Ipswich Borough Council Local Plan

Population and Household Forecasting – Methodology and Rationale

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IPSWICH
BOROUGH COUNCIL

Planning and Development
Ipswich Borough Council
Grafton House, Russell Road
Ipswich IP1 2DE
(01473) 432019

email: planningpolicy@ipswich.gov.uk

website: www.ipswich.gov.uk

1. Purpose

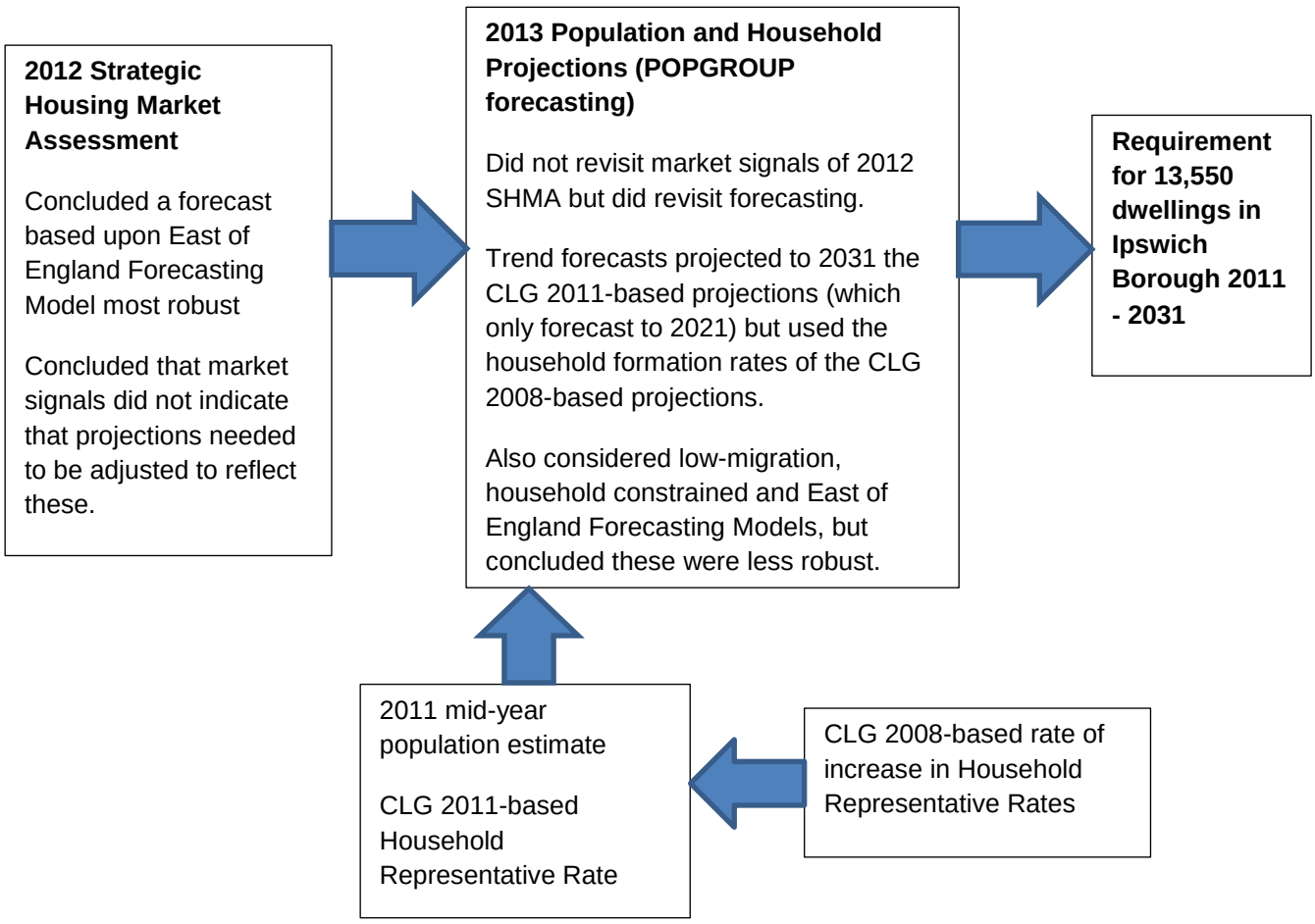
This paper explains the methodology and rationale used in identifying the housing requirement for Ipswich Borough for 2011 – 2031. A Strategic Housing Market Assessment (SHMA) was produced for the Ipswich Housing Market Area in 2012[1] and in 2013 Ipswich Borough Council commissioned Luton Traded Services to model population and household projections for the Ipswich Housing Market Area and the four council areas within it.

2. National policy and guidance

The Planning Practice Guidance (PPG) sets out a methodology for assessing housing needs. This guidance was first published in March 2014, after the production of the SHMA and the 2013 modelling work. Nevertheless, this paper explains how the projections for Ipswich Borough are consistent with the methodology in the PPG.

3. Summary Diagram

The diagram below summarises the detailed explanations contained in the sections below in terms of the inputs to the housing requirement for Ipswich Borough.



[1] Babergh, Mid-Suffolk and Suffolk Coastal District Councils, 2012, *Ipswich Housing Market Area Strategic Housing Market Assessment*, Core Document Library (CDL) reference SCD12

3. Household and population projections

The PPG (Methodology – Assessing Housing Need, paragraph 15) states that 'Household projections published by the Department for Communities and Local Government (CLG) should provide the starting point estimate of overall housing need.' The PPG refers to the latest CLG projections as being those released on 27th February 2015 (the 2012-based projections).

The 2008-based official projections were acknowledged in the 2012 SHMA, as was Government policy for local authorities to use these as part of the evidence base (Section 8.4.1 of the SHMA). An important feature was that the then official projections had over-estimated the number of households in 2011 even though the equivalent population projections had underestimated the population in Ipswich (paragraph 8.4.5 of the SHMA). The SHMA tested a number of different approaches and concluded (page 1.5) that the East of England Economic Forecasting (EEFM) model approach was the most robust for Ipswich when compared to the 2011 Census.

In 2013, the concern of Ipswich Borough Council and other authorities was that the 2011-base Official household projections might not be reliable, which is why Luton Borough Council were commissioned to undertake further projections using the POPGROUP modelling approach. The POPGROUP approach was able to produce forecasts which could better relate to demographic change. The forecasting followed the same methodology as the CLG projections but applied headship rates based upon the 2008-based CLG projections due to uncertainty over the robustness of the headship rates used in the 2011-based CLG projections particularly in terms of suppressed household formation amongst young people.

The POPGROUP forecasting considered a number of different scenarios including Trend, Low Migration, Household Constrained and East of England Forecasting Model. As explained in the Housing Topic Paper[2], the Trend approach was considered to be most robust.

Whilst the EEFM is used to generate forecasts of job numbers, it was considered less robust for forecasting household numbers through the POPGROUP modelling as the EEFM applies a household ratio to the total population rather than separating out the probability of different age/sex cohorts forming a household.

The fact that the 2011-based projections only go to 2021 did mean, however, that data in later years would need to the inputted. Therefore, given that in 2013 a wholly revised set of household projections was not available and given that devising a whole new approach would not be feasible given time and resource constraints, a combined approach was chosen. The approach taken used the 2011-based projections for the year 2011 as the baseline. The annual changes to the household formation rates, known as Household Representative Rates (HRR), from the 2008-based projections were then applied to each year and household type.

The resultant five-year trend population projections used in the POPGROUP forecasts use similar approaches on the CLG projections i.e. average migration levels over five years (2006-2011). The table below compares the different projections of the future population for Ipswich. The trend-based approach results in higher population than those used in the 2011 Interim and 2012-based official household projections owing to a combination of the application of birth and death ratios to the population and the application of a total average of migration for trend instead of the ratio-based approach used by ONS.

[2] Ipswich Borough Council, October 2015, *Topic Paper - Reviewing the Ipswich Housing Figure,* CDL reference LPCD38

Table 1: Ipswich Population Projections Compared

	2011	2016	2021	2026	2031
ONS (2011 Interim)	133,730	138,300	142,900	-	-
Luton (Trend)	133,750	139,634	145,254	150,201	154,713
ONS (2012 Base)	133,730	138,600	143,700	148,100	152,000

As stated above, to forecast households the 2008-base HRRs were used as it was considered that the 2011-based rates were affected by suppressed household formation particularly amongst younger people. Using Ipswich as an example, the HRRs (i.e. the ratio at which new households form) for a family (23-44) with two children in Ipswich from the 2011-base is 0.135. From the 2008 base, the difference in the rate for 2012 and 2011 is -0.001, which was applied to the 2011-based figure (to give a rate of 0.134).

Table 2: Household Projections Compared

	2011	2016	2021	2026	2031
CLG (2011 Interim)	57,432	60,112	62,614	-	-
Luton (Trend)	58,717	62,260	65,641	68,967	72,248
CLG (2012)	57,440	60,076	62,865	65,360	67,875

Table 2 above shows the differences to the number of households projected by the different approaches. It also illustrates the main challenge being that the 2011 Interim results could not provide a long-term view past 2021. It shows the combined effects of increased population projections as well as the re-based HRRs. The 2011 Census recorded 57,298 households within Ipswich. The difference in households in 2031 using the CLG 2012-base projections could be accounted for by the household representative rate applied reflecting recent suppressed household formation.

In summary, whilst the OAN figures could not take account of the 2012-base CLG projections, similar trends and data for population were inputted into the figures. Account was paid to previous concerns over the limitations of the previous official projections in applying the HRRs.

4. Migration

The PPG (Methodology – Assessing Housing Need, paragraph 17) states that 'plan makers may consider sensitivity testing, specific to their local circumstances, based on alternative assumptions in relation to the underlying demographic projections and household formation rates.' and identifies migration as one area where adjustments may be appropriate.

When the forecasts were commissioned in 2013, consideration was given to the appropriateness of past trends. The relatively low level of national migration was known (SHMA, paragraph 5.3.4) and that this is linked to the economic conditions and the overall decline in the volume of transactions (SHMA, paragraph 7.2.1). National migration has a major impact on migration within the wider Ipswich Housing Market Area and international migration has an impact on Ipswich's population.

An average of the migration data from ONS's components of population change 2006-2011 was used in the POPGROUP forecasting for two reasons. An average of five year trends would accord – in so far as possible – with the methodology used by ONS and, therefore, would make for more ready comparison with official projections. The second reason is that a ten year approach would not make sufficient allowance for the most recent trends in international migration. The average level of UK immigration between 2002 and 2012 was

563,900 per annum, and emigration was 360,700.[3] The equivalent for five years up to 2012 is 568,100 and 357,800. Whilst not substantially different, these indicated that the five year trend was appropriate.

The low migration scenario also considered in the POPGROUP forecasting in 2013 was considered to rely too heavily on Government immigration policy.

Whilst net UK and international migration levels are currently below the trend levels for Ipswich, the pattern over the wider Ipswich Housing Market Area is more closely aligned with the forecasts. Table 3 below demonstrates that the trend-based approach does not underestimate current trends in demographic change in Ipswich or the wider Housing Market Area.

Table 3: Average annual demographic change Household Projections Compared

		Births	Deaths	Natural Change	Net UK migrants	Net Overseas migrants	Migration and other changes
Ipswich	**Trend**	1,746	1,101	645	121	283	1,049
	2014 Population Estimates	1,882	1,088	794	-460	-100	265
Ipswich Housing Market Area	**Trend**	5,148	4,605	544	2,053	290	2,887
	2014 Population Estimates	4,630	4,223	407	2,067	-240	2,293

Note to Table 3: the Components of change from the 2014 Population Estimates include 31 additional people in Ipswich and 59 additional people in the HMA under 'other', which include changes to the size of armed forces stationed in the UK, other special population adjustments and rounding.

5. Household Formation

As stated above, the PPG allows plan makers to consider sensitivity testing specific to their local circumstances in relation to household formation.

One of the issues arising when the household projections were commissioned in 2013 was how the economic conditions since 2007 were affecting household formation as well as the affordability of homes, which is also influenced by a lack in the supply of homes. Of particular note is the difference in the younger HRR between the 2008 and 2011 official projections. These were reflecting previous evidence that younger people were less likely to form households in the economic conditions after 2007.

The methodological report for the interim CLG 2011-base projections[4] went into a greater level of detail but, put simply, the process of aligning the results to the 2011 Census and projecting the resultant trend heightened the decline of younger households. This reinforces the trend observed by the Labour Force Survey (LFS) for declining household formation by younger (20-39) people.[5] The 2011-based projections continued 'to use the changes in the household representative rates by age band from the LFS to estimate the changes that have occurred between the 2001 and 2011 Census'.[6]

[3] ONS (2013) Long-Term International Migration – Average of Rolling Annual Average December 2002 to September 2012
[4] DCLG (2013) Updating Department for Communities and Local Government's household projections to a 2011 base: Methodology Report, pages 10-12.
[5] 2008-based and 2011-based household projections methodologies, each page 10.
[6] DCLG (2010) Updating the Department for Communities and Local Government's household projections to a 2008 base: Methodology, page 10

Table 4 below shows how this change affects the output from the process of using a population base and applying different HRR. The HRRs for the 2008 and 2011-based were applied to the 2011-based household population projections used by CLG. If the 2008-based rates are used, just over 1,400 more young-person households would be projected for Ipswich in 2021 than using the 2011-based results. This is just an example but, nonetheless, it is a clear demonstration on the degree to which CLG's 2011-based projections scaled-back the projected number of young households.

Table 4: Worked example using HRR from 2008-base with Interim 2011-base population projections for Ipswich and compared to published projections – projected results for 2021

Age	**Households (2021) (2011-base)**	**Change in households (by applying 2008-base HRR)**	**% change**
20-39	21,822	+1,412	7%
40-59	21,461	+84	0%
60-79	15,881	+196	1%
80+	4,852	- 30	-1%

The total difference in Table 4 is 1,662 dwellings and is therefore significant. Critically, the 2008-base used a declining representative rate between 2002 and 2009 before reverting to the long-term growth trend from 2009.[7] With the 2011 Census confirming this trend, the reversion to the long-term trend was no longer applied.[8] It should be noted, however, that there are other effects contributing to this delay in household formation such as greater participation higher education and declining rates and later ages of marriage and family formation.

It is nevertheless concluded that the suppressed household formation rates following 2007 was a short term trend linked to the economic cycle and should therefore not form a part of future forecasting. For this reason the HRR from the 2008-based CLG projections were applied.

6. Market signals

The PPG (Methodology – Assessing Housing Need, paragraph 19) states that the 'housing need number suggested by household projections (the starting point) should be adjusted to reflect appropriate market signals, as well as other market indicators of the balance between the demand for and supply of dwellings.' Whilst the PPG was published after Ipswich produced its draft revised Core Strategy, market signals had already been taken into account through the 2012 SHMA.

The overall volume of sales was considered, particularly the decline in sales of newly-built homes (SHMA, Table 7.2.2). A comparison was made between the change in median house prices for Ipswich and other areas and that Ipswich had a more substantial decline in prices between 2007 and 2011 than most other areas (SHMA, Tables 7.2.4 and 7.2.5). Of particular note was the decline in the price of flats and apartments and that the potential 'over-supply' was reported by agents (SHMA, paragraph 7.3.4). The price of entry-level accommodation in Ipswich was lower than the national average, or the average for Norfolk and Suffolk (SHMA,

[7] DCLG (2010) Updating the Department for Communities and Local Government's household projections to a 2008 base: Methodology, page 10.
[8] DCLG (2013) Updating Department for Communities and Local Government's household projections to a 2011 base: Methodology Report, page 11.

Table 7.4.1). Of particular relevance is that the percentage change in lower quartile prices between 2001-2011 was lower in Ipswich than the national average (SHMA, Figure 7.4.5).

More recent sales data shows that, between 2013 and 2014, average annual residential sales has increased from 1,700 to 2,200 for Ipswich and 6,600 to 8,000 for the wider Ipswich Housing Market Area[9], as shown in Table 5 below.

Table 5: Rolling Annual Average of Sales of residential properties within Ipswich, the wider Housing Market Area and England 2008-2014 (Q2-based) and the annual averages before and after the recession. (ONS/Land Registry)

	2008	2009	2010	2011	2012	2013	2014	Ave. 1995-2008	Ave. 2008-2015
Ipswich	2,646	1,443	1,853	1,558	1,694	1,701	2,229	2,755	1,882
Ipswich HMA	8,365	4,992	6,761	5,944	6,369	6,203	7,992	9,593	6,733
England	964,272	477,766	652,872	611,377	647,588	644,590	847,956	1,088,168	697,924

The housing market has yet to return to pre-recession levels but that the results for 2014 show signs of growth. The sales figures show that sales have not returned to pre-recession volumes and new supply is dependent upon the market increasing to previous levels of transactions.

The market signals therefore do not suggest that house prices or sales are being affected by supply and therefore an adjustment to the projections is not necessary to reflect any market signals.

7. Conclusions

The above analysis demonstrates that the housing requirement for Ipswich has been founded upon robust methodology which takes account of the specific circumstances of Ipswich Borough and the Ipswich Housing Market Area.

[9] ONS, 2015, House Price Statistics for Small Areas – rolling quarterly average (second quarter)