

BIRMINGHAM DEVELOPMENT PLAN EXAMINATION

**MATTER A: HOUSING NEED AND THE HOUSING
TRAJECTORY**

**STATEMENT ON BEHALF OF BIRMINGHAM CITY
COUNCIL**

Main issue: Does the Plan appropriately identify housing needs and does it seek to meet them in accordance with national policy.

General

- G.1 The 2011 Census indicates that Birmingham's population grew by 9.1% to 1,073,000 between 2001 and 2011.
- G.2 This population growth was driven by two main factors:
- The natural growth of the existing population. Birmingham's population has a young age structure with the result that each year there are more births than deaths.
 - International migration. Birmingham has well-established ethnic minority communities and is an entry point for international migrants.
- G.3 These two factors were mitigated by net outward migration from Birmingham to other parts of the UK – primarily locations nearby.
- G.4 These trends are well-established and they are reflected in the various projections of future population and household growth. Inevitably each new set of projections gives a different result – and recently there has been a particular volatility as a result of the need to adjust the figures to reflect the results of the 2011 Census. However the constant factor is that all the projections indicate substantial growth in both population and households within Birmingham in the period 2011 to 2031.
- G.5 The City Council is keen to ensure that sufficient housing is provided to meet these growth requirements and aims to maximise housing delivery within Birmingham's boundary over the plan period. However the reality is that there is insufficient land within Birmingham to achieve this and so Birmingham will be reliant on neighbouring Councils to accommodate some of Birmingham's growth.

Issue 1

Is the Plan based on an objective assessment of the full needs for market and affordable housing in the housing market area over the Plan period?

- 1.1 The initial stages of the preparation of the Plan took place within the context of the housing targets for Birmingham set in the West Midlands Regional Spatial Strategy. When it became clear that the coalition government was committed to the abolition of Regional Spatial Strategies, the Council concluded that it was necessary to commission a new assessment of Birmingham's future housing need, in line with the requirements of the National Planning Policy Framework.
- 1.2 At that time the Council made initial approaches to neighbouring authorities to establish the potential for commissioning a joint study. However different authorities were at different stages in the development plan process or had adopted plans, and it was clear that there was no appetite for such an approach at that time.

The Council therefore appointed PBA to undertake a Strategic Housing Market Assessment for Birmingham (H2). This focuses on Birmingham – but also considers the demand and supply position in the wider sub-region (see section 12 of the report). This consistent with Government’s view that local plans must be progressed as quickly as possible (NPPF paragraph 213) in order that sustainable development can be delivered in accordance with NPPF requirements (paragraphs 150 – 157).

- 1.3 The SHMA provides a full analysis of the need for both market and affordable housing, using the most up-to-date projections that were available at the time that it was produced. It concludes that household growth in Birmingham will be within the range of 81,500 to 105,200 for the period 2011 – 31 and that around 38% of these dwellings should be affordable.
- 1.4 The submission Plan is based on these conclusions, with a housing requirement at the bottom end of this range, derived from the 2008-based household projections . The derivation of the housing requirements contained in the Plan is explained in the Housing Targets Technical Paper (H1).

Issue 2

If not, what alternative objective assessment of housing needs should the Plan be based upon?

- 2.1 The SHMA was originally published in 2012, and so it is a recent document, taking account of the household and population projections available at that time. However there are two subsequent factors that need to be taken into account.
- 2.2 Firstly, the Office of National Statistics has published new 2012-based population projections which take account of the results of the 2011 Census, although these have not yet been converted into household projections by DCLG. The 2012-based household projections are expected to be published in the autumn of this year. This creates a continuing uncertainty over the projected numbers and a need for caution as to what they may reveal.
- 2.3 Secondly, in the light of the conclusions of the Birmingham SHMA which indicate that household growth in Birmingham will exceed the capacity of the city to accommodate additional housing, the Greater Birmingham and Solihull Local Enterprise Partnership and the Black Country authorities have commissioned a Housing Needs Study. This is also being undertaken by PBA. The first two phases of this work consider housing supply and requirement issues across the two LEP areas and also defines a wider housing market area. Although the full report is not yet available, the headline figures for the GBSLEP in terms of housing need have been published. These show that household growth in Birmingham will be similar to, but somewhat higher than the level shown in the SHMA.
- 2.4 The Study provides projections based on various scenarios. For Birmingham the core scenarios give a range of 89,000 to 115,900 dwellings for the period 2011 – 31. The

derivation of these figures is explained in an appendix to this statement prepared by PBA.

- 2.5 The City Council accepts that it is appropriate to base Birmingham's housing requirement on the most recent data and that this indicates that the requirement will be somewhat higher than the figure included in the submitted Plan. However there is continuing uncertainty surrounding the projections. In view of this, and given that there is insufficient deliverable housing capacity within Birmingham to meet even the lowest projected figure, the Council considers that it would be appropriate to set Birmingham's housing requirement as a range, as indicated by the Housing Needs Study.
- 2.6 However, if it is considered that a more precise position should be adopted at this stage, the Council considers that the following factors should be taken into account:
- Projections based on trends over the last five years will be influenced by the impact of the recession. In particular reduced activity in the housing market has limited the potential for outward migration from Birmingham to other parts of the country. It is reasonable to assume that as the housing market recovers, outward migration will increase. This will mitigate household growth within Birmingham.
 - If the housing requirement is set too high the consequence will be that the development plan process will allocate too much land for new housing. This may impact on the deliverability of more marginal sites. As these are likely to be disproportionately urban, brownfield sites, there would be a negative impact on regeneration in Birmingham and potentially elsewhere, particularly the Black Country, and would undermine urban renaissance principles (NPPF paragraph 17).
 - Greenfield (and in all probability green belt) land would be developed for housing unnecessarily.
- 2.7 For these reasons the Council takes the view that it would be prudent to set the requirement towards the bottom of the Housing Needs Study range. This level would itself ensure a substantial increase in the delivery of new housing in line with the expectations of the NPPF. The Council considers that this is in accordance with the NPPF, which requires Local Plans to be aspirational but deliverable (paragraph 154); this is reinforced in the effective test of soundness (paragraph 182), which also requires plans to be deliverable over the time period.

Issue 3

Does the Plan meet the full needs for market and affordable housing, as far as is consistent with the policies set out in the *National Planning Policy Framework*?

- 3.1 The Plan proposes the development of 51,100 new homes in Birmingham between 2011 and 2031. This is below the objectively assessed requirement on which the Plan is based.

- 3.2 In setting out the requirement for local authorities to meet objectively assessed development needs, the NPPF recognises that this should not apply where ‘the adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole or specific policies in this Framework indicate that development should be restricted.’ This appears in paragraph 14 in relation to development generally and is repeated in similar terms in relation specifically to housing at paragraph 47, bullet 1.
- 3.3 The NPPF thus requires the Council to do whatever it can to meet its objectively assessed housing need within its own boundary, but recognises that circumstances may arise which will make this impossible. This is also acknowledged in the Planning Practice Guidance (paragraph 003).
- 3.4 Consistent with this, the Council has therefore sought firstly to maximise the amount of new housing that could be provided within the urban area, taking account of the need to protect open space and maintain environmental quality and also to ensure that other key strategic objectives such as the provision of employment land are not compromised. This provides a capacity of about 45,000 well below the requirement. Details of this are provided in the Council’s Strategic Housing Land Availability Assessment (SHLAA – H13).
- 3.5 All the open land adjoining Birmingham’s urban area is currently designated as green belt. In order to maximise housing delivery within the city boundary the Council has undertaken a green belt review covering all of the green belt land within Birmingham (see document PG1). In practice this is a relatively small area because Birmingham’s boundaries are drawn tightly around the built-up area, with the only significant opportunities for urban expansion being located to the north east of the city, on the edge of Sutton Coldfield. On the basis of this review a site for up to a further 6,000 homes has been identified – although it is expected that only around 5,000 of these will be developed within the plan period (see document PG3 Housing Delivery on Green Belt Options).
- 3.6 The Council has therefore assessed all available sources of new housing within Birmingham’s boundary as national policy requires, but has been unable to identify sufficient land to meet the full objectively assessed need. In the Council’s view 51,100 is the maximum amount of new housing that could realistically be delivered in Birmingham over the plan period. This means that it will be necessary for some provision for new housing to meet Birmingham’s needs to be made outside Birmingham’s boundary.

Issue 4

What proportion of the assessed housing needs should be met outside the Plan area, and by what mechanism should that proportion be distributed to other local planning authorities' areas?

- 4.1 Under the submitted plan 60.8% of Birmingham's objectively assessed housing need would be met within the city boundary, leaving 39.2% to be provided in neighbouring areas.
- 4.2 It is not a new situation for Birmingham to be unable to meet all of its housing requirements. Table 3.1 of the Duty to Co-operate Statement (DC2) shows that under the 1993 and 2005 Unitary Development Plans a much lower proportion (about 27%) of Birmingham's housing requirement was met within the city boundary.
- 4.3 The Council considers that in line with the NPPF, Birmingham should aim to accommodate as high a proportion of its future housing requirement as possible. However since the amount of new housing that can be delivered within Birmingham is fixed the proportion will vary if there is a change in the overall requirement – i.e. it will decrease if the requirement rises and it will increase if the requirement falls. The Council does not therefore consider that it would be appropriate to identify a fixed proportion to be met within Birmingham regardless of the size of the requirement.
- 4.4 Given the number of Councils which neighbour Birmingham and the fact they are at different stages in the development plan cycle, it has been recognised that it would not be possible for the issue of accommodating Birmingham's unmet need to be addressed effectively through bi-lateral discussions between Birmingham and each of its neighbours. The partners within the Greater Birmingham and Solihull Local Enterprise Partnership (GBSLEP) have therefore agreed the following approach:
1. Undertake a joint Strategic Housing Study to identify a common evidence base in relation to housing land supply and requirements for new housing across the study area and for each of the nine individual local authorities, including identification of any surplus or shortfall (stages 1 and 2 of the Study).
 2. Undertake a third stage of this Study, to identify scenarios for accommodating any shortfall.
 3. Selection of a preferred approach for accommodating the shortfall through the preparation of the non-statutory LEP Spatial Plan.
 4. Where necessary, review of individual authorities' development plans to bring forward additional land for housing development in line with the Spatial Plan.
- 4.5 The authorities within the Black Country LEP have recognised the strength of this approach and the Housing Needs Study (steps 1 and 2 above) is also covering the Black Country. North Warwickshire Borough Council has also agreed to co-operate with the Study and discussions are continuing with Stratford-on-Avon and South Staffordshire.

Step 1 has now been completed and work is commencing on step 2.

- 4.6 More detail on the approach is provided in the Duty to Co-operate Statement (DC2) paragraphs 4.2 – 4.13 and an update on the current position is provided in the Duty to Co-operate Addendum.
- 4.7 The strength of this approach is that it provides a means for agreement to be reached on the scale of the issue and on the most appropriate strategy to address it at the level of the Housing Market Area, combined with a commitment for this to be taken forward through individual development plans, but without interrupting the progress of plans that are already well-advanced through the statutory process. The work being undertaken through the GBSLEP and with the Black Country provides a solid and common evidence base for taking this forward.
- 4.8 The issue of the need to accommodate housing requirements generated in Birmingham in adjoining areas has already arisen at recent or ongoing development plan examinations, including Cannock Chase, Lichfield, Solihull, North Warwickshire and Bromsgrove/Redditch. In these cases inspectors have found the approach summarised above to be a sound and pragmatic way of dealing with the issue.
- 4.9 The City Council has sought the inclusion of wording within these plans recognising that there may be a need for land to be identified within these areas to help meet Birmingham's future housing needs, and committing the authority to work collaboratively with partner authorities to address the issue and to undertake an early review of their local plan to identify additional land to meet Birmingham's needs should this be shown to be necessary. This has been accepted in each case.

Issue 5

Is there justification for the staged housing trajectory set out in policy TP28?

- 5.1 Section 6 of the Housing Targets 2011 – 31 Technical Paper (H1) explains the rationale for the housing trajectory contained in policy TP28. As the Technical Paper explains, the trajectory reflects a judgement on the most likely profile of housing delivery over the plan period taking account of market considerations and development lead-in times. It is clear, for example, that it will not be possible for new housing to be delivered at the Langley Sustainable Extension for several years and the trajectory reflects this.
- 5.2 A small number of comments have been received which criticise the fact that the trajectory is backloaded and suggest that this conflicts with the NPPF because it constrains housing delivery in the early years of the plan period. It should be emphasised that the proposed trajectory reflects the best evidence as to what is deliverable in practice. The Council does not see the annual figures in this policy as ceilings which should not be exceeded in any particular year or as means of

constraining housing delivery. A modification to paragraph 8.13 has been proposed to make this clear (Main Modification MM71).

Issue 6

If not, what alternative trajectory should be pursued?

- 6.1 No detailed alternative trajectory has so far been proposed although it has been suggested that the trajectory should not be backloaded.
- 6.2 For the reasons set out in response to issue 5, the Council would not support this approach.

Issue 7

Does policy TP30 set out a sound approach to the provision of affordable housing?

- 7.1 The level of affordable housing provision required under the policy is derived from the SHMA with further details set out in Section 7 of the Housing Targets Technical Paper.
- 7.2 The policy strongly favours on-site provision of the affordable housing but is sufficiently flexible to enable off site provision, by means of either a commuted sum or provision on another site, when appropriate.
- 7.3 It is not the intention of the policy to impede development or make development unviable. The Policy acknowledges that development proposals will not always be able to provide affordable housing in accordance with the percentage set out in it so it includes a mechanism for assessing the viability of a scheme and revising the level of provision where this is justified.
- 7.4 In the City Council's view the policy is consistent with the NPPF and is sound. There were no significant criticisms of the policy other than in relation to the point raised in issue 8 (below).

Issue 8

Is policy TP30 justified in seeking affordable housing provision in specialist housing and extra care housing schemes?

- 8.1 Nothing in the NPPF indicates that it is inappropriate in principle for affordable housing provision to be sought in the case of specialist housing schemes, including extra care housing schemes.
- 8.2 Policy TP30 aims to meet affordable housing needs for all members of the community not just those who are in need of general housing.
- 8.3 Generally, specialist housing caters for older people. The City Council's primary focus is on those aged 75 and over, as this is when households are most in need of

specialist accommodation, although the concept of specialist housing for older people can apply from age 55.

- 8.4 Types of specialist housing for older people includes:
- Age Related Housing – housing without onsite support. Occupancy restrictions can be as low as age 55. People may enter this market through choice not need.
 - Sheltered Housing – has a manager or warden but there is no personal care provided.
 - Enhanced Sheltered Housing –has some care provided but not 24/7.
 - Extra Care Housing – similar to enhanced sheltered housing but where care and support are available 24/7.
- 8.5 There are 235,400 people aged 55 or over and 68,500 aged 75 or over in Birmingham. These numbers are projected to increase to 308,300 and 93,600 respectively by 2031¹ leading to an increased demand for specialist housing. Modelling undertaken by the City Council identifies a need for an additional 4,716 units of Age Related Housing, 515 units of Enhanced Sheltered Housing and 2,457 units of Extra Care Housing by 2029 just to meet the needs of those aged 75 and over. 60% of the above will need to be affordable.
- 8.6 However, there are relatively few providers of specialist affordable housing for older people, making delivery through the affordable housing policy extremely important. Currently there are just over 15,000 specialist housing units for older people in the city of which 75% is affordable housing, reflecting the fact that older people are far more likely to need financial support with their housing. Almost 60% of this being provided by the City Council.
- 8.7 Policy TP30 applies to self-contained dwellings where all the rooms (including kitchen, bathroom and toilet) in a household's accommodation are behind a single door which only that household can use. The policy would not apply, for instance, to residential nursing homes which have individual bedrooms with shared facilities.
- 8.8 The Council does not accept that specialist housing developments such as extra care are inherently unable to provide affordable housing for viability reasons and the policy allows for exceptions in cases where there is a genuine viability issue.

¹ ONS 2012 based population projections

Birmingham City Council

Objectively assessed housing need Update note

Peter Brett Associates

September 2014

Project Ref: 29710

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1 INTRODUCTION

- 1.1 The Birmingham Strategic Housing Market Assessment (SHMA) 2012, prepared by Peter Brett Associates for the City Council, provided an objective assessment of future housing need to help inform the Birmingham Development Plan. The SHMA took account of the most up-to-date projections available at the time. Some months after it was completed, the Council joined 12 other local authorities in commissioning the Greater Birmingham, Solihull and Black Country Strategic Housing Needs Study ('the 2014 housing study'). That new study is also being prepared by PBA. The report of its first two stages is currently in draft and provides updated housing needs assessments across the study area that take account of the latest available information, including the full results of the 2011 Census. A third and final stage, which is yet to be commissioned, would consider where in the area that need might be accommodated, developing options for policy-makers to consider.
- 1.2 This note provides an update of the SHMA's main results in the light of the 2014 study. Below, in Section 2 we summarise the main findings of that 2014 study as they bear on housing need and possible housing provision targets for Birmingham in the plan period 2011-31. In section 3 we compare these findings with those of the SHMA, and also comment briefly on a further demographic scenario, which is being put forward by objectors to the Birmingham Development Plan.

2 HOUSING NEED 2011-31

Introduction

- 2.1 As part of the 2014 housing study we provided assessments of housing need to cover:
- i The *commissioning authorities* ('the study area') in two groups:
 - *Greater Birmingham and Solihull Local Economic Partnership (GBSLEP)*: Birmingham, Bromsgrove, Cannock Chase, East Staffordshire, Lichfield, Redditch, Solihull, Tamworth and Wyre Forest;
 - *Black Country*: Dudley, Sandwell, Walsall and Wolverhampton.
 - ii '*Related authorities*', which though not part of the study area have relatively close links to it through migration and / or commuting:
 - South Staffordshire, North Warwickshire and Stratford on Avon.
- 2.2 In this note we focus firstly on Birmingham itself and secondly on the rest of the GBSLEP area. We do not cover the related authorities.
- 2.3 The main aim of the 2014 housing study is to provide an objective assessment of overall housing need ('the OAN'), covering both the market and affordable sectors, in line with national policy and guidance. Accordingly, as recommended in the government's Planning Practice Guidance ('PG'), our first source of evidence is demographic projections – beginning with the official projections from ONS and CLG, which we then test and adjust through alternative projection scenarios.
- 2.4 In line with the PG, housing needs assessment should also take account of other factors, including the past balance of demand and supply (as measured by market signals) and a separate calculation of affordable housing need as per paragraphs 022-029 of the PG¹. The assessment presented here does not take account of these factors, because they are best analysed at a finer-grained geographical scale. Past supply and market signals will be considered in Stage 3 of the 2014 study. Affordable need, along with other aspects of housing mix and tenure (household types, dwelling sizes, specialist provision for the elderly etc) will be covered in separate studies by the individual authorities,

Demographic projections

Methods and assumptions

ONS/CLG projections

- 2.5 In line with the PG, our assessment starts from the official household projections from the Department for Communities and Local Government (CLG). The CLG projections are derived from the sub-national population projections (SNPP) produced by the

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Office for National Statistics (ONS). The SNPP show future population by local authority area and are normally published at two-year intervals, though this regular cycle is sometimes disrupted in response to new data – most recently the 2011 Census. The CLG translates the population into households. The projected growth in household numbers, with a small adjustment for vacant and second homes, is used as the measure of housing need.

- 2.6 The official projections, as their name indicates, are trend-driven – that is, they roll forward (project) past trends into the future. Accordingly, still following the PG, we test and amend them through alternative projection scenarios that adjust for:
- Technical flaws in the official method – in particular superseded or otherwise inaccurate historical data (projections are only the past rolled forward, so a projection based on the wrong past will be inaccurate);
 - External (non-demographic) factors that bear on demographic change but are not captured in the projections, because they are likely to differ in the future from what they were in the past – in particular the macroeconomic climate.
- 2.7 For any geographical area, in arithmetical terms change in household numbers is driven by three factors. The first two factors, natural change (equal to births minus deaths) and migration (UK and international²) impact on population change. The third factor is the set of ratios that turns population into households, known as household representative rates (HRRs, alternatively headship or household formation rates). Alternative scenarios are mostly based on varying assumptions about migration and household formation. Unlike natural change, these factors are difficult both to measure for the past and to predict for the future.
- 2.8 When we first looked at demographic projections in early 2014 we referred to the latest official projections available at the time, which comprised:
- The CLG 2008-based projections ('CLG 2008'), published in 2010 and derived from the 2008-based SNPP population projection ('ONS 2008');
 - The CLG interim 2011-based projections ('CLG 2011'), published in 2013 and derived from the 2011 interim SNPP ('ONS 2011').
- 2.9 Both these projections have serious technical weaknesses. The 2008 suite is based on historical information that by now is very out of date. In particular, it long pre-dates the 2011 Census, whose findings in many places overturned earlier views of the past. The interim 2011 suite has a short time horizon, only covering 10 years to 2021. It also has another weakness, which is why it is labelled interim: the future migration it shows is based on pre-Census estimates of past trends, which for many places were shown by the Census to be seriously inaccurate.
- 2.10 A more general problem with the official projections is that future migration follows trends rolled forward from a five-year base period (for ONS 2011, that period is case

² 'Migration' in the present context means all moves that cross a local authority boundary, whether within the UK or internationally.

2006-11)³. In general, it seems doubtful to base a prediction for 20 years or longer on a past as short as five years. In this particular case, the previous five years are likely to be untypical of longer-term trends, because four of them coincide with an economic recession, and an exceptionally severe one at that.

- 2.11 In the CLG 2011 household projection, household formation also carries the imprint of the recession. Across England the 2011 Census showed that there were substantially fewer households than previously expected and on average those households were substantially larger. The evidence suggests that this is partly a demand-side effect of the recession – when, due to falling incomes and the credit crunch, fewer people could afford their own homes. CLG 2011 carries forward this effect into the future.

PBA projections

- 2.12 To correct the weaknesses listed above, we created two alternative scenarios of our own for 2011-31, called PBA Trends. The assumptions behind these scenarios are described at Appendix A below and full results, together with those of the official projections, are at Appendix B. The projections used our in-house suite of demographic models, which are fully-fledged cohort progression models and mirror the methods and assumptions used in the latest official projections – except of course for the alternative assumptions we are testing, as described below.

- PBA Trends 2001-11 projects the migration trend from the inter-censal period 2001-11. Unlike the 2011 official projections, it takes full account of the 2011 Census findings. Unless there are special circumstances that make this 10-year base period untypical, it should also provide a more robust projection than the five-year base used by ONS/CLG. As regards household formation, Trends 2001-11 uses the ‘indexed’ (re-based, blended) method supported by the South Worcestershire EiP inspector among others, which assumes that after 2021 headship rates revert to their pre-recession trend as projected in CLG 2008 – though without catching up the ‘deficit’ accumulated earlier.
- PBA Trends 2007-12 is based on five-year migration trends, 2007-12⁴. In principle, as discussed earlier, one would expect this to be less reliable than a ten-year base period, and also less aligned with long-term trends because of the recession. Its purpose is to help compare our scenarios and the official ones, which (as noted earlier) always use a five-year base period for migration. For household formation, Trends 2007-12 again uses the indexed method – assuming a return to the pre-recession trend after 2021.

ONS/PBA projection

- 2.13 Through the Trends scenarios discussed above, we rectified as far as possible the flaws in the official projections current at the time. But in late May 2014, after this modelling was complete, ONS produced a new, 2012-based release of the SNPP.

³ In the case of international migration, these five-year-based figures are controlled to national totals that reflect longer-term trends and ONS’s judgment.

⁴ The base period has been rolled forward one year from ONS/CLG 2011, because our projections had the benefit of more recent data, following publication of the 2012 ONS mid-year estimates.

This ('ONS 2012') is a fully-fledged population projection, which supersedes the interim ONS 2011. But CLG 2012, which will convert ONS 2012 into households, is not expected until late 2014.

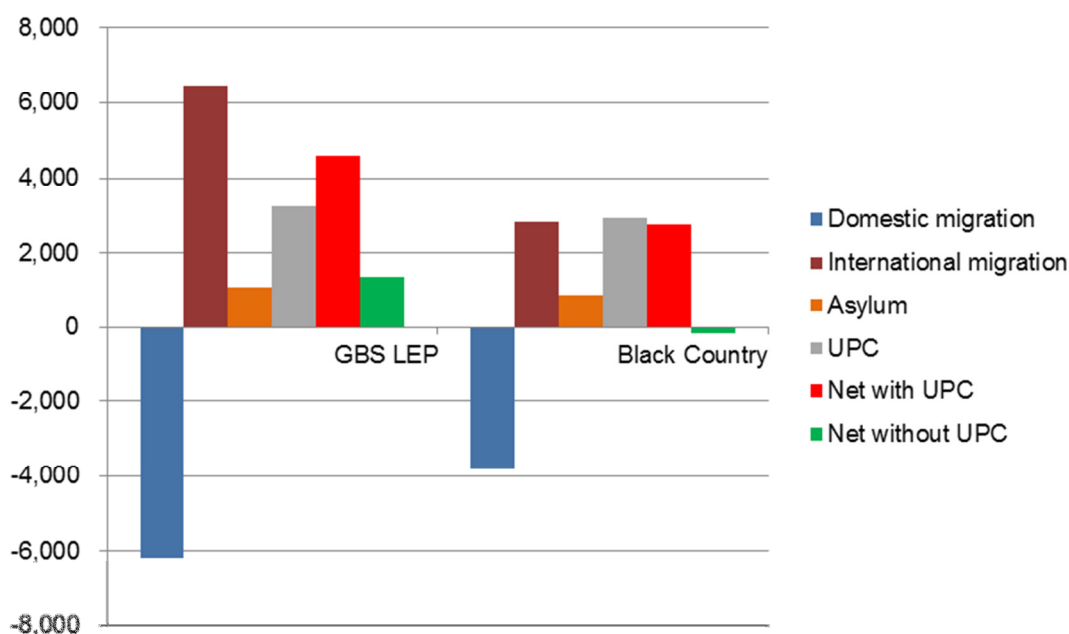
- 2.14 To fill the gap until CLG 2012 is published, we have produced our projection scenario to turn ONS 2012 into households. That scenario, called ONS/PBA Trends 2012, uses the same indexed headship rates as our other Trends scenarios. It is an estimate or preview of CLG 2012, except that at this stage we cannot tell what view CLG will take of future headship rates (household formation) – a matter of judgment as much as analysis.
- 2.15 The ONS 2012 population projection has an important technical flaw, which also affects the ONS/PBA 2012 household projection based on it. The problem relates to an error term in the official population statistics known as unattributable population change (UPC). UPC occurs when area's population change between the two last Censuses, 2001 and 2011, cannot be accounted for by the recorded births, deaths and migration.
- 2.16 Positive UPC occurs when the 2011 Census found more persons than could be traced back to previous population, natural change or migration since the 2001 Census. In other words, there are more people in an area than expected and the ONS cannot tell how the additional people got there (assuming they were actually not there in 2001). Conversely, where UPC is negative there are fewer persons in the area than previously expected, and the ONS cannot tell where the missing people went (assuming they were actually there in 2001).
- 2.17 There are two possible reasons for the UPC. Firstly, population numbers in one or both of the Censuses could be wrong, so that in reality the unattributable change (or some of it) did not happen. Alternatively or additionally, the migration figures could be wrong, so the UPC (or some of it) did happen, but was wrongly recorded. (It is most unlikely that figures on natural change are wrong, because births and deaths are rigorously recorded, whereas migration is merely estimated from incomplete data).
- 2.18 The consensus of demographers is that the latter is more likely, so that the UPC (or much of it) is unrecorded international migration, probably from the EU accession countries and mostly in the first half of the decade. However, the ONS 2012 population projection ignores the UPC – in effect assuming that the UPC results from miscounting in one or both Censuses. In places where the UPC is large this can make a major difference to the estimated past migration that demographic projections roll forward into the future. Hence how the UPC is dealt with can make a major difference to the projected housing need.
- 2.19 Across England as a whole in 2001-11, the aggregate UPC is positive at 103,400 persons per year⁵. This relatively modest number is the net outcome of pluses and minuses for individual local authorities. In our study area, the UPC is a large component of past population change. For the GBSLEP area the UPC is positive and totals 3,200 persons per annum (Figure 2.1), mostly accounted for by Birmingham:

⁵ Numbers quoted in the text are rounded.

- In absolute terms this is more than half of both net international migration (which is positive, a flow into the area) and net internal (UK) migration (which is a negative, a flow out of the area).
- If the UPC is unrecorded migration, annual migration into the area in 2001-11 was an inflow of 4,600. If the UPC is due to Census errors (i.e. it did not really happen) annual migration is still positive but falls to 1,400.

2.20 When carried forward into projections these differences have a major impact on the projected housing need, as we show in the next section.

Figure 2.1 Migration 2001-2011
Persons p.a.



Source: ONS

Summary

2.21 To explore possible demographic futures we use five alternative household projection scenarios, as follows:

- Two official projections, CLG 2008 and CLG 2011 (based respectively on the ONS 2008 and ONS 2011 population projections, which the CLG converted into households);
- Two scenarios of our own making, PBA Trends 2001-11 and PBA Trends 2007-12, which use more recent data and repair weaknesses in the official scenarios;
- One hybrid scenario, ONS/PBA 2012, which translates into households the latest ONS population scenarios – a preview of the new CLG household projection that is expected later this year.

2.22 In the next section we summarise those projections in turn. We then discuss the merits of different scenarios and draw the implications for future housing need.

Results

2.23 The results of the five projection scenarios are summarised in the tables below and discussed in the narrative that follows.

Table 2.1 Population change: five projections
Persons p.a. 2011-31

	CLG 2008	CLG 2011	PBA Trends 2007-12	PBA Trends 2001-11	ONS 2012
Birmingham	7,350	8,583	12,975	12,396	7,746
Rest of GBSLEP	4,295	5,347	4,071	4,611	3,700
GBSLEP	11,645	13,930	17,047	17,007	11,446
Black Country	4,280	6,102	9,374	8,864	5,631
Total study area	15,925	20,032	26,421	25,871	17,077

Source: ONS, CLG, PBA

Table 2.2 Net migration: five projections
Persons p.a. 2011-31

	ONS 2008	ONS 2011	PBA Trends 2007-12	PBA Trends 2001-11	ONS 2012
Birmingham	-4,025	-2,723	1,843	684	-2,549
Rest of GBSLEP	3,245	3,027	2,198	2,518	2,468
GBSLEP	-780	304	4,041	3,202	-81
Black Country	-665	-176	2,941	2,284	-30
Total study area	-2,225	432	11,022	8,689	-192

Source: ONS, CLG, PBA

Table 2.3 Household change: five projections
Households p.a. 2011-31

	CLG 2008	CLG 2011	PBA Trends 2007-12	PBA Trends 2001-11	ONS/PBA 2012
Birmingham	4,077	3,668	6,297	5,620	4,317
Rest of GBSLEP	2,976	2,788	2,398	2,409	2,511
GBSLEP	7,053	6,456	8,695	8,029	6,828
Black Country	2,735	2,475	4,023	3,494	3,072
Total study area	9,788	8,931	12,718	11,523	9,900

Source: ONS, CLG, PBA

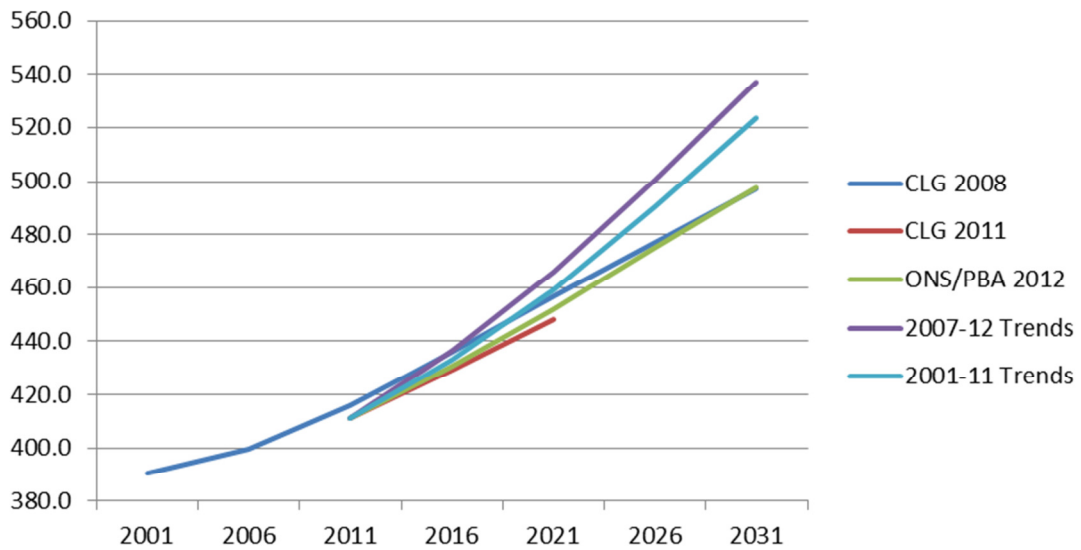
2.24 Over the period 2011-31, the CLG 2008 projections show:

- Population increasing by 7,400 persons per annum in Birmingham City and 11,600 in GBSLEP as a whole (Birmingham is by far the most populous local authority in the area, accounting for just over half of the area's population and households in 2011);
- Household numbers increasing by 4,100 in Birmingham City and 7,100 p.a. in GBSLEP.

- 2.25 CLG 2008 was released in 2010. Two to three years later, as the results of the 2011 Census were released, it became apparent that CLG 2008 was inaccurate. The Census showed that at 2011 the area's population was greater than expected; while numbers of households were very slightly smaller than expected, so the average household size was slightly larger than expected. These differences were concentrated in Birmingham City.
- 2.26 There is no ready-made explanation for the larger than expected number of people in Birmingham. It is likely to result at least in part from supply-side factors – specifically the planning and regeneration policies of the 1990s and early 2000s. In this period planning policy, including the Regional Spatial Strategy, deliberately steered housing growth to the major urban areas - which saw increasing high-density development on brownfield sites; while in the 'greenfield' authorities that had traditionally received Birmingham's overspill land allocations were reduced. Hence fewer people moved out of the city and / or more people moved in than previous trends indicated, resulting in more in-migration and hence a larger total population for Birmingham.
- 2.27 The fact that the area had fewer and larger households than previous trends suggested is easier to explain. As noted earlier it is a general feature of the 2011 Census, and explained in part by the recession.
- 2.28 The CLG 2011 household projection as explained earlier takes account of these Census findings, but only partially, and only runs to 2021. For GBSLEP over this period:
- The population increases by 8,600 p.a. in Birmingham and 13,900 p.a. in GBSLEP;
 - Household numbers increase by 3,700 p.a. in Birmingham and 6,500 p.a. in GBSLEP.
- 2.29 We show this scenario for the sake of completeness, because it is the latest available official household projection. But in our opinion it is no longer technically credible, for two reasons. Firstly, as discussed earlier, it rolls forward estimates of migration, and hence population growth, which the 2011 Census showed to be seriously underestimated. Secondly, as we also explained earlier, its assumptions on future household formation carry the deep imprint of the last recession. Our own PBA Trends scenarios aim to overcome these weaknesses.
- 2.30 In the first of these PBA scenarios, Trends 2007-12:
- The GBSLEP population in 2011-31 increases by 13,000 p.a. in Birmingham and 17,000 p.a. in GBSLEP.
 - Households in the area increase by 6,300 p.a. in Birmingham and 8,700 p.a. in GBSLEP.
- 2.31 One weakness of Trends 2007-12 is that the base period whose migration trends it rolls forward, 2007-12, is both short and dominated by the recession. We include this scenario because it uses the same method as the official ones, but in our view a robust projection should use a longer based period and one that mixes boom and bust. This is the thinking behind the Trends 2001-11, projection, which shows:

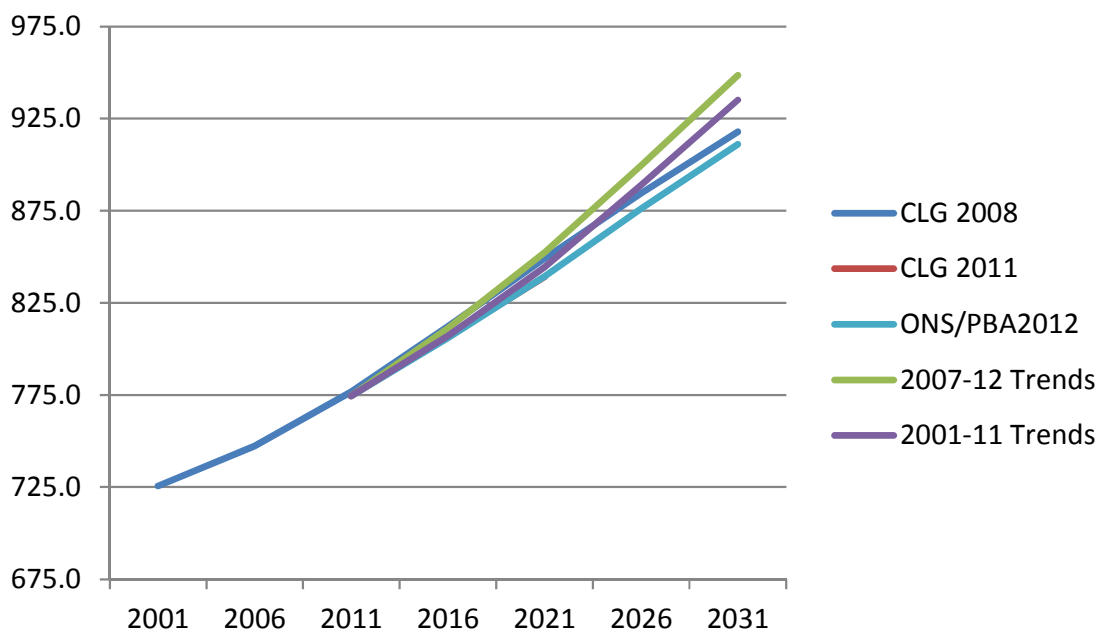
- Population growth of 12,400 p.a. in Birmingham and 17,000 p.a. in GBSLEP;
 - Household growth 5,600 p.a. in Birmingham 8,000 p.a. in GBSLEP.
- 2.32 These numbers are similar to the results of Trends 2007-12, especially for GBSLEP as a whole. The main difference is that in Trends 2001-11, with its longer base period, there is less growth in Birmingham counterbalanced by more growth in the rest of the GBSLEP area. The likely explanation is that in Trends 2001-11 net migration into Birmingham is lower than in Trends 2007-12 (see Table 2.2, which shows migration for the different scenarios).
- 2.33 To understand the reason for *that*, we need to bear in mind that Birmingham's migration comprises two contrasting flows: international migration is usually positive and domestic (UK) migration usually negative. In the 2007-12 recession the domestic outflow slowed, as due to the recession people who would otherwise have moved out to other parts of GBSLEP stayed in Birmingham. The Trends 2007-12 projections carries forward this trend into the future, resulting higher population and more households in Birmingham than the longer-term trend suggests.
- 2.34 The final scenario on our list, ONS/PBA 2012, is almost undistinguishable from the CLG 2008 scenario from which our discussion started. As such is shows much less growth than the PBA Trends scenarios:
- Population in Birmingham grows by 7,700 p.a. and in GBSLEP by 11,400 p.a..
 - Household numbers in Birmingham grow by 4,300 p.a. and in GBSLEP by 6,800 p.a..
- 2.35 The simple explanation for these figures is the unattributable population change (UPC) discussed in the last section. In essence, the PBA Trends projections show substantially more growth than the earlier official projections because they carry forward the unexpected population growth discovered by the 2011 Census. The ONS 2012 population projection, from which the ONS/ PBA 2012 household projection is derived, in effect takes away much of that unexpected growth, by assuming that the UPC was a counting error rather than real change.

Figure 2.2 Birmingham City household change: five projections
Thousands of households



Source: ONS, CLG, PBA

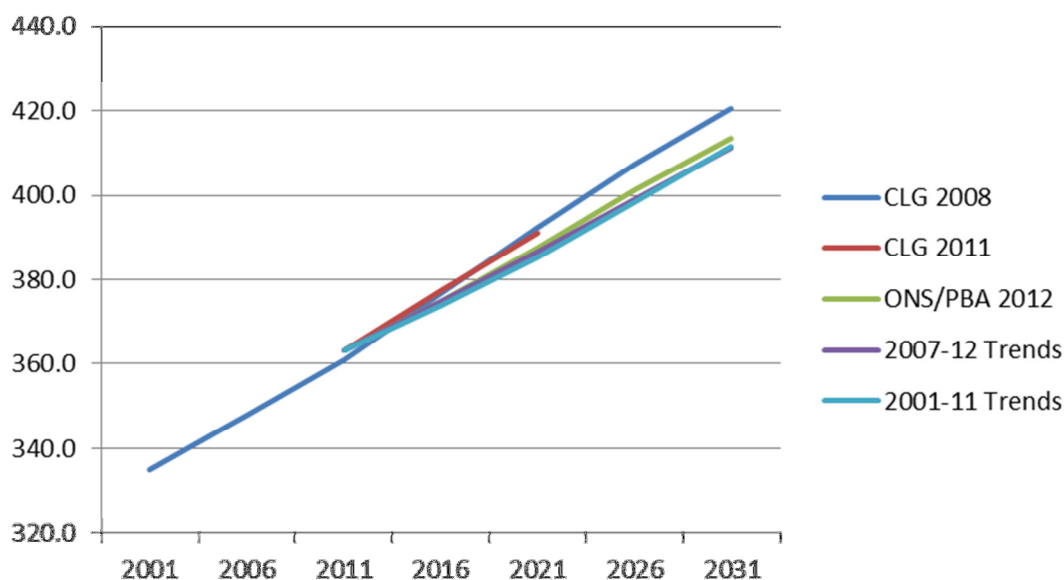
Figure 2.3 GBSLEP household change: five projections⁶
Thousands of households



Source: ONS, CLG, PBA

⁶ On this chart the line showing CLG 2011 is invisible because it is hidden by ONS/PBA 2012, which happens to show virtually the same numbers.

Figure 2.4 Rest of GBSLEP household change: five projections
Thousands of households



Source: ONS, CLG, PBA

2.36 In summary, for the technical reasons discussed earlier, in our view the most credible demographic projections for the GBSLEP area are:

- Trends 2001-11, which for Birmingham shows 5,600 net new households p.a. and for GBSLEP 8,000 net new households p.a..
- ONS/PBA 2012, which for Birmingham shows 4,300 net new households p.a. and for GBSLEP 6,800 net new households p.a..

2.37 These scenarios frame a range of uncertainty in which reasonable trend-driven estimates of housing demand should fall. Both scenarios incorporate the latest historical data and both share the same assumptions about household formation, which have been endorsed by planning inspectors. The main difference between them is how they deal with unattributable population change.

Conclusion: housing need and housing targets

2.38 The table below estimates the need for net additional housing that would result from each of the five projections, on the simple assumption that 3% of the housing stock consists of vacant and second homes.

**Table 2.4 Housing need: five projections
Annual change in dwelling numbers 2011-31**

	CLG 2008	CLG 2011	PBA Trends 2007-12	PBA Trends 2001-11	ONS/PBA 2012
Birmingham	4,203	3,781	6,492	5,794	4,451
Rest of GBSLEP	3,068	2,874	2,472	2,484	2,589
GBSLEP	7,271	6,655	8,964	8,277	7,039
Black Country	2,820	2,552	4,147	3,602	3,167
Total study area	10,091	9,207	13,111	11,879	10,206

Source: ONS, CLG, PBA

2.39 From the two preferred projections, the range of housing need is:

- Minimum (from ONS/CLG 2012):
 - Birmingham 4,500 dpa, equal to 89,000 dwellings over the plan period 2011-31⁷;
 - GBSLEP 7,000 dpa, or 140,800 over the plan period.
- Maximum (from PBA Trends 2001-11):
 - Birmingham 5,800 dpa, or 115,900 over the plan period
 - GBSLEP 8,300 dpa, or 165,500 over the plan period,

2.40 For Birmingham, both these figures are above the 84,000 net new dwellings (2011-31) implied by on the CLG 2008 household projections.

2.41 In technical terms, which projection is preferable depends on one's view of the UPC. If the UPC is primarily due to unrecorded migration, then the higher projection should be preferred. If it is primarily due to miscounting in one or both of the Censuses, then the lower projection should be preferred.

2.42 In practice of course there is no certain answer to the UPC question. Nor can we be sure what future official statisticians, planning inspectors or judges will think caused the UPC – which in practice may be the decisive factor. In deciding which set of numbers makes a good basis for their plan targets, local authorities will also have regard to the likely consequences and risks associated with different options, considered against their policy priorities:

- A too-low number, undershooting future demand and need, would have obvious adverse impact in terms of people's living conditions and financial circumstances. As ever, the worst effects are likely to be felt by people who are already in difficulty and in areas that already suffer housing stress. A more immediate risk is that in the period before plans are adopted new official projections, inspectors' decisions and / or case law may that decide that projections that discount the UPC are too low, and hence dismiss proposed housing targets based on those projections.

⁷ The number quoted in the text are rounded. Therefore the 20-year totals do not precisely equal the annual figures multiplied by 20.

- A too-high housing target also carries risks, especially bearing in mind that any additional need above the minimum figures is likely to be met on greenfield land. Unnecessary greenfield allocations are of course undesirable in themselves, both due to environmental impacts and wasted infrastructure spending. Additionally, if land allocations exceed what will be taken up in practice, greenfield sites are likely to be developed first, while oversupply makes brownfield regeneration projects unviable.

3 OTHER SCENARIOS

What has changed since the SHMA?

Analysis

- 3.1 In the 2012 Birmingham City⁸ SHMA, the preferred demographic scenario for the plan period 2011-31 was CLG 2008, already discussed earlier. As we also discussed earlier, after the 3% vacant homes adjustment this implies a future housing need for Birmingham of 4,200 p.a. (84,000 for the plan period); in the SHMA, the housing number equalled the household growth of 81,500, because the adjustment was omitted);
- 3.2 The SHMA also provided two main alternative projections:
- 'Trend migration' is now overtaken by events, because it was based on the ONS 2010-based population projection, and by now the 2011 Census has invalidated the historical migration data behind that projection.
 - 'Low international migration' is also overtaken by events. It assumed that net international migration into England would fall to less 100,000 in 2015/16 and remain at that level throughout the plan period. This assumption was based on a pledge made by the Prime Minister in 2011. In the intervening period net migration has risen sharply, suggesting that the low migration scenario is no longer relevant.
- 3.3 The SHMA also provided a crude projection that took into account the early results of the 2011 Census. That 'Census scenario' was partly similar to the PBA Trends 2001-11 scenario in our 2014 report, in that it rolled forward the migration trend from the two Census years, 2001-11. But it differs from Trends 2001-11 in that it is a crude estimate based on the incomplete Census data available at the time. Partly due to those incomplete data, and partly because the 'indexed' approach to household formation had not been developed at the time, the SHMA's Census scenario also used a different approach to household formation, simply freezing headship rates (HRRs) at their 2011 level.
- 3.4 Despite these differences, the SHMA's Census scenario shows similar results to the current PBA trends 2001-11: after the 3% vacant homes adjustment (which was omitted from the SHMA), it implies a housing need for Birmingham of 6,000 dpa. Both these housing need figures are well above the CLG 2008 figure, and for the same reason: the 2011 Census found many more people in Birmingham than were predicted by CLG 2008, and if we assume that those extra people were in-migrants the projection carries forward that increased migration into the future.
- 3.5 As regards the wider housing market area beyond Birmingham, the SHMA did not provide independent demographic projections, but simply used CLG 2008 as a

⁸ Birmingham City Council Strategic Housing Market Assessment 2012, revised January 2013

readily available indication of future housing need. For the rest of GBSLEP, in contrast to Birmingham, the current PBA Trends 2001-11 projection shows slightly lower household growth and housing need than PBA 2008. Differences for these two parts of GBSLEP partly offset each other, so for GBSLEP as a whole CLG 2008 and ONS/PBA are closer than for Birmingham on its own – showing future housing need of 7,300 and 8,300 dpa respectively.

Conclusion

- 3.6 For Birmingham considered in isolation, the 2012 SHMA provided three main demographic scenarios. Two of these scenarios are invalidated by information that has come to light since. The third implies housing need of some 4,200 dpa, based on the CLG 2008 household projection.
- 3.7 The SHMA also noted that:
- The early results of the 2011 Census found substantially more population growth between the 2001 and 2011 Censuses than previously expected.
 - As an initial approximation, projecting this new-found growth into the future would imply housing need of the order of 6,000 dpa.
- 3.8 The latter estimate in effect was a rough preview of the current PBA Trends 2001-2011 scenario, which implies a housing need of some 5,800 dpa.
- 3.9 For the wider housing market area the SHMA did not provide independent demographic projections, but simply used CLG 2008 as a readily available indication of future housing need. Our Trends 2001-11 scenario shows higher housing need, due to the Birmingham factor discussed above. For the rest of the GBSLEP area Trends 2001-11 shows slightly lower housing need than CLG 2008.

The Barton Willmore alternative projections

- 3.10 We have briefly reviewed the alternative demographic projections submitted by Barton Willmore (BW) on behalf of a consortium of national developers⁹. Those projections show considerably higher housing need than the PBA Trends ones, equal to 6,755 or 7,655 dpa depending on whether the UPC is taken into account.
- 3.11 The full review is at Appendix C below. In summary, BW do not provide enough detail for a step-by step assessment of their projection. But from the information they do provide we conclude that:
- The BW projection seriously over-projects natural change (the difference between births and deaths).
 - BW's projections of net migration are mathematically incorrect.
 - However these errors make relatively little difference to the household projection and resulting housing need.

⁹ Barton Willmore LLP, Birmingham Sub-regional Housing Study - Part 2, February 2014

- The main factor that lifts the BW projections above the PBA equivalent is too-high household representative rates (HRRs, headship rates, housing formation rates). We cannot tell how these rates have been derived, but it seems clear that they are not credible.

APPENDIX A DEMOGRAPHIC PROJECTIONS DEFINED

APPENDIX B DEMOGRAPHIC PROJECTIONS

Electronic document, not intended for printing.

APPENDIX C REVIEW OF BARTON WILLMORE REPORT

Demographic projections defined

John Hollis
Demographic consultant

Five demographic projections are considered in this study. They are as follows:

ONS/CLG 2008

This is still the most complete set of national projections, as the 2011 Interim projections only go as far into the future as 2021. The migration is based on ONS estimates for 2003-08 and the ONS population projection was converted to households by CLG. This projection has been presented in the 'How Many Homes?' website.

ONS/CLG 2011 Interim

The ONS interim population projection uses the same assumptions and demographic rates (fertility, mortality and out-migration within England) as the ONS 2010 projection but is based on the post-Census 2011 mid-year population estimate. The projection horizon is 2021. The population has been converted to households in the CLG 2011 interim projections. These projections are only a partial update of the 2008 projections due to their use of out-of-date demographic rates, a particularly important factor for local authorities that the 2011 Census showed to have been poorly estimated up to 2010, and the short projection horizon

PBA Trends 2001-11

This projection by PBA is based on the ONS 2012 mid-year estimates. It uses average annual migration characteristics of the area by age and gender over the period 2001-11 but in all other respects uses the same inputs as the 2007-12 Trends projection.

PBA Trends 2007-12

This projection by PBA is based on the ONS 2012 mid-year estimates and uses fertility and mortality assumptions, but not actual rates, from the ONS 2012 projection for England. It uses average annual migration characteristics of the area by age and gender over the period 2007-12 using the revised series of ONS mid-year estimates for years 2007-10. The conversion to households uses the household representative rates and other assumptions of the CLG interim 2011 projections, described above, to 2021. After 2021 the household representative rates from the CLG 2008 projection are used with gender/age/relationship adjustments based on the comparison of rates with the CLG 2011 projection at 2021. (This is effectively the 'indexing' method preferred by the Inspector at the South Worcestershire EiP.) This projection is the closest that can be achieved using the same base period for migration as will be used by ONS in the 2012-based subnational projections.

ONS/PBA 2012

This is derived from the latest ONS population projection, published on 29th May 2014. It incorporates full data from the 2011 Census. The internal (UK) migration is based on ONS estimates for the latest five years (2007-12) and international

migration for the latest six years (2006-12). ONS decided not to utilise in the 2012 projections base their own estimates of UPC in the 2001-11 period. It is generally considered that in areas with high response rates to the 2001 and 2011 Censuses that UPC represents shortcomings in the ONS estimation of one or more migration streams affecting the local authority. It is most likely that this mainly affects the estimates of international migration given that migration within the UK is based on administrative records of patient re-registrations. The ONS 2012 projection for England has a long-term assumption of net international migration being 150 thousand a year; this is significantly lower than earlier ONS projections (eg ONS 2010 and ONS 2011 assumed 188 thousand). CLG is expected to convert this projection to households and publish results later in 2014. In the meantime PBA has converted the populations to households in the same way as in the two Trends projections described below.

John Hollis holds a degree in mathematics from Southampton University and an MA in Demography from the University of California at Berkeley. He led demographic analysis and projections at the Greater London Authority and its predecessor organisations from 1968 to 2011, since when he has been working as an independent demographic consultant. John is a member of ONS Expert Panel on National Population Projections, a member of the Royal Statistical Society, a member and past president of the British Society for Population Studies and a former member of the CLG Advisory Group on Household Projections Development. His experience includes producing annual demographic projections for Greater London and the London Boroughs, including to inform successive versions of the London Plan; writing the demographic mathematics for the ONS sub-national population projections; and demographic projections to inform land-use planning in many parts of England.

Birmingham Sub-Regional Housing Study

Review of Barton Willmore Report (Feb 2014) Part 2

John Hollis

Demographic consultant

Background

This review considers the population and household projections contained in the Barton Willmore (BW) report.

Four projections are shown in some detail in the report. Two are for Birmingham City – using migration trends with and without the unattributable population change (UPC) estimated by ONS. Two similar projections are available for the 13 districts that combined form the Rest of the Housing Market Area (RHMA).

The Modelling Process

Barton Willmore used the PopGroup demographic forecasting model. The projections run annually from 2011 to 2031, using the ONS mid-year estimate as the starting point. The demographic change analyses in Appendices 1 and 2 also show natural change, net migration and total change for the period 2031-32.

There is no detail given of how the natural change element of the projection (annual births less deaths) was calculated.

More detail is given of how the two net migration assumptions for each area were calculated, using the revised ONS mid-year estimate annual change analyses for 2002-2011 and the equivalent analysis for 2011-12.

The process of conversion of the projected population to households is shown in paragraph 6.29. The BW report states that CLG 2011 interim projected household representative rates (HRRs) were used for 2011-21 and CLG 2008 projected rates for 2021-31. We presume that the 2008 rates were only used after 2021. This is not clear from the text although it seems to be the case from the results shown in Appendices 1 and 2, where there are jumps in the annual increase in households starting with 2021-22.

Households were converted to dwellings using a 'vacancy/shared/second homes' factor based upon the CLG Live Tables 2012.

Natural Change

ONS mid-year estimate change analysis for 2011-12 shows births, deaths and natural change. For Birmingham this is a natural change of 9,608. This is the highest of any year since 2001. However the BW projections for Birmingham show natural change for 2011-12 to be 10,904. The BW projections of natural change grow to reach 14,342 in the 'with UPC'

projection in 2030-31. In comparison the ONS 2012 projection for Birmingham shows a maximum natural change of 10,600, with only 10,400 in 2030-31. Therefore the BW projection has seriously over projected natural change. Insofar as this is due to too many births, this swells the population but does not make so much difference to the projection of households, as most of any excess in births would still be under 15 years old by 2031 and so not able to 'represent' (head) a household. However, if the difference was also due to the projection of too few deaths this would swell the potential household representatives in older age groups and hence increase the projection of households.

Table 1: Birmingham: ONS Mid-year estimates change analyses 2001-12

	Births	Deaths	Natural Change	Internal Migration			International Migration			Asylum Seekers	Other unattributable	All Other	Migration & Other
				In	Out	Net	In	Out	Net				
2001-02	14,546	9,774	4,772	33,498	42,035	-8,537	11,286	6,788	4,498	2,765	2,346	-102	970
2002-03	15,078	9,869	5,209	33,899	43,380	-9,481	11,863	6,488	5,375	2,513	2,401	-44	763
2003-04	15,501	9,667	5,834	33,041	43,987	-10,946	15,044	7,617	7,427	1,148	2,490	67	186
2004-05	15,815	9,250	6,565	35,654	42,595	-6,941	14,556	5,098	9,458	667	2,556	-41	5,709
2005-06	16,062	9,116	6,946	36,145	43,787	-7,642	10,905	7,059	3,846	339	2,715	-11	-753
2006-07	16,540	8,963	7,577	36,720	45,126	-8,406	13,205	7,407	5,798	461	2,750	-16	601
2007-08	17,174	8,672	8,502	37,012	45,274	-8,262	11,062	4,619	6,443	605	2,695	-24	1,457
2008-09	17,470	8,421	9,049	38,356	43,444	-5,088	11,842	8,147	3,695	867	2,638	-69	2,043
2009-10	17,055	8,288	8,767	38,253	44,885	-6,632	12,365	6,505	5,860	517	2,509	-19	2,235
2010-11	17,479	8,107	9,372	38,041	43,555	-5,514	15,323	8,317	7,006	531	1,818	-4	3,837
2011-12	17,636	8,028	9,608	42,338	45,503	-3,165	11,710	7,002	4,708	NA	-17	NA	1,526
Annual Average Change													
2007-12	-	-	-	38,800	44,532	-5,732	12,460	6,918	5,542	504	1,929	-23	2,220
										6,046			

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Table 2: RHMA: ONS Mid-year estimates change analyses 2001-12

	Births	Deaths	Natural Change	Internal Migration			International Migration			Asylum Seekers	Other unattributable	All Other	Migration & Other
				In	Out	Net	In	Out	Net				
2001-02	22,172	20,135	2,037	76,929	78,976	-2,047	5,034	3,085	1,949	2,275	3,312	20	5,509
2002-03	22,503	20,881	1,622	78,444	80,322	-1,878	5,458	2,825	2,633	1,958	3,390	-82	6,021
2003-04	23,520	20,535	2,985	77,321	79,285	-1,964	5,521	3,229	2,292	881	3,330	111	4,650
2004-05	23,719	20,347	3,372	75,615	76,850	-1,235	6,128	2,787	3,341	619	3,371	116	6,212
2005-06	23,965	20,256	3,709	76,456	77,759	-1,303	9,556	4,132	5,424	270	3,578	42	8,011
2006-07	24,717	20,144	4,573	80,550	81,943	-1,393	9,892	5,384	4,508	346	3,672	63	7,196
2007-08	25,645	19,638	6,007	78,348	78,582	-234	9,453	3,570	5,883	473	3,609	-4	9,727
2008-09	25,205	19,632	5,573	74,448	76,532	-2,084	7,893	5,448	2,445	730	3,689	-18	4,762
2009-10	25,400	19,107	6,293	76,864	78,544	-1,680	7,951	4,703	3,248	442	3,661	25	5,696
2010-11	26,370	19,262	7,108	77,055	78,754	-1,699	8,849	5,174	3,675	413	3,275	-46	5,618
2011-12	26,696	19,054	7,642	81,171	84,850	-3,679	7,453	4,565	2,888	NA	279	NA	-512
Annual Average Change													
2007-12	-	-	-	77,577	79,452	-1,875	8,320	4,692	3,628	412	2,903	-9	5,058
										4,039			

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Net Migration

Apart from natural change the revised ONS MYE changes analyses for years 2001-02 to 2010-11 showed:

Internal Migration (In, Out and Net)

International Migration (In, Out and Net) **excluding Asylum Seekers**

Asylum Seekers (net)

Changes in Prisoners (net)

Changes in Armed Forces (net)

Other (unattributable) = UPC

Oadby & Wigston Adjustment

The ONS MYE change analysis for 2011-12 also showed:

Internal Migration (In, Out and Net)

International Migration (In, Out and Net) **including Asylum Seekers**

Other Changes (including prisoner and armed forces net transfers) **there is no UPC**

BW used the data for 2007-12 as the basis for their projections.

In calculating 'Net Migration without UPC' BW used the data on internal and international Migration highlighted in yellow above and left out the Asylum Seekers for 2007-11 (highlighted in blue), although they are included in International Migration flows in 2011-12.

In calculating 'Net Migration with UPC' BW added in UPC for 2007-11 and Other Changes in 2011-12 (highlighted in green). The latter does not contain an estimation of UPC.

Therefore BW's 'Net Migration without UPC' was deficient of 2,520 Asylum Seekers who were estimated to have settled in Birmingham between 2007 and 2011. BW estimated an average annual net migration loss to Birmingham in 2007-12 of 190. It should have been an annual average gain of 314.

BW's 2007-12 'UPC' was calculated as an average of 1,549. This was a mathematical error. It should have been 1,935. Therefore BW's 'Net Migration with UPC' estimate of 1,739 (but used in the projections as 1,700) was deficient in both elements and should have been 2,249.

Household Representative Rates

PopGroup uses CLG Stage 2 HRRs. These rates are mainly specific to 10-year age bands and only the rates relating to one-person households are specific to gender. Therefore these rates are less sensitive to changes in the age/gender/relationship structure of the population than are the Stage 1 HRRs, which are specific to 5-year age bands as well as gender and relationship status, but do not split households into types.

How the CLG 2008 HRRs are integrated into the process after 2021 is not described, but it is clear that there is a transition to more accelerated rates of growth after 2021. If the CLG 2008 HRRs are used 'as given' then the discontinuity is understandable. If the change in the 2008 HRRS after 2021 is applied to the CLG 2011 Interim HRRs at 2021 there is also likely to be some acceleration of household formation. This is effectively the 'South Worcestershire indexing method'. We are not told what process was used.

Results Analysis

Birmingham - with UPC

Table 3: Birmingham City: Comparison of BW and PBA projections of 2007-12 migration trends with UPC

	ONS	BW	PBA	Difference
Population	2011	2031	2031	BW - PBA 2031
0-4	82,111	108,982	95,150	13,832
5-10	88,943	122,502	110,021	12,481
11-15	74,942	94,580	91,095	3,485
16-17	29,452	36,977	36,537	440
18-59/64	637,435	779,954	773,854	6,100
60/65-74	93,913	126,019	132,674	-6,655
75-84	49,194	61,222	63,668	-2,446
85+	19,293	34,209	30,788	3,421
Total	1,074,283	1,364,444	1,333,786	30,658
18+	799,835	1,001,404	1,000,984	420
Households	411,357	560,017	537,243	22,774
Households/18+	0.514	0.559	0.537	NA

Table 3 shows that most of the difference in natural change was in births as the comparison with the equivalent PBA projection of persons aged 18+ was negligible. BW used a constant level of net migration of 1,700 after 2012 whereas PBA used a dynamic migration model that started with the average probabilities based on 2007-12 data. However there is a clear difference in the number of households at 2031 of 22,800. Both projections show an increase since 2011 in the ratio of households to persons aged 18+, but in the BW projection this ratio has increased at twice the rate of the PBA projection. There is not enough information to determine whether this is a result of using CLG 2008 rates directly without reference to the trends between 2011 and 2021 in the CLG 2011 rates, or an issue with the general use of CLG Stage 2 rates in PopGroup. PBA uses the indexing approach after 2021 with CLG Stage 1 rates, as recommended by the Inspector at the South Worcestershire EiP. Given the similar populations of adults it is likely that the growth in households 2011-31 should be 125.9 thousand rather than 148.7 thousand.

Conclusion: although BW used incorrect starting levels of natural change and net migration it made little difference to the resulting adult population at 2031, but the household representative rates appear to be too high.

Birmingham - without UPC

Table 4: Birmingham City: BW projections 2007-12 migration trends without UPC

	ONS	BW
Population	2011	2031
0-4	82,111	102,303
5-10	88,943	116,570
11-15	74,942	92,058
16-17	29,452	36,511
18-59/64	637,435	746,043
60/65-74	93,913	125,680
75-84	49,194	61,228
85+	19,293	34,226
Total	1,074,283	1,314,619
18+	799,835	967,177
Households	411,357	542,535
Households/18+	0.514	0.561

There is no equivalent PBA projection but it is clear that ignoring UPC has brought down the population at 2031 by nearly 50 thousand, 34 thousand of which are persons aged over 18 (nearly all in the 18-59/64 group). This reduces the increase in households by 17.5 thousand, but increases the ratio of households to persons aged 18+ to 0.561.

If this ratio was reduced in proportion to the ratio of the BW to PBA ratios with UPC (ie $0.537/0.559$) it would be 0.538 and imply about 21.8 thousand fewer household at 2031. This would be a growth of 109.3 thousand rather than 131.2 thousand.

Conclusion: although BW used incorrect starting levels of natural change and net migration the key difference is the reduced projection of working-age persons. The same problem exists for household representative rates as above.

RHMA - with UPC

Table 5: RHMA: Comparison of BW and PBA projections of 2007-12 migration trends with UPC

	ONS	BW	PBA	Difference
Population	2011	2031	2031	BW - PBA 2031
0-4	129,295	131,194	138,583	-7,389
5-10	145,379	169,083	172,590	-3,507
11-15	129,439	148,991	147,162	1,829
16-17	55,006	61,480	59,196	2,284
18-59/64	1,196,602	1,200,911	1,209,361	-8,450
60/65-74	265,672	323,657	332,857	-9,200
75-84	124,452	179,409	188,723	-9,314
85+	47,359	101,951	106,181	-4,230
Total	2,093,204	2,316,675	2,354,754	-38,079
18+	1,634,085	1,805,928	1,837,122	-31,194
Households	852,898	987,870	985,550	2,320
Households/18+	0.522	0.547	0.536	NA

Table 5 shows differences in comparison with the equivalent PBA projection of persons at all ages. BW used a constant level of net migration of 4,570 after 2012 whereas PBA used a dynamic migration model that started with the average probabilities based on 2007-12 data. However there is only a minimal difference in the number of households at 2031 of 2,300 more in the BW projection, although the BW projection had over 31 thousand fewer adults in the 2031 population. Both projections show an increased since 2011 in the ratio of households to persons aged 18+, but in the BW projection this ratio has increased at almost twice the rate of the PBA projection. Again, there is not enough information to determine whether this is a result of using CLG 2008 rates directly without reference to the trends between 2011 and 2021 in the CLG 2011 rates, or an issue with the general use of CLG Stage 2 rates in PopGroup. If the PBA ratio (0.536) is preferred it is likely that the growth in households 2011-31 should be 115.9 thousand rather than 135.0 thousand.

Conclusion: BW used incorrect starting levels of natural change and net migration and the resulting adult population at 2031 is probably too low. Again, the household representative rates appear to be too high.

RHMA - without UPC

Table 6: RHMA: BW projections 2007-12 migration trends without UPC

	ONS	BW
Population	2011	2031
0-4	129,295	124,883
5-10	145,379	161,496
11-15	129,439	143,622
16-17	55,006	59,698
18-59/64	1,196,602	1,160,363
60/65-74	265,672	320,539
75-84	124,452	178,287
85+	47,359	101,006
Total	2,093,204	2,249,895
18+	1,634,085	1,760,195
Households	852,898	964,091
Households/18+	0.522	0.548

There is no equivalent PBA projection but it is clear that ignoring UPC has brought down the population at 2031 by 67 thousand, over 45 thousand of which are persons aged over 18 (nearly all in the 18-59/64 group). This reduces the increase in households by 23.8 thousand, but increases the ratio of households per person aged 18+ to 0.548.

If this ratio was reduced in proportion to the ratio of the BW to PBA ratios with UPC (ie 0.536/0.547) it would be 0.537 and imply about 18.6 thousand fewer household at 2031. This would be a growth of 92.6 thousand rather than 111.2 thousand.

Conclusion: although BW used incorrect starting levels of natural change and net migration the key difference is the reduced projection of working-age persons. The same problem exists for household representative rates as above.