The Objectively Assessed Housing Needs of Tandridge

Neil McDonald

September 2015

NMSS

Author

Neil McDonald

Neil McDonald is an independent adviser and commentator on housing demographics.

Recent publications include:

- Making sense of the New English Household Projections[1] (April 2015).
- Planning for Housing: Understanding recent changes in household formation rates and their implication for planning for housing in England[2] (January 2014).
- Choice of Assumptions in Forecasting Housing Requirements: Methodological Notes[3] (March 2013).
- "What Homes Where?" an Excel-based tool that provides easy access to the key official datasets for planning for housing[4].

Neil was a civil servant and policy adviser to Ministers for over 30 years, the last 10 advising on housing and planning issues within the Department of Communities and Local Government. His 7 years as a Director at DCLG included a posting as Director, Planning Policy and a period as Chief Executive of the National Housing and Planning Advice Unit until its closure in 2010. He left the Department in March 2011 and has since worked with the Cambridge Centre for Housing and Planning Research (CCHPR) as a Visiting Fellow (2012-15), collaborating in particular with its founder director, Professor Christine Whitehead.

NMSS take considerable care to ensure that the analysis presented is accurate but errors can slip in and even official data sources are not infallible, so absolute guarantees cannot be given. Statistics, official or otherwise, should not be used uncritically: if they appear strange they should be thoroughly investigated before being used.

---

[1] Making sense of the New English Household Projections, Ludi Simpson and Neil McDonald, Town and Country Planning, April 2015. Available from the TCPA at http://www.tcpa.org.uk/pages/our-journal.html Ludi Simpson is Professor of Demographics and the University of Manchester.

[2] Planning for housing in England: Understanding recent changes in household formation rates and their implications for planning for housing in England, RTPI Research Report no.1 January 2014, Neil McDonald and Peter Williams (then Director of the Cambridge Centre for Housing and Planning Research). See http://www.rtpi.org.uk/media/819060/rtpi_research_report_-_planning_for_housing_in_england_-_january_2014.pdf

[3] Choice of Assumptions in Forecasting Housing Requirements: Methodological Notes, Cambridge Centre for Housing and Planning Research, edited by Neil McDonald with contributions from Sarah Monk, Alan Holmans, Christine Whitehead and Peter Williams, March 2013. See http://www.howmanyhomes.org/resources/Choice_of_Assumptions.pdf

[4] See: http://www.howmanyhomes.org/5.html

THE OBJECTIVELY ASSESSED HOUSING NEEDS OF TANDRIDGE

Contents

THE OBJECTIVELY ASSESSED HOUSING NEEDS OF TANDRIDGE

Executive Summary

Aim

To estimate the objectively assessed housing needs of Tandridge.

Approach

This report follows the approach indicated by the National Planning Policy Framework (NPPF) and the Planning Practice Guidance (PPG). It takes as its starting point the official population and household projections.

To assess the housing requirement of any area it is necessary to:

- Estimate the size and age structure of the population that will need to be housed.
- Take a view on how that population will group itself into households. This, combined with the population estimate, enables the number of extra households which will need to be housed to be estimated.
- An allowance needs then to be added for properties which will be empty or second homes to produce a preliminary estimate of the housing requirement.
- Finally, consideration needs to be given to whether there are any factors which will not have been reflected in this approach. These might include:
    - market signals which suggest that the local housing market has been under particular stress;
    - unmet housing needs or past undersupply which will have affected the trend-based assessment of future housing needs produced by a demographic approach;
    - how the assessment of the overall housing requirements relates to the need for affordable housing (i.e. social and intermediate housing); and,
    - whether additional housing is needed to ensure that the area can accommodate sufficient workers to support the projected level of economic growth.

The report follows through these steps in order.

Findings and recommendations

- The starting point for this estimate of Tandridge's objectively assessed need for housing (OAN) is the DCLG's 2012-based household projections (DCLG 2012) which were released in February 2015. These were based on the ONS 2012-based Sub-national Population Projections (2012 SNPP) which were published in May 2014. However, more recent evidence on how the population has changed since 2012 is available from the 2014 Mid-Year Estimates (2014 MYE) which were issued in June 2015 and the international migration statistics for the year to March 2015 which were released in August 2015. This report also takes that additional evidence into account to provide the most up to date view possible.

- As a result of the latest evidence it is proposed that the following adjustments should be made to the 2012 SNPP/DCLG 2012 before using them to estimate the OAN for Tandridge.

    - The 2012 SNPP projects flows to and from other parts of the UK using flow rates estimated from the 5-year period 2007-12. That period included a severe economic downturn and as a result some of the projected flows appear to be low. It is proposed to correct for this by using average flow rates for a 10-year period. This has the added advantage of smoothing out the impact of any one-off factors such as peaks and troughs in house-building. The period 2002-12 has been widely used for this purpose but, with the publication of the 2014 MYE, it is now possible to update this to 2004-14. At the same time the population estimates from the 2014 MYE have been used as a revised starting point for the population projections.
    - The latest estimates for net international migration to the UK suggest that in the year to March 2015 the net inflow was approximately twice that assumed in the 2012 SNPP. In view of this it is proposed to adjust international flows into and out of Tandridge to reflect actual flows over the most recent 10-year period for which data is available, i.e. 2004-14.

- To turn an estimate of a population change into an estimate of the change in the number of households a view needs to be taken on how the tendency of people to form separate households (the household formation rate) is likely to change. The latest DCLG household projections (DCLG 2012) provide the most recent official view on this and represent a significant step forward from the 2011-based interim projections (which were prepared relatively quickly following the 2011 census as a stop-gap measure). Having reviewed the latest projections, NMSS believes that they should be used as published.

- In particular, there is no longer a need to make adjustments to the projected household formation rates for young adults (those aged 25-34) that were appropriate when using the 2011-based interim projections. Those projections envisaged a continuing sharp deterioration in the household formation rates of that age group. NMSS believe that the latest DCLG projections represent a realistic view of likely trends in household formation patterns when account is taken of the

changes that have occurred since the last pre-recession projection were published (the 2008-based projections), many of which are unlikely to reverse in the foreseeable future.

- Once an allowance is made for empty and second homes (based on council tax data), applying the 2012-based DCLG household formation rates to the adjustments made to the 2012 SNPP population produces the results shown in Table S1.

Table S1: Summary of Adjustments			
Change 2013 - 2033	**Population**	**Homes**	**Homes/yr**
2012 SNPP	**14900**	**8770**	**440**
10-year UK flow adjustment	*-530*	*-500*	*-20*
10-year UK flows	**14370**	**8270**	**410**
Adjustment for 2004-14 UK flows	*1440*	*990*	*50*
MYE + 2004-14 UK flows	**15810**	**9260**	**460**
Adjustment for 2004-14 overseas flows	*400*	*170*	*10*
MYE + 2014-14 UK + overseas flows	**16220**	**9440**	**470**

Note: some figures may not add due to rounding

- Topic papers prepared by Turley Economics on house prices, house price-earnings affordability ratios, rents, house building rates, overcrowding levels and the proportion of concealed households show that Tandridge is an area of high housing costs with poor affordability levels. This is a consequence of its location in attractive countryside close to London with good rail links into the capital. Although prices have risen and affordability has fallen (on the standard measure at least), the position is not significantly worse than surrounding areas. There is not, therefore evidence which would justify increasing the OAN above the level indicated by the demographically based estimate.

- Economic projections have been obtained from Experian. These suggest that 9,260 additional jobs will be created in Tandridge between 2013 and 2031. Over that period the population between 16 and state pension age is projected to increase by 8,490 in the adjusted projection used to estimate the OAN. Analysis comparing that projection with the population projections which accompany the Experian employment projection suggests that the OAN will more than accommodate the labour force needed to support the projected increase in jobs. There is therefore no need to add additional homes to support economic growth.

- A range of alternative scenarios has been modelled to explore how sensitive the OAN estimate is to alternative assumptions about population growth and household formation rates.

- The population sensitivity tests produce a range from 425 to 472 homes a year. The proposed OAN (472 homes a year rounded to 470) is at the top of this range. It is, however, is based on a series of judgements as to what the prudent planning assumptions are, not on selecting a particular point in the range suggested by the sensitivity tests.

- Nine household formation rates scenarios have been tested. These include six which explore scenarios in which household formation rates move all or part of the way back towards the 2008-based projections for some or all age groups. These result in estimates of the number of homes needed up to 508 homes a year in the scenario in which the household formation rates of all age groups are assumed to reach the rates envisaged in the 2008-based projections before 2031. This is thought extremely unlikely given that it is now clear that the 2008-based projections were optimistic when they were first published and changes have occurred that are unlikely to reverse even after a full recovery from the recession.

- Two other household formation rate sensitivities are more relevant.

    - One considers the impact of assuming that no group sees its household formation rate fall below the level in 2011 – the '2011 floor' scenario. This increases the number of homes needed by 10 homes a year or 2%. This is a relatively small adjustment and indicates that the deterioration in housing conditions for some groups implicit in the new projections is relatively small.
    - A second scenario assumes that no group sees a rise in its household formation rate above its 2011 level – the '2011 ceiling' scenario. This reduces the number of homes needed by 39 homes a year or 8%. It is a pessimistic scenario as it takes away all of the increases in household formation rates inherent in the 2012-based projections. However, in doing so it shows that the improvements in housing conditions which some groups are projected to enjoy are reasonably substantial.

- In view of all of the above NMSS conclude that the OAN is 470 homes a year over the period 2013-33. Table S2 show how this compares with the latest official population and household projections. The differences from the official projections are due to:

    - Estimating flows to and from the rest of the UK using flow rates from the period 2004-14 rather than the recession-affected period 2007-12 used by the ONS.
    - Re-basing to the 2014 Mid-Year Estimate population figures for 2014.
    - Using average international migration flows for the period 2004-14 rather than ONS figures derived from their 2012 national population projections, which may be too low.

Given the inevitable uncertainties, the demand for homes and the growth in employment should be closely monitored and the OAN should be reviewed periodically in the light of what actually happens.

THE OBJECTIVELY ASSESSED HOUSING NEEDS OF TANDRIDGE

INTRODUCTION

Aim

1. To establish the objectively assessed housing needs of Tandridge.

Approach

2. The report follows the approach indicated by the National Planning Policy Framework[5] (NPPF) and the Planning Practice Guidance[6] (PPG). It takes as its starting point the latest official population and household projections. These are the Office for National Statistic's (ONS's) 2012-based Subnational Population Projections for England[7] (2012 SNPP) and the Department for Local Government's (DCLG's) 2012-based Household Projections[8]. Account has also been taken of the ONS's Annual Mid-year Population Estimates, 2014[9] (2014 MYE) and the latest estimates of international migration[10]

3. To assess the housing requirement of any area it is necessary to:

    - Estimate the size and age structure of the population that will need to be housed.

[5] The *National Planning Policy Framework* was published on 27 March 2012 and sets out the Government's planning policies for England and how these are expected to be applied. See http://www.communities.gov.uk/publications/planningandbuilding/nppf

[6] The *Planning Practice Guidance* was launched by the Department for Communities and Local Government (DCLG) on 6 March 2014 as a web-based resource and has been periodically updated since then. It is available at http://planningguidance.planningportal.gov.uk/

[7] The *2012-based Subnational Population Projections for England* were published on 29 May 2014 and are available at http://www.ons.gov.uk/ons/rel/snpp/sub-national-population-projections/2012-based-projections/stb-2012-based-snpp.html

[8] The *2012-based household projections in England, 2012 to 2037* were published on 27 February 2015 and are available at https://www.gov.uk/government/statistics/2012-based-household-projections-in-england-2012-to-2037

[9] The *Annual Mid-year Population Estimates, 2014* were published on 25 June 2015 and are available at http://www.ons.gov.uk/ons/dcp171778_406922.pdf

[10] See *Migration Statistics Quarterly Report, August 2015* which was released on 27 August 2015 and is available at http://www.ons.gov.uk/ons/rel/migration1/migration-statistics-quarterly-report/august-2015/stb-msqr-august-2015.html

- Take a view on how that population will group itself into households. This, combined with the population estimate, enables the number of extra households which will need to be housed to be estimated.
- An allowance needs then to be added for properties which will be empty or second homes to produce a preliminary estimate of the housing requirement.
- Finally, consideration needs to be given to whether there are any factors which will not have been reflected in this approach. These might include:
    - market signals which suggest that the local housing market has been under particular stress;
    - unmet housing needs or past undersupply which will have affected the trend-based assessment of future housing needs produced by a demographic approach;
    - how the assessment of the overall housing requirements relates to the need for affordable housing (i.e. social and intermediate housing); and,
    - whether additional housing is needed to ensure that the area can accommodate sufficient workers to support the projected level of economic growth.

4. The report follows through these steps in order drawing on analysis prepared by Turley Economics at various stages.

WHAT POPULATION SHOULD BE PLANNED FOR?

Introduction

5. The first step in preparing a demographic estimate of an area's objectively assessed needs (OAN) for housing is to reach a view on the number of people to be planned for by age group and gender. This section takes as its starting point the most recent ONS population projections and considers whether they provide a prudent basis on which to plan.

The recent ONS population projections

6. There are two sets of ONS population projections which post-date the 2011 census:

- The *Interim 2011-based subnational population projections for England*[11] (2011 SNPP) were published on 28 September 2012. They only cover the period 2011-21 and have a number of acknowledged weaknesses stemming from the fact that they were produced relatively quickly following the census, before the necessary data was available to update the trends on which they are based. As a result they can over-estimate births in some areas and either over- or underestimate population flows between local authorities. These have been superseded by the 2012-based population projections and are not discussed further in this report.

- The latest ONS local authority level population projections are the *2012 Sub-national Population Projections for England* (2012 SNPP) which were published on 29 May 2014[4]. They take as their starting point the 2012 population estimates. They cover the period 2012 to 2037. Unlike the 2011-based interim projections, the 2012 SNPP involve a full re-working of the trends which are used to project population growth. However, there are two significant issues with these projections:

    - The projections for flows between local authorities are estimated from data from the five years 2007-8 to 2011-12, a period which included a severe economic downturn, during which activity in the housing market and population flows between local authorities were generally depressed although the effect varies considerably from authority to authority.

    - The projections ignore population changes which occurred between 2001 and 2011 which the ONS have not been able to attribute to any of the 'components of change' (births, deaths, and flows in and out to and from the rest of the UK and abroad). For some authorities these 'unattributable population changes' (UPCs) can be large compared with the total population change between the censuses. Not taking

[11] Interim 2011-based subnational population projections for England, ONS, 28 September 2012, http://www.ons.gov.uk/ons/rel/snpp/sub-national-population-projections/Interim-2011-based/index.html

them into account may have introduced significant errors into some projections.

7. The ONS's 2014 Mid-year Estimates[6] (2014 MYE) were published on 25 June 2015 and provide the best available estimates of the population of local authorities at 30 June 2014. In some cases the population estimate is higher than that estimated in the 2012 SNPP and in other cases it is lower. This section of the report also considers the consequences of the 2014 MYE for Tandridge.

8. The latest estimates for international migration[7] suggest that the net inflow to the UK in the year to 31 March 2015 was 330,000. This is about twice the level assumed in the 2012 SNPP. The implications of this for Tandridge are also examined below.

What the 2012-based population projections say

9. The 2012 SNPP suggests that the population of Tandridge will grow by 14,900 or 17.7% over the plan period (2013-33). This is faster than England as a whole which is projected to grow by 13.3% over the same period. See Table 1.

Table 1: Population past and projected: Tandridge and England

Historic data and 2012 SNPP (000s)	2001	2013	2033	Change 2013 - 2033	Percent increase 2013 - 2033	Annual change
Tandridge	79.33	84.26	99.16	14.90	17.7%	0.745
England	49450	53844	61022	7179	13.3%	359

2014 Mid-Year Estimates

10. With the publication of the 2014 MYE there are now two year's data available for the period covered by the 2012 SNPP. This provides the best available evidence of what has happened since 2012, although it should be treated with some caution: what has happened in the first two years of a 25 year projection period is not necessarily a reliable indication of what is likely to happen over the period as a whole: and, the mid-year estimates are also subject to sampling error and other uncertainties[12].

11. Chart 2 and Table 2 below show how the 2012 SNPP projection compares with the recent historical data including the mid-year estimates for 2013 and 2014. Note that the mid-year estimates for both 2013 and 2014 were higher than the projections, indicating that the projections underestimated the rate at which Tandridge grew in

[12] In the Background notes to *Annual Mid-year Population Estimates, 2014* (paragraph 12) the ONS notes in relation to the national population estimates (which the local authority area estimates are constrained to be consistent with) that, "As the national population estimates rely on Census estimates of the population in 2011 and survey estimates of international migration since then, the population estimate will be affected by sampling error." There are also significant additional uncertainties at the local authority level due to the difficulties in determining the ultimate destinations of international in migrants; the origins of international out migrants and the estimation of flows between local authorities. Mid-year estimates become increasingly uncertain the further they are from the most recent census.

these years. The difference in 2014 was 445 people or 0.5%, a not insignificant number.

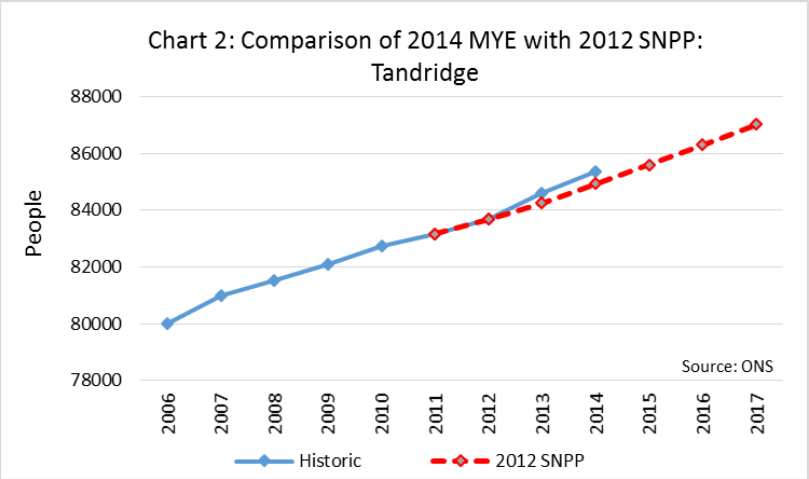


Table 2: Comparison of 2014 MYE with 2012 SNPP: Tandridge				
	2014 MYE	2012 SNPP	Difference	%
Total population	85374	84929	445	0.5%

Understanding how populations change

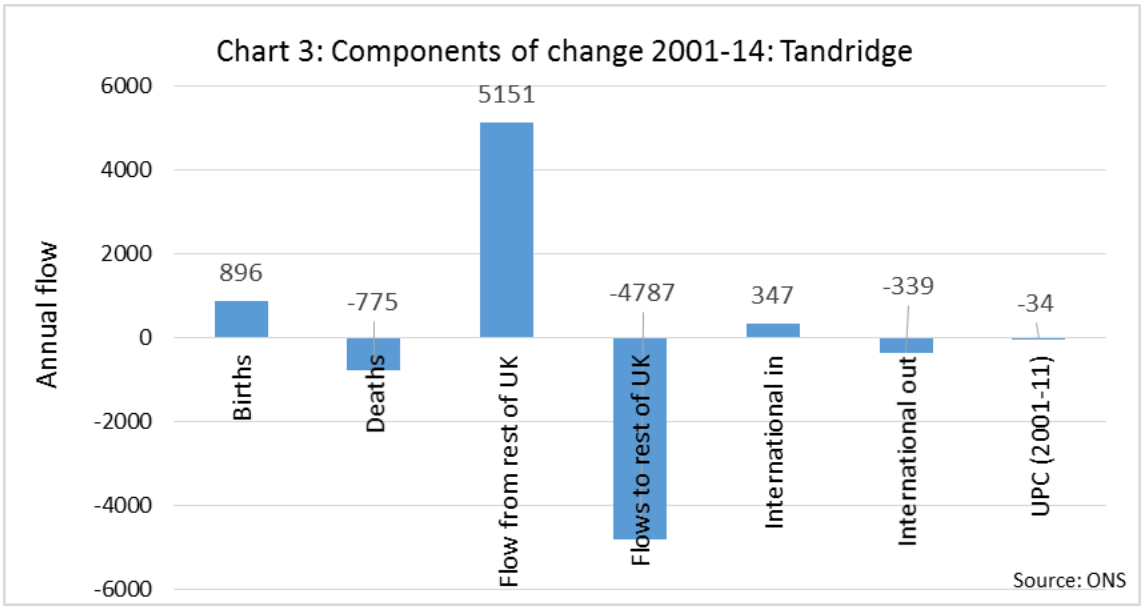
12. The future population of any area is simply the current population plus those who come less those who go. Those who come are those who are born in the area plus those who move in from outside. Those who go are those who die plus those who leave the area. It is helpful to divide arrivals and departures into those who come from or go to the rest of the UK and those who come from or go to other countries. This gives six 'components of population change':

- Births
- Deaths
- Arrivals from other parts of the UK – "UK flow in"
- Departures to other parts of the UK – "UK flow out"
- Arrivals from abroad – "overseas in"
- Departures abroad – "overseas out"

Taking a view on the plausibility of a projected population change

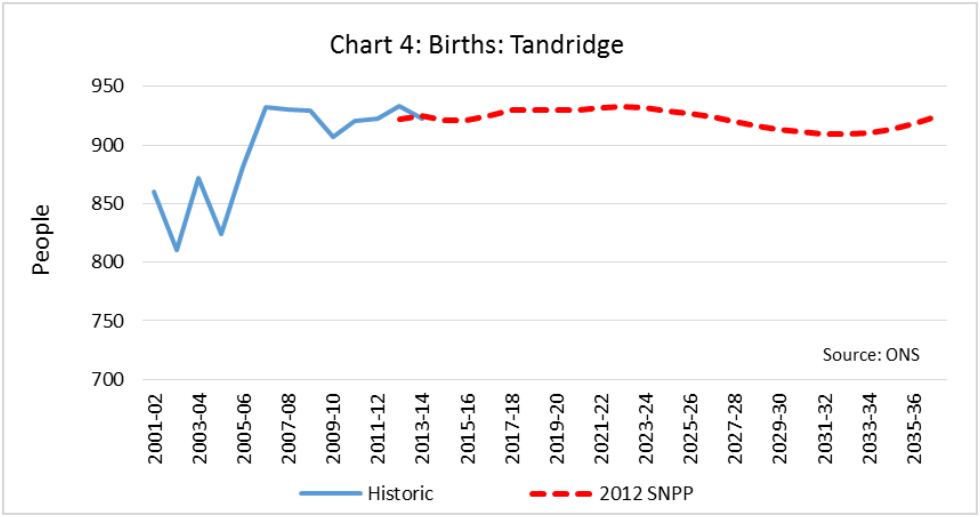
13. By examining each of the six components of change individually it is possible to take a view on how reasonable or otherwise the overall projection for the population of any local authority area might be. This can be done by comparing the projected flow with the recent past to assess how plausible it might be.

14. Chart 3 (below) shows how the six components of change have contributed to the population changes which occurred between 2001 and 2014. This gives an indication of the relative size of the flows. The flows to and from the rest of the UK are substantially larger than the other flows.



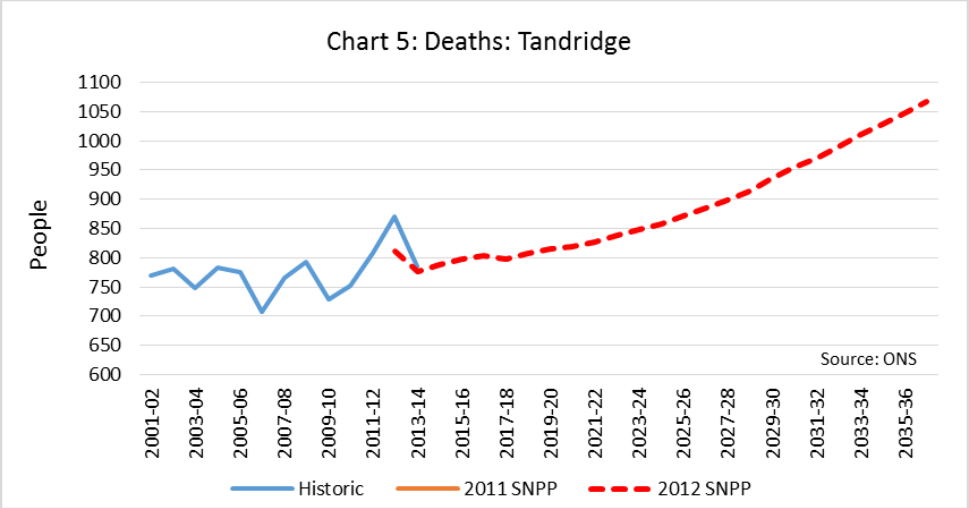
Births

15. Chart 4 (below) compares the latest ONS projections for births with the historic data up to and including the 2014 MYE. The 2012 SNPP projections is a reasonable fit to the historic data. There is no case for adjusting this aspect of the projections.



Deaths

16. Chart 5 below compares the latest ONS projections for deaths with the historical trends. The rising line is due to the increasing number of older people in the population. There is no reason to question this aspect of the projections.



Flows to and from the rest of the UK

17. As already noted, the flows to and from the rest of the UK are by some way the largest of the six components of change. Unlike births, they have an immediate impact on the adult population of an area and therefore have significant implications for household numbers and housing requirements.

18. There are two complicating factors: the data sources on which the trends are based (primarily GP registrations) are not of a high quality and, in the 2012 SNPP the projected flows between local authorities in the UK were based on flow rates in the period 2007-12, a period which included the most severe economic downturn for more than a generation. For some authorities this latter factor will have had a significant impact on net flows, and hence the rate at which the population is projected to increase.

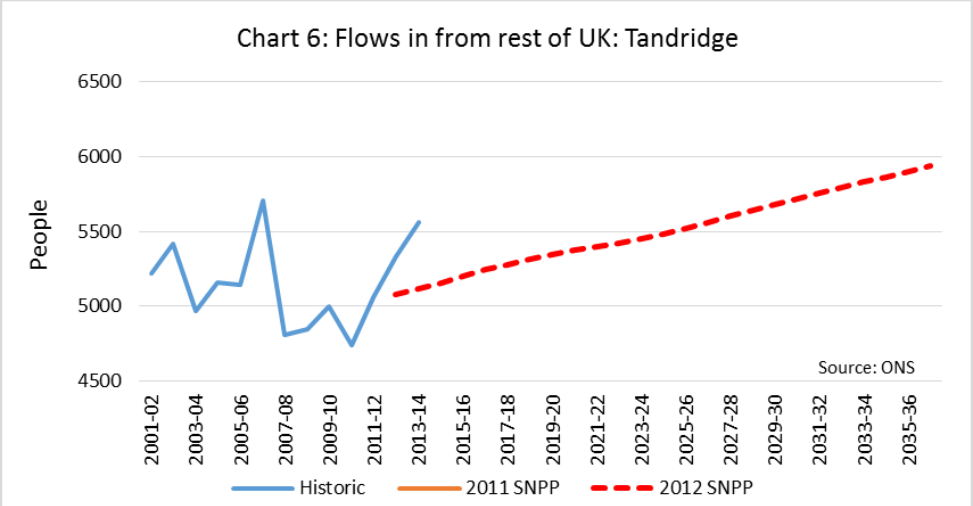
19. It can be argued that the appropriate course of action is to base the projection on either a 'typical' period or a longer period. A longer period would have the advantage of being less affected by economic or housing market cycles. This argument is particularly strong at a time such this when the economy is recovering after a prolonged and deep recession. It is likely that flows will return to higher levels once more normal economic conditions return, although that is not to say that the years immediately before 2008 were typical or that those flow rates will necessarily occur again. In addition, by using a longer trend period the impact of one-off factors such as peaks and troughs in house building on net flows to and from the rest of the UK will be smoothed out and be much less likely to distort the projection.

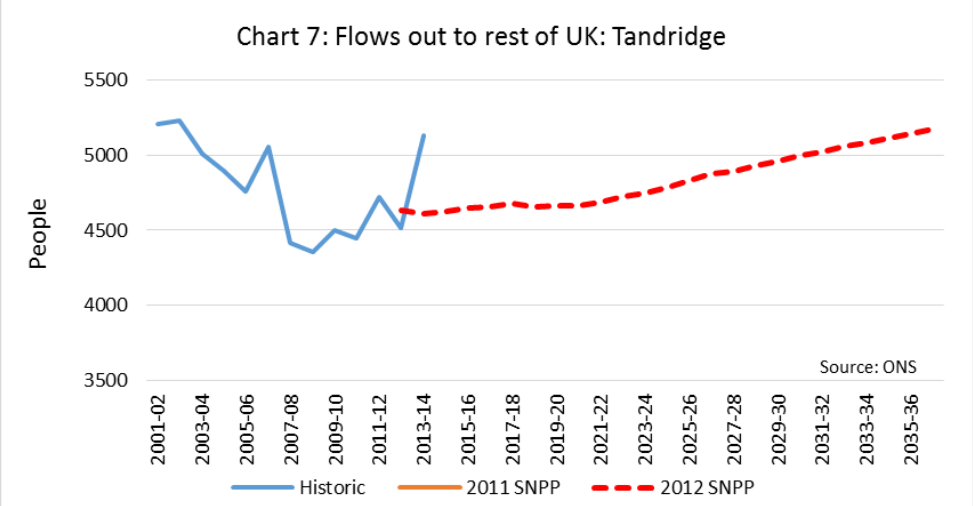
20. The ONS do not however follow this approach in the official population projections: they base their trends on a recent five year period. This has the advantage of picking up changes in trends more quickly, but the disadvantage of potential distortions as a result of cyclical changes.

21. It should also be noted that the net UK flow is often a relatively small difference between two much larger gross 'in' and 'out' flows. This means that a small

percentage change in either the projected 'in' or 'out' flow can result in a large change in the projected net flow, with sizeable consequences for the projected change in population and hence the housing requirement.

22. As is often the case with such issues, the impact varies significantly from authority to authority. Charts 6 and 7 compare the 2012 SNPP projections for inflows and outflows with the historical data. These show that flows into the area appear to have fallen off after 2006-07. There was also a fall in outflows at this time, but outflows had been falling since the turn of the century and the high point in 2006-07 could be seen as a spike in a downward trend.

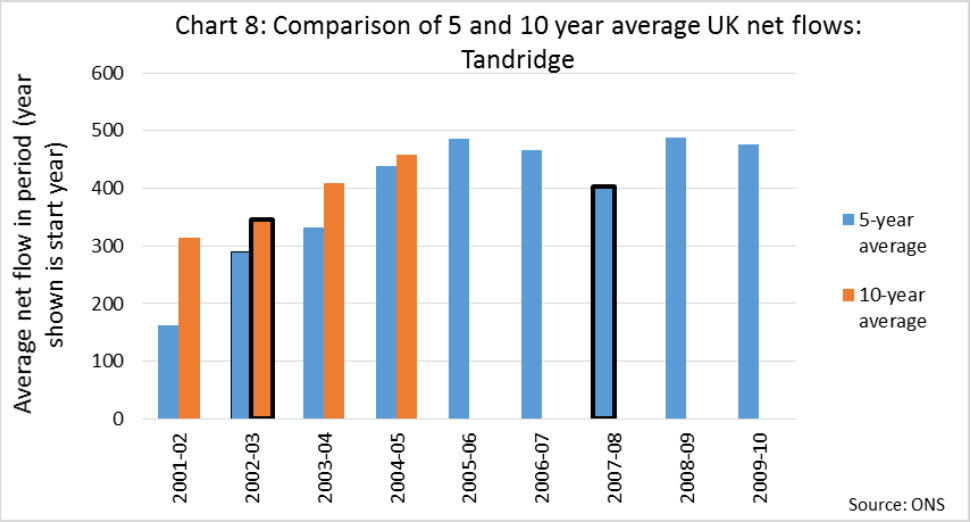




23. As a result of the way in which outflows have fallen since 2002-03 the impact of adjusting outflows to reflect 10 year flows for the period 2002-12 is larger than the impact of making a similar adjustment to inflows. This means that the 10-year UK flow adjusted projection produces a smaller population increase than the 2012 SNPP, reducing the projected population increase over the period 2013-33 by 530 (3.5%) from 14,900 to 14,370. See Table 3.

Table 3: 10-year UK flow adjustment: 2002-12: Tandridge		
Change 2013 - 2033		**Population**
A	**2012 SNPP**	**14900**
B	*10-year UK flow adjustment*	*-530*
C	**10-year UK flows**	**14370**

24. Chart 8 shows how the average net flow into Tandridge over both 5 and 10-year periods varies with the choice of period used. In Tandridge's case the 10-year average flows (orange bars) are more variable than is often the case and the average flow increases steadily the later the period chosen. This suggests that there may be something of a trend in the net flows. The blue bar bordered in black is the 5-year average flows used by the ONS in the 2012 SNPP. The orange bar bordered in black is the 10-year period used in the above adjustment. As in both the 5 and 10-year average a move to the latest period would increase the average net flow there is a fairly strong case for adjusting the flow rates used to reflect the latest 10-year period for which data is available i.e. 2004-14.

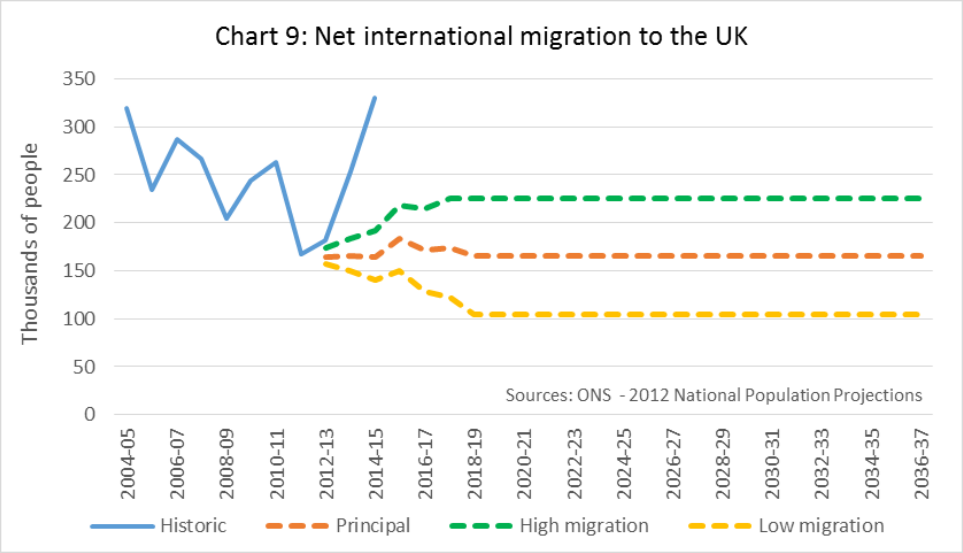


25. Rows D and E in Table 4 show the effect of changing the 10-year trend period to 2004-14 and at the same time re-basing the projection to start from the 2014 MYE population figures. The projected population increase goes up by 1440 (10%) from 14,370 to 15,810.

Table 4: Adjustment to average flows in 2004-14: Tandridge		
Change 2013 - 2033		**Population**
A	**2012 SNPP**	**14900**
B	*10-year UK flow adjustment*	*-530*
C	**10-year UK flows**	**14370**
D	*Adjustment for 2004-14 UK flows*	*1440*
E	**MYE + 2004-14 UK flows**	**15810**

International flows

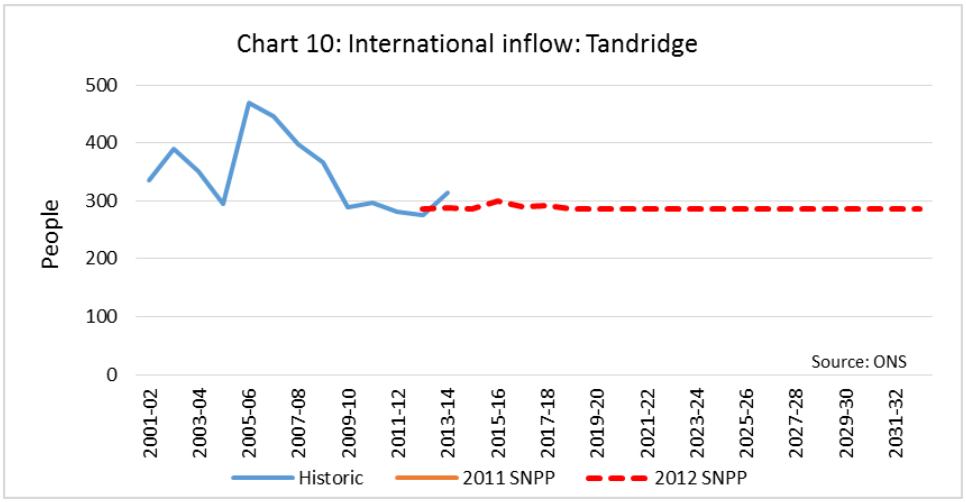
26. The international projections in 2012 SNPP are based on allocating the 2012-based National Population Projections[13] for in and outflows between authorities. The flows to and from each authority therefore depend on the national projections and how they are envisaged to change over the plan period. It is therefore understandable that some have expressed concern that the latest data for net migration to and from the UK suggest flows that are much larger than assumed in the 2012-based projections. Chart 9 compares the latest data with the 2012-based projections. As can be seen, the latest figures (for the year to March 2015) are about twice the ONS's principal projection.

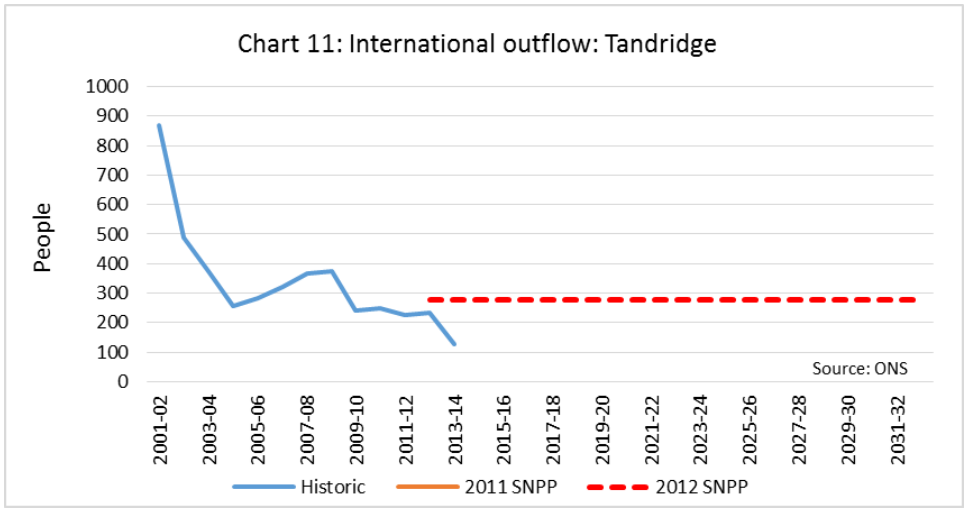


27. Whilst two years' data is not necessarily a reliable indicator of what is likely to happen over the 20 year plan period, there is a clear case for exploring the potential consequences of different assumptions.

28. One option would be to scale up the in and outflows to reflect the 'high migration scenario' presented by the ONS with their 2012 National Population Projections. However, this would apply uniform adjustments to all authorities when different authorities have been affected differently. Charts 10 and 11 show how international flows into and out of Tandridge have changed since 2001-02 and are projected in the 2012 SNPP.

[13] See *National Population Projections, 2012-based Statistical Bulletin* published on 6 November 2013 and available at http://www.ons.gov.uk/ons/rel/npp/national-population-projections/2012-based-projections/stb-2012-based-npp-principal-and-key-variants.html#tab-Introduction





29. Note from Chart 11 how the outflow has fallen form a very high level in 2001-02 and to a lesser extent in 2002-03. NMSS understand from Tandridge Council officers that there were a number of events which occurred at this time which may explain the high outflows, including:

- Bristow Helicopters at Redhill Aerodrome downsized (reduced as the North Sea oil and gas activity began to decline) - they had a few international employees.
- International Rectifier - an international German - based company with its UK HQ at Hurst Green which shrank at that time.
- Commercial Union - based at Whyteleafe was absorbed into a multi-national firm around about this time.
- Nestle - UK HQ in Croydon but many employees lived in Tandridge. There was a retrenchment of business back to Switzerland about this time.
- US defence operations - a few American service personnel lived in the District but went home after the 'peace dividend' and closure of their communication installations (e.g. at Botley Hill).
- MoD people - although Caterham Barracks had already closed, there were still military staff (including some international people) in the District (e.g. in the now redeveloped married quarters at Kenley Aerodrome).

- Brewing Research Centre - at South Nutfield - this was redeveloped and some of the European research people are likely to have returned home.
- The London Temple at Newchapel (a large Centre for the Mormon faith) - there was a redevelopment of accommodation about this time. It's possible some personnel returned to Utah during the project.

30. This suggests that the outflows at this time may have been exceptional. However, if the projected international flows were to be adjusted to reflect the latest 10-year average flows into and out of the district i.e. 2004-14 a projection would be obtained which reflects what has happened recently but is not influenced by what appear to have been exceptional outflows in the early years of the century. Rows F and G of Table 5 show the effect of making this adjustment: the projected increase in population rises by 400 (2.5%) from 15,810 to 16220.

Table 5: Adjustment to average overseas flows 2004-14: Tandridge		
Change 2013 - 2033		**Population**
A	**2012 SNPP**	**14900**
B	*10-year UK flow adjustment*	*-530*
C	**10-year UK flows**	**14370**
D	*Adjustment for 2004-14 UK flows*	*1440*
E	**MYE + 2004-14 UK flows**	**15810**
F	*Adjustment for 2004-14 overseas flows*	*400*
G	**MYE + 2014-14 UK + overseas flows**	**16220**

Note: some numbers may not add due to rounding

31. Although two years' figures are not necessarily a good indicator of the long term trend it is suggested that it would be prudent to adjust the international flow to reflect the latest 10-year average international flows on the basis the figures to date give a fairly strong indication that the ONS is likely to be too low. Using the (higher) average actual flows reduces the risk of planning for too few people.

Unattributable Population Change' (UPC)

32. If all of the data were completely accurate the population in one census plus the cumulative effect of the components of change in the intervening years would equal the population counted in the next census. That is not the case: there is a discrepancy known as the 'Unattributable Population Change' (UPC). At the national level the discrepancy was 103,700 people between the 2001 and 2011 census. That is not a large number in the context of England's population of 53 million in 2011, only 0.2%. It is, however, 2.8% of the population change between the two censuses and that is arguably the more relevant comparison.

33. At the local authority level UPC can be much larger proportionately. There are 28 English local authorities for which the total UPC over the period 2001-11 is more that 5% of the population in 2011 and 83 for which the average UPC is more than 50% of the average population change between 2001 and 2011. A discrepancy of that size is highly significant in estimating population changes.

34. It is not thought likely that there are significant errors in the estimation of births and deaths as we have effective registration systems for both. That leaves three possible causes of UPC:

- International migration estimates
- Flows within the UK
- Census estimates in both 2001 and 2011

35. The ONS considered the arguments for and against taking UPC into account in its 2012 sub-national population projections and decided not to. The main reasons were that:

- It is unclear what proportion of UPC is due to errors in the 2001 and 2011 censuses and what proportion is due to errors in the components of change. Insofar as the errors are in either the 2001 and 2011 censuses they will not affect projections based on trends in the components of change.

- If UPC is due to international migration, the biggest impacts will have been during the earlier years of the decade as significant improvements in the migration estimates were made in the latter part of the decade.

36. This is the considered view of the ONS's experts in this field and should not be lightly dismissed. However, where UPC is sizeable compared with the total population, it is less likely that a significant part of it could be due to errors in the 2001 and 2011 censuses, although it should be noted that census estimates of local authority populations are subject to significant error margins.

37. The ONS publishes[14] 95% confidence intervals[15] for its census population estimates and for the 'all persons' counts for Tandridge in the 2011 census the interval was 1.69% which equates to 1400 people. UPC for Tandridge for the period 2001-11 was -340 (the negative sign implying that the cumulative components of change exaggerated the actual population change.) It is therefore possible that all or a significant proportion of UPC could have been due to errors in either the 2001 or 2011 censuses. That would mean that it would not affect the projections. On the other hand, if UPC was caused by errors in the migration components of change it could have caused the projected increase in population to have been exaggerated.

38. The practical reality is that we simply do not know whether UPC will have affected the population projection for any given authority and, if it has, by how much. The ONS assumption in the 2012 SNPP that UPC will have had no effect is at one end of the spectrum; the assumption that all of UPC should be incorporated in the projection is at the other. A practical compromise is to assume that 50% of UPC will have affected the projection. Rows H and I of Table 6 show the effect of making this

[14] http://www.ons.gov.uk/ons/guide-method/census/2011/census-data/2011-census-data/2011-first-release/first-release--quality-assurance-and-methodology-papers/census-confidence-intervals.xls

[15] A 95 per cent confidence interval is a range within which the true population would fall for 95 per cent of all possible samples that could have been selected.

adjustment. The impact is relatively small: the projected population increase falls by 270 (1.7%) from 16,220 to 15940.

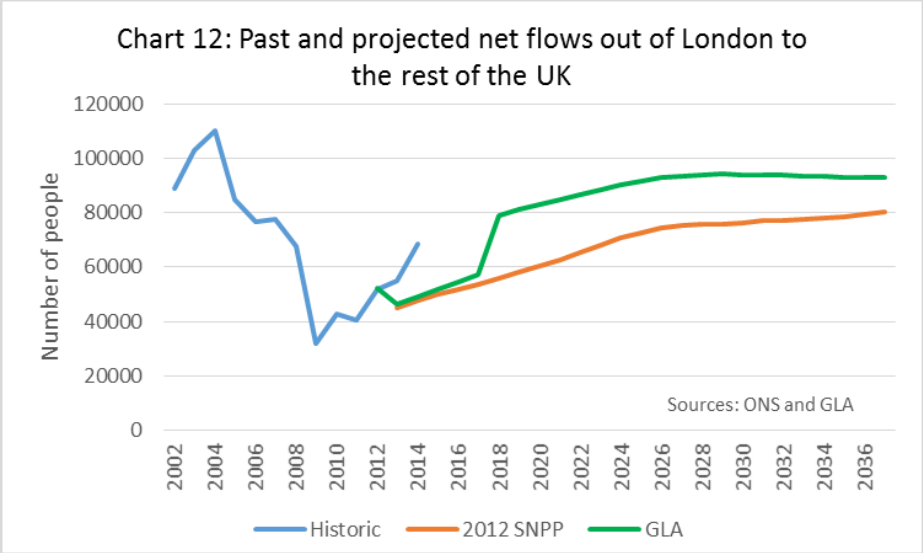
Table 6: UPC adjustment: Tandridge		
Change 2013 - 2033		**Population**
A	**2012 SNPP**	**14900**
B	*10-year UK flow adjustment*	*-530*
C	**10-year UK flows**	**14370**
D	*Adjustment for 2004-14 UK flows*	*1440*
E	**MYE + 2004-14 UK flows**	**15810**
F	*Adjustment for 2004-14 overseas flows*	*400*
G	**MYE + 2014-14 UK + overseas flows**	**16220**
H	*Adjustment for 50% UPC*	*-270*
I	**MYE + 2014-14 UK +overseas flows + 50% UPC**	**15940**

Note: some numbers may not add due to rounding

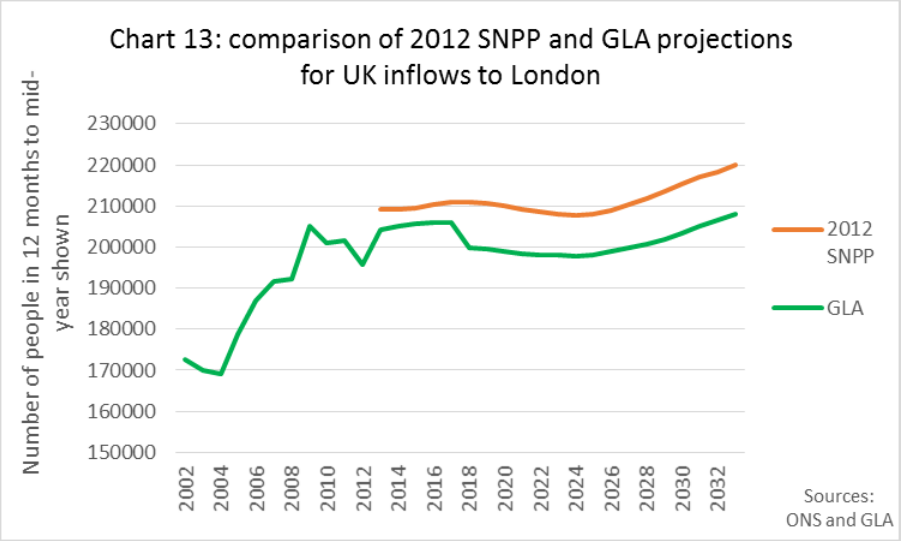
Potential impact of increased out-migration from London

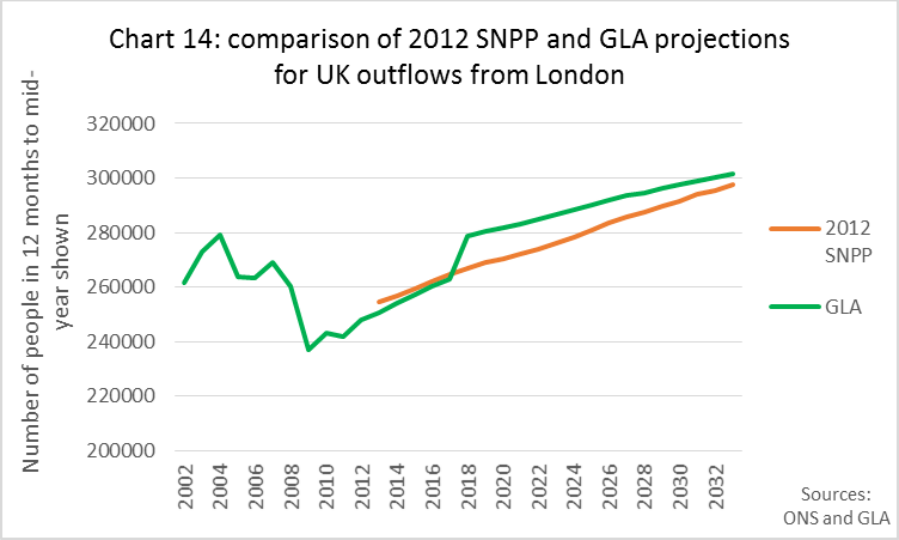
39. The analysis hitherto has not explicitly recognised that Tandridge has a very large neighbour immediately to its north: London. London has a significantly younger age profile than the rest of the UK and is projected to grow faster. Net migration out of London to the rest of the UK has been substantially reduced during the economic downturn and there are signs that it is returning to previous levels. This potentially has large implications for Tandridge as almost half of those who move to the district from the rest of the UK come from London.

40. Chart 12 shows how net flows out of London dipped during the economic downturn and how the 2012 SNPP and the GLA project that they will grow in the future. The GLA projection (on which the current London Plan is based) is higher and more consistent with the data for the last two years, but even that could prove to be too low.



41. Charts 13 and 14 separate out the past and projected in and outflows:





42. Note that whilst the outflow from London dipped significantly during the economic downturn the inflow did not and, indeed, continued to rise in some years. Note also that the GLA's projected net outflow from London is larger the 2012 SNPP as a result of the combination of lower projected inflows and higher projected outflows. In fact the lower projected inflows are responsible for the larger part of the difference: over the period 2012-37 the GLA projected inflows are on average 4.6% smaller than the 2012 SNPP whilst their projected outflows are 1.9% larger.

43. To explore the consequences of both the GLA's assumption for net migration out of London and even higher net outflows, two 'London scenarios' have been modelled. These are variants of the adjusted population projection set out in Table 6 (above). That projection assumes the both UK and overseas flows into and out of Tandridge reflect the average flows over the period 2004-14 and that the projection is re-based to start from the 2014 MYE estimates of the population in 2014. The two London scenarios replace the UK flow assumptions in that scenario with the following:

- **GLA scenario:** the 2012 SNPP flows to and from the London area have been adjusted to reflect the differentials between the GLA projections and the 2012 SNPP i.e. the inflows to Tandridge from London have been increase by

1.9% relative to the 2012 SNPP and the outflows from Tandridge to London have been reduced by 4.6%. Flows to and from the rest of the UK other than London have been adjusted to reflect 10-year flows over the period 2002-12.

- **Return to pre-recession flows:** the flows to and from London have been adjusted to reflect flows in the 5 years before the economic downturn i.e. 2002-07 whilst the flows to and from the rest of the UK other than London have been adjusted as before to reflect 10-year flows over the period 2002-12.

44. Table 7 shows how these scenarios compare with that in Table 6.

Table 7: Alternative London migration scenarios: Tandridge

	Population change 2013-33	Homes needed per year
UK and overseas flows reflect 2004-14 averages; rebasing to 2014 MYE	15940	468
As above but flows to and from London reflect GLA projections	14230	428
As above but flows to and from London reflect 2002-07	16471	473

45. As can be seen from the table, the GLA flow scenario reduces the projected population increase because the impact of the lower flows into London outweighs the smaller increase in the outflows from London. This reflects the fact that nearly a quarter of the outflows from Tandridge to other parts of the UK are to the London area. The net effect is to reduce the projected population increase by 10.7%

46. The scenario which returns flow to and from London to the levels seen before the economic downturn increases flows, but by a much smaller amount than the GLA scenario reduces them by – 3.3%.

47. Table 7 also shows the impact of the two scenarios on the annual number of homes needed (based on the 2012-based DCLG household formation rates). Because those who move tend to be younger and have lower household formation rates, the impact of the two scenarios on the number of homes needed is smaller than the change in the population increase: the GLA scenario reduces the number of homes needed by 8.5% (from 468 to 428 homes a year) whilst the pre-downturn flow scenario only increases it by 1.1% (from 468-473). As the pre-recession scenario is fairly extreme, assuming as it does a return to flows seen in a 'boom period', and only increases the number of homes needed slightly compared with the scenario based on average UK and overseas flows from the period 2004-14, that latter scenario is taken as the central case.

Impact of the high numbers of homes built in 2006-07

48. It has been suggested that the very high number of homes built in 2006-07 has distorted the official population projections as this may have resulted in atypically high levels of net migration into Tandridge around that time. Annex A discusses the evidence for this and concludes this has not distorted the adjusted population projection produced in this report.

Conclusions on the population to be planned for

49. It is proposed that four adjustments should be made to the ONS's 2012-based Sub-national Population Projection for Tandridge to reflect both weaknesses in those projections and the latest evidence available from the 2014 Mid-Year Estimates and the most recent international migration statistics. These are shown in Table 8.

Table 8: Summary of population adjustments: Tandridge		
Change 2013 - 2033		**Population**
A	**2012 SNPP**	**14900**
B	*10-year UK flow adjustment*	*-530*
C	**10-year UK flows**	**14370**
D	*Adjustment for 2004-14 UK flows*	*1440*
E	**MYE + 2004-14 UK flows**	**15810**
F	*Adjustment for 2004-14 overseas flows*	*400*
G	**MYE + 2014-14 UK + overseas flows**	**16220**
H	*Adjustment for 50% UPC*	*-270*
I	**MYE + 2014-14 UK +overseas flows + 50% UPC**	**15940**

Note: some numbers may not add due to rounding

50. The key points to note are:

- The ONS's 2012 Sub-national Population Projections (2012 SNPP) are latest official population projections. They suggest that the population of the area will increase by 14,900 over the plan period, 2013-33. (Row A)

- The 2014 Mid-Year Estimates (published in June 2015) provide the latest indication of what has happened to the population of the area since the 2012 SNPP was published. They suggest that the population in 2014 was 445 or 0.5% higher than projected in the 2012 SNPP.

- Due to the way in which outflows from Tandridge to the rest of the UK have fallen since 2002-03, adjusting flow to and from the rest of the UK to reflect average rates in the period 2002-12 rather than the period 2007-12 reduces the projected population by 530 or 3.6% (Rows B and C).

- The publication of the 2014 Mid-Year Estimates allows average rates for flow to and from the rest of the UK to be calculated for the period 2004-14. Adjusting for the larger average flow seen over this period increases the projected population increase by 1440 or 10%. (Rows D and E)

- Adjusting flows to and from abroad to reflect actual flow seen over the period 2004-14 rather than the lower flows assumed by the ONS in the 2012 SNPP further increase the projected population increase by 400 or 2.5%. (Rows F and G)

- It is debatable whether the projections should make an allowance for Unattributable Population Change (UPC). The ONS made no such allowance

in the 2012 SNPP. That approach is at one end of the spectrum, the other being to make a 100% allowance for UPC. As there is no basis for deciding what the right approach is, it could be argued that a sensible middle way would be to make a 50% allowance for UPC. As Rows H and I show, this has a relatively small impact on Tandridge's case, reducing the projected population growth by 270 or 1.7%.

51. The future development of London and the rate at which people move out of London to the rest of the UK will have a significant impact on Tandridge as almost half of those who move to Tandridge from elsewhere in the UK come from the London area. Adjusting projected flows to and from the London area to reflect the GLA projections on which the current London Plan is based has the effect of reducing Tandridge's projected population increase. This is because the GLA projections reduce the inflows into London relative to the 2012 SNPP by more than it increases outflows from London. A more extreme scenario in which flows to and from London return to levels seen in the 'boom period' before the recent economic downturn (i.e. to rates in the period 2002-07) produces a projected population increase that is only slightly larger than that produced by assuming that UK and overseas flows move to rates which reflect the average flows over the period 2004-14 (as in Table 8). As that second scenario is fairly extreme, it is proposed that the planning assumption for population increases should be based on the analysis summarised in Table 8.

52. As the 50% UPC, adjustment makes relatively little difference and may be contentious, it is proposed not to make this adjustment and to use the figure in Row G – an increase of 16,220 between 2013 and 2033 – as the planning assumption. Table 9 compares this assumption with the 2012 SNPP.

Table 9: Proposed population assumption: Tandridge

Change 2013 - 2033		**Population**
A	2012 SNPP	14900
B	**Proposed planning assumption**	**16220**
C	**Change from 2012 SNPP**	**1320**
D	**Percentage change from 2012 SNPP**	**8.9%**

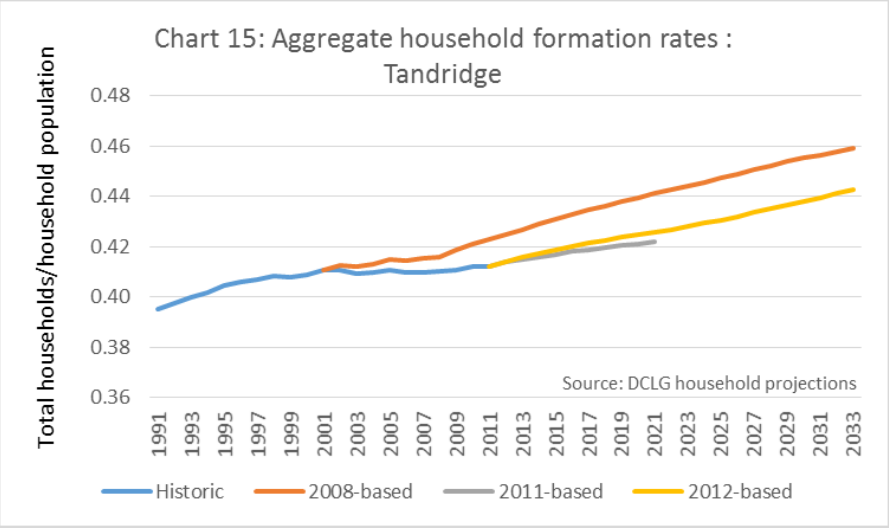
HOW PEOPLE ARE LIKELY TO GROUP THEMSELVES INTO HOUSEHOLDS

The household projections

53. The assumptions made about how people will group themselves together into households are crucial in estimating the number of homes needed. The key issue is whether household formation patterns will revert to the earlier trend towards smaller average household sizes or will the economic downturn and a long period of deteriorating housing affordability have caused a permanent change?

54. There are three recent DCLG household projections that are of some relevance: those with base dates of 2008, 2011 and 2012. The 2008-based projections, in effect, predate the economic downturn and are taken by some as broadly indicative of the previous longer term trend, although there are good reasons to believe that they were optimistic even from the standpoint of the time when they were formulated. The 2011-based projections were produced following the 2011 census and take some account of census data which generally found fewer households than had been envisaged in the 2008-based projections, suggesting that household formation patterns had departed from the previous long term trends. The 2012-based projections are the first full set of projections following the 2011 census and take much fuller account of that census.

55. Chart 14 summarises the view these projections take of the likely direction of travel of household formation rates in Tandridge.



56. Note that:

- Household formation rates rose only slightly between 2001 and 2011 – at a much slower than between the previous two censuses.
- The 2008-based projections were based on a view of household formation rates in 2008 that we now believe to have been over-estimated (as can be seen from the way in which the brown line for the 2008-based rates in 2008

is higher than the blue line showing what is now believed to be the true historic position).

- The most recent projections, the 2012-based set, envisage faster increases in household formation rates than the 2011-based projections. There can be little doubt that the 2012-based projections are more soundly based as they take much fuller account of the 2011 census and did not have to use older trend data which the 2011-based projections were obliged to use.

- The 2012-based projections envisage that aggregate household formation rates will return to rates of growth which are broadly comparable to those envisaged in the 2008-based projections (as can be seen from the way in which the yellow line for the 2012-based projections moves to become roughly parallel to the brown line for the 2008-based projections).

57. The key issue is whether or not it should be assumed that household formation rates will not just return to rates of growth similar to those envisaged in the 2008-based projections but will also, in effect, catch up some or all of the lost ground relative to those earlier projections.

Is a return towards the 2008-based household formation rates likely?

58. There are two reason for believing that a return towards the 2008-based household formation rates is unlikely:

- The 2008-based household formation rates were optimistic even when they were first issued.

- The departure from the earlier trend in household formation rates which occurred between 2001 and 2011 was not primarily due to the economic downturn but to other factors, most of which are unlikely to reverse.

2008-based household formation rates optimistic

59. There are a number of reasons for believing that the 2008-based household formation rates were optimistic.

- As already noted, their starting point was an estimate of household formation rates in 2008 that we now believe to have been too high. (See Chart 15 above).

- The DCLG at the time discounted some evidence which suggested that their projections were too high. This included evidence from the Labour Force

Survey[16] and on cohort effects (which were ignored by the methodology used[17]).

- The projections did not take into account the significantly higher numbers of new international migrants in the first decade of this century. This impacts on headship rates as recent international migrants tend to live in larger households (i.e. they have a lower propensity to form separate households) than the rest of the population of a similar age. There is evidence to suggest that the increased volumes of international in migration were responsible for at least half of the difference between the expected number of households in 2011 and the actual number found by the census[18] although this has since been disputed.

Reasons for the departure from the earlier household formation rate trends

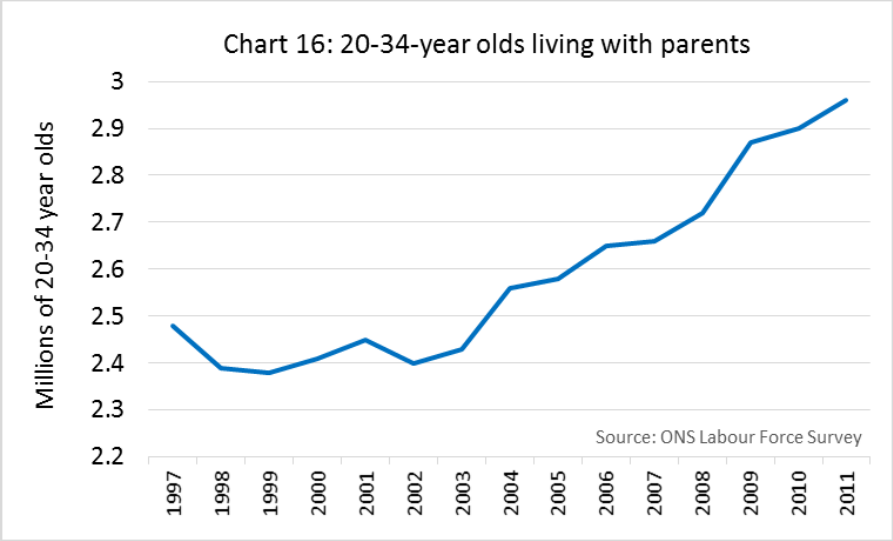
60. It is fairly clear that the departure from the earlier household formation rate trends began well before the economic downturn and as such is unlikely to be reversed as a result of the economy emerging from recession. In particular, there is evidence that there has been a significant increase in young adults living with their parents and that this started well before the economic downturn. This was explored in an ONS report entitled "Young adults living with parents in the UK, 2011"[19] Using data for the Labour Force Survey this suggested that there had been a 21% increase in the number of young adults living with their parents between 2001 and 2011 – an increase of over ½ million people. Chart 16 shows a steady increase from 2002, well before the 'credit crunch' and recession, suggesting that other factors, such as the deteriorating affordability of housing and changing behaviour patterns, were at work.

[16] See *"Updating the Department for Communities and Local Government's household projections to a 2008 base: methodology"* 26 November 2010, page 10 and available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7484/1780350.pdf. This include the following comment, "Labour Force Survey (LFS) data suggests that there have been some steep falls in household representative rates for some age groups since the 2001 Census. If these shifts in household formation behaviour are sustained in the longer term, and this can only be truly assessed once the 2011 Census results are available, the household projections using the method as in the 2006-based and previous projection rounds would turn out to be too high."

[17] See *"Updating the Department for Communities and Local Government's household projections to a 2008 base: methodology"* 26 November 2010, page 12 and available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7484/1780350.pdf.

[18] Holmans, A. (2013), *New estimates of housing demand and need in England, 2011 to 2031,* London, TCPA. http://www.tcpa.org.uk/pages/new-estimates-of-housing-demand-and-need-in-england-2011-to-2031.html

[19] Young Adults Living With Parents in the UK, 2011, ONS, 29 May 2012 http://www.ons.gov.uk/ons/rel/family-demography/young-adults-living-with-parents/2011/young-adults-rpt.html



61. An analysis of the changes that have occurred in household formation rates has been provided by Professor Simpson writing in the TCPA Journal in December 2014[20]. In that he argues that, "The causes of reduced household formation are varied, began before the recession, and mostly are likely to continue with or without recession". He refers to:

- "…a sustained increase among young people not leaving home" which began at the turn of the century and accelerated after 2008;
- " …the introduction of student fees from 1998"
- "…the increase in precarious employment, including the rapid growth of part-time work…."
- "The long term increase in the number of childless women…which increased the number of smaller households, stopped and has fallen since 2000."
- "Increasingly older formation of couples or families, which had increased the number of single person households in the 1980s and 1990s, has levelled out since 2001."

62. Whilst it is possible that some of these factors may change, that does not seem very likely. Professor Simpson suggests that the first three, "…appear at the moment as fixed circumstances of the policy and economic environment." It might also be noted here that there are a number of factors such as increasing levels of student debt and welfare reform that are likely to serve to reduce further household formation rates. These will not have been reflected in the 2011 census or the 2012-based household projections.

63. Professor Simpson concludes that, "…we are not in a position to expect further increases in household formation rates of the same kind [as suggested in the 2008-based projections]…..The future in the UK is likely to be a continuation of precarious

[20] Professor Simpson is Professor of Population Studies at the University of Manchester and is the originator and designer of Popgroup. His article in the December 2014 TCPA Journal, "Whither household projections", was referred to in paragraph 15 of the NMSS Update Report of July 2015.

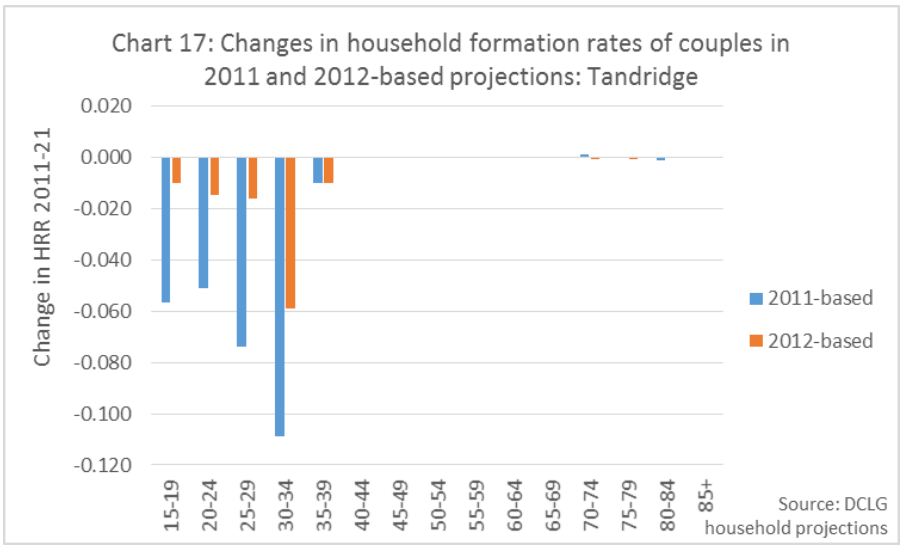
household formation. It will probably be lower than once projected and carry more uncertainty…."

Why not assume a partial return to 2008-based rates for at least the 25-34 year olds as in earlier NMSS Reports for other authorities?

64. The short answer to this question is, "because the 2012-based projections are very different from the 2011-based projections on which those reports were based".

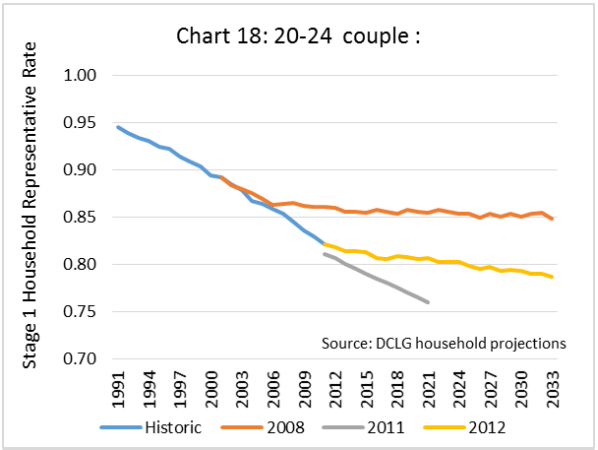
65. It should be noted that the 2011- based projections were labelled in their title as "interim" projections. DCLG were fully aware that they were a stop-gap measure and for that reason they only extend to 2021 and not the 25 years of a full set of projections such as the 2012-based set.

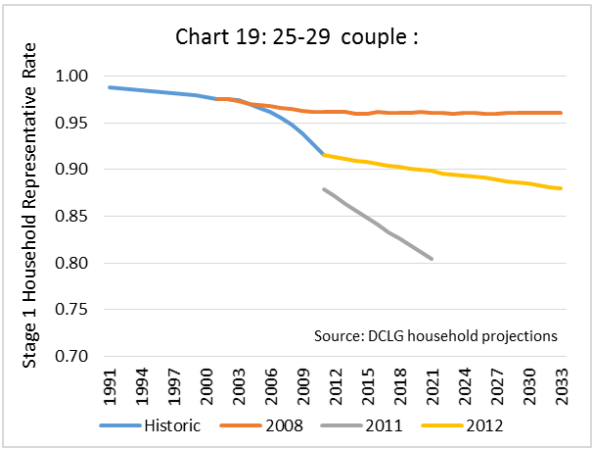
66. The aspect of particular concern with the 2011-based projections was the way in which they envisaged sharp and continuing fall in household formation rates for younger couples. Such falls have been largely eliminated in the 2012-based projections. See Chart 17 which compares the projected changes in household formation rates between 2011 and 2021 in the 2011 and 2012-based projections for Tandridge. The bars indicating negative numbers for age groups up to 35-39 mean that the household formation rates of these groups are projected to fall between 2011 and 2021. Note however, the difference between the blue bars for the 2011-based projections and the much smaller orange bars for the 2012-based projections. These show that the reduction in household formation rates in the most recent projections are very much smaller.

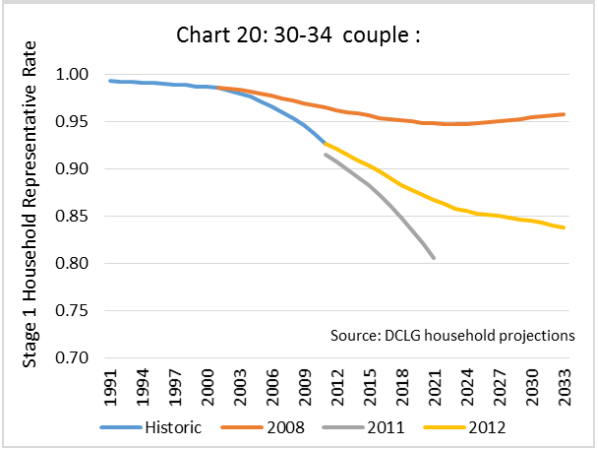


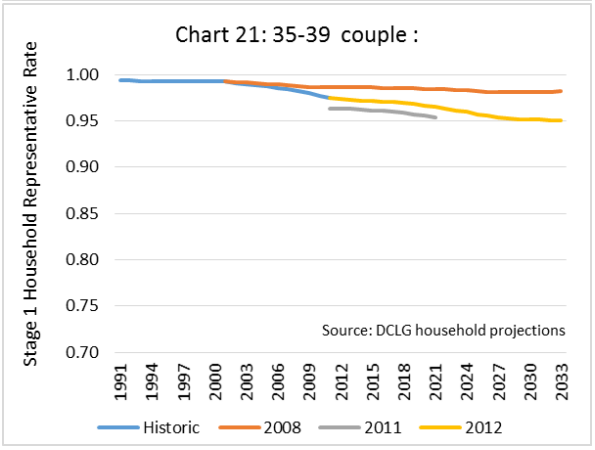
67. Faced with such large projected declines in household formation rates for young adults in the 2011-based projections it was reasonable to conclude that this aspect of the projections had been influenced by something that was unlikely to continue (although it was not, and is not, possible to link the projected falls to any particular cause).

68. Charts 18-21 compare the three projections for the household formation rates of younger couples in Tandridge – effectively presenting the information in Chart 17 in a different form and adding in the 2008-based projection.









..

69. The falls in the household formation rates of couples in their 20s and 30s are in the context of aggregate household formation rates rising and average household sizes falling. This means that the projections assume that sufficient homes are built to allow some groups to have higher household formation rates but that those additional homes are taken by other groups, probably older people with greater purchasing power. This would be consistent with factors such as welfare reform, tighter mortgage regulation and increased student debt affecting those in this age group in particular. Although it may not be a desirable outcome, it is by no means an unlikely one.

Conclusion on household formation rates

70. The conclusion from the above analysis is that there is no case for adjusting the household formation rates in the 2012-based household projections.

EMPTY AND SECOND HOMES

71. To turn an estimate of the net number of additional households into an OAN, assumptions need to be made about the proportion of the housing stock that will either be empty or used as second homes. The assumptions used have been based on 2013 council tax data as set out in Table 10[21].

Table 10: Empty and second homes: Tandridge			
A	B	C	D = (A + B)/C
Empty homes	Second homes	Total homes	% empty or second homes
833	231	35190	3.02%

72. Applying these empty and second homes rates and the DCLG 2012 household formation rates to the proposed planning assumptions for population growth in estimated in the previous section produces the following estimates of demographic OAN[22]:

Table 11: Demographic OAN: Tandridge			
Change 2013 - 2033		**Homes**	**Homes/yr**
A	2012 SNPP	8770	440
B	**Proposed planning assumption**	**9440**	**470**
C	**Change from 2012 SNPP**	**670**	**30**
D	**Percentage change from 2012 SNPP**	**7.6%**	**7.6%**

[21] Empty homes from DCLG Live Table 615 at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/423184/LT_615.xls

Second homes from 2013 Council Taxbase available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/286768/Council_Taxbase_local_authority_level_data_2013.xlsx

Dwelling stock estimates from DCLG Live Table 125 at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/423183/LT_125.xls

[22] The calculation has two steps:

- First, DCLG's 2012-based household formation rates are applied to the proposed planning assumption for the population increase between 2013 and 2033 – 16,220 (from Table 9. This produces a household increase of 9150 extra households.
- Second, to accommodate 9150 extra households with 3.02% vacant or second homes needs 9436 extra homes i.e. 9150 is 9436 less 3.02%. (The calculation is 9436 = 9150/(1-0.0302)) 9436 is then rounded to 9440 to avoid suggesting spurious accuracy.

ADJUSTMENTS TO REFLECT 'OTHER FACTORS'

73. The PPG advises:

> *"The household projection-based estimate of housing need may require adjustment to reflect factors affecting local demography and household formation rates which are not captured in past trends. For example, formation rates may have been suppressed historically by under-supply and worsening affordability of housing. The assessment will therefore need to reflect the consequences of past under delivery of housing. As household projections do not reflect unmet housing need, local planning authorities should take a view based on available evidence of the extent to which household formation rates are or have been constrained by supply."*[23]

Market signals

74. More specifically those planning for housing are expected to take account of 'market signals':

> *"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."*[24]

75. The reference to 'prices or rents rising faster than the national/local average' is important. Higher prices than in other areas may not necessarily indicate a particular problem but may simply reflect the mix of housing in an area or particular features which are thought desirable such as proximity to transport links, city centres, attractive countryside etc. For example, prices in central London are always going to be higher than elsewhere given the value those renting or buying homes attach to a central location – advantages that are inevitably limited to a finite number of properties no matter how adequate the supply of homes is in London as a whole. On the other hand, prices rising faster than other areas may indicate a supply problem. This is reinforced by the Planning Advisory Service's (PAS) recent technical advice note on Objectively Assessed Needs and Housing Targets[25] which advises at paragraph 5.38 that, "Proportional price change is generally a better indicator than absolute price,…."

76. The Turley Economics paper *"Analysis of Market Signals: Technical Paper for Tandridge District Council, September 2015"* analyses the available evidence in some depth. The picture that emerges is one of high house prices and rents which are,

[23] Planning Practice Guidance, Paragraph: 015 Reference ID: 2a-015-20140306
[24] Planning Practice Guidance, Paragraph: 019 Reference ID: 2a-019-20140306
[25] Objectively Assessed Need and Housing Targets: Technical advice note, Planning Advisory Service http://www.pas.gov.uk/documents/332612/6363137/Objectively+Assessed+Need+and+Housing+Targets/f22edcc2-32cf-47f1-8e4a-daf50e4412f7

relative to many other parts of the country, unaffordable relative to earnings. This is not a happy situation but it is to some extent inevitable as Tandridge is an attractive area with good rail links to London but also an area in which constraints and the character of the district heavily constrain the scope for development. The key issue is whether the deterioration in market signals has been significantly worse than in the surrounding area so as to indicate particular market pressures that would warrant increasing the OAN.

77. Turley Economics helpfully summarise their analysis of how Tandridge compares with neighbouring authorities and England as a whole in the following table. In this a ranking of '1' indicates that an area has performed worse than all the comparators and a ranking of '10' that it has performed best.

Turley Figure 3.22: Market Signals Summary

	Tandridge	Bromley	Crawley	Croydon	Mid Sussex	Reigate and Banstead	Sevenoaks	Sutton	Wealden	England
House prices										
Change (mean) 2001 – 2014	7	1	10	4	8	6	5	3	9	2
Change (LQ) 2001 – 2014	8	2	6	3	7	10	9	4	5	1
Rents										
Change (mean) 2010/11 – 14/15	7	5	4	2	8	1	9	3	6	10
Change (LQ) 2010/11 – 14/15	4	6	5	1	7	2	8	3	9	10
Affordability										
Change 2001 - 2013	1	10	9	2	3	7	8	4	5	6
Overcrowding										
Change 2001 – 2011	9	5	3	2	1	6	7	8	10	4
Concealed families										
Change 2001 – 2011	9	7	2	4	3	10	8	1	6	5

78. As can be seen from the table there is one area in which Tandridge stands out: affordability. In all other areas apart from lower quartile rents (for which the ranking

is ‘4’ i.e. slightly worse than middle ranking) Tandridge ranks in the lower half of the range.

79. The affordability indicator used is DCLG’s which compares lower quartile earnings from jobs in the area with lower quartile house prices in the area. This is not particularly helpful in an area like Tandridge in which large numbers commute up to London to largely higher paid jobs there. Turleys point out that, had the earnings of those who live in the area been compared with house prices, the affordability of the area would not have deteriorated and, in fact, there would have been a slight improvement since 2002.

Conclusions on market signals

80. In view of this analysis of how the Tandridge housing market has fared relative to surrounding areas and the fact that the demographically-based OAN calculated in earlier sections of this this report is 7.6% higher than the figure suggested by the latest DCLG projections, it is not suggested that the OAN should be increased further to reflect market signals.

81. In deciding where the housing requirement should be set relative to the OAN Tandridge District Council may wish to be mindful that the affordability of housing is a major issue in the area. However, the practical reality is that Tandridge is a small part of a much wider housing market and prices in the district will be determined by the balance between the supply of and demand for housing in London and the South East as whole.

AFFORDABLE HOUSING

82. The affordable housing needs of Tandridge have been assessed by Turley Economics in their paper, *"Affordable Housing Needs Assessment: Technical Paper for Tandridge District Council, September 2015".* This uses the method set out in the PPG and concludes that there is a need 440 affordable homes a year over the next five years and 268 a year for the remainder of the plan period. This is clearly undeliverable within an overall the OAN of 470 homes a year. However, the question remains of the extent to which the assessed need for affordable housing should be taken into account in determining the OAN.

83. The PPG guidance on this is not particularly explicit:

> "*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 deliver the required number of affordable homes."*[26]

84. In seeking to apply this guidance it is important to recognise that the methods set out in the PPG for estimating the OAN and estimating the need for affordable housing are fundamentally different and incompatible. The second edition of the PAS Technical Note[27] deals with this explicitly:

> *"…the two numbers are not directly comparable, because they relate to different meanings of the term 'need'. ….affordable need measures aspiration (what ought to happen), while the OAN measures expectation (what is likely to happen) based on past experience, provided that planning provides enough land."*[28]

The OAN is described as being:

> *"….based primarily on projecting (rolling forward) past trends in total population and household numbers"* whereas the PGG in seeking to *"determine how many households will need affordable housing … does not refer to past reality, but instead looks to set criteria, or standards."*[29]

The PAS Technical Note further explains that:

> *"….the calculated OAN relates to net new dwellings which accommodate net new households (household growth). In contrast, much of the assessed affordable need relates to existing households that are or will be entitled to affordable housing over the plan period. For the most part the needs of these*

[26] Planning Practice Guidance, Paragraph: 029 Reference ID: 2a-029-20140306

[27] Objectively Assessed Need and Housing Targets Technical advice note, second edition, July 2015. Available at http://www.pas.gov.uk/documents/332612/6549918/OANupdatedadvicenote/f1bfb748-11fc-4d93-834c-a32c0d2c984d

[28] PAS Technical Note, paragraphs 9.3 and 9.4.

[29] PAS Technical Note paragraph 2.14.

existing households are not for net new dwellings. Except for those who currently live in temporary institutional accommodation or on the street, if they move into suitable housing they will free an equivalent number of dwellings, to be occupied by people for whom they are suitable.

In practical terms there is no arithmetical way of combining the two calculations set out in the PPG to produce a joined up assessment of overall housing need. We cannot add together the calculated OAN and the calculated affordable need because they overlap: the OAN of course covers both affordable and market housing, but we cannot measure the components separately. Because demographic projections – which are the starting point for the OAN – do not distinguish between the different sectors of the housing market.

In summary, it seems logical that affordable need, as defined and measured in paragraphs 22-29 of the PPG, cannot be a component of the OAN. The OAN does have an affordable component – which cannot be measured separately but will normally be much smaller than the affordable need…."[30]

This reasoning supports the conclusion that:

"…it seems clear from the PPG and Inspectors' advice that affordable housing need is a policy consideration that bears on policy targets, rather than a factor that bears on objectively assessed need."

85. This makes eminent sense in an area such as Tandridge in which affordable housing need as calculated in the manner set out in the PPG clearly cannot be delivered within the OAN as the need in the first 5 years is almost equal to the total OAN. It is clearly ludicrous to suggest that the OAN should be to the point at which the assessed need for affordable homes can be delivered through S106 agreements. (Even if 40% affordable housing were delivered from all new development that would imply a need for around 1,100 homes a year for the first 5 years as 440 affordable homes is 40% of 1,100). However, it remains the case that the more homes that are built the more affordable homes can be delivered through S106 agreements. Where the need for affordable housing is high it has to be a matter for local policy judgement whether and, if so to what extent, more homes are built than either the demographic or jobs-led OAN suggests. That inevitably involves assessing the costs and benefits of a range of impacts, many of which cannot be quantified. As such it must, as the PAS Technical Note suggests, fall outside the scope of an objective assessment of housing need such as this and into the realm of the qualitative judgements which local decision takers have to make in determining where the housing requirement should be set relative to the OAN. This report does not therefore suggest any adjustment for affordable housing.

[30] PAS Technical Note, paragraphs 9.5-9.7

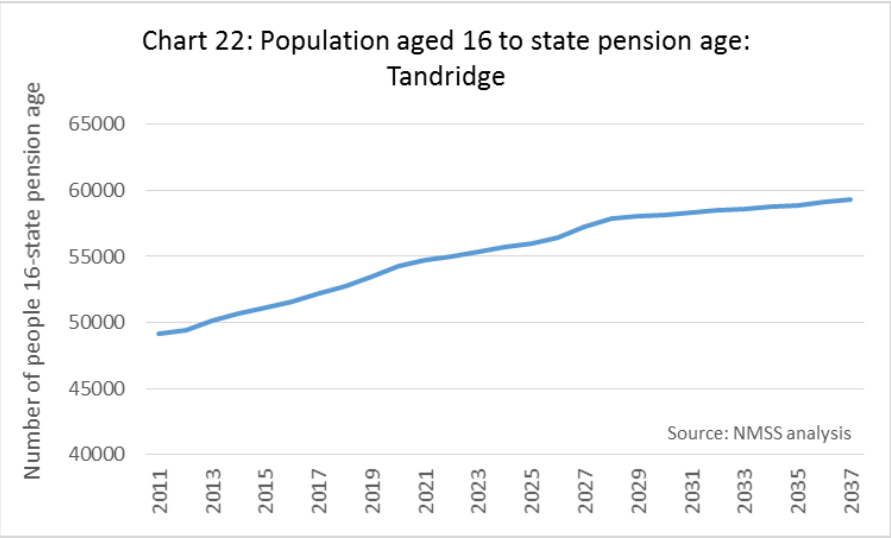
SUPPORTING ECONOMIC GROWTH

86. The PPG advises:

> *"Plan makers should make an assessment of the likely change in job numbers based on past trends and/or economic forecasts as appropriate and also having regard to the growth of the working age population in the housing market area. …..*
>
> *Where the supply of working age population that is economically active (labour force supply) is less than the projected job growth, this could result in unsustainable commuting patterns (depending on public transport accessibility or other sustainable options such as walking or cycling) and could reduce the resilience of local businesses. In such circumstances, plan makers will need to consider how the location of new housing or infrastructure development could help address these problems."*[31]

87. This makes it clear that Local Plans should be consistent with the economic prospects of an area and that it is not acceptable simply to assume that commuting patterns will change to cover any shortfall between the resident labour force and what is needed to support the economic growth of the area.

88. An economic forecast for Tandridge has been obtained from Experian, dated March 2015. This envisages that there will be 9,260 additional jobs created in the area between 2013 and 2033. To set this in context Chart 22 shows how the population of Tandridge is projected to change in the population scenario adopted for the OAN.



89. As can be seen, with the announced changes in state pension age, the population between 16 and pension age is set to continue to increase, rising by 8,490 between 2013 and 2033. Not all of these will be economically active (and thus part of the

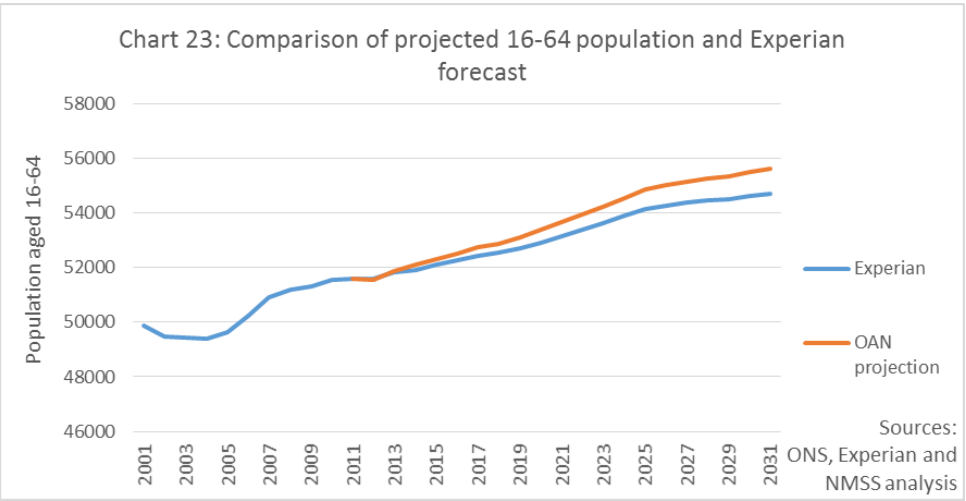
[31] Planning Practice Guidance, Paragraph: 018 Reference ID: 2a-018-20140306 http://planningguidance.planningportal.gov.uk/blog/guidance/housing-and-economic-development-needs-assessments/methodology-assessing-housing-need/

labour force), however, the closeness between the number of additional jobs forecast and the increase in the 16-state pension age population is such that it is by no means inconceivable that the additional jobs could be accommodated within the projected population: it depends primarily on the assumptions made on how economic activity rates change.

90. There is considerable uncertainty about how economic activity rates will change over the next 20 years. With higher state pension ages; better health; and less generous pensions it is highly likely that more older people will remain active in the workforce for longer. The key question is, "By how much?" Opinions differ and can make a big difference to the estimates made of the number of additional people who will need to live in an area to support a given increase in jobs without changes in commuting patterns. NMSS believe that the only credible and consistent basis on which to take a view on how large a population change is needed to support a particular jobs increase forecast is to use economic activity rates consistent with the forecast being interpreted. This is because the relationship between population and labour force measured by economic activity rates is inherent in any forecast of this type: had the forecaster assumed a different relationship it is highly likely they would have forecast a different increase in jobs. One cannot accept a forecast's view on the likely increase in jobs without being prepared to accept the view on the relationship between the size of the population and the number of jobs i.e. its assumptions on economic activity rates. If you believe that the economic activity rate assumptions are implausible you are in effect saying that you believe that the forecast is implausible.

91. Experian provide projections for the increase in both the 16-64 population and the 16-state pension age population alongside their employment projections. By comparing either with the OAN population projection it is possible to determine whether the OAN population projection is large enough to support the forecast increase in jobs. Chart 23 makes this comparison.

Chart 23: Comparison of projected 16-64 population and Experian forecast



92. As can be seen, the OAN projection provides a larger 16-64 population than the Experian forecast suggests is necessary. In fact analysis suggests that the OAN could be reduced from 470 homes a year to 450 before the projected population would be too small.

Conclusion on homes needed to support economic growth

93. This analysis indicates that it is not necessary to add to the demographically based OAN to ensure that there is a sufficiently large labour force to support the Experian economic forecast.

SENSITIVITY ANALYSIS

94. Any analysis of this kind depends on the assumptions made. This section reports the results of sensitivity analysis carried out to explore what the implications would have been had different assumptions been made.

95. The two main components in a household projection and OAN calculation are the estimation of the number of people to be accommodated and the assumption made about how those people will group themselves into households i.e. the assumptions on household formation rates. This section therefore looks at the impact which alternative assumptions might have in both of areas. In each sensitivity test, only one parameter is changed from the assumptions made in the chosen OAN scenario.

Population sensitivities

96. There are three main areas in which adjustments have been made to the 2012 SNPP:

- Flows to and from the rest of the UK
- Overseas flows
- UPC

97. This sub-section looks at each in turn

(a) Flows to and from the rest of the UK

98. The proposed demographic population projection assumes that flow rates are adjusted to reflect the average rates for the latest ten year period for which data is available i.e. 2004-14. Two alternative assumptions are considered here:

- Flow rates for 2002-12 are used. This might be thought the most natural longer period to take as the trend period for 2012-based projections even though data for more recent periods is available.
- An alternative method for producing a 10-year flow rate estimate that calculates inflow rates calculated as percentages of the population in the local authority rather than the population in the rest of UK as used in the method adopted for calculating the OAN. Both methods are proxies for the population in the areas from which people actually move to Tandridge. Neither is a perfect. By considering the method which expresses inflows as percentages of the local authority population as a sensitivity, an indication can be gained of the extent of the uncertainty introduced by the use of the rest of the UK as the chosen proxy.

99. Table 12 (below) compares these two scenarios with the chosen OAN scenario.

Table 12: UK flow rate sensitivities			
	OAN scenario	2002-12 UK flow rates	2004-14 rates, LA population as proxy
Population change	16220	14880	16250
Homes a year	472	425	471

100. As can be seen, using 2002-12 average flow rates instead of the 2004-14 rates used in the OAN reduces the population increase from 16,220 to 14,880 i.e. by 1340. The number of homes needed falls from 472 a year to 425 i.e.by 46 a year (after rounding).

101. On the other hand, using the local authority itself as the proxy for the authorities from which people move to the Tandridge area makes very little difference: the population change increases from 16220 to 16250 i.e. by only 30 (0.2%) and the number of homes need by only one. This suggests that in Tandridge's case the choice of proxy population is not a significant factor.

(b) Overseas flows

102. The proposed demographic projection assumes that flows to and from abroad reflect the average flow rates seen over the most recent 10 year period for which data is available i.e. 2004-14. Plausible alternative assumptions are:

- The assumptions in the 2012 SNPP. Although these appear low in relation to the actual flows in the last two years, it should be acknowledged that they were intended to reflect what is likely to happen over the next 25 years: high flows in the first years of this period do not necessarily invalidate the ONS's assumptions as a longer term view. That view is undoubtedly an expert and independent view arrived at after careful consideration of the available evidence, notwithstanding that many believe it to be far too low.

- Scaling up international migration flows to reflect the ONS's high migration assumption. This involves scaling up the flows into all authorities by the same percentage irrespective of whether individual authorities have seen international flows higher than those envisaged by the ONS. It therefore does not reflect what has actually happened in individual authorities. However, it does approximate the results the ONS might have produced had they taken their high scenario as their principal one.

103. Table 13 (below) shows the results for these two scenarios compared with the OAN scenario.

Table 13: Overseas flow sensitivities			
	OAN scenario	2012 SNPP overseas flow assumptions	ONS high migration scenario
Population change	16220	15460	15860
Homes a year	472	458	467

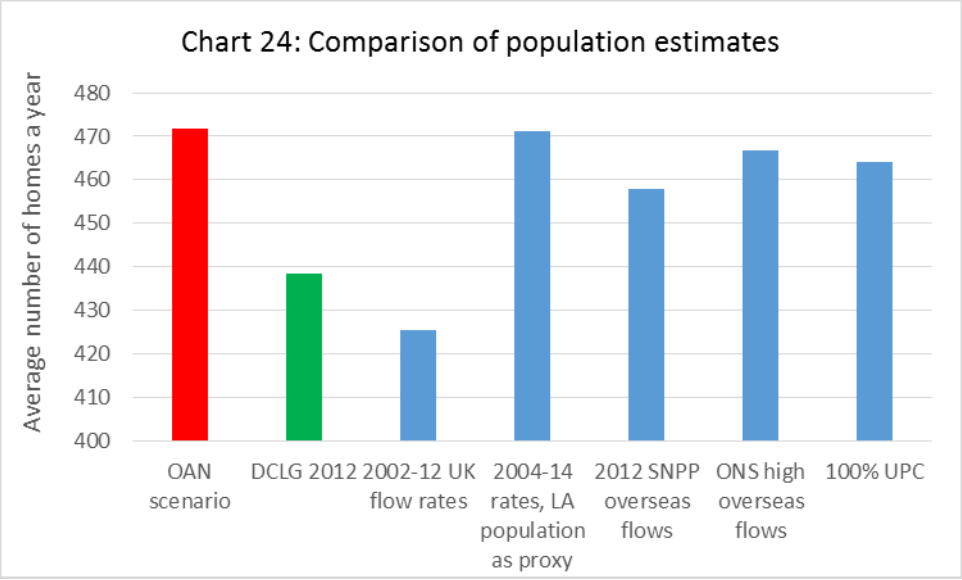
104. Both of these sensitivities reduce the projected population increase – by 3,300 for the 2012 SNPP and by 900 for the ONS high migration scenario. The former reduces the number of homes needed by 14 a year whilst the latter cuts it by 5 a year.

(c) Unattributable population change

105. Whether or not an adjustment should be made for UPC is debatable. Whilst for some areas UPC can make a large difference, Table 14 shows that it is not a very significant fact for Tandridge. Note that the '100% UPC' figure is lower than the OAN because in Tandridge's case OAN is negative

Table 14: UPC sensitivities		
	OAN scenario	100% UPC
Population change	16220	15670
Homes a year	472	464

106. The chart below illustrates the above population sensitivities. It includes both the DCLG projection (green) based on the unadjusted 2012 SNPP.



107. The factor which makes the biggest difference is the adjustment from using the 10 years 2002-12 as the trend period for flows to and from the rest of the UK to using

2004-14. Apart from that the range of the scenarios is fairly narrow – from 458 to 472 homes a year, a range of only 3%.

108. The OAN scenario is at the top of this range. It should, however, be noted that that is not what has determined what the OAN is. The OAN is based on a series of judgements on the components of the population projections (as described earlier in this report) each of which has been taken on the basis of what would be a prudent planning assumption.

Household formation rate sensitivities

(a) Tests relative to the DCLG 2012 household formation rates

109. The discussion in paragraphs 57-68 above suggests that the 2008-based household formation rate (HFR) projections are now of very limited relevance: those projections were optimistic even at the time they were formulated and the world has changed irreversibly since then. In this context the most relevant alternative scenarios to test are those which address aspects of the new projections themselves. Three are suggested as being particularly worth investigating:

- Although the household formation rates in the 2012-based projections are generally higher than those in the 2011-based interim projections and eliminate or reduce most of the instances in which the household formation rates of specific groups are projected to fall, there are still some groups for which a small fall is still projected. Whilst this may well be a realistic prospect for those groups, a useful sensitivity test is the scenario in which the household formation rate of no group falls below the level it was at in 2011 and the rates for other groups rise as projected. This might be described as the '**2011 HFR floor'** scenario.

- A more extreme version of the above scenario is one in which it is assumed that the household formation rates of all groups at least return to the level they were at in 2001, with those groups whose formation rates are projected to rise above those levels allowed to do so. This might be termed the **'2001 floor'** scenario.

- The above scenarios are an 'upside' tests. A balancing 'downside' test would be the scenario in which the household formation rate of no group rises above its level in 2011. This could be described as the '**2011 HFR ceiling'** scenario. This may sound excessively pessimistic, but with recent shocks to the world economy and the likelihood that emerging economies will catch up on the West, possibly growing at its expense, it is far from obvious that housing conditions will inevitably always move in the upwards direction. This test has the added advantage of providing a measure of the 'upside' included in the 2012-based projections for some groups, largely single people aged over 30, who are projected to see their chances of setting up a separate household increase.

110. The table below gives the results for these two tests compared with OAN scenario. (The projected population increases are not shown because in all of the household formation rates scenarios the projected population is held at the level in the OAN i.e. an increase of 16,220 between 2013 and 2033.)

Table 15: Sensitivities on DCLG's 2012-based HFRS

	OAN scenario	2012 + 2011 floor	2012 + 2001 floor	2012 + 2011 ceiling
Homes a year	472	482	503	433

111. The 2011 floor scenario increases the number of homes needed by 10 homes a year or 2%. This is a relatively small adjustment and indicates that the deterioration in housing conditions for some groups implicit in the new projections is relatively small.

112. The 2001 ceiling scenario on the other hand increase the number of homes needed by 31 homes year or 7%. This is sizeable and shows that there have been some significant deteriorations in household formation rates for some groups since the turn of the century. However, as discussed earlier in this report, some major changes have occurred since 2001 that are unlikely to reverse without substantial policy changes. Achieving this scenario would takes us well beyond the 'policy-off' realm of in which an OAN is supposed to be calculated.

113. The 2011 ceiling scenario reduces the number of homes needed by 39 homes a year of 8% - even more than the 2001 floor increase the number of homes needed. This shows that the improvements in housing conditions which some groups are projected to enjoy are reasonably significant and bigger than the deterioration in conditions for the groups that have lost out. The message here is that, whilst the projections assume that more homes will be built than are necessary to maintain existing household sizes, they are implying that, if recent trends continue there will be an increasing imbalance with some groups, largely older people, gaining at the expense of younger households.

Test based on the 2008-based household formation rates

114. Although there is growing evidence that the 2008-based household projections have very little relevance some still use them as the basis for constructing sensitivity tests, perhaps in the absence of any other benchmark. Six such tests have been carried out involving either a full return to the 2008-based household formation rates by 2031 for some or all age groups or a partial return, which is interpreted as a move to the mid-point between the 2008 and 2012-based rates by 2031. These tests are:

- Full return to 2008-based rates for all age groups for all ages 'FRT 2008 all ages'.
- Full return to 2008-based rates for 25-34 year olds 'FRT 2008 25-34s'
- Full return to 2008-based rates for 25-44 year olds 'FRT 2008 25-44s'
- Partial return to 2008-based rates for all age groups 'PRT 2008 all ages'

- Partial return to 2008-based rates for 25-34 year olds 'PRT 2008 25-34s'
- Partial return to 2008-based rates for 25-44 year olds 'PRT 2008 25-44s'

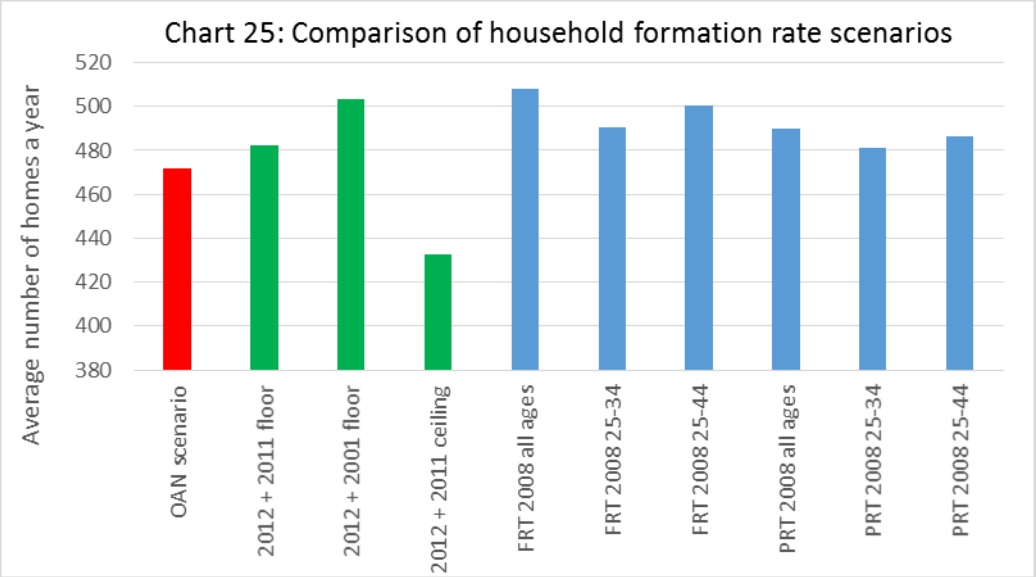
115. The flowing table shows the results of these tests.

Table 16: Sensitivities relative to DCLG's 2008-based HFRS

	OAN scenario	FRT 2008 all ages	FRT 2008 25-34	FRT 2008 25-44	PRT 2008 all ages	PRT 2008 25-34	PRT 2008 25-44
Homes a year	472	508	491	500	490	481	486

116. As expected all of these scenarios increase the number of homes needed. The biggest increase is, of course, the full return to trend for all age groups. This increases the number of homes needed by 36 a year or 8%. The partial return to trend for the 25-34 age group – the age group that has seen its household formation rate fall most – involves an increase of just 9 homes a year or 2%. It is perhaps a little surprising that the differences are not larger. This indicates that in Tandridge the reduction in household formation rates relative to the 2008-based rates is not as large as it is in some other areas.

117. The chart below summarises all of the sensitivity tests relative to both the OAN.



SUMMARY AND CONCLUSIONS

117. The starting point for this estimate of Tandridge's objectively assessed need for housing (OAN) is the DCLG's 2012-based household projections (DCLG 2012) which were released in February 2015. These were based on the ONS 2012-based Sub-national Population Projections (2012 SNPP) which were published in May 2014. However, more recent evidence on how the population has changed since 2012 is available from the 2014 Mid-Year Estimates (2014 MYE) which were issued in June 2015 and the international migration statistics for the year to March 2015 which were released in August 2015. This report also takes that additional evidence into account to provide the most up to date view possible.

118. As a result of the latest evidence it is proposed that the following adjustments should be made to the 2012 SNPP/DCLG 2012 before using them to estimate the OAN for Tandridge.

- The 2012 SNPP projects flows to and from other parts of the UK using flow rates estimated from the 5-year period 2007-12. That period included a severe economic downturn and as a result some of the projected flows appear to be low. It is proposed to correct for this by using average flow rates for a 10-year period. This has the added advantage of smoothing out the impact of any one-off factors such as any peaks and troughs in house building. The period 2002-12 has been widely used for this purpose but, with the publication of the 2014 MYE, it is now possible to update this to 2004-14. At the same time the population estimates from the 2014 MYE have been used as a revised starting point for the population projections.

- The latest estimates for net international migration to the UK suggest that in the year to March 2015 the net inflow was approximately twice that assumed in the 2012 SNPP. In view of this it is proposed to adjust international flows into and out of Tandridge to reflect actual flows over the most recent 10-year period for which data is available, i.e. 2004-14.

119. To turn an estimate of a population change into an estimate of the change in the number of households a view needs to be taken on how the tendency of people to form separate households (the household formation rate) is likely to change. The latest DCLG household projections (DCLG 2012) provide the most recent official view on this and represent a significant step forward from the 2011-based interim projections (which were prepared relatively quickly following the 2011 census as a stop-gap measure). Having reviewed the latest projections, NMSS believes that they should be used as published.

120. In particular, there is no longer a need to make adjustments to the projected household formation rates for young adults (those aged 25-34) that were appropriate when using the 2011-based interim projections. Those projections envisaged a continuing sharp deterioration in the household formation rates of that age group. NMSS believe that the latest DCLG projections represent a realistic view of likely trends in household formation patterns when account is taken of the

changes that have occurred since the last pre-recession projection were published (the 2008-based projections), many of which are unlikely to reverse in the foreseeable future.

121. Once an allowance is made for empty and second homes (based on council tax data), applying the 2012-based DCLG household formation rates to the adjustments made to the 2012 SNPP population produces the results shown in Table S1.

Table S1: Summary of Adjustments			
Change 2013 - 2033	**Population**	**Homes**	**Homes/yr**
2012 SNPP	**14900**	**8770**	**440**
10-year UK flow adjustment	*-530*	*-500*	*-20*
10-year UK flows	**14370**	**8270**	**410**
Adjustment for 2004-14 UK flows	*1440*	*990*	*50*
MYE + 2004-14 UK flows	**15810**	**9260**	**460**
Adjustment for 2004-14 overseas flows	*400*	*170*	*10*
MYE + 2014-14 UK + overseas flows	**16220**	**9440**	**470**

Note: some figures may not add due to rounding

122. A review by Turley Economics of house prices, house price-earnings affordability ratios, rents, house building rates, overcrowding levels and the proportion of concealed households shows that Tandridge is an area of high housing costs with poor affordability levels. This is a consequence of its location in attractive countryside close to London with good rail links into the capital. Although prices have risen and affordability has fallen (on the standard measure at least), the position is not significantly worse than surrounding areas. There is not, therefore evidence which would justify increasing the OAN above the level indicated by the demographically based estimate, particularly when that estimate has been made taking full account of factors which could lead to the population growing nearly 9% faster than suggest by the latest ONS projections.

123. Economic projections have been obtained from Experian. These suggest that 9,260 additional jobs will be created in Tandridge between 2013 and 2031. Over that period the population between 16 and state pension age is projected to increase by 8,490 in the adjusted projection used to estimate the OAN. Analysis comparing that projection with the population projections which accompany the Experian employment projection suggests that the OAN will more than accommodate the labour force needed to support the projected increase in jobs. There is therefore no need to add additional homes to support economic growth.

124. A range of alternative scenarios has been modelled to explore how sensitive the OAN estimate is to alternative assumptions about population growth and household formation rates.

125. The population sensitivity tests produce a range from 425 to 472 homes a year. The proposed OAN (472 homes a year rounded to 470) is at the top of this range.

126. Nine household formation rates scenarios have been tested. These include six which explore scenarios in which household formation rates move all or part of the way back towards the 2008-based projections for some or all age groups. These result in

estimates of the number of homes needed up to 508 homes a year in the scenario in which the household formation rates of all age groups are assumed to reach the rates envisaged in the 2008-based projections before 2031. This is thought extremely unlikely given that it is now clear that the 2008-based projections were optimistic when they were first published and changes have occurred that are unlikely to reverse even after a full recovery from the recession.

127. Two other household formation rate sensitivities are more relevant.

a. One considers the impact of assuming that no group sees its household formation rate fall below the level in 2011 – the '2011 floor' scenario. This increases the number of homes needed by 10 homes a year or 2%. This is a relatively small adjustment and indicates that the deterioration in housing conditions for some groups implicit in the new projections is relatively small.

b. A second scenario assumes that no group sees a rise in its household formation rate above its 2011 level – the '2011 ceiling' scenario. This reduces the number of homes needed by 39 homes a year or 8%. It is a pessimistic scenario as it takes away all of the increases in household formation rates inherent in the 2012-based projections. However, in doing so it shows that the improvements in housing conditions which some groups are projected to enjoy are reasonably substantial.

128. In view of all of the above NMSS conclude that the OAN is 470 homes a year over the period 2013-33. Table S2 show how this compares with the latest official population and household projections.

Table S2: Comparison of OAN with latest official projections			
Change 2013 - 2033	**Population**	**Homes**	**Homes/yr**
2012 SNPP/DCLG 2012	14900	8770	440
Proposed planning assumption	**16220**	**9440**	**470**
Change from 2012 SNPP/DCLG 2012	**1320**	**670**	**30**
% change from 2012 SNPP/DCLG 2012	**9%**	**8%**	**8%**

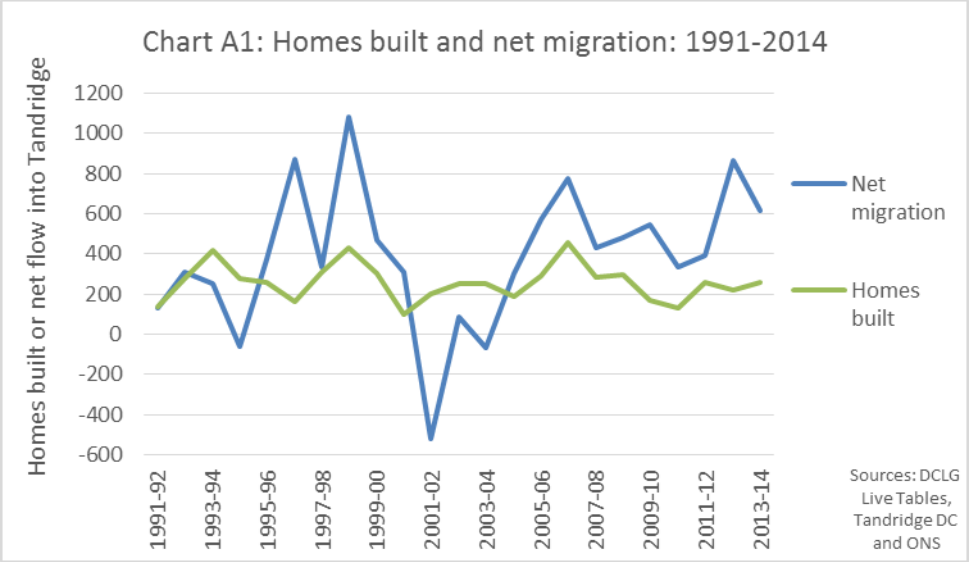
129. Given the inevitable uncertainties, the demand for homes and the growth in employment should be closely monitored and the OAN should be reviewed periodically in the light of what actually happens.

Annex A

IMPACT OF THE HIGH NUMBER OF HOMES BUILT IN 2006-07

1. 459 homes are recorded as having been completed in Tandridge in 2006-07. This was over 80% more than the average built in the preceding 10 years. It has been suggested that, as there is a relationship between the number of homes built and net migration into an area, this will have resulted in an exceptionally high level of net migration into the district. That in turn, it is argued, will have resulted in the population projections over estimating the likely increase in Tandridge's population, as the population projections are trend-based.

2. To explore this it is helpful to look at house building in Tandridge and net migration into the area over a reasonably long period. Chart A1 shows the data for the period 1991 to 2014:

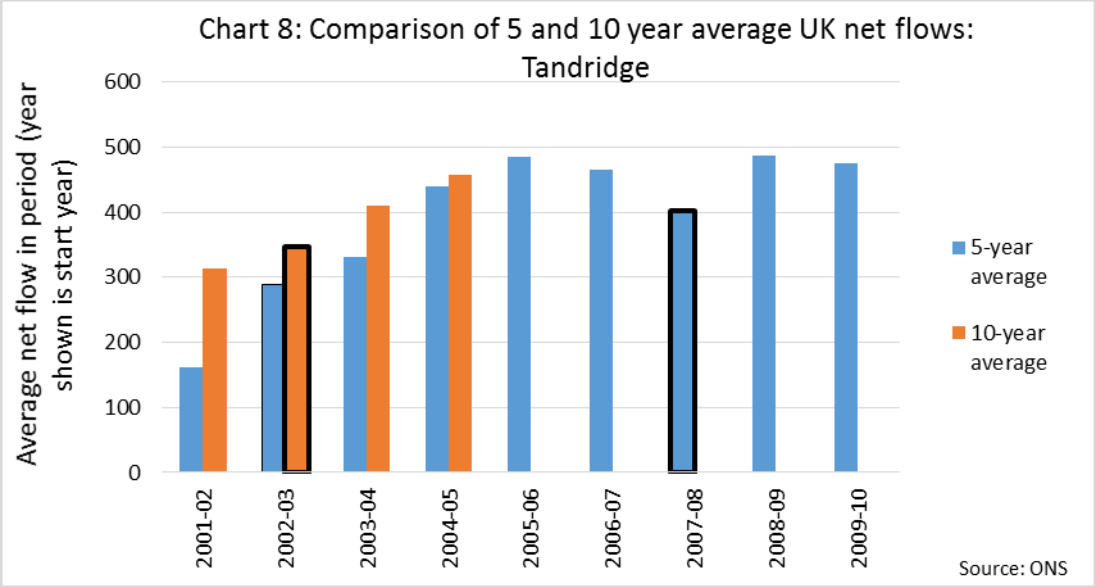


3. As can be seen from the chart:

- There is some relationship between the number of homes built and net migration.
- There was a peak in house building in 2006-07 but there were similar peaks in 1993-94 and 1998-99. House building in Tandridge seems to be fairly cyclical.
- The big anomaly in the last 25 years appears to have been 2001-02 when net migration went negative and then recovered slowly up to the local peak in 2006-07. As discussed in paragraph 29 of the main report, there was a large net international outflow at this time.
- There were also low net inflows and house building rates in the early '90s. This was presumably the result of the recession before last.

- Although there was a local peak of net migration in 2006-07 there have been three higher peaks in the last 25 years.

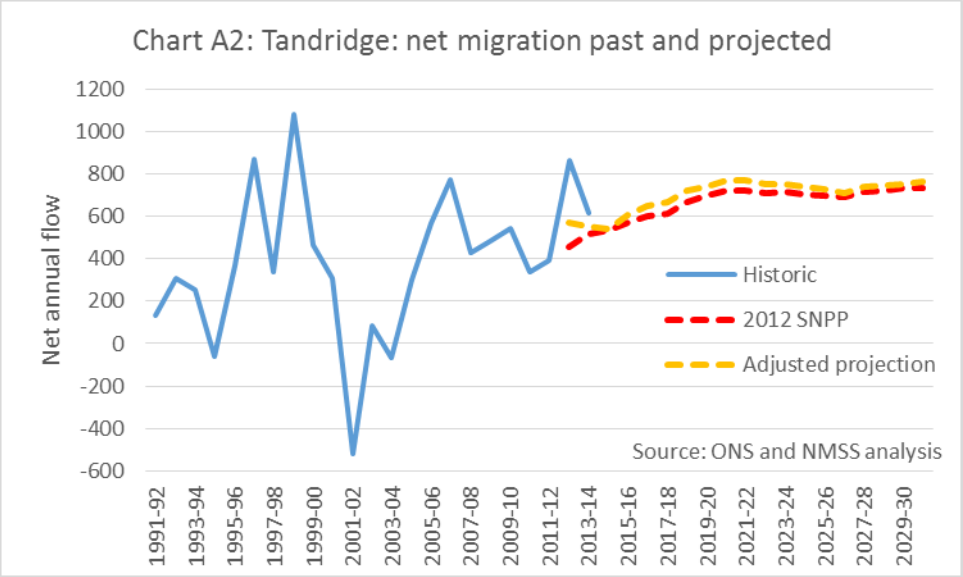
4. In the ONS population projections projections for flows to and from the rest of the UK are normally based on flow rates in the 5 years up to the base date. The 2011-based population projections were, however, based on the trend rates used for the 2010-based population projections as they were produced quickly following the 2011 census. They will therefore have taken 2005-10 as their trend period, thereby incorporating 2006-07. The 2012-based population projections took 2007-12 as their internal migration trend period. 2006-07 will therefore have dropped out of the trend period. Moreover, the high flows in 2012-13 will not have been taken into account, with the result that the 2012-based population projections can be argued to be based on atypically low 5-year average flows. This is illustrated by Chart 8 in the main report (reproduced below for ease of reference).



5. The blue bars in the chart show 5-year average flows, the date on the X-axis being the first year of the 5-year period. The bar labelled '2007-08' and bordered in black is therefore the one that relates to the average flows over the period 2007-12. As can be seen, this is lower than the 5 year average flows that would be obtained if the trend period had started at any time up to three years before 2007-08 or two years after.

6. Chart 8 also shows that using 10-year average flows produces results that are less variable than those obtained using 5-year flow rates (albeit more variable than for many authorities). Note also that the 10-year average is lower than 5-year average ending in the same year e.g. the 2002-12 10-year average flow is lower than 2007-12 5-year average flow. This is because the 10-year average gives weight to the lower net flows in the early years of the century.

7. Chart A2 shows the ONS's 2012-based net migration projection in relation to the historic flows dating back to 1991-92. The net migration flow from the adjusted population projection used in this report to calculate the OAN is also shown. Neither appears out of line with the longer term historic trend.



8. It therefore seems reasonable to conclude that neither the 2012-based ONS projection nor the adjusted projection used for the OAN has been distorted by the higher house building and net migration rates seen in 2006-07.