



**Implications of the 2016-based SNPP for  
Tendring  
Response to Lichfields (NLP) Briefing Note  
(01/06)**

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## Introduction

- 1 On 24th May the ONS released the new 2016-based population projections (SNPP).
- 2 On 1st June, one day after receiving the Great Bentley decision letter (EXD/036), Lichfields (formerly NLP) submitted a 'briefing note' to the Examination suggesting that the 2016-based projections have "critical implications" for the Local Plan.
- 3 In their briefing note they requested that the Inspector urgently consider an additional submission on the implications of the 2016 SNPP for Tendring's housing need. They also request that the Inspector re-open the housing hearing session to take these into account.
- 4 The Council has been asked to comment on the issues raised in Lichfields note. This note provides that comment on behalf of the Council
- 5 In summary, our view is:
  - Most of the issues raised in the Lichfields note are effectively a continuation of the case they unsuccessfully made at the Great Bentley appeal. In substance, the same points have already been introduced to this examination via their Hearing Statement and this new note is largely a further rebuttal to the determined appeal and an advance on their Matter 3 statement and associated evidence.
  - New data (2016 SNPP) does not change the Council's fundamental view that the current method used by the ONS to estimate population change in Tendring inflates population change and so housing need. Further testing of the most recent ONS data by the Council only confirms that view. We note that, while seeking to promote the SNPP over the Council's OAN, the Lichfields note and associated appeal evidence, don't demonstrate that the known errors in the data have been corrected and that any more weight should be applied to the 2016 data over the 2014-based data discussed at the Examination.
  - The new estimated population data, prepared by the ONS using the same approach as previous rounds, which we know resulted in significant UPC, cannot logically be used to prove or disprove the Tendring OAN<sup>1</sup>. In this context it is difficult to see how this is 'new data is of critical importance' to the Council's departure from the ONS estimated population and associated projections'.
  - Using local evidence to depart from the ONS estimates does not run counter to the advice from the ONS. ONS always state that their estimates have a margin of error and this error margin grows every year post census. As Neil Park (Head of ONS Population Estimates Unit) stresses in his correspondence to the Council (EXD/010), even a 95% confidence interval, as in the Census, means that 5 out of every 100, or 1 in 20, local authority areas are likely to find that their data falls outside that expected by the ONS. In our view, Tendring is part of that untypical minority. So there is no suggestion from the ONS that their data should be applied uncritically, or that their estimates cannot be adjusted to reflect local evidence. We would add that this is especially the case here, where previous known errors

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<sup>1</sup> Lichfields suggest that the ONS have improved their 2016 data but as we show below none of the improvements relate to data the Council, working with the ONS, understand are at issue here.

have been exceptionally large; summing to the entire estimated population change between the 2001 and 2011 census.

**The Council continues to test new data from the ONS as it emerges. This recognises that a choice to depart from the ONS estimates should not be taken lightly.**

**However, this new testing confirms that the (past) known errors in the ONS estimates have yet to be corrected and provides sound evidence to continue treating them with caution.**

**This testing is appended to this note as well as further, more technical commentary.**

- 6 In the rest of this note we address in turn the three ‘main areas of concern’ raised in the Lichfields note. Although as noted above these seem, in the main, to be a continuation of the case they presented at Great Bentley and previously reported to this examination via their hearing statement and proofs of evidence.

## **Lichfields areas of ‘Main Concern’**

### **Whether the household projections should have been adjusted to incorporate the 2016 MYE**

- 7 It is clear that the Great Bentley Inspector disagreed with Lichfields in this regard. The Inspector’s reasoning is set out at paragraph 36 of their report. In summary, the Inspector found it contradictory for Lichfields to promote rebasing the demographic data using the 2016 MYE when they were also promoting changes to the population to correct for errors in part of the source ONS data (UPC). Accepting the need to correct data means that, by definition, the MYE data cannot be relied on as part of a re-basing of the data to 2016.
- 8 Here Lichfields suggest that, because the ONS have revised some of their data (22nd March 2018), previous concerns about the robustness of ONS estimates have been addressed. In summary, they suggest that the ONS estimated population can now be considered robust and therefore ought to be ‘*factored into any future housing need modelling*’. (para 1.25 – 1.27)

#### ***The 2016 ONS improvements***

- 9 To support their view, Lichfields point out that when preparing the 2016 base data the ONS made ‘*some improvements...to the population estimates for England and Wales*’. They go on to note that the revised figures include ‘*new estimates of local authority international emigration and foreign armed forces dependents*’.
- 10 These improvements are factually correct, but neither of them (neither international emigration nor foreign armed forces dependents) are relevant to the data quality issues here.
- 11 In diagnosing the UPC error (as set out in EXD/010 Appendix 1), we know that:
- a) International flows (including international emigration) are small, and so unlikely to be a significant source of the known errors (Appendix 1, point 3)

b) That the most likely source of the (non-census) error relates to internal migration (Appendix 1, point 4)

12 We would not expect to see a change in the robustness of Tendring's estimated data following the improvements, because they don't relate to areas of data we think cause the data quality issues here.

### *New estimates of the population are not necessarily better*

13 We also note that, contrary to the impression given in the Lichfields note, new population estimates are likely to be more prone to errors than previous rounds and not less.

14 This is because, as the ONS warn, there is a risk that more recent population estimates compound earlier errors. So, it is certainly not the case that recent MYE data should automatically be preferred. Being more recent does not make the data more accurate.

15 It is also the case that the 2016-based projections now project using entirely estimated population change between 2011 and 2016. This is because the domestic migration trend years (2012,13,14,15 &16) are now a product of the ONS estimates without a census 'anchor point' in the trend period, there is a greater risk that the projections further compound any error in the estimated MYE data.

16 When discussing the "uncertainty in ONS local authority mid-year population estimates" the ONS state:

*"The estimation process [to create the MYE] is repeated each year, starting from the 2011 Census base and rolled forward using the cohort component method. Uncertainty from international and internal migration includes accumulated uncertainty from previous years rolled forward, plus new uncertainty for the given year. This means that the uncertainty accumulates over time. The longer the lapse since the census, the more uncertainty there will be in the estimates."*

17 We also understand that the ONS is continuing to work to improve their model. Work on refreshing their model for internal migration flows has not yet been completed and if successful the ONS hopes to release further, and possibly more relevant, improvements in future years<sup>2</sup>. This may include backward revisions to estimated data, including the most recent data. But only time will tell what effect these have: given the scale of past errors, and the difficulty in tracing the source of these errors, it is unlikely the ONS will find a single 'magic bullet'. We hope that, following the extensive exchanges between Neil McDonald and the ONS in late 2017, addressing possible errors in Tendring is at least on their 'radar' for future improvements.

### *Summary*

18 For this examination, the improvements made in the 2016 data, cited by Lichfields to support the use of the MYE 2016 data, do not address the Council's data quality concerns. The fact the ONS is still working to improve its modelling of internal

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<sup>2</sup> For details of ongoing work see:

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/methodologies/populationestimatesforlocalauthoritiesinenglandandwales/newmethodsfebruary2018>

migration only demonstrates that the current approach is neither error-free nor definitive. If it were, ONS would not be seeking to improve it.

## The impact of ONS's change to national mortality rates

- 19 Lichfields' second 'major concern' relates to updated mortality rates. We consider that this will reduce the need for new homes in Tendring. This is because the ONS have revised their mortality estimates upwards, which reduces life expectancy; and, because of the elderly age profile in Tendring, this reduces housing need.
- 20 In their note, Lichfields go on to state that, the reduced need from higher mortality rate is offset by higher estimates of internal migration in Tendring.
- 21 It is factually correct that the SNPP 2016 has a higher inflow of domestic migration to Tendring. But this does not change the Council's position that the ONS projections continue to overestimate internal migration – or indeed that earlier errors may be 'compounded' in the future.
- 22 In summary, the lower mortality rates in the 2016-based projections are likely to reduce Tendring's housing need. The effect might be counterbalanced by the higher inward migration shown in the 2016-based projections, if that migration were a robust projection. But the ONS migration is not a robust projection, because it is affected by the same errors and the earlier version.

## Migration errors and the impact on UPC

- 23 Lichfields' third main area of concern relates to the treatment of unattributable population change (UPC). Technically, UPC ceased in 2011, because its purpose was to reconcile the estimated population growth with the population reported at the census. So; it is correct that UPC in a strict sense ceases to exist post 2011. It is also the case that the ONS projections make no adjustment for UPC in its post-census projections. This is a decision made a national level, which does not consider the extensive local evidence here.
- 24 Although UPC is no longer reported post 2011, it is incorrect to suggest, as Lichfields do, that UPC has no impact on the latest set of estimated population (MYE) and associated population projections.
- 25 That is because, as the Council has demonstrated, the factors that resulted in the UPC are repeating in post 2011 data. The Council's testing of recent data provides no evidence that the errors of the past, which were agreed between the Council and the ONS, have been corrected in more recent data. Locally specific corrections to the ONS data remain justified, as they were before.

## Conclusions

- 26 In Lichfields' 1st June briefing note, the key assertion is that the release of new ONS data, including the SNPP 2016, is of 'critical' significance to housing need in Tendring. They request that the examination hearings be re-opened to consider that new evidence.

- 27 We disagree. Lichfields' case is in effect the same as they put forward at the Great Bentley appeal – where the Inspector found Lichfields' evidence less than compelling and concluded that there was “nothing to support the appellants case for a higher OAN” (IR 40). Their new briefing note re-asserts the argument made unsuccessfully by Lichfields at Great Bentley, and seeks to rebut the argument made successfully by the Council at Great Bentley.
- 28 Setting this aside, Lichfields suggest the new ONS data provides robust evidence that the Council' s choice to depart from the previous estimates of the population is now unsound.
- 29 But Lichfields provide no evidence to support this view, beyond citing the very data that the Council has already demonstrated cannot be relied on. The Council has demonstrated that the ONS data are affected by serious errors, which lead to overestimated population growth and housing need. The new ONS data are affected by the same errors, because they are produced by the same methods; the latest methodological improvements do not relate to the identified errors. But Lichfields use the new data to 'prove' that the errors no longer exist. Logically this cannot be right.
- 30 In this regard a significant amount of work has been undertaken by the Council, working with the ONS, to understand the exceptional scale of errors pre-2011. We now understand that around 55% of the known errors related to misreported internal migration and 45% to errors in one (or possibly both) of the Censuses.
- 31 The Council has used this knowledge to test more recent ONS figures, including the 2016-based projection as well as previous estimates and projections. This testing continues to show that there remains sound evidence to depart from the ONS figures. There is no evidence that the known errors of the past have been corrected.
- 32 In summary, for the reason sets out above, the release of new ONS data does not represent a 'meaningful' change in the housing evidence that would warrant a full review of the OAN<sup>3</sup>. In our view, the one element of the new data that will have a significant impact on housing need is the higher mortality rates in the 2016-based projection, and that impact will be downward.
- 33 However, we agree with the Great Bentley Inspector that, while recent demographic modelling by Neil McDonald for various appeals suggests the OAN may be lower than 550 dpa (EXD/036), there remains significant uncertainty in the Tendring data.
- 34 **For the soundness of the plan being examined there no evidence to suggest the OAN or Tendring ought to be higher than 550 dpa. The Council remains satisfied that the housing requirement 550 dpa more than fully addresses housing need in Tendring.**
- 35 **As noted above there is emerging evidence that this may be falling, in part due to the higher mortality rate assumptions. Recent appeal evidence, including Great Bentley suggests that the range of OAN is between 480 – 550 dpa. Therefore, the Council will keep the OAN under review.**

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<sup>3</sup> 2a-016-20150227

# **The Implications of the 2016 Sub-national Population Projections for Tending**

**Neil McDonald**

**June 2018**

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**NMSS**



## **Author**

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This report has been prepared for Tendring District Council

**Neil McDonald** is an independent adviser and commentator on housing demographics. He works with local authorities and others on the estimation of housing need and related issues.

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 and liability cannot be accepted. Statistics, official or otherwise, should not be used uncritically: if they appear strange they should be thoroughly investigated before being used.

# The Implications of the 2016 Sub-national Population Projections for Tendring

## 1. Introduction

- 1.1. This note provides a preliminary analysis of the ONS's new population projections for Tendring and the extent to which they should be taken into account in estimating Tendring's objectively assessed need for housing (OAN).

## 2. Background

- 2.1. ONS published the 2016 sub-national population projections (2016 SNPP) on 24 May. These suggest that the population of Tendring District will grow 24% faster over the period 2016-26 than indicated by the 2014 sub-national population projections (2014 SNPP). Applying the household formation rates and other assumptions from the 2014-based household projections (2014 SNHP) this implies that over the Tendring Plan period (2013-37) household growth will be 23% greater than suggested by the 2014 SNHP.
- 2.2. These are surprising conclusions. However, it should be noted that the ONS:
  - Has indicated<sup>1</sup> that it will be revising its historical estimates for internal migration flows in the forthcoming 2017 Mid-year Population Estimates (due on 28 June). This could have a substantial further impact on the Tendring numbers.
  - The ONS has not made any attempt to adjust for UPC - which is a very large factor in Tendring.

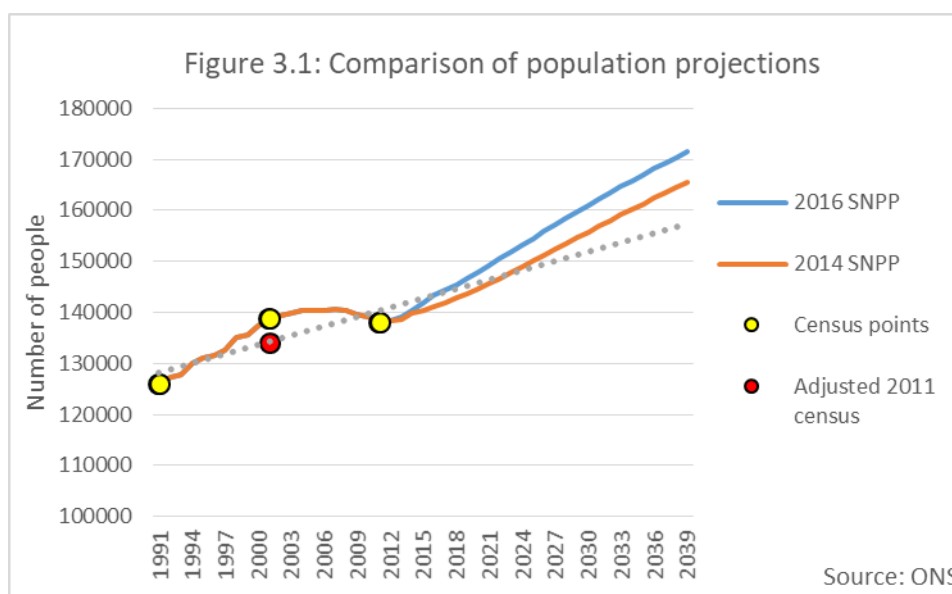
## 3. The reasons for the changes in the 2016 SNPP

- 3.1. Figure 3.1 compares the 2014 and 2016 SNPPs. The census population estimates are shown as yellow dots. The red dot is the 2001 census estimate adjusted to reflect the ONS's suggestion<sup>2</sup> that there may be an error of 4,500 – 5000 in the census estimates.

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<sup>1</sup> Population estimates for local authorities in England and Wales, new methods: February 2018, [www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/methodologies/populationestimatesforlocalauthoritiesinenglandandwalesnewmethodsfebruary2018](http://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/methodologies/populationestimatesforlocalauthoritiesinenglandandwalesnewmethodsfebruary2018). Section 2 includes the sentence, "We plan to make three changes in the way we estimate internal migration for the 2017 mid-year estimates (MYEs)."

<sup>2</sup> See ONS email of 29 November 2017 at Appendix 2 to the NMSS Report, "Tendring's Unattributable Population Change" of December 2017.



3.2. As can be seen, the 2016 SNPP is even further out of line from the longer term trend than the 2014 SNPP. This is the case irrespective of whether the longer trend is taken from the period between the 2001 and 2011 censuses or the period since 1991. This immediately raises concerns about the plausibility of the 2016 SNPP projection for Tendring.

3.3. The method used to produce the 2016 SNPP is similar to that that used for the 2014 SNPP. The changes are primarily due to changes in the inputs to the method:

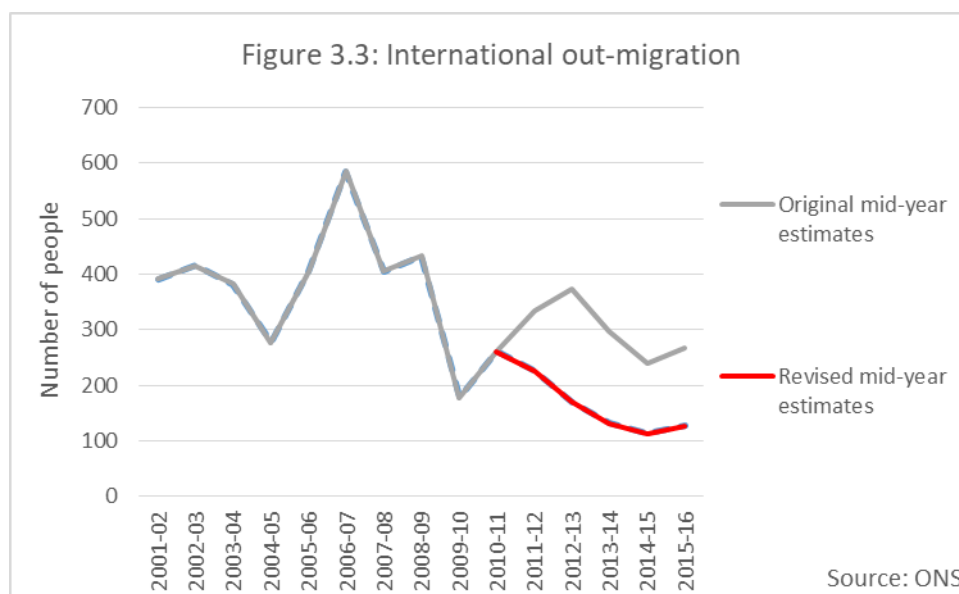
- The ONS's revised its local authority level population estimates for the years 2012 to 2016 projection. The changes were largely due to revised estimates of the international migration flows.
- The trend periods used have moved forward two years: from 2009-14 to 2011-16 for flows within the UK and 2008-14 to 2010-16 for international flows.
- Changes to the assumptions made about how fertility and mortality rates will change in the future. In terms of the impact on the number of households (and hence the number of homes needed), the more important impact is the assumption that life expectancy will grow less quickly than previously envisaged, with the result that the older population will be smaller.
- A reduction in the ONS assumption about the level of net international migration, with the long term net flow into England falling from 170,000 people a year to 152,000.

**(a) Changes to the historic population estimates**

3.4. Looking first at the changes to the historic population estimates, Figure 3.2 compares the components of change originally published by the ONS with the revised set issued on 22 March 2018.

Figure 3.2: Components of change 2011-16	Original MYE	Revised MYE	Change	% change
Births	6757	6757	0	0%
Deaths	10341	10341	0	0%
Internal in	32846	32846	0	0%
Internal out	24712	24712	0	0%
Cross border in	611	611	0	0%
Cross border out	645	645	0	0%
International in	1492	1494	2	0%
International out	1512	766	-746	-49%
Adjustments	40	47	7	18%
<b>Total</b>	<b>4536</b>	<b>5291</b>	<b>755</b>	<b>17%</b>

- 3.5. The only change is to international migration outflow which falls by almost half. As fewer people are assumed to leave, the estimated population in 2016 is higher – by 755 people.
- 3.6. Figure 3.3 looks at the revised estimates for international outflows in the context of the estimates flows between 2001 and 2011.



- 3.7. The revised emigration figures for the period 2011-16 are somewhat surprising. They are considerably lower both than the original estimates and the estimates for the previous 10 years. It is possible that there is continuing downward trend in out-migration or that the figures for 2001-11 were over-estimates (although in that case the unattributable population change in the years between the censuses would have been even larger). However, the revised figures deserve more detailed scrutiny: the possibility that the ONS’s revised method for attributing international emigration to individual authorities does not work well for Tendring cannot be excluded.
- 3.8. This increase in the revised 2016 MYE caused by the lower estimates of emigration has implications for the number of households in Tendring. Applying the 2014 SNHP household formation rates to the higher population figure gives an estimate that there were 64,815 households in Tendring in 2016. This compares with 64,430 households suggested by the original 2016 MYE.

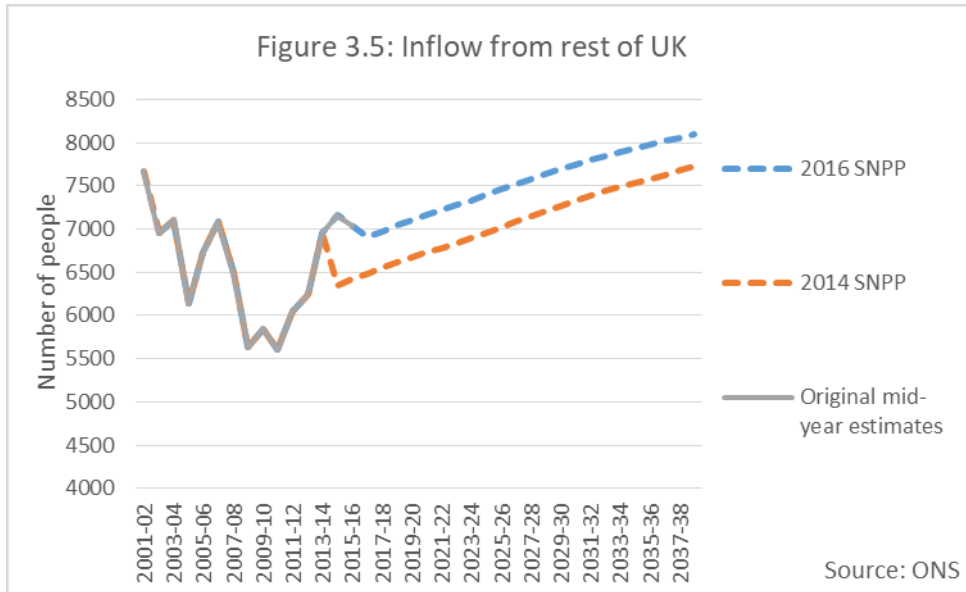
- 3.9. The NMSS proof of evidence for the Great Bentley appeal compared the increase in the number of households over the period 2011-16 suggested by the original MYEs with the number of homes added to the housing stock in that period. Allowing for empty and second homes, the original MYEs implied a need for 2,400 additional homes when on 1,190 were actually added to the stock. Revising that calculation to reflect the revised MYEs suggest a need for 2,810 homes when only 1,190 were added to the stock.
- 3.10. This provides even stronger evidence that the errors in the migration estimates that were responsible for a proportion of UPC continued after the 2011 census. If that is the case, the revised MYEs are not a sound basis for projecting Tendring's future population and the 2016 SNPP for Tendring which is based on those MYEs cannot be regarded as sound.

**(b) Changes between the 2014 SNPP and the 2016 SNPP**

- 3.11. Turning now to the 2016 SNPP itself a similar analysis to that set out in Figure 3.2 (above) for 2001-16 is possible for the projected components of change in the 2014 and 2016 SNPPs – see Figure 3.4:

<b>Figure 3.4: Components of change 2016-26</b>	<b>2014 SNPP</b>	<b>2016 SNPP</b>	<b>Change</b>	<b>% change</b>
Births	13608	13214	-394	-3%
Deaths	19639	21140	1501	8%
Internal in	66369	70759	4390	7%
Internal out	49976	51139	1164	2%
Cross border in	1173	1143	-29	-3%
Cross border out	1299	1396	96	7%
International in	2939	2613	-326	-11%
International out	3103	1553	-1550	-50%
Adjustments	-14	4	17	-127%
<b>Total</b>	<b>10058</b>	<b>12504</b>	<b>2447</b>	<b>24%</b>

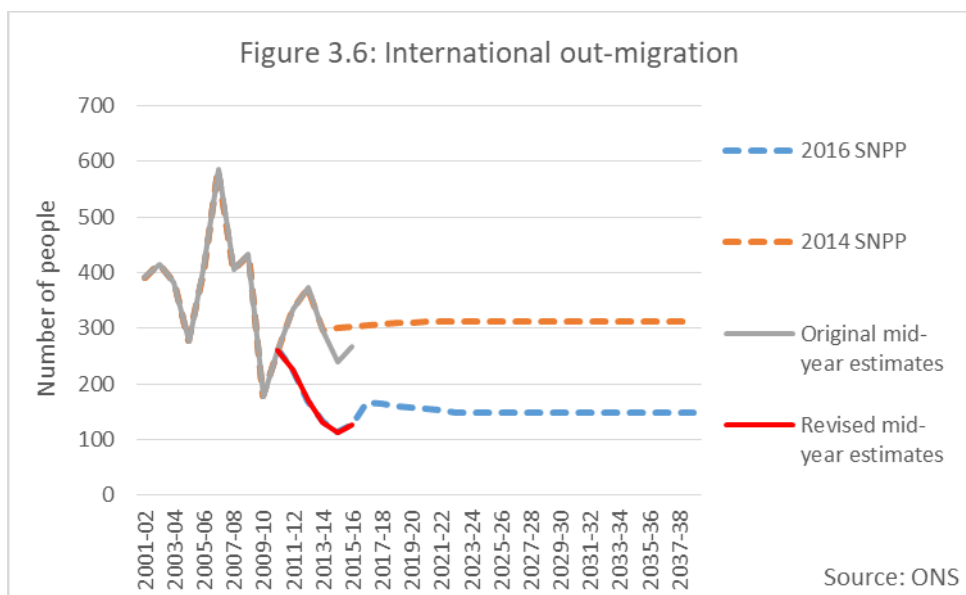
- 3.12. The increase in the projected number of deaths is almost certainly primarily due to ONS's revised mortality assumptions.
- 3.13. Figure 3.5 shows the two projections for the inflow from the rest of the UK (i.e. internal migration (flows from the rest of England) and cross border inflows combined):



3.14. The higher projected inflows are due to the average inflows in the trend period for the 2016 SNPP being higher than those in the 2014 SNPP. The key question here is whether the estimates of the inflows in the trend period are accurate. There are two reasons to doubt this:

- As already noted, the ONS intend to revise their historic estimates for internal migration flows when they publish their 2017 mid-year estimates on 28 June (2018).
- As explained in the December 2017 NMSS report on Tendring’s UPC, there are good reasons for believing that the errors in the estimation of internal migration flows that gave rise to Tendring’s very large UPC continued after 2011. If that is so, the figures in the trend period for the 2016 SNPP will have been inflated and the 2016 SNPP will have over-estimated the likely future growth in the population.

3.15. Figure 3.6 shows the two projections for international outflows.



- 3.16. The significantly lower projection in the 2016 SNPP is due to the lower flows in the trend period and, to a lesser extent, the lower national projection for net migration. The lower flows in the trend period are due to the revisions to the 2016 MYEs – revisions which make the MYEs look highly suspect when compared with other evidence such as the number of homes added to the housing stock since 2011.
- 3.17. Again, if there are errors in the estimates made for the trend period, the projection will also be wrong.

## **4. Conclusions**

- 4.1. Earlier analysis of Tendring's UPC has provided ample evidence that for a range of reasons which are not fully understood, the ONS's standard methods for estimating and projection populations do not work at all well for Tendring. It should therefore be no surprise that the 2016 SNPP produces perverse figures for Tendring.
- 4.2. The particular issues are:
  - The ONS's revisions to its 2016 MYEs suggest emigration flows that look suspect and total population numbers that suggest strongly that the errors which cause UPC have continued after 2011. They are therefore not a sound basis for projecting Tendring's future population.
  - Given the revised MYEs suggest even larger continuing errors in the migration flows than the figures which fed into the 2014 SNPP, it is inevitable that the 2016 SNPP is less plausible than the 2014 SNPP.
- 4.3. It follows that the 2016 SNPP is not a sound basis on which to estimate Tendring's housing need. It needs adjustments for UPC similar to those made in the earlier NMSS reports to the 2014 SNPP and 2014 SNHP.
- 4.4. The Appendix provides some brief notes on a Briefing Note Lichfields which seeks to use the 2016 SNPP to dispute the estimate put forward by NMSS at the recent Great Bentley appeal.

NMSS

6 June 2018

### **COMMENTS ON LICHFIELDS' BRIEFING NOTE "IMPLICATIONS OF THE 2016-BASED SNPP ON TENDRING DISTRICT'S OAHN"**

#### **Introduction**

1. Lichfields use the 2016 SNPP to argue against the position adopted by the Council at the Great Bentley appeal on three issues. This notes comments briefly on these.

#### **The Council's position that the household projections should not have been adjusted to incorporate the 2016 MYE (as suggested by Lichfields)**

2. Lichfields note that the revised 2016 MYE total population figure for Tendring is higher than the original figure and assert that this means that, far from being too high (as the Council's witness had maintained), the original MYE was too low. They fail, however, to consider whether the errors which infected the original MYEs might also have affected the revised one. As discussed in the body of the report, that appears to be the case.

#### **The impact of ONS's change to mortality rates at the national level**

3. Lichfields note that the increase in the number of deaths in the 2016 SNPP has been "comprehensively outweighed by changes to migration flows and other inputs" and that as a result the number of older people is higher. The inference appears to be that the Council's witness was wrong to suggest that the projections should be adjusted for the ONS's revised mortality assumptions. There is no logic in this – particularly when they seem to be content to use revised population projections that incorporate these higher rates. What they fail to address is whether the higher net migration flows are soundly based. Again the analysis in the main report suggests that they are not.

#### **Migration errors and the impact of UPC**

4. To precis the Lichfield argument, they suggest that as UPC relates to the period between the censuses and the trend period for the 2016 SNPP (2011-16) does not include the inter censual years, there is no need to correct for UPC.
5. They are in narrow technical terms right, but substantively wrong. UPC is the discrepancy between the population change suggested by the ONS's components of change estimates and the change suggested by the census headcounts. As there are no census headcounts after 2016, there can be no UPC, but that does not mean that the errors in the components of change between 2001 and 2011 have not continued after 2011. The available evidence suggests that they have and that without adjustments for UPC the 2016 SNPP is not plausible.