford University and overall amongst postgraduates. The analysis shows that around three-fifths of the growth is projected to in age groups of people under 25 and about 16% of people aged 30 and over.

Table 15: Projected Change in Number of Students in Oxford (2016-36)

		Undergraduate	Postgraduate	Total
Oxford Brookes	Under 25	3,085	305	3,389
	25-29	218	160	378
	30+	315	122	437
	Total	**3,617**	**587**	**4,204**
Oxford University	Under 25	1,123	1,443	2,566
	25-29	25	1,902	1,927
	30+	12	1,067	1,079
	Total	**1,160**	**4,412**	**5,572**
Total students	Under 25	4,208	1,748	5,955
	25-29	243	2,062	2,305
	30+	327	1,189	1,516
	Total	**4,778**	**4,998**	**9,776**

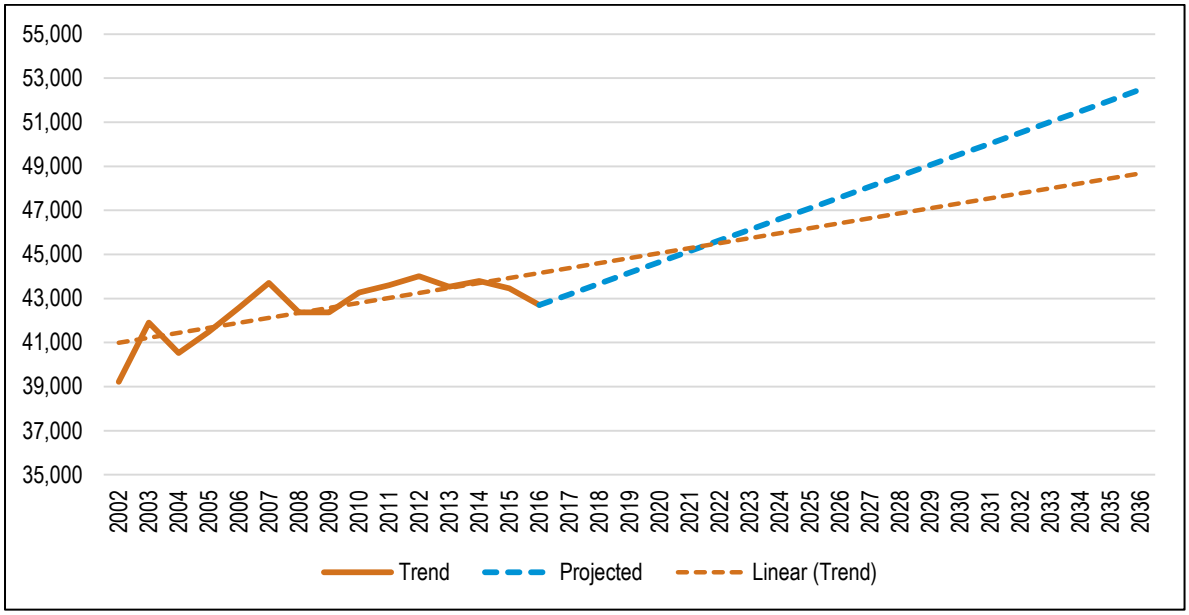
Source: GLH analysis informed by CCHPR and HESA data

3.76 The growth in the number of students can be put in context with past trends (data from HESA) and this is shown in the figure below. This shows that whilst there has been some increase in the number of students in the City over the past decade or so, the projected levels of student growth are somewhat higher. This does potentially raise two issues:

- Is the growth in students properly reflected in the projections given that past trend analysis shows a lower level of growth (e.g. this lower level may be reflected moving forward in any trend-based projection)?; and
- Are the projections for the growth in the number of students realistic given that they are somewhat higher than past trends show has happened?

3.77 The second of the questions above is difficult to answer and it may be that monitoring student numbers is the best way to test if this projection is realistic. It is however possible to consider the projected growth in different age groups and to see how this fits with the projected student numbers. This is not entirely straightforward as the student age groups shown above are not entirely discrete (e.g. those aged 30 or over could theoretically be age 90). To look at different age groups, we have used ages 18-24 to look at the Under 25 age group and people aged 30-44 for the 30+ age group. The table below shows the projected level of growth in each of these age groups from our core projection.

Figure 13: Past trends and future projected number of students in Oxford



Source: GLH analysis informed by CCHPR and HESA data

3.78 The analysis shows that there is projected to be an increase of 7,715 people in the age groups used to consider students; this is slightly lower than the projected increase in the number of students (of 9,776) with the main difference being in the 18-24 age group, where the projected population growth is less than half the projected increase in the number of students. This might suggest that some further increase in the population of Oxford could be expected (to take account of students) but given the query set out above about the student projections it is not considered that any further adjustments need to be made at the present time. We have not made an adjustment at this stage, but this is an issue for discussion. As noted, student numbers should be monitored over time.

Table 16: Projected Change by age in potential student age groups in Oxford (2016-36)

Age group	2016 population	2036 population	Change
18-24	34,277	36,876	2,599
25-29	15,829	17,743	1,914
30-44	33,232	36,435	3,203
Total	83,338	91,053	7,715

Source: Demographic Projections

Household Formation Rates

3.79 Having studied the population size and the age/sex profile of the population the next step in the process is to convert this information into estimates of the number of households in the area. To do this the concept of Household Representative Rates (HRR) is used. HRRs can be described in their

most simple terms as the number of people who are counted as heads of households (or in this case the more widely used Household Reference Person (HRP)).

3.80 In September 2018 ONS produced the 2016-based household projections. These were the first projections produced by ONS having taken over the role from CLG. The ONS projections drew on trends from 2001 rather than 1971 and as a result locked in more recent trends in household formations. This has in part resulted in the reduced household growth set out in the previous chapter.

3.81 It is also the reason that the ONS have agreed to produce a variant household projections whereby household formation rates in younger age groups (25-44) are increased rather than supressed. ONS state that "the purpose of this variant would be to illustrate the uncertainty in the projections around the future household formation patterns of this age group".

3.82 With this uncertainty in mind we have continued to use the 2014-based household projections which were published by the CLG in June 2016. Although it should also be stated that this work was largely drafted on that bases.

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

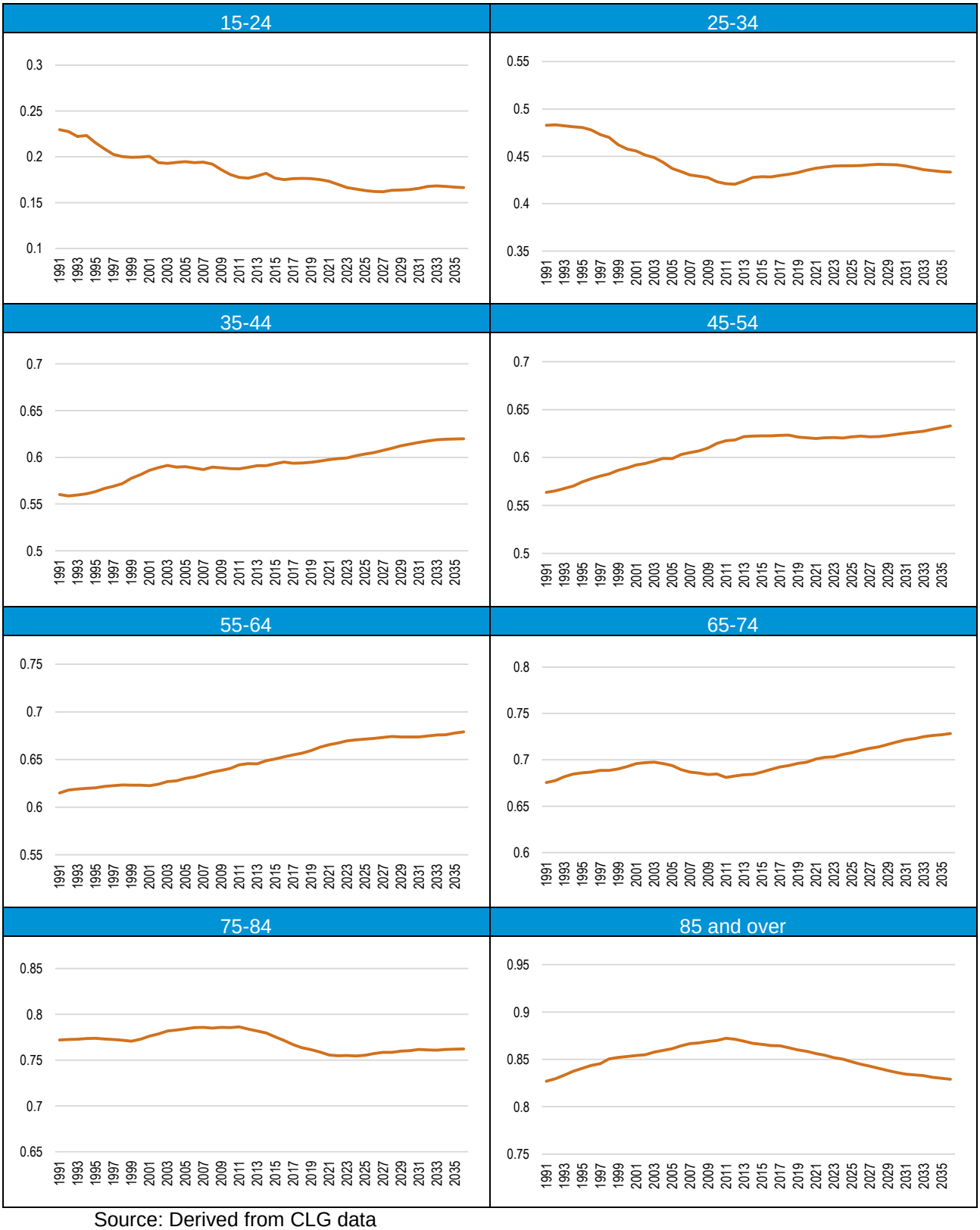
3.84 The Stage 2 household projections consider household types and the methodology report accompanying the projections is clear that these projections are based on just two data points – from the 2001 and 2011 Census. Overall outputs on total household growth are constrained to the totals from the Stage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

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

3.86 The figure below shows how Stage 1 figures differ for different age groups. It is evident from the analysis that household formation amongst households in their late 20s and early 30s fell slightly over the 2001-11 decade, although moving forward from 2011, the data does suggest that there will not be any notable further reduction (with any reduction only apparent after about 2029). Data for the 35-44 age group shows a strong increase in the rate from 1991 to 2001, and that increases since (both trend and projected) are more modest.

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

Figure 14: Projected household formation rates by age of head of household – Oxford



Source: Derived from CLG data

Sensitivity Testing Household Formation Assumptions

3.88 The PPG in Para 2a-017 states that it may be sensible to undertake sensitivity testing around household formation rates; and sets out that the household formation rates may in some circumstances have been suppressed historically by an under-supply of housing and worsening affordability (Para 2a-015).

3.89 Against this context, GL Hearn has considered trends in household formation in the 2014-based Household Projections. As the data shows, in Oxford, household formation rates for younger households had fallen (at least in the 25-34 age group). Research by the late Alan Holmans[8] has suggested that this is likely in part due to increasing international migration and in part due to economic factors and affordability. His research identified that:

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

3.90 Broadly what Dr Holmans was saying is that about half of changes to household formation seen nationally are due to market factors and about half due to international migration. International migration is a notable component of demographic trends in Oxford, as the components of change analysis in shows, and international migration is therefore likely to have made more of a contribution to the fall in household formation amongst younger households than market factors (which might include access to mortgage finance).

3.91 Research by Neil McDonald and Christine Whitehead[9] has taken forward the Holmans' research to consider the 2012-based Household Projections. The assumptions on household formation in the 2014-based Household Projections are very similar to these.

3.92 Their research identified that changes in household formation amongst younger households are not just related to the recession and housing market factors, but to levels of student debt, impacts of welfare reform, changes in types of employment, and higher numbers of couple households than previously projected, as well as the impacts of international migration on changing household structures.

3.93 The implication of all of this is that the household formation assumptions in the 2008-based Household Projections, which pre-dated the 2011 Census, should be considered too high and it is unrealistic to assume a 'full return' to these.

[8] Holmans, A. (2013) *New estimates of housing demand and need in England, 2011-31, TCPA, London.*
[9] McDonald, N. and Whitehead, C. (Nov 2015) *New estimates of housing requirements in England, 2012 to 2037*.

3.94 Nonetheless, as the analysis above shows some reduction in the HRRs for the population aged 25-34 a sensitivity test has been developed to look at an alternative approach to HRRs. In this sensitivity, a 'part-return-to-trend' analysis has been developed, where the rate of household formation sits somewhere between figures in the 2014-based projections and those in an older 2008-based version.

3.95 The adjustment has been applied to the 25-34 age group. Whilst the 35-44 age group doesn't show any reduction, either historically or in the future, it has become common practice to include a similar adjustment to this age group also. This is largely borne out of the suggested changes from the Local Plan Expert Groups suggested changes to the PPG[10].

Housing Need

3.96 The first table below bring together outputs in terms of household growth and housing need using the 2014-based HRRs and the second includes an uplift to the 25-34 and 25-44 age group.

3.97 To convert households into dwellings the data includes an uplift to take account of vacant and 2nd/holiday homes. This has been based on 2011 Census data with an adjustment to take account of the reduction in the number of vacant homes seen since 2011 (informed by Council Tax data). The vacancy rate applied is 2.6%.

3.98 The analysis shows that using the 2014-based HRRs and the GLH core scenario, there is a need for 513 dwellings per annum in the 2016-36 period. Increasing the HRRs for the 25-34 and 35-44 population increase this figure by about 6% to 543 dwellings per annum. This is modestly below the outputs from the 2014-based SNPP.

3.99 The various sensitivities developed show a wide range of different outputs; focussing on the 2014-based HRRs the range of outputs can be seen to be from 196 to 1,001 dwellings per annum.

[10] http://lpeg.org/wp-content/uploads/2016/02/Appendices-local-plans-report-to-government.pdf

Table 17: Projected housing need – 2014-based CLG HRR Assumptions

	Households 2016	Households 2036	Change in households	Per annum	Dwellings (per annum)
GLH Core	**59,306**	**69,315**	**10,009**	**500**	**513**
2014-based SNPP	59,369	70,175	10,806	540	554
S1 – PR 2016	59,008	67,763	8,755	438	449
S2 – STmig	59,306	69,151	9,845	492	505
S3 – 10mig(var)	59,306	63,122	3,816	191	196
S4 – 10mig(fixed)	59,306	78,822	19,516	976	1,001
S5 – 15yr(UPC)	59,306	65,616	6,310	316	324
S6 – BD-NPP	59,306	70,002	10,696	535	549
S7 – Constraint	59,306	69,146	9,840	492	505
S8 – NPPmig	59,306	68,460	9,154	458	470

Source: Demographic projections

Table 18: Projected housing need – Adjusted Household Formation Rates

	Households 2016	Households 2036	Change in households	Per annum	Dwellings (per annum)
GLH Core	**59,306**	**69,900**	**10,594**	**530**	**543**
2014-based SNPP	59,369	70,768	11,399	570	585
S1 – PR 2016	59,008	68,335	9,327	466	478
S2 – STmig	59,306	69,706	10,400	520	533
S3 – 10mig(var)	59,306	63,586	4,279	214	219
S4 – 10mig(fixed)	59,306	79,457	20,151	1,008	1,034
S5 – 15yr(UPC)	59,306	66,115	6,809	340	349
S6 – BD-NPP	59,306	70,588	11,282	564	579
S7 – Constraint	59,306	69,734	10,428	521	535
S8 – NPPmig	59,306	69,025	9,719	486	498

Source: Demographic projections

Final HRR Sensitivity

3.100 A final HRR sensitivity has been developed – this is based on recreating the assumptions used in the Oxfordshire SHMA. At the time of the SHMA, the latest household projections available were the 2011-based 'interim' projections, which were widely considered as 'not fit for purposes'. Hence in the SHMA, the 2011-based projections were adjusted to try to find a more realistic view about HRRs.

3.101 It was observed that the 2011-based projections were showing a constrained household formation position moving forward and so the SHMA developed a set of rates where any future suppression was removed – the SHMA rates did not however seek to address any historic constraint in household formation. The table below shows the housing need outputs if the SHMA rates are

applied to our new population projections. This shows for all scenarios that using the SHMA rates gives lower housing need figures that either of the two scenarios developed above.

Table 19: Projected housing need – Oxfordshire SHMA HRR assumptions

	Households 2016	Households 2036	Change in households	Per annum	Dwellings (per annum)
GLH Core	59,126	67,950	8,825	441	453
2014-based SNPP	59,385	69,460	10,075	504	517
S1 – PR 2016	59,059	66,542	7,482	374	384
S2 – STmig	59,126	67,999	8,873	444	455
S3 – 10mig(var)	59,126	62,088	2,962	148	152
S4 – 10mig(fixed)	59,126	77,266	18,141	907	930
S5 – 15yr(UPC)	59,126	64,115	4,989	249	256
S6 – BD-NPP	59,126	68,602	9,476	474	486
S7 – Constraint	59,126	67,877	8,751	438	449
S8 – NPPmig	59,126	67,253	8,128	406	417

Source: Demographic projections

Key Points

- The Oxford City population totals 90,537 persons as of mid-2016. This has grown by 25% since 1991, with an average annual growth of 0.9%.
- Net International migration has been a key driver of historic population change, which although fell over the 2005/6 to 2008/9 have since recovered to pre-recession levels in the most recent past.
- The starting point of the assessment is the 2014-based projections which show an average household growth of about 554 household per annum for the period 2016-36 – this would be a 16.8% increase. Taking into account the 2016 MYE reduces this to 449 dpa.
- As outlined in the previous chapter taking into account the latest 2016-based projections significantly decreases the need over the same period a growth of 95 households per annum. However these diverge from recent trends and there remains questions over its quality.
- Given historic issues with demographic data in Oxford and the release of 2016-based national projections the SHMA has tested a range of sensitivities to the official projections. Our core scenario started with the 2014-based SNPP with adjustments for 2016 MYE, migration age structure, and implemented national 2016-based fertility/mortality projections and removing the ONS consolidation factor.
- The Core sensitivity resulted in a housing need 513 dpa which is slightly below the previous official projections. Including an adjustment to Household Formation Rates which recognises and adjusts for historic reduction in the HRRs for the population aged 25-34 the Core Scenario increases to 543 dpa.
- The concluded demographic need (using alternative analysis to the 2016-based projections) in Oxford for the period 2016-36 should be seen as a range from the previous official projections to our Core Scenario 543 to 554 dpa. While the Core Scenario results in a slightly lower housing need than the previous official projections it has a notably different age structure.

4 ASSESSING ECONOMIC GROWTH

4.1 In 2014, Cambridge Econometrics and SQW were commissioned by partners in Oxfordshire[11] to prepare a set of economic forecasts for the county, to inform the Oxfordshire Strategic Housing Market Assessment (SHMA) and the Oxfordshire Strategic Economic Plan[12]. This included:

- the development of a revised baseline projection (which was adapted to reflect a locally-derived set of demographic projections and which assumed that historical trends in growth in Oxfordshire (as compared with the wider South East (or UK) economy on an industry-by-industry basis) continue into the future); and
- a Planned Economic Growth forecast, which took account of local policy influences on economic growth.

4.2 Within Oxford, the PEG forecast from 2014 anticipated 'above trend' jobs growth of 8,100 in the period 2011-31, through additional employment in the universities and within the bioscience, healthcare, advanced engineering, environmental technologies and retail sectors.

4.3 For this assessment Oxford City Council commissioned GL Hearn, SQW and Cambridge Econometrics to prepare an 'updated' PEG forecast based on a new set of revised baseline projections (including again locally-derived demographic projections) and a review of the local policy assumptions contained in the 2014 study over an extended timescale (i.e. looking forward to 2036).

4.4 This chapter sets out the results of the revised baseline projection which took into account GL Hearn's baseline projection. The justification for this is that the baseline forecasts reflected the mid-year population estimates to 2016, and thereafter growth rates from the 2014-based subnational population projections, scaled to the 2016-based national population projections. As discussed in the previous chapter this may not be relevant for the City of Oxford.

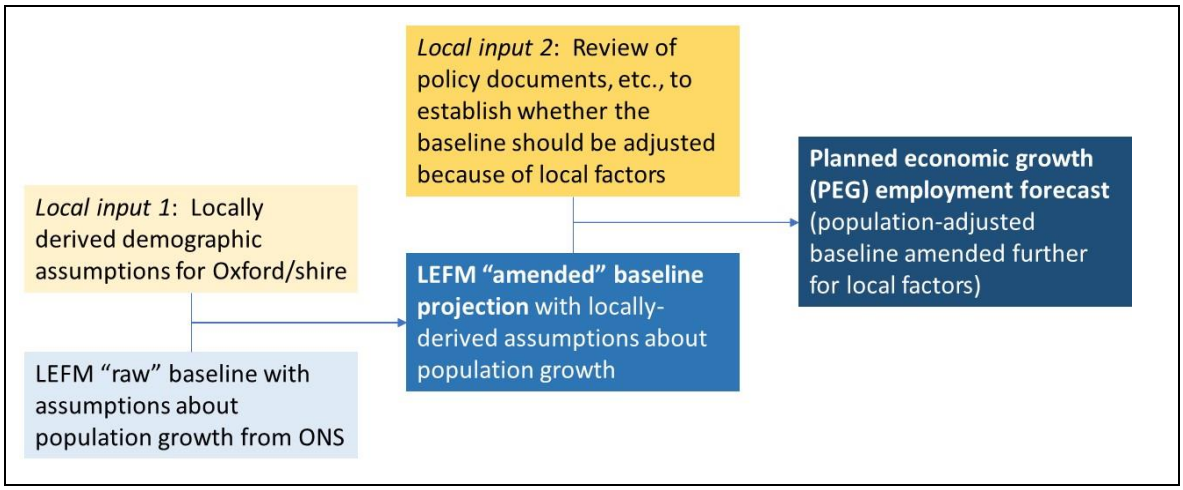
4.5 This chapter also sets out an update to the Planned Economic Growth forecast for Oxford to 2036, which is based on current baseline projections using Cambridge Econometrics' Local Economy Forecasting Model (LEFM), GL Hearn's assumptions on and an update of the assumptions made in the preparation of earlier Planned Economic Growth forecasts in 2014. The chart below illustrates this process.

[11] The commission was led by Vale of White Horse District Council., on behalf of a partnership which also included Cherwell District Council, Oxford City Council, Oxfordshire County Council, Oxfordshire LEP, South Oxfordshire District Council and West Oxfordshire District Council

[12] Cambridge Econometrics/SQW (2014), *Economic Forecasting to inform the Oxfordshire Strategic Economic Plan and Strategic Housing Market Assessment*

4.6 The assumptions on local economic growth for the Planned Economic Growth Scenario was informed by a review of policy documents, interrogation of past trends and a detailed discussion with the City Council's Economic Development team.

Figure 15: Approach to developing employment scenarios for Oxford and Oxfordshire in 2014 – and for Oxford in 2018

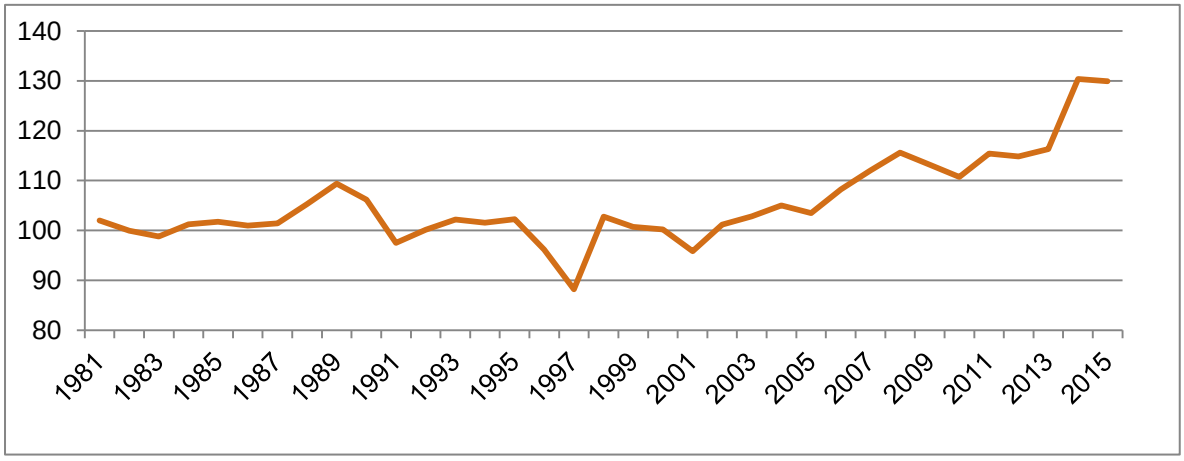


4.7 The remainder of this section looks firstly at the baseline forecasts and the revised baseline forecast. This is followed by a more detailed analysis of the Planned Economic Growth Scenario including more detail on the assumptions being used and the uplifts applied.

Historic Growth

4.8 The Oxford Economy has seen an upturn in fortunes since 2001 following a 20 year long period of stagnation/decline. As illustrated in Figure 16 growth in the 13-14 period was particularly significant. This was driven by growth in construction (4,300 jobs).

Figure 16: Employment Growth – Oxford City (1981-2015)



Source: Cambridge Econometrics

4.9 It is also worth noting that the data the forecasts are based on includes the Business Register and Employment Survey. As the name suggest this source is survey based and is only as good as its responses as such it is prone to fluctuations.

4.10 In trying to understand historic rates of employment growth (and to benchmark against forecasts) it is worthwhile looking at shorter and longer term trends as well as those over the market cycle. This is typically viewed on a peak to peak or trough to trough basis to ensure the analysis is not skewed by a particular rate of growth and is done so using the compound annual growth rate (CAGR).

4.11 As illustrated in the table below the time-period examined has a significant impact on the attachment. Those including the most historic data tends to reflect the poor performance in the manufacturing (largely connected to British Leyland/Rover) industry at the time. For example the 20 year period leading up to 2001 employment declined by 0.3% per annum. While

Table 20: Historic Employment Growth in Oxford City (Various Periods) - CAGR

Period	CAGR
81-01	-0.3%
83-97 (t2t)	-0.8%
98-08 (p2p)	1.2%
05-15	2.3%
97-10 (t2t)	1.8%
98-15	1.4%
81-15	0.7%

Source: Cambridge Econometrics

4.12 Over the longest term (1981-2015) the annual growth rate was 0.7%. However more recent trends (2005-15), incorporating the growth in 2013-14, show the maximum rate of growth of up to 2.3% per annum.

4.13 However examining the more recent business cycles (98-08 (peak to peak) and 97-10 (trough to trough) shows a more modest rate of growth ranging from 1.2% to 1.8% per annum respectively. This is the most robust comparators to use against projections.

Revised Baseline

4.14 Cambridge Econometrics baseline projections are a top down model which disaggregates national and regional views of sectoral growth based on a range of factors including location quotients, recent trends and for some sectors anticipated population growth and age structure changes.

4.15 It is largely those sectors whose growth is driven by population and age structure changes (for example education, healthcare and to a lesser extent retail) which are impacted by the changing assumptions on population growth. Therefore it is these sectors which affected by the revised baseline.

4.16 As shown in the table below the overall jobs growth is expected to be just 6,000 jobs within the revised baseline. However the rate of growth (0.22% per annum) is a much lower in comparison to the trends shown in the most recent business cycles.

	2016	2036	Change	CAGR
Revised Baseline	135,300	141,348	6,048	0.22%

Source: Cambridge Econometrics

4.1 However there is a clear rationale for the reduced rate of growth is well established. This is not just an Oxford phenomenon but national expectation. The rational for slowing growth includes but are not limited to:

- Slowing consumer expenditure to continue to be a key driver of factor as interest rates and inflation rise. Thus the expectation is for more modest growth within the wholesale, retail and accommodation and food service sectors. For Oxford this might be offset by Westgate which provides a better retail and hospitality thus attracting and retaining more expenditure;
- Slowing commercial expenditure/investment as a result of Brexit uncertainty, this is particularly impacting on businesses reliant on the export market or the importation of materials from outside the UK.
- Slowing global economy, although as America has shown there is signs of recovery. However the growth in historic trends linked to growth in the Chinese market is unlikely to be repeated to the same extent.
- Slowing job growth within manufacturing due to automation. For Oxford this includes car manufacturing which although already highly automated may not see the historic rate of growth associated with the revival of the mini as seen in the historic trends;
- Public services growth is also likely to be weaker in future compared to past trends due to continued government spending constraints, thus the outlook for public admin, education and health is more subdued. For location such as Oxford which is home to the significant facilities in these sectors then the impact is disproportionate;
- Across the UK lower migration linked to Brexit but also linked to an expectation of accelerated growth in the European and global economies is reducing the incentive for people to leave their country and migrate elsewhere. Although this will not impact Oxford as much as other locations as a major service centre the impact on the shire counties may have a ripple effect.

Planned Economic Growth

4.2 Within Oxford, the PEG forecast from 2014 anticipated 'above trend' jobs growth of 8,100 in the period 2011-31, through additional employment in the universities and within the bioscience, healthcare, advanced engineering, environmental technologies and retail sectors.

4.3 In reviewing the PEG forecast, it should be noted that:

- As in the original 2014 study, we have avoided 'double counting'. The new baseline forecasts incorporate assumptions regarding the impact of macroeconomic policy (such as that associated with Brexit) and national sectoral trends (such as changes in retail patterns). The purpose of the PEG forecast is to consider *locally specific* variance that would not otherwise be incorporated into the baseline
- Our analysis has been restricted to a review of the assumptions made in the original 2014 study, in order to update the PEG forecasts. This is based on: a meeting with Oxford City Council; a review of relevant documents; a comparison of actual changes in job numbers and those anticipated in the PEG forecast in the period 2012-16[13]; and internal team discussion. However, We have not carried out a 'fresh' and comprehensive assessment of Oxford's economy or its capacity for growth as part of this exercise
- While the 2014 report covered the whole of Oxfordshire, our review focuses on the city of Oxford. We have therefore not made any assumptions regarding economic growth in the rest of the county or the extent to which neighbouring districts could accommodate Oxford-derived employment growth.

4.4 The 2014 study identified six areas in which local developments were likely to stimulate employment growth over the revised baseline. The following paragraphs consider each of these in turn.

Universities

Assumptions in the 2014 Planned Economic Growth forecast

4.5 The 2014 study anticipated 2,000 additional jobs over the baseline in the Education sector. This was driven by a planned increase in floorspace for research and teaching at the University of Oxford, particularly through the redevelopment of the Science Area and the former Radcliffe Hospital site and the acquisition of new premises on the Osney Mead industrial estate. The study also anticipated a smaller increase in employment at Oxford Brookes University.

Revised assumptions

4.6 As the 2014 study set out, the universities make a substantial contribution to Oxford's economy. In combination, Oxford Brookes University and the University of Oxford accounted for 32,455 students in 2016/17[14]; a recent study estimates that the University of Oxford alone supports around 28,800 jobs in Oxford, contributing around £2 billion GVA[15]. Between 2012 and 2016, Education employment in Oxford grew significantly faster than anticipated in the 2014 PEG forecast (by 23% compared with 7%).

[13] 2012 and 2016 contain the most recent actual data for the 2014 and 2018 forecasts respectively
[14] HESA
[15] Biggar Economics for University of Oxford (2017), *Economic Impact of the University of Oxford*

4.7 Of the expansion plans referred to in the 2014 study, much of the redevelopment of the former Radcliffe Hospital site is now complete, with the Mathematical Institute and Blavatnik School of Government opened on site in 2013 and 2015 respectively. The redevelopment of the Science Area is also now underway, with the new Beecroft Physics building now complete.

4.8 There is significant scope for expansion on the Osney Mead industrial estate, an 18 hectare site west of the city centre. The emerging master plan seeks to develop the site as an 'innovation quarter', which is likely to have both commercial and university-related R&D uses. Proposals for the development of Osney Mead remain at an early stage, and employment on the site is therefore likely to come forward over the long term. While redevelopment of the site may involve the displacement of existing (mainly lower-value) activities, the estate is generally regarded as under-used[16].

4.9 In 2016, Oxford Brookes University announced a new estate investment plan that will see a consolidation of teaching and research activity on its Headington and Harcourt Hill campuses (the former of which is located inside the city boundary), with withdrawal from the Wheatley campus in South Oxfordshire due to take place by 2022. This is likely to mean some increase in employment within Oxford itself (although site consolidation should lead to some efficiencies).

4.10 Generally, the assumptions made in the 2014 study remain valid, given the development plans of the two universities. We therefore consider that **university expansion will result in an additional 2,000 jobs over the baseline to 2036**, and that these are likely to come forward at a broadly constant rate over the period.

Bio-Science

Assumptions in the 2014 Planned Economic Growth forecast

4.11 The 2014 study assumed an additional 1,500 jobs over the baseline as a result of the growth of Oxford's bioscience sector. This was partly related to the development of the Northern Gateway as a location for larger bioscience and other technology-related firms, and partly due to the 'organic growth' of successful bioscience firms such as Oxford Nanopore.

Revised assumptions

4.12 Between 2012 and 2016, actual employment in pharmaceuticals and 'other professional services' (the two sector groups used as a proxy for biosciences) grew more rapidly than anticipated in the PEG scenario. Recent reports also suggest that the sector in Oxford is strong: the 2016 *Oxfordshire*

[16] Ultimately, Osney Mead has been cited as having the potential to accommodate up to 4,000 jobs (*Oxford Mail*, 7 July 2016), although these are likely to come forward over the long term, and will not all be university related.

Innovation Engine Update report noted "rapid and sustained growth" over the preceding seven years, with a number of Oxfordshire-based firms attracting high levels of investment and the county proving attractive to inward investors[17]. This has led to some locally-based firms (such as Oxford Biomedica) increasing employment.

4.13 Much of the additional capacity cited in the 2014 study has yet to come on stream, although good progress is being made. For example:

- the BioEscalator, based on the University of Oxford's Old Road campus, and offering lab space for small biomedical businesses) is now complete and will open in summer 2018
- since the 2014 study, the Oxford Northern Gateway *Area Action Plan* has been published (July 2015), identifying 90,000 sq m of employment space, with a focus on "science and technology research, biotechnology and spin-off companies from the universities and hospitals"[18]. Public consultation on a master plan for the area commenced in June 2018, and development is likely to be accelerated by a recent announcement of capital support from the Government's Housing Infrastructure Fund. Potentially, up to 8,000 jobs could be supported by the Northern Gateway site[19]: while not all of these will be in bioscience, it is likely (given the focus of the development and evidence of indigenous growth) that the sector will account for a significant proportion of them
- the new Wood Centre for Innovation at Stansfield Park in Headington is being developed by the Oxford Trust and will provide new space for start-up and growing businesses from 2019. While this is not only aimed at the bioscience sector, it is being promoted with reference to its proximity to the clinical research facilities at the universities and is likely to be attractive to businesses in this sector.

4.14 This expansion will complement existing provision at Oxford Science Park to the south of the city (currently home to around 28 bioscience firms). Since taking full ownership of the Park, Magdalen College has plans to develop an additional 2,800 sq m of office and laboratory space over the next ten years[20]. There may also be some potential for additional bioscience employment associated with the development of Osney Mead.

4.15 Overall, the growth potential of the bioscience sector in Oxford is likely to be greater than the baseline projections would suggest, particularly given the major developments coming forward. **We consider that around 2,000 jobs could be created over the baseline to 2036**, coming forward at a constant rate. This represents an increase in the job creation assumptions made in the 2014 study.

[17] University of Oxford/ Oxford Trust/ Oxford ASHN/ OxLEP (2016), *Oxfordshire Innovation Engine Update*, pp.13-14
[18] Oxford City Council (2015), *Northern Gateway Area Action Plan*, p.14
[19] Oxford and Oxfordshire City Deal
[20] Oxford Science Park (http://www.oxfordsp.com/locate-to-the-park/#section7)

Healthcare

Assumptions in the 2014 Planned Economic Growth forecast

4.16 The 2014 study assumed an additional 2,500 jobs over the baseline in the health sector. This was largely as a result of an increasing concentration of NHS investment on centres of excellence, particularly given Oxford's position as a leading global centre for cancer research (at the Churchill Hospital) and the international significance of the Nuffield Orthopaedic Centre.

Revised assumptions

4.17 As set out in the 2014 study, Oxford is a major centre for health investment over and above locally-responsive provision (demand for which is rising and is reflected in the baseline projections). The key drivers of growth are unchanged from the 2014 position, with most capacity for growth associated with future development on the Churchill site. **We therefore consider that around 2,500 jobs could be created over the baseline to 2036**, coming forward at a constant rate. This essentially rolls forward the assumptions made in 2014.

Advanced Engineering

Assumptions in the 2014 Planned Economic Growth forecast

4.18 The 2014 study assumed 1,000 additional jobs over the baseline, largely accounted for by the announcement of the expansion of the BMW plant at Cowley and growth in specialist areas of advanced engineering (such as instrument engineering and magnet technology).

Revised assumptions

4.19 The 2014 PEG forecast anticipated a contraction in motor vehicles employment, despite the additional jobs anticipated in Oxford. This reflects generally falling employment in the sector. However, actual employment grew, by around 18%. Since 2014, BMW's commitment to Cowley has been maintained, with the announcement in 2017 that the new electric Mini will be produced at the site[21]. Oxford's knowledge base is also likely to be important in supporting growth in specialist technical sectors: the *Oxfordshire Innovation Engine Update*, for example, cites Oxbotica, an artificial intelligence and robotics company which originated from Oxford University's Mobile Robotics Group.

[21] https://www.bbc.co.uk/news/business-40718892

4.20 The assumptions made in the 2014 study remain valid: **we therefore consider that around 1,000 jobs could be created over the baseline to 2036**, coming forward at a constant rate.

Environmental technologies

Assumptions in the 2014 Planned Economic Growth forecast

4.21 The 2014 study assumed a small number of additional jobs over the baseline, partly linked with construction demand. Across Oxfordshire, much of the increased demand was assumed to be linked with the 'eco-development' at Bicester, although it was assumed that around 100 additional jobs might be created in Oxford in this area of activity.

Revised assumptions

4.22 The *Oxfordshire's Low Carbon Economy* report prepared by the University of Oxford Environmental Change Institute in 2014 highlighted Oxford's strengths as particularly associated with its research capacity and the role of the universities, noting *(inter alia)* the low carbon building research group at the Oxford Institute for Sustainable Development and SMEs that have spun out of the universities focused on developing engineering solutions to drive carbon reduction[22]. There are also a number of larger construction operators based in Oxford, and (anecdotally) demand for 'higher value' construction services is high.

4.23 Overall, a modest increase over the baseline appears appropriate, given the overlap between environmental technologies and Oxford's advanced engineering strengths. **We therefore consider that around 100 jobs could be created over the baseline to 2036**, coming forward at a constant rate.

Retail

Assumptions in the 2014 Planned Economic Growth forecast

4.24 The 2014 study assumed an additional 1,000 jobs over the baseline. This was entirely driven by the redevelopment of the Westgate Centre, which at the time was in the planning process and was expected at to create 3,400 net new jobs.

Revised assumptions

4.25 The new Westgate Centre opened in October 2017, offering around 74,000 sq m of retail, restaurant and leisure space (of which around 40,000 sq m is net). Most of the additional jobs

[22] ECI/ Low Carbon Oxford (2014), *Oxfordshire's Low Carbon Economy,* pp.9-10

created as a result of the development will now have been created, although these will not yet be 'visible' in the baseline (given that the most recent actual employment data is from 2016).

4.26 **We therefore consider that around 1000 jobs could be created over the baseline to 2036.** However, these will take the form of a 'one off' injection of new employment in 2017-19. Beyond 2019, there is no reason to assume any additional retail employment over the baseline.

Factors likely to depress growth below trend

4.27 The 2014 study considered public sector spending reductions, potential falls in employment in the publishing sector and competition from neighbouring centres as possible factors that could depress growth. However, it did not consider that any of these warranted changes to the PEG forecast numbers.

4.28 In respect of **public sector cuts**, there is likely to be further pressure on public services, although these are factored into the baseline. In Oxford, it is likely that the public sector overall will be quite resilient, given that a relatively high proportion of employment is in the universities and the health sector – both areas in which the city has strengths and which are likely to grow.

4.29 While the **publishing** sector faces challenges from digital media, this should again be factored into the baseline, and it is likely that Oxford will be relatively resilient, given its specialism in academic publishing.

4.30 **Competition** from neighbouring areas (for example for skills and talent and for property) was also considered. This is essentially a 'risk' factor, which could be exacerbated if other locations (especially in the Thames Valley, given its closer proximity to London) benefit from better labour market conditions or infrastructure. However, at this stage, we do not consider a need to change the PEG forecast numbers.

4.31 A final factor which was not relevant in 2014, but which clearly is in 2018, is **Brexit**. The baseline projections take account of the sectoral impact of variation in projected economic growth in the light of Brexit, although the terms of the UK's departure from the European Union are not yet clear. Some sectors in which Oxford has particular strengths have (potential) vulnerabilities to Brexit (for example, bioscience, given the relevance of European regulation), although it is reasonable to assume that the same issues apply within sectors everywhere. We do not therefore consider that any changes should be made to the PEG forecast.

Summary of proposed changes to the baseline

4.32 Based on the review above, Table 21 sets out the proposed changes to the baseline that are incorporated in the Planned Economic Growth forecasts:

Table 21: Judgement in 2018: above baseline jobs growth in Oxford, 2016-36

Change factor	Total	Sectors
Universities	2,000	Education
Bioscience	2,000	Pharmaceuticals; other professional services
Healthcare	2,500	Health; other professional services
Advanced engineering	1,000	Motor vehicles
Environmental technologies	100	Other professional services
Retail	1,000	Retail trade
Total	**8,600**	

Source: CE, SQW

4.33 Over 20 years, this is a slightly higher increase over the baseline than that included in the 2014 PEG forecast (8,100), with the difference accounted for by higher employment numbers linked to bioscience.

4.34 As well as the direct jobs growth resulting from these planned investments there is also expected to be additional jobs growth resulting from the supply chain to the business hosting the additional jobs.

4.35 In addition further jobs are expected from the servicing of the increased population growth resulting from this scenario. The Planned Economic Growth scenario requires additional migration to services the increased rate of jobs. In total the Planned Economic Growth scenario results in an additional 10,700 jobs above the revised baseline.

Forecasts Growth

4.36 Table 22 shows the level of employment within the revised baseline and Planned Economic Growth forecasts across the plan period. As illustrated the resultant rate of growth within the Planned Economic Growth scenario is almost treble that of the revised baseline.

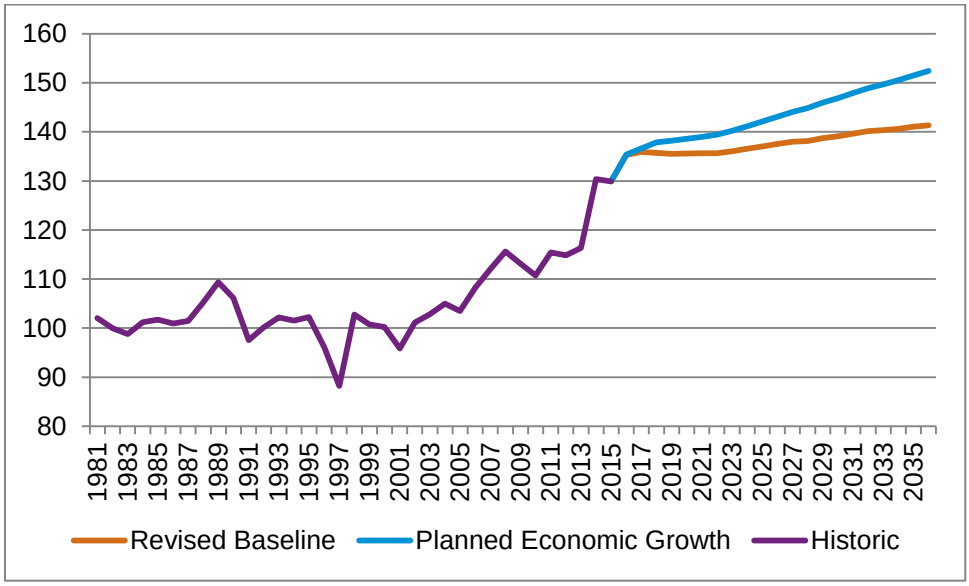
Table 22: Comparison of 2018 scenarios for employment and employment growth in Oxford

	Revised baseline projection (2018)	Planned Economic Growth forecast (2018)
2016	134,800	135,400
2036	141,100	152,400
Jobs growth: 2016-2036	+6,300	+17,000
CAGR	0.2% p.a.	0.6% p.a.

Source: CE, SQW

4.37 Figure 17 illustrates the historic employment trends against the two forecasts. This shows a considerable uplift to the baseline jobs growth. While it still results in rate of jobs growth below past trends as set out in the earlier parts of this chapter there is a clear rationale for a slower rate of growth.

Figure 17: Employment Forecasts for Oxford (1981-2036)



Source: CE, SQW

Key Points

- GL Hearn, SQW and Cambridge Econometrics have updated economic forecasts to reflect known investment and our views on demographic changes.
- Oxford's economy has performed strongly in recent years. The most recent full business cycles demonstrate an annual growth of between 1.2% and 1.8%.
- The revised baseline employment forecast for Oxford (taking into account the core population growth scenario) show a growth of around 6,300 jobs over the 2016-36 period. This equates an annual growth rate of 0.2%.
- The Planned Economic Growth Forecasts indicate that employment in Oxford City can be expected to increase by 17,036 jobs over the 2016-36 period. This equates to a growth of 0.6% per annum.
- While this future rate of growth is below the historic rate of growth even within the Planned Economic Growth scenario there is a clear rationale based on local and macro-economic factors to suggest this would be the case.

5 ECONOMIC LED HOUSING NEED

5.1 As set out in the previous chapter CE have forecast for there to be an additional 17,000 (17,036) jobs created in Oxford over the 2016-36 period, this is an uplift of 10,700 jobs from the revised baseline position of 6,300 (6,290) jobs to take account of a range of employment opportunities over and above the baseline (8.600 additional jobs) and the additional supply chain and induced impacts (indirect impacts) of the increased jobs (about 2,100 further jobs).

5.2 To convert the number of jobs into the required change in the resident labour-supply, analysis has taken account of commuting dynamics and levels of double jobbing (i.e. people with more than one job). A different approach to commuting is taken to each of the baseline and the uplifts to jobs.

Commuting Ratio

5.3 In converting the job growth into a labour-supply growth, commuting dynamics have been taken directly from data in the 2011 Census (this being the most up-to-date and complete data available). The analysis takes account of both in- and out-commuting in a 'business as usual' approach.

5.4 The table below shows that as of the 2011 Census there were around 100,000 people working in the City, and about 70,000 people living in the City who were working. This means that there are about 0.7 people living in the City (and working) for every job and so the increase in the labour-supply needed (setting aside double jobbing). This means that for every 100 jobs created the number of residents in employment only needs to increase by 70 with the remaining 30 commuting into the City.

Table 23: Calculating a baseline commuting ratio for Oxford

	Oxford
Live and work in the City	42,406
Work at or mainly from home	7,431
No fixed workplace	4,395
In-commuting	45,852
Out-commuting	16,013
Work in the City	100,084
Live in the City and are working	70,245
Commuting Ratio	0.702

Source: 2011 Census

5.5 For the 6,300 additional jobs in the baseline scenario this would mean an additional number of residents in employment of 4,400. For the uplifted scenario (17,000 jobs) the approach above is taken for the first 6,300 additional jobs with a slightly different approach taken to the additional

10,000 jobs created. In effect we have estimate where people would commute from for these additional jobs.

5.6 The approach uses the same information as in the table above, but not all of the data. Excluding those who work from home or who are of no fixed workplace, it is estimated that there are around 88,300 people working in the City, of these just under half (42,406 – 48%) also live in the City.

5.7 It is therefore assumed that around 48% of these additional jobs would be taken up by people living in the City (or seeking to live in the City). This equates to a commuting ratio of 0.48 – this gives an additional labour-supply (again setting aside double jobbing) of about 5,200 people.

5.8 Therefore, for the 17,000 jobs to be filled, and assuming commuting dynamics remain the same as they were in 2011, the analysis works on the basis of an increase in the number of residents in employment (excluding double jobbing) of about 9,600 people (4,400+5,200).

5.9 Under these assumptions, there would be projected to be an increase in the level of commuting into the City, and the commuting ratio would fall slightly from the 2011 figure of about 0.7. However this doesn't take into account accelerated growth in the shire districts.

Double jobbing

5.10 It is recognised that some people will have more than one job, and so an adjustment is made to the 9,600 figure above to translate into a change in the resident labour-supply. Data from the Annual Population Survey back to 2004 suggests that typically around 6% of local workers have a second job and so the 9,600 figure is reduced by 6% to calculate an increase in the resident labour supply. Overall, it is estimated that to meet the forecast 17,000 jobs, there would be an additional 9,000 local residents in employment (9,026) from 2016 to 2036.

Economic activity

5.11 The final part of the analysis is to make some assumptions about how economic activity might change moving forward. This is difficult to predict and therefore two methodologies have been applied. These are as set out below:

- Using the employment rate assumptions of the previous SHMA
- Using Office of Budget Responsibility (OBR) projections, but with an adjustment so that rates are not projected to fall for any given age group (by sex)

Housing need

5.12 Estimates of housing need set against these two activity rate assumptions can be seen in the tables below. Two different tables are provided, the first uses household representative rates (HRRs) from the 2014-based household projections, the second uses the same data, but provides for an uplift to the 25-34 and 35-44 age groups to see a part-return to the trends seen in the 2008-based projections.

5.13 Using the part return to trend assumptions the housing need ranges from 527 to 555 dpa. This is around 30 dpa higher than those based on the household formation rates set out in the 2014-based household projections. As set out earlier in the report we believe there is some justification for using the Part Return to Trend HRR

Table 24: Estimated housing need associated with forecast change in jobs (SHMA employment rates)

	Households 2016	Households 2036	Change in households	Per annum	Dwellings per annum
Stage 1 HRRs	56,759	67,027	10,268	513	527
PRT HRRs	56,759	67,582	10,822	541	555

5.14 The higher of this range (555 dpa) ensures continuity with the economic activity rate assumptions set out in the Oxfordshire SHMA. It also closely aligns with our demographic conclusions of 543 dpa. However a preference should perhaps be given to the OBR rates given the historic nature of the SHMA rates.

Table 25: Estimated housing need associated with forecast change in jobs (OBR economic activity rates)

	Households 2016	Households 2036	Change in households	Per annum	Dwellings per annum
Stage 1 HRRs	56,759	66,494	9,735	487	499
PRT HRRs	56,759	67,037	10,278	514	527

5.15 This suggests that the economic and demographic growth are broadly in balance with the realistic need for up to 527 dpa. This however is unlikely to address the affordability and affordable housing need identified later in this report.

5.16 Based on the previous PPG any such market signals adjustments should be applied to the demographic growth. Given the broad balance between the economic and demographic growth it is likely that the market signals adjusted housing need will exceed that of the economic led need. Thus there would be no need to make any further adjustments on this basis.

5.17 However under the new PPG the identified need for 527 dpa would be enough to deliver the planned economic growth. Meeting this level of need would be a policy choice for the Council.

Key Points

- CE Forecasts indicate that employment in Oxford City can be expected to increase by 17,036 jobs over the 2016-36 period. This relates to a growth of 0.6% per annum.
- The analysis herein indicates that if modelled on a policy-off basis, whereby the Census commuting ratio is held constant for the first 6,300 additional jobs and then a slightly different approach (excluding those who work from home or who are of no fixed workplace) is taken to the additional 10,000 jobs, this would decrease the commuting ratio from the 2011 figure to 0.48 compared to 0.7 in Census 2011.
- In terms of double jobbing, it is estimated that to meet the forecast 17,000 jobs, there would be an additional 9,000 local residents in employment (9,026) from 2016 to 2036.
- Key assumptions about how economic activity might change moving forward used the below methodologies:
  - Employment rate assumptions of the previous SHMA
  - Office of Budget Responsibility (OBR) projections, but with an adjustment so that rates are not projected to fall for any given age group (by sex)

  These resulted in a housing need of 527 and 555 dpa. The higher of this range ensures continuity with the economic activity rate assumptions set out in the Oxfordshire SHMA. It also closely aligns with our demographic conclusions of 543 dpa.
- However the SHMA EAR are somewhat historic a focus should be on those numbers coming out of the OBR rates. This gives an economic need for 527 dpa.
- This suggests that the economic and alternative demographic growth are broadly in balance with potentially only a modest adjustment to housing requirement based on alternative demographics to meet the economic growth. This however is unlikely to address the affordability and affordable housing need identified later in this report.

6 AFFORDABLE HOUSING NEED

6.1 This section discusses the level of affordable housing need in Oxford. Affordable housing is defined in the NPPF text as "housing for sale or rent, for those whose needs are not met by the market (including housing that provides a subsidised route to home ownership and/or is for essential local workers)" and which complies with one of more of the definitions set out therein for affordable housing for rent; starter homes; discounted market sale homes; and other affordable routes into home ownership.

6.2 The analysis of affordable housing need in this section follows the methodology set out in the Planning Practice Guidance (PPG). It includes *All households whose needs are not met by the market can be considered in affordable housing need.*

6.3 In line with the PPG, affordable housing need has been assessed using secondary data sources. The analysis draws on a number of sources of information including 2011 Census data, demographic projections, house prices/rents and income information.

6.4 The affordable housing needs model is based largely on housing market conditions (and particularly the relationship of housing costs and incomes) at a particular point in time – the time of the assessment – as well as the existing supply of affordable housing which can be used to meet the need. The base date for analysis is 2017 (i.e. data about housing costs and incomes is for 2017). It is recognised that the analysis should align with other research and hence estimates of affordable housing need are provided in this section on an annual basis for the 19-year period between 2017 and 2036 (the end date being consistent with the demographic projections developed in this report).

Entry-Level Market Housing Costs

6.5 An important part of the affordable needs model is to establish the entry-level costs of housing to buy and rent. The affordable housing needs assessment compares prices and rents with the incomes of households to establish what proportion of households can meet their needs in the market, and what proportion require support and are thus defined as having an 'affordable housing need'.

6.6 Analysis below considers the entry-level costs of housing to both buy and rent in Oxford. It uses Land Registry and Valuation Office Agency (VOA) data to establish lower quartile prices and rents.

6.7 Table 26 shows lower quartile house prices by dwelling type in the City in the year to September 2017. Entry-level costs to buy start from about £243,500 for a flat and rising to in excess of £500,000 for a detached home. Across all dwelling types, the lower quartile price of £308,900.

Table 26: Lower quartile cost of housing to buy – year to September 2017

	Oxford
Flat/maisonette	£243,500
Terraced	£323,000
Semi-detached	£338,100
Detached	£509,000
All dwellings	£308,900

Source: Land Registry

6.8 A similar analysis has been carried out for private rents using Valuation Office Agency (VOA) data over a 12-month period to September 2017. For the rental data, information about dwelling sizes is provided (rather than types). The analysis shows an average lower quartile cost (across all dwelling sizes) of £1,025 per month.

Table 27: Lower Quartile Market Rents, year to September 2017 – Oxford

	Lower Quartile rent, pcm
Room only	£500
Studio	£623
1-bedroom	£860
2-bedrooms	£1,050
3-bedrooms	£1,250
4-bedrooms	£1,750
All properties	£1,025

Source: Valuation Office Agency

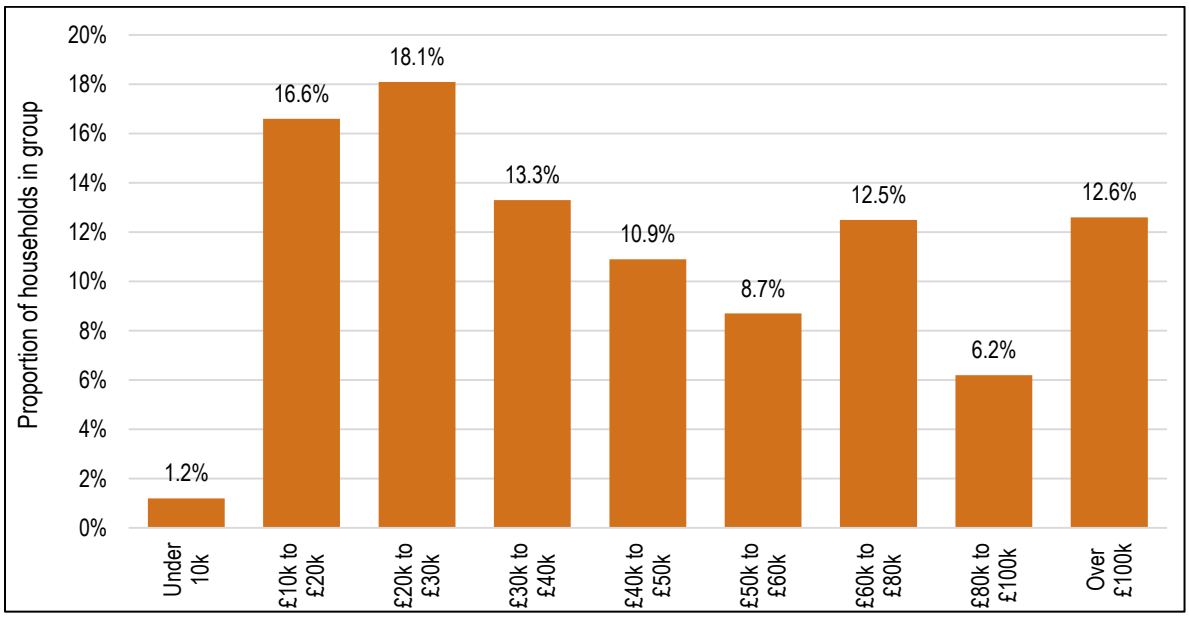
Income Profile

6.9 GL Hearn/JGC have sought to model household incomes, using data about total household income from ONS modelled income estimates, with data from the English Housing Survey (EHS) being used to provide information about the distribution of incomes.

6.10 Our modelling indicates that across Oxford, around a fifth (18%) of households have incomes below £20,000 with a further third in the range of £20,000 to £40,000. The overall average (median) income of all households in the City is around £40,700 with a mean income of £53,500. The average income is estimated to be somewhat higher than was the case in the 2014 SHMA (a mean income of £40,000) reflecting the updated ONS source[23].

[23] This difference may not reflect actual changes over the period studied

Figure 18: Distribution of Household Income in Oxford (mid-2017 estimate)



Source: Derived from EHS and ONS data

What proportion of income will households spend on housing?

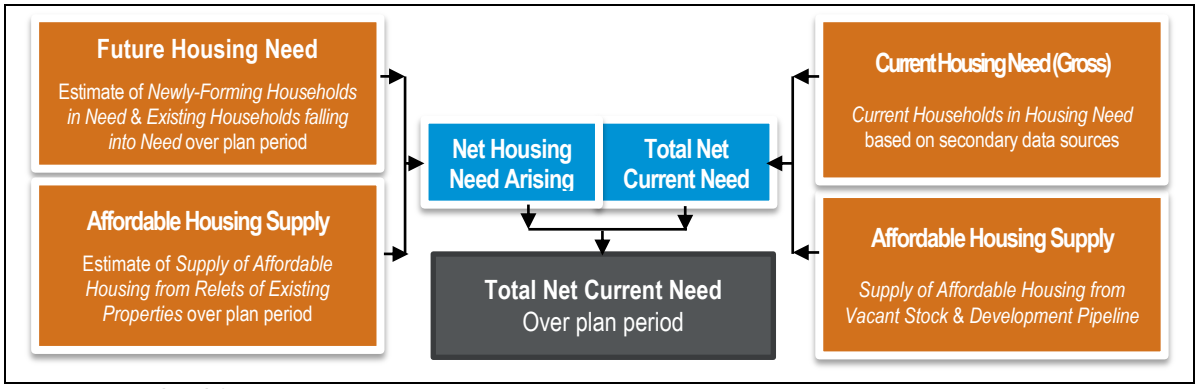
6.11 There is no specific national guidance on what proportion of income households might reasonably spend on housing. This issue was considered in the 2014 Oxfordshire SHMA which concluded that taking account of an analysis of residual incomes, households might reasonably be expected to spend up to 35% of their gross household income on housing. This assumption has therefore been maintained herein, ensuring consistency in approach across the Housing Market Area.

Establishing the Narrow Affordable Housing Need

6.12 Our analysis first considers needs arising from households that do not have their basic housing needs met and which cannot afford to meet these needs in the market – the narrow definition of affordable housing. The Basic Needs Assessment Model has been used to assess this need, as set out in the PPG and summarised in the chart below.

6.13 The model considers the current identified housing need, and that arising each year from both newly-forming and existing households. This is then compared to the supply of affordable housing to establish a net need.

Figure 19: Overview of Affordable Needs Assessment Model



Source: Derived from PPG

6.14 We work through below each of the steps in identifying the affordable need.

Current Affordable Housing Need

6.15 In line with the PPG, the current need for affordable housing need has been based on considering the likely number of households with one or more housing problem. A list is set out in the PPG and provides the following.

What types of households are considered in affordable housing need?

- the number of homeless households;
- the number of those in priority need who are currently housed in temporary accommodation;
- the number of households in overcrowded housing;
- the number of concealed households;
- the number of existing affordable housing tenants in need (i.e. householders currently housed in unsuitable dwellings);
- the number of households from other tenures in need and those that cannot afford their own homes, either to rent, or to own, where that is their aspiration.

6.16 In this section we have considered the needs arising from households that do not have their basic housing needs met and which cannot afford to meet these needs in the market.

6.17 We first consider households who are living in unsuitable housing. The table below shows the data we have used to do this.[24] Certain aspects of the analysis (notably overcrowding and tenure-specific analysis) have been updated from a 2011 Census base using data from the Survey of English Housing.

[24] It should be noted that due to the sources used there is a possibility of some double counting. For example, when looking at concealed households and overcrowding, it is possible that providing housing for some concealed households would remove an overcrowding issue – no account has been taken of this and therefore arguably the figures presented could be slightly too high. However, on balance, it is considered that the analysis and outputs (whilst noting some potential deficiencies of using a secondary data approach) will be as accurate and plausible as is reasonably possible.

6.18 We have then excluded households living in affordable housing (as these households would release a dwelling for another household in moving, and so no net need for affordable housing would arise). We have also then considered the ability of households to meet their housing needs without financial support, through consideration of the household type and tenure profile of those in unsuitable housing, and consideration of household's financial ability to address their own housing needs.

Table 28: Sources for Assessing the Current Unmet Need for Affordable Housing

	Source	Notes
Homeless households	CLG Live Table 784	Total where a duty is owed but no accommodation has been secured PLUS the total in temporary accommodation
Households in overcrowded housing	Census table LC4108EW	Analysis undertaken by tenure
Concealed households	Census table LC1110EW	Total number of concealed families
Exiting affordable housing tenants in need	Modelled data linking to past survey analysis	Base position linked to 2011 Census tenure split. These categories will include households with many of the issues in the first box above (e.g. insecure tenure).
Households from other tenures in need	Modelled data linking to past survey analysis	

Source: PPG

6.19 The first step of the assessment indicates that there are 6,639 households living in unsuitable housing (or without housing) across Oxford. This is around 11% of the estimated total number of households living in the City in 2017. The profile of these households is shown in Table 29.

Table 29: Households living in Unsuitable Housing

Category of 'need'	Oxford
Homeless households	96
Households in overcrowded housing	3,574
Concealed households	858
Exiting affordable housing tenants in need	253
Households from other tenures in need	1,858
Total	6,639

Source: CLG Live Tables, Census (2011) and data modelling

6.20 Households living in affordable housing are excluded, as are 90% of owner occupiers based on evidence from household surveys indicating that the majority of owner occupiers will be able to afford housing once savings and equity are taken into account.

6.21 A final adjustment is to slightly reduce the unsuitability figures in the private rented sector to take account of student-only households. Whilst such households could technically be overcrowded/living in unsuitable housing but would be unlikely to be assessed as being in affordable housing need.

6.22 These adjustments result in a revised assessment of 4,035 households living in unsuitable housing which represents 7% of all households in the area in 2017.

Table 30: Unsuitable housing by tenure and numbers to take forward into affordability modelling

	In unsuitable housing	Number to take forward for affordability testing
Owner-occupied	1,094	109
Social rented	1,246	0
Private rented	3,346	2,971
No housing (homeless/concealed)	954	954
Total	6,639	4,035

Source: CLG Live Tables, Census (2011) and data modelling

6.23 We then consider the ability of these households to afford market housing without the need for subsidy/ financial support. We have modelled the household income of distribution groups to do so. We assume households in unsuitable housing have a distribution skewed towards lower incomes, with an average income of 69% of that of all households; and that concealed and homeless households and those in temporary accommodation have an average income 42% of that of all households.

6.24 On this basis around two-thirds of households shown in Table 31 are estimated to be likely to have insufficient income to afford market housing. Taking this into account, **the analysis points to a current need from 2,666 households in Oxford that do not have their basic housing needs met and which cannot afford to meet these needs in the market.**

6.25 The table below shows this information which is also split by broad category of current housing. An estimated 788 of the households do not have housing – this is an important number within this analysis as it is this group who will need additional accommodation to be provided. The remaining households (1,878) have a need, but if they were to move to alternative accommodation would free-up a home for use by another household.

Table 31: Estimated Current Need by broad type of Current Accommodation

	In unsuitable housing (taken forward for affordability test)	% Unable to Afford	Revised Gross Need (including Affordability)
Households in housing	3,081	61.0%	1,878
No housing (homeless/concealed)	954	82.7%	788
Total	4,035	66.1%	2,666

Source: CLG Live Tales, Census (2011), data modelling and affordability analysis

6.26 The levels of current need shown by this analysis can be compared with those on the Council's Housing Register. According to Local Authority Housing Statistics (LAHS) there were 2,116 households on the Housing Register in March 2017. Of these some 581 were assessed by the Council to be a reasonable preference category (i.e. having more acute needs). This latter figure is some way lower than the modelled estimate above (of 2,666), but this is likely to reflect the availability of affordability housing in the City and how the Council manages the allocation of a scarce resource.

Newly-Arising Need

6.27 To estimate newly-arising (projected future) need, two key groups of households have been studied. These are:

- Newly forming households; and
- Existing households falling into need.

Newly-Forming Households

6.28 The number of newly-forming households has been estimated through the demographic modelling, with consideration then given to the proportion who fall into affordable housing need. This has been undertaken by considering the changes in households in specific 5-year age bands relative to numbers in the age band below, 5 years previously, to provide an estimate of gross household formation. This differs from numbers presented in the demographic projections which are for net household growth. The numbers of newly-forming households are limited to households forming who are aged under 45.[25] There may be a small number of household formations beyond age 45 (e.g. due to relationship breakdown) although the number is expected to be fairly small when compared with formation of younger households.

6.29 The estimates of gross new household formation have been based on outputs from the core demographic projection. Surveys indicate that typically the average income of newly-forming

[25] This is consistent with CLG guidance (from 2007) which notes after age 45 that headship (household formation) rates 'plateau'.

households is around 84% of the figure for all households.[26] We therefore adjust the overall household income data to reflect the lower average income for newly-forming households. The adjustments have been made by changing the distribution of income by bands such that average income level is 84% of the all household average. In doing this it is possible to calculate the proportion of households unable to afford market housing without any form of subsidy.[27] The assessment indicates that overall around half of newly-forming households will be unable to afford market housing (to rent) and that **a total of 669 new households will not have their basic needs met by the market in each year** to 2036.

Table 32: Estimated Level of Affordable Housing Need from Newly Forming Households (per annum)

	No. of new households	% unable to afford	Total in need
Oxford	1,300	51.5%	669

Source: Projection Modelling/affordability analysis

Existing Households falling into Affordable Housing Need

6.30 The second element of newly arising need is existing households falling into need. To assess this, information from CoRe[28] has been used. This looked at households who have been housed over the past three years as this group will represent the flow of households onto the Housing Register over this period. From this newly forming households (e.g. those currently living with family) have been discounted, as well as households who have transferred from another social/affordable rented property. The ability of households to afford a market housing solution has then been assessed.

6.31 This method for assessing existing households falling into need is consistent with the 2007 SHMA guide which says on page 46 that *'Partnerships should estimate the number of existing households falling into need each year by looking at recent trends. This should include households who have entered the housing register and been housed within the year as well as households housed outside of the register (such as priority homeless household applicants)'*.

6.32 Following the analysis through suggests **a need arising from 331 existing households each year** from 2017 to 2036.

[26] English Housing Survey and GLH/JGC Housing Needs Studies
[27] Such as Local Housing Allowance or Housing Benefit
[28] The continuous recording of lettings and sales in social housing in England (referred to as CoRe) is a national information source that records information on the characteristics of both private registered providers and local authority new social housing tenants and the homes they rent

Supply of Affordable Housing

6.33 The future supply of affordable housing is the flow of affordable housing arising from the existing stock that is available to meet future need. This focusses on the annual supply of social/affordable rent relets.

6.34 The PPG requires an estimate of likely future relets from the social/affordable rented stock. or "the number of affordable dwellings that are going to be vacated by current occupiers that are fit for use by other households in need". This should be based on recent trends.

6.35 We have used information from the CoRe system has been used to establish past patterns of social housing turnover. The figures include general needs and supported lettings, but exclude lettings of new properties and also exclude an estimate of the number of transfers from other social rented homes. These exclusions are made to ensure that the figures presented reflect relets from the existing stock.

6.36 On the basis of past trend data it has been estimated that **462 units of social/affordable rented housing are likely to become available each year** moving forward.

Table 33: Analysis of past social/affordable rented housing supply (per annum – based on data for 2014-17 period)

	General needs	Supported housing	Total
Total lettings	404	370	774
% as non-new build	87.9%	100.0%	93.7%
Lettings in existing stock	355	370	725
% non-transfers	53.4%	73.7%	63.7%
Total lettings to new tenants	190	273	462

Source: CoRe

6.37 The PPG model also includes the bringing back of surplus/vacant homes into use and the pipeline of affordable housing as part of the supply calculation. There is no evidence of any substantial stock of vacant homes (over and above a level that might be expected to allow movement in the stock) – as of 2017, CLG data shows just 61 vacant social/affordable rented homes in the City.

Pipeline Supply of Affordable Housing

6.38 Including the pipeline supply as part of the supply side of the calculation arguably hides the true extent of affordable housing need. It is therefore not included in the supply calculations above of in our final affordable housing need calculation.

6.39 That said for monitoring purposes it will be important to net off these dwellings as they are completed

6.40 As an indication of affordable housing supply using Council data reveals that the permitted supply of affordable housing through developer contributions over the last year (2016/17) was 33 homes. On average the overall affordable housing supply being delivered in the 2006/7 to 2016/17 period was 107 per annum. However in the last year this was as low as 20 units.

6.41 The supply of affordable housing in Oxford is expected to be further boosted in future monitoring years as major schemes are built out. This includes Barton Park (354 affordable homes), land north of Littlemore Healthcare Trust (70 affordable homes) and Littlemore Park (135 affordable homes expected). It is expected that new homes at Barton Park (Phase 1) will start to be completed in autumn 2017 and will begin to be counted in the AMR 2017/18. Therefore the average supply of 107 dpa is a useful benchmark.

Bringing the Evidence Together

6.42 The table below shows the overall calculation of affordable housing need arising from households that do not have their basic housing needs met and which cannot afford to meet these needs in the market. This excludes supply arising from sites with planning consent (the 'development pipeline').

6.43 The analysis shows that there is a need for 678 dwellings per annum to be provided – a total of 12,900 over the 19-year period (2017-36). The shows the need for housing which is priced below private sector rents. This would include social rented housing, affordable rented housing and discounted private rented housing.

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

Table 34: Estimated Need for Affordable Housing

	Per annum	2017-36
Current need	140	2,666
Newly forming households	669	12,709
Existing households falling into need	331	6,281
Total Gross Need	1,140	21,657
Relet Supply	462	8,778
Net Need	678	12,879

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

6.44 Including the average pipeline supply would reduce this need to 571 dpa while using the permitted supply. However to reiterate this potentially masks the true extent of affordable housing in the City and does not feature in our core analysis.

Comparison with Previous Analysis of Affordable Need

6.45 It is worthwhile to briefly make a comparison between the findings in this report and the last assessment of affordable housing need. The last full assessment was undertaken in the 2014 Oxfordshire SHMA (Table 54).

6.46 The analysis herein shows a notably lower affordable need in this assessment compared with previous work – a need for 678 dwellings per annum, compared with 1,029. The difference is largely due to reduced estimates of gross need (with little difference is future supply estimates).

Table 35: Comparison of affordable housing needs assessments (2014 and 2017) – all figures per annum

	2017-based (this study)	2014 SHMA
Current need	140	111
Newly forming households	669	900
Existing households falling into need	331	476
Total Gross Need	1,140	1,488
Re-let Supply	462	459
Net Need	678	1,029

Source: This study and 2014 SHMA

6.47 This has been driven firstly by a situation where the lower quartile rent in this assessment is lower than in 2014 – this is likely to be mainly due to a change in the source used, the 2014 SHMA undertook an online survey of rents, whereas this study draws on VOA data. Secondly, new income data (from ONS) is showing notably higher incomes than estimated in 2014. Hence affordability looks to have improved and the net need has fallen. These changes may not be real changes, and are driven by changes in the data sources used.

6.48 Regardless of any difference, both studies show a substantial need for additional affordable housing, and the Council should seek to provide such accommodation where the opportunities arise.

Housing Requirement

6.49 Any increase above the OAN would contribute to increased delivery of affordable housing. Based on current affordable housing policy of 50% the identified affordable housing need of 678 dpa would require a nominal supply of 1,356 dpa.

6.50 However this is a nominal figure based on a certain calculation. It does not for example take into account the fact that some of the households identified affordable housing need would release their current property if provided with suitable accommodation, thus there is no net need for an additional home.

6.51 It also does not take into account the fact that the OAN also includes newly forming households, thus would be double-counted in such a scenario. Finally the figure does not take into account development which may contribute a higher percentage of affordable homes. However, this is very likely to be balanced out by smaller site providing less than 50% because only sites of 10 units or more are required to provide onsite affordable housing.

6.52 The figure of 1,356 dpa, while based on robust calculation, represents a nominal figure based on existing policy which may over-estimates the true housing need in the City. This issue is considered further in the concluding chapter including a review of the relevant case law.

Key Points

- An assessment of affordable housing need has been undertaken which is compliant with Government guidance to identify whether there is a shortfall or surplus of affordable housing in Oxford City. This has estimated 6,639 households in current housing need.
- The assessment indicates that overall around half of newly-forming households will be unable to afford market housing (to rent) and that a total of 669 new households will not have their basic needs met by the market in each year to 2036. In addition there is a need for 331 existing households each year from 2017 to 2036.
- Based on past trend data 462 units of social/affordable rented housing are expected to become available each year from 2017 to 2036.
- The analysis shows that there is a need for 678 dwellings per annum to be provided – a total of 12,900 over the 19-year period (2017-36). This is notably lower affordable need compared with our previous work in 2014 when a need for 1,029 dpa was estimated. The difference is largely due to reduced estimates of gross need with little difference in future supply estimates.
- It needs to be stressed that this report does not provide an affordable housing target; the amount of affordable housing delivered will be limited to the amount that can viably be provided. The evidence does however suggest that affordable housing delivery should be maximised where opportunities arise.

7 AFFORDABLE HOUSING MIX

Introduction

7.1 This section provides an indication of the range of tenure options that meet the needs of a broad spectrum of households – including those able to access the private rented sector, but not owner-occupation; this is a key additional category of affordable housing need set out in the PPG. A particular focus of the analysis is to therefore consider the (wider) proposed definition of affordable housing in the NPPF and PPG (and initially set out in the Housing White Paper (HWP) of February 2017).

7.2 The analysis in this section therefore looks at the cost of housing of different tenures, and develops this to seek to understand what this might mean in terms of an income required to access such housing. The analysis looks at both market housing and the full range of affordable housing options set out in the PPG.

Definitions of Affordable Housing

7.3 Affordable housing is currently defined in national policy (National Planning Policy Framework (NPPF), Annex 2: Glossary) as follows:

> ***Affordable housing:*** *Social rented, affordable rented and intermediate housing, provided to eligible households whose needs are not met by the market. Eligibility is determined with regard to local incomes and local house prices. Affordable housing should include provisions to remain at an affordable price for future eligible households or for the subsidy to be recycled for alternative affordable housing provision.*
>
> *Social rented housing is owned by local authorities and private registered providers (as defined in section 80 of the Housing and Regeneration Act 2008), for which guideline target rents are determined through the national rent regime. It may also be owned by other persons and provided under equivalent rental arrangements to the above, as agreed with the local authority or with the Homes and Communities Agency.*
>
> *Affordable rented housing is let by local authorities or private registered providers of social housing to households who are eligible for social rented housing. Affordable Rent is subject to rent controls that require a rent of no more than 80% of the local market rent (including service charges, where applicable).*
>
> *Intermediate housing is homes for sale and rent provided at a cost above social rent, but below market levels subject to the criteria in the Affordable Housing definition above. These can include shared equity (shared ownership and equity loans), other low cost homes for sale and intermediate rent, but not affordable rented housing.*
>
> *Homes that do not meet the above definition of affordable housing, such as "low cost market" housing, may not be considered as affordable housing for planning purposes.*

7.4 The NPPF amends the definition of affordable housing to include a wider range of housing options such as Starter Homes and 'affordable private rent', discounted market sales housing and other

affordable routes to home ownership. The new definition of affordable housing in the NPPF is as follows (again in Annex 2):

Affordable housing*: housing for sale or rent, for those whose needs are not met by the market (including housing that provides a subsidised route to home ownership and/or is for essential local workers); and which complies with one or more of the following definitions:*

a) Affordable housing for rent*: meets all of the following conditions: (a) the rent is set in accordance with the Government's rent policy for Social Rent or Affordable Rent, or is at least 20% below local market rents (including service charges where applicable); (b) the landlord is a registered provider, except where it is included as part of a Build to Rent scheme (in which case the landlord need not be a registered provider); and (c) it includes provisions to remain at an affordable price for future eligible households, or for the subsidy to be recycled for alternative affordable housing provision. For Build to Rent schemes affordable housing for rent is expected to be the normal form of affordable housing provision (and, in this context, is known as Affordable Private Rent).*

b) Starter homes*: is as specified in Sections 2 and 3 of the Housing and Planning Act 2016 and any secondary legislation made under these sections. The definition of a starter home should reflect the meaning set out in statute and any such secondary legislation at the time of plan-preparation or decision-making. Where secondary legislation has the effect of limiting a household's eligibility to purchase a starter home to those with a particular maximum level of household income, those restrictions should be used.*

c) Discounted market sales housing*: is that sold at a discount of at least 20% below local market value. Eligibility is determined with regard to local incomes and local house prices. Provisions should be in place to ensure housing remains at a discount for future eligible households.*

d) Other affordable routes to home ownership*: is housing provided for sale that provides a route to ownership for those who could not achieve home ownership through the market. It includes shared ownership, relevant equity loans, other low cost homes for sale (at a price equivalent to at least 20% below local market value) and rent to buy (which includes a period of intermediate rent). Where public grant funding is provided, there should be provisions for the homes to remain at an affordable price for future eligible households, or for any receipts to be recycled for alternative affordable housing provision, or refunded to Government or the relevant authority specified in the funding agreement*.

NPPF (2018) Definition of Affordable Housing

7.5 The NPPF (2018) proposals are interesting in that the basic definition of who affordable housing is for does not change (households whose needs are not met by the market) but at the same time a series of additional options for meeting affordable need are suggested. In particular, some of the home ownership options (such as Starter Homes) might arguably be seen as unaffordable when looking at access to the housing market generally (i.e. to include the private rented sector).

7.6 However, Central Government is clear in its desire to see more home ownership options being made available, stating (paragraph 64, NPPF) that 'Where major development involving the provision of housing is proposed, planning policies and decisions should expect at least 10% of the homes to be available for affordable home ownership'. The figure of 10% is considered to provide a balance between renting and home ownership.

7.7 Whilst home ownership options may not be affordable in the traditional sense of the term (i.e. to only apply to those who cannot afford any form of market housing), it is clear that enabling additional households to access home ownership will release other forms of housing for use by other households – this will particularly be in the private rented sector, and it is noteworthy that the NPPF now includes a form of private renting within the affordable definition.

7.8 Looking more closely at some of the individual forms of affordable housing in the NPPF, there appears to be some degree of similarity. For example, both affordable rented and affordable private rent appear to be based on a discount from market costs of 20% - hence in cost terms they are arguably identical. However, the difference is that affordable private rent is seen to be a suitable tenure on Build to Rent schemes, whereas affordable rented housing would be let by local authorities or Registered Providers. The difference is therefore partly how housing might be allocated and hence the eligibility criteria; this would make a difference to the size profile of such housing (particularly as affordable private rent would be expected to be *'physically indistinguishable'* from other types of housing in a development).

7.9 This discussion is designed to show that the widening range of affordable options within the NPPF would not necessarily lend itself to a straight suggestion of different percentages of delivery of different types of housing. For example, affordable private rent (given that this is seen as most suitable on Build to Rent schemes) might arguably not have any target, but could be provided should an appropriate scheme come forward.

7.10 Additionally, some home ownership schemes might not be affordable in a traditional sense (depending on the cost of other forms of housing) but might be considered suitable to allow households to move out of private rented accommodation and to meet the 10% provision level

suggested in the NPPF (2018). All of these issues are discussed in more detail in the analysis to follow.

Housing Costs

7.11 The analysis below looks at the cost of housing of different tenures, and develops this to seek to understand what this might mean in terms of an income required to access such housing. The analysis looks at both market housing and the range of affordable housing options set out in the NPPF (2018).

Owner-occupied housing

7.12 Data from the Land Registry for the year to September 2017 (i.e. Q4 of 2016 and Q1-Q3 of 2017) shows that the average (mean) cost of housing in the City was £517,000, with a median cost of £400,000. When looking at the bottom end of the market (traditionally viewed by reference to lower quartile house prices) it can be seen that the 'average' cost is £309,000.

Table 36: Cost of housing to buy – year to September 2017 – Oxford

	Lower quartile	Median	Mean
Flat/maisonette	£243,500	£300,700	£345,300
Terraced	£323,000	£410,300	£483,200
Semi-detached	£338,100	£418,900	£538,100
Detached	£509,000	£725,000	£1,063,500
All dwellings	£308,900	£400,000	£517,300

Source: Land Registry

7.13 To put the data for Oxford into context, it is possible to compare figures with other areas; this is shown in the table below (just for median prices). This shows that prices in the City are notably higher than other areas. Other than for flats (which will be influenced by the London market) it can be seen that prices for all types of accommodation are more than double the national average.

Table 37: Median cost of housing to buy – year to September 2017

	Oxford	Oxfordshire	South East	England & Wales
Flat/maisonette	£300,700	£224,400	£202,000	£208,000
Terraced	£410,300	£290,000	£269,000	£170,000
Semi-detached	£418,900	£325,200	£325,000	£194,300
Detached	£725,000	£475,000	£483,800	£320,000
All dwellings	£400,000	£336,700	£305,000	£220,000

Source: Land Registry

7.14 The data above is from actual sales and split by the built form of properties, however in analysis of affordability, and to be consistent with analysis for other tenures of housing, it is more useful to consider the cost of housing in terms of the number of bedroom. The Land Registry analysis has therefore been supplemented by a search of homes for sale in the City with the table below showing estimated lower quartile prices by size. In this case it is estimated that housing costs would vary from about £183,100 for a one-bedroom homes and up to £453,000 for four bedrooms.

Table 38: Estimated lower quartile property price by dwelling size – Oxford

	Lower quartile
1-bedroom	£183,100
2-bedroom	£265,100
3-bedroom	£337,300
4-bedroom	£453,000

Source: Land Registry and Internet price search (March 2018)

7.15 To complete the initial analysis of owner-occupied housing, it is of interest to look at the cost of new homes compared with second-hand properties. This information is available from Land Registry and in the period studied (to the end of September 2017) there were very few newbuild sales in the City (just 7 flats in total recorded by Land Registry). The data about flatted accommodation did suggest that new-build homes are around a third more expensive than in the second-hand market, however, with the relative lack of data it is difficult to make any real conclusions.

7.16 Even if more data were available it would be difficult to draw firm conclusions about the relative costs of new and second-hand homes. This is mainly because new and second-hand homes will in many cases not be readily comparable (e.g. a new-build 3-bedroom semi-detached homes will be different to a 3-bedroom semi-detached home in the resale market). At a national level, it is estimated that new-build homes are around 15% more expensive than the equivalent all property figure, and this 15% figure has been used in analysis as appropriate. It should be noted that this is a best estimate, as previously noted it is difficult to get a direct comparison between new and second-hand homes.

Private Rented Housing

7.17 The table below sets out the cost of renting a property on the open market in Oxford by size of property. Average rents start at around £975 per calendar month for a 1-bedroom property, rising to £2,100 for a 4-bedroom family sized home. For comparison, lower quartile rents are also presented in the figure below along with the local housing allowance (LHA) available to those receiving housing benefit.

7.18 The table below shows local housing allowance rates for Oxford. All of the City is covered by the Oxford Broad Rental Market Area (BRMA), although this BRMA does extend well outside the City boundary (including the settlements of Witney, Abingdon and Didcot). The Oxford LHA is insufficient to cover the cost of renting a lower quartile property in the City for all dwellings sizes, meaning that many households are likely to need to 'top up' their rent to be able to access private rented housing. For some households, a benefit cap will also impact on the ability to afford private rented housing in the City; this is likely to particularly affect larger family households.

Table 39: Average (median) and Lower Quartile Market Rents, year to September 2017 – Oxford

	Rent		Local Housing Allowance by Broad Rental Market Area (as at January 2018)
	Average (median) pcm	Lower Quartile pcm	Oxford BRMA
Room only	£510	£500	£349
Studio	£700	£623	-
1-bedroom	£975	£860	£689
2-bedrooms	£1,175	£1,050	£834
3-bedrooms	£1,425	£1,250	£997
4-bedrooms	£2,100	£1,750	£1,296
All properties	£1,295	£1,025	-

Source: Valuation Office Agency

7.19 As with prices, the rent levels can be compared with other areas (as in the table below for median rents by property size). This shows that rents are generally substantially higher than in other areas, approaching double the national average for some dwelling sizes (and for the all properties figure).

Table 40: Average (median) Market Rents, year to September 2017

	Oxford	Oxfordshire	South East	England
Room only	£510	£509	£410	£377
Studio	£700	£623	£550	£550
1-bedroom	£975	£775	£695	£595
2-bedrooms	£1,175	£925	£875	£650
3-bedrooms	£1,425	£1,200	£1,075	£750
4-bedrooms	£2,100	£1,850	£1,680	£1,300
All properties	£1,295	£995	£875	£675

Source: Valuation Office Agency

Affordable Rents

7.20 The table below sets out what an affordable rent would be if calculated at 80% of average and lower quartile market rents within Oxford. The rents in this case are more closely aligned with the LHA limits (for the Oxford BRMA) and would suggest that households claiming benefits would in many cases be able to afford an affordable rent, whilst the private rent is likely to put some strains on household finances. There are still some gaps between LHA limits and an affordable rent based on lower quartile figures (notably for rooms and 4-bedroom accommodation) and this would suggest that a greater discount than the standard 20% might be required in instances where the tenant will need their rent to be supported by benefits

7.21 It should be noted that the private rent data from VOA does not include service charges (whereas an affordable rent cost would do so). If additional service charges were added to the VOA data, then the estimates of the cost of an affordable rent (as in the table below) would increase. It is possible that this would take the cost well above LHA limits, and again could cause difficulties for some households in affording rents. It is not however possible from the data available to estimate if and/or how much the private rent costs would increase with the inclusion of service charges.

7.22 The costs below for affordable rented housing are likely to be similar to those for affordable private rent housing (a new tenure introduce in the NPPF (2018)) and so private rent housing has not been separately studied.

Table 41: Estimated Affordable Rent level (2017)

	80% of Average Market Rents pcm	80% of Lower Quartile Market Rents pcm	*LHA limit*
Room only	£408	£400	*£349*
1-bedroom	£780	£688	*£689*
2-bedrooms	£940	£840	*£834*
3-bedrooms	£1,140	£1,000	*£997*
4-bedrooms	£1,680	£1,400	*£1,296*

Source: Derived from Valuation Office Agency data

Social Rents

7.23 The final main tenure analysed initially is social rents. The figures provided are an average rent and include services changes. The figures have been derived by looking at rent levels for 2016/17 (as evidenced by CoRe[29] data) and then figures for different sizes established by looking at historical

[29] Continuous Recording of Lettings and Sales in Social Housing in England – a national information source funded by the Department for Communities and Local Government that records information on the characteristics of both Private Registered Providers' and Local Authorities' new social housing tenants and the homes they rent and buy

data (to iron out any potential year-on-year anomalies) and also the profile of dwellings let at social rents.

7.24 The analysis shows rent levels starting at £406 per month for a 1-bedroom home and rising to around £567 for four (or more) bedrooms. The figures for the 4-bedroom category should be treated with some caution as there are generally very few lettings of properties of this size in the Oxford. For comparison, the Local Housing Allowance limit has also been provided – this shows for all sizes that social rents are less than LHA.

Table 42: Estimated average social rent by dwelling size

	Average (median) social rent	*LHA limit*
1-bedroom	£406	*£689*
2-bedroom	£466	*£834*
3-bedroom	£565	*£997*
4-bedroom	£567	*£1,296*

Source: CoRe and VOA data

Income Required to Access Different Tenures of Housing

7.25 Having established the likely cost of housing, the next step is to estimate what level of income might be required to access the different products. Separate tests are applied for home ownership and private renting; home ownership is based on looking at mortgage multiples (mortgage affordability) with accessing private rented housing being based on consideration of the proportion of income that might need to be spent on housing (rental affordability).

Mortgage Affordability

7.26 A household is considered able to afford to buy a home if it costs less than four times the gross household income; it has also been assumed that a household will have a 10% deposit.

7.27 Previous CLG guidance (of 2007) suggests using thresholds of 2.9× for households with multiple incomes and 3.5× for those with a single income. The use in this study of a four times multiple reflects the fact that there is likely to be some keenness from Government to ensure that prospective households are able to access the finance they need (for example, with the Help-to-Buy Scheme, the maximum income multiple is 4.5). Additionally, a brief review of a number of lenders indicates that four times income is generally available across the market; although the exact availability of finance will also depend on an individual household's circumstances.

7.28 The 10% deposit is used to reflect the typical minimum deposit required to access mortgage finance. Again deposit availability will vary by household and raising this sort of level of capital would

potentially be an issue for a number of households. However, there are initiatives available to help households to raise a deposit (such as Help-to-Buy ISAs).

7.29 Hence, as with other analysis, the affordability measure used should be treated as indicative given that there are a number of variables that will differ based on the circumstances of individual households – this cannot be captured within this study.

Rental Affordability

7.30 A household is considered able to afford market rented housing in cases where the rent payable would constitute no more than a particular percentage of gross income. The choice of an appropriate threshold is an important aspect of the analysis, CLG guidance (of 2007) suggested that 25% of income is a reasonable start point but also notes that a different figure could be used. Analysis of current letting practice suggests that letting agents typically work on a multiple of 40% (although this can vary by area). Government policy (through Housing Benefit payment thresholds) would also suggest a figure of 40%+ (depending on household characteristics).

7.31 For the purposes of analysis in this section, it has been assumed that a household should spend no more than 35% of their income on housing. This is to provide consistency the previous analysis of the need for affordable housing and to be consistent with the 2014 SHMA.

7.32 It is not considered appropriate to use the same ratios for all tenures of rented housing, as lower housing costs for social/affordable rented homes would reduce levels of residual income (if matched to the same percentage of income to be spent on housing). In the analysis it has been assumed that there should be a stepped reduction such that a 30% figure is used for social renting (a figure of 32.5% has therefore been used when studying affordable rented housing). The use of a 30% threshold for social rented housing is consistent with the 2014 SHMA. The table below summarises the assumptions used.

Table 43: Affordability thresholds for different tenures of rented housing

	LQ private rent	Affordable rented	Social rented
Oxford	35%	32.5%	30%

Source: Housing costs from VOA and CoRe

7.33 In checking if these thresholds are of the right order of magnitude it is worth considering recent evidence on this subject. The English Housing Survey headline report (2016/17) provides data on the proportion of household income spent on housing costs, by tenure. This showed, on average, those buying their home with a mortgage spent 19% of their household income on mortgage payments whereas rent payments were 31% of household income for social renters and 41% of

household income for private renters. Excluding Housing Benefit, the average proportion of income spent on rent was 41% for social renters and 46% for private renters (paragraph 1.47).

7.34 This suggests that the assumption that households could spend more than 25% of their gross income on housing costs reflects reality for those living in the private and social rented sectors in England. Overall it is considered that the threshold of 35% of gross household income is a reasonable threshold based on the available evidence.

Income thresholds for different tenures of housing

7.35 The table below brings together an analysis of the different tenures discussed so far to consider what level of income would indicatively be required to access a home. Although the measures for mortgage and rental affordability are different; both ultimately lead to an estimate of the income required. Looking at figures for the whole of the City it can be seen that it is estimated that an income of around £59,600 would be required for open market purchase of a 2-bedroom property; but much lower figures are seen for rental options.

7.36 The analysis shows a figure of around £16,200-£22,700 to afford social rented housing and therefore it is assumed that any household with an income below this level would need this tenure of housing (probably supported by Housing Benefit). In reality, affordable rented housing might also be a solution for such a household, as long as sufficient Housing Benefit were to be available.

7.37 The estimated incomes to access social rented housing should also be considered in light of benefit caps; 3- and 4-bedroom dwelling sizes show an income requirement which is higher than the upper end of benefit caps (£20,000 per annum for non-single person households). It should however be remembered that this is based on a 30% affordability threshold; if the threshold were changed to 35% (consistent with that used for private renting) then income estimates would be below the benefit cap for all dwelling sizes.

7.38 As of November 2017, data from the Department for Work & Pensions (DWP) shows that 191 households in the City were having their benefits capped (and around 38% of these by more than £50 a week). Further analysis of DWP data identifies that 93% of these households have at least two children and that 79% are lone parent households. This confirms that benefit cap issues are likely to disproportionately impact on households needing larger homes.

Table 44: Indicative affordability (income) thresholds for different tenures of housing – by size

	LQ purchase	LQ private rent	Affordable rented	Social rented
1-bedroom	£41,200	£29,500	£25,400	£16,200
2-bedrooms	£59,600	£36,000	£31,000	£18,600
3-bedrooms	£75,900	£42,900	£36,900	£22,600
4-bedrooms	£101,900	£60,000	£51,700	£22,700

Source: Derived from a range of sources as described

7.39 With regard to the use of Housing Benefit (particularly to assist households affording affordable rented homes) it should be noted that there are a number of implications. The most obvious one is that the higher rents potentially charged will see a greater burden on the public purse. Additionally, with households being subject to the tapering of Housing Benefit as their income rises, the higher rents potentially provide for a longer 'benefit trap'.

Affordability

7.40 Following on from the assessment of local prices and rents it is important to estimate the number/proportion of households who have an income that fits in the 'gaps' between the different tenures. In part this provides information about the numbers who have an income that would allow them to privately rent, but not to buy – this being a new category of affordable housing need introduced by the PPG (2018).

7.41 An estimated income level was previously set out when looking at affordable housing need (measured against those unable to afford any tenure of market housing) and because the analysis has been segmented by dwelling size, it is additionally necessary to consider how incomes might vary for households requiring different sizes of property. There is no published source for this information and analysis is complicated by the fact that there is a difference between the size of accommodation a household needs (which would normally be determined by a bedroom standard as part of an allocations policy) and what a household might demand – particularly in the private sector where a household is able to live in a home larger than their requirements as long as they can afford to do so. Because this analysis is largely focussed on affordable housing, the approach is to estimate income levels by the size of accommodation needed.

7.42 Analysis carried out by GLH/JGC (based on survey data from other local authority areas) suggests that incomes are lowest for households with a 1-bedroom need and highest for those needing 3 or more bedrooms. The table below shows the overall average income by size required as a proportion of total income in an area along with an estimate of what the median income would be in Oxford when these figures are applied to local data. The analysis also assumes that the incomes of

those with an affordable need are lower than the 'all households' figure. For the purposes of this analysis it has been assumed that incomes are around 80% of the City average (80% reflecting likely lower incomes of younger households who might be first-time buyers).

7.43 The data shows that households requiring just one bedroom have an income which is about 80% of the average with all other sizes having income levels notably above the average. There is no notable difference in income levels between households requiring three bedrooms and those with a need for four bedrooms.

7.44 Whilst the distribution looks to be somewhat skewed with more sizes having higher than average incomes it needs to be remembered that for affordability purposes we would typically look at minimum size requirements for households – this means for example that all single person and childless couple households would be modelled against the costs of a one-bedroom home.

Table 45: Estimated median incomes by size requirement (all households)

Size requirement	Income as % of average	Estimated income
1 bedroom	64%	£26,000
2 bedrooms	108%	£43,900
3 bedrooms	120%	£48,800
4+ bedrooms	120%	£48,800

Source: Derived from a range of sources as described

7.45 Having worked through a range of housing products and local income levels, it is possible to bring the data together to look at the proportion of households able to afford different housing products. Focussing on two-bedroom homes, the table below shows that some 35% of households would be able to buy a lower quartile property on the basis of their income.

7.46 There is a relatively big gap between the income required for market purchase and private rented accommodation with some 24% of households having an income in this range and around 29% of households fall in the gap between private rent and social rent. This category would be intermediate housing (as previously defined by the NPPF).

7.47 Finally, the analysis shows some 12% of households in the 'below social rent' category (shown as *can only afford housing with housing benefit support* in the table below) – this would increase to 34% if those unable to afford affordable rents are included (i.e. to also include *can afford a social rent without benefit support but cannot afford an affordable rent*). These households would all essentially fall into a need for social rented housing and have incomes that are insufficient to afford any of the housing products (other than social rents) without spending a high proportion of their income on housing (or without claiming Housing Benefit). Whilst these households are placed in a

'social rented' category for the purposes of analysis, it remains the case that other products (notably affordable rent) may be suitable, as long as sufficient Housing Benefit can be accessed.

7.48 When looking at different sizes of accommodation, the findings show some notably different outputs. For 1-bedroom homes, there is a fairly high proportion who could afford to buy a home and relatively few in the gap between buying and renting. The analysis also shows a high proportion (28%-49%) who could only afford social rented housing. The findings for 1-bedroom accommodation reflect the fact that housing costs across the spectrum are closer together than for other dwelling sizes.

7.49 For three and four-bedroom homes, there is generally lower proportion able to afford to buy a home and higher proportions in the gap between buying and privately renting (around a quarter of households are estimated to be in this gap between buying and renting). There is therefore arguably considerable scope for housing to be provided in this 'gap' although the analysis does not take account of current supply, clearly in this gap between buying and renting there will be a large range of rented homes available as well as a quarter of all sales. Finally, the analysis identifies notable proportions of households who fall below affordable rents in terms of income (37% of the 3-bedroom category and 53% for 4-bedrooms). This would suggest a potential need for social rented housing, or affordable rents, where the rent level falls below the appropriate LHA limit.

7.50 The final row of the table below shows a 'crude average' of the figures for each of the different dwelling sizes (this is simply the average of the figures, and is not weighted to take any account of the different need for different sizes of homes). This shows overall that around 51% of households are unable to afford market housing (based on a lower quartile private rent) and that around 24% sit in the gap between affording to buy and affording to rent (based on income data alone).

Table 46: Proportion of households able to afford different housing tenures by size – Oxford

	Can afford to buy a home	Cannot afford to buy but can afford to privately rent	Cannot afford to privately rent but can afford affordable rented housing	Can afford a social rent without benefit support but cannot afford an affordable rent	Can only afford housing with housing benefit support	Total unable to afford (sum of last three columns)
1-bedroom	27.8%	15.9%	7.6%	20.5%	28.3%	56.4%
2-bedrooms	35.4%	24.2%	6.6%	22.4%	11.5%	40.5%
3-bedrooms	28.7%	27.7%	6.8%	21.7%	15.2%	43.7%
4-bedrooms	16.9%	23.1%	7.1%	37.6%	15.4%	60.1%
Crude average	25.2%	24.0%	7.0%	28.1%	15.8%	50.9%

Source: Derived from a range of sources as described

7.51 The figures provide an indication of the relative affordability of different housing products. However, this should not be seen as indicating what tenure split is appropriate for new development – there are significant overlaps between the tenures which mean that households may be able to afford or access a range of different products.

7.52 The analysis should also be considered as indicative as it is based on estimated income levels of all households. In reality, individual households will have different and specific affordability levels which can vary, for example, depending on whether they are a current owner (with equity) and the size of home that they actually need. Also, certain groups will have a different profile (for example younger people are likely to have lower incomes than those in their 40s and 50s). However, the general ordering of the affordability of different products and the gap in costs between them does mean that the analysis is a useful guide to the potential mix of housing within the (broadening) affordable housing definition.

7.53 The analysis does however clearly identify that there will be a significant number of households who have an income that sits somewhere between being able to afford to privately rent and being able to afford to buy (i.e. that fit in with the additional definition of affordable need set out in the NPPF (2018). Analysis below seeks to see what sort of products might be available to this group – such products can be referred to as affordable home ownership.

Affordable Home Ownership

7.54 The analysis above has considered some of the main tenures of housing. There are also a series of other tenures in the NPPF that can be considered in this report. These are under the banner of affordable home ownership, and in terms of the NPPF (2018) could include Starter Homes, Discounted market sales housing and intermediate housing (taken in this report to largely be shared ownership).

Intermediate Housing (shared ownership)

7.55 Looking at affordability for shared ownership draws on both a mortgage and rental affordability test and is discussed separately below. Shared ownership starts with an open market value (OMV) and then part of the property is sold and the rest is rented (normally from a Registered Provider). It is difficult to know exactly what the OMV of shared ownership might be (as this will depend on a range of factors such as the location of the dwelling), however, for the purposes of an indicative analysis, it is assumed that the OMV for shared ownership will be approximately lower quartile house price plus 15% (the estimated new-build premium).

7.56 Taking the example of a 2-bedroom property, it is estimated that the OMV would be about £305,000. If buying a 25% share in the property, the income required for the purchase part of the tenure would be around £17,100 (this assumes a 10% deposit and 4× income multiple). The rental element would be about £6,900 per annum (based on paying a rent of 3% per annum on the unsold equity) and based on 33% of income for this (which seems to be a fairly standard figure for shared ownership) an additional income of about £20,600 would be needed. The overall income required for shared ownership would therefore be around £37,700.

7.57 The table below shows the same calculation (working through to an income requirement) for all dwelling sizes and also considering a 50% share (as well as 25%). This shows that shared ownership is affordable for 1-bedroom homes with a 25% share (this is based on considering if there is an income requirement which is below the LQ private rent figure) but not affordable for other dwelling sizes. With a 50% share, the income required is above that for private renting for all dwelling sizes. That said, the income requirements for shared ownership are lower than for outright purchase for all sizes of home. This analysis would suggests that generally shared ownership is arguably not an affordable product, although enabling households to access shared ownership would potentially release other accommodation into the market for use by another household.

7.58 The calculations below all assume a 10% deposit on the equity part of the home; if a household were to be able to pay a larger deposit, then the mortgage cost (and income requirement) would reduce, and hence the housing would be more affordable. That said, it may be that some shared ownership is available with deposits lower than 10% - this in turn would increase the monthly housing cost. Overall, it should therefore be noted that the analysis below is based on a specific set of circumstances; these would be different for individual households seeking to access shared ownership accommodation and should therefore be seen as indicative (albeit consistent with the analysis carried out when looking at the affordability of other tenures).

Table 47: Indicative affordability (income) thresholds for shared ownership – by size

	25% equity share	50% equity share	*LQ purchase*	*LQ private rent*
1-bedroom	£26,100	£33,200	£41,200	£29,500
2-bedrooms	£37,700	£48,000	£59,600	£36,000
3-bedrooms	£48,000	£61,100	£75,900	£42,900
4-bedrooms	£64,500	£82,100	£101,900	£60,000

Source: Derived from a range of sources as described

7.59 In looking at shared ownership, the question about affordability can be shifted to ask what level of equity purchases would be needed for a home to be affordable (i.e. at the same cost or less than access level private rented accommodation). The table below estimates these percentages and shows that an equity purchase of 37% for a 1-bedroom home would bring the cost in at a level

close to the private rented sector along with a figure of 20% for 2-bedrooms. For larger homes, a household would only be able to equal the income requirement to access the private rented sector if the equity purchase was as low as 15-18%.

7.60 The analysis (particularly for the larger dwelling sizes) does not mean that the Council should not consider this type of accommodation within the mix of housing, as larger shared ownership can add to the mix of housing and will be affordable to some households who are able to rent but not to buy. Additionally, whilst 1-bedroom shared ownership looks to be relatively affordable, it would need to be established if there is actually demand for this size and tenure of accommodation in a local area – experience elsewhere has suggested that one-bedroom shared ownership is not typically of high demand.

Table 48: Equity share needed to make shared ownership income requirements the same as requirements in the private rented sector

	Affordable equity share
1-bedroom	37%
2-bedrooms	20%
3-bedrooms	15%
4-bedrooms	18%

Source: Derived from a range of sources as described

Starter Homes/discounted market sales housing

7.61 The final tenures to be considered are Starter Homes and discounted market sales housing. These are considered together as in many cases they would be the same product (having a discount of at least 20% from open market value (OMV). There are some differences in terms of eligibility and the extent to which the discount is held in perpetuity, but for the purposes of this report they are most readily considered as a single tenure.

7.62 Consistent with other analysis, to establish the likely OMV we have looked at lower quartile prices and added 15%. Then a discount of 20% is applied and all of the same assumptions about deposits and income multiples as for full open market purchase. The table below shows a worked example of the income requirement for a 2-bedroom home. This shows an income requirement of £54,900, which is below the income required for open market purchase (£59,600) but above the equivalent figure for a lower quartile private rented home (£36,000).

Table 49: Income Required for Starter Home/discounted market sales housing – 2-bedroom

	Assumptions	Value (£)
Overall price of SH/DMS (before discount)	Price is 15% above estimated lower quartile second-hand purchase	£304,900
Price of home after 20% discount	20% discount on market value	£243,900
Deposit	10% required	£24,400
Mortgage required	Minus 20% discount and 10% deposit	£219,500
Income required to afford home	Assuming a mortgage up to 4 times income	£54,900

Source: Derived from a range of sources as described

7.63 The table below shows equivalent income requirement figures for all dwelling sizes. This does split Starter Homes for Discounted Market Sale. This is because Starter Homes have a maximum cost of £250,000 outside London. A 20% discount from the estimated OMV for 3- and 4-bedroom homes gives a figure in excess of £250,000 and so the figure is capped at this level for this size of property. In most cases the income requirement sits somewhere between the income for open market purchase and the income required to access the private rented sector (also shown in the table below for clarity). The exception to this is for 4-bedroom Starter Homes, and is a situation created by capping the value at £250,000.

Table 50: Affordability thresholds for Starter Homes and Discounted Market Sale housing

	Discounted market sale	Starter Home	*LQ purchase*	*LQ private rent*
1-bedroom	£37,900	£37,900	£41,200	£29,500
2-bedrooms	£54,900	£54,900	£59,600	£36,000
3-bedrooms	£69,800	£56,300	£75,900	£42,900
4-bedrooms	£93,800	£56,300	£101,900	£60,000

Source: Derived from a range of sources as described

7.64 One additional question arising from this analysis is to study at what point increasing the discount on a Discounted market sale/Starter Home (above the minimum 20% assumed above) will put this tenure on and equal footing (in affordability/income requirement terms) as the access level to the market (i.e. a lower quartile private rent). The simplest way to consider this is to look at the discount required so that the income required is in line with that needed to access a lower quartile private rented home – this tenure essentially sets the upper bound for intermediate housing. Hence an additional analysis has been undertaken to test what level of discount might be needed for Starter Homes/Discounted Market Sale housing to be an intermediate product, as defined in the NPPF of March 2012.

7.65 The table below shows for a Discounted market sale/Starter Home to just fall into the bracket of intermediate housing, that the discount from OMV would need to be in the order of 38% for a one-bedroom home and rising to around 50% for other dwelling sizes.

Table 51: Theoretical discount needed from OMV to make a Starter Home/Discounted Market Sale as 'affordable' as intermediate housing

	Discount from OMV
1-bedroom	38%
2-bedrooms	48%
3-bedrooms	51%
4-bedrooms	49%

Source: Derived from a range of sources as described

7.66 An alternative way to look at discounts to make housing affordable is to use the income thresholds for private rented accommodation and work these back into a house price (again assuming a four times income multiple and a 10% deposit). The table below shows what the sale price would need to be if low-cost home ownership were to essentially be at the access level to the market.

Table 52: Oxford affordable home ownership prices (aligned with cost of accessing private rented sector)

	Affordable Housing Prices (AHP) (initial fixed sale prices)
1-bedroom	£131,000
2-bedrooms	£160,000
3-bedrooms	£190,500
4-bedrooms	£266,700

Source: Derived from a range of sources as described

7.67 One advantage of looking at the cost of housing in this way is that it can readily be updated (every six months by reference to Valuation Office Agency data). However, it is not entirely clear if setting low-cost home ownership costs at these levels would be a worthwhile exercise.

7.68 Firstly, whilst these costs would theoretically mean that an affordable home ownership unit would meet any definition of affordable housing; it would remain the case, that many households who are able to afford such a product, could already afford open market housing without the need for subsidy/discount.

7.69 Secondly, providing homes at these costs (e.g. a 2-bedroom home for £160,000) will be less viable than providing the same homes at (say) a 20% discount (e.g. in the case of a 2-bedroom home a 20% discount would roughly equate to a property price of £244,000). The larger discount could have a knock-on effect on the ability for other forms of affordable housing to be provided (such as social/affordable rent). As with many aspects of looking at affordable housing provision, there will be

a series of choices to be made by the Council which will need to balance up overall delivery, the affordability of housing and the viability of provision.

Affordability (Wider Definition) - Discussion

7.70 The cost of housing to buy in Oxford City is expensive compared with many other areas. A lower quartile terraced home (regardless of size) is estimated to cost around £323,000, whilst a lower quartile two-bedroom home is estimated to be around £265,000. To access a 2-bedroom home (assuming a 10% deposit and a four times income multiple) a household would need an income of around £59,600.

7.71 The cost of private rented accommodation is also somewhat more expensive than seen elsewhere. A lower quartile 2-bedroom home costs around £1,050 per month, and the income needed to access this accommodation (assuming that around 35% of income could reasonably be spent on housing) would be around £36,000. The amount of Housing Benefit that can be claimed is generally lower than lower quartile market rents, meaning that benefit dependent households could find it difficult to access market housing (without having to top-up the rent to be paid).

7.72 The cost of affordable rented housing (at 80% of market rents) looks likely to have a cost closer to maximum Housing Benefit levels, and hence can be considered as an affordable product likely to be available to most households. However, for households requiring larger homes, it is possible that the benefit cap would make it difficult to access this form of affordable housing. Social rents are notably cheaper than private or affordable rents and are the most affordable form of accommodation.

7.73 Given the income requirements to access owner-occupation compared with accessing the private rented sector, it is clear that there will be a great many households in the 'gap' between the two tenures. These households would be included in the NPPF (2018) definition of affordable housing need *'households which can afford to rent in the private rental market, but cannot afford to buy despite a preference for owning their own home'*. Whilst we do not have specific information about household preferences, it would be reasonable to assume that a great many would aspire to be owner-occupiers.

7.74 On this basis, analysis has been carried out to look at the potential cost of a range of affordable home ownership options. Key forms of affordable home ownership set out in the NPPF (e.g. Starter Homes or Discounted Market Sale) have the potential to be expensive relative to the income requirements for private rented accommodation but slightly more affordable than open market purchase. Generally, if such homes were sold at a 20% discount to Open Market Value (OMV) then they would not be meeting a traditional affordable need (i.e. those able to afford such

accommodation could also afford to rent privately without any subsidy). To make home ownership as affordable as the private rented sector, discounts on OMV of well in excess of 20% would typically be needed (for a 2-bedroom home a discount of around 48% is estimated as being necessary).

7.75 Turning to shared ownership, this tenure would generally sit at an effective cost somewhere between the cost of outright ownership and renting privately (potentially cheaper than privately renting for smaller homes if the equity share is as low as 25%). Hence, this tenure of accommodation is again generally unaffordable in terms of a traditional view of the ability to access the market (through private rented housing). Shared ownership is however clearly more affordable (in terms of an income requirement) than Starter Homes or Discounted Market Sale. It should be noted that this analysis is based on a specific set of assumptions; the affordability of any particular dwelling could vary depending on the OMV and the circumstances of prospective purchasers.

7.76 It is clear from the analysis that shared ownership is likely to be the most affordable home ownership option available and should ideally be included in the mix of housing where an affordable home ownership element is to be included.

7.77 The range of analysis around the cost of housing (including affordable housing) does provide the Council with a series of choices. The analysis clearly identifies a need for affordable housing based on a traditional definition (i.e. those unable to afford anything in the market) but also identifies a substantial proportion of households as likely to be in the gap between renting and buying.

7.78 There are clear overlaps between different 'affordable' products, with the analysis only able to provide a broad overview; for example, shared ownership could be provided with different equity shares to that assumed in this study, whilst Starter Homes could be provided with a greater discount than 20% on open market value.

7.79 Affordable home ownership with 'standard' discounts would typically require an income that is above the income needed to access private rented accommodation. This means that such housing would be available to those who can also afford to rent privately; however, inclusion of affordable home ownership products as part of the mix of housing would enable some households to move out of private rented accommodation, as well as fulfilling the Government desire to increase home ownership.

7.80 On the basis of this analysis, and recognising the NPPF, the Council could consider seeking 10% of all housing to be affordable home ownership. There will be decisions to make about the form such housing takes. The analysis is clear that a 20% discount from OMV will not make housing particularly affordable, but higher discounts will impact on viability, with the possibility that such

housing still does not meet an ideal target audience (e.g. if households with relatively high incomes are able to access such housing). Hence any policy to include the 10% should be carefully thought through. Furthermore, it is not considered that there is any basis (in affordability terms) to increase the provision of affordable home ownership above the 10% figure currently suggested in the NPPF.

7.81 The Council will also need to consider what forms of affordable home ownership are most appropriate in local circumstances. The discussion when looking at different tenures within this broad 'affordable home ownership' category clearly points towards shared ownership as being the most affordable option; the Council should therefore focus on this tenure as a start point, with other options potentially being considered where viability is a concern. The Council could also consider other forms of affordable home ownership over and above the typical social:intermediate split typically sought in policy. This could be in addition to the affordable housing and could form part of the market housing.

7.82 Subject to viability, in addition to 10% of affordable home ownership, the Council should be seeking to provide additional rented housing; the provision of such housing should be maximised where opportunities arise. Analysis in this report suggests that rented housing could be split broadly equally between social and affordable rented, although the amount of affordable rent could be increased as long as the rent level does not fall above LHA limits (and also being mindful of the impact of benefit caps for larger households).

7.83 In terms of the choices, the delivery of affordable housing will be limited by the finance available to provide such housing, and this will need to be balanced against the need for different types of accommodation. For example, the analysis clearly indicates the main need to be for rented homes and that social rents are the most affordable tenure of housing. However, social rent is typically less viable to provide than say shared ownership (or indeed affordable rents) – therefore fewer social rented homes would be able to be provided than homes of other tenures.

7.84 There are further considerations when looking at the tenures of affordable homes to be provided. This includes the cost to the public purse of Housing Benefit and also the extent to which households might get caught in a benefit trap if rent levels are too high (which could act as a disincentive to seek employment). Differences in the pricing and availability of housing in different areas will also be a consideration when deciding what mix of housing is most appropriate.

7.85 Finally, whilst the NPPF contains an expectation that 10% of all homes should be affordable home ownership, it does also note that this requirement would not apply where it would *'significantly prejudice the ability to meet the identified affordable housing needs of specific groups'*. This may be particularly relevant in Oxford where the analysis of affordable housing need (using the private rented sector as the access point to the market) shows a very high need. Clearly if the Council were

to provide 10% of housing as affordable home ownership then less of this more acute need could be met. The Council do therefore have a good case for not providing the 10% expected, although it does need to be recognised that there are a significant number of households who fall into the affordable home ownership category.

7.86 Overall, whilst the analysis provides an evidence base about different types/tenures of housing, it remains the case that the local authority will need to recognise that there are a series of choices to be made with regard to the provision of new affordable housing; essentially a trade-off between the affordability of accommodation and the number of homes that can viably be provided.

Summary

7.87 Analysis was undertaken to consider the affordability of housing options in Oxford City; this was with a particular focus the (wider) proposed definition of affordable housing in the NPPF (including the expectation that at least 10% of new homes are in an 'affordable home ownership' tenure).

7.88 The table below provides a summary of estimated income requirements to access a range of different property sizes and tenures. This clearly identifies that affordable home ownership with 'standard' discounts would typically require an income that is above the income needed to access private rented accommodation. This means that such housing is not technically affordable (in a tradition sense); however, it needs to be noted that the figures below are based on a specific set of assumptions; the affordability of any particular dwelling could vary depending on the open market value and the individual circumstances of prospective purchasers.

7.89 Overall, the analysis would generally support shared ownership as the most affordable form of affordable home ownership that can be promoted by the Council (when compared with standard 20% discounts as included in the NPPF).

Table 53: Indicative affordability (income) thresholds for different tenures of housing – by size (ordered for 2-bedroom properties)

	1-bedroom	2-bedrooms	3-bedrooms	4-bedrooms
Lower Quartile purchase	£41,200	£59,600	£75,900	£101,900
Discounted market sale	£37,900	£54,900	£69,821	£93,771
Starter Home	£37,900	£54,900	£56,300	£56,300
Shared ownership (50% equity share)	£33,200	£48,000	£61,100	£82,100
Shared ownership (25% equity share)	£26,100	£37,700	£48,000	£64,500
Lower Quartile private rent	£29,500	£36,000	£42,900	£60,000
Affordable rented (median)	£28,800	£34,700	£42,100	£62,000
Affordable rented (lower quartile)	£25,400	£31,000	£36,900	£51,700
Social rented	£16,200	£18,600	£22,600	£22,700

7.90 On the basis of the analysis of housing costs, income requirements and an understanding of potential changes to the definition of affordable housing; the main conclusions from the analysis are:

- The Council could consider seeking 10% of all housing to be affordable home ownership (as set out in the NPPF) although there is a good case for this percentage to be lower (or even zero);
- The bulk of any affordable home ownership should be shared ownership – this is the most affordable of the home ownership options;
- The Council could also consider other forms of affordable home ownership (such as Starter Homes) where this improves viability. The Council could potentially also seek for some proportion of market housing to be discounted (e.g. a similar product to a Starter Home, but forming part of the market mix; and
- The Council should be seeking to provide additional rented housing. A broadly equal split between social and affordable rented could be considered, although the costs and affordability of affordable rented housing should be monitored over time.

7.91 Overall, it needs to be recognised that there are a series of choices to be made with regard to the provision of new affordable housing; essentially a trade-off between the affordability of accommodation and the number of homes that can viably be provided. Hence the analysis in this report can only provide a guide to the types of affordable housing that should be provided.

Key Points

- Based on housing costs, income requirements and an understanding of potential changes to the definition of affordable housing, the analysis concludes that:
  - The Council could consider seeking 10% of all housing to be affordable home ownership although a lower percentage (or even zero) can be justifiable;
  - The bulk of any affordable home ownership should be shared ownership as this is the most affordable options;
  - The Council could also consider other forms of affordable home ownership such as Starter Homes where this improves viability.
  - The Council should be seeking to provide additional rented housing. A broadly equal split between social and affordable rented could be considered, although the costs and affordability of affordable rented housing should be monitored over time.
- There are a series of choices to be made with regard to the provision of new affordable housing; essentially a trade-off between the affordability of accommodation and the number of homes that can viably be provided.
- The housing needs research represents a point in time and the need for affordable housing going forward is dependent on a number of factors. For example, current Government policies around Universal Credit, Supported Housing, Local Housing Allowance, Homeless Reduction Act and other related policies may mean an increase in the need for affordable housing need going forward. The Council will need to be mindful of such policies and monitor their impact in its administrative area.

8 MARKET SIGNALS

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

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

8.2 It is clear that a comparative analysis is required. In preparing the analysis herein, GL Hearn has also sought to consider longer-term trends, recognising that for some indicators there can be short-term volatility. For comparison we have provided comparison to Cambridge as the most similar local authority according to ONS as well as Oxfordshire, the South East region and England and Wales.

8.3 Since the preparation of the 2014 SHMA, there has been new data released in a number of areas, and this is what is considered herein. The update thus considers:

- House Prices – drawing on the 2017 Price Paid Data. Our analysis assesses trends over three separate time periods 2014-2017 (since the base date of the latest official projections), 2007-2017 (10 years) and 2002-2017 (15 years).
- Private Rental Sector – updating rental trends using the latest Valuation Office Agency (VOA) data covering a 6 year period from September 2011 to September 2017 which is the longest available period.
- Affordability – using the latest median and lower quartile affordability ratio data, considering residence based and workplace-based data, over a 15 year period from 2001 (residence based data since 2002).
- Rate of Development – taking account of 2016 completions data and comparing completions against the housing target/ OAN from 2001 to 2016 to understand housing over/ under delivery.

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

Land Prices

8.5 There is limited published data relating to land prices nationally. That which is available was produced by the by the DCLG in December 2015 in a publication entitled *Land value estimates for policy appraisal.* The table below provides an update to land value estimates in the 2014 SHMA.

Table 54: Post permission residential land values estimates, per hectare

	Value
Oxford City	**£5,020,000**
Cambridge	£5,655,000
Oxfordshire LA Average	£3,789,000
South East	£3,600,000
England excl. London	£2,100,000
England incl. London	£6,900,000

Source: DCLG 2015

8.6 As Table 54 demonstrates the land values in Oxford are slightly lower that the comparative values in Cambridge but significantly higher that the South East and across England taking London land values into account.

8.7 In both Oxford and Cambridge's case the land values demonstrate both the value of housing in each city as well as the paucity of suitable land. Outside of London land in Cambridge is the 15th most expensive in the country with Oxford at 22nd.

House Price Analysis

8.8 Using the latest available full year's data from the Land Registry (2017), the median house price in Oxford City was £400,000. This was higher than the equivalent values for Oxfordshire, South East and for England. The median house price for Oxford City in 2017 was almost double (45% higher) that of the national average. However, median house prices in the City of Oxford were 7.5% lower than in the comparative values in Cambridge (£430,000).

Table 55: Absolute and Percentage Change in Median House Prices (2002-2017)

		Q3 2014-2017		Q3 2007-2017		Q3 2002-2017	
	Median 2017	Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
Oxford City	**£400,000**	**£87,000**	**28%**	**£134,000**	**50%**	**£257,000**	**180%**
Cambridge	£430,000	£84,000	24%	£170,349	66%	£252,000	142%
Oxfordshire	£342,500	£67,500	25%	£92,528	37%	£166,400	94%
South East	£317,000	£67,050	27%	£90,500	40%	£162,050	105%
England	£222,000	£29,500	15%	£42,000	23%	£104,000	88%

Source: Price Paid Data, 2018

8.9 Median house prices in the City of Oxford have increased by 28% since Q3 2014 as demonstrated by the table above with increases of a similar level in Cambridge (24%), Oxfordshire (25%) and the South East (27%).

8.10 Absolute median house price increases were marginally higher in Oxford (£87,000) when compared with Cambridge (£84,000) and greater than the county average (£67,500). Over the same period prices in England only increased by 15% or £29,500.

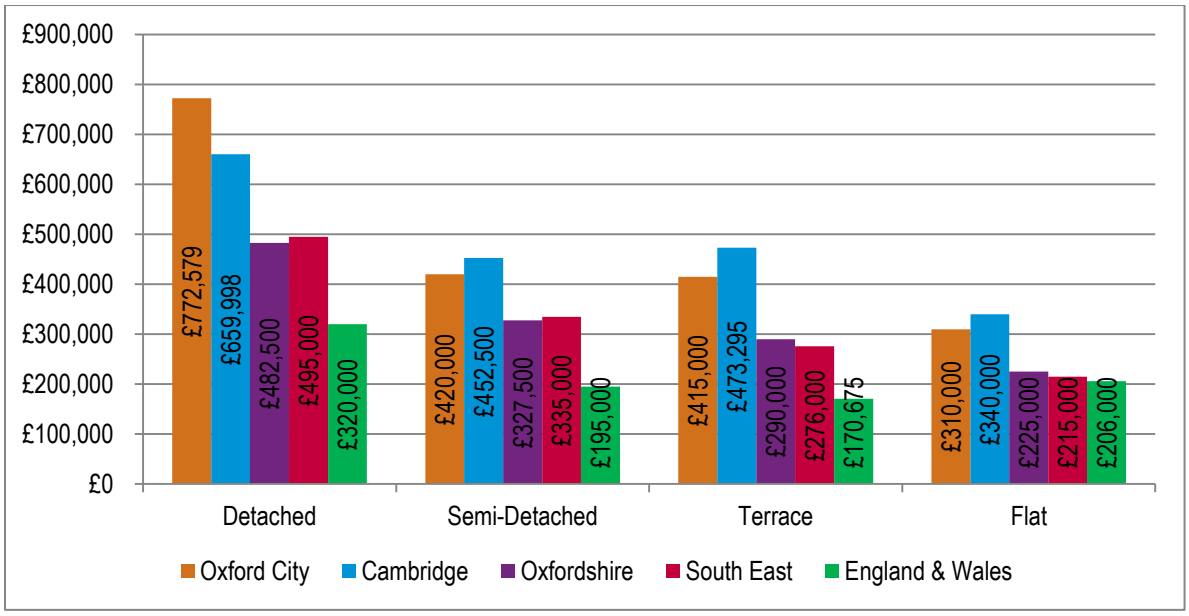
8.11 The PPG advises that consideration is given to longer-term trends therefore trends over a 10 year period (2007-2017) and 15 year period (2002-2017) were also assessed. Over the last decade, house prices increased in Oxford City by 50% (£134,000), representing a stronger growth than the regional and national level. However Cambridge saw stronger growth over the 10 year period at 66%.

8.12 Over a fifteen year period, since 2002, house prices have increased in Oxford City by £257,000 (180%), which is a marginally greater increase than in Cambridge with £252,000 (142%). This was significantly higher than the equivalent growth in Oxfordshire and the South East (£162,000 and £166,000, respectively) whereas house prices in England increased by just £104,000, although this equated to an increase of almost 90% since 2002.

House Price by Type

8.13 Median house prices are influenced by the mix of properties sold. Figure 20 below provides an analysis which enables consideration of the relative price for comparable properties. In most cases, except for detached dwellings, Cambridge has higher house prices for all types of dwellings.

Figure 20: Average House Price by Type of Dwelling (2017)



Source: Price Paid Data, 2018

8.14 In all cases Oxford City has higher house prices by type of dwelling than Oxfordshire, the South East region and nationally. There is a particular premium on detached housing which are 60% higher in the City than the county as a whole. This again reflects the lack of detached properties and the premium on space in the City.

Rents

8.15 Median and lower quartile rents in the City of Oxford are above the South East average at £1,295 and £1,205 per calendar month (pcm) respectively. Unlike purchase prices median and lower quartile rents are higher in the City of Oxford City than in Cambridge.

8.16 From 2011 to 2017 median rents have increased by 27% (£345) in Oxford City which is on par with the increase in Cambridge. Median rents have increased more in Oxford City than across the county, region and nationally since 2011.

Table 56: Median Rental Trends (2011-2017)

		Median 2011-2017			LQ 2011-2017	
	Median 2017	Absolute Change	% Change	LQ Rent 2017	Absolute Change	% Change
Oxford City	**£1,295**	**£345**	**36%**	**£1,025**	**£250**	**32%**
Cambridge	£1,100	£300	38%	£850	£230	37%
Oxfordshire	£995	£155	18%	£825	£150	22%
South East	£875	£175	25%	£695	£120	21%
England	£675	£100	17%	£500	£50	11%

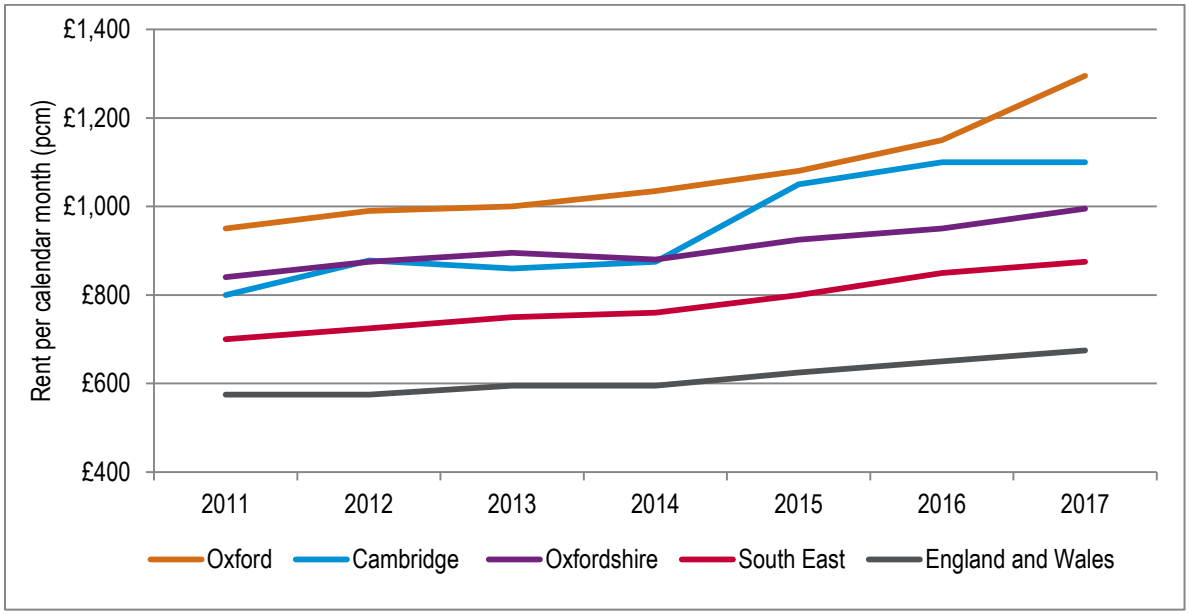
Source: VOA Private Rental Data (2017)

8.17 The increase in Lower quartile rents in Oxford City over the six year period from 2011 to 2017, was not as great as for median rents with an increase of 24% (£250). In percentage terms, lower quartile rents increased more in Cambridge than in Oxford, although the absolute change was lower.

8.18 The figures below demonstrate the median and lower quartile rental trends from 2011 to 2017. Median rents in Oxford City increased at a gradual but steady rate from 2011 with a notable increase in the last year.

8.19 The pattern in the City is similar to that of Oxfordshire and South East benchmarks (albeit from a higher base); whereas median rents in Cambridge saw increases from 2014 to 2015 with relatively steady growth before and since.

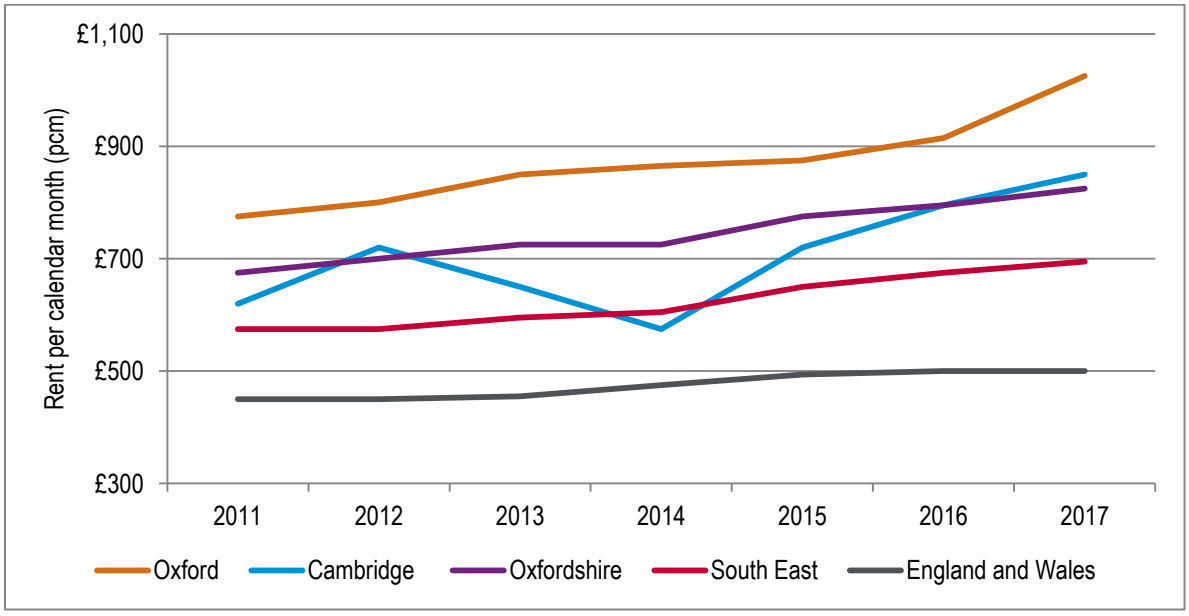
Figure 21: Median Rental Trends (2011-2017)



Source: VOA Private Rental Data (2017)

8.20 It is a similar story for lower quartile rental trends as illustrated in Figure 22. Oxford's rental growth is steady with again the largest growth in the past year. Until the last year a similar pattern was seen across the county and South East regions again at a higher rate.

Figure 22: Lower Quartile Trends (2011-2017)



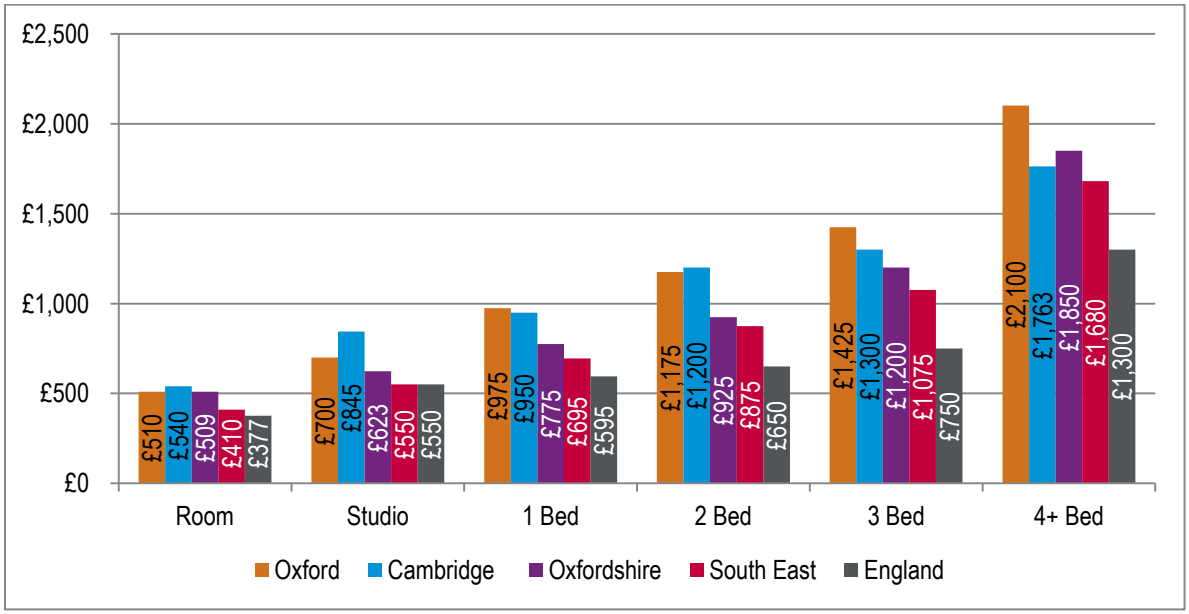
Source: VOA Private Rental Data (2017)

8.21 In contrast lower quartile rents in Cambridge decreased by over £100 from 2012 to 2014 before proceeding to increase sharply from 2014 to 2016 increasing by £225 over the entire six year periods.

Rent by Size

8.22 Figure 57 below illustrates median rental values for different unit sizes. Oxford and Cambridge have similar median rental values for different unit sizes. Oxford City has higher median rents for 1 bedroom, 3 bedroom and 4+ bedrooms (£975, £1,425 and £2,100) whereas Cambridge has higher median rents for a room, studio, and 2 bedroom unit (£510, £700 and £1,200).

Table 57: Median Rental Values for Unit Size (2017)



Source: VOA Private Rental Data (2017)

8.23 Median rental values for all unit sizes are higher in Oxford City than in the county of Oxfordshire, South East Region and England as a whole. One and two bedroom properties have a particular premium in the City compared to the wider county with prices being around 26% higher for both.

Affordability Ratios

8.24 The 2014 SHMA considered evidence specifically at the relationship between median and lower quartile house prices and incomes up to 2012. This section of the report will provide an updated analysis considering data to 2016.

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

Workplace Based

8.26 The table below shows the lower quartile affordability ratio based on the earnings of those working in each authority. It considers the current ratio, and how this has changed over three separate time periods 2014 to 2016 (2 years), 2006 to 2016 (10 years) and 2001 to 2016 (15 years).

Table 58: LQ Affordability Trend (work-place earnings)

		2014-2016		2006-2016		2001-2016	
	LQ 2016	Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
Oxford City	**12.22**	**1.79**	**17%**	**2.13**	**21%**	**4.87**	**66%**
Cambridge	13.32	2.06	18%	4.11	45%	6.73	102%
Oxfordshire	11.04	1.40	15%	1.60	17%	4.33	65%
South East	9.99	1.09	12%	1.30	15%	4.41	79%
England	6.96	0.22	3%	-0.20	-3%	2.96	74%

Source: DCLG Live Tables: Land Registry Data

8.27 The lower quartile ratio in Cambridge (13.2) is higher than in the City of Oxford (13.3), although the City does have a higher lower quartile affordability ratio than Oxfordshire (11.04). In all cases, this is above the South East (10.0) and national (7.0) averages.

8.28 Since 2014, the LQ affordability ratio has increased (worsened) across all geographies, with greater absolute changes in Cambridge (2.06 increase) when compared to Oxford City (1.79 increase), although these are equal in terms of percentage increases.

8.29 Over the 10 year period, Cambridge's lower quartile affordability ratio increased by almost double that of Oxford City's (4.11 increase and 2.13 increase, respectively). From 2002 to 2016, Oxford City's increase in affordability has been similar to that of Oxfordshire's and the South East.

8.30 We have also considered and compared the median price-earnings ratio to identify whether affordability is an issue across the market or a particular segment. A similar pattern emerges that there has been consistent growth (worsening) in the affordability ratio in Oxford City since 2014.

8.31 However, the lower quartile ratio is higher than the median affordability demonstrating that those at the bottom end or entry level in Oxford face more affordability pressure than those seeking to move in the general market.

8.32 The median workplace based affordability ratio is arguably the key market signal given its proposed use within the standard methodology. This demonstrates that median house prices in the City of Oxford were 11.84 times median wages in the City.

8.33 Similar to lower quartile affordability, Cambridge has a higher ratio of house prices to earnings ratio with house prices almost 13 times higher than average earnings, in comparison to Oxford City where house prices are just below 12 times higher than average earnings.

Table 59: Median Affordability Trend (work-place earnings)

		2014-2016		2006-2016		2001-2016	
	Median 2016	Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
Oxford City	**11.84**	**1.83**	**18%**	**2.85**	**32%**	**5.05**	**74%**
Cambridge	12.97	1.58	14%	3.92	43%	6.43	98%
Oxfordshire	10.23	1.20	13%	1.60	19%	3.68	56%
South East	9.75	1.19	14%	1.73	22%	3.87	66%
England	7.59	0.64	9%	0.63	9%	3.17	72%

Source: DCLG Live Tables: Land Registry Data

8.34 From 2006 to 2016 there was a 2.85 increase (32%) in affordability and a 5.05 increase (74%) over the 15 year period. Cambridge experienced greater increases (worsening) than Oxford City over both time periods.

8.35 Again, Oxford City had higher absolute changes in affordability since 2001, when compared to Oxfordshire and the South East where affordability ratios increased by similar amounts (2.68 and 3.87, respectively) over this time period.

Residence Based

8.36 The table below demonstrates the lower quartile affordability trend for residence based earnings. In comparison to work place earnings, there is very little difference in lower quartile figures for 2016. An analysis of median figures on this basis is shown in the table below.

8.37 As the residence based rates are higher than the workplace based equivalents this demonstrates that those living in Oxford earn less than those working in the City. This also demonstrates that higher value jobs in the City are more frequently taken up by those living outside of the City.

8.38 The residence based earnings affordability ratio shows a similar pattern to those in the workplace based ratios. In summary the ratios in Oxford are above the County, Regional and national equivalents but below those in Cambridge.

Table 60: LQ Affordability Trend (residence based earnings)

		2014-2016		2006-2016		2002-2016	
	Median 2016	Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
Oxford City	**12.49**	**1.91**	**18%**	**2.20**	**21%**	**2.52**	**25%**
Cambridge	13.78	2.29	20%	4.72	52%	6.00	77%
Oxfordshire	10.90	1.34	14%	1.63	18%	3.50	47%
South East	9.74	1.14	13%	1.32	16%	3.50	56%
England	6.95	0.22	3%	-0.20	-3%	2.54	58%

Source: DCLG Live Tables: Land Registry

8.39 Growth in the LQ ratio in Oxford over the longer period since 2002 has been much lower than any of the comparable areas although in the medium and shorter terms the growth (worsening) in Oxford have exceeded all but Cambridge.

8.40 For Median residence based affordability ratio the pattern is again a familiar one with the City of Oxford being less affordable than the County, Region, and Country but more affordable than Cambridge with similar patterns of growth to the Lower Quartile ratio.

Table 61: Median Affordability Trend (residence based earnings)

		2014-2016		2006-2016		2002-2016	
	Median 2016	Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
Oxford City	**12.58**	**2.38**	**23%**	**2.70**	**27%**	**3.93**	**45%**
Cambridge	13.45	2.63	24%	4.24	46%	6.31	88%
Oxfordshire	10.09	1.14	13%	1.37	16%	3.24	47%
South East	9.43	1.23	15%	1.37	17%	3.31	54%
England	7.58	0.63	9%	0.42	6%	2.53	50%

Source: DCLG Live Tables: Land Registry

8.41 All of the affordability ratios examined demonstrate clear affordability issues in Oxford with the lowest ratio still showing that house prices are 11.84 times earnings. Typical mortgage affordability calculators would only allow for a multiple of around 4 times earnings thus demonstrating that without a significant deposit most purchasing a house in Oxford would be out of reach for most households.

Rate of Development

8.42 GL Hearn has assessed housing delivery compared to housing targets/OAN figures across three separate time periods, 2014 to 2016 (2 years since the last SHMA), 2009 to 2014 (5 years feeding

in to the latest official projections) and 2006 to 2016 (10 years). The table below identifies the percentage of delivery for each authority and the total delivery in Oxford City since 2006.

8.43 In Oxford City, there has been an under-delivery of homes over all time periods. For the purpose of considering adjustment for market signals the input period to the 2014-based SNPP (2009-14) and the 10 year period (2006-2016) are the most relevant.

8.44 The 2009-14 year period saw a notable level of under-delivery, influenced by economic / housing market conditions in this period. Oxford City delivered just over half of its housing target (56%) which resulted in an under-delivery of 887 dwellings out of the target 2,000 homes.

8.45 The 10 year period from 2006 to 2016 covered both the pre and post-recession period. Overall, Oxford City has delivered over 4,200 homes since 2006, equating to 96% of housing targets / OAN figures.

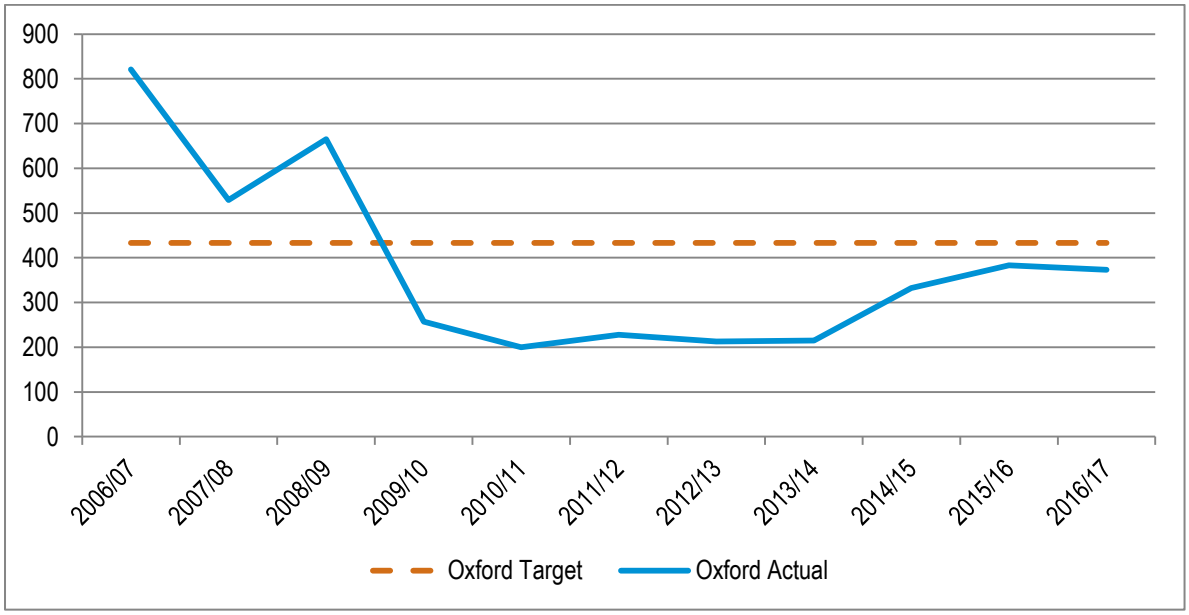
Table 62: Rate of Development (2006-2016)

	Completions	Target	Under Delivery	% of Delivery
2014-2016	1,086	1,200	114	91%
2009-2014	1,113	2,000	887	56%
2006-2016	4,214	4,400	186	96%

Source: Annual Monitoring Reports

8.46 The graph below illustrates the rate of development in Oxford City, comparing the target with the actual dwellings completed since 2006/7. As shown there was considerable over-delivery in the initial three years with under-delivery since. Although in the 2014-16 period under-delivery has only been 9% below target.

Figure 23: Rate of Development (2006-2016)



Source: Annual Monitoring Reports

8.47 This level of under-delivery is responded to through a market signals adjustment rather than a specific adjustment in its own right. This reflects the PPG (Para 2) which states that "The standard method uses a formula to identify the minimum number of homes expected to be planned for, in a way which addresses projected household growth and historic under-supply." However any under-delivery since the start of the Plan Period (2016) will need to be planned for and built.

Overcrowded Housing

8.48 The 2014 SHMA stated that over-crowding is an important market signal. Above average overcrowding is likely to be a reflection of either a lack of housing supply (which inhibits new household formation) or an imbalance in the housing stock.

8.49 Overcrowding is defined by the difference between the number of bedrooms needed to avoid undesirable sharing and the number of bedrooms available to the household.

8.50 Data on over-crowding is available from Census data and has not been updated since 2011. Therefore there is no update from the previous SHMA.

8.51 Census data identified that across Oxfordshire, 3.3% of households are classified as overcrowded based on the bedroom standard. This is below the regional average of 3.8% and national average 4.8% which is partly a reflection of a housing stock focused ore towards larger homes.

8.52 However over-crowding is above average in Oxford City, with 6.2% of households classified as overcrowded using the bedroom standard. Outside of Oxford City, none of the Oxfordshire authorities have a level of overcrowding which is above the national and regional wages.

Table 63: Over-crowding and Under-Occupation, 2011

	Overcrowded Households	% Overcrowded	% Under Occupied
Oxford City	**3,447**	**6.2%**	**60.5%**
Oxfordshire	8,490	3.3%	73.5%
South East	133,570	3.8%	70.7%
England	1,060,967	4.8%	68.7%

Source: ONS, Census,2011

8.53 The 2014 SHMA identified that this is likely to reflect a number of factors, including the following:

- A younger population;
- The volume of student multi-occupancy lettings in the City;
- A housing offer focused more towards smaller properties;
- Higher housing cost in relative terms.

8.54 The 2011 Census also suggests that a significant 73.5% of households in Oxfordshire under-occupy homes (using the bedroom standard). This is partly a reflection of market realities, particularly in the (large) owner occupied sector, whereas in Oxford City only 60.5% of households are under occupied.

8.55 When considering whether over-crowding has increased, the analysis of changes in occupancy rating shows that overcrowding on this measure has increased by 30% in Oxfordshire between 2001 and 2011, but that this is a lower growth than recorded at either regional or national level.

Table 64: Changes in Overcrowding using Occupancy Ratings, 2001-2011

	Overcrowded Households, 2001	Overcrowded Households, 2011	Change, 2001-11	% Change
Oxford City	**6,102**	**7,702**	**1,600**	**26%**
Oxfordshire	12,699	17,827	4,128	30%
South East	195,392	265,974	70,582	36%
England	1,457,512	1,928,596	471,084	32%

Source: ONS, Census,2011

8.56 Table 64 also shows that over the 2001-11 decade the number of households considered over-crowded using the occupancy rating increased by around 4,100 in Oxfordshire. The greatest change in the proportion of over-crowded households was in Oxford City which accounted for 39% of the total change within Oxfordshire.

Homelessness

8.57 The City has seen great strides in reducing the number of homeless acceptances. However the City on average over the last 10 years (2.12 per 1,000 households) have seen a higher number of acceptances than the national average once London in excluded (1.97 per 1,000 HHs).

Table 65: Homeless Acceptances and in priority need- Oxford

Year	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Homeless Acceptances and in priority need	147	105	123	120	104	114	114	141	125	99
Oxford per 1,000 households	2.60	1.88	2.28	2.22	1.87	2.05	2.04	2.51	2.11	1.65
England (Ex London) per 1,000 households	2.22	1.67	1.84	2.03	2.01	1.84	1.91	1.98	2.09	2.08

Source: MHCLG, 2018

8.58 This is also the case in relation to the numbers in temporary accommodation. On average over the last ten years the City has had 2.81 households in temporary accommodation per 1,000 households. However this has fallen from 7.00 per 1,000 households in 2008/9 to just 1.62 per 1000 households in 2016-17.

Table 66: Total in temporary accommodation (2008/9 – 2017/18 - Oxford

Year	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Total in temporary accommodation	395	240	156	129	120	113	107	115	96	107
Oxford per 1,000 households	7.00	4.29	2.89	2.39	2.16	2.03	1.91	2.04	1.62	1.78
England (Ex London) per 1,000 households	0.88	0.67	0.67	0.74	0.80	0.79	0.85	1.01	1.17	1.28

Source: MHCLG, 2018

8.59 In contrast the numbers across England (excluding London) have been increasing. On average the number in temporary accommodation has been 0.89 per 1,000 households however this has increased from 0.88 in 2008/9 to 1.28 in the latest year.

8.60 While the number of households in temporary accommodation has fallen the number of rough sleepers have increased substantially, particularly in the last year. At present there are some 61 rough sleepers recorded in the City which is an 85% increase since 2016.

Table 67: Rough Sleepers (2010-2017) - Oxford

	2010	2011	2012	2013	2014	2015	2016	2017
Total	11	8	12	19	26	39	33	61
% change per annum		*-27*	*50*	*58*	*37*	*50*	*-15*	*85*
% change per annum - England		*23*	*6*	*5*	*14*	*30*	*16*	*15*

Source: MHCLG, 2018

8.61 The equivalent growth in England over the last year has been just 15%. On average the annual growth in Oxford over the last seven years has been 34% compared to 16% nationally. Although it should be noted the numbers are prone to substantially fluctuations.

Key Points

- As set out in the 2014 SHMA there is considerable market signals pressure in the City of Oxford. This has not eased in the interim period
- Affordability ratios have increased since 2014. In the case of the work place based median ratio this has increases by 18% and now stands at 11.84
- Median house prices in Oxford have increased by 28% in just 3 years (2014 – 17) and now stand at £400,000. House prices remain considerably higher in the city than elsewhere in the Council.
- Rents have also increased notably since 2014 and particularly in the last year. Median rents are now almost £1,300 per month with lower quartile rents at £1,025 per month.
- Housing delivery has increased since 2014 although it is still below the Core Strategy Target of 400 dpa.
- Homelessness has improved in the city and in particular the number of households in temporary accommodation. However, both are above the national averages when London is excluded. Furthermore there has been a substantial increase in the number of rough sleepers in the City.

9 CONCLUSIONS AND DERIVING AN OAN AND HOUSING REQUIREMENT

9.1 This section brings together the OAN findings from this updated SHMA report based on both the methodology set out in 2015 Planning Practice Guidance and the standard methodology as set out in the 2018 planning practice guidance.

9.2 For plan-making, Councils such as Oxford which do not submit local plans for examination before the 24th of January 2019 should use the Government's standard methodology for assessing housing need unless there are exceptional circumstances to move away from it.

9.3 As set out above, the Standard methodology results in a need for 93 dwellings per annum. However on publication of the latest household projections there has been quite heavy criticism of them including from the minster for housing himself.

9.4 Perhaps recognising the failing of the most recent forecasts ONS also signalled their intention to produce a variant household projection whereby household formation rates in younger age groups (25-44) are increased rather than supressed. ONS state that "the purpose of this variant would be to illustrate the uncertainty in the projections around the future household formation patterns of this age group".

9.5 As well as the projections the standard methodology has also been deemed unsuitable in light of the latest projections, recognising that the national housing need number would fall significantly the Ministry for Housing, Communities and Local Government signalled their intention to "consider adjusting the method to ensure that the starting point in the plan-making process is consistent in aggregate with the proposals in "Planning for the right homes in the right places" consultation and continues to be consistent with ensuring that 300,000 homes are built per year by the mid 2020s."

9.6 Furthermore in the foreword to the "Government response to the draft revised National Planning Policy Framework consultation" document it was clear that there was a link between that figure and Oxfordshire.

> *"In addition, housing deals provide an opportunity to support our commitment to create a housing market that delivers 300,000 homes per year by the mid-2020s and beyond. For example, the first deal agreed between the Government and a local area supports Oxfordshire's ambition to plan for 100,000 homes by 2031. To support this, the Government has agreed up to £215 million of new funding and the implementation of time-limited planning freedoms and flexibilities. The Government will bring forward a temporary flexibility on housing land supply in Oxfordshire in the Autumn."*

9.7 There is still therefore a great deal of uncertainty relating to the appropriate housing need number nationally but also specifically in Oxfordshire. As Oxford City Council are submitting their Local

Plan after the 24th of January then it is appropriate to plan on the basis of the standard methodology.

9.8 However the standard methodology is a **minimum target** and other options should be considered including higher numbers to:

- To meet growth strategies;
- To reflect infrastructure improvements that will support new homes;
- Where an authority has agreed to meet the unmet need from neighbouring authorities;
- Previous level of delivery exceed the identified need; or
- Where an alternative level of need has been assessed and exceeds the standard methodology.

Alternative Demographics

9.9 Our assessment of housing need using the previous PPG takes in to account of local demographics and adjusts to either support economic growth, or improve affordability (taking account of evidence from market signals and of affordable housing need).

9.10 Given the shortcomings about the latest population projections the starting point for examining alternative demographics were the 2014-based household projections. These expect an increase of around 10,800 households (554 dpa) between 2016 and 2036. This sees 18.2% household growth, based on an 11.2% increase in population (18,175 persons).

9.11 Chapter 3 of this report examines a wide range of sensitivities to the population growth including adjusting for the latest national population projections and local population estimates, shorter and longer term migration trends, unattributable population change and variation on fertility and mortality rates.

9.12 Our Core scenario uses the 2014-based SNPP as its starting point with adjustments made to take account of the 2016 Mid-Year Population Estimates. It then uses Migration assumptions from the 2014-based SNPP with Adjustments to the age/sex profile to take account of more recent trends to 2016. It also took account of changes to fertility and mortality rates to be consistent with the national 2016-based projections while discarding the changes to migration within the same source.

9.13 At 16,734 the resultant population growth from the core scenario was less than the official projections. This equates to a growth of 10.4%. This also translates to a housing need of 513 dpa.

9.14 GL Hearn however consider that an adjustment should be made to household formation rates for those aged 25 to 34 in line with national policy supporting an improved ability of younger households to form. The adjustment effectively returns the household formation rate (HFR) of those aged 25-34 to a mid-point between the 2014-based and the 2008-based Household Projections.

9.15 Applying these rates to the core scenario and the 2014-based household projections leads to a need for between 543 and 585 dwellings per annum to 2036 period respectively. These should be regarded as our concluded range on demographic need.

Supporting Economic Growth

9.16 GL Hearn along with SQW and Cambridge Econometrics developed a bespoke set of Economic forecasts for the City taking account of known investment, planned economic growth and revised assumptions about population growth. The planned economic growth forecasts show a growth of employment of 17,000 jobs over the period 2016-36.

9.17 In modelling housing need we triangulated different data sources relating to future changes in economic participation; and considered existing commuting dynamics and levels of double jobbing. The core modelling assumptions maintain 2011 census commuting patterns and the long term average double-jobbing with sensitivities around economic activity rates. Again we consider that it is appropriate to make changes to household formation rates.

9.18 The resultant housing need ranges from 527 to 555 dpa with a preference for the 527 dpa figure based on more recent economic activity rate assumptions. As this 527 dpa figure is below the demographic figures and this scenario can be discarded from further consideration when developing the housing requirement.

9.19 The higher end of this range is still lower than the high end of the alternative demographic range. While this suggests that the economic and alternative demographic growth are broadly in balance there is limited scope to increase the housing requirement above the demographic projections on the basis of economic growth.

9.20 There is however a clear choice that should the Council wish to meet its economic aspiration it must provide a greater number of homes than the standard methodology provides.

Affordable Housing Need and Market Signals

9.21 The analysis of market signals points to house prices which are above the national and regional trends. The analysis also shows that market signals pressure in the City of Oxford have not eased in the interim period.

9.22 Rents have increased notably with median rents now around £1,300 per month and even lower quartile rents exceeding £1,000 per month. Affordability ratios have also increased since 2014 and the workplace based median ratio now stands at 11.84. Homelessness in the City is worse than national equivalents (excluding London) with a notable increase in rough sleeping over the last year.

9.23 The report has considered the need for affordable housing using the Basic Needs Assessment Model recommended in the PPG. Using the available information, it identifies a net need for 678 affordable homes per annum across the City for the 2013-36 period using the core modelling assumptions, and includes sensitivity analysis considering alternative thresholds for the proportion of income households spend on housing.

9.24 The former PPG sets out in Para 2a-029 that:

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

9.25 The theoretical overall housing provision required to meet the affordable housing need based on existing policies for the proportion of housing to be delivered as affordable (50%), in line with the PPG would show a need for 1,356 dpa would be required.

9.26 Case law had established that, prior to the standard methodology, the appropriate approach in considering affordable housing needs evidence was for it to be a material consideration in developing an OAN but it was not necessary to have a mechanical calculation applied to it.

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

> *"31 In terms of the first element of the assessment in the first of the sub-bullet points in paragraph 159, namely meeting household and population projections taking account of migration and demographic change, the PPG illustrates that this is a statistical exercise involving a range of relevant data for which there is no one set methodology, but which will involve elements of judgment about trends and the interpretation and application of the empirical material available.*
>
> *These judgments will arise for instance in relation to whether, for example, adjustments for local demography or household formation rates are required (see paragraph ID 2a-014–20140306), and the extent and nature of adjustments for market signals (see paragraph ID 2aa-018–20140306). Judgment will further be involved in taking account of economic projections in undertaking this exercise.*

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

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

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

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

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

9.28 It is clear from this that the expectation is that it may be necessary, based on the affordable needs evidence to *consider* an adjustment to enhance the delivery of affordable housing, but that this does not need to be necessarily done in a mechanical way whereby the affordable need on its own dictates the housing requirement figure. Nonetheless it is clear that affordable housing need may result in upwards adjustments to the housing requirement above the OAN, but with consideration given to the overall deliverability of housing.

9.29 However the housing requirement needs to be set at a level which is deliverable, can be supported by additional population and households; and it should be recognised that the affordable housing need is sensitive to market housing costs (and therefore increases in market housing supply supporting improvements in affordability).

9.30 GL Hearn also considers that there is a strong interaction between affordable housing need and market signals, noting that the scale of affordable housing need is sensitive to housing costs. On this basis we have sought to draw the affordable housing analysis together with the market signals evidence, as set out in the next section, in drawing conclusions.

9.31 The PPG also sets out that any such market signals adjustments should be applied to the demographic starting point. In the case of this study that means applying the adjustment to the 2014-based household projections without the adjustment to Household Formation Rates (554 dpa).

9.32 To inform the market signals adjustment we have sought to benchmark adjustments which have been made or tested through local plan examinations. The evidence shows a range of market signals adjustments have ranged from 0% to 51%.

9.33 The latter of these figures is an effective rather than specific market signals uplift which comes from the interim conclusions from the inspector at Guildford and is not yet adopted. The inspector at Guildford made this decision on the basis of a median affordability ratio of 10.4 and affordable housing need of 517 per annum.

9.34 Other appropriate comparisons include Canterbury and Cambridge where the inspector accepted that 30% market signals uplift was appropriate. In Canterbury this position was taken in the context of affordability ratio of 9.12 and affordable housing need for between 490 and 740 dpa (mid-point of 615 per annum).

9.35 In Cambridge the position was set out in the 2015 Cambridge and South Cambridgeshire OAN paper which was prepared at the same time as the King's Lynn High Court judgement. However Cambridge and South Cambridgeshire make it clear that affordable housing need was not considered as part of the OAN despite evidence showing a significant need (520 per annum compared to 678 in Oxford). At the time the affordability ratio in Cambridge was around 10.

9.36 The situation in Oxford is one where there is a clear, acute affordable housing need beyond that in any of the comparators above. While the affordability ratio in the City is at present below Cambridge and Guildford the current ratio of 11.8 exceeds those other areas at the time of their local plan examination.

9.37 It should however be noted that the median workplace based affordability ratio in Oxford has consistently been below the Guildford figure and for much of the last ten years below Cambridge also. For balance a number of other areas such as South Bucks, Mid Sussex and Chiltern have had higher ratio than Oxford has now but have only adopted a 20% uplift.

9.38 We would therefore conclude that an uplift of 40% in response to market signals and affordable housing need would be appropriate. This is also the maximum level of adjustment set out within the standard Methodology although this coincidental.

9.39 Applying this level of uplift to the starting point figure of 554 dpa results in housing requirement of 776 dpa. We consider that provides a strong basis for planning positively and takes into account demographic trends; it would also meet the identified economic growth and help to address local affordability issues, although it would not meet affordable housing need in full.

Like for Like Update

9.40 It is worthwhile to briefly make a comparison between the findings in this report and the last assessment of affordable housing need which was written under a less evolved understanding of its relationship with OAN as previously defined.

9.41 The SHMA report identified a baseline demographic growth of 755 dpa (compared to 543 dpa in this report). However this figure was derived from a bespoke set of headship rates to find a more realistic view about HRRs rather than those set out in the 2011-based 'interim' projections, which were widely considered as 'not fit for purposes'.

9.42 If the same headship rates were to be applied to the Core Scenario in this report then the housing need would fall to 453 dpa. However we do not consider that a bespoke set of headship rates are required given the improvements to the household forecasts.

9.43 In the previous SHMA an historic shortfall was added to the demographic need which resulted in a need for 782 dpa. However, the subsequent Winchester Vs Zurich High Court case established that historic under-delivery is address through a market signals adjustment rather than a separate calculation or specific response. That said any shortfall since the start of the plan period should be planned for.

9.44 It then went on to consider the housing need to support the local Economy based on a bespoke set of economic activity rates. These resulted in a need for 700 dpa based on a jobs growth of 851 jobs per annum. The per annum jobs figures are almost identical however the different assumption on HFR and Economic Activity rates reduce the housing need within this report to 527 dpa while utilising the same economic activity rates increases this to 555 dpa.

9.45 On affordable housing need the 2014 Oxfordshire SHMA set out a need for 1029 affordable dpa. However the analysis herein shows a notably lower affordable need largely due to reduced estimates of gross need (with little difference is future supply estimates).

9.46 The SHMA then went on to identify a housing need of 2,058 dpa to meet affordable housing need in full based on a policy of 50% delivery. The equivalent figure using the latest assessment of affordable housing need (678 affordable dpa) would be 1,356 dpa.

9.47 The SHMA report then went on to consider the range of housing need taking into account the above plus an adjustment to address local affordability issues/market signals. For Oxford a range of 1200-1400 dpa was identified.

9.48 The particularly large range reflected the difficulty in being precise regarding what scale of adjustment is necessary to support an improvement in affordability and also the range between the economic need and meeting affordable housing need in full.

9.49 At the time GL Hearn considered that provision of 1,400 homes per annum would be appropriate as it aligned with the higher end of the range of growth rates achieved nationally over the past 15 years (2.0% per annum).

9.50 This also provided a very strong response the evidence from market signals and affordable housing needs, the latter of which we know has now eased. This was effectively an 85% uplift for market signals. On a like for like basis an 85% uplift on our demographic starting point would result in a need for 1,004 dpa.

9.51 The then ambition was to achieve a level of housing growth of 2.0% per annum, so on a like for like basis this wouldn't have changed and 1,400 dpa would remain in place, although it should be noted that 1,400 homes equates to 2.3% per annum from 2018, this would now be termed a policy on position.

9.52 It is also worthwhile reflecting the fact that one justification for going above the standard methodology would be where growth strategies are in place or where there is funding in place to promote and facilitate growth (e.g. Housing Deals).

9.53 The City is one of five local authorities that have received £215 million of funding to support the delivery of 100,000 new homes by 2031. This would be the equivalent of 2.4% per annum growth across the county. The growth rate of 1,400 dpa or 2.3% in this context would seem like a reasonable justification for planning for a higher housing requirement for the City Council to adopt.

Housing Requirement

9.54 It should be reiterated that the OAN figure is not the housing target or requirement. It is an input to determining or reviewing housing targets in local plans alongside wider evidence. Housing targets in local plans will be informed by the OAN but will also take into account wider factors such as sustainability, infrastructure constraints and land availability; together where appropriate with unmet needs of other areas.

9.55 Nor will the OAN take into account local "policy-on" aspiration for additional employment beyond that being planned for nor will it deliver all of the affordable housing need nor if there is a local or regional policy to deliver housing growth beyond the identified need; these are policy on positions. This would include such policies as the housing and growth deal.

9.56 The housing and growth deal for Oxfordshire includes a secured £215m of Government investment for new homes and infrastructure across the County including £60m for affordable housing. It is intended to support the ambition of building 100,000 new homes across Oxfordshire between 2011 and 2031.

9.57 The 100,000 figure results in a per annum growth rate which is very similar (slightly higher) to the level of growth identified in the 2014 Oxfordshire SHMA. It would therefore seem reasonable that the City Council consider maintaining the previous figures as a housing requirement. **This would equate to a housing requirement of 1,400 dpa.**

9.58 However in the current policy context this is not the OAN but a choice for the local authority to make in order to meet the requirements of the housing deal.

Affordable Housing Mix

9.59 On the basis of the analysis of housing costs, income requirements and an understanding of potential changes to the definition of affordable housing; the main conclusions from the analysis on housing mix are:

- The Council could consider seeking 10% of all housing to be affordable home ownership (as set out in the NPPF) although there is a good case for this percentage to be lower (or even zero);
- Shared ownership is the most affordable of the home ownership options;
- The Council could also consider other forms of affordable home ownership (such as Starter Homes) where this improves viability. The Council could potentially also seek for some proportion of market housing to be discounted (e.g. a similar product to a Starter Home, but forming part of the market mix; and

Overall, it needs to be recognised that there are a series of choices to be made with regard to the provision of new affordable housing; essentially a trade-off between the affordability of

accommodation and the number of homes that can viably be provided. Hence the analysis in this report can only provide a guide to the types of affordable housing that should be provided.