

Braintree District Council
Chelmsford City Council
Colchester Borough Council
Tendring District Council

Objectively Assessed Housing Need Study

Peter Brett Associates

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Minor revisions to paragraph 7.18 – 7.22 (24/07/2015)

Update 2016 Re Tendring UPC, Affordable Housing & HRRs

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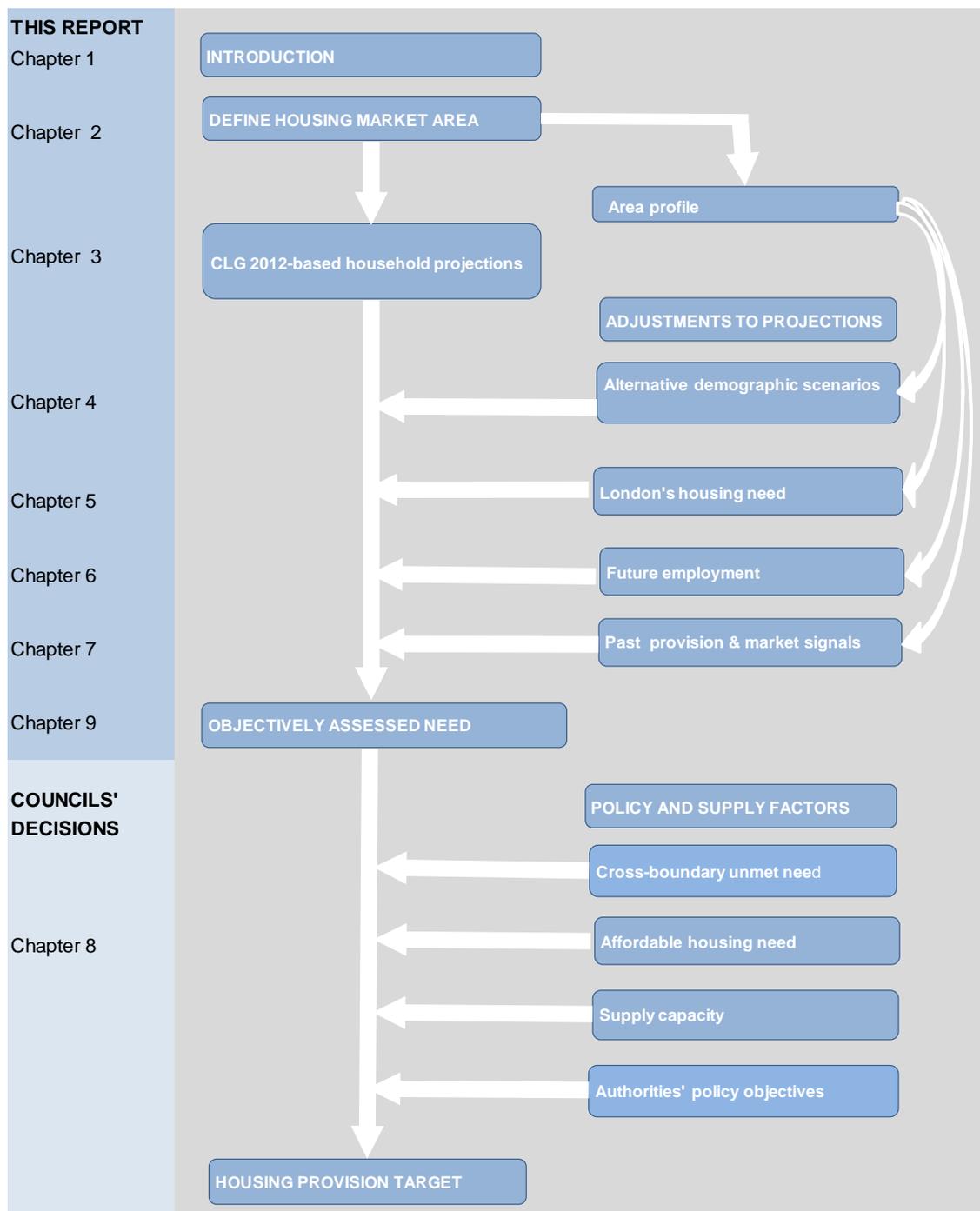
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- APPENDIX A TESTING OF HEADSHIP RATES
- APPENDIX B TENDRING: OAN VALIDATION REPORT
- APPENDIX C JANUARY 2016 TENDRING SCENARIO

1 INTRODUCTION

- 1.1 In July 2015 PBA published the first Objectively Assessed Housing Needs Study for Braintree, Chelmsford, Colchester & Tendring. The work drew on the comprehensive demographic work commissioned by the Essex Planning Officers Association from Edge Analysis, which was published earlier in 2015.
- 1.2 That demographic work remains relevant; it used the official population projections (2012) updated to 2013. In line with the National Planning Policy Guidance paragraph 16 (2a) this data remains robust.
- 1.3 But, a minor update to the assessment is required for three main reasons.
- 1.4 Firstly, In September 2015 the ONS published new data regarding Unattributable Population Change . This has a material impact on the OAN range and recommendations for Tendring. In this update report we update the Tendring analysis to reflect this new data.
- 1.5 Secondly, the Councils have updated their assessment of affordable housing need. Although this does not suggest an increase in OAN we include some of this analysis in this update for completeness. We update Chapter 8 (affordable housing) to reflect this new evidence and emerging best practice.
- 1.6 Thirdly, we provide more detailed commentary regarding the decision to use 2012 based Headship Rates when deriving the OAN.
- 1.7 Most of this report remains largely as originally drafted with some minor errors, corrections or improvements where they have come to light.
- 1.8 In this update we do not update the Market Signal analysis, with the exception of mean house prices which has been updated to include 2013 data to better align with the base date of this study.
- 1.9 As with the previous study the update was commissioned by Braintree, Chelmsford, Colchester and Tendring Councils to provide an objective assessment of housing need over the period 2013 - 37. The assessment will help inform targets in future Local Plans, as required by national policy and guidance. The chart below summarises our approach.

Figure 1-1 Study overview



1.10 The National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) advise that where housing market areas (HMAs) extend beyond administrative boundaries, housing needs assessments should cover these wider areas rather than individual local authorities. Therefore our first step, in Chapter 2 below, is to test whether the four authorities that commissioned the study form an HMA. We find that this is indeed the case and go on to assess the area's housing need, following the method set out in the PPG. This method starts from the latest official household projections and applies a series of tests and adjustments to arrive at the objectively assessed housing need (OAN).

- 1.11 Also in line with the NPPF, that assessed need should form the basis of housing provision targets in the four authorities' emerging plans. But, in setting those targets the Councils should also have regard to other considerations. Targets could be below the OAN if it is demonstrated that the area does not have the sustainable capacity to meet its need in full. Alternatively targets could be set above the OAN in order to meet cross-boundary need from more constrained areas, provide more affordable housing or promote other policy objectives. These additional considerations are beyond the scope of the present study

2 DEFINING THE HOUSING MARKET AREA

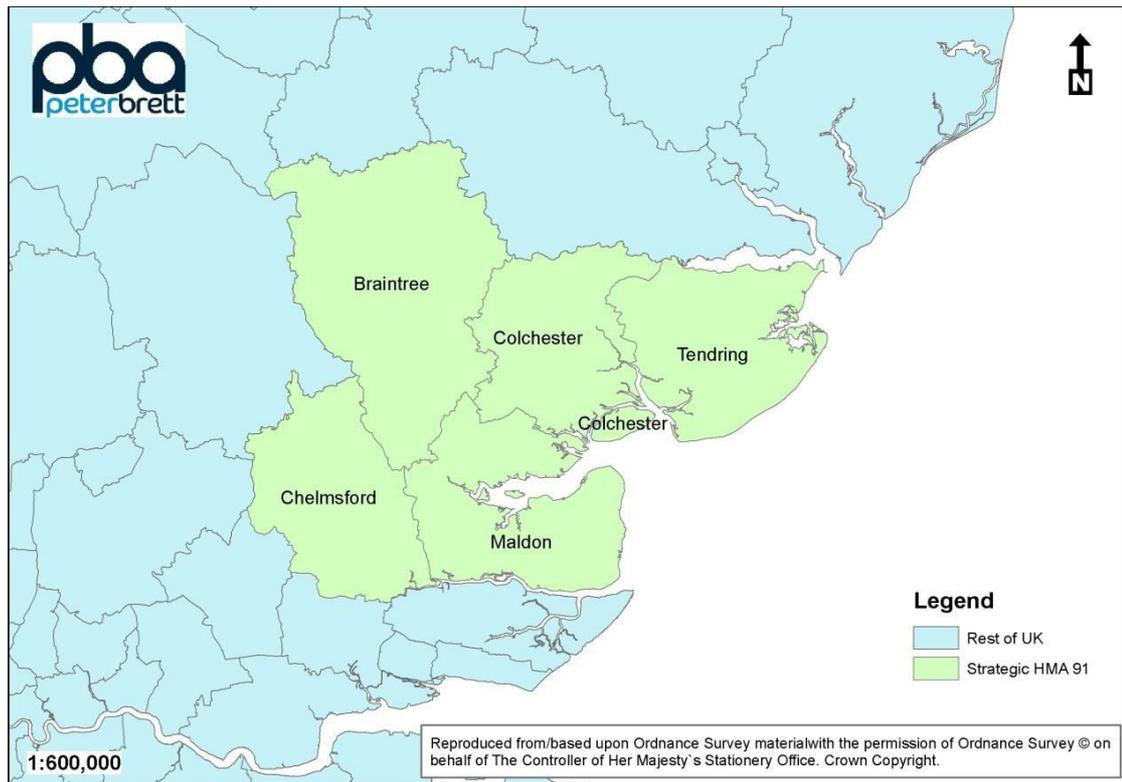
Overview

- 2.1 As mentioned earlier, where a housing market area (HMA) extends across two or more local authorities those authorities are required to work together to assess needs across the area as a whole. The underlying idea is that much of the demand or need for housing is not tied to specific local authority areas, as people's decisions on where to live are driven by access to jobs, schools, family etc, rather than administrative boundaries. An HMA is an area of search, bringing together places which share similar household characteristics.
- 2.2 To help identify such areas, the PPG suggests a list of indicators including house prices, migration, travel-to-work areas and school and retail catchments. The guidance does not prescribe how these indicators should be analysed, except for migration – where it says that a high proportion of house moves, 'typically 70%', excluding long-distance moves, should be contained within the area. Travel-to-work areas, also mentioned in the PPG and defined by ONS, are also based on the idea of containment – in this case relating to commuting rather than migration.
- 2.3 To identify HMA boundaries in this study we start from the national geography of housing market areas developed for the NHPAU (National Housing and Planning Advisory Unit). We then verify and update that geography, using the latest data available and the key indicators recommended in the PPG.

The NHPAU geography

- 2.4 This HMA geography was produced in 2010 for the former NHPAU by Newcastle University academics, using data from the 2001 Census. Following the same logic as the PPG, the NHPAU research defines a hierarchy of HMAs based primarily on migration and commuting containment. It is a useful starting point because it is a national top-down geography, which maximises containment across England as a whole. This is a sound approach, because if each local authority were to define its own HMA, centred on its own area, there would be nearly as many HMAs as local authorities, and HMAs would hugely overlap.
- 2.5 As shown on Figure 2-1, the NHPAU geography brings together into one strategic market area the four authorities that commissioned this study with the addition of a fifth district, Maldon.

Figure 2-1 The NHPAU strategic HMA



Source: PBA

- 2.6 Below, we test this strategic HMA based on the same key indicators, migration and commuting, but using the latest available data from the 2011 Census.

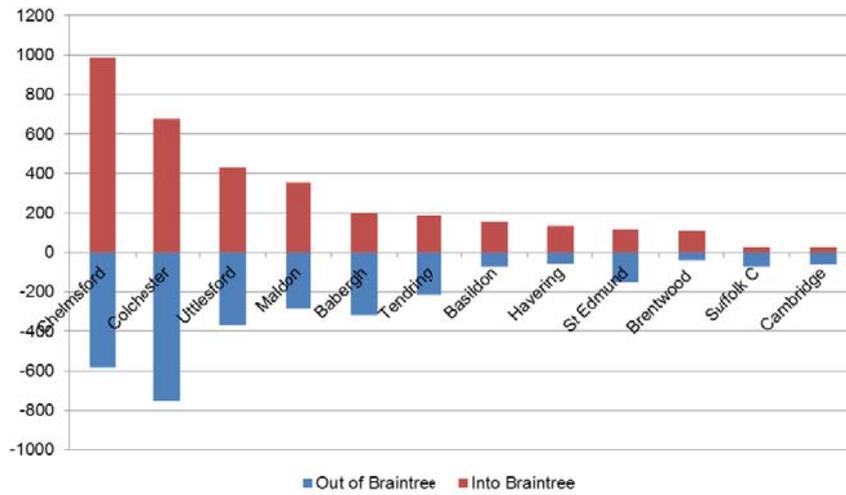
Migration

House moves - main origins and destinations

- 2.7 For each authority in the strategic HMA, the charts below show the other authorities with which that authority has the largest combined gross migration flows. The analysis is for the 12 months preceding the Census and excludes internal house moves within local authorities. Using these combined migration flows (in to an out of each authority) to measure the strength of links with other districts:

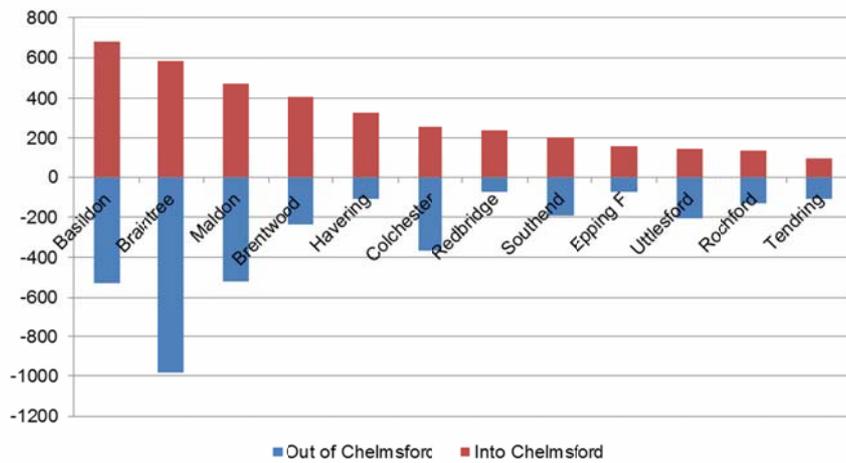
- Braintree's strongest links are with Chelmsford and Colchester.
- Chelmsford's strongest links are with Basildon, Braintree and Maldon.
- Colchester's strongest links are with Tendring and Braintree.
- Tendring's strongest link is with Colchester.
- Maldon's strongest links are with Chelmsford, Braintree and Colchester.

Figure 2-2 Cross-boundary migration to and from Braintree, 2010-11, persons



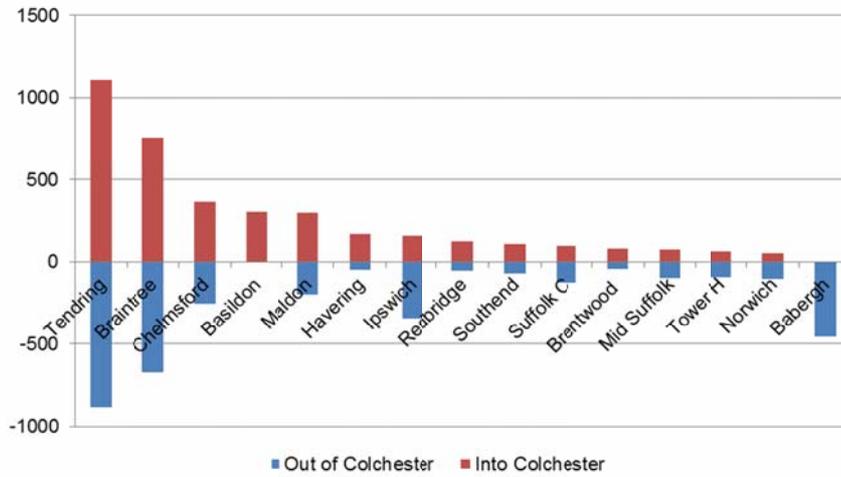
Source: ONS, PBA

Figure 2-3 Cross-boundary migration to and from Chelmsford, 2010-11, persons



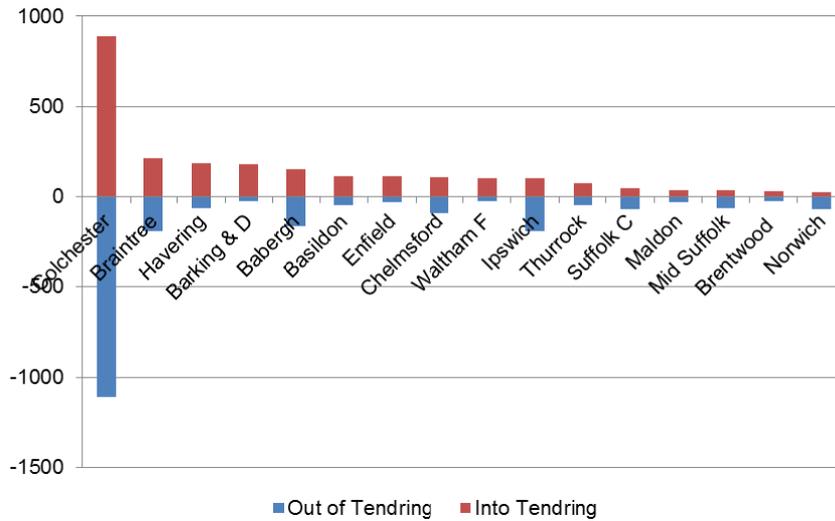
Source: ONS, PBA

Figure 2-4 Cross-boundary migration to and from Colchester, 2010-11, persons



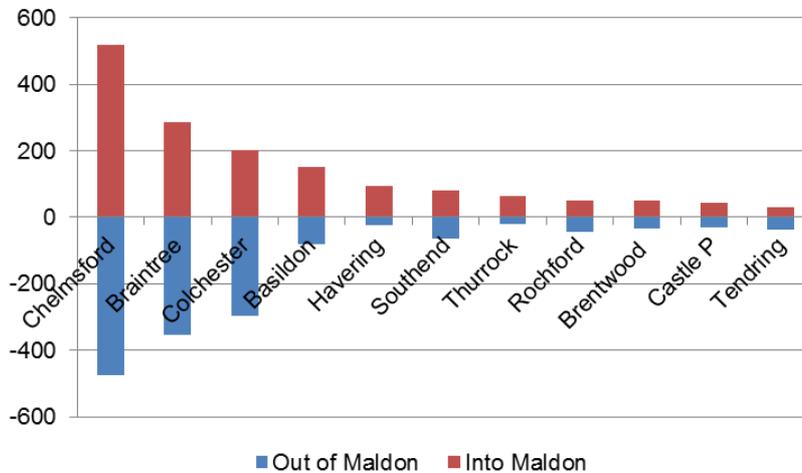
Source: ONS, PBA

Figure 2-5 Cross-boundary migration to and from Tendring, 2010-11, persons



Source: ONS, PBA

Figure 2-6 Cross-boundary migration to and from Maldon, 2010-11, persons



Source: ONS, PBA

- 2.8 In summary, for each authority in the NHPAU strategic HMA, the strongest migration links are with other authorities in that HMA – with the sole exception of Chelmsford, whose strongest link is with Basildon, which lies outside that HMA. Outside the strategic HMA there is no one authority that is strongly linked to all the members of that HMA. Uttlesford, for example, comes third in the list of districts linked to Braintree and tenth on Chelmsford’s list, but it does not appear in the lists for Colchester, Maldon or Tendring. On this basis there is no additional authority that has a good case for joining the strategic HMA.
- 2.9 Other than places already discussed, the HMA authorities’ strongest links are with London. Thus, Chelmsford received a large total inflow from the London Boroughs of Redbridge and Havering, though there is little movement in the opposite direction. Similarly, Tendring is on the receiving end of a large one-way flow from Havering, Barking & Dagenham, Enfield and Waltham Forest.
- 2.10 In summary, the analysis so far suggests that the five local authorities in the NHPAU’s strategic HMA are more closely linked to one another than to any other area. The only exception to this general statement is that several of the authorities receive large migration inflows from London. Given that it would not be practical to include parts of London in the HMA, this suggests that NHPAU’s strategic HMA is correctly defined. But, before drawing conclusions we test the evidence more closely.

The 70% self-containment test

- 2.11 In this section we test the strategic HMA’s migration containment against the PPG criterion that ‘typically’ some 70% or more of all house moves that either begin or end in the HMA, excluding long-distance migration, should occur within the HMA. The test is specified in more detail in an earlier CLG publication, on which the PPG is clearly based:

‘Identifying suitable thresholds for self-containment: The typical threshold for self-containment is around 70 per cent of all movers in a given time period. This threshold applies to both the supply side (70 per cent of all those moving out of a

dwelling move within that same area) and the demand side (70 per cent of all those moving into a dwelling have moved from that same area).¹

2.12 Table 2-1 shows these measures of containment for the strategic HMA. In this calculation:

- Calculation of the origin and destination containment.
- Migration data, as before, are taken from the 2011 Census and relate to persons moving house in the year ending on Census day.
- The analysis includes moves within authorities, which were excluded from the calculations in the July 2015 report.
- Total moves comprise moves within the UK. It excludes those whose origin or destination is overseas, because by definition these are long-distance moves, which according to the PPG should be excluded from the total.
- Note - In the July 2015 report we did not fully include moves internal to the four districts in the self-containment calculations (moves between the Councils in the HMA were classed as external). In this current version, following best practice, we count all moves between the four Councils as internal to the HMA, and so counting towards the self-containment threshold.

2.13 This measure of total moves is larger than the PPG intends, because it does not exclude long-distance moves within the UK. Therefore the resulting containment ratios will be underestimates, though we cannot tell by how much because the PPG does not define such distance moves, but only describes them by example: 'e.g. those due to a change of lifestyle or retirement'. On this basis we cannot identify long-distance moves in the statistics, though we believe that retirement migration to the Essex coast plays a significant part.

Table 2-1 Migration containment, strategic HMA, 2010-11, persons

Origin (moves from)	Destination (moves to)			Origin containment
	the HMA	Elsewhere	Total moves from the HMA	
the HMA	49,192	19,862	69,054	71%
Elsewhere	20,401			
Total moves to the HMA	69,593			
Destination containment	71%			

Source: ONS, PBA.

2.14 As calculated in the table, containment ratios for both origin and destination are equal at 71%, marginally exceeding the PPG threshold.

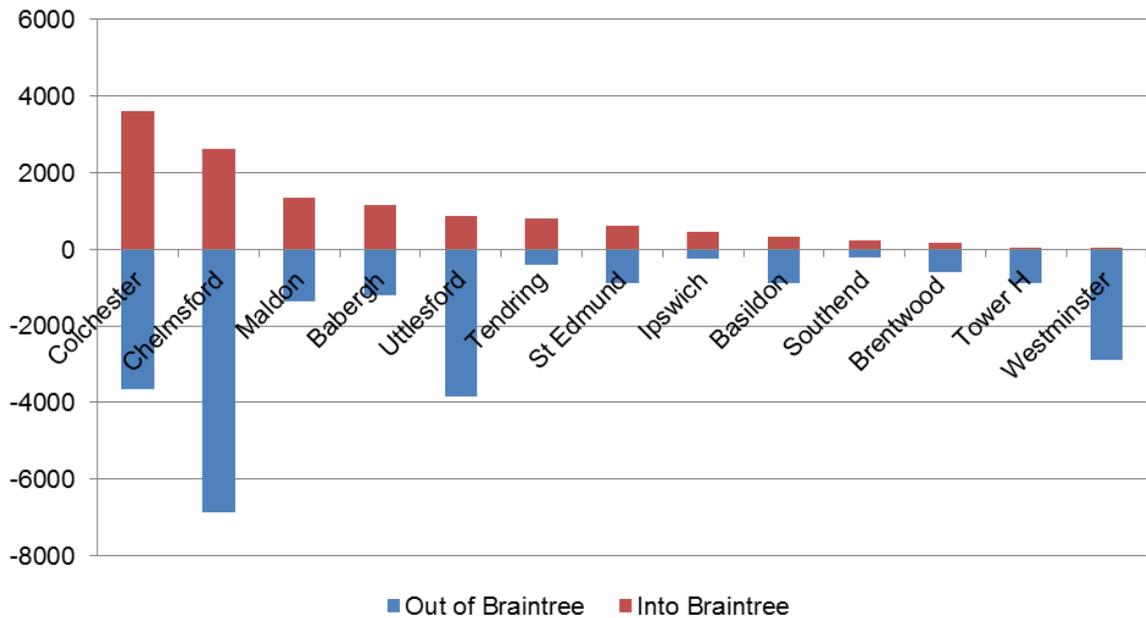
¹ Communities and Local Government, Identifying sub-regional housing market areas, Advice note, March 2007

Commuting

Work related trips - main origins and destinations

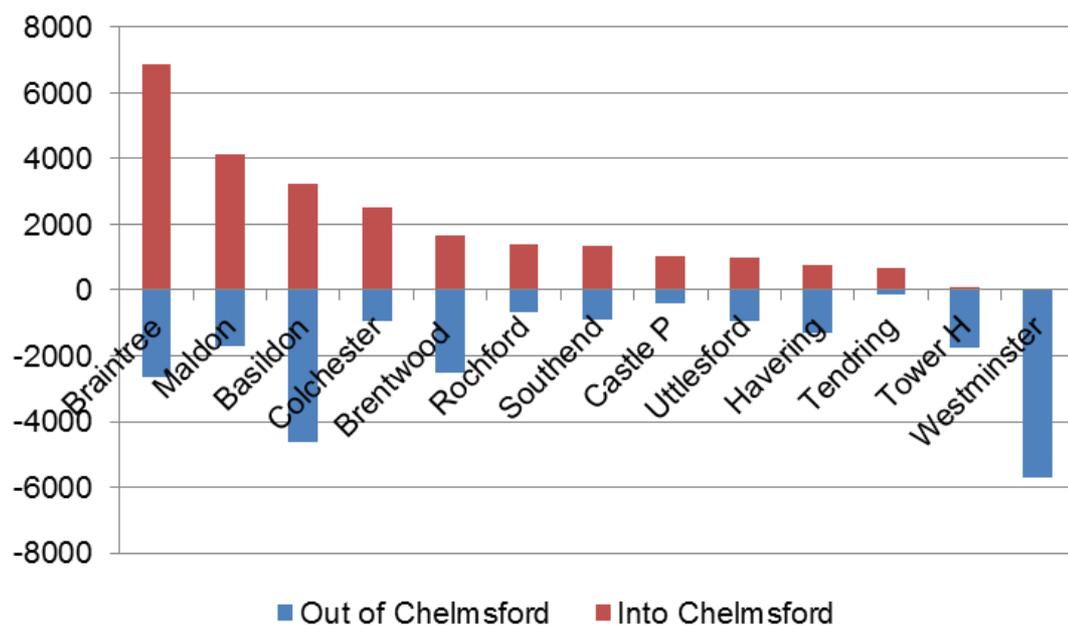
2.15 The charts below show the main origins and destinations of cross-boundary commuting to and from each authority in the strategic HMA.

Figure 2-7 Cross-boundary commuting to and from Braintree, 2011, persons



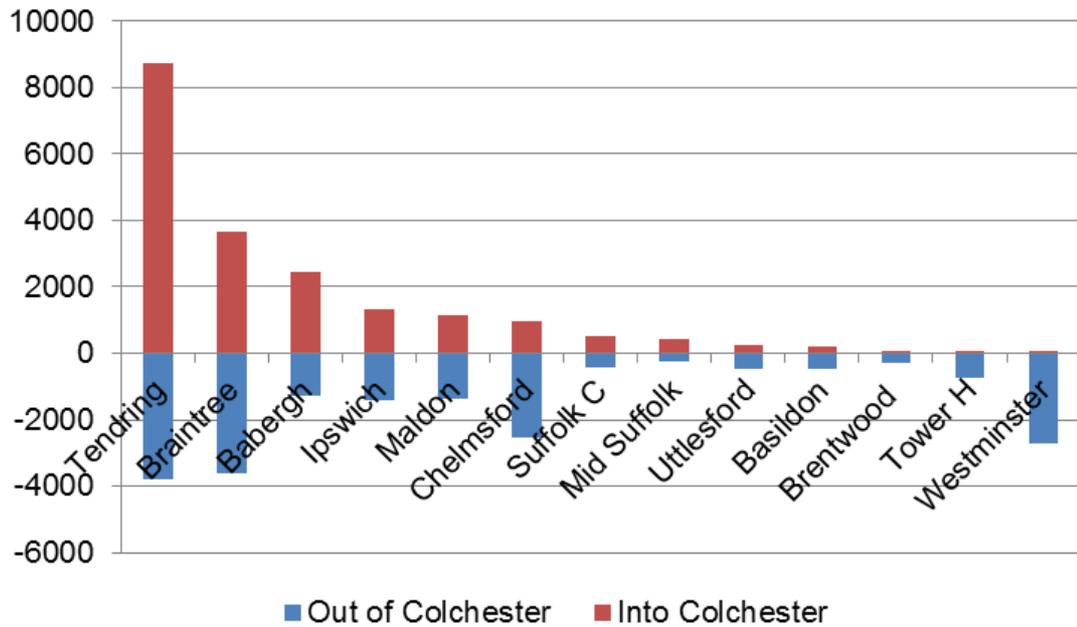
Source: ONS, PBA

Figure 2-8 Cross-boundary commuting to and from Chelmsford, 2011, persons



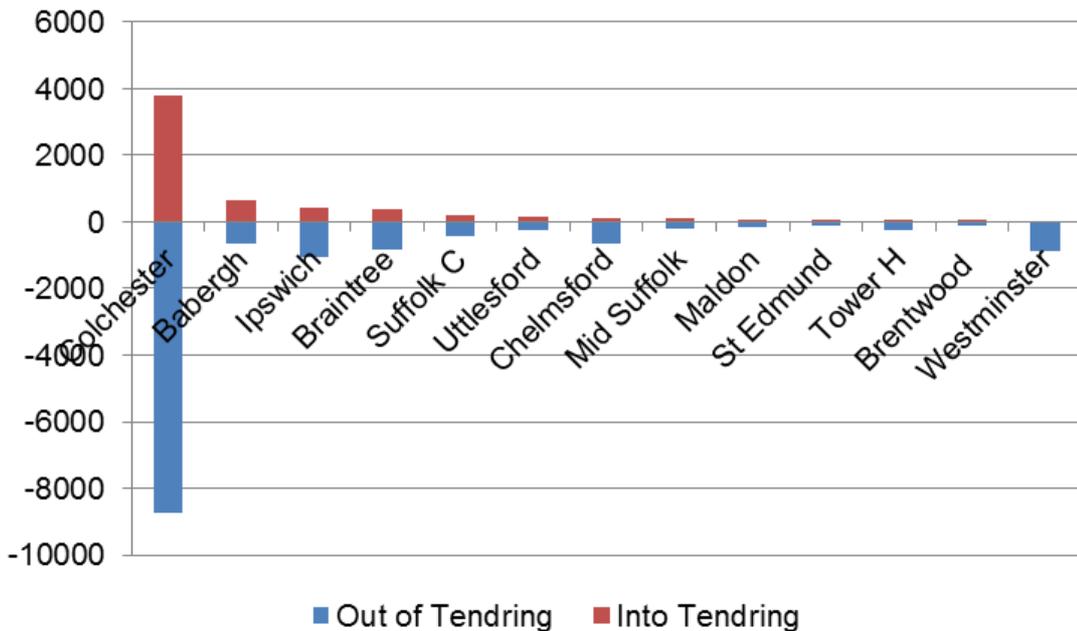
Source: ONS, PBA

Figure 2-9 Cross-boundary commuting to and from Colchester, 2011, persons



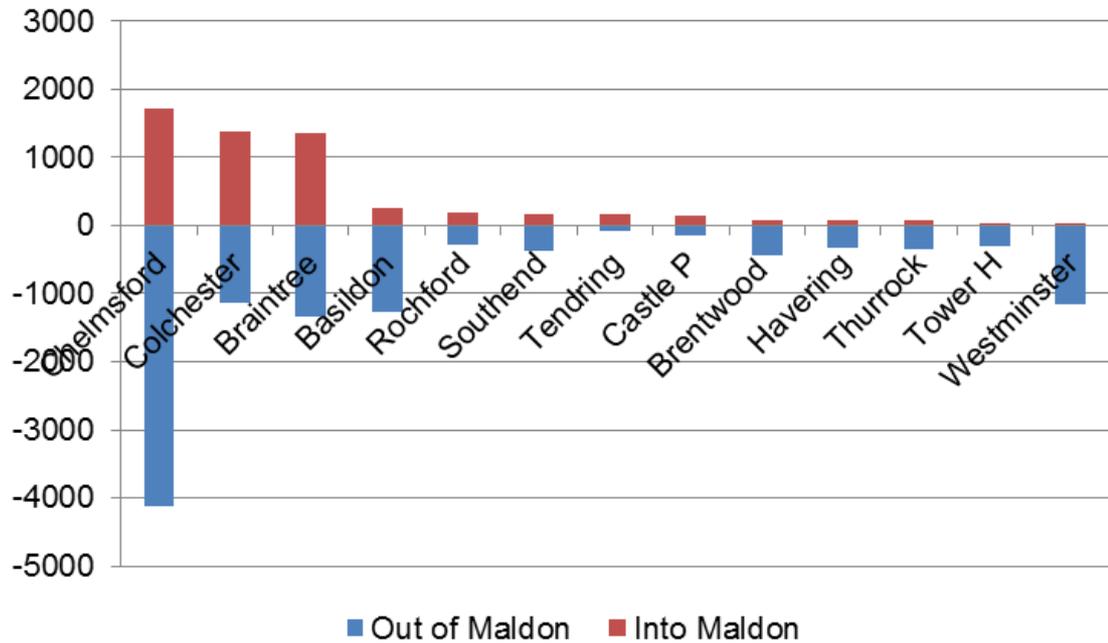
Source: ONS, PBA

Figure 2-10 Cross-boundary commuting to and from Tendring, 2011, persons



Source: ONS, PBA

Figure 2-11 Cross-boundary commuting to and from Maldon, 2011, persons



Source: ONS, PBA

2.16 Using the combined commuting flows (in an out):

- Braintree’s strongest links are with Colchester and Chelmsford.
- Chelmsford’s strongest links are with Braintree, Maldon and Basildon.
- Colchester’s strongest links are with Tendring and Braintree.
- Tendring’s strongest links are with Colchester.
- Maldon’s strongest links are with Chelmsford, Colchester and Braintree.

2.17 There are also large outflows from the strategic HMA (particularly Braintree, Chelmsford and Colchester) to London, especially to Westminster, but also Tower Hamlets and Havering.

The containment test

2.18 Table 2-2 below shows containment ratios for commuting.

Table 2-2 Overall commuting containment, strategic HMA, 2011

Origin (trips from)	Destination (trips to)			Origin containment
	the HMA	Elsewhere	Total trips from the HMA	
the HMA	257,370	75,351	332,721	77%
Elsewhere	36,131			
Total trips to the HMA	293,501			
Destination containment				88%

Source: ONS, PBA

- 2.19 The strategic HMA's containment ratios for commuting are 88% for destination and 77% for origin, which are higher than the ratios for migration.
- 2.20 In a change from July 2015 we include 'home workers' and 'no fixed workplace' categories in these calculations. Previously we only counted those recorded as commuting internal to the Councils or cross boundary. It is debatable whether the 'no fixed workplace' people should be included; we do not know if they are working for example overseas or, in our opinion more likely, 'on the road' in the local area. If we adopt a more cautious approach and exclude these workers self-containment is still high falling by only 2% to 75% and 86%.
- 2.21 In relation to commuting neither the PPG nor the 2007 CLG advice² identify a threshold to help define housing market areas. But, such a threshold is provided in the ONS definition of Travel to Work Areas, which are mentioned in the PPG:
 'The current criterion for defining TTWAs is that generally at least 75% of an area's resident workforce work in the area and at least 75% of the people who work in the area also live in the area... However, for areas with a working population in excess of 25,000, containment rates as low as 66.7% are accepted.'
- 2.22 The strategic HMA comfortably exceeds the 66.7% criterion

Maldon – migration and commuting

- 2.23 Maldon District Council does not agree that Maldon shares an HMA with Braintree, Chelmsford, Colchester and Tendring, and in progressing its Local Plan has provided evidence to show that Maldon is a separate HMA. This situation is not unusual where plans are at different stages of production and provision is made in the PPG for Councils to take a pragmatic approach in the short to medium term and seek to align their plans and evidence in the future³.
- 2.24 To assess the implications of this stance on our commissioning authorities we have calculated the impact on the strategic HMA's containment of removing Maldon. This change makes little difference as set out in the tables below: migration containment

² Communities and Local Government, Identifying sub-regional housing market areas, Advice note, March 2007

³ PPG 2a-007-20150320

decreases marginally to 70% (from 71%) and 69% (from 71%) for origin and destination. The corresponding figures for commuting containment are 76% (from 77%) and 85% (from 88%), still well above the HMA containment threshold.

- 2.25 This analysis shows that Maldon is marginal to the overall containment rates in the strategic HMA. Once any provision for long distance or lifestyle moves is made in the data the four Councils meet the self containment threshold regardless of Maldon.

Table 2-3 – Migration - overall containment

Origin (moves from)	Destination (moves to)		Total trips from the HMA	Origin containment
	the HMA <u>minus Maldon</u>	Elsewhere		
the HMA <u>minus Maldon</u>	44,695	19,515	64,210	70%
Elsewhere	20,225			
Total moves to the HMA	64,920			
Destination containment				69%

Table 2-4 Commuting – overall containment

Origin (trips from)	Destination (trips to)		Total trips from the HMA	Origin containment
	the HMA <u>minus Maldon</u>	Elsewhere		
the HMA <u>minus Maldon</u>	229,294	72,963	302,257	76%
Elsewhere	40,914			
Total trips to the HMA	270,208			
Destination containment				85%

Source; ONS, PBA

House prices

- 2.26 To supplement the above analysis of migration and commuting, we have considered if house prices (levels and recent change) provide any evidence that would help define a housing market area. We chose these indicators because alongside migration and commuting house prices are the only 'hard' evidence mentioned in the PPG, as opposed to qualitative and contextual evidence such as household areas of search and catchment areas for schools or retail centres.
- 2.27 Figure 2-12 is a heat map of house prices across Essex. It shows high prices in Brentwood (the red circle) and an M11 corridor (the blue line). But, there is no pattern that would help us define the boundaries of an HMA that includes our commissioning authorities.

Figure 2-12 House prices, February 2015



Source: Zoopla, Heatmap of UK property values

2.28 Table 2-5 shows house price change in the 10 years to 2012 for the Essex districts. There is very little variation between the districts, and no distinct spatial pattern that can help draw housing market areas.

Table 2-5 House price changes, Essex districts, 2002-12

Local authority area	% increase
Basildon	65%
Braintree	62%
Brentwood	69%
Castle Point	65%
Chelmsford	67%
Colchester	67%
Epping Forest	67%
Harlow	65%
Maldon	70%
Rochford	68%
Tendring	70%
Uttlesford	66%
Essex	66%

Source: CLG live table 581 (mean house prices based on Land Registry data), PBA

Conclusions

- 2.29 We have used evidence from the 2011 Census to test the strategic HMA defined by the NHPAU housing market area geography. Our analysis found that the area exceeds the 70% threshold. Even so we tested alternative definitions of the HMA, adding further local authority areas, but we could not find an alternative that had higher containment. The likely reason is that migration out of London, including retirement migration into the HMA, makes containment difficult to achieve.
- 2.30 Maldon District Council considers that its district is a free-standing HMA, rather than part of the NHPAU's strategic HMA. Whether or not this view is supported by local information, including 'soft' qualitative data, is a matter for that Council to consider. But, there is support in the PPG for Councils to adopt a pragmatic approach where plans and evidence are not aligned⁴.
- 2.31 For our part, we have tested the quantitative impact of excluding Maldon on our four commissioning authorities, which form the rest of the strategic HMA. We find that an HMA comprising those four authorities still form a reasonable HMA even without removing lifestyle or long distance moves.
- 2.32 In summary, our analysis suggests that an HMA comprising Braintree, Colchester, Chelmsford and Tendring Council areas forms a sound basis for assessing housing need. The rest of this report focuses on this area, which we call simply 'the HMA'.

⁴ 2a-007-20150320

3 THE OFFICIAL HOUSEHOLD PROJECTIONS

Introduction

- 3.1 As required by national policy and guidance, in assessing housing need we start from the latest official household projections published by the Department of Communities and Local Government (CLG). In later chapters we will sensitivity-test the projections and consider alternative scenarios to deal with any factors that the projections do not capture, in line with the PPG. For three of our Councils the projections are taken from the *Greater Essex Demographic Forecasts* report produced by Edge Analytics for the Essex Planning Officers Association (EPOA). Specifically we use the Phase 7 Edge Analytics report, which is the most up-to-date in the series⁵. For the purposes of brevity this will be referred to as the Edge report for the rest of this report.
- 3.2 The exception to this relates to Tendring. As we discuss below in more detail, new data has emerged from the Office of National Statistics that casts doubt on the robustness of the EPOA Phase 7 scenarios for the district. This is not to say that the EPOA Phase 7 report was wrong; it used the best available data at the time; but in respect of Tendring the demographic scenarios have been superseded.
- 3.3 PBA has worked with this new evidence and the Councils expert demographer to update the projections for Tendring.

Recent releases

- 3.4 The official demographic projections are issued in two separate publications:
- ONS produces the Sub-National Population Projections (SNPP), which show population by age and sex, based on rolling forward past rates of natural change (births minus deaths) and migration for each demographic group.
 - CLG then converts each SNPP into household projections.
- 3.5 The factors that translate population into households, known as Household Representative Rates (HRRs, also known as headship rates or housing formation rates), are based on rolling forward past trends for different demographic groups. The resulting household numbers, with a small adjustment for vacant and second homes, are used as a measure of future housing demand, or objectively assessed need.
- 3.6 The NPPF, published in March 2012, advised that the official CLG household projections should be the starting point for assessing housing need. But, at that time, and until very recently, we did not have a full set of recent projections that were fit for purpose. The 2008-based projections were increasingly out of date. The 2011-based projections, published in 2013, were labelled 'interim' because of data limitations, and they only ran to 2021.
- 3.7 To fill the gap, Councils and their consultants developed a range of alternative demographic scenarios that extended or adjusted the 2011 projections, or 'blended'

⁵ Edge Analytics, Greater Essex Demographic Forecast 2013-37, Phase 7 Main Report, May 2015

them with the 2008 ones in an attempt to capture long-term trends. Different authorities used different approaches, making it difficult to compare or aggregate neighbouring areas.

- 3.8 On 27 February 2015 CLG finally produced 2012-based household projections ('CLG 2012'), which supersede earlier versions. The new CLG projections are derived from the 2012-based sub-national population projections ('SNPP 2012') published in 2014. To model future HRRs the CLG 2012 projections use the same method as CLG 2011, but a different starting point, in that they are based on revised estimates of actual HRRs at 2011. Although these estimates are still imperfect, due to difficulties in processing Census results, they are the best information available at present.
- 3.9 The PPG, in a new paragraph published on the same day as CLG 2012, has endorsed that projection as 'the most up-to-date estimate of future household growth'⁴. This statement establishes a new starting point for assessing housing need and implies that earlier official projections may now be dismissed.

The 2012-based projections

- 3.10 Table 3.1 below shows the 2012-based official projections for the HMA. The figures are from the Edge report, which has re-based the projection to start in 2013 and translated households into dwellings through a small adjustment for vacant and second homes. We show these and later numbers per annum, because this is how local plans and monitoring reports normally express housing targets. For the HMA the projections show a need for 2,916 net new dwellings per annum (dpa).

Table 3-1 Population, households and dwellings, 2013-37, ONS/CLG 2012

Change p.a.	Population	Households	Dwellings
Braintree	1,171	668	686
Chelmsford	1,108	643	657
Colchester	1,638	834	868
Tendring	1,068	654	705
HMA	4,986	2,799	2,916

Source: Edge Analytics Greater Essex Demographic Forecasts Phase 7 Report

- 3.11 Table 3.2 shows the split of projected population growth between migration and natural change. It demonstrates that population growth in the HMA is highly dependent on migration. Of the 5,000 net additional people in the HMA each year 84% are net in-migrants⁶.

⁶ As a reminder, 'migration' and 'migrants' in the present context include people moving house within the UK as well as international migration

Table 3-2 Components of population change, 2013-37, ONS/CLG 2012⁷

Change p.a.	Total population	Net migration	%	Natural change	%
Braintree	1,171	985	84%	186	16%
Chelmsford	1,108	628	57%	480	43%
Colchester	1,638	822	50%	816	50%
Tendring	1,068	1,737	163%	-669	-63%
HMA	4,986	4,172	84%	814	16%

Source: Edge Analytics Greater Essex Demographic Forecasts Phase 7 Report

- 3.12 In Tendring the picture is even starker. There are more deaths than births each year, because the population is much older than in the rest of the HMA, so migration tops up what would otherwise be a declining population.

2012 Headship Rates

- 3.13 In the July 2015 report we adopted the CLG 2012 Headship rates as the preferred translation of population to households. This was fully in line with the PPG and best practice at the time.
- 3.14 Since the CLG published the 2012 household projections some have queried whether the 2012 base headship rates remain robust. This is because they have observed that in some places, for some age groups, household formation is lower than the 2008 set of rates and sometimes lower than the 2011 set. There is a suggestion that they have remained 'supressed' since the recession.
- 3.15 The Edge report applied sensitivity tests to the demographic projections using alternative headship rates. This testing showed very little difference in this HMA. The table below shows the different HRRs applied to the SNPP 2012 population projections:

Table 3-3 Headship Rates - Sensitivity Tests

	2008 HRR	2011 HRR	2012 HRR
Braintree	17,282	15,890	16,705
Chelmsford	17,091	16,169	16,016
Colchester	21,413	20,836	20,830
Tendring	16,075	15,981	16,038
HMA	71,861	68,876	69,589

⁷ In this table natural change includes births and associated with migrants, so if a woman who moved into the area one year gives birth the following year that birth counts as part of natural change. An alternative assessment of the relative contributions of migration and natural change is provided in the EPOA 'natural change scenario' (not shown here), in which babies born to migrants and deaths of migrants are excluded from natural change.

Source: Table 2 of Edge report, Phase 7 Main Report, May 2015

- 3.16 For the HMA the results range from 71,861 new homes (2008) to 68,876 (2011 HRRs). The 2012 HRRs provide a number between these two.
- 3.17 Despite this narrow range it is still sensible to consider to what extent the recession may have led to suppressed rates in 2012. In this regard the ONS continues to release new data and this new data has been used by independent academic experts⁸ to test whether the 2012 rates were genuinely suppressed by the recession. This research strongly suggests that 2012 HRRs remain fit for purpose.
- 3.18 Where the use of 2012 HRRs suggest lower rates of household formation this is for three broad reasons; none of which can be redressed by increasing the supply of housing.
- 3.19 Firstly, the 2008 set has since been proved to be erroneous and any comparisons with 2012 rates should not be relied on. In April 2015 Simpson & McDonald noted⁹:
- “It is no longer sensible to appeal to previous household projections including the 2008- based set as if they were evidence of an underlying trend in household formation. They were produced at a time when household formation had already changed, starting before the economic downturn of the mid-to-late 2000s, and are in themselves only evidence of the optimism of that period”*
- 3.20 Secondly, the rapid expansion of higher education coupled with sweeping changes to higher education funding, which means that many more young people leaving University are unable or unwilling to take on new debt (i.e. mortgages) until later in life.
- 3.21 Thirdly, the reason that the 2012 HRRS may appear lower is because practitioners erroneously fail to note that some HRRs are lower because more young people live in couples than in the past. This fact reduces younger age HRRs across the board because only one person can be nominated as the ‘head of household’. The effect is particularly acute in female HRRs because the ONS always assume the male is the head of the household¹⁰. In October 2015 McDonald and Whitehead¹¹ estimated this this statistical anomaly accounts for 20% of any apparent ‘suppression’ at the national level.
- 3.22 In conclusion, the most recent (October 2015) academic work finds that 2012 rates remain fit for purpose:

⁸ Simpson & McDonald April 2015 (Town and Country Planning) & McDonald and Whitehead October 2015 (Town and Country Planning - Tomorrow Series)

⁹ Town & Country Planning *April 2015*

¹⁰ The same logic can apply to males – when two males choose to form a new household together only one is classed as the ‘head of the household’.

¹¹ Town & Country Planning Tomorrow Series Paper 17, October 2015.

“We would suggest that the 2012-based household formation rate projections form a reasonable basis for purposes such as planning for housing. This is because, although economic growth might be expected to increase the household formation rate, there are both longer-term structural changes and other factors still in the pipeline (such as welfare reforms) that could offset any such increase”.

Further Testing of Headship Rates

- 3.23 PBA has looked at the detailed HRRs by age and sex in this HMA compared to English averages. This is to discount any HMA specific ‘suppression’. This analysis is presented in Appendix A.
- 3.24 There is some evidence that household formation for young males below 25 years old is below the English average, but this is much less significant than it may first appear. Nationally there are exceptionally few heads of household below 20 years old. Fewer than 1 in 4 20-25 year old males are heads of household.
- 3.25 For household formation the ages 25 – 35 are much more important and nationally by the time males reach 40 years old 90% are heads of household. For these key age groups local headship rates are much more favourable; local rates generally exceed national rates. This suggests that households may form very slightly later in this HMA than England on average, but this is much less significant that it may first appear and is more than made up in the key household forming age groups.
- 3.26 This slight delay in formation is likely to be a result local house prices being higher than the English average partly as a product of the housing stock slightly larger. In three of the HMA districts the average size of houses is larger than the national average. The census reported that homes have more bedrooms than the national average¹². So it takes a few years longer to secure a deposit and mortgage.
- 3.27 A similar pattern is common across the wider South East of England and in other areas where the housing stock is more orientated to larger family units as opposed to small, and cheaper flats. So part of the reason relates to the mix of property in the area.
- 3.28 Appendix A also looks at female HRRs, but these have a much more limited impact than males because most households contain a male, and it is this HRR that drives most of the household growth.
- 3.29 Here female rates are below the national average, and remain so through all age groups.
- 3.30 The most obvious reason for this, as noted in the academic research discussed above is that in this area the Census shows a much higher proportion of couples or family households than the English average and generally fewer single person households. In England 61.8% of households are classed as ‘family households’¹³,

¹² Census Table KS403EW – National average is 2.7 bedrooms per household. Chelmsford 2.9, Colchester 2.8, Braintree 2.9 & Tending 2.6.

¹³ KS105EW - Household composition

but in this HMA the proportion is much higher. In Braintree this exceeds 67.5% and Chelmsford 67.2% and Colchester 64.1.

- 3.31 The exception to this is Tendring, but here the age and migration profile is very different to the wider HMA; being much older.

Headship Rate Conclusions

- 3.32 Recent academic research firmly disproves suggestions that 2012 Headship Rates were suppressed by the recession and a 'reversion' to 2008 rates should be promoted. This is recent independent research, and in our opinion strongly weights in favour of retaining the 2012 HHRs despite some Inspectors (without sight of this research) previously conceding otherwise.
- 3.33 This opinion is strengthened by research suggesting the alternative 2008 set, is erroneous and flawed. So no meaningful comparison can or should be made in any circumstances.
- 3.34 We also have compared local headship rates (2012) with national rates to see whether there is any local evidence of suppression. For males household formation in this HMA is generally more favourable than England as a whole. The exception to this is for the group <25 years old which show lower headship rates than the English average. But this reverses at ages =>25 where these males are much more likely to form a household than the average. This suggests that any apparent suppression at age 24 and below is a structural feature of the housing market in this area including the type of property available and the profile (and property expectations) of people living in the area.
- 3.35 Female rates are much lower here than the English average. These are much less significant because the vast majority of households are headed by a male. But the data suggests that part of the reason female rates here may appear low compared to the national average is the fact that the household structure here is more bias to larger, family households, than the national average.
- 3.36 Accordingly, we consider that for Essex the Edge 2012 Headship rates are a more robust projection than the 2008 Headship rates.

4 ALTERNATIVE DEMOGRAPHIC SCENARIOS

Introduction

- 4.1 As mentioned earlier the official projections should be tested at the local level before being accepted as a measure of housing need. This is usually done through alternative scenarios which vary some of the methods and assumptions used by ONS/CLG. In the present case the Councils have the benefit of regionally consistent alternative scenarios provided by the Edge report.
- 4.2 That report provides 10 variations on the official projections, from which we have selected those most relevant to future housing needs. In this chapter we review two alternative scenarios based on varying projection methods. In Chapters 5 and 6 we will move on to scenarios that assess the implications of wider factors, first London's unmet needs and then future job growth. But first, we discuss a technical question which applies to all scenarios: the choice between fixed and non-fixed migration profiles.

Fixed vs non-fixed migration profiles

- 4.3 The Edge projections use two alternative methods for determining the amount and age profile of future migration:
- 'Fixed' scenarios carry forward past migration flows from the base period (reference period), ignoring any impact that the population's changing age profile might have on migration.
 - Other scenarios, which may be called non-fixed or dynamic (though the report does not give them a particular label) use age-specific migration rates. Rather than numbers of migrants, these scenarios carry forward the likelihood (or propensity) to migrate of different age groups. Because different age groups have different propensities, this means that future migration will change as the age structure of the population changes.
- 4.4 To take an example, in the base periods used (which may be five or 10 years as discussed later) migration from the rest of the UK to Tendring has been weighted towards the older age groups. The proportion of all UK residents who moved to Tendring was much higher for (say) over-65s than younger age groups. In future the over-65s will form a growing proportion of the UK's population. In the fixed scenarios, this ageing population makes no difference to the projected migration into Tendring. In the non-fixed scenarios it results in more migration into Tendring, because there is a large pool of older people.
- 4.5 The Edge report does not recommend either method, leaving the choice (like all such choices) to the client authorities. In our analysis below we show both variants. We prefer the non-fixed (dynamic) version, because common sense suggests that the different behaviour of people at different ages is an important driver of demographic change – especially given that in the next 20 years or so the UK's population is set to age dramatically.

- 4.6 As a caveat, however, we note that the dynamic method may exaggerate the impact of this ageing on migration; because as older age groups form a higher proportion of the population their behaviour might change ('60 is new 50'). The postponement of the State Pension Age is already causing this kind of effect. For women in their early 60s, for example, the likelihood of being retired is becoming similar to that which previously applied to those in their late 50s. A natural consequence might be that people will move to the Essex coast at later ages than they did in the past.

Unattributable Population Change

- 4.7 The Edge report provides alternative projection scenarios 'with Unattributable Population Change (UPC) and 'excluding UPC' (labelled 'X' scenarios). To choose between these alternatives, we need to understand what the UPC is and how it affects the HMA.

What is UPC?

- 4.8 UPC is a discrepancy in the official population statistics that arose between the 2001 and 2011 Censuses. In this inter-censal period the ONS makes estimates of the components of population change, which are published as Mid-year Population Estimates (MYEs). Births and deaths are measured easily and accurately, because the UK has an efficient registration system. But migration (UK and international) cannot be measured directly, and is estimated from indirect and incomplete data such as GP registrations.
- 4.9 When the 2011 Census results came to light, the population in many places was different from what had previously been estimated. ONS accordingly revised the MYEs for the inter-censal period to bring them into line with the Census. But, for many places it proved impossible to fully reconcile the revised components of change with population numbers at the two Censuses. To deal with this remaining discrepancy, ONS introduced an additional component of change, in effect an 'errors and omissions' factor. This is the UPC.
- 4.10 The UPC may be due to miscounted population in one or both Censuses – though this is more likely to be in 2001 than 2011, because by 2011 methods had been considerably improved. It may also be due to unrecorded or misrecorded migration between the Censuses. More likely both factors are at work.
- 4.11 For England, the UPC is positive and amounts to 103,000 persons between 2001 and 2011. At this level, insofar as the UPC is due to misrecorded migration it is likely to relate to international migration rather than cross-border movements within the four countries of the UK. This view is supported by ONS in its 2014 review 'Quality of International Migration Estimates from 2001 to 2011', which shows that net international migration to the UK may have been originally underestimated by over 340,000 over the period. This was mainly caused by the failure in mid-decade of the International Passenger Survey (IPS) to cover the arrivals of budget airline flights from Eastern Europe at regional airports. These airports are now covered by IPS.
- 4.12 At the local authority level the UPC is more complicated. The national total of 103,000 is the net outcome of positive UPC in some authorities and negative UPC in others.

Although the initial problem (or some of it) may have been in counting international migrants, further issues arise in relation to the correct assignment of these migrants to local authorities. Incorrect initial assignments are compounded when new immigrants to the UK change address and their move is picked up by the NHS and translated by ONS into its estimates of internal migration.

- 4.13 UPC, therefore, is at least partly a correction for failings in the combination of measuring and assigning international migrants at the local authority level. This correction should not be needed in future, because ONS has now improved its processes to better distribute international immigrants to their first true area of settlement (where they register with the NHS) rather than where they may first live temporarily. But, we still need to consider it when projecting from base periods that pre-date these improvements.
- 4.14 Although it has already improved its methods, we understand that ONS has a provisional plan for revised MYEs back to 2011 to be published in 2016, using any new methods arising from its current research into international and internal migration. This implies that its current annual estimates of migration since mid-2011 are not sacrosanct, and therefore should be used with caution in using past migration trends as the springboard for future projections.

UPC and the official population projections

- 4.15 ONS decided not to adjust its 2012-based Sub-national Population Projections (SNPP 2012) to take account of the UPC. This means that the UPC is excluded from the past migration flows which the projections carry forward. Therefore the CLG household projections, which are derived from SNPP 2012, also exclude the UPC. An ONS Questions and Answer document¹⁴ gives two reasons for the ONS's decision:
- UPC is unlikely to measure a bias in the trend data that will continue in the future; and
 - It would be methodologically difficult to adjust for, because it is unclear what proportions of the UPC are due to errors in the Census population counts as against errors in the migration estimates.
- 4.16 In an earlier consultation document¹⁵, ONS expands on the first point, noting that, insofar as the UPC is due to international migration '*it is likely that the biggest impacts will be seen earlier in the decade [2001-11] and will have less of an impact in the later years, because of improvements introduced to migration estimates in the majority of these years*'.
- 4.17 Among respondents to the consultation was the GLA Intelligence Unit, which has particular expertise in demography and a particular interest in the issue, because the

¹⁴ Office for National Statistics, Questions and Answers: 2012-based Subnational Population Projections, May 2014

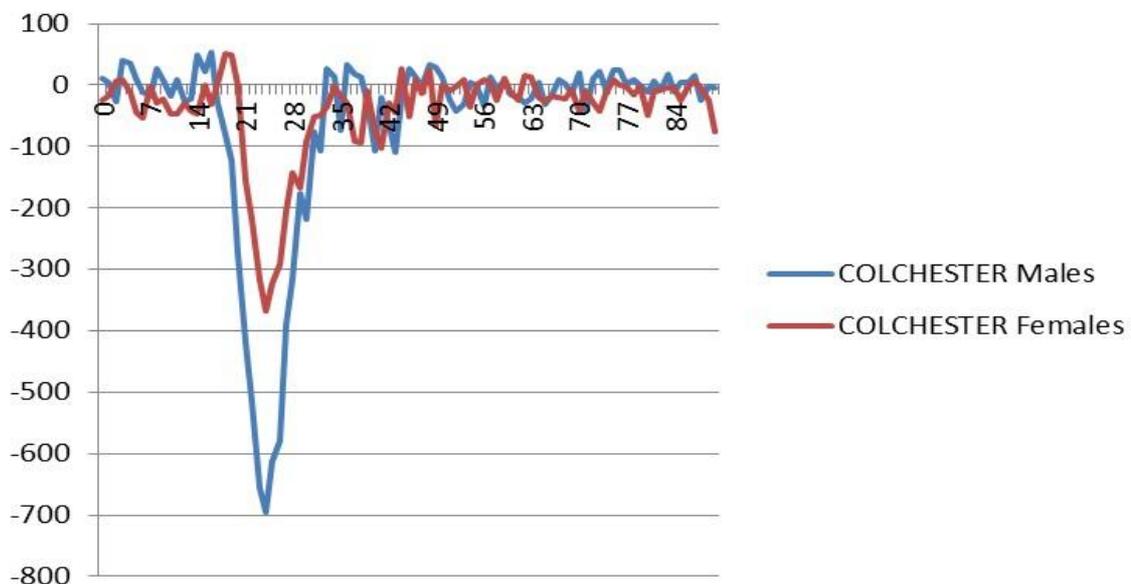
¹⁵ ONS, Report on Unattributable Population Change ; January 2014

UPC was relatively large for a number of London boroughs. The GLA paper¹⁶ questions whether the MYE population counts should be corrected for distortions related to UPC, recognising that these distortions are likely to impact on the 2012-based projections. Its answer to the question is that correcting the MYEs '*would be a very large undertaking and is probably unrealistic at this time*'. The GLA then asks if projected migration should be corrected through 'a mechanism such as rolling forward the UPC', but answers that this '*would likely prove unsuccessful and generate confusion*'. Therefore the paper advises that '*the GLA agrees with [the ONS's] decision... not to attempt to incorporate the UPC component within the projections*'.

UPC in Braintree Chelmsford & Colchester

- 4.18 In the July 2015 report we recommended no UPC adjustment to Chelmsford and Braintree; in both cases UPC was not significant enough to depart from the official projections.
- 4.19 In Colchester we traced the UPC to specific age groups; we found that most of this unattributed population comprises younger people, between the ages of 18 and 30, and especially males. The Census reported many fewer young males than expected and slightly fewer young females.

Figure 4-1 Colchester estimate of UPC by age



Source: ONS Mid-2010 Population Estimates (original and revised)

- 4.20 The most likely reason for this is mis-recording of either students or members of the armed forces. This is a well-known problem with official statistics, which rely on GP registrations to record domestic migration.

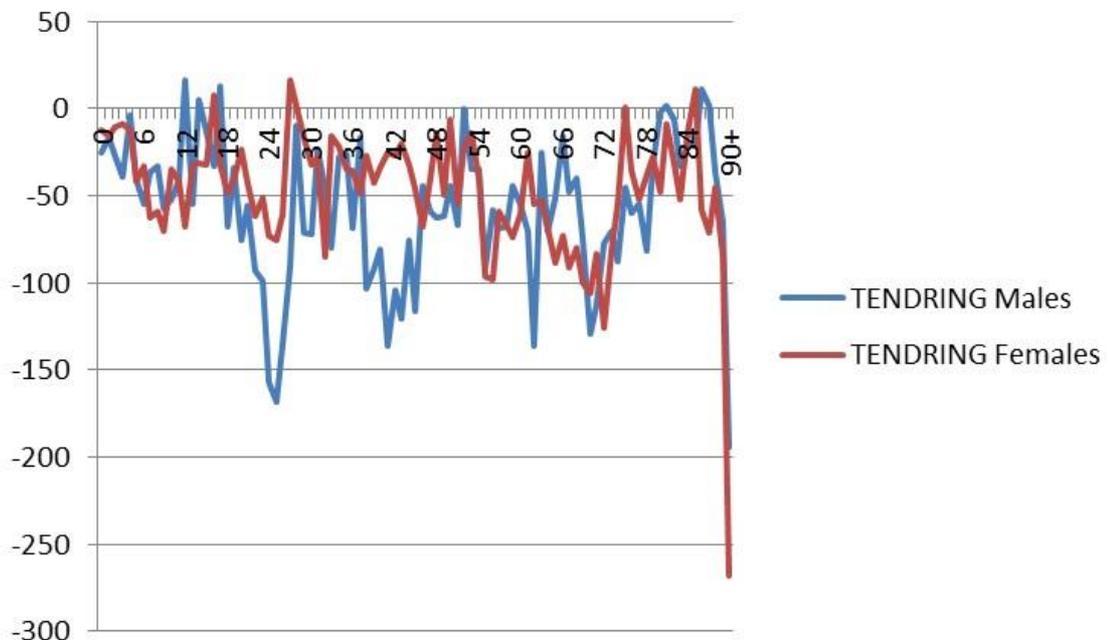
¹⁶ GLA Intelligence, Response to the SNPP 2012-based Subnational Population Projections consultation, February 2012

- 4.21 It is not uncommon for universities (including the University of Essex, which has an on campus health centre) to require students to register with local doctors on arrival at university. But following completion of their courses former students move away, but do not re-register with a new surgery until they need access to healthcare services. A similar pattern applies to army personnel; official statistics report them arriving, but slow to acknowledge them leaving.
- 4.22 So, in Colchester an adjustment to the official projections to remove these attributable people appeared justified. Projections that take account of the UPC are more likely to be robust because here the UPC represents those students and army personnel who moved out of the area unnoticed by the official statistics at time.

UPC In Tendring

- 4.23 Of the four Councils, Tendring has the largest and most problematic UPC issue.
- 4.24 Here UPC was over 9,000 people negative over the 10 year (Census to Census) period. The Census reported many fewer people in the district than were expected. The scale of this possible error makes it impossible to ignore.
- 4.25 Contrary to Colchester, the UPC appears to be spread evenly across the age groups (Figure 4-2)¹⁷. In this case the age breakdown provides no clue to the cause of the UPC. For Tendring Council this presents a dilemma that official statistics at the time would not answer. The July 2015 report was unable to conclude what the correct demographic projection could be for Tendring.

Figure 4-2 Tendring estimate of UPC by age



Source: ONS Mid-2010 Population Estimates (Difference between original and revised population profiles)

¹⁷ The 'bunching' at 90+ is because the data combines all people above 90 years old.

New Data regarding UPC in Tendring

- 4.26 In September 2015, so well after the EPOA demographic reports and the OAN report was originally drafted, ONS published a paper “Further understanding of the causes of discrepancies between rolled forward and census based local authority mid-year population estimates for 2011”. They also provided an associated data tool.
- 4.27 For this update this new data is only significant for Tendring where the UPC adjustment was very large and could not be traced.
- 4.28 Tendring commissioned an independent review of all their demographic data, including this new UPC data from one of the UKs leading demographers. In January 2015 John Hollis, former Chief Demographer to the GLA reported his findings to Tendring.
- 4.29 His full report is reproduced in Appendix B. In summary his professional opinion is that the SNPP 2012 can no longer be supported for Tendring. There is sufficient evidence to show that UPC was a product of misreported migration and the demographic projections should be corrected to reflect this.
- 4.30 Regarding the correction he concludes that the level of housing growth in the EPOA 10 Year, UPC adjusted, population projection (479 dpa) remains, in his professional opinion, the most sound starting point for Tendring. But, drawing on the new data he concludes Edge Analytics wrongly adjusted for the UPC error in their scenarios, and this has a bearing on the population profile.
- 4.31 When Edge corrected for UPC they assumed that the error related only to international migration whereas the new data shows the ONS had miscalculated both international and domestic flows.
- 4.32 This erroneous correction inadvertently produced a migration flow which is much too old because international migration flows are younger than domestic flows. So the EPOA UPC corrected population profile ‘cut off’ the younger international migration (believing it was exaggerated) while leaving the older domestic flows intact.
- 4.33 This has an important consequence for the EPOA economic led projections. This is because these projections increase migration (and so homes) until the labour force required to fill these jobs is found. If the assumed migration flow is younger, more likely to be working age, then fewer new homes are needed to fill any given number of jobs.
- 4.34 For this update we asked Experian to provide a new Tendring economic forecast and explicitly tested job and housing alignment in Tendring to determine whether an economic uplift in OAN is still justified. We do this because the EEFM projections, informing the EPOA work, will have been invalidated by the very different population assumption we now think is resident in the district today and will be resident in the future. We return to this in chapter 6.

Alternative base periods

- 4.35 As we explained earlier, to predict UK migration the ONS population projections carry forward the trends of the previous five years¹⁸. This choice of base period can be critical to the projection, because for many areas migration has varied greatly over time.
- 4.36 To sensitivity-test the impact of this, the Edge scenarios use two alternative base periods: five years from 2008-9 to 2012-13 and 10 years from 2003-04 to 2012-13. The tables below show the results.
- 4.37 In the tables below, reproduced from the Edge report, we show the CLG 2012 projection (labelled SNPP 2012) and these alternative scenarios. We also show the EPOA's Natural Change scenario. This is not a measure of housing need. It is of interest only because by comparing it with the other scenario we can see how much of the growth in the other scenarios is due to migration.

Braintree

Table 4-1 Alternative scenarios, change p.a. 2013-37, Braintree

Scenario	Population	Households	Dwellings
SNPP-2012	1,171	668	686
PG-10Yr-X	1,169	654	672
PG-5Yr-X	912	565	580
PG-10Yr	1,238	650	668
PG-5Yr	984	563	579
PG-10Yr-Fixed	1,261	598	614
PG-5Yr-Fixed	808	446	458
Natural Change	284	268	276

Source: Edge Analytics Greater Essex Demographic Forecasts Phase 7 Report

- 4.38 For Braintree the 2012-based official projection is the highest demographic projection tested. But it is also very similar to the 10-year which adds credibility to the SNPP 2012 as a base for long term planning; despite its short trend period.
- 4.39 UPC, as noted above, makes very little difference to the projections here. There is also little difference between the fixed and dynamic migration scenarios.

¹⁸ Similarly the distribution of international migration across local authority areas is projected from the previous six years.

Chelmsford

Table 4-2 Alternative scenarios, change p.a. 2013-37, Chelmsford

Scenario	Population	Households	Dwellings
SNPP-2012	1,108	643	657
PG-10Yr-X	1,031	571	584
PG-5Yr-X	975	590	603
PG-10Yr	1,096	595	608
PG-5Yr	1,026	605	618
PG-10Yr-Fixed	793	479	490
PG-5Yr-Fixed	800	503	514
Natural Change	310	395	404

Source: Edge Analytics Greater Essex Demographic Forecasts Phase 7 Report

- 4.40 For Chelmsford most of the projections, except the fixed versions, are very similar. Alternative trend-based projections are slightly lower than the SNPP 2012, but not so different to cast doubt on the use of the SNPP 2012 as the starting point. The difference between the 10 year projection (excluding UPC) and the SNPP 2012 (which is also excluding UPC) is around 10% and given the large margin for error in all the data is not sufficient to depart from the SNPP 2012 as the starting point.

Colchester

Table 4-3 Alternative scenarios, change p.a. 2013-37, Colchester

Scenario	Population	Households	Dwellings
SNPP-2012	1,638	834	868
PG-10Yr-X	1,824	952	990
PG-5Yr-X	1,639	892	928
PG-10Yr	1,638	856	891
PG-5Yr	1,493	811	844
PG-10Yr-Fixed	2,360	1,095	1,139
PG-5Yr-Fixed	1,999	1,009	1,050
Natural Change	555	561	584

Source: Edge Analytics Greater Essex Demographic Forecasts Phase 7 Report

- 4.41 In Colchester SNPP 2012 is lower than some of the other projections, but very similar to the 10-year projection when an adjustment is made for UPC.
- 4.42 As noted above we think a UPC adjustment is justified here because it relates to misreported out migration of younger people leaving university or the Army.

- 4.43 The SNPP 2012 is also very similar to the alternative five-year projection once the UPC has been taken into account. As with Braintree this adds credibility to the SNPP 2012 as a reasonable starting point.

Tendring

- 4.44 For Tendering the Edge report has been superseded by the new ONS data relating to UPC discussed above.
- 4.45 The updated demographic starting point for Tendring is 479 dwellings per annum, based on 10 year trend period and correcting for UPC in line with the September 2015 paper from the ONS. This 10 year projection is higher than a 5 year projection, which mirrors the ONS method. But, as noted above, 5 year projections are generally less robust because the short base period is more likely to be unduly influenced by the recession and so need treating with caution.

Conclusions

- 4.46 Our analysis above has confirmed that for most of the HMA the CLG 2012 projections are a robust demographic starting point. Scenarios that project migration from a 10-year reference period produce very similar results, indicating that in this particular case the shortness of the official base period (five years) does not cast doubt on the projections.
- 4.47 The only doubtful element in the projections relates to the Unattributable Population Change (UPC) in Tendring. Further work, with the benefit of the new data from the ONS, means that a UPC adjustment is justified. The John Hollis paper (Appendix B) endorses 480 dpa (rounded from 479 in the EPOA report) and concludes that 480 dpa is the best estimate of the demographic starting point. This is a 10 year projection with a UPC correction.
- 4.48 Table 4.4 shows the results for the whole HMA. For three of the districts we use the SNPP 2012 as the demographic starting point, but for Tendring this is replaced by the 480 dpa scenario which corrects for UPC.

Table 4-4 Alternative scenarios, change p.a. 2013-37, whole HMA

	Population	Households	Dwellings
Braintree	1,171	668	686
Chelmsford	1,108	643	657
Colchester	1,638	834	868
Tendring	993	445	480
HMA	4,910	2,589	2,691

Source: Edge Analytics Greater Essex Demographic Forecasts Phase 7 Report & John Hollis (Tendring)

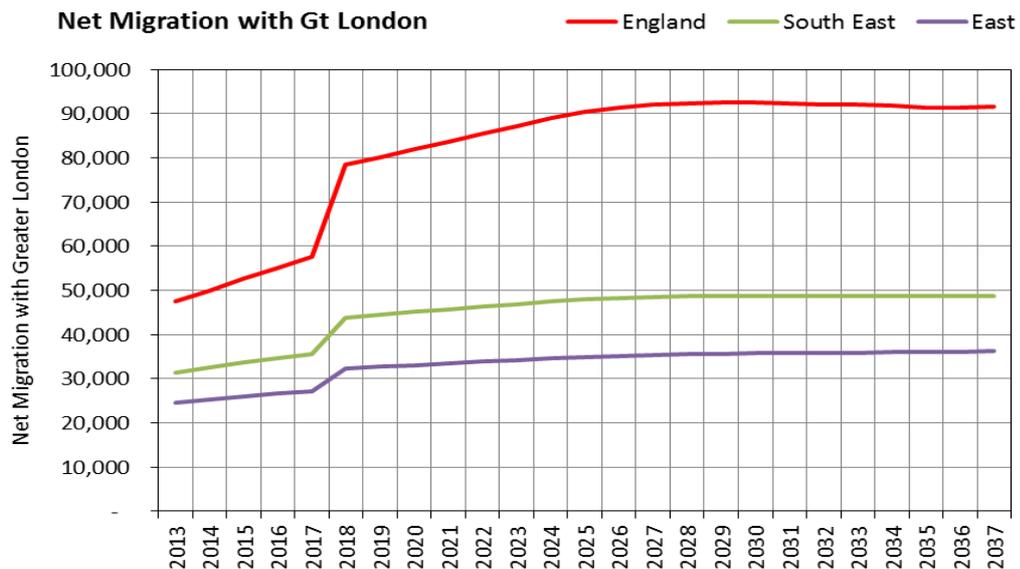
5 LONDON'S HOUSING NEED

5.1 As is widely known, the Further Alterations to the London Plan (FALP), adopted on 10 March 2015, recognise that London's land supply falls short of its projected housing need. For related authorities, which include our HMA, this means that additional new homes may be required to help accommodate this cross-boundary unmet need. Accordingly this chapter explores the potential implications for the HMA of the new London Plan.

The GLA demographic scenario

- 5.2 In evidence supporting the FALP, the GLA criticised the 2011-based official demographic projections for London. It claimed the projections understated out-migration from London, and hence overstated London's own housing need, because the reference period on which they were based included the last recession; and in that recession domestic out-migration fell steeply – from a net 70-80,000 per annum before 2008 to 32,000 in 2009.
- 5.3 The GLA maintained that in better economic times net out-migration would revert to its high pre-recession levels, and so fewer homes would be needed in London than the official projections implied. It follows of course that more homes would be needed outside London.
- 5.4 This is a key issue in this HMA. GLA has been working collaboratively with the EPOA through consultants Edge Analytics to better align the demographic projections used outside of London with those used by the GLA.
- 5.5 For this work the GLA demography team provided additional model output to enable an assessment of the effect of higher out-migration flows from London. The GLA has provided detailed information on the internal migration flows that underpin its Central scenario. At this stage we have no information about their method and assumptions. Figure 5-1 shows its predictions for England outside London, the South East and Eastern region.

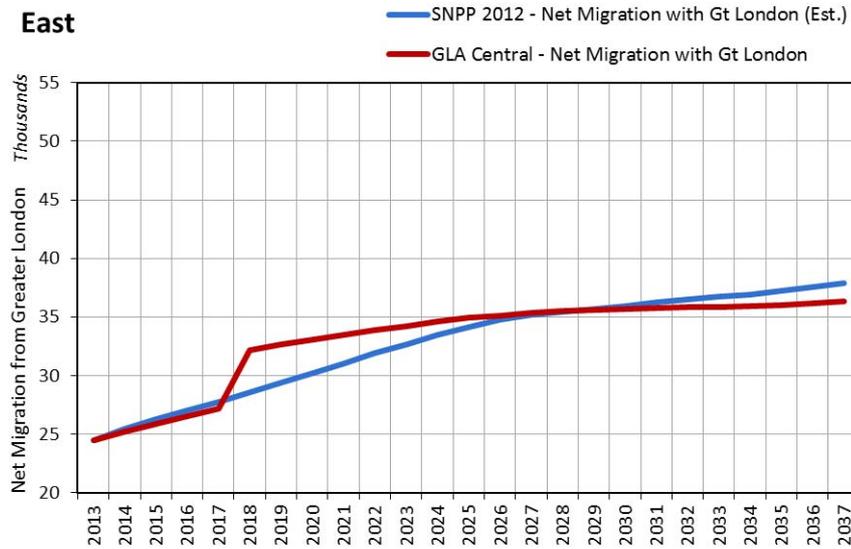
Figure 5-1 Net migration with Greater London, GLA Central Scenario



Source: Edge Analytics Greater Essex Demographic Forecasts Phase 7 Report, GLA Intelligence Unit

- 5.6 The Central Scenario shows net out-migration from London to the rest of England rising from some 48,000 persons in 2013 to 78,000 in 2018 and 91,000 in 2037. For the East of England region the uplift is much subdued: from 2013 to 2037 net out-migration from London to the region only increases from 28,000 to 37,000. The trend for the South East region is similar. The explanation is that in the Central Scenario much of London's out-migration spreads out over long distances, away from the regions that adjoin the capital.
- 5.7 Part of the reason could be that the East and South East regions were better insulated from the recession than England as a whole. If so, the recovery may also be felt less sharply in these southern regions; while further from London the upturn in job opportunities may be steeper, encouraging more out-migrants from the capital to make long-distance moves.
- 5.8 In any case, the GLA's Central Scenario is not alone in predicting growing migration from London to the East of England. The 2012-based SNPP shows a very similar future, as shown in Figure 5-2, which compares the two scenarios. The GLA scenario shows steeper growth up till 2026, but by 2026 the SNPP has caught up and for later years the SNPP shows slightly more migration than the Central Scenario.

Figure 5-2 Net migration from London to the East of England, thousands



Source: Edge Analytics Greater Essex Demographic Forecasts Phase 7 Report & GLA Intelligence Unit

5.9 This suggests that for the East of England as a whole the 2012-based official projections would require little or no adjustment to deal with London’s needs. In the next section we examine whether the same applies to our HMA.

Impact on the HMA

5.10 The Central Scenario provided by the GLA is not broken down by local authority. Edge Analytics have estimated this breakdown as part of EPOA Phase 7 report, apportioning the region’s migration to authorities in proportion to past flows. Results are shown in the table below and should be treated with caution.

Table 5-1 SNPP 2012 & GLA Central Scenario compared

	Net migration, persons p.a. 2013-37			Net new dwellings p.a. 2013-37		
	SNPP 2012	GLA Central Scenario	Difference	SNPP 2012	GLA Central Scenario	Difference
Braintree	985	1,004	19	686	698	12
Chelmsford	628	636	8	657	671	14
Colchester	822	916	94	868	913	45
Tendring	1,737	1,718	-19	705	698	-7
HMA	4,172	4,274	102	2,916	2,980	64

Source: EPOA Greater Essex Demographic Forecasts Phase 7 Report & GLA Intelligence Unit

- 5.11 The two scenarios are extremely close. Net annual migration is 4,274 in the GLA Central Scenario against 4,172 in SNPP 2012. Projected annual housing need is 2,980 dpa in the Central Scenario and 2,916 dpa in SNPP 2012.
- 5.12 For Tendering the London scenario has not be re-run to reflect the new, UPC adjusted, demographic projection. But as can be seen below the UPC adjustment for Tendering was actually negative and reduced the baseline projection. The testing concluded that Tendering was poorly related to London and was unlikely to attract any trend based increased migration flowing from London.

Conclusions

- 5.13 The GLA considers that demand for out-migration from London will exceed the official demographic projections, because those projections bear the imprint of the last recession, in which migration was suppressed.
- 5.14 Accordingly the GLA has built an alternative projection in which more people move out of London, so housing need in the capital is less than in the official projections, and conversely housing need outside the capital is greater. But in this scenario the places that receive additional migration from London do not include our HMA.
- 5.15 The HMA's housing need, as estimated from the GLA scenario, exceeds the housing need derived from the CLG 2012 projection by just 74 dpa. Therefore, even if we accepted that the GLA's view of the future is correct, it would justify only a small uplift in the HMA's housing provision.

6 FUTURE EMPLOYMENT

Introduction

- 6.1 This chapter examines whether housing provision in line with our preferred demographic projections would support enough workers to match the future job growth expected in the area. If that were not the case, in line with the NPPG the projections should be adjusted upwards, unless the labour market can be brought into balance by other means, such as transport infrastructure. The underlying principle is that planning for housing, economic land uses and community facilities / services should be integrated¹⁹, so that the demand for labour is fulfilled and there is no unsustainable commuting.
- 6.2 To answer this question we start from the East of England Economic Model (EEFM), as taken forward into the Edge study's jobs-led scenarios.

The EEFM / Edge forecasts

Method

- 6.3 The EEFM was created by Oxford Economics to provide integrated economic, demographic and housing need forecasts by local authority across the East of England region. Its reach was expanded in 2011, so it also covers the East Midlands and South East regions and a number of LEP areas in the three regions. The latest EEFM forecast, which informs the EPOA job-led scenario, is the autumn 2014 release and covers the period 2011-31²⁰.
- 6.4 In the EEFM, population change, and the resulting household change and housing demand, are partly driven by job opportunities. For each local authority district:
- The number of workplace jobs (labour demand) depends partly on the size of the local population – because people's consumption of local services creates jobs in retail, leisure and so forth – and partly on wider national / global demand. Numbers of jobs are translated into resident workers through double-jobbing²¹ and commuting, and resident workers into resident population through activity rates.
 - On the labour supply side, the future resident population is initially determined by natural change and trend-driven migration ('non-economic migrants') (the EEFM makes its own projections rather than using the official ONS ones).
 - The model compares the resulting numbers of resident workers with the labour demand estimated earlier, to produce unemployment in each area. Places with low unemployment attract above-trend net migration ('economic migrants') as

¹⁹ NPPF paragraph 70

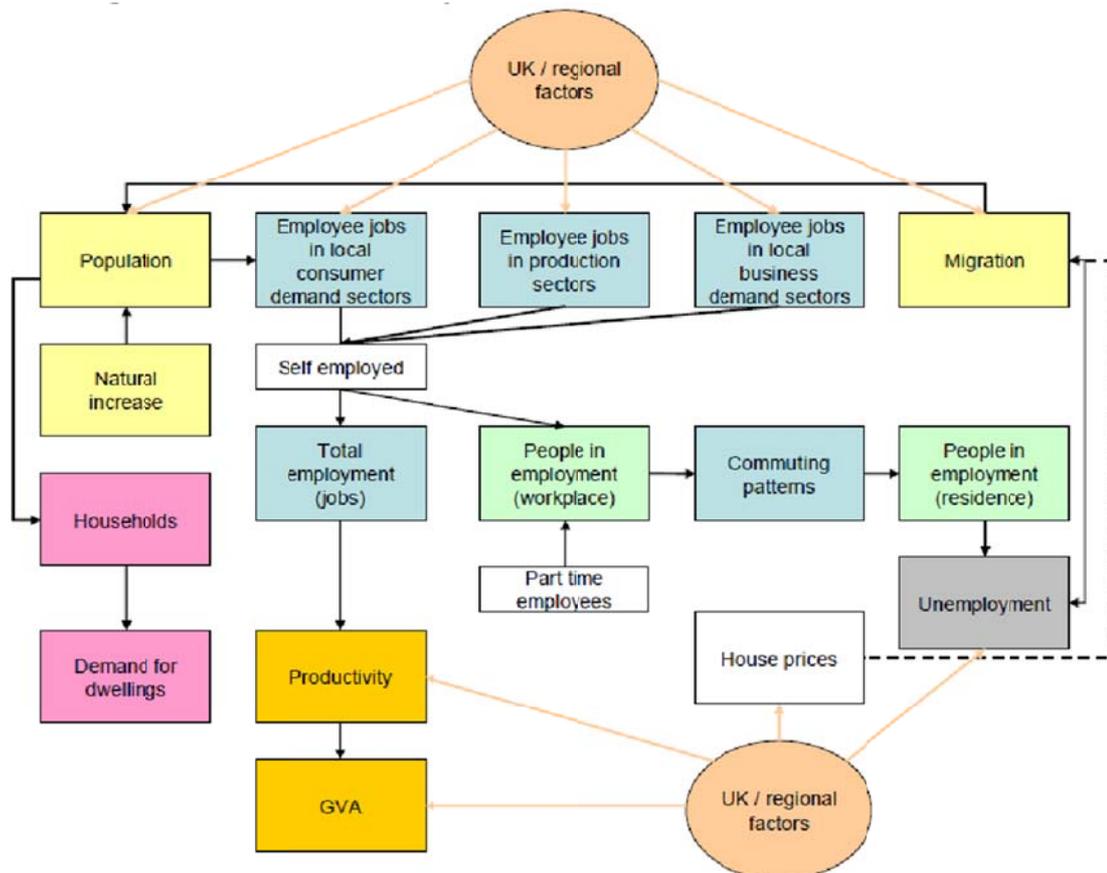
²⁰ Oxford Economics, East of England Forecasting Model: 2014 baseline results, January 2015

²¹ Double-jobbing is the difference between jobs and people employed. It results from the fact that some people have more than one job. This is not uncommon, partly because many jobs are part-time.

people move to places where there are more job opportunities. Hence the resident population in these places rises above the initial trend-driven number, while conversely in places where unemployment is high population falls below the trend-driven number.

- Finally, the resulting population is translated into household demand, again using Oxford Economics' own method, using projections of persons per dwelling, rather than the CLG household forecast).

Figure 6-1 Main relationships between variables in the EEFM Model



Source: Oxford Economics, East of England Forecasting Model, Technical report: model description and data sources, 2013

- 6.5 In short, EEFM uses 'economic migration' to balance the local relationship between jobs and labour. Its housing forecasts are job-led forecasts: they estimate the numbers of dwellings that would be required to meet housing demand, including the demand resulting from changing employment opportunities.
- 6.6 The job-led scenarios in the Edge Phase 7 study have the same intention and use a broadly similar approach. These scenarios take from the EEFM future workplace jobs and people employed, and three other key variables: unemployment rates, economic activity rates and commuting ratios²². But to model the relationship of workplace jobs to resident population to housing demand, Edge Analytics uses its own model,

²² The ratio of resident population in employment to workplace jobs

PopGroup, whose mechanics are different from EEFMs. In particular, in PopGroup there is no demand-side link whereby the resident population creates local jobs through its consumption of local services; and the supply link is based on fixed ratios, rather than the dynamic adjustment through unemployment rates used in the EEFM. EPOA also extends the end date of the forecast from 2031 to 2037, by continuing the EEFM changes for 2031 over the following six years.

Results

Edge Analytics

6.7 The Edge Analytics Phase 7 study shows growth of 57,000 jobs across the HMA in 2013-37. Most net new jobs are in Chelmsford (24,000) with 14,500 in Braintree and 14,500 in Colchester. Tendring adds only 3,400 new jobs (Figure 6-1).

Table 6-1 Job growth, 2013-37, Edge Analytics

	Net new jobs	Net new jobs p.a.
Braintree	14,592	608
Chelmsford	24,312	1,013
Colchester	14,424	601
Tendring	3,408	142
HMA	56,736	2,364

6.8 These are baseline or policy-neutral estimates. If the Councils choose economic targets which depart from the forecasts, they may require more (or fewer) homes than the following analysis suggests.

6.9 Table 6-1 shows Edge Analytics' translation of these jobs into housing need, as shown in its 'Employed People' scenario²³. It suggests that to meet job-led housing need the HMA should provide 3,137 net new dwellings per annum (dpa) against the 2,916 dpa in the CLG household forecasts. The difference is more than accounted for by Braintree and Chelmsford, where the Edge job-led forecast shows 159 and 118 dpa respectively above the official projections. For Colchester the job-led scenario is also above the official projection, but only by 52 dpa. For Tendring the job-led scenario shows 108 fewer dwellings per year than the official projection, suggesting that the district's economy will not provide enough new jobs to support the official population projections (however it should be borne in mind that these projections may overstate trend-based population growth, due to Unattributable Population Change).

²³ Edge Analytics also provides another job-led scenario, called 'Jobs'. The Edge report (paragraph 5.16) suggests that the 'Employed People' scenario takes account of double-jobbing, while 'Jobs' does not – in effect assuming that each employed person has just one job. This is why we prefer 'Employed People'.

Table 6-2 Net new dwellings p.a. 2013-37, SNPP 2012 and Edge Analytics Employed People scenario

DPA	CLG 2012	EPOA	Difference
Braintree	686	845	159
Chelmsford	657	775	118
Colchester	868	920	52
Tendring	705	597	-108
HMA	2,916	3,137	221

6.10 In summary, the Edge job-led scenario suggests that if population change accords with the 2012-based SNPP the HMA as a whole, Braintree and Chelmsford will not have enough workers to meet demand. By contrast, Tendring will have too many workers to meet demand.

EEFM

6.11 However the EEFM forecast, for the shorter period 2011-31, provides a different view of labour market balance;

- For the HMA as a whole, EEFM shows slightly lower population growth than SNPP 2012 – 4,837 person p.a. against 5,032 persons p.a. in the SNPP. Thus EEFM, contrary to Edge, suggests that the official projection would provide slightly more than enough people to support the expected job growth.
- Of the individual districts, for Braintree and Colchester there is more population in EEFM than SNPP 2012, suggesting that if population grows in line with the official projection it may not provide enough workers. But the differences are small, and given that the HMA as a whole is in surplus the imbalance could possibly be resolved by small changes in commuting.
- For Chelmsford, the EEFM and SNPP show virtually the same population growth.
- For Tendring the EEFM figure is well below the SNPP, confirming that trend-based population growth would result in a labour surplus.

Table 6-3 Population 2011-31: EEFM and SNPP 2012

	2011	2031	Change	Change p.a.
Braintree				
SNPP 2012	147,470	171,070	23,600	1,180
EEFM	147,500	173,522	26,022	1,301
Chelmsford				
SNPP 2012	168,480	190,940	22,460	1,123
EEFM	168,500	190,291	21,791	1,090
Colchester				
SNPP 2012	173,670	208,770	35,100	1,755
EEFM	173,600	210,752	37,152	1,858
Tendring				
SNPP 2012	138,150	157,630	19,480	974
EEFM	138,100	149,875	11,775	589
HMA				
SNPP 2012	627,770	728,410	100,640	5,032
EEFM	627,700	724,439	96,739	4,837

Source: EEFM, ONS

- 6.12 We suspect that the discrepancy between Edge Analytics and the EEFM conclusions results from the ‘translation’ of EEFM into the quite different PopGroup model. But, it is not possible to trace the detailed interactions between the two models, and therefore we cannot tell which job-led demographic scenario is more plausible (EEFM or Edge). Nor do we know how the Edge analysis has resolved any potential inconsistencies between the two models.
- 6.13 Our opinion, as stated in the Planning Advisory Service notes is that PopGroup should not be used to try and align jobs and housing. As a demographic model it cannot replicate labour market dynamics and ‘flex’ variables such as unemployment, economic activity or commuting in line with ‘policy off; market demand. It requires the user of the demographic software to superimpose their independent view of these variables and on occasion make ‘policy on’ choices about future commuting or unemployment. Critically, if the demographer disagrees with the economic forecasting house about any set of variables and chooses to depart from them then this invalidates the number of jobs forecast.
- 6.14 The most common area of disagreement between demographers and economists is over future economic activity rates. The economic models often forecast higher

economic activity rates than simple projections of economic activity rates would suggest. Objectors to plans often suggest that the economic models are over-optimistic about their economic activity rate assumptions and more cautious rates should be used instead; so resulting in a need for more new homes. But if in the future the economists are disproved and economic activity rates are lower in the future then the number of forecast jobs in the national, regional and so local economy would also be lower. All the economic models need to present a credible national picture of total job growth aligned to the national supply of labour and if economic activity rates are lower than they expect today then all the forecast models will be reduced according.

6.15 This is clearly a complex area of analysis where demography and economics need to align. But, in this case from the two scenarios taken together, our pragmatic conclusion is that Braintree, Chelmsford and the HMA as a whole to match future job opportunities may need housing slightly the official 2012 projection. However, the size of the uplift is uncertain, and the EPOA estimates should be considered a maximum.

Reality checks

6.16 As a reality check on the relative position of the different districts, in the table below we show two measures of labour market balance:

- Economic activity rates, which equal the sum of employed and unemployed residents divided by the working-age population
- Unemployment rates, which equal unemployed residents divided by economically active residents.

Table 6-4 Economic activity rate %

	2011	2013	2031
Braintree	71.9	68.7	71.4
Chelmsford	72.2	74.0	80.1
Colchester	69.1	67.7	66.4
Tendring	60.2	58.5	60.3

Source: EEFM, Edge Analytics

Table 6-5 Unemployment rate %

	2011	2013	2031
Braintree	3.4%	3.1%	1.7%
Chelmsford	3.2%	2.7%	1.7%
Colchester	3.7%	3.2%	1.8%
Tendring	6.1%	5.5%	3.6%

Source: EEFM, Edge Analytics

6.17 Braintree and Chelmsford have high economic activity rates and low unemployment throughout the period, pointing to a tight labour market, in which demand exceeds supply. Conversely Tendring has low activity and high unemployment, pointing to a surplus of workers over jobs. Colchester is in an intermediate position, with an activity rate between those of Chelmsford/Braintree and Tendring, but low unemployment, virtually equal to Braintree and Chelmsford.

The Experian forecast

- 6.18 As a cross-check on the EEFM results we have also considered job forecasts from Cambridge Econometrics and Experian. The Cambridge forecast shows considerably less growth than either of the others, so we do not discuss it further²⁴. But the Experian version merits close analysis.
- 6.19 Contrary to EEFM's demand-led approach, Experian's forecast takes a supply-constrained approach to the labour market. Rather than allow job-led migration as the EEFM does, it assumes future population growth in line with SNPP 2012, and ensures that future job growth is consistent with the labour supply produced by that population, taking account of the potential for reduced unemployment, increased activity rates and changes in commuting.
- 6.20 The Experian forecast provides both labour demand (a relatively unconstrained estimate, based on long-term trends since 1997) and labour supply. When demand exceeds supply, this means that trend-based population growth in line with the official projections would fall-short of job-led demand, and the model provides an estimate of the shortfall, measured in numbers of jobs.
- 6.21 The table below compares the Experian jobs forecast (June 2015²⁵) with the EEFM one, for the period 2011-31.

²⁴ Baseline Economic Projections for Essex Technical Report for Essex County Council. July 2014 but based on a November 2013 model run extending only up to 2026.

²⁵ This just-published Experian forecasts shows slightly lower job growth than the previous vintage, dated march 2015. The main reason is that Experian reduced rates of double-jobbing nationally and regionally, for greater realism.

Table 6-6 Jobs 2011-31: Experian and EEFM

is	2011	2031	Change	Change p.a.
Braintree				
Experian	58,460	68,830	10,370	519
EEFM	59,416	72,956	13,540	677
Chelmsford				
Experian	91,970	113,950	21,980	1,099
EEFM	94,600	115,800	21,200	1,060
Colchester				
Experian	86,210	109,900	23,690	1,185
EEFM	89,800	103,200	13,400	670
Tendring				
Experian	45,920	56,830	10,910	546
EEFM	45,100	50,900	5,800	290
HMA				
Experian	282,560	349,510	66,950	3,348
EEFM	288,916	342,856	53,940	2,697

Source: EEFM, Experian. Note this data will differ slightly from that reported in BRES. This is because the forecasters quality-check their data to overcome variations caused by BRES sampling. Also because the forecasters include self-employment, people on paid training schemes and service personnel.

- 6.22 For the HMA as a whole Experian shows more job growth than EEFM – 3,348 net new jobs per year as against 2,697 in EEFM. The bulk of the difference is accounted for by Colchester, where Experian shows almost twice as many net new jobs as EEFM. In support of their view Experian note that Colchester is known to be an area with especially buoyant growth prospects. Numerous investment projects have been planned in the area, both into regeneration schemes in towns and the Knowledge Gateway at the University of Essex. Experian believe that it will be one of the fastest growing areas in the East of England, which itself will be one of the fastest growing regions in the country.
- 6.23 Experian also show more jobs than EEFM for Tendring. One likely explanation is that Experian expects much greater population growth than EEFM, due to Unattributed Population Change. The reasons for that Experian assumes population growth in line with SNPP 2012, which excludes the (negative), UPC; while the EEFM does not use

the SNPP, but rather starts from projecting forward past population trends that include the UPC.

- 6.24 Experian estimate that none of the districts in the HMA are labour-constrained at present. From 2016 onwards its model predicts a constraint in just one district, Chelmsford, but this is very small – rising to just 80 ‘unfilled jobs’ by 2031.
- 6.25 In summary, the Experian forecast predicts that in the period 2011-31 the HMA could deliver more job growth than forecast by EEFM, consistent with the population shown in the SNPP. In Experian’s view this job growth would not be constrained by labour supply, except very marginally in Chelmsford.

January 2016 Tending Scenario

- 6.26 As noted above the SNPP 2012 is not robust in Tending because of the large UPC error. To test the alignment of jobs and houses in Tending PBA again worked with Experian who replaced their default population assumption (SNPP) with a new UPC corrected set of data which uses 550 dpa as the Tending OAN. We discuss the rationale for 550 dpa in chapter 7.
- 6.27 In Appendix C we have included the results of this testing along with Experian’s note. This shows that there is no need for an economic uplift to a housing need figure of 550 dpa.
- 6.28 The data shows that the new UPC adjusted migration profile is younger than previously assumed (SNPP 2012) and the size of the workforce slightly larger. In response to this increase in labour supply in the 550 dpa scenario the labour market in Tending has adjusted; not by increasing the number of jobs, but instead by decreasing economic activity rates increasing unemployment. This is because the local economy is structurally weak and simply increasing labour supply does not stimulate sufficient demand for jobs. In this case increasing the labour supply possibly results in undesirable economic consequences.
- 6.29 PBA discussed the merits of running additional (higher) scenarios with Experian, but given results of the 550 dpa scenario this was discounted. Providing an even larger labour supply would still not remedy the structurally weak demand for labour in the local economy.

Conclusions

- 6.30 The Edge Analytics Phase 7 study suggests that in the period 2013-37 the population growth shown in the 2012-based official projections would not be enough to support the growth of 2,364 jobs p.a. of expected in the area. The study estimates that to support that job growth would require 221 net new dwellings per annum over and above the official projections, virtually all in Braintree and Chelmsford.
- 6.31 The EEFM and Experian forecasts, which cover the slightly shorter period 2011-31, disagree with this view.
- 6.32 EEFM, which provides the economic starting point of the Edge study, estimates that for the HMA as a whole the official projection would provide slightly more than enough workers to support the 2,697 new jobs p.a. expected in 2011-31. In regard to

individual districts it suggests that if population follows the official projections there will be small labour shortfalls in Colchester and Braintree, but these will be more than offset by a labour surplus in Tendring.

- 6.33 The baseline Experian forecast predicts growth above the EEFM figure, at 3,348 jobs p.a., consistent with the official demographic forecasts. It suggests that the only district constrained by labour supply will be Chelmsford, and the constraint will be vanishingly small. As noted above we have run a new Tendring scenario with UPC corrected, but the conclusion is the same; no economic uplift is warranted in Tendring.
- 6.34 These differences of opinion are not surprising, given the uncertainties inherent in local economic forecasting. Overall, we conclude that to fulfil the future demand for labour the HMA might need housing development over and above the SNPP 2012 projection, located in Chelmsford and Braintree. But this additional housing supply is impossible to quantify and the EPOA estimate of a 221-dpa uplift is very much a maximum.
- 6.35 As a final caveat, it is important to note that the economic forecasts we have used are policy-neutral. If the Councils promote economic growth ambitions above the baseline forecast, the job-led housing need will rise accordingly.

7 PAST PROVISION AND MARKET SIGNALS

Introduction

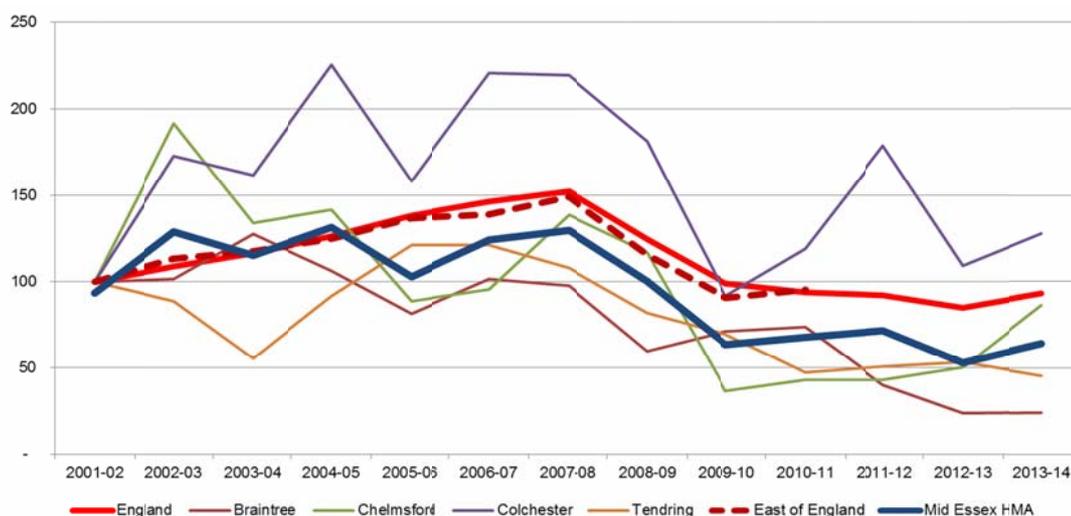
- 7.1 The PPG deals with past provision and market signals in two separate sections. Paragraph 15 explains that trend-based demographic projections will understate future housing need if household growth has been suppressed by undersupply in the past, and where this is the case the projections that roll forward that past should be adjusted upwards. Paragraph 19 lists a number of market signals, or indicators that may be used to identify such undersupply.
- 7.2 Set out below, is the analysis of past provision and market signals. This is assessed for the HMA as a whole and then for individual districts. In relation to each area we first look at the history of housing delivery, to see if there is evidence that restrictive planning has constrained land supply and hence housing development. We then look at market signals, beginning with house prices.

The HMA

Housing development

- 7.3 Figure 7.1 compares housebuilding across the HMA with England starting in 2001.
- 7.4 In the first few years the HMA tracked the rate of national housing delivery. It also tracked the region. But, from 2004-5 onwards the HMA lagged behind, and this continued until the last data point (2013-14).

Figure 7-1 Housing completions in the HMA indexed 2001=100



Source: Local authority AMRs &

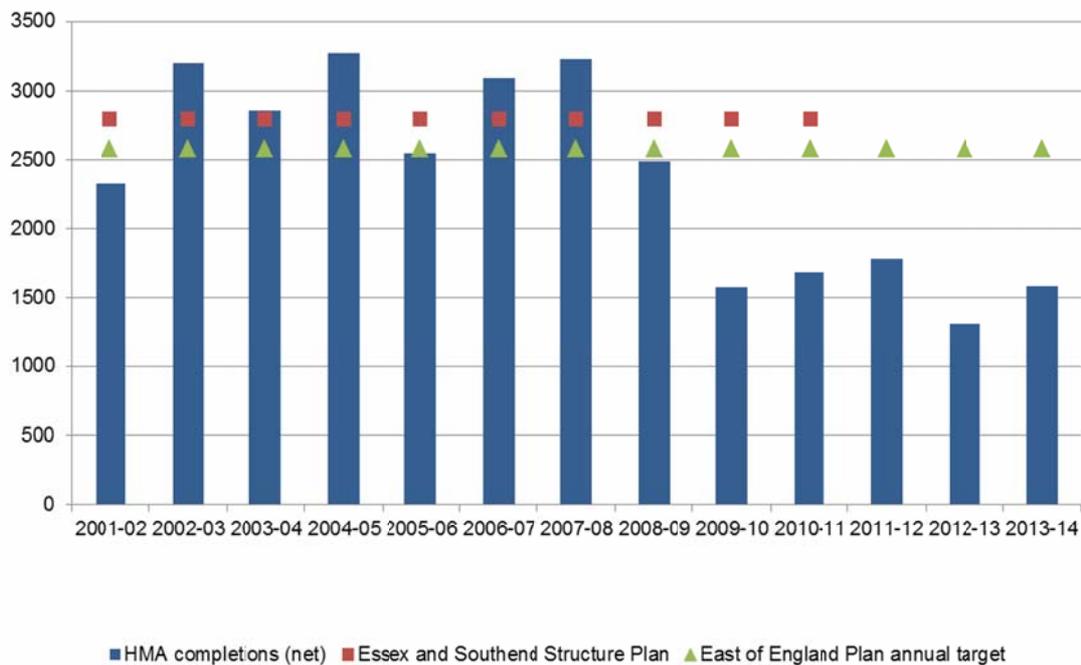
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/373576/Net_Supply_of_Housing_England_2013-14.pdf. Note – region data was discontinued in 2011.

- 7.5 Figure 7.2 below shows housing completions in the HMA from 2001 onwards (the start date of the former Regional Spatial Strategy). It shows that, although the rate of

completions was slower in the HMA than the national average housing targets were generally being met or exceeded until 2009-10. This does not mean that demand or need was being met: strategic planning policy at that time aimed to direct housing growth to other areas, including the urban areas (brownfield land) and also the growth areas such as Milton Keynes & South Midlands and the Thames Gateway.

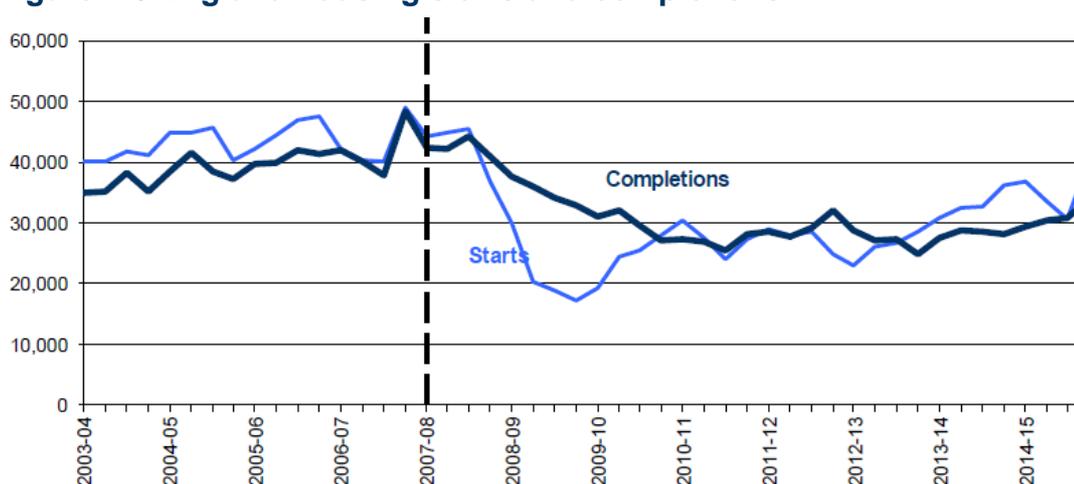
7.6 The chart shows both the former Structure Plan targets and the RSS. The Structure Plan was expected to run until 2011, but as a strategic planning document was replaced by the RSS in the mid to late 2000s. At this point the RSS became the primary strategic planning document.

Figure 7-2 HMA Completions compared to targets



Source: Local authority AMRs

7.7 From 2010 onwards the HMA fell behind its planning targets. There are at least two possible reasons for this. The first was obviously the recession, which almost halved the national rate of housing delivery as shown in the chart below, reducing the effective demand for housing and the viability of development sites.

Figure 7-3 England housing starts and completions

Source:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/428601/House_Building_Release_-_Mar_Qtr_2015.pdf

- 7.8 A second factor was that in Essex the planning system was transitioning from the former Structure Plan to the new RSS. This caused a period of uncertainty in land supply across the HMA. New large allocations aiming to meet the RSS targets were emerging, but they were delayed by the transition, which coincided with the recession. While we cannot disentangle the impact of these two factors, it seems likely that the recession played a larger role, so even if more land had been allocated sooner there would still have been a large downturn in housebuilding.

House prices

- 7.9 In this section, we review past change in house prices, affordability, market rents and overcrowding. Firstly, we look at average house prices. If the housing market has been unduly constrained in the area, this may be reflected in house prices rising relative to national and regional benchmarks and neighbouring authorities. .
- 7.10 Table 7.1 below shows average (mean) house prices for the four HMA authorities, the county, region and England. Since the latest dataset, for Q2 2013 does not provide a figure for the region, we also show the most recent set that does – Q3 2012.

Table 7-1 – Mean house prices

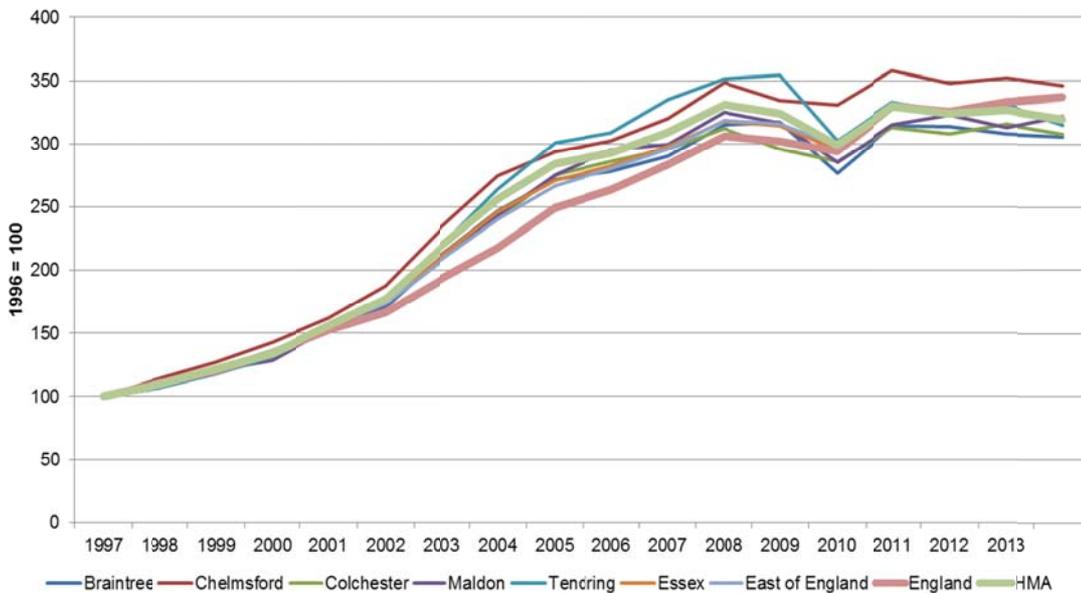
	2012 Q3	2013 Q2
Braintree	230,933	215,851
Chelmsford	269,352	248,157
Colchester	211,560	202,625
Tendring	179,765	168,829
Essex	251,269	246,369
East of England	244,036	N/A

	2012 Q3	2013 Q2
England	253,690	246,764

Source: ONS/CLG Live table 581.

- 7.11 For three of the HMA’s authorities the average house price is lower than for the county average, which in turn is slightly above the figure for the East of England average and virtually equal to that for England. The one exception is Chelmsford, where the average price is above all three benchmarks.
- 7.12 However, for this analysis these absolute prices tell us little, because there will always be areas of England which are more expensive than other parts. Prices vary between local authority areas because some areas are more attractive and more prosperous than others, and also they may have different kinds of housing. Therefore, as noted in the PPG a more useful indicator of the demand-supply balance in different areas is the rate of change in house prices.
- 7.13 Figure 7-4 House price change (indexed) shows changes in average house prices in the districts and comparator areas since 1996, which was the base date of the former Structure Plan.

Figure 7-4 House price change (indexed)



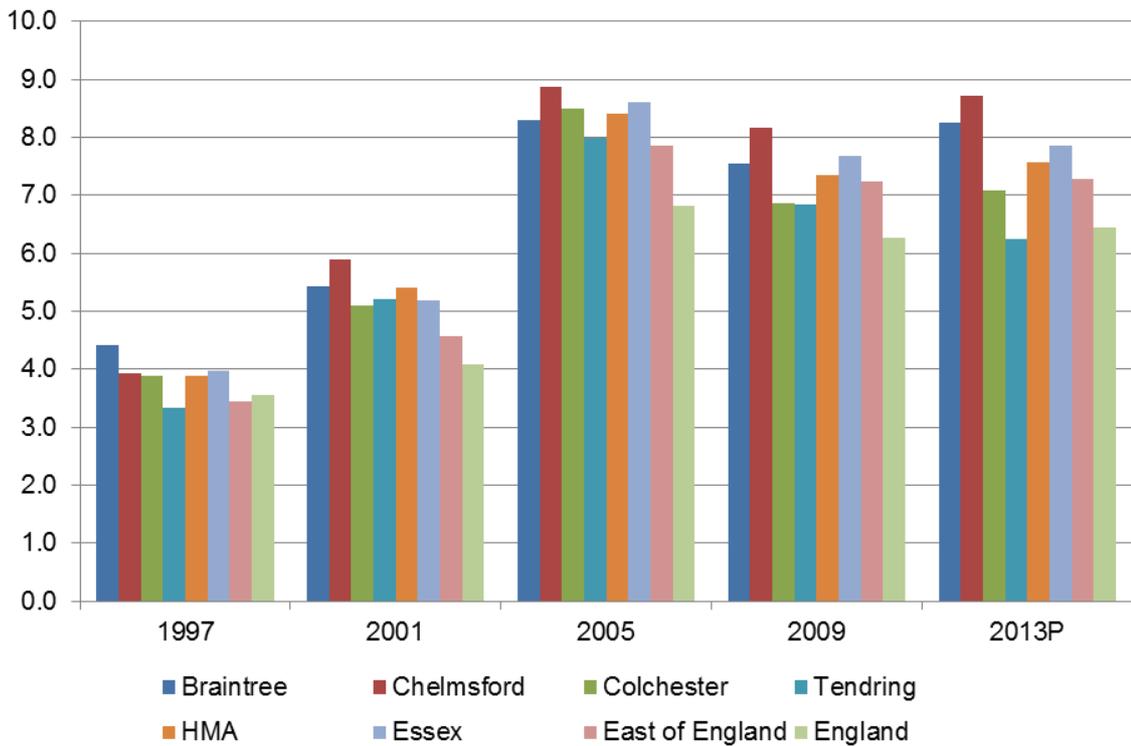
Source: ONS / CLG Live table 581.

- 7.14 Between 2001 and 2009 house price change in the HMA outstripped that in England and slightly exceeded the regional increase. But, these differentials were eroded in the recession. Since 2009, when as noted above house building fell sharply in the HMA, house prices have fallen back to mirror England and the region. This suggests that the HMA’s falling delivery in the recession was due to low demand rather than restricted land supply.

Affordability

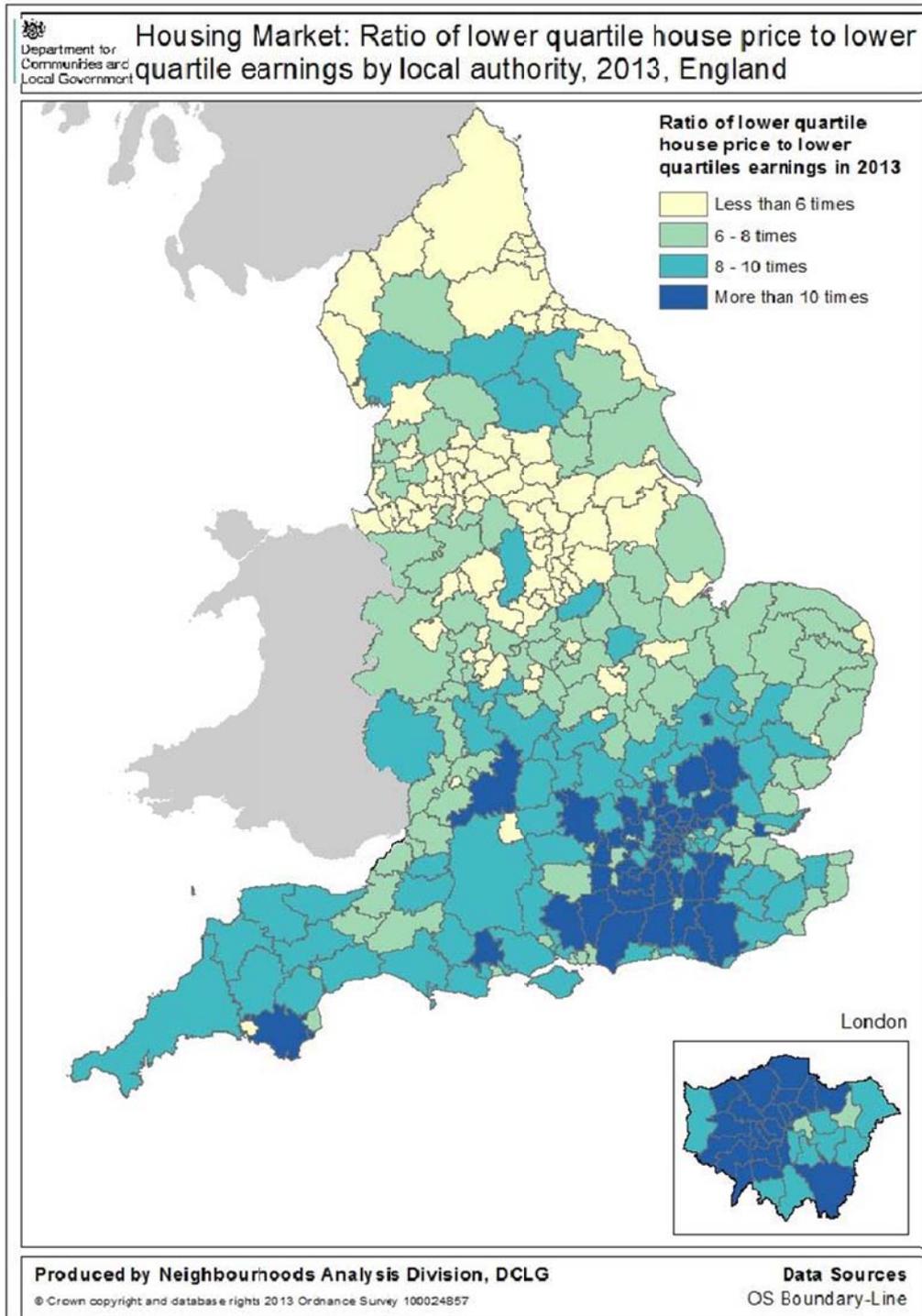
- 7.15 Affordability, as defined by CLG, is the ratio of lower-quartile house prices to the lower- quartile earnings of people who work in the area. A high ratio indicates low affordability, where the cheapest dwellings are less affordable to people on the lowest incomes.
- 7.16 Figure 7-5 Housing affordabilitybelow shows affordability for the HMA and its districts compared to Essex, the East of England and England. For the HMA as a whole affordability is consistently worse than the national and regional benchmarks, though very close to Essex.

Figure 7-5 Housing affordability



Source: CLG Table 576 Ratio of lower quartile house price to lower quartile earnings (2013 data are provisional).

- 7.17 The map below; produced, by CLG shows this HMA in a national context. It shows that in 2013 the authorities in this HMA were some of the more affordable locations in the wider south east of England, and offer some of the most affordable properties in close proximity to London.



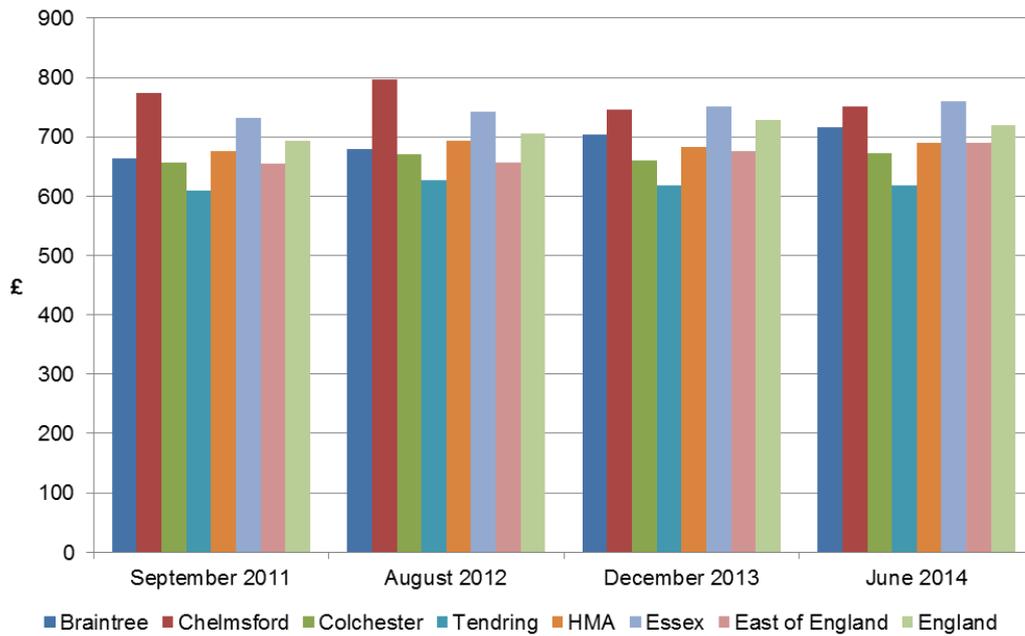
Source:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/321014/Chart_575.pdf

Market rents

- 7.18 The ONS only started to publish data on market rents from September 2011, so there is currently only a limited amount of data running between 2011– 2014.
- 7.19 Throughout this period, average rents in the HMA have been close to those for the East of England and national averages. Rents in the HMA are generally £30-£50, below the national average. Rents are relatively stable in the HMA.

Figure 7-6 Market rents

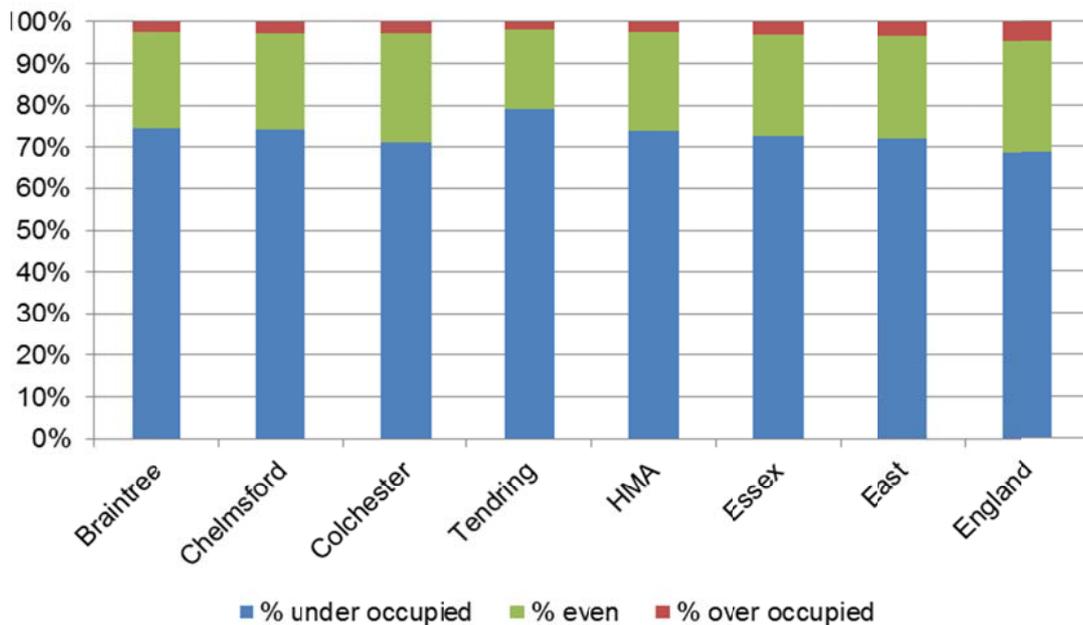


Source: Source: VOA Private Rental Market Statistics

Overcrowding and concealed households

- 7.20 The PPG suggests that an above-average incidence of overcrowding may indicate undersupply. Figure 7-7 below shows occupancy rates (based on the ONS definition) derived from 2011 Census data. However, this data need to be interpreted with caution because different data collection methods were used in the production of the 2001 and 2011 data sets.
- 7.21 On average overcrowding in the HMA is similar to Essex as a whole and slightly less than the national average.

Figure 7-7 Overcrowding and under-occupation



Source: Census QS412EW - Occupancy rating (bedrooms)

- 7.22 A further indicator is the number of concealed families. A concealed family is one living in a multi-family household who is not the primary family in that household. The definition includes couples with or without dependent children and lone parents of dependent children, but it excludes single people. An abnormally large number of concealed households can also be a sign of market pressure.
- 7.23 In common with the statistics for overcrowding, numbers of concealed families are comparatively low, and more so in the HMA than elsewhere. The 2011 Census reported that 1% of families in the HMA were concealed, half the 1.9% national average²⁶. Proportions have increased since 2001, when the proportion of concealed families was 0.7% in the HMA and 1.1% in England²⁷. These small increases are likely to be due to the recession. A caveat to bear in mind with concealment data is that due to reasons of confidentiality the ONS randomize the local data, which questions its reliability²⁸.
- 7.24 In summary, concealed families in the HMA are even less common than in England, and while numbers have increased over time in the HMA this conforms with the national trend, and has increased more slowly in the HMA than the national change. There is therefore no evidence here to justify an uplift to the demographic projections.

²⁶ Source: Census Table DC1110EW1a

²⁷ Source: Census table CAS 011

²⁸ Census table footnote: 'Figures have been randomly adjusted to avoid the release of confidential data.'

Summary

- 7.25 For the HMA as whole there is no evidence that housing has been under-supplied, or that planning has been particularly restrictive.
- 7.26 The rate of housebuilding in this HMA fell behind the England rate in the mid-2000s. But, the HMA was broadly meeting its plan targets until the recession took hold. From 2009 onwards it is very difficult to disentangle the effect of the national recession from any possible local land constraints. Housebuilding in the HMA broadly reflected national trends.
- 7.27 There is also no evidence of undersupply when we consider the rate of house price change. By 2013 any divergence in house prices since the early 2000s had been eroded.
- 7.28 As is the case across England, houses have become less affordable, although this is not as severe in the HMA authorities as many other parts of the wider south east of England.
- 7.29 Below, we consider each district in turn to develop a better understanding of the HMA market dynamics.

Braintree

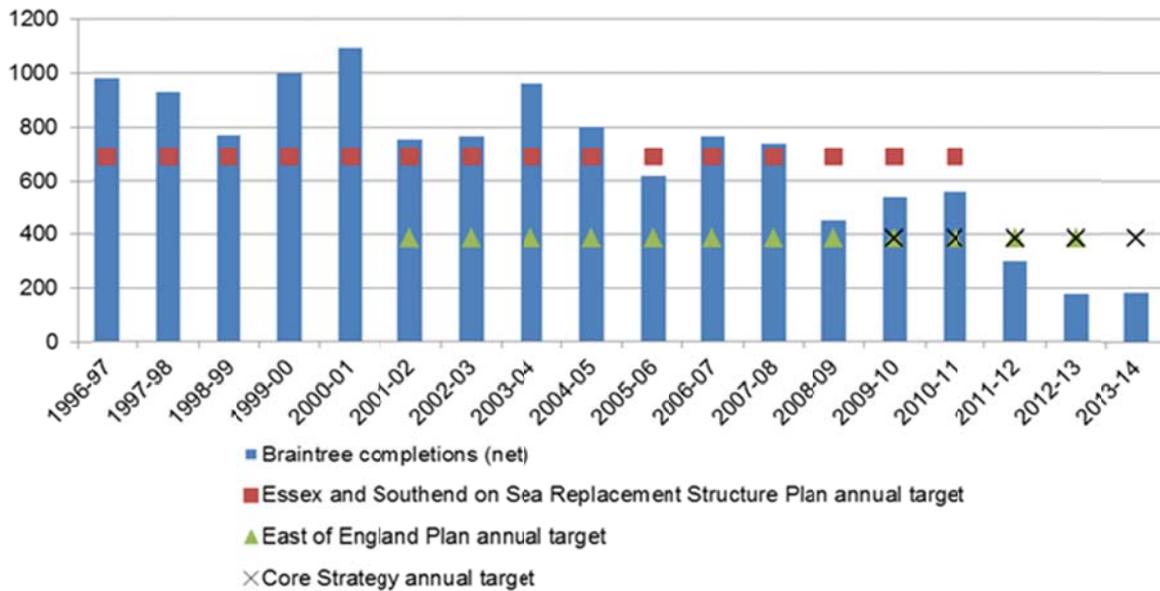
Planning background

- 7.30 The Essex and Southend Structure Plan had a requirement of 10,300 dwellings (an annual average of 687 dpa) between 1996 and 2011.
- 7.31 Between 1996 and 2011, 11,718 net additional homes were completed in the district. This was 1,418 dwellings above the Structure Plan target.
- 7.32 The Braintree Local Plan Review was adopted in 2005. The plan took its housing target from the Essex and Southend Structure Plan target.
- 7.33 The East of England Regional Spatial Strategy set a much lower target for the district than the Structure Plan. The plan had a minimum housing target of 7,700 dwellings over the period 2001-2021 or an annual average of 385 dpa. Between 2001 and 2014, 7,607 dwellings had been completed in the district leaving a residual requirement of just 93 dwellings to be completed by 2021.
- 7.34 The Core Strategy was adopted in September 2011. Braintree's Core Strategy had a minimum target of 4,637 dwellings between 2009 and 2026 – an annual average target of 273 dwellings per annum.

Housing delivery

- 7.35 The chart below shows housing delivery in Braintree from 1995-96 and 2013-14 against the plan target.

Figure 7-8 Braintree housing completions



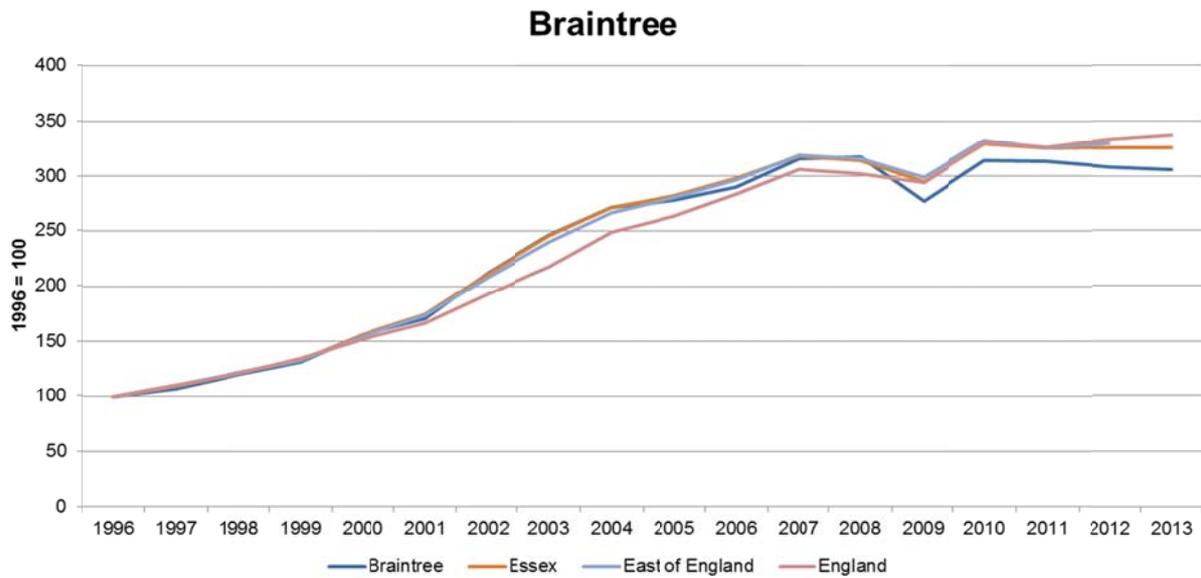
Source: AMR (Corrected CLG figures)

- 7.36 Two similar targets run from 1995-96 to 2010-11: the Structure Plan target, which covered 1996 to 2011, and the Braintree Local Plan target. In 2001-02, the East of England RSS target commenced, and the Core Strategy target started in 2009-10.
- 7.37 From 1996 to 2011, the district achieved, and in many cases surpassed its annual average housing target. Peak periods include 1996 to 2000, which is attributable to large housing allocations on greenfield sites in the 1980s and 90s.
- 7.38 From 1996 to 2005, housing delivery in the district exceeded the Structure Plan annual average targets. This is attributed to new allocations coming forward. In the early years of the RSS housing delivery exceeded those annual average targets by a considerable margin; partly as the result of a ‘policy overhang’ from the previously higher targets.
- 7.39 From 2009 the effects of the economic slowdown were evident in Braintree’s housing delivery, but this was the time when the Council was transitioning to the RSS target, which was lower compared with the Structure Plan. Delivery fell most severely in 2013 and 2014 at the time the national housing market was starting to improve, but then almost doubled in 2014/15 when 409 dwelling were completed.

House prices

- 7.40 Long-term change in Braintree closely followed national trends until 2009. In more recent years there has been an improvement though the change in average house price is still lower than the comparator areas.
- 7.41 There is nothing in this evidence to suggest that housing supply has been constrained in Braintree, despite the fall in delivery rates.

Figure 7-9 Braintree house prices indexed

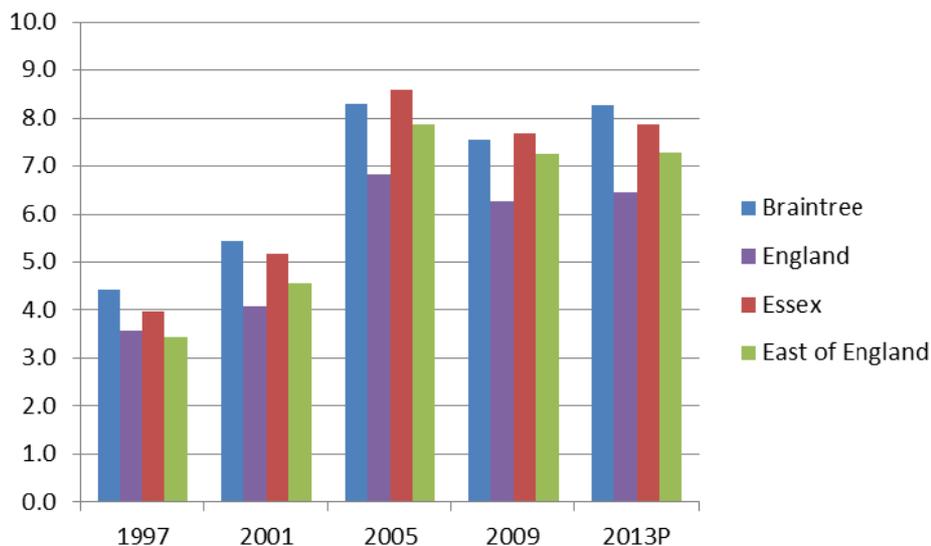


Source: ONS / CLG Live table 581.

7.42 Commercial data sources (rightmove.com) provide a more up-to-date snapshot of house prices than ONS / CLG. But, the data is not available a district level. This data shows that the average house price in Braintree (town) at March 2015 was £220,635. For comparison, the average house price in Essex was £269,132, £266,896 for the East of England and £242,006 in England. This data accords with the less up to date ONS / CLG data showing that average house prices in Braintree are lower than all other comparator areas.

Affordability

Figure 7-10 Braintree affordability



Source: CLG Table 576

7.43 Housing in Braintree is relatively unaffordable. Ratios were higher in Braintree than all comparator areas except Essex. Between 2005 and 2009 Braintree’s ratio fell though

it was broadly similar to the county and regional ratios. Between 2009 and 2013 Braintree has again seen an increase in its ratio outperforming all other comparator areas.

Summary

- 7.44 Braintree may be an extreme example of why the demand and supply of housing can only be considered robust for larger areas, and not at the individual local authority level.
- 7.45 Despite the fact that delivery fell in Braintree; because of the economic downturn and the transition from a higher Structure Plan target to the much lower RSS target, house prices in the district remained largely unaffected. The likely reason is that demand for housing was interchangeable with other areas in the HMA. Instead of buying new homes in Braintree houses were bought elsewhere in the HMA.

Chelmsford

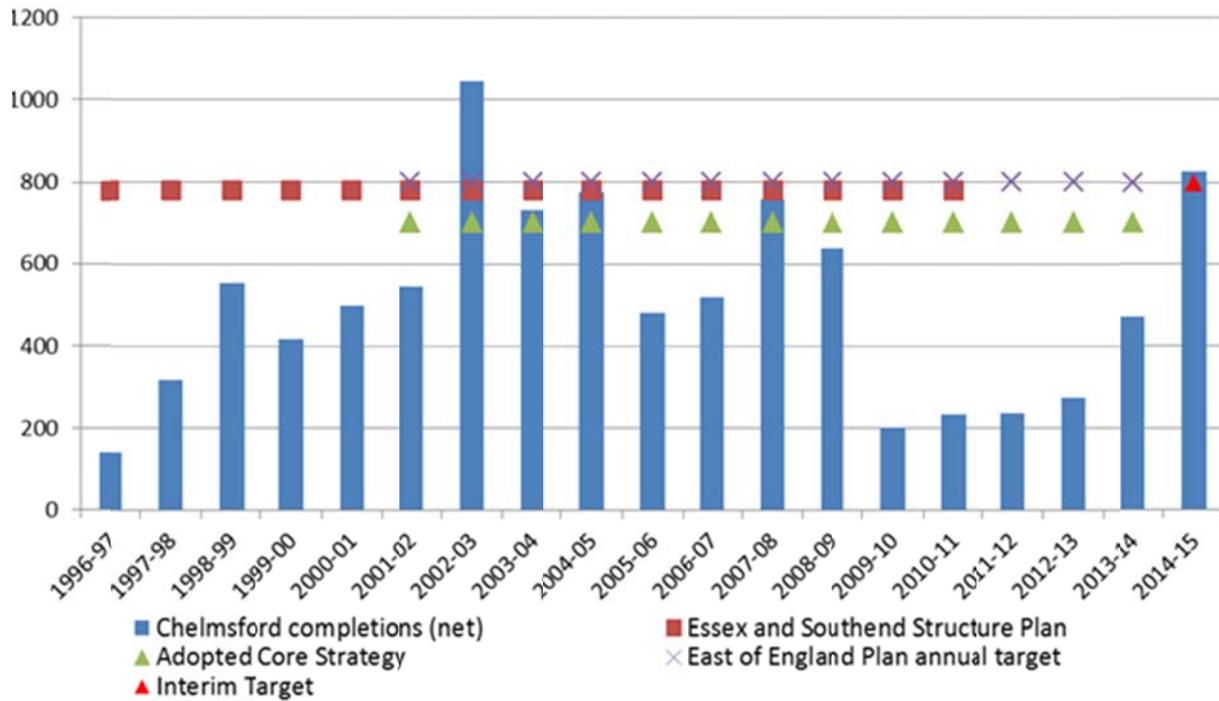
Planning background

- 7.46 Chelmsford's Core Strategy was adopted in 2008, and has a minimum target of 14,000 net new dwellings (700 dpa) in 2001-2021 in accordance with the emerging East of England Plan. However, the Council's Housing Trajectory made provision for 16,170 new dwellings, although the adopted target remained at 700 dpa. When finally approved the East of England Plan target for Chelmsford was 800 dpa. In October 2014, the Council approved an annual Interim Housing Target of 800 dpa.
- 7.47 Between 2001-02 and 2014-15, 7,731 new homes were completed in the district. This leaves a residual requirement of 6,269 homes to be completed between 2015 and 2021 based on the overall 14,000 target, equal to 1,044 dwellings per annum.
- 7.48 The Core Strategy sought to make the best use of Previously Developed Land (PDL) predominately in Chelmsford's Urban Area. The majority of the remaining housing requirement would be made up of new neighbourhoods to the North of Chelmsford's Urban Area providing 4,000 homes.
- 7.49 The Core Strategy did not allocate sites for the proposed urban extensions in North of Chelmsford. This was done through the North Chelmsford Area Action Plan.
- 7.50 The Council expected greenfield sites to come forward in the later part of the plan period.

Housing delivery

- 7.51 Figure 7.11 below shows housing completions from 1996-97 to 2014-15 against the applicable plan targets.
- 7.52 The Essex and Southend Structure Plan ran from 1996 and 2011, and had a plan target of 777 dpa. The East of England Plan ran from 2001 to 2021 and had a target of 800 dpa.
- 7.53 Chelmsford Core Strategy has a target of 700 dpa. In October 2014 the Council approved an Interim Target of 800 dpa for calculation of its supply.

Figure 7-11 Chelmsford housing completions



Source: AMR

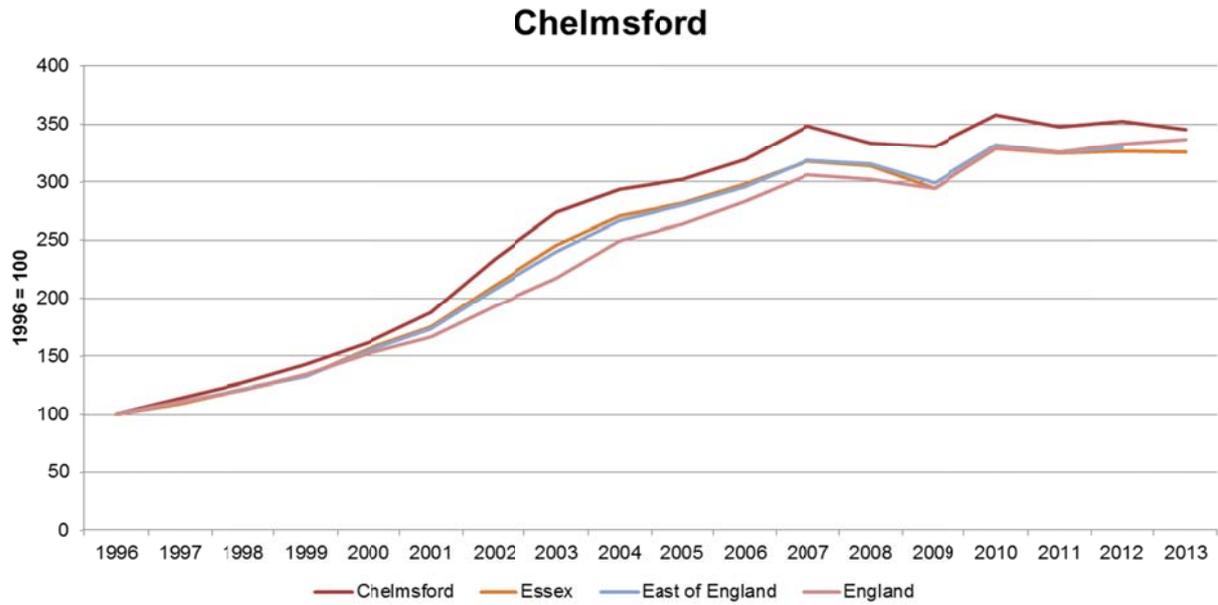
- 7.54 Housing completions only met the plan target on a few occasions. Housing completions peaked in 2002-03 to 2004-05, in 2007-08 and more recently in 2014-15.
- 7.55 The significant drop in housing completions from 2009/10 to 2012/13 was attributed to the economic downturn and the uncertainty developers had in bringing forward sites. During 2007 – 2010 the impact of the recession on completions was less notable as sites that commenced development continued to be built out.
- 7.56 According to the Council's AMR, the expectation was that housing completions would accelerate in the later part of the plan period. In 2012; the Council granted planning permission for strategic housing sites including the North East Chelmsford Urban Extension.
- 7.57 Housing completions increased steeply in 2013-14 and 2014-15.

House prices

- 7.58 The CLG / ONS house price data is the most robust available, but has a time delay before being published. More recent data is available from commercial sources²⁹. This alternative data shows that the average house price in Chelmsford at March 2015 was £271,487. For comparison, the average house price in Essex was £269,132, £266,896 for the East of England and £242,006 in England. So average house prices in Chelmsford are on average higher than the comparator areas.

²⁹ Rightmove.com

Figure 7-12 Chelmsford house prices (indexed)

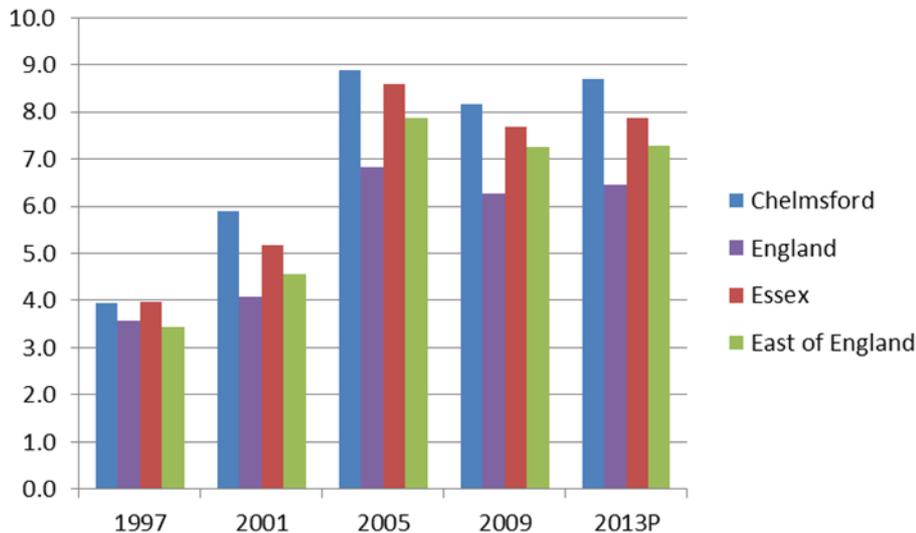


Source: CLG / ONS Live table 581.

- 7.59 The data above is indexed to 1996 to align with the Structure Plan. It shows that house prices in Chelmsford increased slightly faster in the late 1990s, but the ‘gap’ between the districts, the County and England was well established by 2003. Between 2003 and 2013 the district tracked the County and the Region with no evidence of abnormal house price inflation.
- 7.60 This suggests that the low rates of housing delivery, below target in recent years, did not result in unmet demand for housing to any greater extent than England as a whole. The data also shows that for the period covered by the EPOA projections, house prices largely tracked the comparators.

Affordability

- 7.61 Housing in Chelmsford is relatively unaffordable compared with the county, regional and national ratios. Affordability ratios in Chelmsford dropped slightly between 2005 and 2009 though the affordability ratios have since risen.

Figure 7-13 Chelmsford affordability

Source: CLG Table 576

Summary

- 7.62 Homes in Chelmsford are more expensive than most of the rest of HMA. The likely reasons for this include the area's accessibility to London and the presence of highly paid commuters. Local affordability is the worst in the HMA.
- 7.63 Chelmsford's relative position in terms of house prices is well established. Since the early 2000s house price change has largely tracked the county and region despite the Council not meeting its former housing targets in full.
- 7.64 One possible reason for this is that the housing need was met elsewhere; either within this HMA or in other housing market areas. Most housing demand in this HMA is migration led and this demand is likely to be footloose. There is limited evidence of market pressure here because the people who may have migrated to Chelmsford, to fill homes if built as planned, were provided with homes elsewhere.

Colchester

Planning background

- 7.18 The Essex and Southend Structure Plan had a plan target of 11,000 homes (773 dpa). In 2004 the Council adopted the Colchester Local Plan, which took its housing target from the Structure Plan and identified sufficient provision to meet the Structure Plan requirements.
- 7.19 Housing development was to be focused on the following broad allocations - Town Centre, North Colchester, East Colchester and the Hythe, South Colchester (The Garrison) and Stanway.
- 7.20 Between 1996 and 2011 12,178 homes were completed in the district. There was therefore a surplus of 1,178 dwellings in the district against both the Structure Plan and Local Plan targets.

- 7.21 The East of England RSS had a plan target of 17,100 homes to be built between 2001 and 2021. The annualised plan target was 830 dwellings per annum.
- 7.22 The Council adopted its Core Strategy in December 2008. The Core Strategy took its target from the East of England RSS. However, since the plan period was extended from 2021 to 2023 an additional 1,710 homes were added to the Core Strategy target. As such the Core Strategy target was for 830 dpa up to 2021, and 855 units for the 2021 – 2023 period, a slightly higher target compared with the RSS.

Housing delivery

- 7.23 Figure 7.14 below shows net housing completions from 1995-96 to 2013-14 against the plan targets applicable at the time.

Figure 7-14 Colchester housing completions



Source: Council AMR

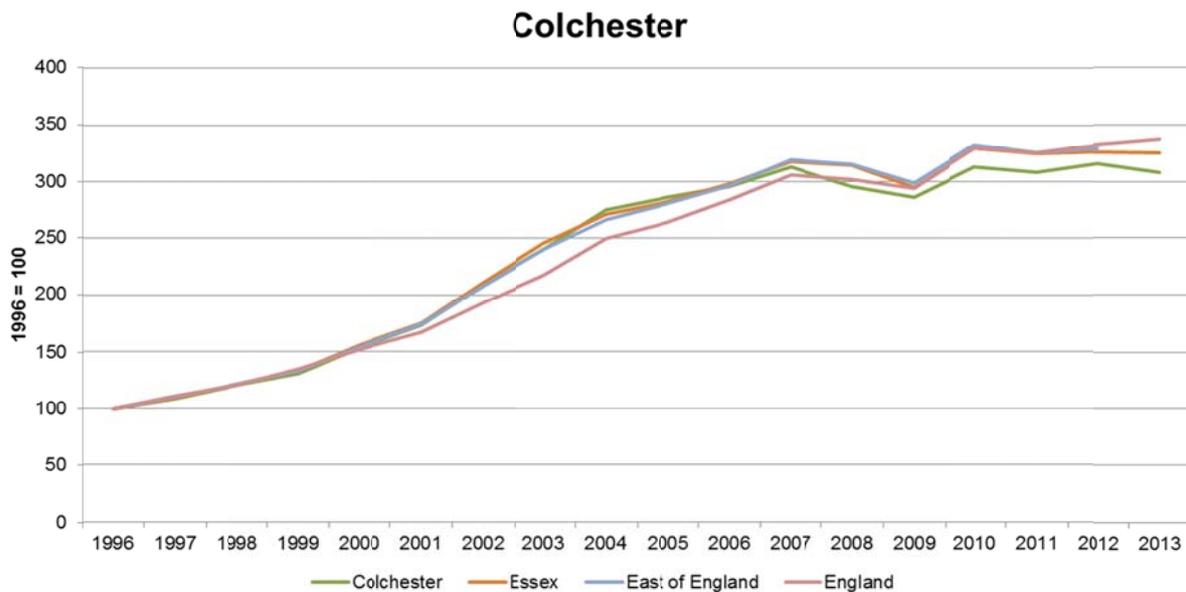
- 7.65 Two similar targets run from 1995-96 to 2010-11: the Structure Plan target and the Local Plan target. In 2001-02, the East of England RSS and the Core Strategy started with slightly higher targets.
- 7.66 From 1996 to 2001 housing completions in the borough were below the Structure Plan target.
- 7.67 From 2002 to 2008 the trend reversed and the borough saw high completions as site allocations began to be taken up. During this period, allocations came from a broad number of sites including the Colchester Garrison, North Colchester and Stanway. For the HMA as a whole this peak in delivery may have partly offset the low rate of housebuilding in other parts of the HMA, especially Chelmsford.
- 7.68 While housing delivery continued at a comparatively high rate during the early part of the economic crisis 2008-2009, completions fell in 2010, reflecting the recession. There was a steady increase in housing delivery from 2011 to 2012.

- 7.69 Since the recession it seems that the market demand, rather than the supply of housing land has constrained housing delivery in Colchester.

House prices

- 7.70 The average house price in Colchester at March 2015 was £198,510³⁰ – substantially less than in Essex (£269,132), the East of England (£266,896) and England (£242,006).

Figure 7-15 Colchester house price (indexed)



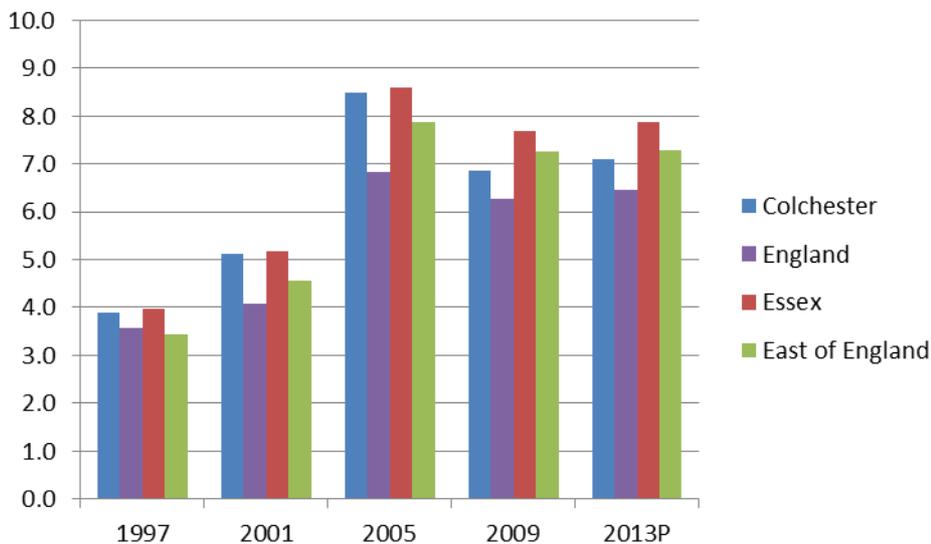
Source: ONS / CLG Live table 581.

- 7.71 Long-term change in house prices closely followed the regional trend for the East of England. Since 2007 all other comparator areas outperformed Colchester.

Affordability

- 7.72 The affordability ratio in Colchester increased between 1997 and 2001, and again between 2001 and 2005. During this time Colchester's ratio was in line with the Essex ratio, but higher than the regional and national ratios. Between 2005 and 2009 ratios generally fell across the board though Colchester saw a greater fall than comparator areas. More recently, there has been a small increase in the affordability ratio in Colchester, though it is lower than the Essex and East of England ratios.
- 7.73 The chart below therefore indicates that Colchester has relatively good affordability when compared to county and regional benchmarks.

³⁰ Rightmove.com

Figure 7-16 Colchester affordability

Source: CLG Table 576

Summary

- 7.74 Contrary to Chelmsford, housing delivery in Colchester held up relatively well in the recession. In the reference period on which the official demographic projections are based, delivery fell below targets, but not as fast as other areas. There was also a supply of land available should the market be willing to deliver more new homes. This history, and the market signals we have analysed, does not indicate evidence of undersupply.

Tending

Planning background

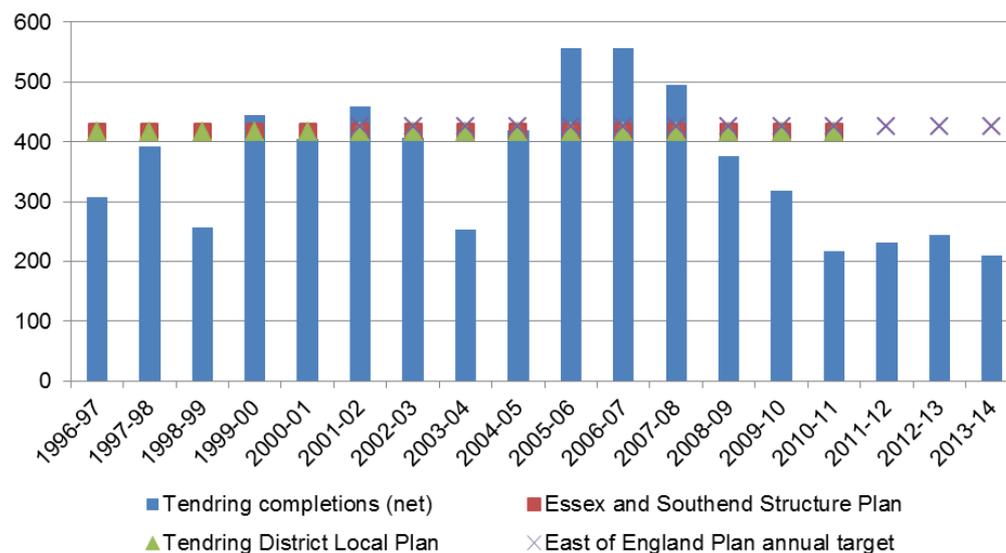
- 7.75 The Essex and Southend-on-Sea Structure Plan had a plan period running from 1996 to 2011, and had a housing target of 6,250 homes giving an annualised target of 417 dwellings per annum (dpa).
- 7.76 In December 2007, the Council adopted a Replacement Local Plan that superseded the 1998 Local Plan that had a plan period of 1992 to 2001, but that had a short plan period between 2004 to 2011. The housing target in the Replacement Local plan was based on Policy H1 of the Replacement Structure Plan. i.e. it sought to deliver 2,917 homes between 2004 and 2011.
- 7.77 Between 1996 and 2011 the district delivered 5,865 dwellings against a Structure Plan target of 6,250 dwellings. This left a residual shortfall of 385.
- 7.78 The East of England RSS had a minimum plan target of 8,500 dwellings per annum from 2001 to 2011. This translates into annualised housing target of 425 dpa.
- 7.79 Between 2001 and 2014 the district delivered 4,744 dwellings (365 dpa) against an RSS target of 5,525 dwellings. This resulted in a shortfall of 781 dwellings.

- 7.80 While the earlier part of the plan period was characterised by high numbers of completions on Previously Developed Land and windfall sites, from 2009 onwards completions were associated with greenfield site allocations in the Local plan.
- 7.81 The Council does not have an up to date development plan. The structure plan derived Local Plan is now time expired (2011), and has not yet been replaced.

Housing delivery

- 7.82 Figure 7-17 below shows housing completions in the district from 1996 to 2014.

Figure 7-17 Tending housing completions



Source: AMR

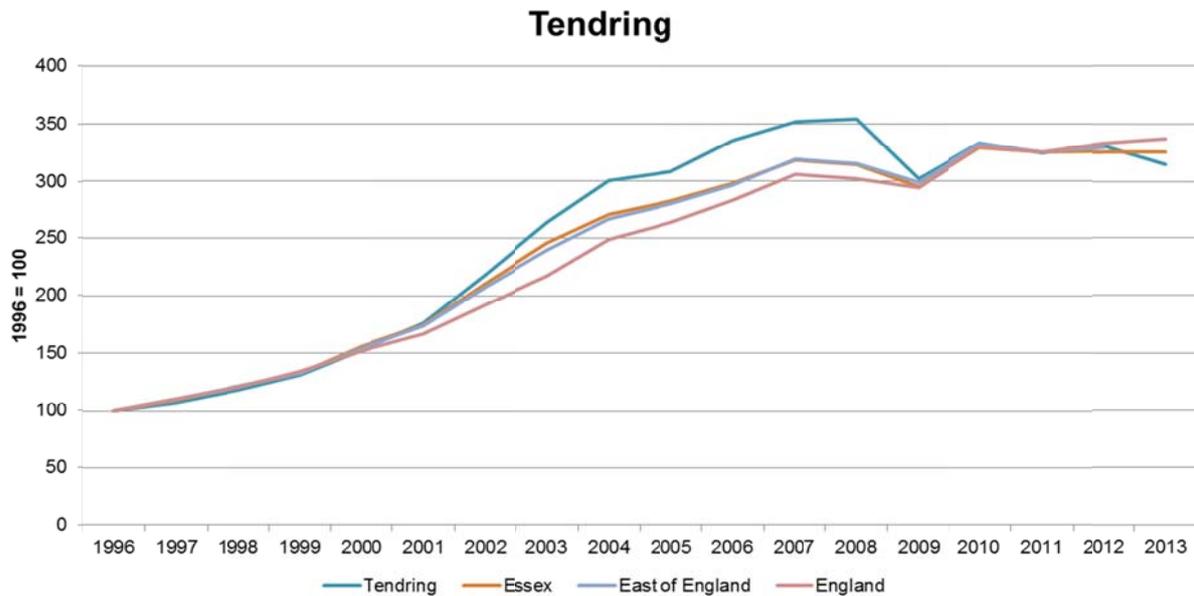
- 7.83 Until 2008, housing completions in the district met, and in some cases exceeded the Structure Plan targets. This was due to a particularly buoyant housing market, and a large supply of Previously Developed Land and windfall sites meaning there was a supply of housing land to meet the demand for new homes.
- 7.84 But, as noted above the district currently does not have an up to date development plan with new land allocations. This means that the main supply of housing land is now windfall sites, but the recession has reduced the supply of 'windfall sites'. The five-year land supply in the district has fallen from a 4.6 year supply in 2010 to 2.7 years in 2014.
- 7.85 If the Council had an up to date plan it would be able to demonstrate a larger land supply. But, this is no guarantee that this would be taken up if the demand for new homes is weak.

House prices

- 7.86 House price change outstripped the region, the country and England until the recession. But, a sharp fall between 2008 and 2009 brought the district back into line with these comparator areas. But in recent years the Council has been without a development plan and new housebuilding possibly constrained. This lack of

newbuild property in recent years may have suppressed average house prices in the area.

Figure 7-18 Tendring house price change (indexed)

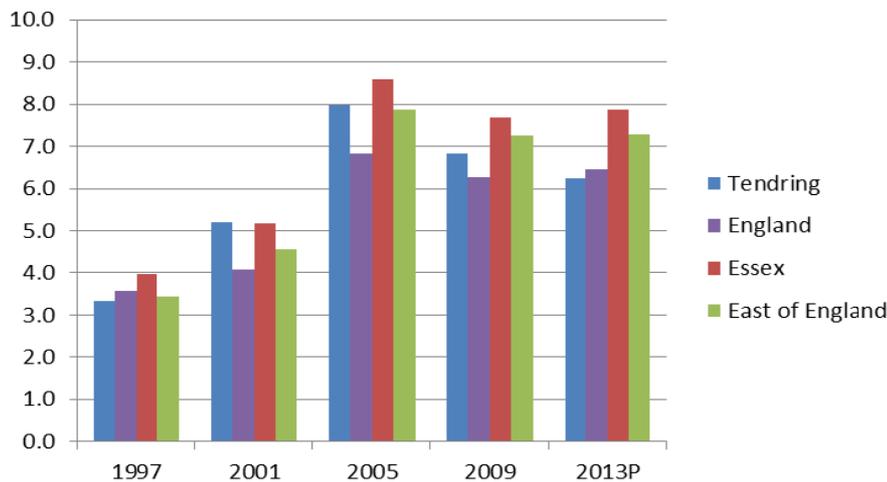


Source: ONS / CLG Live table 581.

Affordability

7.87 Tendring has good affordability when compared to the county, regional and national benchmarks.

Figure 7-19 Tendring affordability



Source: CLG Table 576

Summary

7.88 The market signals for Tendring are very similar to those for Braintree. The supply of housing land in recent years has been tight. However, unlike Braintree, where policy deliberately aimed for fewer new homes, in Tendring the supply blockage was partly

due to a planning hiatus – coinciding with the recession, which cut off the supply of windfall sites.

- 7.89 When delivery fell in Tendring house prices also fell. This may be because new homes are more expensive than second-hand stock. But, it may also indicate that the downturn in delivery owed more to constrained demand than constrained supply. The lack of plan coverage makes it very difficult to draw firm conclusions here.
- 7.90 One factor that has depressed demand is the state of the local economy. Tendring has the highest unemployment rate of the HMA's districts, and is least accessible to London. This has made the housing market especially vulnerable in the recession.

Conclusions

- 7.91 The reasons for the decline in housebuilding in the HMA from 2008 onwards are difficult to identify conclusively because of the influence of the recession is coterminous with the abolition of the RSS housing targets. Therefore it is unclear how much of the decline is attributable to a lack of demand as opposed to constrained supply – ie insufficient sites allocated in plans.
- 7.92 Looking at the HMA as whole, there are three pieces of evidence which suggest that an uplift to the demographic projections might possibly be justified. The first is affordability, but this should be kept in perspective: while affordability in the HMA is slightly worse than for the region and England, is it clearly better than for most other areas as close to London.
- 7.93 The second issue is that delivery in Chelmsford fell behind plan targets, including in the middle years of the last decade, when demand was buoyant. However, there is no house price evidence to suggest that supply fell short of demand. The explanation may be the migration led population growth was attracted to other parts of the HMA, including Colchester- where housing delivery rose above targets - or other housing market areas.
- 7.94 Thirdly in Tendring the lack of plan coverage make it very difficult to conclude that market signals were not influenced by the lack of development land being made available. Should more land have been made available development may have been higher.

8 AFFORDABLE HOUSING

National guidance

- 8.1 The PPG provides two separate methods for calculating housing need. Paragraphs 015-020 set out a step-by-step method for calculating the overall need, or OAN, starting from demographic projections. This is the method followed in our calculations above. Its result is the total number of net additional dwellings to be provided over the plan period, in both the market and affordable sectors. Paragraphs 022-029 provide step-by-step instructions for a separate calculation, this time dealing with affordable need only.
- 8.2 The PPG does not say how the calculation of affordable need at paragraphs 022-029 relates to the earlier calculation of overall need at paragraphs 015-021. Nor does it state directly if, or how, authorities should take account of the second calculation as well as the first to arrive at an objective assessment of market and affordable needs, as the NPPF requires.
- 8.3 In our view, from the implicit logic of the NPPF and PPG, together with Inspectors' advice, it is clear that affordable housing need is a policy consideration that bears on housing targets, rather than a component of objectively assessed need. In principle the two numbers are not directly comparable, because they relate to different meanings of the term 'need'. There are two main reasons for this.
- 8.4 Firstly, 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).
- 8.5 Secondly, 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 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.
- 8.6 Having explained how to calculate affordable need, the PPG at paragraph 029³¹ advises on how housing needs assessments should take account of affordable housing need:

'The total affordable housing need should 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.'

³¹ Reference ID: 2a-029-20140306

- 8.7 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 these components separately, because demographic projections – which are the starting point for the OAN – do not distinguish between different sectors of the housing market.
- 8.8 In summary, it seems logically clear 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 discussed at paragraphs 22-29. When paragraph 47 of the NPPF says that plans should meet in full ‘*the need for market and affordable housing*’, it is referring to that component rather than the separately calculated affordable need.

The 2015 SHMA

- 8.9 For the reasons set out above the affordable housing calculations required by paragraphs 22-29 of the PPG cannot be a direct component of the OAN. But, paragraph 29 still requires consideration of increasing the total housing figures in the plan where this increase could help deliver the required number of affordable homes.
- 8.10 To help determine whether such an increase is warranted here the Councils’ commissioned HDH to undertake a PPG compliant assessment of affordable housing needs, and to advise whether the Councils should consider increasing the ‘total housing figures included in the plan’ in line with paragraph 29.
- 8.11 This work is published separately, and summarised below.

Braintree

- 8.12 The SHMA concludes that out of the 845 dwellings required per year in Braintree between 2013 and 2037, 218 (25.8%) dwellings should be affordable. The residual dwellings within the Objectively Assessed Need estimate are market accommodation.

Chelmsford

- 8.13 The SHMA concludes that out of the 775 dwellings required per year in Chelmsford between 2013 and 2037, 179 (23.1%) dwellings should be affordable, with the residual dwellings within the Objectively Assessed Need estimate being market accommodation.

Colchester

- 8.14 For Colchester, the SHMA found that out of the 920 dwellings per year required in Colchester between 2013 and 2037, 218 (25.8%) dwellings should be affordable with the residual dwellings within the Objectively Assessed Need estimate being market accommodation.
- 8.15 Table 8.1 below summarises the OAN for each authority and their respective affordable housing requirements.

Table 8.1: Affordable housing requirement

	Objectively Assessed Need (dwellings per year)	Affordable housing requirement (dwellings per year)
Braintree	845	218
Chelmsford	775	179
Colchester	920	278

Tending Findings

- 8.16 In Tending the SHMA was commissioned before the Council became aware of the UPC issue, and without sight of the John Hollis report.
- 8.17 Out of the 597 dwellings then required each year in the July 2015 OAN report the SHMA estimates that 163 (27.3%) dwellings should be affordable. This is the requirement derived from the affordable housing need model. The residual dwellings within the Objectively Assessed Need estimate being market accommodation.
- 8.18 This is now being updated to reflect the Councils new OAN and policy target (550 dpa).

Conclusions

- 8.19 The findings of the SHMA suggest that there is no need for the Councils to adjust their total housing figure as set out in Paragraph 29 of the PPG.
- 8.20 For each of the Councils the study concludes
“[the] Council can be confident that the affordable housing requirement can be met by the Objectively Assessed Need identified and no adjustment is required to this figure”
- 8.21 Note – this may need to be revised for Tending pending further work.

9 CONCLUSIONS

The housing market area

- 9.1 We have used evidence from the 2011 Census to test the strategic HMA defined by the NHPAU housing market area geography. We have found that the area forms a reasonable, PPG compliant, HMA.
- 9.2 Maldon District Council considers that its district is a free-standing HMA, rather than part of the NHPAU's strategic HMA. Whether or not this view is supported by local evidence, including 'soft' qualitative data, is a matter for that Council to consider. We have tested the quantitative impact of excluding Maldon on our four commissioning authorities, which form the rest of the strategic HMA. We find that an HMA comprising those four authorities has fractionally lower self-containment than the strategic HMA. Therefore Maldon Council's stance has no detrimental impact on our commissioning authorities, and those authorities have no reason to challenge it.
- 9.3 In summary, our analysis suggests that an HMA comprising Braintree, Colchester, Chelmsford and Tendring forms a sound basis for assessing housing need.

The demographic starting point

- 9.4 The table below shows the most recent 2012-based official demographic projections for the HMA. In accordance with the PPG, these projections provide the most up-to-date information and should be the starting point for assessing housing need.

Table 9-1 Population, households and dwellings, 2013-37, ONS/CLG 2012

Change p.a.	Population	Households	Dwellings
	n	s	gs
Braintree	1,171	668	686
Chelmsford	1,108	643	657
Colchester	1,638	834	868
Tendring	1,068	654	705
HMA	4,986	2,799	2,916

Source: Edge Analytics Greater Essex Demographic Forecast Phase 7 Report

9.5 Our tests suggest that these projections are robust, with one exception: the figures for Tendring are heavily affected by Un-attributable Population Change. The Council has commissioned further work, drawing on new data released by the ONS. The work concludes that 480 dpa is a robust starting point for Tendring; replacing the erroneous SNPP.

Table 9-2 Population, households and dwellings, 2013-37, ONS/CLG 2012 + Tendring Corrected

	Population	Households	Dwellings
Braintree	1,171	668	686
Chelmsford	1,108	643	657
Colchester	1,638	834	868
Tendring	993	445	480
HMA	4,910	2,589	2,691

Source: Edge Analytics Greater Essex Demographic Forecast Phase 7 Report & John Hollis January 2016

9.6 Making this adjustment reduces the demographic starting point for the HMA as a whole to 2,691 dpa.

Adjustments

9.7 In line with national guidance, before they are used as a measure of objectively assessed housing need, the demographic projections may be adjusted in the light of two factors: firstly future employment and secondly past provision and market signals. In addition we have considered an adjustment for London’s unmet need.

9.8 It is important to understand that these different adjustments overlap. As discussed earlier in this report, the demographic projections carry forward past demographic trends. But, past growth may have been constrained by lack of housing, so that some people who otherwise would have lived in the HMA had to go or remain elsewhere. If that is the case, housing provision should be lifted above the projection, so that in future people in the same position are able to live in the area. If job numbers in the area also rise above past trends, these same people will be available to fill the additional jobs that are provided.

9.9 To return to the three potential adjustments, in relation to future employment we have considered three kinds of evidence: from the Edge study, the East of England Forecasting Model (EEFM) forecasts and Experian forecasts:

- The Edge study suggests that to support the expected job growth would require 3,137 net new dwellings per annum (dpa) – an uplift of 221 dpa, or 8%, over the demographically projected need (SNPP 2012).
- The EEFM suggests that no uplift is required to support these future jobs
- Experian suggests that a small uplift may be required, which is too small to measure.

- 9.10 The differences between EEFM and Experian are not surprising, given the uncertainties inherent in local economic forecasting. The Edge scenario is very much at the upper limit of reasonable expectation.
- 9.11 The new Experian Tendering Scenario, with corrected UPC, shows that no economic uplift is warranted in Tendring.
- 9.12 In relation to market signals, there are two pieces of evidence which suggest that an uplift to the demographic projections might possibly be justified. The first is affordability, which is slightly worse in the HMA than the region and England. But, this should be kept in perspective: while affordability in the HMA is slightly worse than for the region and England, it is clearly better than for most other areas in such close proximity to London.
- 9.13 The second is that delivery in some parts of the HMA fell behind plan targets, including in the middle years of the last decade when demand was buoyant. However, there is no house price evidence to suggest that demand in Chelmsford was being suppressed. The explanation may be that the migration led population growth was attracted to other parts of the HMA, including Colchester and Tendring - where housing delivery rose above targets - and / or other housing market areas. The HMA as a whole met (or exceeded) its targets until the recession.
- 9.14 Given this evidence, whether market signals justify an uplift to the demographic projections is very much a matter of judgment. In the spirit of the NPPF it is advisable to err on the positive side, and we recommend a small uplift. But, this should be below the 10% suggested by Local Plan Inspectors in Eastleigh and Uttlesford, where the evidence pointed to moderate under-provision or mixed signals. Therefore for the three districts of Braintree, Chelmsford and Colchester the 'future employment' uplift will cover any 'market signals' adjustment that can reasonably be justified. It also makes an allowance for additional London related migration.
- 9.15 For Tendring the issue is more complex and uncertain. The EPOA employed persons scenario can no longer be used because the now corrected population profile is very different. More recent testing of the economic uplift with Experian concludes that no economic uplift is needed; increasing the number of homes (and labour supply) above 480 dpa may have negative economic consequences because this may oversupply labour compared to demand. But, there is still some evidence of market signal pressures, gaps in plan coverage and a large degree of uncertainty surrounding the base demographic data.
- 9.16 To manage this risk and uncertainty, our advice is that Tendring should work within a range of OAN between 500dpa and 600dpa. Where a single number is required 550 dpa should be used.
- 9.17 We use 600dpa as the upper end of this range because even if the John Hollis UPC adjustments are subsequently disproved, with even more new data, 597 dpa was the original OAN for the district flowing from the EPOA Employed Persons scenario. It is the highest possible OAN calculation available. The lower end of the range is slightly above the John Hollis 480 dpa demographic starting point, and allows for a small margin of error or very modest market signal adjustment.

- 9.18 550dpa is suggested as the indicative OAN because at this level of OAN affordable need can still be met in full, assuming that slightly fewer than a third of new homes are delivered as affordable. It is possible to provide more detailed calculations, but this would suggest a level of confidence in the data that we don't have given the nature of the UPC error. A reasonable rounded figure reflects this uncertainty much better.
- 9.19 There is no suggestion the OAN for any of the Councils should be increased to meet affordable housing needs.
- 9.20 The final adjustment we have considered is the above-trend need likely to be exported from London. In terms of the NPPF and PPG this occupies a grey area between the HMA's objectively assessed need and cross-boundary unmet need. The GLA and the EPOA study estimates the HMA's share of that unmet need at just 64 dpa. It overlaps with the 'future jobs' adjustment, because the additional in-migrants whom these dwellings would accommodate could potentially fill jobs in the HMA.

Table 9-3 Objectively assessed housing need, 2013-37 per annum

	Demographic Starting Point		OAN		Difference	% Uplift
Braintree	686	(SNPP)	845	(EPOA)	159	23%
Chelmsford	657	(SNPP)	775	(EPOA)	118	18%
Colchester	868	(SNPP)	920	(EPOA)	52	6%
Tendring	480	(John Hollis)	550	(PBA)	70	15%
HMA	2,691		3,090		399	15%

Source: PBA

Policy implications

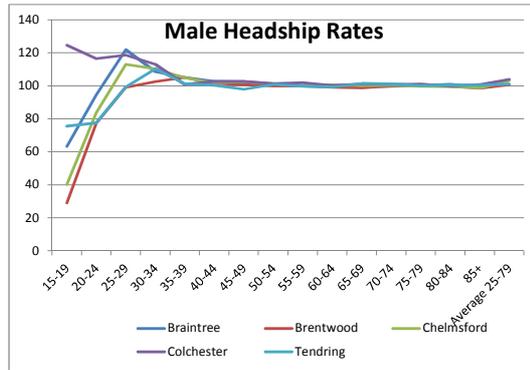
- 9.21 The HMA OAN is 3,090 dwellings per annum over the period 2013 – 2037. This is the number of new homes needed to provide sufficient labour to meet the number of jobs in the EEFM according to the EPOA scenario with an updated estimate of OAN for Tendring. For the HMA this is a 15% uplift on the most recent set of household projections.
- 9.22 Within the HMA any distribution is only indicative, and where the housing land is to be provided is a policy choice to be agreed between the HMA partners.
- 9.23 As a starting position the OAN scenario provides a distribution. This shows where new homes should be located so that new jobs and new housing are aligned. As well as objectively assessed need, in setting housing provision targets the local authorities should have regard to their area's development capacity, and to policy considerations that include cross-boundary unmet need and affordable housing need. While the 2015 SHMA is confident that the OAN identified above does not need to be increased to meet affordable need the Councils may consider further policy increases in their plan targets should they wish to meet a higher number of affordable homes.

APPENDIX A TESTING OF HEADSHIP RATES

CLG 2012 Local Headship Rates as % of England Rates

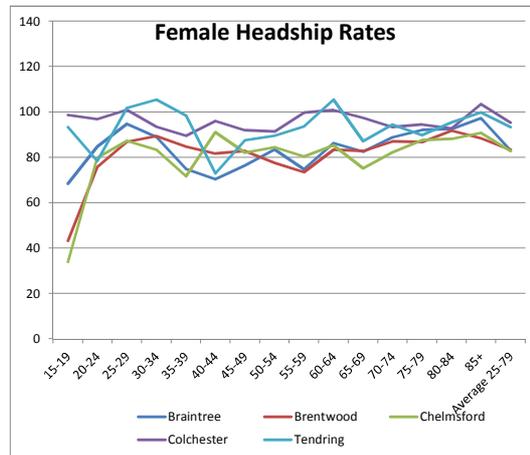
2031: Males

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	Average 25-79
Braintree	63.39	94.40	121.93	108.68	105.11	102.84	102.52	100.81	100.14	100.57	99.45	99.64	100.18	100.78	99.31	103.80
Chelmsford	40.25	83.68	113.00	110.32	104.94	101.86	102.42	101.30	99.93	100.41	100.15	100.29	99.63	99.50	98.72	103.11
Colchester	124.76	116.55	118.69	113.01	100.89	102.59	102.54	101.24	101.77	100.14	101.07	100.81	100.90	99.92	100.63	103.97
Tendring	75.50	77.46	99.28	110.44	101.24	100.36	98.02	100.87	99.66	99.42	101.38	101.01	100.05	100.39	100.38	101.06
Average	75.97	93.02	113.22	110.61	103.05	101.91	101.37	101.05	100.38	100.13	100.51	100.44	100.19	100.15	99.76	102.99



2031: Females

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	Average 25-79
Braintree	68.50	84.77	94.80	89.03	74.87	70.39	76.40	83.42	74.75	86.31	82.56	88.87	92.01	92.46	97.22	83.04
Chelmsford	33.98	79.81	87.32	83.28	71.67	91.08	82.13	84.49	80.35	85.27	75.14	82.16	87.50	88.10	90.79	82.76
Colchester	98.67	96.82	100.87	93.50	89.50	96.06	91.88	91.41	99.59	100.78	97.47	93.26	94.46	92.72	103.51	95.34
Tendring	93.30	78.47	101.71	105.41	98.39	72.93	87.58	89.49	93.65	105.44	87.17	94.39	89.82	95.46	99.75	93.27
Average	73.61	84.97	96.17	92.80	83.61	82.61	84.49	87.20	87.09	94.45	85.58	89.67	90.95	92.18	97.82	88.60



APPENDIX B TENDRING: OAN VALIDATION REPORT

A Report for Tendring DC

Version 2 – with Addendum: January 2016

Prepared by John Hollis

Tendring: OAN Validation

A Report for Tendring DC

Version 2 – with Addendum: January 2016

John Hollis

1. Background

1.1 This report has been commissioned by Tendring DC to validate the EPOA Phase 7 10-year projection prepared by Edge Analytics and preferred by Peter Brett Associates in '*Objectively Assessed Housing Need Study (July 2015)*'. Specifically, this report will:

- Review changes in Tendring's population 2001-14
- Validate the Edge projection against the above review
- Calculate alternative scenarios

2. Demographic Changes 2001-14

2.1 Since mid-2001 the population of Tendring DC has been estimated to have risen by 1,100 to reach 139,900 at mid-2014. This increase has been made up of a loss of 10,500 due to natural change (births to resident women being less than deaths of residents) and a net migration gain of 11,600 persons. The net migration figure includes 'other changes' including an 'unattributable population change' (UPC) loss of 10,500¹. If UPC and other changes, such as armed forces and prisoners, are ignored there was a net migration gain of 22,100, as seen annually in Table 1. Net migration within the UK was estimated to have been a gain of 20,800 and there was a small net gain from Overseas of 1,300.

2.2 Over the thirteen year period being studied the level of natural loss has declined, due mostly to the rise in the annual number of births, although numbers of deaths have also generally declined (see Figure 1). Net migration within the UK has been the main driver of population increase, with initial high levels of net inflow of around 2,000 per year falling to below 1,000 in 2010-11 and 2011-12. The net inflow has increased in the last two years up to 2014. Net Overseas migration has been virtually nil since 2005-06. Other changes, which apart from UPC includes net movements of prisoners, armed forces and boarding pupils, has also been virtually nil apart from 2001-11 when it included UPC. The net result is that while the population rose to a peak of 140,500 in 2008 it declined to 139,100 in 2011 before starting to rise again. Over the thirteen year period the range of the total population was less than 1,500 or barely 1% of the population.

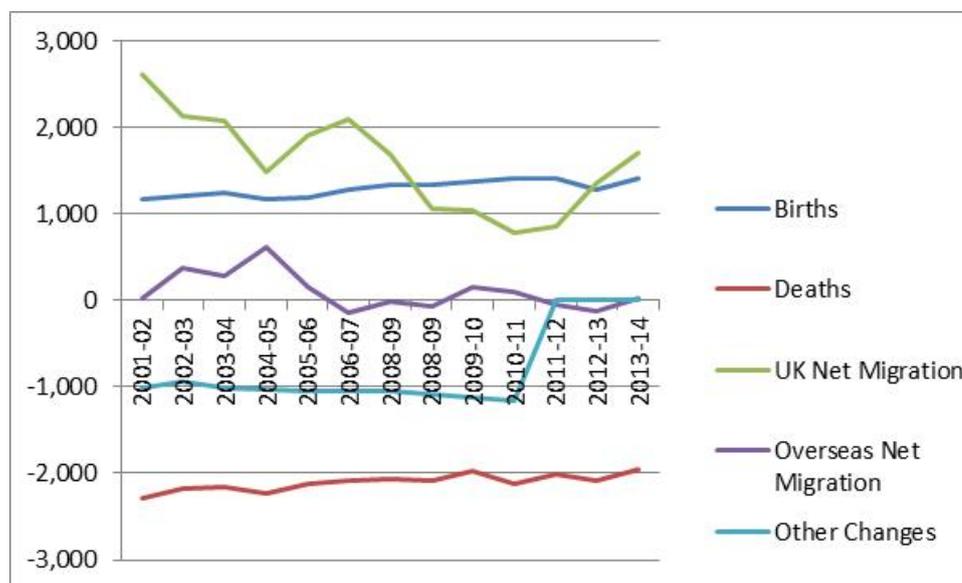
¹ ONS has stated that the 'unattributable' losses (or gains in other authorities), often referred to as UPC, may be due to errors in either the 2001 or 2011 Censuses, giving rise to errors in the mid-year estimates of those years, or errors in either the UK or Overseas migration calculations or both.

Table 1: Tendring DC: ONS mid-year estimate change analyses 2001-14.

	Start Population	Births	Deaths	Natural Change	Migration UK Net	Migration Overseas Net	Other	Migration & Other	Total Change	End Population
2001-02	138,802	1,174	2,290	-1,116	2,620	16	-1,004	1,632	516	139,318
2002-03	139,318	1,200	2,173	-973	2,126	378	-940	1,564	591	139,909
2003-04	139,909	1,253	2,161	-908	2,068	284	-1,013	1,339	431	140,340
2004-05	140,340	1,164	2,239	-1,075	1,488	607	-1,035	1,060	-15	140,325
2005-06	140,325	1,196	2,116	-920	1,911	147	-1,040	1,018	98	140,423
2006-07	140,423	1,284	2,088	-804	2,092	-137	-1,051	904	100	140,523
2008-09	140,523	1,334	2,071	-737	1,693	-5	-1,053	635	-102	140,421
2008-09	140,421	1,345	2,081	-736	1,061	-76	-1,077	-92	-828	139,593
2009-10	139,593	1,371	1,978	-607	1,039	158	-1,125	72	-535	139,058
2010-11	139,058	1,408	2,123	-715	782	102	-1,165	-281	-996	138,062
2011-12	138,062	1,412	2,001	-589	858	-56	10	812	223	138,285
2012-13	138,285	1,287	2,075	-788	1,346	-124	2	1,224	436	138,721
2013-14	138,721	1,407	1,952	-545	1,701	30	9	1,740	1,195	139,916

Source: ONS © Crown Copyright

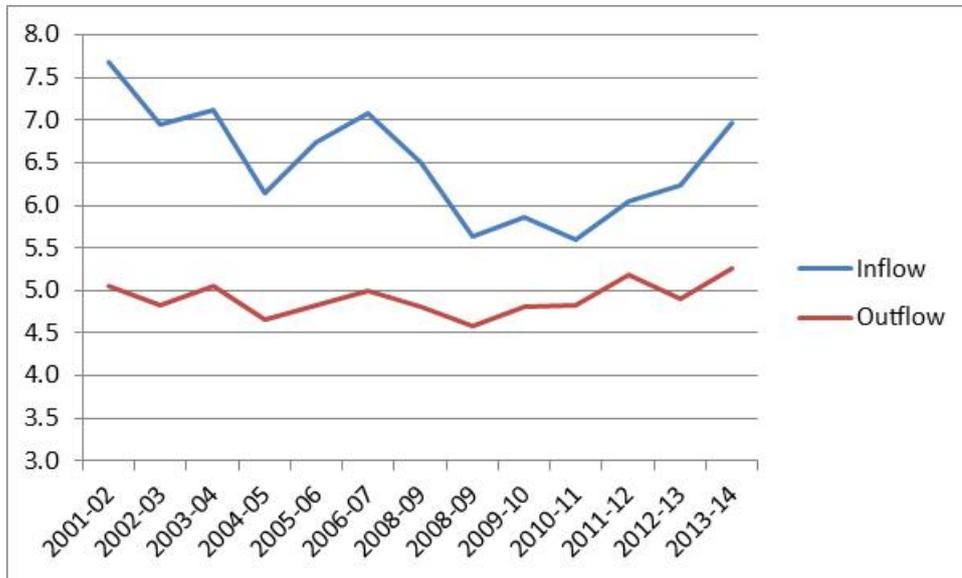
Figure 1: Tendring DC: Births, Deaths, Net Migration and Other Changes 2001-14: ONS mid-year estimate change analyses



Source: ONS © Crown Copyright

2.3 Three aspects of population change require more detailed analysis; gross migration movements, both within the UK and with Overseas, and UPC.

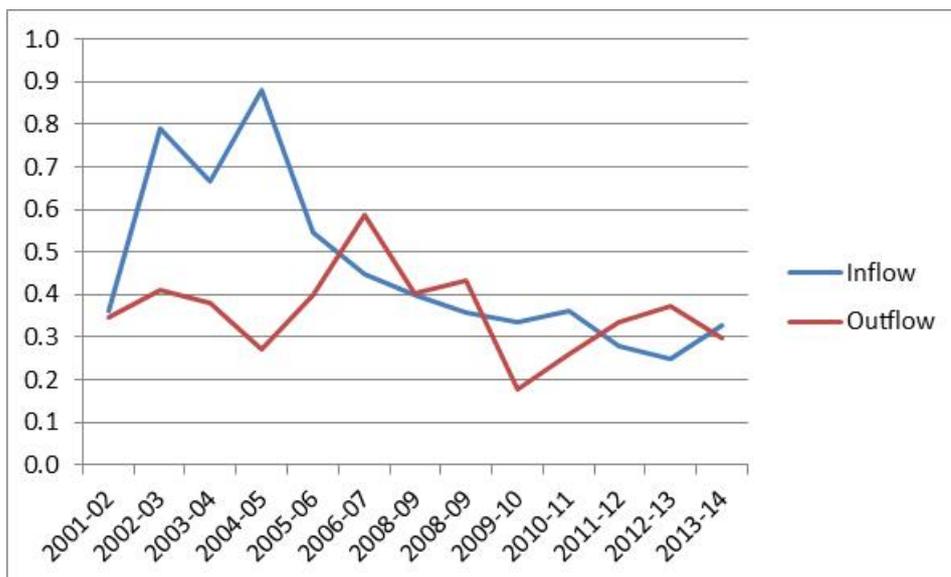
Figure 2: Tendring DC: Gross UK Migration Flows 2001-14: ONS mid-year estimate change analyses (thousands)



Source: ONS © Crown Copyright

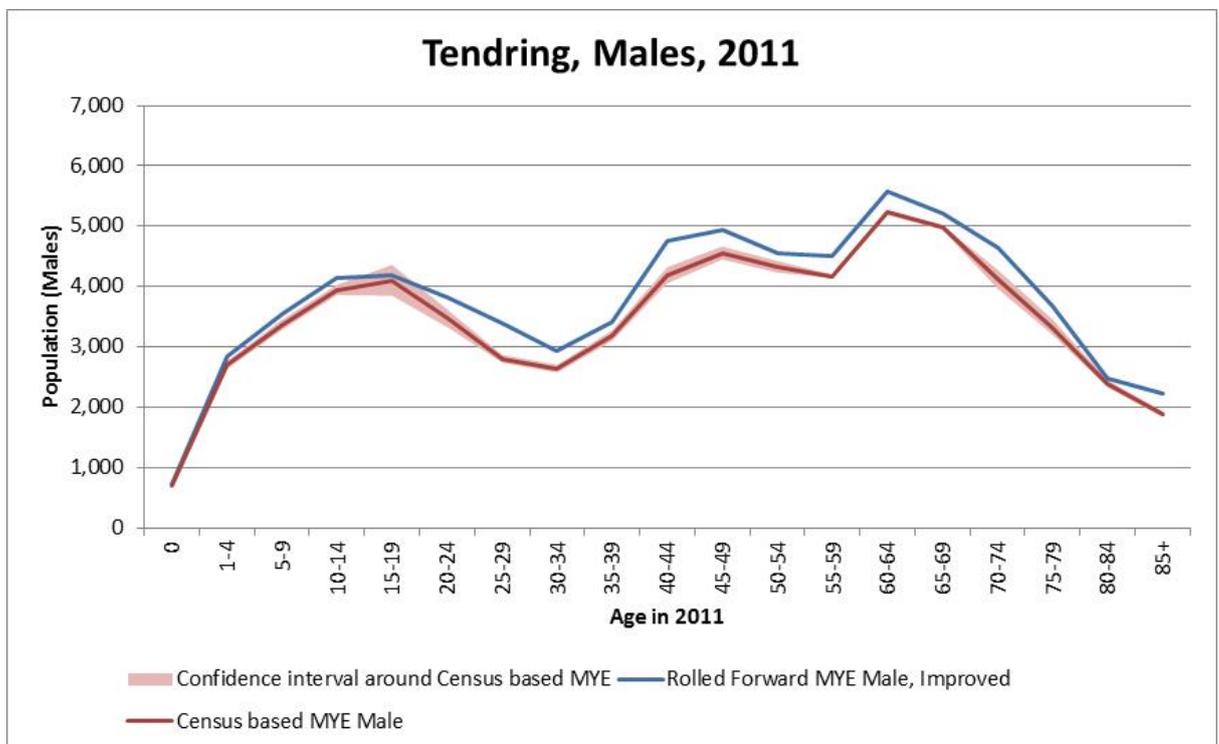
2.4 The gross outflow from Tendring to the rest of the UK has been remarkably stable at around 5,000 per year. The gross inflow has been estimated to have been much more variable, with a peak of 7,700 in 2001-02 falling to below 6,000 per year between 2008 and 2011. There has since been some recovery to reach 7,000 in 2013-14. The decline in flows after 2008 is common within the UK as a response to the recession. It may be particularly marked in Tendring because of the relatively high volume of persons around retirement age moving to the area.

Figure 3: Tendring DC: Gross Overseas Migration Flows 2001-14: ONS mid-year estimate change analyses (thousands)



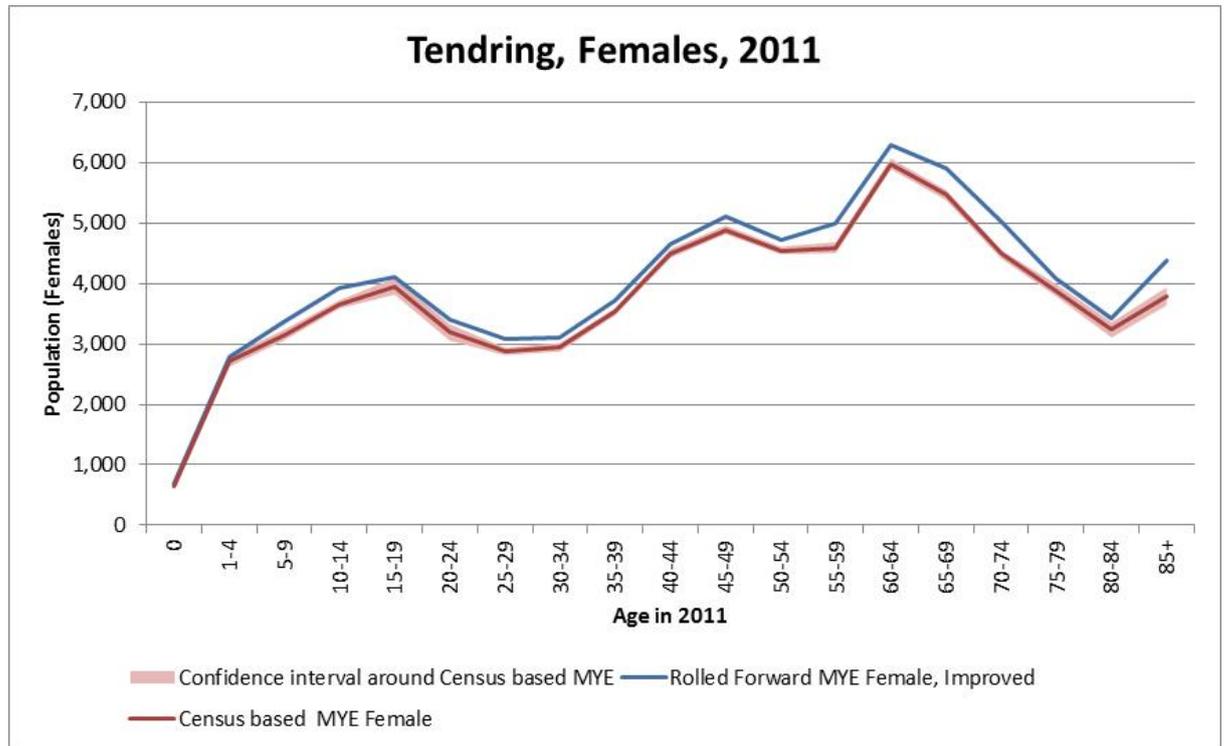
- 2.5 The volumes of migration with Overseas are estimated to be much less than those with the rest of the UK, averaging just a few hundred in each direction each year. There was a peak of inflows in the early part of the period. This includes the time when the eight Eastern European countries joined the EU. Since the peak of 900 in 2004-05 the estimated inflow has declined to around 300 a year since 2011. In most years since 2006-07 the outflow has exceeded the inflow. The net inflow of 1,300 over the thirteen years was split between an inflow of 1,400 in 2001-06 and a net loss of 100 in 2006-14.
- 2.6 The annual ONS mid-year estimate change analyses between 2001 and 2011 showed UPC for Tendring to be a net loss of 10,542. There was a general increase in the annual UPC loss from 997 in 2001-02 to 1,182 in 2010-11. In September 2015 ONS published a paper (*Further understanding of the causes of discrepancies between rolled forward and census based local authority mid-year population estimates for 2011*) and an associated data tool.
- 2.7 The two following charts, prepared by ONS, show that the 2011 Census based mid-year population estimates for Tendring were below the rolled forward estimates based on the 2001 mid-year estimates at all ages. Only for males aged 15-19 and females aged 1-4 were the rolled forward estimates within the 95% confidence intervals of the 2011 Census based estimates.

Figure 4: Tendring DC: Male Population Estimates, 2011



Source: ONS © Crown Copyright

Figure 5: Tendring DC: Female Population Estimates, 2011



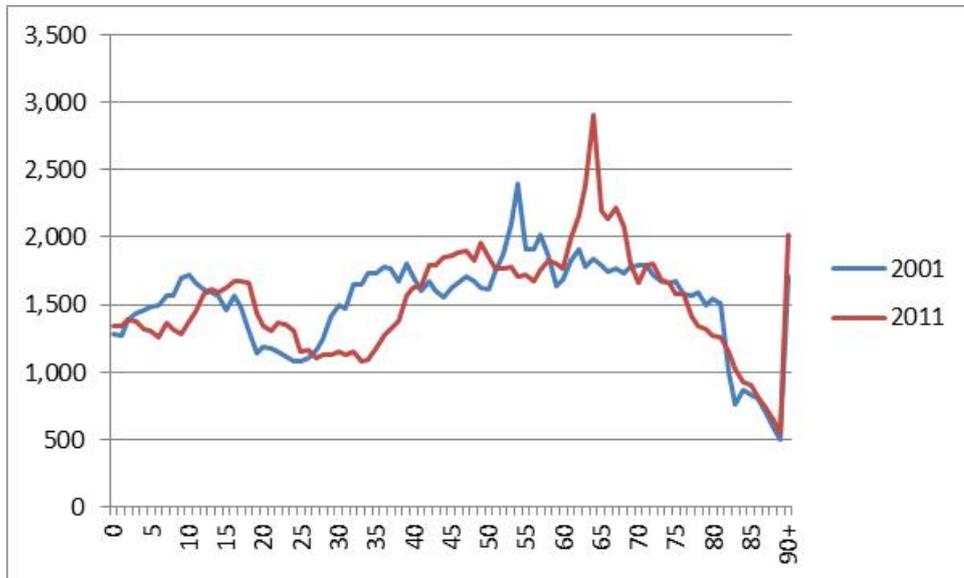
Source: ONS © Crown Copyright

- 2.8 The discrepancies are the accumulated UPC over the period 2001-11. The discrepancies for males were generally higher than for females and were highest at ages 20-34, 40-44, 70-79 and 85+. The discrepancies amongst females were highest at ages 70-74 and 85+. Other significant discrepancies are seen for males aged 35-39, 45-49 and 55-64, and for females aged 5-14, 20-29, 55-59 and 65-69.
- 2.9 The causes of the high rolled forward estimates have been analysed by ONS under a number of headings: international emigration, international immigration, internal migration and the process of rolling forward from 2001.²
- 2.10 In terms of **International Emigration** the estimates for Tendring for males aged 20-34 and females aged 25-34 were considered to have boosted the rolled forward estimates.
- 2.11 In terms of **International Immigration** the estimates for Tendring for males aged 20-49 and females aged 20-44 were considered to be too high. These exaggerated estimates of immigration would all tend to boost the rolled forward estimates.
- 2.12 The estimates of **Internal Migration** for Tendring were considered to have boosted the population of males aged 70+ and females aged 20-24 and 70+.

² ONS also considered the estimates of school boarders and the presence of armed forces but these are not relevant to Tendring.

- 2.13 The process of **Rolling Forward from 2001** is only likely to have an impact of boosting the rolled forward estimates at higher ages, notably for males aged 75-79 and female ages 55-59 and 70-74.
- 2.14 Although ONS offer no direct numerical insight of the individual effects It appears from the analysis that most of the discrepancy is due to inaccurate estimates of migration: international mainly in the 20s, 30s and 40s and internal mainly in the 70s. There is no indication of the annual effects of each of the factors throughout the decade.
- 2.15 Given the ONS analysis it appears that UPC in any base period of a population projection would be mainly due to inaccuracies in migration estimation and so should be considered as migration in any projection based on that period, for example 2008-13 or 2003-13. As all of the effects boosted the population account needs to be taken of some combination of reduced gross inflow and increased net outflow.
- 2.16 The overstatement of internal immigrants at high ages may be connected with the large number of residential care places in Tendring. Deaths of recent immigrants to Tendring should be assigned back to their districts of previous residence if they had relocated within six months of death. In these cases people would still be 'estimated' to be in Tendring even though they had died. The rolled forward overestimate at ages 70+ is 2,650 and this may be mainly an issue of internal migration. It is extremely difficult to correctly re-estimate migration in a population projection model to account for this phenomenon.
- 2.17 If the above calculation is of the correct magnitude this leaves about 8,000 UPC at lower ages – mainly between 20 and 49 - which has been assessed as mainly a problem of international migration estimation. The net effect of international migration between 2001 and 2011 was estimated to be 1,474 – 5,142 immigrants and 3,668 emigrants. ONS stated that immigration was overestimated and emigration too low. The volume of adjustment required to reduce the net inflow by 8,000 to a net loss of about 6,500 over the ten year period is exceptional. If the 8,000 is split 1:3 between inflow and outflow this could result in a gross inflow of about 3,200 and a gross outflow of about 9,700. Distributing the 8,000 evenly, or assuming a higher impact in the gross inflow, would result in very small gross inflows over the ten years. No adjustment of this order appears to be reasonable.
- 2.18 Figure 6 shows that Tendring's population has noticeably aged over the last inter-censal decade. There are fewer young children and considerably fewer persons in the working ages between 30 and 40. There was also a huge increase in the 60s, but little overall change over age 70. Some of these difference, notably the spike at age 64 in 2011, are partly due to the ageing on of the population resident in 2001, but others are mainly due to net migration effects.

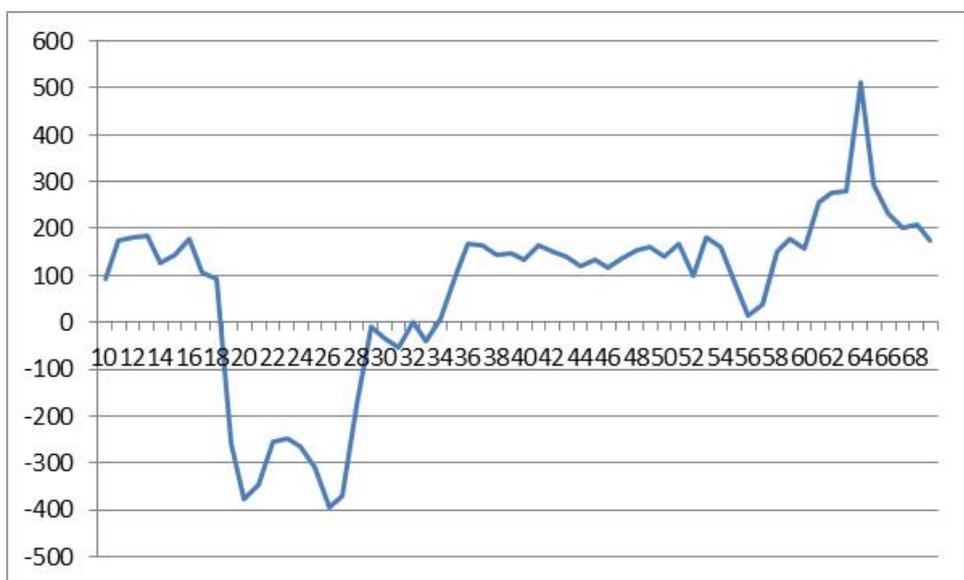
Figure 6 Tendring DC: Detailed age structure 2001 and 2011. ONS mid-year estimates



Source: ONS © Crown Copyright

2.19 Figure 7 shows the net migration pattern of Tendring over the decade 2001-11. The data are obtained by differencing the ONS 2001 and 2011 mid-year estimates with an allowance for 10 years difference in age, ie 20 year olds in 2011 less 10 year olds in 2001. The figures will therefore also contain the small impact of deaths in the resident population aged 0-59 at 2001 over the following decade. As all ages are as at 2011 the average age of migration would be about 5 years younger than shown by the x-axis scale, though relatively little migration tends to occur before age 18.

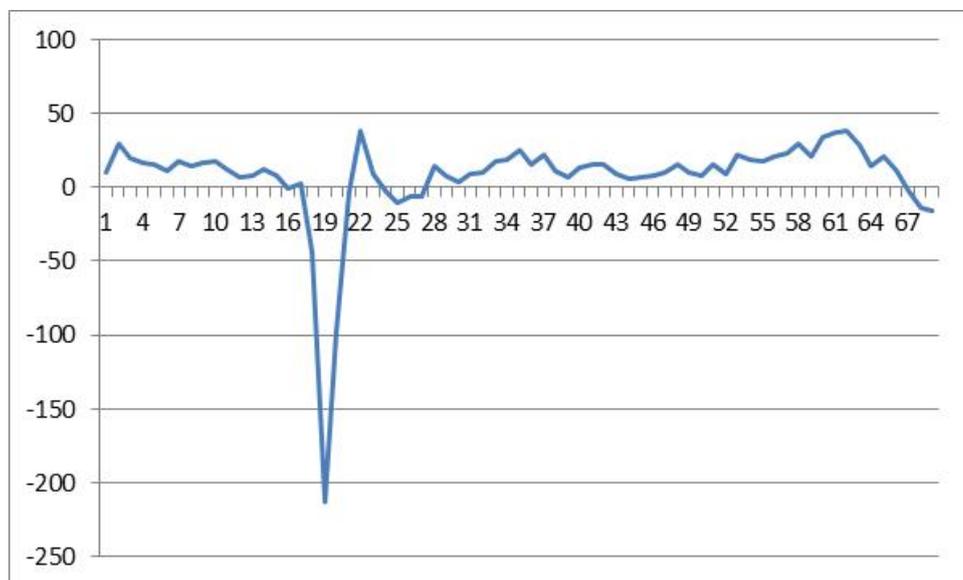
Figure 7: Tendring DC: Net Migration 2001-11 by ages 10-69 at 2011. ONS mid-year estimates



Source: ONS © Crown Copyright

- 2.20 The net impact has been a gain of children, a large net loss of students and young workers up to the late-20s and small gains at ages from the mid-30s to the mid-50s. There is then a significant net inflow in the 60s.
- 2.21 Figure 8 takes a different view of net migration, presenting the average annual levels by age over the decade. These data also exclude the minor impact of annual deaths by age 69 of the resident population. The figure clearly confirms the very large net outflows at the student ages (18-20) followed by a small return 'graduate' flow in the early 20s and small net inflows in the 30s rising to large inflows at pre-retirement ages.

Figure 8: Tendring DC: Average Annual Net Migration 2001-11 by age. ONS mid-year estimates



Source: ONS © Crown Copyright

3. Edge 10-year projection

- 3.1 The Edge PG-10yr projection was produced based on migration change, including UPC, over the period 2003-13. Table 2 shows the base data that was used in the projection. Edge assigned all of the UPC between 2003 and 2011 to international migration, leading to an annual average net international outflow of 764 persons. It is not clear how the average UPC (-854) was distributed between inflow and outflow by Edge, but the net loss of 764 persons was used as a constant throughout the projection.
- 3.2 Edge prepared these projections before the ONS work on the main causes of difference between rolled forward and census-based estimates was available. Edge therefore took the most likely view that all the UPC was due to international migration. Adjusting international flows was unlikely to have made much impact on the projection of the elderly. The over 70 age group was originally overestimated at 2011 by 2,650 or 9.8%.

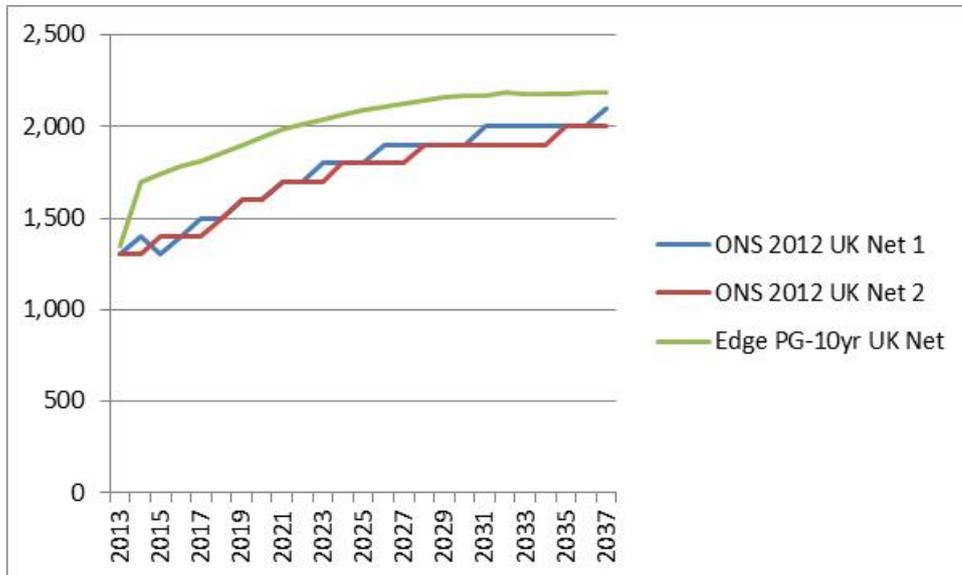
Table2: Tendring DC: Gross Migration Flows 2003-13 ONS mid-year estimate change analyses

	UK	UK	UK	Overseas	Overseas	UPC	Overseas
	Inflow	Outflow	Net	Inflow	Outflow		Net
2003-04	7,111	5,043	2,068	665	381	-1,009	-725
2004-05	6,139	4,651	1,488	878	271	-1,032	-425
2005-06	6,737	4,826	1,911	547	400	-1,038	-891
2006-07	7,086	4,994	2,092	448	585	-1,035	-1,172
2008-09	6,494	4,801	1,693	398	403	-1,059	-1,064
2008-09	5,635	4,574	1,061	356	432	-1,070	-1,146
2009-10	5,850	4,811	1,039	336	178	-1,116	-958
2010-11	5,603	4,821	782	363	261	-1,182	-1,080
2011-12	6,048	5,190	858	278	334		-56
2012-13	6,241	4,895	1,346	249	373		-124
Average	6,294	4,861	1,434	452	362	-854	-764

Source: ONS © Crown Copyright

- 3.3 In terms of migration within the UK the Edge projection is supposed to follow the trends in the ONS 2012 projection. However, as Figure 9 shows it projects a far higher net inflow, 50,200 compared to about 43,500 in the period 2012-37. This is mainly due to using the higher gross inflows between 2003 and 2007 in the base period. It is a matter of choice whether to use data over a ten-year period rather than the most recent five-year period. Although the average net inflow from the UK in 2003-13 was 1,434 the Edge projection has an initial value of 1,738 in 2013-14.

Figure 9: Tendring DC: Net UK Migration: 2012-13 to 2036-37: ONS 2012³ and Edge PG-10yr projections.



Source: ONS © Crown Copyright and EPOA projections

- 3.4 Average annual net migration, including UPC over the period 2003-13 was 669. The Edge projection, based on probabilistic migration for UK flows and constant numbers for Overseas flows starts at 936 in 2013-14 and rises to 1,418 in 2036-37. While the start point is high compared to the base period it must be compared with the ONS estimate for 2013-14 of 1,731. This increase is mainly a result of increased movement within the UK that brought nearly 7,000 new residents to Tendring while about 5,300 left for other UK destinations. The inflow was the highest recorded since 2003-04 and the outflow the highest of any year since before 2001. Whether these levels are sustainable is not part of the estimation and projection process. However, in 2013-14 Tendring DC only showed a net increase in housing stock of just over 200 units, whereas the estimated growth in population would have generated a need for an additional 590 homes (allowing for vacancy at 2011 levels).
- 3.5 Overall the Edge methodology, using PopGroup software, is sound. However a few questions remain that are specific to projections for Tendring. Are the high levels of UPC estimated by ONS realistic or have there been reasons apart from incorrect migration estimation for the rolled-forward estimates to have been too high compared to the 2011 Census based estimates? What are the assumed levels of international flows in the projection? Would Edge have treated UPC differently had the recent ONS report been available? Is it reasonable to use a ten-year period, rather than the latest five-year period, as the migration base? Is it reasonable to use constant international migration flows? Should international outflows be treated as probabilistic in the modelling?

³ Two separate calculations of the ONS net migration projection are shown as the available source data are rounded to the nearest 100. One estimate sums the four individual UK flows the other differences the total net flow with the two international flows.

- 3.6 Given the problem of UPC estimated for Tendring any migration-led projection taking a base period that includes years up to 2011 may produce results that are difficult to interpret for one reason or another. On the face of it the Edge PG-10yr projection produces feasible results. It indicates a growth in the need for homes of about 470 per year. Since 2001 this average level was only achieved in 2004-09 and in the Edge base period the average was about 360 per year. The latest five years (2009-14) have only produced about 240 additional units on average.

Table 3: Tendring DC: Household Spaces 2001 and 2011

	Census 2001	Census 2011	Change	Change per year
Household Spaces:				
Total	64,907	67,036	2,129	213
Occupied	61,411	62,105	694	69
Not Occupied (inc 2nd Homes, Holiday Lets)	3,496	4,931	1,435	144
Vacancy (%)	5.39	7.36		
Of Which:				
Whole House, Bungalow etc	54,617	55,171	554	55
Flats	9,722	11,165	1,443	144
Caravans etc	568	700	132	13
CLG Households (2012 projection)	61,608	62,138	530	53

Source: ONS & CLG © Crown Copyright

- 3.7 Table 3 shows statistics from the 2001 and 2011 Censuses in relation to household spaces in Tendring. Over the ten years there was a growth of only 2,100 spaces. This compares to data from the Annual Monitoring Reports of over 4,000. Of the growth shown by the censuses there was a net increase of over 1,400 vacancies, including second homes and holiday lets. This figure is similar to the net increase in flats in Tendring. The increase in occupied household spaces of 694 may be compared to the CLG estimated mid-2001 to mid-2011 growth in households of 530. The difference may be due to some reduction in sharing.
- 3.8 If there was a growth of over 4,000 homes in Tendring there is major discrepancy with one or both of the last two censuses. If the growth in homes and population was much as described by the two censuses it seems that about 70% of new homes have in effect contributed to increases in the number of vacancies. These are most likely due to being used as second homes and holiday lets, neither of which contribute to the local resident population as defined by ONS and CLG.
- 3.9 It is therefore necessary to look at the future population and households of Tendring in other ways. One of which would be to investigate the outcome of increasing the housing stock at particular rates between 2013 and 2037. Two possibilities would be by 240 per year, as per the most recent five year period, and 480 per year as per the

best five consecutive years since 2001 (2004-09). Other possibilities would be to look at migration trends over different periods to those used by Edge. This could be 2004-14, 2008-13 or 2009-14. However each of these options would also have to interpret UPC over a number of years as part of the migration flows and leave the same uncertainty as the Edge PG-10Yr projection. Therefore the following section investigates the impact of two building rates between 2013 and 2037. The resulting projections are compared to the Edge projection and the ONS/CLG 2012 projection.

4. Alternative Projection Scenarios

- 4.1 Two projection scenarios have been developed. Both use the 2014 ONS population estimates as the base. The first investigates the consequences of an average build rate of 240 net new homes per year between 2013 and 2037. The second considers an average build rate of 480 homes per year. In converting net new homes to additional households a constant vacancy rate of 92.64 per cent has been used. This is the rate as at the 2011 census (Table KS401).
- 4.2 Figure 10 shows the resulting population with the build rate of 480 dpa being very similar to the ONS projection and the 240 dpa projection being lowest of all. Figure 11 shows the resulting net migration. The 480 dpa projection lies mainly between the ONS and Edge projections while the 240 dpa projection still indicates a net inflow of about 1,000 per year. Figure 12 shows that the projection of households from the 480 dpa projection is very close to the Edge projection, but is significantly lower than the CLG 2012 projection.

Figure 10: Tendring DC: Population: 2001-37: Projections compared (thousands)

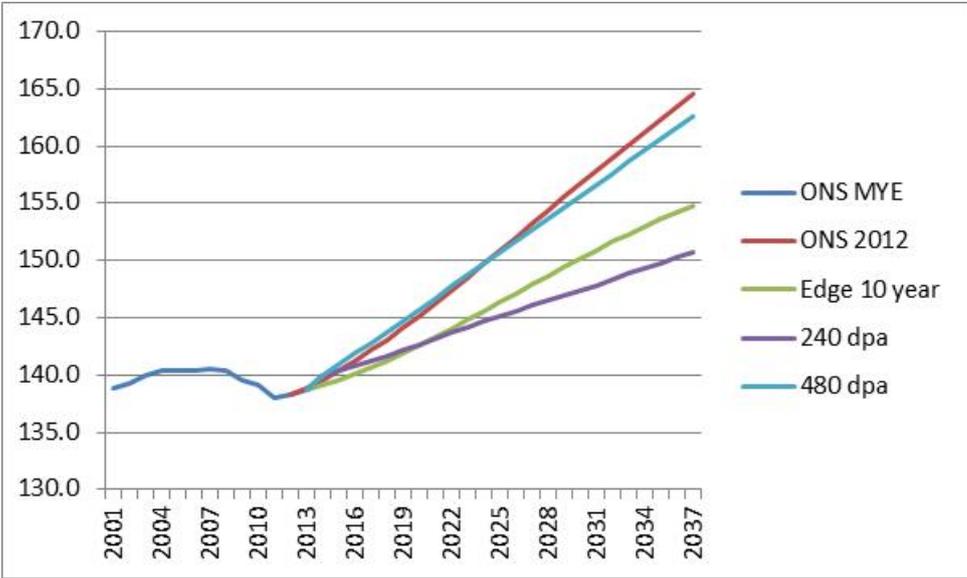


Figure 11: Tendring DC: Net Migration and Other Changes: 2001-37: Projections compared (thousands)

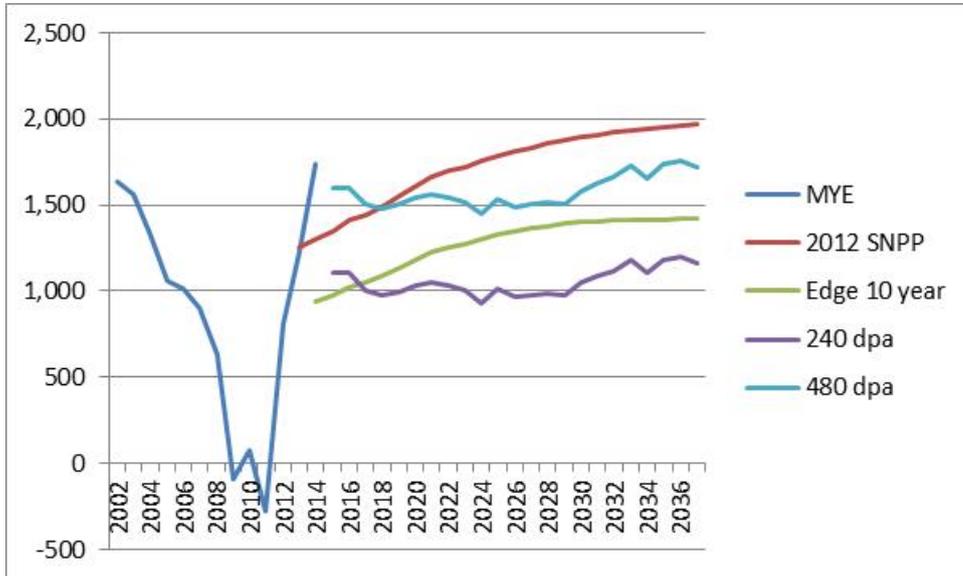


Figure 12: Tendring DC: Households: 2001-37: Projections compared (thousands)

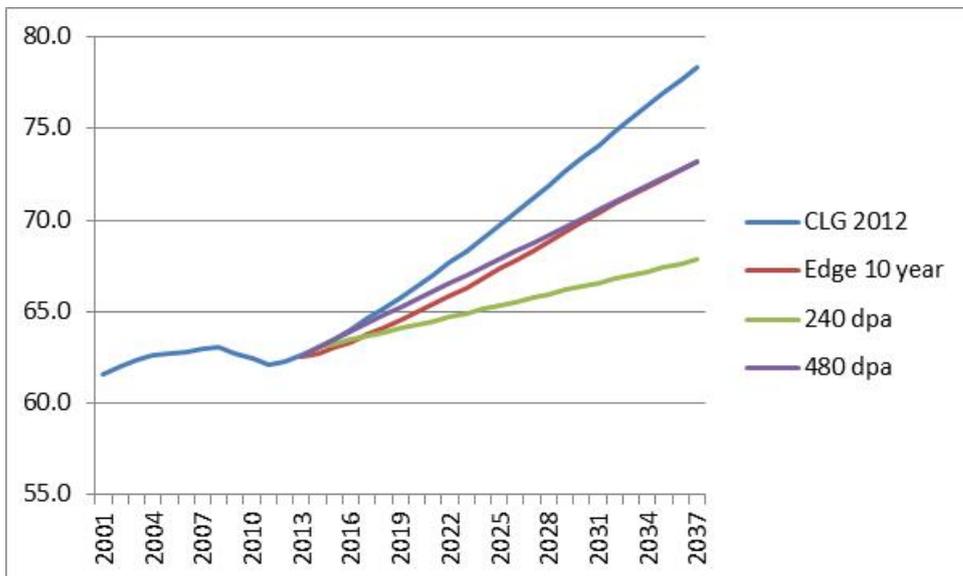
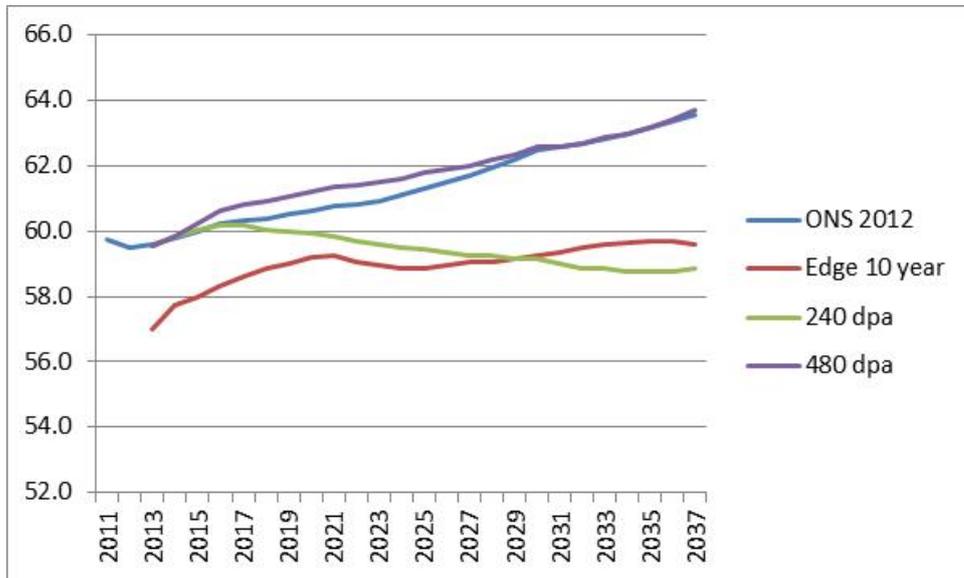


Figure 13: Tendring DC: Labour Force: 2011-37: Projections compared (thousands)



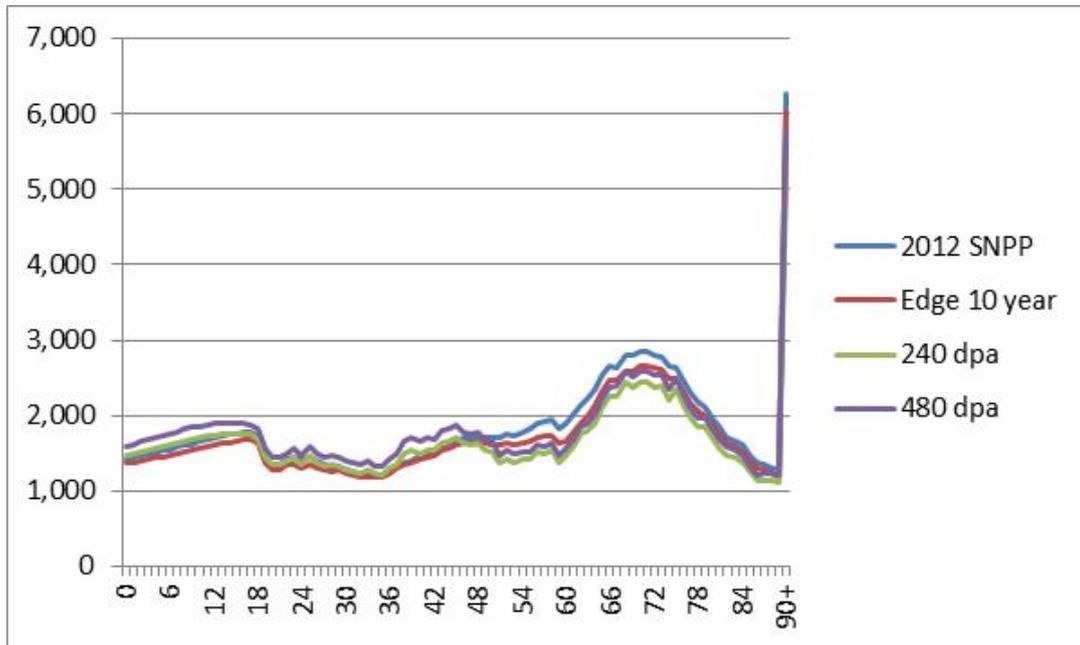
- 4.3 Figure 13 shows the projection of resident labour force. Here the 480 dpa projection is similar to the ONS 2012 projection and significantly higher than the Edge projection. It is unclear why the Edge projection starts so much lower than figures derived from the 2011 Census.
- 4.4 The results are summarised in Table 4 in which the conversion of all four projections from households to homes uses the same vacancy rate. The main difference between the Edge projection and that based on building 480 dpa is age structure. This is shown in Figure 14.

Table 4: Tendring DC: Projections Summary

		ONS/CLG	Edge	240 dpa	480 dpa
		2012	PG-10yr		
Population					
2001	thousands	138.8	138.8	138.8	138.8
2011	thousands	138.1	138.1	138.1	138.1
2013	thousands	138.9	138.7	138.7	138.7
2037	thousands	164.5	154.8	150.7	162.5
2001-11	thousands	-0.7	-0.7	-0.7	-0.7
2013-37	thousands	25.6	16.1	11.9	23.8
p.a.	persons	1,068	672	498	993
Households					
2001	thousands	61.6	61.6	61.6	61.6
2011	thousands	62.1	62.1	62.1	62.1
2013	thousands	62.6	62.5	62.5	62.5
2037	thousands	78.3	73.2	67.8	73.2
2001-11	thousands	0.5	0.5	0.5	0.5
2013-37	thousands	15.7	10.7	5.3	10.7
p.a.	households	654	444	222	445
Homes					
2013-37	thousands	17.0	11.5	5.8	11.5
p.a.	homes	706	480	240	480
Labour Force					
2011	thousands	59.7	59.7	59.7	59.7
2013	thousands	59.6	57.0	59.6	59.6
2037	thousands	63.6	59.6	58.9	63.7
2013-37	thousands	4.0	2.6	-0.7	4.1
p.a.	Labour Fce	165	108	-29	173
Labour Force/Hhold					
2013		0.95	0.91	0.95	0.95
2037		0.81	0.81	0.87	0.87

- 4.5 The ratio of resident labour force to households is already very low in 2013 and becomes lower in all projections.

Figure 14: Tendring DC: Age Structure in 2037: Projections compared (thousands)



- 4.6 Figure 14 shows that the projection based on 480 dpa build rate tends to have more people at all ages up to 50 while the Edge projection has more above that age. This is due to the different approaches the two models make in treating overall net migration by age. The 240 and 480 dpa projections consider the net migration in the base data at each age group whereas the Edge projection, as discussed earlier, tends to utilise the structures of migration streams from the ONS 2012 projection that did not take account of UPC.
- 4.7 The reactive sizes of the populations projected above and below 50 explain the differences in the projections of the labour force.
- 4.8 The Edge projection has about 7,700 fewer people overall in 2037 therefore the average household size is lower in the Edge projection, even though the same basic household representative rates were used. All four projections show a broadly similar age structure with a peak around retirement age and a relatively flat structure at most working ages.
- 4.9 A further feature of the projection of households is the assumption about the numbers of elderly persons over 75 who would be expected to be resident in some form of communal establishment. Following CLG methodology constant proportions of the population over age 75 by gender, age group and marital status are used. The numbers are assumed to rise from 1,236 in 2013 to between 2,040 (240 dpa) and 2,200 (480 dpa). The CLG projection shows a rise to 2,398. This statistic is not available from the Edge projection, but would be expected to be about 2,275 based on the overall age structure in 2037.

5. Summary

- 5.1 There are considerable doubts about the demographic changes that occurred in Tendring between the times of the last two Censuses (2001 and 2011).
- 5.2 ONS could not explain a difference of 10,500 fewer residents than had been previously estimated on the basis of its original estimates of migration.
- 5.3 Much of this difference has been determined by ONS to be an overestimate of net international migration into Tendring.
- 5.4 However, some of the difference was amongst the elderly population and was unlikely to be a feature of faulty international flows.
- 5.5 These issues are Tendring specific and do not seem to be repeated in adjacent authorities.
- 5.6 ONS did not account for the unattributable population change (UPC) in its 2012 projection.
- 5.7 In the Edge PG-10yr projection the UPC between 2003 and 2011 was added to the net international migration for 2003-13 and together they were projected at the same level each year. It is not clear how Edge altered the ONS gross international inflow and outflow streams to accommodate UPC.
- 5.8 However the Edge projection arrives at a reasonable outcome of the requirement of about 480 net new homes per year. This was the level achieved in the best five year period since 2001. The age structure of the Edge projection may be biased to the elderly and hence shows lower numbers of economically active residents than the 480 dpa projection.
- 5.9 According to the AMR Tendring increased its housing stock by over 4,000 homes between 2001 and 2011, although the comparison of Census data for 2001 and 2011 shows a net increase of only about 2,100, of which vacancies increased by 1,400.
- 5.10 Whatever the true net stock increase it would appear that there has been a significant increase in second homes and holiday lets. The net vacancy level, which includes all properties not used as a main residence, increased from 5.4% to 7.4% over the decade.
- 5.11 Apart from the growth in the housing requirement the calculations do not take into account the likely rise in the number of residents who, on the basis of the 2011 Census, would require some form of residential accommodation outside of the private housing stock. The estimated number in 2013 was 1,236 and this could rise to between 2,040 and 2,398 according to the four projections considered.

Addendum

- A1 The demographic models have been used to test the results of average annual net additional building rates of 500, 550 and 600 dwellings per year throughout 2013-37
- A2 The results are compared to those of the ONS 2012 SNPP and the Edge PG-10yr projections.
- A3 The projection models have been updated in one regard compared to the models used in the main part of the report. The calculation of resident economically active population has been amended to cover all persons over the age of 16 rather than those aged 16-74. This has been made possible by an additional ONS 2011 Census table. At the same time as the age range has been extended it has also been made a little more detailed. The 18-24 group has been split to 18-19, 20-21 and 22-24. It should be noted that from September 2015 it has been required that all 16 and 17 year olds should be in education, therefore from mid-2016 the projections assume no 16-17s are in the economically active population.
- A4 The results are shown in Table A1. In terms of households the projections are all higher than the Edge projection that implied 480 dpa but even the 600 dpa projection is lower than the ONS 2012 SNPP.
- A5 As a consequence of incorporating UPC the migration into Tendring has a lower age profile than either the ONS or Edge projections. This results in more persons in the working ages and therefore a higher number of economically active residents – the resident labour force. This is best illustrated by looking at the ratio of labour force per household. The elderly age structure of Tendring ensured that this statistic was less than unity in 2013. While the ratio falls in all projections it falls most in the ONS and Edge projections.
- A6 In the three new projections the resident labour force is projected to grow over the period 2013-37 by 3.7, 4.7 and 5.7 thousand respectively. If one concentrates on changes projected for persons aged 18 and over – rather than 16 and over – the change over the projection period would be 4.9, 5.9 and 6.9 thousand respectively as a consequence of the 1.3 thousand 16 and 17 year olds in the labour force in 2013 who drop out of the calculations after 2015.

Table A1: Tendring DC: Projections Summary

		ONS/CLG	Edge	500 dpa	550 dpa	600 dpa
		2012	PG-10yr			
Population						
2001	thousands	138.8	138.8	138.8	138.8	138.8
2011	thousands	138.1	138.1	138.1	138.1	138.1
2013	thousands	138.9	138.7	138.7	138.7	138.7
2037	thousands	164.5	154.8	163.5	166.0	168.5
2001-11	thousands	-0.7	-0.7	-0.7	-0.7	-0.7
2013-37	thousands	25.6	16.1	24.8	27.3	29.8
	p.a. persons	1068	672	1034	1137	1240
Households						
2001	thousands	61.6	61.6	61.6	61.6	61.6
2011	thousands	62.1	62.1	62.1	62.1	62.1
2013	thousands	62.6	62.5	62.5	62.5	62.5
2037	thousands	78.3	73.2	73.6	74.7	75.8
2001-11	thousands	0.5	0.5	0.5	0.5	0.5
2013-37	thousands	15.7	10.7	11.1	12.2	13.3
	p.a. households	654	444	463	510	556
Homes						
2013-37	thousands	17.0	11.5	12.0	13.2	14.4
	p.a. homes	706	480	500	550	600
Labour Force						
2013	thousands	60.3	60.3	60.3	60.3	60.3
2037	thousands	63.6	59.8	63.9	65.0	66.0
2013-37	thousands	3.3	-0.4	3.7	4.7	5.7
	p.a. Labour Force	136	-19	152	194	236
Labour Force/Hhold						
2013		0.963	0.965	0.965	0.965	0.965
2037		0.812	0.818	0.869	0.869	0.870

Appendix 1: Description of Demographic Models – updated January 2016

Inputs

Population

Base Population (gender and single years 0 to 90+): ONS 2014 mid-year estimate.

Other Populations: ONS MYE 2001-2013.

Births: latest mid-year to mid-year (2013-14) consistent with MYE change analysis.

Age-specific Fertility Rates and Total Fertility Rate Assumption: as ONS 2012 national and subnational projections.

Deaths: latest mid-year to mid-year (2013-14) consistent with MYE change analysis.

Survival/Mortality Assumptions: as ONS 2012 national and subnational projections.

Migration: Age/gender probabilities linked to annual average migration changes over a recent minimum five-year period between 2001 and 2014 (eg 2004-14 or 2009-14) using data from ONS MYE and ONS MYE change analyses.

Households

Household Representative Rates: Stage 1 rates from CLG 2012 projection for year 2011 to 2037. The model uses the CLG Stage 1 rates that are specific to 5-year age groups (15-19 ... 85+), gender and relationship status.

Communal Population: as CLG 2012 assumptions.

Relationship Status (in a couple, formerly in a couple, single): as CLG 2012 assumptions.

Labour Force

Economic Activity Rates: 2011 Census by age groups and gender.

National Trends in EA Rates by age/gender: ONS national projection to 2020 (*Labour Market Trends* January 2006) with extension to 2037 using analysis by Kent County Council *Activity Rate Forecasts to 2036 (Provisional)* (published March 2014).

Processes

Population

- 1 Survive base populations (single years of age and gender) by one year.
- 2 Calculate and add net migration by single years of age and gender for the survivors. This gives the population of persons aged 1+ at the end of first projection year.
- 3 Calculate births by single years of age of mother (15 ... 49) using the average female population at each age group throughout the projection year.
- 4 Split total births by gender using most recent 5-year average.
- 5 Survive births by gender to the end of projection year.

- 6 Calculate and add net migration of those surviving infants by gender born in the projection year. This gives the population of 0 year old boys and girls at the end of the first projection year.
- 7 Repeat cycle until the final projection year.

Households

- 1 Separate total population (by gender and five-year age groups) into the three relationship statuses by following CLG assumptions of the proportions in each status.
- 2 Calculate communal establishment population by gender, age and relationship status by following CLG assumptions (constant numbers by gender, relationship status and age groups to 74 by and then constant proportions).
- 3 Calculate private household population by gender, age and relationship status by difference between total population and communal population.
- 4 Apply CLG Stage 1 household representative rates to the private household population by age, gender and relationship status. This gives total households.
- 5 Apply 2011 Census net vacancy rates, or other agreed rates, to convert households to homes.
- 6 The model may be run 'backwards' by defining a net annual increase in homes and iterating by adjusting the migration in the population projection to reach a fixed state where the population produces growth in households that is matched by the growth in homes allowing for a vacancy assumption.

Labour Force

- 1 Accumulate the 2011 Census data on economic activity by age to the required age groups (16-17, 18-19, 20-21, 22-24, 25-29, ... 70-74, 75+) by gender and calculate the EA rates using the 2011 Census resident population as base.
- 2 Project the EA rates to 2036 according to the changes by age group and gender in the ONS and KCC projections. Extend from 2036 to 2037 and ensure rates do not exceed 100% or fall below 0%.
- 3 Accumulate the population projection to the required age groups by gender.
- 4 Apply the projected EA rates to the projected population.

Outputs

Total **Population** by single years of age (0-90+) and gender for all projection years to 2037.
Annual births, total fertility rates, deaths and net migration to 2036-37.

Total population, private household population and communal establishment population by age (0-4 ... 85+), gender and relationship status every year 2011 to 2037.

Households by age (15-19 ... 85+), gender and relationship status of household representative every year 2011 to 2037.

Households are converted to **homes** every year 2011 to 2037.

Economically active resident population by gender and age groups (16-17, 18-19, 20-21, 22-24, 25-29, ... 70-74, 75+) for all years to 2037.

Appendix 2: John Hollis: Personal Biography

John Hollis has an M.A. in Demography from the University of California, Berkeley and is a Fellow of the Royal Statistical Society (RSS). He was President of the British Society for Population Studies (BSPS) in 2005-07 and has also been Chair of the Local Authorities Research and Intelligence Association (LARIA).

He was Demographic Consultant at the Greater London Authority until retiring in 2011. He prepared borough and ward level demographic projections for the various incarnations of the *London Plan*. He was demographic adviser to SEERA and prepared demographic projections and analyses for several local authorities.

He led the local government side of the CLIP (Central and Local Government Information Partnership) Census Advisory Group for both the 2001 and 2011 Censuses. In 2011-12 he was one of four external experts assisting ONS with quality assurance of the initial results of the 2011 Census. In 2013 he was part of the small team that wrote a methodological assessment of the ONS *Beyond 2011* project, which advised ONS not to forego a Census in 2021, and also advised ONS on future requirements for small area data.

He was a member of the CLIP Population Sub-group, which discusses methodology for population and household estimates and projections with ONS and DCLG. He has also been a member of the ONS Expert Panel advising on assumptions for National Population Projections and the CLG Steering Group on Household Projections, focussing on the 2010 redevelopment of the modelling process as well as the 2008 and 2011 Interim projections.

In 2010 he co-wrote a critique for PopGroup focussing on suggestions for improving the model's demographic methods in order to better represent ONS and DCLG projection methodologies.

His demographic projections have recently been used relating to objectively assessed need for housing in:

- Birmingham Development Plan
- Brentwood Local Plan
- Cheltenham, Gloucester & Tewkesbury JCS
- Cheshire East LP
- Cheshire West & Chester LP
- Luton & South Bedfordshire SHMA
- Maidstone SHMA
- Maldon LP
- South Hampshire SHMA
- South Worcestershire
- Telford & Wrekin OAN
- Warwick OAN
- West Dorset

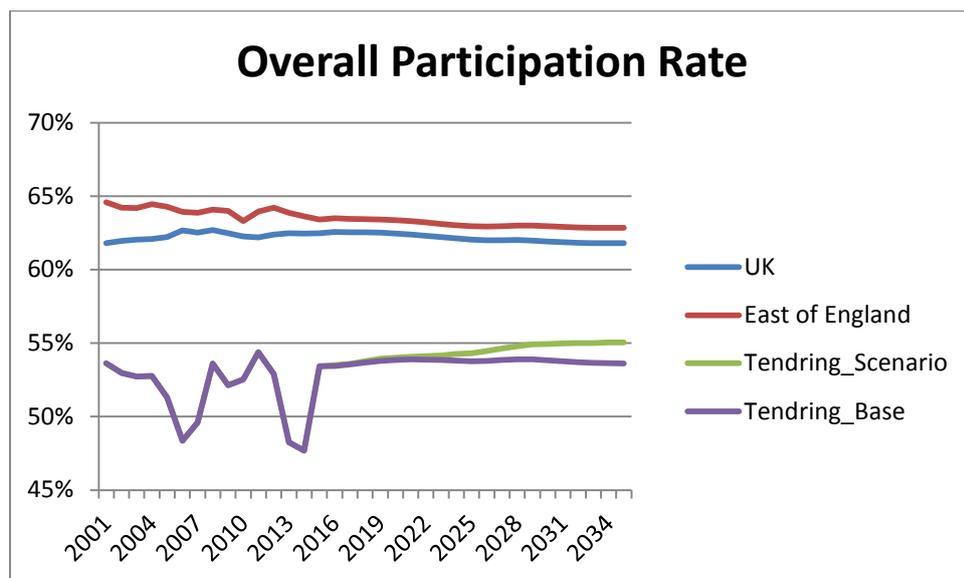
	ONS/CLG 2012	Edge PG-10yr	500 dpa	550 dpa	600 dpa
Population					
2001 thousands	138.8	138.8	138.8	138.8	138.8
2011 thousands	138.1	138.1	138.1	138.1	138.1
2013 thousands	138.9	138.7	138.7	138.7	138.7
2037 thousands	164.5	154.8	163.5	166.0	168.5
2001-11 thousands	-0.7	-0.7	-0.7	-0.7	-0.7
2013-37 thousands	25.6	16.1	24.8	27.3	29.8
p.a. persons	1068	672	1034	1137	1240
Households					
2001 thousands	61.6	61.6	61.6	61.6	61.6
2011 thousands	62.1	62.1	62.1	62.1	62.1
2013 thousands	62.6	62.5	62.5	62.5	62.5
2037 thousands	78.3	73.2	73.6	74.7	75.8
2001-11 thousands	0.5	0.5	0.5	0.5	0.5
2013-37 thousands	15.7	10.7	11.1	12.2	13.3
p.a. households	654	444	463	510	556
Homes					
2013-37 thousands	17.0	11.5	12.0	13.2	14.4
p.a. homes	706	480	500	550	600
Labour Force					
2013 thousands	60.3	60.3	60.3	60.3	60.3
2037 thousands	63.6	59.8	63.9	65.0	66.0
2013-37 thousands	3.3	-0.4	3.7	4.7	5.7
p.a. Labour Force	136	-19	152	194	236
Labour Force/Hhold					
2013	0.963	0.965	0.965	0.965	0.965
2037	0.812	0.818	0.869	0.869	0.870

APPENDIX C JANUARY 2016 TENDRING SCENARIO

Experian Commentary – Tendring 550dpa scenario

The population size [in the 550 dpa scenario] is larger and the age composition is younger relative to the baseline [SNPP]. There are over 3,340 more students and 1,710 more people aged 16-64 by 2035, while there are 3,850 fewer people aged 65 and above.

Younger people tend to have higher participation rates, so the change in the composition of the population leads to a higher overall participation rate for those aged 16-plus. Even though there are fewer residents aged 16-plus, the labour force is larger in the scenario because people aged 16-64 have much higher activity rates. However, the participation rate in Tendring is still low relative to the East of England (as a whole) and the UK.



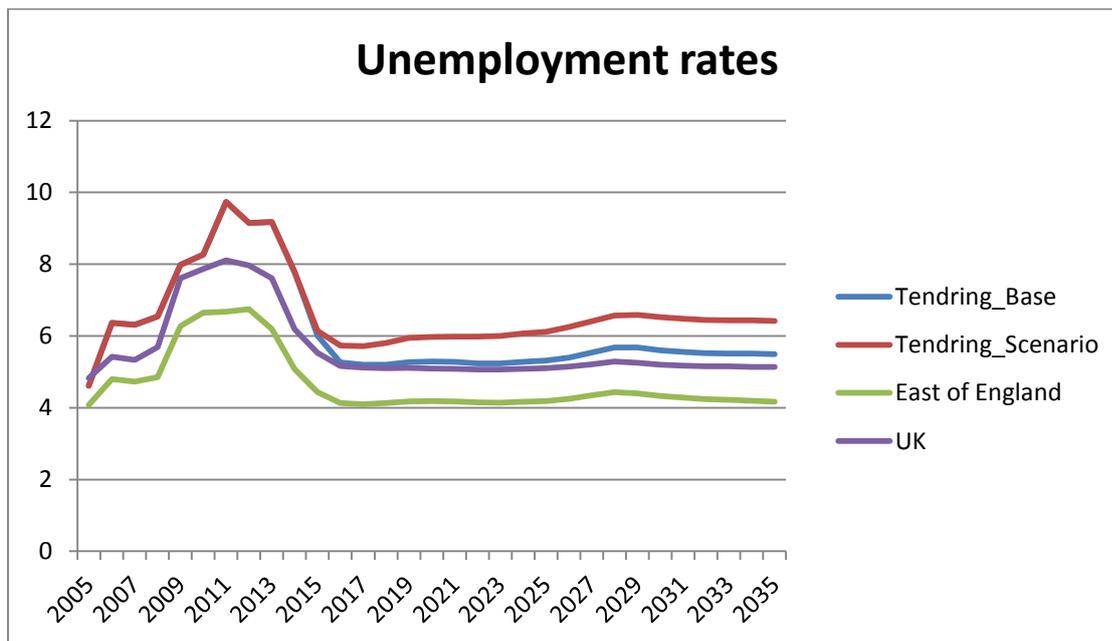
There is a slight offsetting effect for participation rates in each of the age bands due to the extra slack in the labour market. With more people participating in the labour market and competing for jobs, some residents get discouraged about their job prospects and leave the labour market. Although both the 16-64 and 65-plus participation rates are below baseline levels, the overall rate is higher. By the end of the forecast period there are nearly 800 more people in the labour market.

The increase in the size of the population leads to new endogenous demand for jobs in the area. The increase is relatively modest because there are fewer people aged 65-plus, and older people in particular are more likely to demand local services and less likely to travel outside the local area to acquire them. The levels of employment have increased in the services sector. Employment in education services has increased because of the increase in the size of the population aged 0-15.

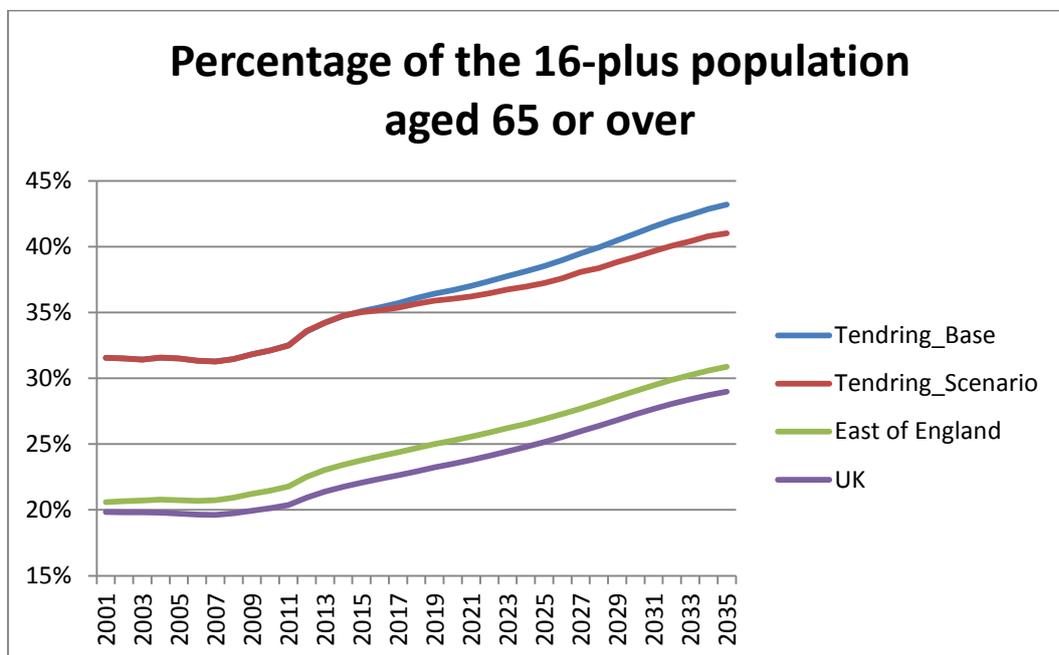
Net commuting levels are unchanged because there is relatively little commuting in and out of Tendring. The proportion of workers in Tendring who are also residents was 79.3% according to the 2011 Census. This is the highest proportion of all local authorities in the East of England. The proportion of Tendring's employed residents who work there was 60.2%, which is also amongst the highest in the region. The commuting ratios are probably low because Tendring is on the coast and is not especially near any prosperous hubs in which there is strong job growth.

As a result of the small increase in job demand, there are not enough new jobs to create employment for the new participants in the labour market. With little commuting in and out of

Tendring, the increase in the size of the labour force leads to a large rise in unemployment of 730 people by 2035.



The seasonally-adjusted unemployment rate in the baseline is high relative to the region (as a whole) and the UK. By 2035, the rates for Tendring, the East of England and the UK are 5.5%, 4.2% and 5.1% respectively. This is especially high given the low participation rates and the high proportion of the population aged 65-plus, as people of that age have very low unemployment rates. The rate for Tendring reaches 6.4% in 2035 in the scenario.



The labour market is not constrained by the labour supply in the baseline case [SNPP]. With more people in the labour market, but only a small increase in demand for jobs, there is no constraint in the scenario [550 dpa scenario] either. We cannot confirm whether there will be a labour constraint under an assumption of 500 dpa without running the scenario with the required population projections.

Variable Name	SNPP		SNPP Experian¹ Difference	
	2013	2031	2031	2031
Labour Force	56.07	71.34	72.10	-0.76
Labour Force - 16 to 64	52.50	63.37	64.56	-1.19
Labour Force - 65 Plus	3.57	7.98	7.55	0.43
Population - retired	43.67	49.60	46.90	2.70
Population - student	22.60	25.43	27.98	-2.55
Population - 16 Plus	116.18	132.69	131.15	1.54
Population - 16 to 64	76.41	77.60	79.13	-1.53
Population - 65 Plus	39.77	55.09	52.02	3.07
Total Population	138.78	158.12	159.14	-1.02
Working Age Population	72.52	83.09	84.25	-1.16
Economic Activity Rate (%) - 16+	48.26	53.77	54.98	-1.21
Economic Activity Rate (%) - 16 to 64	68.70	81.66	81.58	0.07
Economic Activity Rate (%) - 65 Plus	8.98	14.48	14.51	-0.03
Economic Activity Rate (%) - Working Age	77.32	85.86	85.58	0.28
Workforce Jobs	45.17	54.25	54.32	-0.07
Jobs Demand	45.17	54.25	54.32	-0.07
Excess Jobs	0.00	0.00	0.00	0.00
FTE jobs	33.10	39.47	39.47	0.00
Workplace based employment	45.88	53.67	53.73	-0.05
Residence based employment	50.94	67.38	67.43	-0.05
Net commuting balance (inflow)	-5.06	-13.71	-13.70	0.00
Unemployment	5.13	3.96	4.67	-0.71
Unemployment Rate	9.17	5.55	6.48	-0.93

Key ¹ = Experian 550 dpa Scenario