

Bradford Local Plan

Core Strategy Examination

Matter 4a: Housing Requirements

Further Statement responding to Letters From J Thompson on Population Projections

Date: 10th March 2015

Venue: Victoria Hall, Saltaire

- 1.1 This statement contains the Council's response to two submissions made by Jacqueline Thompson relating to population projections issued by ONS and the matter of Unattributable Population Change (UPC). The substantive response is attached at Appendix 1 and has been provided by Edge Analytics.
- 1.2 The Council concurs with the points made by Edge Analytics and strongly disagrees with the analysis and comments made by Ms Thompson. In particular the Council wishes to stress that the ONS has re-affirmed that it has not made any adjustment for UPC in both the national and sub national population projections.
- 1.3 The scenarios generated by Edge Analytics, in particular those which have shown the implications of carrying forward the 5 year and 10 year migration trends, are in the Council's view both justified and essential to determining the appropriate level at which to set the assessment of future housing need.
- 1.4 The Council also disagrees with the assertion made by Ms Thompson that the differences between the projected population within the district (mid year estimates) and subsequent much higher population recorded at the 2011 census can be largely attributed to people choosing to avoid filling in the census by considering themselves 'visitors' rather than 'usually resident'. There is no logic to this since in some parts of the country such as in Leeds, the census 2011 populations were not higher but were actually lower than those implied in the previous mid year estimates. There are clearly other factors at work and Edge Analytics provide a logical and compelling case for suggesting that the most likely cause of the discrepancy lies with inaccurate reporting of levels of migration.
- 1.5 The Council would also stress that, contrary to the impression which Ms Thompson seeks to present, the Council's assessment of housing need is not just predicated on UPC and migration assumptions but has resulted from a wide variety of evidence including assessments of future economic performance and of housing market signals.
- 1.6 The Council is confident that the approach to assessing need, unlike that of Ms Thompson, has been objective, logical and founded on robust evidence.

APPENDIX 1: EDGE ANALYTICS RESPONSE TO MATTERS RAISED BY JACQUELINE THOMPSON

[J Thompson Point 1: The Inclusion of UPC within the international migration assumptions used by Edge Analytics](#)

Edge Analytics Response

Edge Analytics includes the Unattributable Population Change (UPC) within the international migration assumptions used in the 'PG' scenarios (PG-5yr and PG-10yr scenarios). To state that Edge Analytics has "*added [the UPC component] to the ONS projections*" (as stated by J Thompson in paragraph 1 of her letter) misrepresents the approach taken by Edge Analytics.

Context: 2011 Census and the re-basing of the Mid Year Population Estimates

Between Censuses, population estimation is necessary. The Mid-Year population Estimates (MYEs) are derived by applying the 'components of change' (i.e. counts of births and deaths and estimates of internal and international migration) to the previous year's MYE.

At the 2011 Census, there were more people recorded as living in Bradford than the trajectory of growth implied by the inter-Census MYEs suggested (see Figure 1 of the Edge Analytics September 2014 report).

The MYEs were re-based by ONS following the 2011 Census, with adjustments made to the components of change (i.e. births, deaths and migration) to account for methodological changes and estimated errors in the components¹. A portion of the inter-Census population change was not attributed to any one component, with the ONS referring to this as 'Unattributable Population Change' (UPC). The ONS states that "*UPC is likely to be due to either sampling variability and/or other methodology issues that may have occurred in the following:*

- *international migration estimates,*
- *census estimates (both 2001 and 2011), or*
- *internal migration estimates (at subnational level only)."*¹

ONS 2012-based SNPP

In the formation of demographic trend projections, historical data are used to determine future rates of growth.

The ONS states that the "*SNPPs are demographic, trend-based projections indicating likely size and age structure of the future population if the underlying trends and assumptions about future levels of components of change were realised. They are*

¹ 2012-based Subnational Population Projections for England, Report on Unattributable Population Change 20 January 2014, ONS.

based on levels of births, deaths and migration observed over a **five year reference period** leading up to the base year.”² (Emphasis added).

In the September 2014 Edge Analytics report, the 2012-based SNPP is presented as the ‘benchmark’ official scenario. On page 10 of the report, a comparison of the projected components of change and the historical components of change are presented. Table 1 is replicated below:

Component of Change	Historical		Projected
	5-year average (2007/08–2011/12)	10-year average (2002/03–2011/12)	2012-based SNPP average (2012/13–2036/37)
Natural Change	4,104	3,639	4,019
Net Internal Migration	-3,057	-2,670	-3,217
Net International Migration	2,699	2,935	2,131
Unattributable Population Change*	909	1,045	-
Annual Population Change	4,649	4,942	2,933
Annual Population Change (%)	0.93%	1.04%	0.56%

* UPC is only applicable to the years 2001/02 - 2010/11

Annual population change is calculated as a % change from the start year of the time period

For all the components of change, the SNPP-2012 assumptions are more closely aligned with the 5-year historical period than the 10-year period. However, there are differences: net internal migration is assumed to happen at a *higher* rate under the SNPP-2012 than the historical data suggests, and net international migration at a *lower* rate than the historical data suggest.

ONS has explicitly stated that it has **not** made any adjustment for UPC in both the 2012-based national and sub-national population projections. The justification for this, at a national level, is that the “UPC for England (103,700) is within the confidence interval for the international migration estimates”³. However, in some local authority districts the UPC adjustment is considerable - as is the case in Bradford - and therefore neglecting to include it within the historical MYEs would potentially mis-represent the historical population growth.

Trend-based Scenarios: Edge Analytics Approach

Given the unprecedented economic changes that have occurred since 2008, and the differences between the historical migration data for Bradford and the 2012-based SNPP projection assumptions (see Table 1 above), it is important to give due consideration to an extended historical time period for assumption derivation.

In the ‘PG’ scenarios, Edge Analytics has used the historical components of change data to derive assumptions on future rates of internal and international migration. Both a 5-year (2007/08–2011/12) and a 10-year history (2002/03–2011/12) were used. Fertility and mortality assumptions in these scenarios were derived from the 2012-based SNPP.

² 25th September 2012: Quality and Methodology Information Paper, ONS

³ 2012-based Subnational Population Projections for England, Report on Unattributable Population Change 20 January 2014, ONS.

In the formulation of the alternative 5-year and 10-year scenarios, the UPC element is a complicating factor as it represents a change in the historical population that is not explicitly assigned to one of the four components of population change: births, deaths, internal migration or international migration. However, between successive censuses, births and deaths are accurately recorded in vital statistics registers and provide a robust measure of population growth due to 'natural change' (the difference between births and deaths). Furthermore, internal migration data are derived from GP registers, providing an accurate representation of population movement between local authority areas, albeit with some issues with regard to potential under-registration in young adult age-groups.

In contrast, international migration is the most difficult component to estimate with confidence and this has been reflected in the extensive Migration Statistics Improvement Programme (MSIP)⁴ that ONS has undertaken to review and revise its methods for estimating immigration and emigration to and from local authority areas.

On the assumption that births, deaths and internal migration have been robustly measured between the 2001 and 2011 Census, the UPC 'adjustment' that followed the 2011 Census count is most likely associated with the mis-estimation of international migration; the balance between immigration and emigration flows to and from Bradford. Edge Analytics therefore includes the UPC element within the net international migration assumptions in its two 'PG' scenarios.

J Thompson Point 2: Visitors vs. Usually Resident Population

Jackie Thompson states that *"...the ONS has a reasonable explanation for the discrepancy between the projections based on the 2001 Census and the actual count at 2011....'The 2001 Census in England and Wales under-estimated the population by around 275 thousand people, even after the initial adjustment for undercount. The 2001 Census collected information from usual residents only, with no attempt to collect information from visitors. This lack of visitor information has been perceived as a weakness of the 2001 Census, and it has been suggested that many people may have chosen to classify themselves as visitors in order to avoid completing a census return. It was decided to review all options for enumeration base before deciding on the appropriate base before deciding on the appropriate base for 2011."*

Edge Analytics Response

The above is taken to assume that Ms Thompson is here referring to the differences between the trajectory of growth suggested by the 'previous' MYEs (i.e. pre-2011 Census revisions) and the population recorded at the 2011 Census.

ONS states that it is normal to find some differences between the rolled-forward MYEs and the Census-based MYEs⁵. There are several reasons why these differences may have arisen; these are outlined in the ONS guide in footnote 5 below but the main reasons at national-level are:

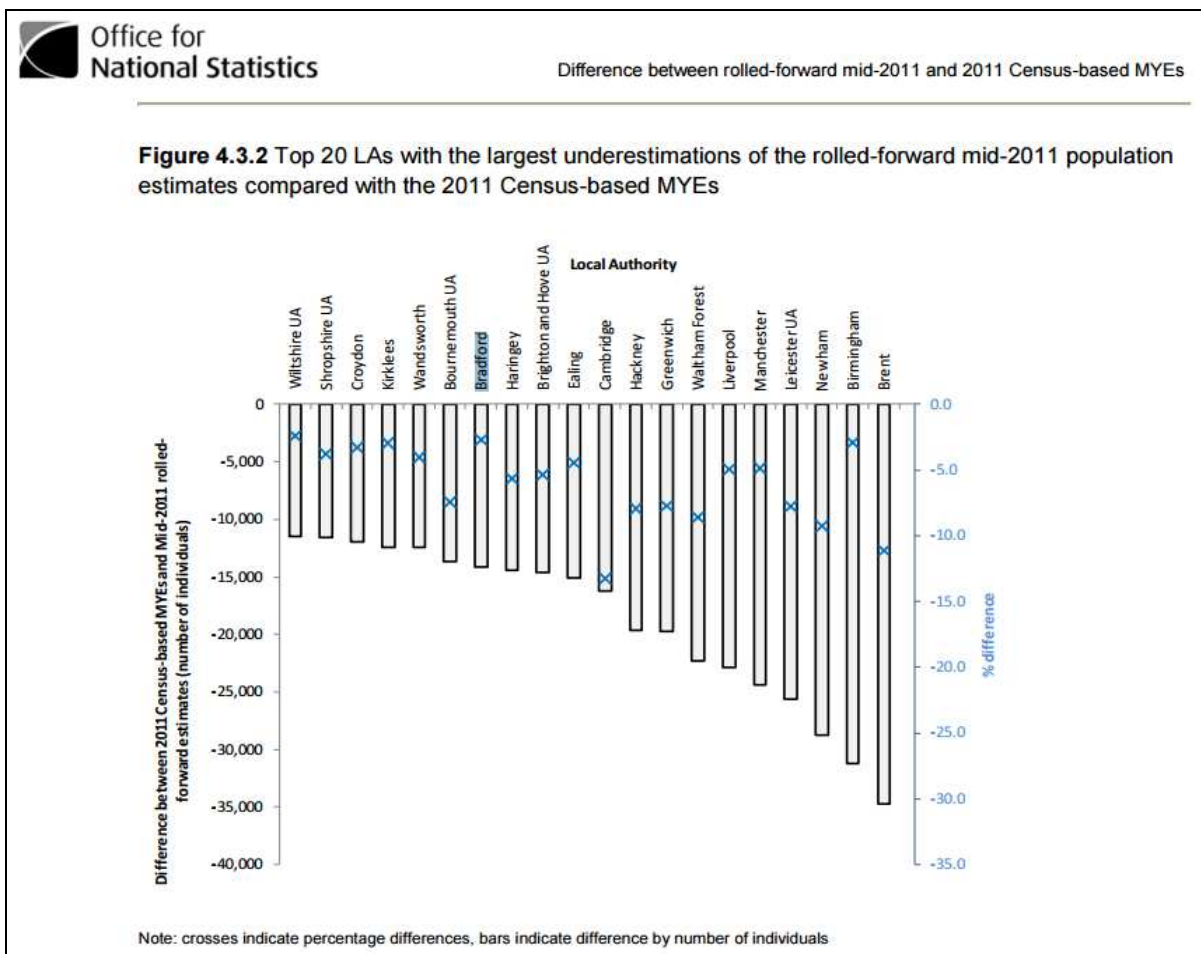
- underestimation of international migration in the early to middle part of the decade;

⁴ <http://www.ons.gov.uk/ons/guide-method/method-quality/imps/index.html>

⁵ Examining the difference between the rolled-forward mid-2011 population estimates and the 2011 Census-based MYEs at local authority level, ONS 25 September 2012, Coverage: England and Wales.

- underestimation in the 2001 Census base.

Bradford falls within the top 20 local authorities where the rolled-forward mid-2011 population estimate was *lower* than the 2011 Census-based MYE:



Source: ONS 2012⁶

Following the 2011 Census, the 2002–2010 MYEs were ‘rebased’ to align them with the 2011 MYE and to ensure the correct transition of the age profile of the population over the 2001–2011 decade (see response to Comment 1 above). A portion of this growth is attributed by ONS to UPC.

Whilst it is possible that there are issues with the 2001 and 2011 Census counts in some areas (and the ONS clearly state that this may be a reason for the UPC element in some instances), Edge Analytics considers that in the case of Bradford, it appropriate to include the UPC element within the net international migration assumptions.

⁶ Examining the difference between the rolled-forward mid-2011 population estimates and the 2011 Census-based MYEs at local authority level, ONS 25 September 2012, Coverage: England and Wales.

J Thompson Point 3: Adjustments to ONS projections based on local knowledge

Jackie Thompson states that the ONS informed her that “...Local Authorities might, on the basis of evidence or knowledge that was additional to that already used in formulating ONS projections, be justified in making adjustments to them...The Council and Edge Analytics have not produced any such evidence and have already made adjustments to the projections based on economic factors that might lead to a growth in employment.”

Edge Analytics Response

The PPG states that “plan makers should make an assessment of the likely change in job numbers based on past trends and/or economic forecasts as appropriate...” (PPG paragraph 2a - 018).

The ‘Jobs-led REM’ scenario produced by Edge Analytics examines the demographic implications of forecast jobs-growth in Bradford, in line with the PPG. The employment forecast used comes from the Yorkshire and Humber Regional Econometric Model, which is used across the Leeds City Region (LCR) Local Enterprise Partnership (LEP).

Bradford-specific economic activity rates, a commuting ratio and unemployment rates have been used to determine the level of population growth (and therefore the household growth and dwelling requirement) of the jobs-growth trajectory.

J Thompson Point 4: Population growth in Bradford 2001–2011 may not be as large as it appears

Jackie Thompson states that her attention was also drawn “to an anomaly in the data associated with the mid-term population estimates between the 1991 and 2001 Censuses ... In Bradford’s case there was a substantial discrepancy between the projected population and the mid-term estimate, with the latter being lower than expected ... population growth between the 2001 and 2011 Censuses may not be as large as it appears ... Bradford might well be justified in reducing the estimates of future growth below that in the ONS figures ... [it is] probable that the actual population increase between the 2001 and 2011 Census counts was not as great as it appears from the counts themselves. The people were here before 2001. If this is the case current ONS projections will be inflating numbers because they are based on the increases observed between the two most recent censuses.”

Edge Analytics Response

The 2001 and 2011 Censuses provide definitive counts of Bradford’s population.

J Thompson Point 5: 2011 Census Population

“The population figure for the 2011 Census point and upon which further calculations are based is given in the report as 522,542. The actual count was 517,000. The starting point for Edge analytics calculations is therefore already inflated. This represents 2,300 households if one uses the figure of 2.4 people representing an ‘average’ household size.”

Edge Analytics Response

This is incorrect. The 2011 Census population for Bradford was **522,542**, **not** 517,000. The 2011 Census data table for Bradford (Table KS101EW) can be found in link below (and is replicated below):


<https://www.nomisweb.co.uk/census/2011/KS101EW/view/1946157124?cols=measures>

nomis
official labour market statistics

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You are here: [home](#) > [2011 Census](#) > [Key Statistics](#) > [KS101EW](#) > [Data Viewer](#)

KS101EW - Usual resident population

 [Download \(.xls\)](#)
Table population: All usual residents
Variable by measures
Units: Persons

Date 2011
Geography Bradford

	value
All usual residents	522,452
Males	257,132
Females	265,320
Lives in a household	515,315
Lives in a communal establishment	7,137
Schoolchild or full-time student aged 4 and over at their non term-time address	4,896
Area (Hectares)	36641.72
Density (number of persons per hectare)	14.3

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies