



Strategic Planning & Research Unit

For and on behalf of
Redrow Homes Ltd

Telford and Wrekin Local Plan Examination
Matter 1
Update Report on Objectively Assessed Housing Need

Roland G Bolton
Strategic Planning Research Unit
DLP Planning

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0.0 EXECUTIVE SUMMARY

- 0.1 SPRU has been instructed by JVH Planning on behalf of Redrow Homes to review the evidence presented by the Council on the Objectively Assessed Housing Need (OAHN) in Telford and Wrekin.
- 0.2 WEhave reviewed the councils evidence on the objectively assessed need for housing as set out in their two background documents to the Telford & Wrekin Local Plan 2011 – 2031 Submission Version June 2016.
- 0.3 While Policy HO 1 identifies a borough wide plan target of 15,555 net new dwellings up to 2031, the council state that the objectively assessed need is just 9,940 dwellings as identified in the Telford & Wrekin Objectively Assessed Housing Need report by Peter Brett Associates (March 2015) (OAHN Report 2015) and that the higher requirement has been set to meet the other objectives of the council including the delivery of affordable housing (T&W Local Plan paragraph 5.1.1.4).
- 0.4 The councils OAHN of 497 dwellings has been set utilising an average rate of migration for the period 2003 to 2013 and the 2012 DCLG household formation rates. The OAHN Report 2015 makes no allowance for improved household formation rates or any other market adjustments and, using a single economic forecast, concludes that this level of housing provision is aligned with the creation of 17,000 new jobs over the plan period.
- 0.5 We consider these conclusions to be unsound for the following reasons:
- a. The 2014 household projections suggest a higher baseline forecast;
 - b. The 2015 mid-year estimates record a much higher rate of net in migration;
 - c. An allowance should be made for improved household formation rates as continued declining rates for the under 44's is contrary to the objectives of the Framework;
 - d. Market factors suggest that affordability has worsened in the area;
 - e. Recent rates of delivery have averaged 900 a year for the last five years with the most recent year seeing 1,255 completions.
 - f. The level assumptions made in aligning the employment and housing forecasts are unsound for the following reasons:
 - i. The baseline projection (the 2102 SNPP) used by the OAHN Report 2015 suggests a decrease in the working age population of 4,900 persons not an increase of 4,900 persons as suggested in the report.
 - ii. The resulting change to the working population is not an increase but a decrease.
 - iii. The assumption that net in migration will increase by 3,600 persons is not founded on evidence, and the requirement for these workers to be housed in neighbouring authorities has not been subject to the Duty to Cooperate which is a requirement for such cross-boundary issues.
 - iv. The assumption that 26% of the new jobs will be taken by existing residents already in employment as a second job is unrealistic and not supported by credible evidence.



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- 0.6 In light of these findings we suggest that the evidence base for the 497 dwellings a year OAHN is unsound.
- 0.7 We have undertaken our own analysis including modelling both the demographic and economic factors.
- 0.8 In terms of the demographic starting point a projection using the rolling average for migration over the last five years would require some 698 dwellings a year (this includes a modest uplift on the assumption that household formation rates for the under 44's will not decrease from their 2014 position).
- 0.9 In terms of the employment projection we have modelled the average growth from three nationally recognised forecasting consultancies (Cambridge Econometrics, Oxford Economics and Experian), and making reasonable allowances for reduced unemployment, changes to the pension age activity rates, as well as double jobbing, we have concluded that the minimum level of housing provision should be 888 dwellings a year. This is the minimum level required to align the housing and employment strategies of the plan.
- 0.10 Taking into account the need to deliver affordable housing and recent rates of completion, we consider the actual OAHN should reflect the recent average rate of housing delivery at 900 dwellings a year.
- 0.11 In reaching this conclusion we note the likely drivers of migration in the future as well as the performance of the area in previous decades, which suggest that this level of provision is both required and achievable.

1.0 THE APPROACH TO OBJECTIVELY ASSESS HOUSING NEED

The Framework

- 1.1 In determining the Objectively Assessed Need for Housing, the Framework requires that this should be based upon a consideration of demographic projections and trends (paragraph 159) as well as meeting demand. The assessment also needs to consider the needs of the economy so that planning is not an impediment to sustainable growth (paragraph 19).
- 1.2 Local planning authorities are required to ensure that their assessment of, and strategies for, housing, employment and other uses are integrated, and that they take full account of relevant market and economic signals (paragraph 158).
- 1.3 The Framework sets out a clear process for local authorities to follow to set a housing requirement for their local plan. The first is to produce a SHMA to assess the full needs for the Housing Market Area (paragraph 159) this should:
 - Meet projected needs taking account of migration;
 - Assess needs for all types of housing; and
 - Provide the scale of supply to meet housing demand.
- 1.4 A fuller explanation of the interpretation of the Framework with regard to the Objective Assessment of the Need for Housing is set out in the Planning Practice Guidance.

The Planning Practice Guidance

- 1.5 In respect of the calculation of the five year housing land supply the Guidance states (Paragraph: 030 Reference ID: 3-030-20140306) that the starting point for the five year housing supply should be the housing requirement figures in up-to-date adopted local plans and that considerable weight should be given to the housing requirement figures in adopted local plans.
- 1.6 The Guidance goes on to warn that evidence which dates back several years, such as that drawn from revoked regional strategies may not adequately reflect current needs.
- 1.7 In such circumstances, where evidence in local plans has become outdated and policies in emerging plans are not yet capable of carrying sufficient weight, then the Guidance (Paragraph: 030 Reference ID: 3-030-20140306) suggests that the following should be considered:
 - Information provided in the latest full assessment of housing needs; and
 - Where there is no robust recent assessment of full housing needs, the Household Projections published by the Department for Communities and Local Government (DCLG) should be used as the starting point.
- 1.8 In both cases the weight given to the above should take account of the fact that they have not been tested.
- 1.9 The Guidance states that the definition of need requires the identification of the scale and mix of housing and should cater for the housing demand of the area, identifying the scale of housing supply necessary to meet that demand.

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- 1.10 The assessment of development needs should be proportionate and include those future scenarios that could be reasonably expected to occur.
- 1.11 Plan makers should not apply constraints to the overall assessment of need, such as limitations imposed by the supply of land for new development, historic under performance, viability, infrastructure or environmental constraints.
- 1.12 Local planning authorities are required to assess their development needs working with the other local authorities in their relevant Housing Market Area or functional economic market area in line with the Duty to Cooperate.
- 1.13 Where local plans are at different stages of production, local planning authorities are required to co-ordinate future housing reviews so they take place at the same time.
- 1.14 The starting point for the Objective Assessment of Housing Need is the Household Projections published by DCLG. The Guidance (Paragraph: 015 Reference ID: 2a-015-20140306) highlights that these are trend based and do not predict the impact that future Government policies, changing economic circumstances, or other factors might have on demographic behaviour. As such the Household Projection based estimate of housing need may require adjustment to reflect factors affecting local demography and household formation rates which are not captured in past trends. For example:
 - Household formation rates may have been suppressed historically by under-supply and worsening affordability of housing. The assessment will therefore need to reflect the consequences of past under delivery of housing.
 - Unmet housing need - evidence of the extent to which household formation rates are or have been constrained by supply will need to be taken into account.
- 1.15 Local needs assessments should be informed by the latest available information and a meaningful change in the housing situation should be considered in the context of the requirement for the Local Plans to be kept up-to-date.
- 1.16 The Guidance (Paragraph: 017 Reference ID: 2a-017-20140306) confirms that the Household Projections produced by DCLG are statistically robust and are based on nationally consistent assumptions, but suggests 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. Such testing should take into account the most recent demographic evidence including the latest Office of National Statistics (ONS) population estimates.
- 1.17 The Guidance requires that changes from the DCLG projections are to be clearly explained and justified on the basis of established sources of robust evidence.
- 1.18 Future employment trends are required to be taken into account (Paragraph: 018 Reference ID: 2a-018-20140306) by an assessment of the likely change in job numbers based on past trends and/or economic forecasts as appropriate, with reference to the growth of the working age population in the Housing Market Area. The Guidance states that any cross-boundary migration assumptions, particularly where one area decides to assume a lower internal migration figure than the Housing Market Area figures suggest, will need to be agreed with the other relevant

local planning authorities under the Duty to Cooperate. Failure to do so will mean that there would be an increase in unmet housing need.

- 1.19 In particular, where the supply of working age population that is economically active (labour force supply) is less than the projected job growth, this could result in unsustainable commuting patterns and in such circumstances, plan makers will need to consider how the location of new housing or infrastructure development could help address these problems.
- 1.20 The Guidance (Paragraph: 019 Reference ID: 2a-019-201403060) further requires that consideration must be given to whether the DCLG Projections are appropriate on issues such as:
- Migration levels;
 - Demographic structures that may be affected by local circumstances or policies;
 - Employment trends - in such circumstances where the supply of working age population that is economically active (labour force supply) is less than the projected job growth, plan makers will need to consider how the location of new housing or infrastructure development could help address these problems (Paragraph: 018 Reference ID: 2a-018-20140306); and
 - Market signals - 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. Prices or rents rising faster than the national/local average may well indicate particular market undersupply relative to demand. Relevant signals may include the following:
 - i. Land Prices.
 - ii. House Prices - longer term changes may indicate an imbalance between the demand for and the supply of housing.
 - iii. Mix adjusted house prices (adjusted to allow for the different types of houses sold in each period) measure inflation in house prices.
 - iv. Rents - the Office for National Statistics publishes a monthly Private Rental Index.
 - v. Affordability – DCLG publishes quarterly the ratio of lower quartile house price to lower quartile earnings by local authority district.
 - vi. Rate of Development - if the historic rate of development shows that actual supply falls below planned supply, future supply should be increased to reflect the likelihood of under-delivery of a plan.
 - vii. Overcrowding - the number of households accepted as homeless and in temporary accommodation is published in the quarterly Statutory Homelessness release.
- 1.21 In respect of market signals, plan makers should not attempt to estimate the precise impact of an increase in housing supply but should increase planned supply by an amount that, on reasonable assumptions and consistent with principles of

sustainable development, could be expected to improve affordability, and monitor the response of the market over the plan period.

- 1.22 In areas where an upward adjustment is required, plan makers should set this adjustment at a level that is reasonable. The more significant the affordability constraints (as reflected in rising prices and rents, and worsening affordability ratio) and the stronger other indicators of high demand (e.g. the differential between land prices), the larger the improvement in affordability needed and, therefore, the larger the additional supply response should be.
- 1.23 Any cross-boundary migration assumptions, particularly where one area decides to assume a lower internal migration figure than the Housing Market Area figures suggest, will need to be agreed with the other relevant local planning authorities under the Duty to Cooperate. Failure to do so will mean that there would be an increase in unmet housing need.

Conclusion on Approach to the Objectively Assessed Need for Housing

- 1.24 The Framework and Guidance provide an appropriate background against which to approach the choice of assumptions as part of the Objective Assessment of Need for Housing.
- 1.25 This report considers three areas of Objectively Assessed Need identified by the Guidance, these being:
- Demographic;
 - Economic; and
 - Market.
- 1.26 To break this process down further, the steps are as follows:
- Demographic
 - i. Start with the DLCCG projections
 - ii. Allow for vacancy and second homes
 - iii. Consider alternative migration assumptions using different time periods and/or up to date migration data
 - iv. Consider changes to Household Formation Rates
 - Economic
 - i. Consider balance of employment growth and working age population
 - Market
 - i. Consider response to affordability
 - ii. Consider level required to meet affordable housing need in full.

2.0 THE APPROACH OF THE COUNCIL

Introduction

- 2.1 The council's evidence regarding the objectively assessed housing need is contained within two documents that form the background evidence to the Telford & Wrekin Local Plan 2011 – 2031 Submission Version June 2016.
- 2.2 In Policy HO 1, the Council identifies a borough wide plan target of 15,555 net new dwellings up to 2031.
- 2.3 In paragraph 5.1.1.4 the council explain that the requirement in Policy HO1 is higher than the objectively assessed need of 9,940 dwellings identified in the Telford & Wrekin Objectively Assessed Housing Need report by Peter Brett Associates (March 2015), because it was not solely based on the overall housing need but allows for additional development to support delivery of the overall plan vision and growth strategy, including the delivery of affordable housing. In addition, the increase dwelling requirement was in recognition of Telford & Wrekin's key role as an Urban Powerhouse within the Marches Local Enterprise Partnership and as a competitive inward investment destination.

Telford and Wrekin Objectively Assessed Housing Need (March 2015) (OAHN Report 2015)

Demographic projections

- 2.4 The report sets out that the 2012 DCLG Household Projections for the period 2011 to 2031 would require some 461 dwellings a year (page 13 table 3.1).
- 2.5 This is higher than both of the Trend Scenarios (5 and 10 year migration based trends) of 439 dwellings a year (5 year trend) and 453 dwellings a year (10 Year Trend) (table 3.1).
- 2.6 In paragraph 3.22 the difference between the two results is explained as follows:
- 2.7 'At first sight it seems surprising that CLG 2012 shows as many new households as the Trends scenarios, although it shows much less population growth. The explanation is that in ONS 2012 the population has an older age profile, with fewer children and fewer adults under 50 (Figure 3.4). Consequently in ONS 2012 the average household size is also smaller, because those age groups tend to live in larger households (have lower headship rates) than older people.'
- 2.8 The consultants rerun their original projections using the 2012 Household Projections Household representation rates which gave a need of 483 and 497 dwellings a year for the 5 and 10 year Projections (paragraph 3.27 page 16).
- 2.9 The OAHN Report 2015 rejects the migration assumptions in the DCLG 2012 projections on the grounds that it is too low and instead use a rising net in-migration figure which reaches a net in-migration of between 150 and just below 200 net in migrants by 2031 (OAHN Report 2015 Figure 3.3).
- 2.10 In paragraph 3.21, the OAHN Report 2015 explains that these two PBA Trends scenarios show annual growth of 439 and 426 households respectively close to the DCLG 2012 projection of dwellings per annum.
- 2.11 The report concludes that on the demographic evidence the objective assessment of housing need over the plan period is 497 dwellings a year (paragraph 3.27).

2.12 At the end of this section the report comments upon the 750 Dwelling scenario and states in paragraph 3.29 there are two ways in which a higher dwelling figure than the OAHN could serve the councils policy objectives these being:

- Financing affordable housing for which there is a very large need
- Healthier and more sustainable communities by creating a critical mass to support better services and facilities.
- Additional population in the under 55 age groups (paragraph 3.31).

Market Factors

2.13 The report considers completion rates from 1995 and states in paragraph 4.14 that housing delivery did not reach the required annual target once in the remainder of the Structure Plan period, and that at the start of the 2000s, delivery dropped off in comparison with the delivery in the 1990s.

2.14 This decrease in completions was partly due to English Partnerships (now HCA) carrying out a review of its sites and 600 demolitions (between 2001 and 2006) reduced net completions (paragraph 4.15).

2.15 In paragraph 4.18, it states that from 2010 onwards, completions increased as demand for housing improved and that in this most recent period completions broadly met the annual target, which had gone down to 700 dwellings per year.

2.16 In concluding on past rates of delivery, the report deduces in paragraph 4.20 that housing delivery always fell far short of the targets, but the reason for this was not lack of land supply which they suggest was broadly in line with the targets, as much of that supply had planning permission. The report identifies the following constraints on housing development:

- The lack of effective demand and poor viability, partly due to the high costs associated with brownfield sites.
- The reliance on large strategic sites, which by their nature have long gestation periods, led to delayed development.

2.17 In terms of affordability the report finds:

- That in terms of Lower Quartile House Prices to Lower Quartile Earnings Telford and Wrekin have relatively good affordability compared to regional national and the neighbouring authority (Paragraph 4.29)
- That average rents in the borough have been close to those for the West Midlands and Shropshire, and some £100-200 a month below the national average (Figure 4.4); and as such rents are relatively stable in Telford & Wrekin and the region (paragraph 4.30).
- Overcrowding is below average (paragraph 4.32)
- There is an affordable housing requirement of 1,237 dwellings over 5 years or 445 dwellings over 20 years (table 4.1)
- To pay for the lowest level of affordable housing need would require 1,171 dwellings a year (paragraph 4.47).

- 2.18 In terms of the level of affordable housing need, paragraph 4.41 of the Report states that these are different types of need with the affordable housing need relating to entitlement or “what ought to happen” while the demographic projection is what is likely to happen based on past trends.
- 2.19 The report states that although providing just the OAHN will mean affordable housing will fall far short of needs the solution cannot be releasing more land, as releasing land far in excess of market demand would adversely impact on viability (paragraph 4.48).
- 2.20 One solution to this is the suggestion that one should consider realistic opportunities to import market demand from the Greater Birmingham, Solihull and Black Country HMA to support a higher level of affordable housing provision (Paragraphs 4.49 and 4.53).
- 2.21 This section concludes that there are no market indicators that demographic projections based on a five or ten year migration trend should be adjusted upwards.

Economic led projections

- 2.22 The Report assessment of the impact of future jobs and employment land is based upon a single Experian projection (Paragraph 5.2).
- 2.23 Paragraph 5.4 explains that past growth is as estimated by Experian and future growth is as predicted by the baseline forecast. This projection falls into four sections:
- In the long boom until 2008, both Telford and the national economy gained jobs steadily and on average at similar rates.
 - In the recession Telford & Wrekin underperformed the UK as it started to lose jobs sooner, returned to growth later and its total loss was proportionally greater.
 - From 2012 onwards there is a short sharp recovery, with above-trend growth both in the UK and the borough.
 - From 2014 or 15 job growth slows down to resume its long-term trend. Telford’s growth rates lag very slightly behind the national benchmark.
- 2.24 In paragraph 5.5 it is stated that over the whole plan period, 2011-31, Telford’s forecast job growth at 19% is close to those for the UK (21%) and the West Midlands (20%).
- 2.25 The average level of job growth is considered to be 810 jobs a year (Paragraph 5.9).
- 2.26 The important assumptions in the approach taken in this report are set out in Table 5.1 (and Paragraphs 5.13 – 5.15). These are:
- An increase of 4,300 in the borough’s resident labour force, the outcome of 4,900 net new working-age residents and a virtually unchanged economic activity rate overall;
 - A reduction in unemployment of 4,200, as the unemployment rate falls from 9.7% to 4.3%;

- An increase of 3,600 in net in-commuting (from 11.5% to 13.1% of the labour force);
 - Some 4,300 new jobs being taken by residents already in employment (this is referred to as “double jobbing”).
- 2.27 In the baseline projection, the Report states that there is a deficit of labour demand against supply but that this is too small to be taken literally (paragraph 5.16).
- 2.28 Commenting upon the “Trends 2003 – 2013 Scenario” the report states that this will result in an extra 3,100 resident workers but only an extra 740 workplace jobs and that the additional workers over projected jobs will be absorbed by other adjustments, namely higher unemployment or lower in commuting (paragraph 5.20). These calculations are described as broad approximations (paragraph 5.21).
- 2.29 In assessing the 750 dwelling scenario, the report on the labour force growth is calculated to be 14,100 persons (paragraph 5.23). The impact of this was not modelled but the report concluded this would result in:
- Only a small increase in the number of jobs to service the additional population as Experian’s analysis suggests that in the particular circumstances of Telford & Wrekin additional residents create little demand for extra jobs.
 - On the supply side the forecast would show no additional jobs above the Trends scenario. This is because, as noted earlier, the Trends scenario already provides enough workers to meet demand, so labour supply is not a constraint on growth.
 - Most of the increase in resident workers over and above the base scenario would be absorbed in changes to unemployment, commuting and possibly double-jobbing.
- 2.30 It should be noted that in the baseline projection (table 5.1) some 4,300 jobs were to taken by those already in employment (double jobbing) and a further 3,600 jobs were to be taken by increased levels of in commuting.
- 2.31 Paragraph 5.26 suggests that Telford and Wrekin could require “super growth” to create enough workplace jobs for the future population accommodated by the proposed 750 dwellings a year.
- 2.32 The report states that the implication of making sufficient land available to deliver 750 dwellings a year is either that the land is not taken up for development or that it meets unmet needs from Greater Birmingham which may lead to further out commuting.

Conclusion

- 2.33 The report concludes that the OAHN is the demographical derived figure of 497 dwellings a year based upon the 10 year migration average (2003 to 2013).
- 2.34 This is considered to be compatible with a projected job growth of 17,000 over the plan period (paragraph 6.3).

Telford and Wrekin Strategic Housing Market Assessment (SHMA) 2016

- 2.35 This report relies on the evidence provided by the OAHN Report 2015 and in paragraph 6.11 confirms that consideration of the alignment of housing growth with economic growth is a key requirement of the PPG.
- 2.36 In paragraph 6.13 it states that over the plan period, the 16,300 additional jobs are filled by:
- An increase of 4,300 in the Borough's resident labour force, the outcome of 4,900 net new working-age residents and a virtually unchanged economic activity rate overall;
 - A reduction in unemployment of 4,200 as the unemployment rate falls from 9.7% to 4.3%;
 - An increase of 3,600 in net in-commuting (from 11.5% to 13.1% of the labour force); and
 - An additional 4,300 jobs are filled by 'double jobbers' i.e. people with more than one job.
- 2.37 In paragraph 6.18 it confirms that the Objectively Assessed Housing Need for Telford and Wrekin over the plan period 2011-2031 is 497 dwellings and that no further adjustment is necessary to support jobs-growth.
- 2.38 The SMHA states that the council's future estimate of the likely population is derived from the 750 dwellings a year projection (Paragraph 6.23).
- 2.39 The justification for the higher housing target of 15,555 dwellings up to 2031 in the new Telford and Wrekin Local Plan is given in paragraph 6.24. This explains that this figure:
- "reflects the growth ambitions of the Council and supports the delivery of affordable housing."*
- 2.40 It should be noted that making an adjustment to deliver affordable housing is in fact part of the approach to defining the OAHN and is not an additional consideration.

3.0 CRITICISM OF THE COUNCILS APPROACH TO OAHN

Demographic projections

- 3.1 The OAHN report 2015 and the SHMA 2016 both rely upon the 2012 DCLG household projections. The most recent projections are now the 2014 household projections which suggest a higher baseline dwelling requirement of 550 for the period to 2021 and 452 for the period 2021 to 2031.

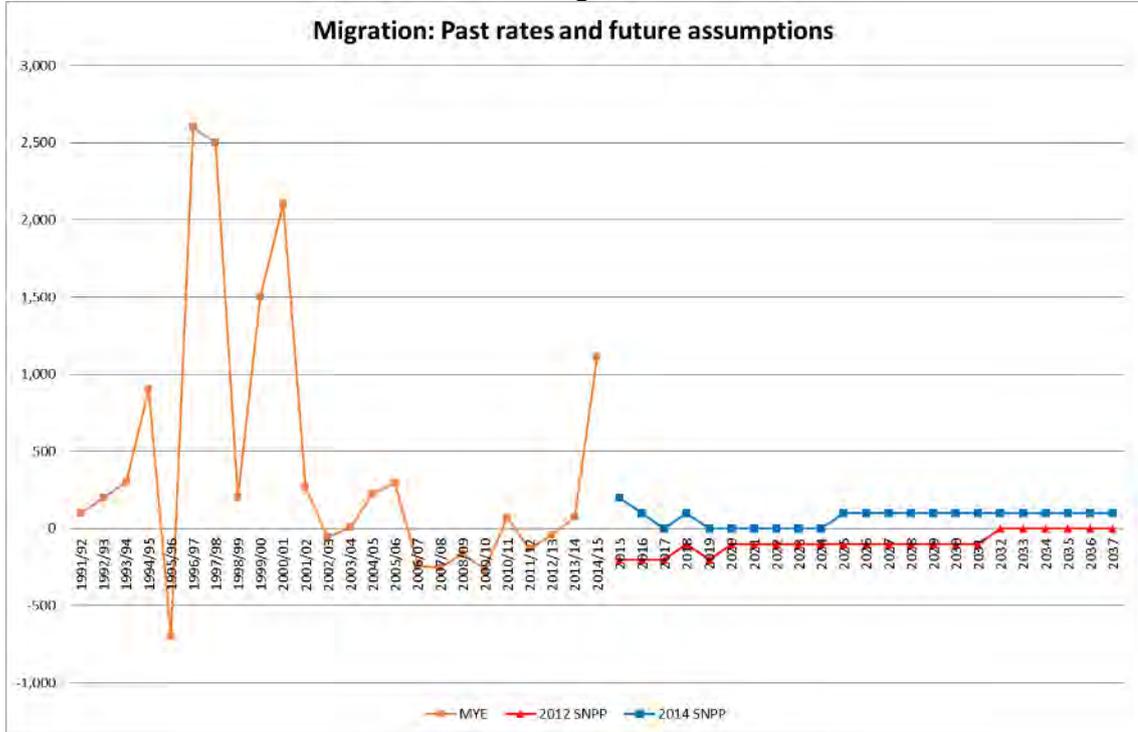
Table 1 2014 DCLG Household projections

Telford and Wrekin UA	Total Households	Change	Annual change in Dwellings
Actual Change			
1991	53,783		
2001	63,818	10,035	1,034
2011	66,670	2,852	294
Projected Change			
2021	72,014	5,344	550
2031	76,402	4,388	452

Table 406: Household projections by district, England, 1991- 2039

- 3.2 The 2015 Mid-Year Estimates are available and these reveal that net migration into Telford and Wrekin has increased and was recorded as being 1,113 persons (832 internal and 281 international). This suggests a return to previous levels of migration associated with the period of the 1990's during which there were higher rates of completion.
- 3.3 Both of these factors would suggest a higher demographic starting point for the assessment of the OAHN.
- 3.4 Neither the DCLG projections nor the alternative demographic based projections may represent the full Objectively Assessed Need. There are a number of cases in which inspectors have considered the Objectively Assessed Need for Housing, in which they have emphasised that such assessments not only take into account the demographic drivers of need, but also the economic drivers of need and demand (Land between Leasowes Road and Laurels Road, Offenham, Worcestershire, WR11 8RE (Appeal Ref: APP/H1840/A/13/2203924), four appeals at Broom Hill, Swanley, Kent (Appeal Ref's: APP/G2245/A/13/2195874, APP/G2245/A/13/2195875, APP/G2245/A/13/2197478 and APP/G2245/A/13/2197479, and Pulley Lane, Droitwich Spa decisions by the Secretary of State (Appeal Ref's: APP/H1840/A/13/2199085 and APP/H1840/A/13/2199426).

Chart 1: Telford and Wrekin: Net Migration



Source: ONS

Economic Led Projections

3.5 It is important to note that the Experian model used in the OAHN report 2015 is a population constrained model. This means that job growth in any one location can be constrained by the supply of labour which in turn is tied back to the population in the 2012 SNPP's. As the 2012 SNPP are also the underlying population projections for the 2012 DCLG household projections it follows that the outputs of these projections in terms of jobs, commuting, activity rates and unemployment are all consistent with the underlying population projection. In this respect, the Experian projections maybe characterised as being “circular” as described by paragraph 8.8 of the PAS advice:

“Figure 8.1 illustrates a job-led housing need calculation using the first kind of economic forecast, where future population is an input to the model (type a) above. Similar points apply to ‘type b’ economic models. The logical flaw is obvious: population is both an input to the model and output of the model. If the economic forecast and the housing needs study take the same view of the factors that link population to jobs (commuting, activity rates etc.), the calculation will be logically circular: the ‘housing need’ it calculates will be simply the result of the population assumption the economic model started from.”

3.6 To put it simply, such projections do not allow for people to move to fill jobs and instead adjust other variables in order to balance job growth to the given population. The appropriateness of these assumptions for the other variables must be considered. The model resolves job growth to resident population by making changes to unemployment, patterns of commuting and activity rates. It is therefore

appropriate to test whether it is more likely for these assumed changes to occur rather than migration.

- 3.7 In our experience the common approach to address the differences between economic projections is to take an average between the three recognised economic forecasters.
- 3.8 This would mean considering the average between the projections of Cambridge Econometrics, Oxford Economics as well as Experian. The first two are not constrained by the population (paragraph 43).
- 3.9 An analysis of the results of the baseline projection in figure 5.1 reveals that a number of the assumptions are not sound.

Assumptions in the OAHN report for modelling of job growth and housing provision.

- 3.10 The table below sets out the assumption in the baseline scenario (table 5.1). The lack of detail in the OAHN Report (March 2015) has meant that the different scenarios in the report cannot be fully investigated although the written material would suggest that there is not a great variation in the basic approach with unemployment and in commuting being the main variants.

Table 2 Summary of employment projection assumptions 2011 to 2031

Projection (000's)	Experian Baseline 2015
Working age population	4.9
Resident labour force	4.3
Unemployment	-4.2
Resident based Employment	8.5
Net Commuting	3.6
Workplace based employment	12.1
Double jobbing	4.3
Job growth	16.3

Source: OAHN March 2015 Table 5.1, 5.2

Working age population - increase of 4,900 persons

- 3.11 The table above suggests that the working age population in the Experian Model will increase by some 4,900 persons. The OAHN Report 2015 (paragraph 5.17) states that the population is expected to grow as per the ONS 2012 projections. If this is the case, then the figure in table 5.1 of the OAHN Report 2015 report appears to be incorrect as this should be a loss of 4,900 persons not a gain of 4,900 persons as illustrated in the table below:

Table 3 Changes to working age population in Telford and Wrekin in 2012 SNPP (000's)

Age	Persons at 2012 (,000)	Persons at 2032 (,000)	Change (,000)	Summary (,000)
0-4	11.5	10.4	-1.1	
5-9	10.5	10.6	0.1	
10-14	10.2	10.9	0.7	-0.3
15-19	11.4	11.1	-0.3	
20-24	11	11.1	0.1	
25-29	10.8	10	-0.8	
30-34	10.5	9.8	-0.7	
35-39	10.4	10.7	0.3	
40-44	12.8	11	-1.8	
45-49	12.8	10.5	-2.3	
50-54	11	10	-1	
55-59	9.7	9.6	-0.1	
60-64	9.7	11.4	1.7	-4.9
65-69	8.7	11.2	2.5	-2.0
70-74	6.3	9.3	3	
75-79	4.6	7.6	3	
80-84	3.2	6.5	3.3	
85-89	1.8	4.4	2.6	
90+	1	2.8	1.8	16.2
All ages	167.7	178.9	11.2	

2012-based Subnational Population Projections, Table 2: Local authorities and higher administrative areas within England, 5 year age groups, Persons

- 3.12 There is a considerable difference between the growth in the working age population in the “Baseline Scenario” in the OAHN Report 2015 (Table 5.1) and the DCLG SNPP which is left unexplained.
- 3.13 The more recent 2014 SNPP also suggest that this age group will decrease rather than increase in size as illustrated in the table on the next page.

Table 4 Changes to working age population in Telford and Wrekin in 2014 SNPP (000's)

AGE GROUP	2014	2034	Change to 2034	Summary 2014 to 2031
15-19	11	11.1	0.1	
20-24	10.9	11.4	0.5	
25-29	10.7	10.6	-0.1	
30-34	10.9	9.9	-1.0	
35-39	10.2	10.8	0.6	
40-44	12	11.3	-0.7	
45-49	12.8	10.9	-1.9	
50-54	11.8	10.5	-1.3	
55-59	9.9	9.5	-0.4	
60-64	9.5	10.9	1.4	-2.8
All ages	169.4	182.3	12.9	

2014 -based Subnational Population Projections, Table 2: Local authorities and higher administrative areas within England, 5 year age groups, Persons

Resident Labour Force - increase of 3,200 persons

- 3.14 The resident labour force in table 5.1 (OAHN Report 2015) increases by 4,300 persons as a result of the increase in the working age population of 4,900 persons. As the SNPP for both 2012 and 2014 project a falling working age population this increase in the resident labour force cannot be correct.
- 3.15 While the OAHN Report 2015 states (paragraph 5.13) that the model increases activity rates for the older population it suggests this is off set by the rapidly aging population. The above is evidence of the aging population.
- 3.16 The increase of 3,200 persons in the resident labour force is not supported by the 2012 SNPP baseline projections.

Changes to the pattern of commuting - 3,600 additional in commuters

- 3.17 The OAHN Report 2015 assumption is that net in commuting will increase by 3,600 persons (an increase from 11.5% to 13.1%).
- 3.18 There is no explanation as to why there should be a change in the pattern of commuting.
- 3.19 Assumptions regarding changing the pattern of commuting need to be evidence based, and agreed with the neighbouring authorities who are required to provide housing for these additional workers. This is a strategic issue that requires to be addressed under the duty to cooperate.
- 3.20 The requirement for such assumptions to be evidence based and agreed is in line with findings of the Aylesbury Vale Inspector who required evidence to justify changes to the pattern of commuting stating (IL Paragraph 37):

“There is no substantive evidence that the jobs density or patterns of out-commuting are likely to change to the extent required to support the planned level of

employment growth without the need for significantly more housing. In simple terms there is a clear and substantial mismatch between the level of housing and jobs planned.”

3.21 A similar approach was adopted in in the South Worcestershire Plan during the course of the examination where the inspector indicated that commuting rates should be held constant (Inspector’s further interim conclusions on the outstanding stage 1 matters paragraph 15 and 24).

3.22 There is no justification for the assumption that 3,600 of these jobs will be filled by in commuters.

Double jobbing - 4,300 jobs are filled by ‘double jobbers’

3.23 Table 5.1 (OAHN Report 2015) suggests that 4,300 of the 16,300 new jobs will be filled by those who already hold another job.

3.24 This suggests that some 26.5% of all the new jobs created will be taken as a second job by someone already in employment.

3.25 There is no evidence to support this high level of double jobbing.

3.26 There are no official figures for those persons who take two or more jobs, commonly referred to as “double jobbing”.

3.27 The Financial Times reported (25th January 2015) that there are now about 1.2m workers with two jobs, up from about 1.05m workers in 2007. This is out of a total workforce of 31.4m persons in the UK and therefore represents about 4% of the workforce having two jobs.

3.28 This information would support the use of a 4% allowance for double jobbing or just 648 persons.

3.29 This assumption of some 4,300 job being taken by existing residents already in employment is unrealistic.

Conclusion on the assumptions in the OAHN Report 2015

3.30 The table below summarises the position on the assumptions in the OAHN Report 2015 and this suggests that given the serious concerns regarding the assumptions taking a different approach based on the 2012 SNPP, and evidenced based assumptions regarding commuting and double jobbing results in there being very little growth in the resident labour force to support the predicted level of job growth.

3.31

Table 5 Conclusion on employment projection assumptions in OAHN report 2015

	Projection (000's)	Experian Baseline 2015	Comment	Impact
A	Working age population	4.9	Reduction in Working age population as determined by underlying population projection (2012 SNPP)	-4.9
B	Resident labour force	4.3	Reduces in line with reduction in working age population	-4.3
C	Unemployment	4.2		4.2
D	Resident based Employment (B+C)	8.5		-0.1
E	Net Commuting	3.6	No change in net commuting	0
F	Workplace based employment (D+E)	12.1		-0.1
G	Double jobbing	4.3	Double jobbing at 4% of new jobs as per evidence	0.6
H	Job growth (F+G)	16.3		0.5

Source: OAHN Report March 2015 Table 5.1, 5.2

3.32 Even assuming that the calculation of the resident labour is correct (which is doubtful) then adopting a position of no increase in commuting and a 4% rather than a 26% level of double jobbing would still result in too few residents to meet the predicted level of job growth. This is illustrated in the table on the next page.

Table 6 Summary of 750 dwelling projection with corrected commuting and double jobbing

	Projection (000's)	750 dwellings
A	Working age population	
B	Resident labour force 4.3 plus 3.1	7.4
C	Unemployment	4.2
D	Resident based Employment (B+C)	11.6
E	Net Commuting	0
F	Workplace based employment (D+E)	11.6
G	Double jobbing	0.6
H	Job growth (F+G)	12.2

Source: OAHN Report March 2015 Table 5.1, 5.2 and paragraph 5.20

3.33 This analysis casts serious doubts regarding the conclusion of the OAHN 2015 report that the proposed level of housing (497 dwellings a year) will not impede economic growth.

Recent appeal decision

3.34 The above critique is independent of the recent appeal decision (Land north of Haygate Road, Wellington, Shropshire Appeal Ref: APP/C3240/W/15/3025042 in which the inspector considered the evidence supporting the OAHN of 497 dwellings a year against a higher OAHN of 961 dwellings. In paragraph 47 of the decision, the

inspector concluded that it was very difficult to reach a firm conclusion as to the robustness and reliability of the competing OAHNs, and considered it appropriate to assess the differing results which flow from both of the OAHN figures.

- 3.35 In commenting upon both approaches the inspector noted that the appellants case argued that:
- a. In addition to upward adjustments to reflect local migration trends over the 2003-2013 period, further adjustments should be made to address what it sees as clear local evidence of suppression in household formation in the 2012-based series, especially in the 25-34 and 35-44 age groups (this would require 648dpa would be needed to support demographic-led need).
 - b. Rather than relying on an employment forecast from a single company, an average from 3 companies was used (An average of 690 jobs per annum)
 - c. Using plausible assumptions about economic activity and unemployment rate changes, there this resulted in a need for 961dpa to support this annual growth of 690 jobs (IL paragraph 40).
- 3.36 In terms of market signals, affordability has worsened locally over recent years, despite being more affordable than the regional and national average. Similarly, although overcrowding and the number of concealed households have worsened in Telford and Wrekin, the situation is less severe than the national average (IL paragraph 41).
- 3.37 The inspector rejects a number of the council's criticisms of the appellants OAHN figure as follows:
- a. In terms of changes in headship rates the council reference to recent academic articles to suggest that headship rates will continue to fall and will not return to the 2008 rates was rejected on the grounds that low household formation rates can and do have harmful social impacts, such as the creation of concealed households.
 - b. The correct response to falling headship rates is not simply to take these forward in the OAHN, but seek to address and improve this situation in view of the Framework's requirement that local planning authorities boost significantly the supply of housing (IL paragraph 42).
 - c. The criticism that the approach of using job forecasts as an input to household projections was logically inconsistent did not seem to be supported by submitted emails from both Oxford Economics and Cambridge Econometrics, which make it quite clear that their employment projections are not constrained by population projections (IL paragraph 43).

Conclusion on the council's evidence on OAHN

- 3.38 The Framework paragraph 158 requires that Local planning authorities ensure that their assessment of, and strategies for, housing and employment are integrated, and that they take full account of relevant market and economic signals. The OAHN Report 2015 and the SHMA 2016 are not soundly based and as such the housing and economic strategies are not interrelated.



Strategic Planning & Research Unit

- 3.39 These recent decisions confirm that substantial weight may be placed upon the most recent evidence of the Objectively Assessed Need for Housing and that assessments based upon up-to-date evidence that take into account changes to the economy and household representation rates, should be given significant weight in the determination of planning applications.
- 3.40 The reference in paragraph 5.26 (OAHN Report 2015) that Telford and Wrekin could require “super growth” to create enough workplace jobs for the future population accommodated by the proposed 750 dwellings a year is unsound. This is because paragraph 5.20 suggests that this level of housing provision would only add some 3,100 extra resident workers who could take some of the 4,200 new jobs that are assumed to be filled existing residents already in employment, or some of the 3,600 jobs that have been assumed to be taken by increased levels of in commuting. As neither the assumptions regarding commuting or double jobbing appear to be evidence based, it is more than likely that these jobs will be filled by existing or future residents. In such circumstances, there is no need for “super growth” but there is likely to be a need for more housing.

4.0 THE OBJECTIVELY ASSESSED NEED FOR HOUSING

The DCLG projections

- 4.1 Using the 2014 Sub National Population Projections (which are the underlying projections to the DCLG 2014 Household projections) as an input to the Chelmer Model, together with the 2014 household formation rates and a 3.1% vacancy rate as recorded in the 2011 census, results in a projection of **502 dwellings a year**.
- 4.2 With no changes to the employment assumptions this level of housing would result in a decrease in the labour force.

Alternative migration assumptions

- 4.3 Recent levels of dwelling completions have averaged about 900 dwellings a year. The impact of this level of provision has started to reflect in the recorded rates of migration with the Mid Year Estimate for net migration peaking at over 1000 persons in 2015.
- 4.4 The Chelmer Baseline assumption uses a rolling five-year average migration, and taking into account this most recent level of migration which showed a substantive increase from recent rates recording an estimated
- 4.5 This results in a projection of **667 dwellings a year**.

Adjustments to reflect improved household formation rates

- 4.6 In order to respond the falling of average household representation rates those rates for the under 45 age groups has been held constant at the 2014 level so as to prevent the situation getting worse for these age groups. In the case of Telford & Wrekin the groups impacted were the 15 to 29 age groups.
- 4.7 This increased the projected annual requirement to **698 dwellings a year**.

Meeting economic projections

Employment growth

- 4.8 There are three economic projections available (Oxford Economics, Cambridge Econometrics and Experian) which suggest an average of 693 jobs being created every year.

Table 7 Employment projections

	2011	2016	2021	2025	2026	2031	job growth from 2011	annual average rate of job growth from 2011
Cambridge Econometrics	84,000	94,100	96,700	99,100	99,800	103,000	19,000	950
Oxford Economics	84,328	92,682	92,309	93,590	93,519	92,697	8,370	418
Experian	86,100	93,900	94,700	97,400	98,000	100,300	14,200	710
Average rates of growth	84,809	93,561	94,570	96,697	97,106	98,666	13,857	693

- 4.9 As these projections have a different number of workers at the start of the projection instead of utilising absolute numbers in the projection, the projection has used the average rate of growth and applied this to the number of workers working in the area recorded in the model start date of 82,901 persons (Source: Chelmer Model / annual population survey)
- 4.10 The rates of growth are calculated as follows:

Table 8 Employment growth rates

Rates of growth	2016	2021	2025	2026	2031	Average
Cambridge Econometrics	12.0%	2.8%	2.5%	0.7%	3.2%	4.2%
Oxford Economics	9.9%	-0.4%	1.4%	-0.1%	-0.9%	2.0%
Experian	9.1%	0.9%	2.9%	0.6%	2.3%	3.1%
Average rates of growth	10.3%	1.1%	2.2%	0.4%	1.6%	3.1%

- 4.11 This highlights that there was a projected high level of growth between 2011 and 2016. This of course includes recorded changes in levels of employment up to the base date of the projections.
- 4.12 To convert these employment projections into population and dwelling projections a number of assumptions have to be made.
- 4.13 If the default assumptions in the model are retained, then this level of growth would require some 1,285 dwellings a year.

Unemployment (UE)

- 4.14 This projection retains unemployment at over 9% if it is assumed that unemployment falls to 5.3% in 2016, and then continues to fall to 4.3% in 2031 then this increases the number of workers available from the same population, and reduces the level of additional population and hence housing down to just 1,012 dwellings a year.

Pension Age Changes (PA)

- 4.15 If an allowance is made for increased economic activity for those over 60 to reflect the changes in the pension age, then this again increases the available workforce from the same population and will further reduce the need for population growth and associated housing down to 965 dwellings a year.

Double Jobbing

- 4.16 Not all new jobs will be taken by new workers, some workers will undertake more than one job – this is referred to as double jobbing. Making an allowance for double jobbing by reducing the growth rate by 4% will again decrease the population required to support the projected level of employment growth down to 942 dwellings a year.

Economic Activity Rates

- 4.17 There is the possibility that as well as increases in the activity rate amongst the over 60's, there will also be an increase in the activity rate for the population in general. Allowing for a 2% increase in the activity rates for all age groups other than the over 60's (which have already been increased) would again increase the number of workers available from the same population thereby reducing the need for population growth and hence housing to some 864 dwellings a year.

Household Representation Rates

- 4.18 If an allowance is made to prevent the household formation rates from falling below their position in 2014, then this annual level of housing provision would need to be increased to 888 dwellings a year.

Commuting assumptions

- 4.19 It has been assumed that the ratio of in and out commuting remains the same and as such the increase in the overall level of jobs results in an increase in net commuting of some 937 persons by 2031.

Summary of employment projections

- 4.20 Above has demonstrated the assumptions that have to be made in order to meet the average rate of employment growth projected by the three models and allow for no further decrease in household formation rates. This would then require the level of housing provision to be 888 dwellings a year.
- 4.21 The table below shows the different assumptions that are required to reduce the dwelling requirement down to this level, all the assumptions will need to be met for this level of housing to provide for sufficient workers.

Table 9 Summary of employment projections

Dwelling change	2011-2031	Annual Average 2011 - 2031
Average rate of Employment Change	25,701	1,285
Average rate of Employment Change UE <ul style="list-style-type: none"> Reduced Unemployment to 4.3% 	20,246	1,012
Average rate of Employment Change UE PA <ul style="list-style-type: none"> Reduced Unemployment to 4.3% Increased activity for post 60 age groups to reflect changes in pension age 	19,306	965
Average rate of Employment Change UE PA DJ <ul style="list-style-type: none"> Reduced Unemployment to 4.3% Increased activity for post 60 age groups to reflect changes in pension age Allowance for 4% double jobbing 	18,843	942
Average rate of Employment Change UE PA DJ AR <ul style="list-style-type: none"> Reduced Unemployment to 4.3% Increased activity for post 60 age groups to reflect changes in pension age Allowance for 4% double jobbing Increased activity rates by 2% 	17,287	864
Average rate of Employment Change UE PA DJ AR HRR <ul style="list-style-type: none"> Reduced Unemployment to 4.3% Increased activity for post 60 age groups to reflect changes in pension age Allowance for 4% double jobbing Increased activity rates by 2% No decrease in average household formation rates for under 44 age groups 	17,752	888

Market adjustments

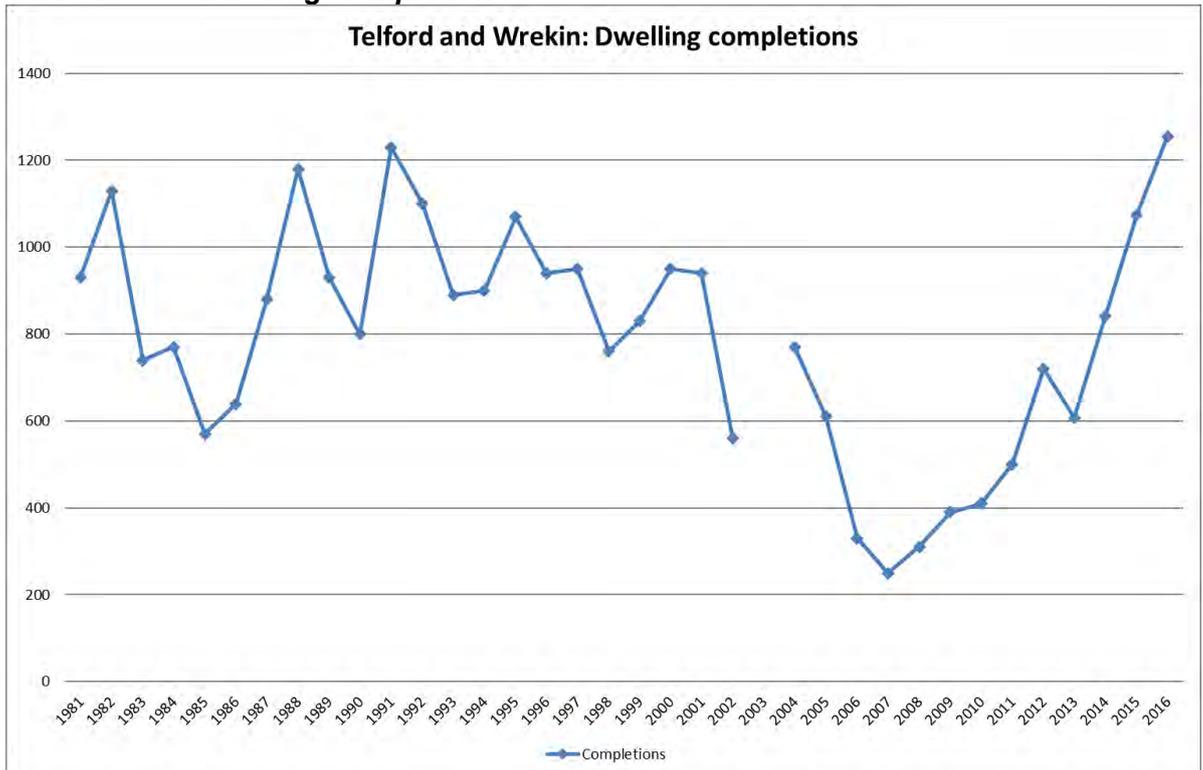
Past rates of delivery

- 4.22 There are a number of factors to consider in terms of indicators of market demand, however in this case the past rates of delivery are considered to be a very clear indication as to the level of demand and need.
- 4.23 In the last five years 4,498 dwellings have been completed, an average of 900 dwellings a year, with the last year of completions being some 1,255 dwellings.
- 4.24 While this completion rate is substantially higher than the preceding five years it is a return to the levels of delivery that have been sustained over a long period of time

as illustrated in the chart below. Over the past 35 years' completions have averaged at some 800 dwellings a year.

- 4.25 The lower levels of completions experienced between 2005/6 and 2010/11 cannot be regarded as representing the long-term pattern of demand and yet it is this period which will have impacted on the DCLG household projections.

Chart 2: Dwelling Completions



Source DCLG Live Tables & AMR

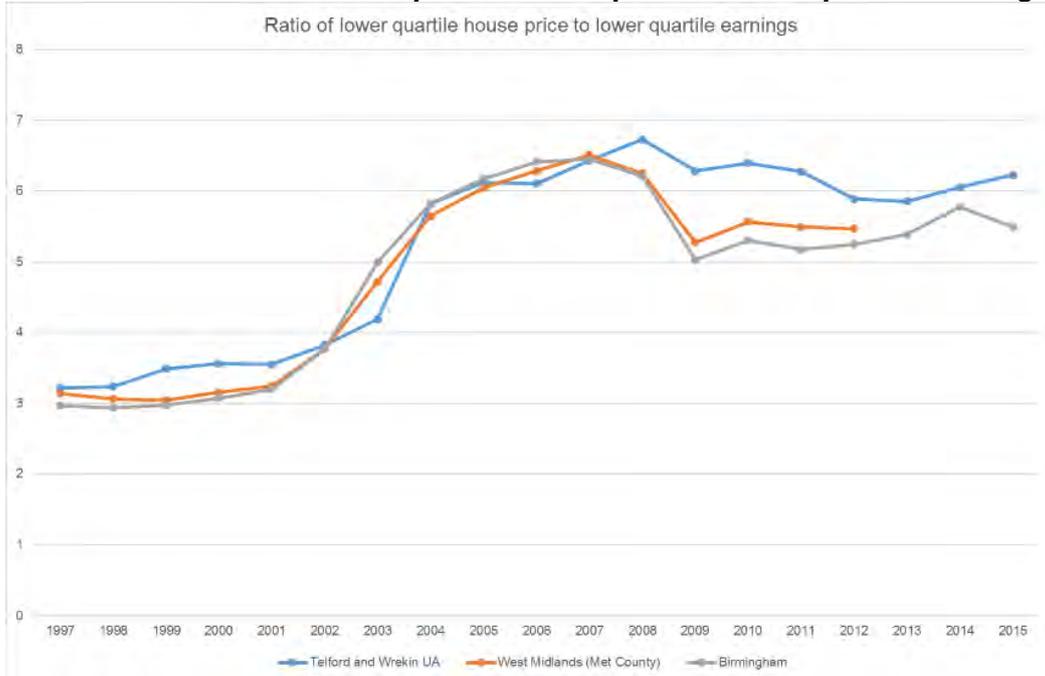
- 4.26 The recent rates of housing delivery are supported by the assessment of housing need taking into consideration the impact of employment growth and as such this would appear to be a robust indicator as to the future level of housing need in the area.

House Prices and Affordability

- 4.27 The published evidence on affordability suggests the situation has significantly worsened in Telford and Wrekin, more than doubling from 3.22 in 1997 to 6.2 in 2015.
- 4.28 The ratio of median house price to median earnings has also more than doubled from, 3.1 in 1997 to 5.8 in 2015.
- 4.29 While these ratios are lower than England as a whole, they are not ratios that we consider to be conducive to the Government's long term aim of increasing home ownership (Framework paragraph 59).

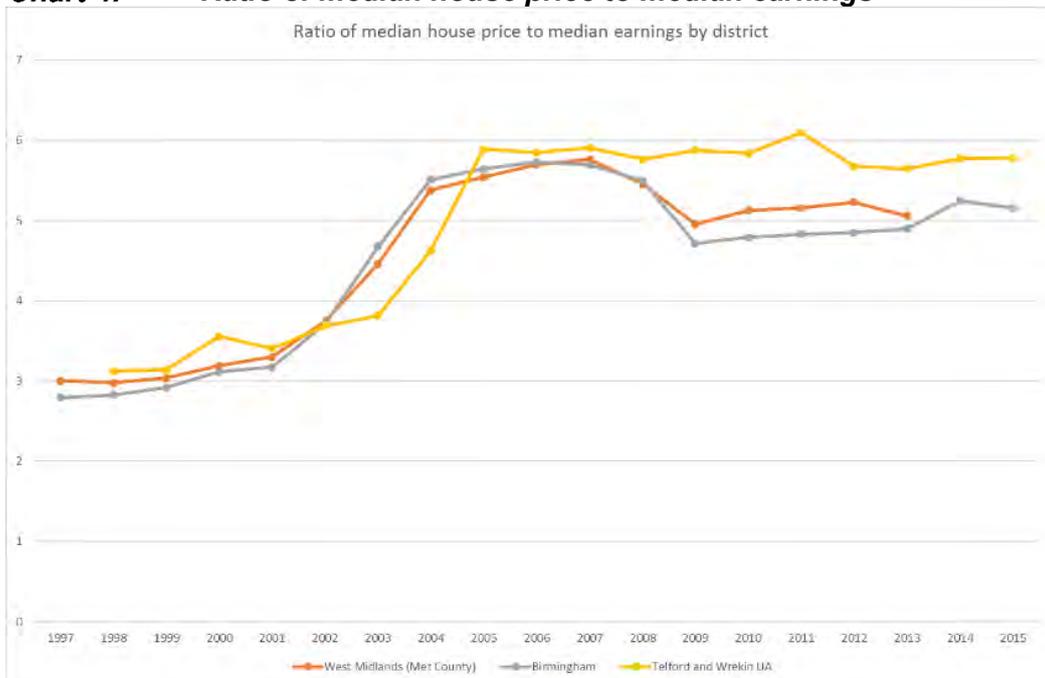
4.30 The relative position has also worsened with regard to Birmingham and the West Midlands with Telford becoming less affordable than both the city and the region as a whole.

Chart 3: Ratio of lower quartile house price to lower quartile earnings



Source: ONS Table 576 Ratio of lower quartile house price to lower quartile earnings by district

Chart 4: Ratio of median house price to median earnings



Source: ONS Table 577 Ratio of median house price to median earnings by district, from 1997-6

The need for affordable housing

- 4.31 The need for affordable housing is an indication of the state of the housing market within the area. Table D1 of the SHMA 2016 suggests there is an annual requirement of some 665 dwellings a year to meet both the newly arising need and the backlog.
- 4.32 Policy HO 5 Affordable housing thresholds and percentages sets out two levels of requirement these being:
- 25% to be applied to Telford; and
 - 35% to be applied to Newport and in any other location, including the rural area.
- 4.33 Even using the higher of the two rates would require 1,900 dwellings to be delivered each year for the next five years.
- 4.34 This calculation does not appear to make an allowance for the net change in affordable housing stock which is to decrease by 504 dwellings (line 3.5 Table D1 SHMA 2016).
- 4.35 We acknowledge that this requirement may not need to be met in full according to recent High Court judgements nevertheless it is clear that a higher level of housing provision than that suggested in the plan would make positive contribution to meeting these unmet needs.

5.0 CONCLUSIONS

5.1 We have reviewed all the most recent evidence including the 2014 DCLG household projections and conclude that while these represent the starting point there are a number of reasons that justify a higher rate of housing provision. These are summarised as follows:

- a. Recent rates of in migration have been suppressed and a return to both the higher rates of housing delivery and the higher rates of net migration appear not only possible but entirely realistic given recent rates of completions and last year's migration figures.
- b. There is an imbalance between projected employment growth and housing provision. Making suitable allowances for increased activity rates, lower levels of unemployment, and double jobbing a substantial uplift in housing would be required to meet this level of job growth. This would suggest a minimum requirement of 888 dwellings a year. The fact that housing delivery has already increased alongside recent employment growth would support this conclusion. Dwellings completions are currently averaging 900 dwellings a year over the last five years.
- c. Indicators of affordability including a substantial backlog of affordable housing also support a higher level of housing than that being suggested by the DCLG 2014 projections.

5.2 To meet the average of the three most recent projections of employment growth of 693 jobs a year would be required an average of 888 dwellings a year. This is our lower assessment of need, but taking into account market signals including the need to provide affordable housing and recent build rates then the more appropriate requirement would be **900 dwellings a year**.

5.3 In respect of the OAHN Report (March 2015), this is based upon the lower 2012 DCLG projections, and we consider that the report is based on the following assumptions that have led it to underestimating the future level of housing need in the area:

- d. The Experian baseline model assumes an increase of the working population of 4,900 whilst the 2012 SNPP on which it is based suggests a fall of 4,900 persons in these age groups. This appears to be adding approximately 10,000 persons to the working age population
- e. The Experian baseline model produces changes to commuting patterns but provides no evidence as to why this is likely to happen. This approach is contrary to that adopted by previous Inspectors and in our opinion would need to be subject to the duty to cooperate with those areas likely to be affected.
- f. The Experian baseline model produces a level of double jobbing of 26% of all new jobs compared to available evidence which suggests a level of 4% but provides no evidence as to why this is likely to happen.

5.4 The differences between the two sets of assumptions are summarised below:

Table 10 Summary of difference between approaches

Projection (000's)	Experian Baseline 2015 (497 dwellings)	SPRU (888 dwellings)
Working age population	4.9	5.8
Resident labour force (for SPRU this includes impact of increase activity rates including pension age changes)	4.3	6.7
Unemployment	-4.2	4.2
Resident based Employment	8.5	10.6
Net Commuting (for SPRU commuting ratios are held constant)	3.6	0.9
Workplace based employment	12.1	11.5
Double jobbing	4.3	0.6
Job growth	16.3	12.0

Source: OAHN report (March 2015) & SPRU Chelmer results (may not sum due to rounding)

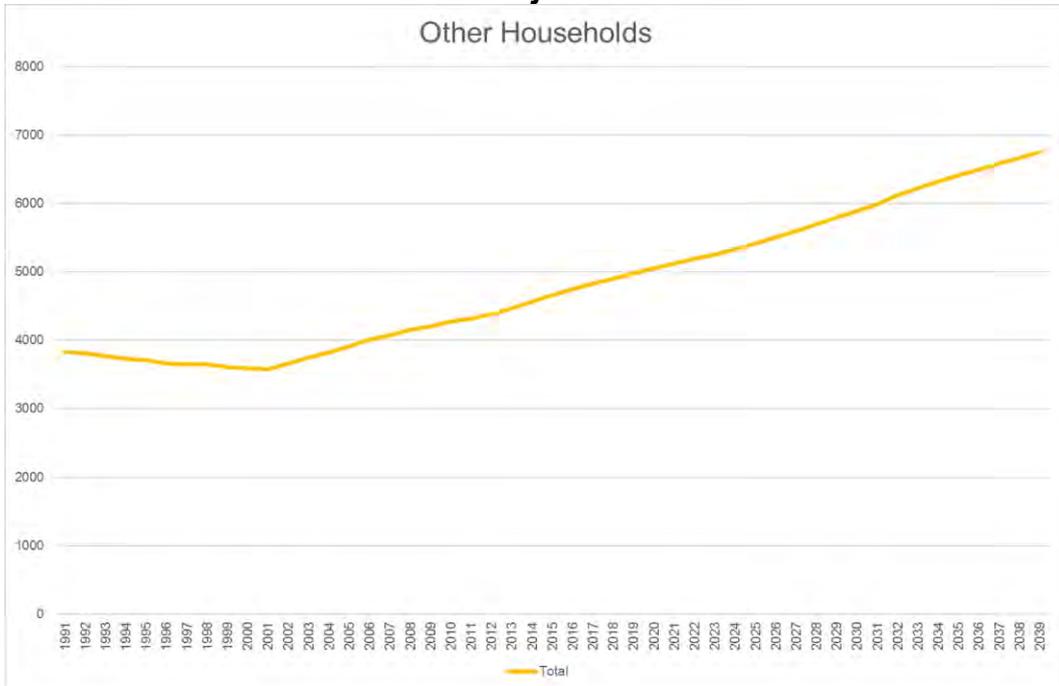
- 5.5 Our projection is derived from the DCLG projections and the increase in dwelling provision proposed is commensurate both with historic and current build rates it also reflects the level of migration that has occurred previously and this level appears to be returning. This level of provision will also address issues of affordability including increasing the level of affordable housing to meet the substantial backlog.
- 5.6 Lastly the provision of 900 dwellings a year would boost significantly the supply of housing as required by paragraph 47. The suggestion that an annual rate of provision of just 497 dwellings a year would meet this policy aspiration when the most recent rate of delivery was 1,255 dwellings lacks credibility.

APPENDIX 1: BACKGROUND EVIDENCE

Household representation rates

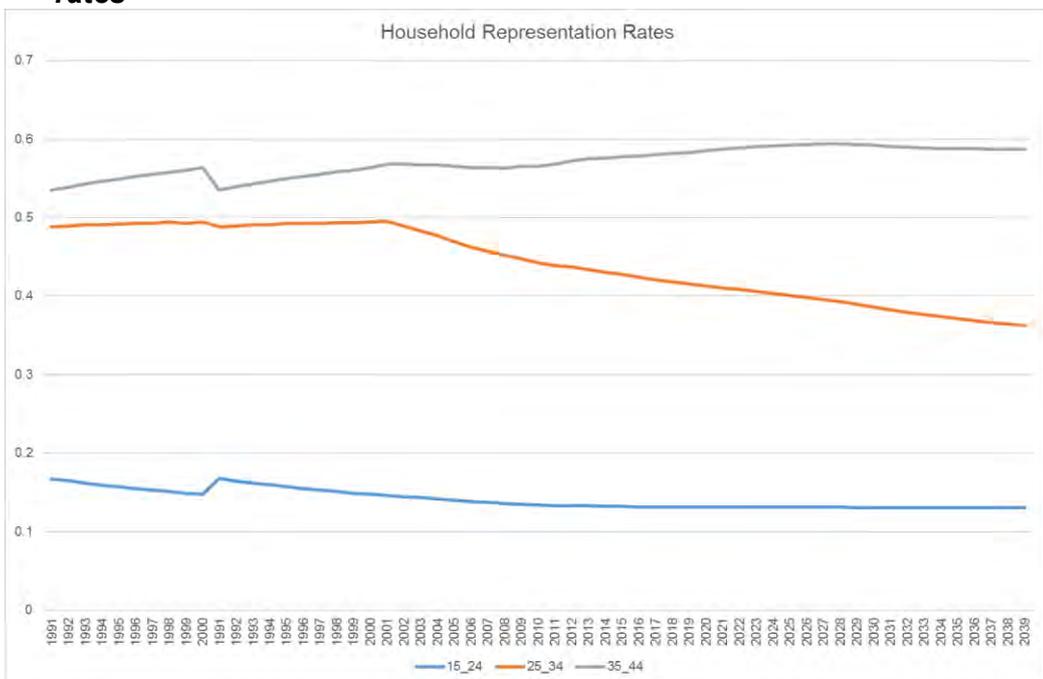
- A1.1 The approach to future Household Representation Rates is that the Chelmer Model uses the 2014 Household Representation Rates. This approach models in the decreasing opportunity for many age groups to form households in the future. While this mirrors the official projections in terms of outputs, it cannot be considered to be fully compliant with the Framework paragraphs 17 and 50, as it does not meet demand nor does it increase the opportunity for home ownership.
- A1.2 The 2014 Household Projections include household representation rates which model forward the negative impact of undersupply and the recession, for example the inability of under 35's to enter the housing market. The projections assume that the present situation of more under 35's staying at home and a greater number of unrelated adults living together (shared housing) will continue.
- A1.3 These are trend based projections and as such reflect previous levels of under provision that have led to the present housing crises. The PPG makes it clear that these projections do not reflect unmet need (Paragraph: 015 Reference ID: 2a-015-20140306).
- A1.4 The changes between 2001 and 2011 reflected in these projections are:
- The 36% rise for those living in Other households without dependent children;
 - The 30% rise between 2001 and 2011 for those living in Other households with dependent children;
 - Households with six or more people rose 25% between 2001 and 2011;
 - households with six or more people saw the largest proportional at almost 50%;
 - 18% of all occupied household spaces were privately rented, an increase from 12% in 2001. This was the largest increase of all housing tenure types;
 - The owner occupied declined from 69% to 64% over the same period.
- Source: 2011 Census Analysis, Households and Household Composition in England and Wales, 2001-2011*
- A1.5 In respect of the growth in Other households, these have not only increased substantially but have also increased in average size. The average size of Other households without dependent children increased from 2.92 people in 2001 to 3.06 in 2011 and saw the largest percentage increase (5.1%). Within this main category, the Other category includes unrelated adults sharing a household space and multi-family households with no dependent children; this category increased by 4.1% from 2.90 people to 3.02. It is suggested by the Office for National Statistics that this may reflect an increase in young working adults sharing accommodation and multigenerational households.
- A1.6 The changes to household representation rates and the increase in other households in Telford and Wrekin are both illustrated in the charts on the next page. This shows that the decline in other households experienced in the period 1991 to 2001 has been reversed and that these are now projected to grow substantially.

Chart 5: Telford and Wrekin: Projected Growth in Other Households



Source: 2014 DCLG Household projections

Chart 6: Telford and Wrekin: changes to Household representation rates



Source: 2014 DCLG Household projections

A1.7 In light of the above it is considered inappropriate to utilise the Household Representation Rates in the 2014 Household Projections as these project forward the continuation of above trends which are in conflict with the Framework notably in terms of:

- Not meeting housing demand (Framework paragraph 159)
- Not delivering a wide choice of homes and widen home ownership (framework paragraph 50).

A1.8 If the number of “other households” was to be held constant at the 2011 level of 4,320 instead of increasing to 5,893 then this could suggest the creation of a further 1,573 households (DCLG 2014 Household projections). We have not taken this approach.

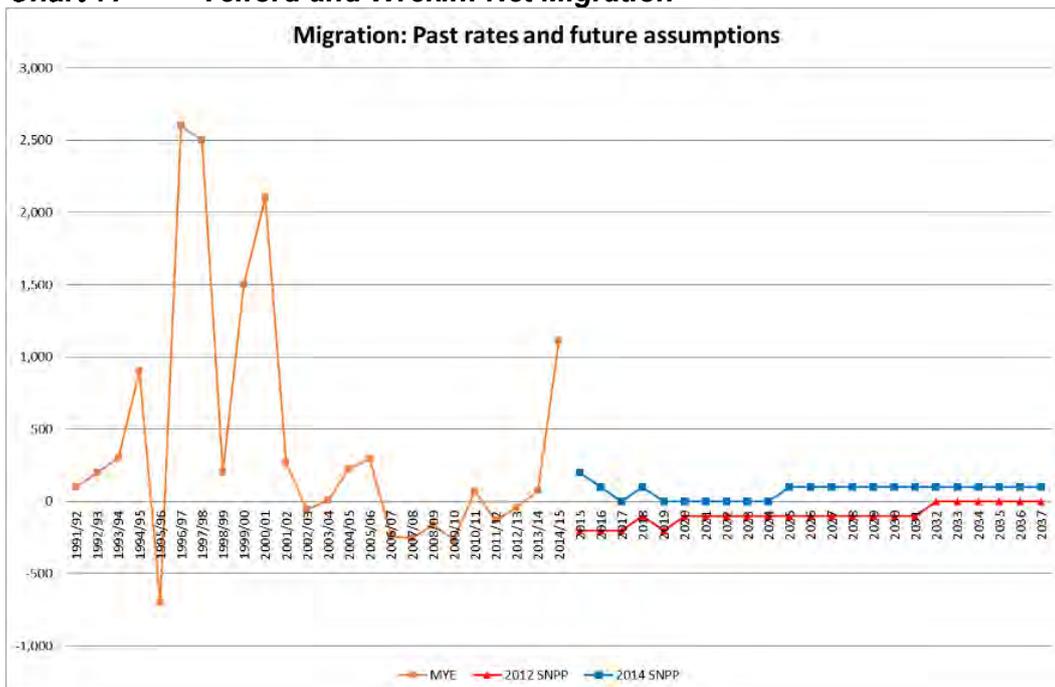
A1.9 The approach we have taken to address these issues is to hold the Household Representation Rates constant for the age groups 15 to 44

Past rates of migration

A1.10 The average level of migration over the 1991 to 2015 period is 441 persons a year although the five year average rate has fluctuated between -170 persons a year (2006 – 2011) and 1,780 persons a year (1996 to 2001).

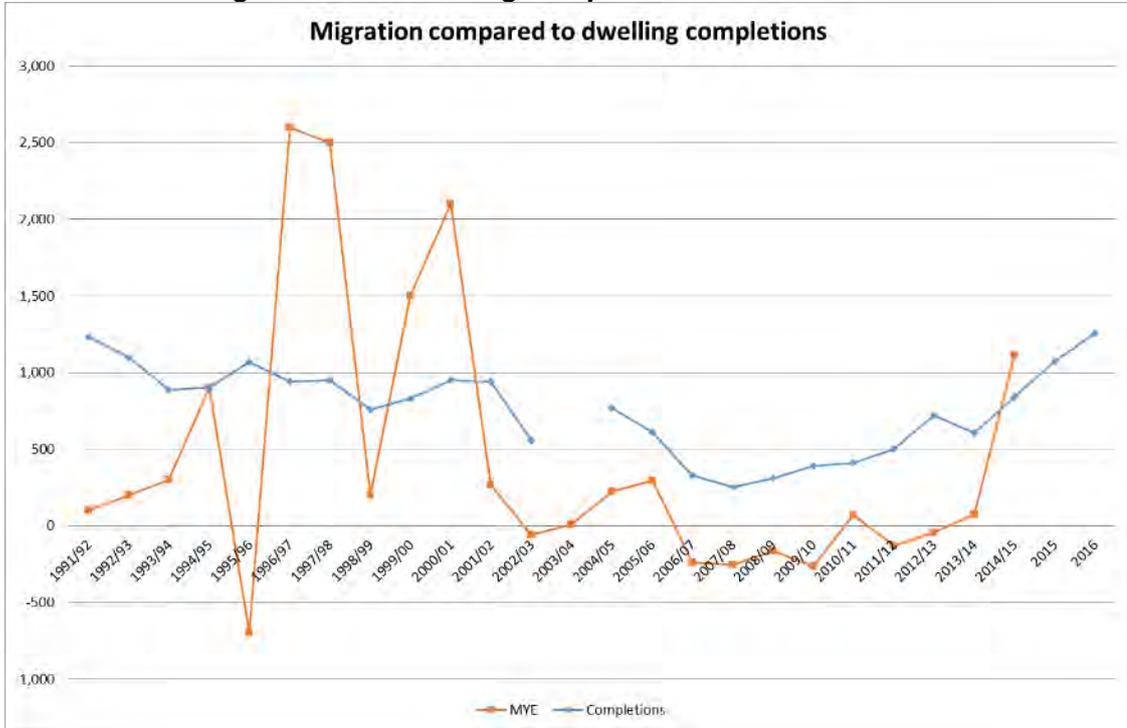
A1.11 Chart 2 illustrates past levels of migration as well as the two most recent SNPP projections for the future. Both the 2012 and 2014 SNPP assumptions appear too low when considered in the context of the longer-term pattern of migration into the area. Chart 3 compares previous rates of housing completions and net migration, while there is not a direct correlation there is clearly a relationship between the provision of housing and migration. It is pertinent to note that recent increases in dwelling provision has been reflected in increased levels of net in internal migration.

Chart 7: Telford and Wrekin: Net Migration



Source: ONS

Chart 8: Migration and dwelling completions



The consideration of migration assumptions

A1.12 The Guidance (Paragraph: 019 Reference ID: 2a-019-201403060) highlights that past under supply can impact on migration, household formation and affordability. In this context, it is important to consider the level of undersupply that has occurred within the area will have impacted on both the level of migration and the ability to form households.

A1.13 The Planning Advisory Service publication “Objectively Assessed Need and Housing Targets: Technical advice note” (Second edition July 2015) is not government guidance and takes a different position on the suitability of the ONS approach to using the most recent five-year migration for the projection of future population:

6.24 For all these reasons, in assessing housing need it is generally advisable to test alternative scenarios based on a longer reference, period, probably starting with the 2001 Census (further back in history data may be unreliable). Other things being equal, a 10-to-15 year base period should provide more stable and more robust projections than the ONS’s five years. But sometimes other things will not be equal, because the early years of this long period included untypical one-off events as described earlier. If so, a shorter base period despite its disadvantages could be preferable.

6.25 On a more general point, there are many kinds of unusual events which may have impacted on population and household growth in the reference period, whether that period is five, 10 or 15 years. In particular, it may be that housing development

was constrained by planning, so that for some or all of the period land supply fell short of demand or need. If so the demographic projections will underestimate future demand or need and should be adjusted upwards, as discussed in Chapter 7 below.

A1.14 As highlighted in this objection the level of housing in Telford and Wrekin has been below that required to meet past projections and past policy. In light of these past events and in accordance with the PAS guidance the use of a shorter period is clearly justified.

A1.15 Part of the justification in the PAS guidance for considering longer time periods is that they consider the base period used in the latest official projections, 2007-12, to be “especially problematic” and it states:

“The period covers all of the last recession, in which migration was severely suppressed as many households were unable to move due to falling incomes and tight credit. Therefore the official projections may underestimate future migration - so that they show too little population growth for the more prosperous parts of the country, which have been recipients of net migration in the past. If so, by the same token the projections will also overestimate population growth for areas with a history of net out-migration.”

A1.16 The justification for looking at a longer period therefore is to establish if the official projections are likely to underestimate the need in Telford as in the past it had been a net recipient of migration but recent events have reversed this and it is a net exporter of migration.

A1.17 The most recent levels of migration appear to be affected by the reduction in the level of supply below both policy and projected needs. The impact of the recession will have also had an impact. In these circumstances, it would appear to be appropriate to consider a wider evidence base for deriving suitable migration assumptions for the OAHN.

A1.18 The OAHN Report 2015 recognises that in the longer term the Borough had been focus for in migration from the Black Country and that this role might be revised in the future. In particular, this could be driven by the unmet need rippling out of Birmingham. It is appropriate to conclude that this emerging unmet need is likely to drive a “ripple effect” of out migration from both Birmingham and the Black Country that would strongly suggest the recent levels of net out migration experienced in Telford and Wrekin are unlikely to continue.

A1.19 The Shropshire Core Strategy plans to provide 27,500 dwellings between 2006 and 2026 (1,375 a year) although delivery rates in the first half of the plan period have not kept up with this requirement. So, while the 2014 SHMA update for Shropshire suggested in paragraph 7.4 that this requirement remains robust the area has already under delivered completions by over 2,000 dwellings between 2006 and 2015 (Shropshire 5 Year Land Supply Statement). Again, unless the issue of under delivery can be addressed future levels of out migration to the County is unlikely to continue.

A1.20 Considering change over the longer time period there was a decline in dwelling provision since 2001. This according the OAHN Report 2015 was due in part to the activity of English Partnerships (paragraph 4.15). The lower population growth and migration are to an extent the result of these lower levels of dwelling completions.

The return to higher levels of net migration experienced in the 1990's is a scenario that is worthy of further consideration.

The Greater Birmingham and Solihull LEP Black Country Local Authorities Strategic Housing Needs Study Stage 3 Report August 2015

- A1.21 In considering the future level of migration, it should be noted that in (paragraph 10.34 of this report by the same authors as the Telford SHMA) it is highlighted that the Framework is clear that the HMA is the main geography for which housing need should be met but the Duty to Cooperate does not end at the HMA boundary. It suggests that where unmet need is a strategic issue then the Duty can be used to help meet strategic housing needs in a sustainable way beyond the HMA.
- A1.22 While the authors of the OAHN Report 2015 state (paragraph 10.35) that they did not look at this in detail, because the 'export option' was not part of the study brief they do suggest that Telford may be a suitable location to accommodate part of the shortfall.

The undersupply in Birmingham Housing Market Area

- A1.23 The wider Birmingham and Black Country HMA currently has a shortfall of available land in existing and emerging Local Plans. Given the historic relationship between Telford & Wrekin with the West Midlands conurbation and Shire authorities and the prevalent migration and travel to work links between the two areas, there is clearly the potential for Telford to be able to assist in meeting this need by accommodating higher levels of migration such as it has done in the past.
- A1.24 The un-met housing need arising from the Greater Birmingham HMA can be mostly attributed to unmet need arising from Birmingham. The Main Modifications to the Birmingham Development Plan consider the OAHN to be 89,000 dwellings, with 51,100 accounted for in the Birmingham Plan, leaving 37,900 of this need still unmet (IR 61).
- A1.25 At the time of writing only North Warwickshire is considering meeting some 10% (3790 dwellings) of this unmet need based upon patterns of migration and commuting from Birmingham (North Warwickshire Local Plan Consultation Draft, paragraph 7.38).
- A1.26 While the Inspector of the Birmingham Plan recommended that paragraph 4.7 of the plan should be amended as follows this does not provide any clarity with regard to addressing the unmet need, it simply states:

"The City Council will seek to work collaboratively with neighbouring authorities to secure the development of further homes to contribute toward meeting Birmingham's housing requirement over the period to 2031. This will focus on the Greater Birmingham Housing Market Area (HMA), which comprises, in addition to Birmingham itself, The Black Country, Bromsgrove, Redditch, Solihull, North Warwickshire, Tamworth, Lichfield, Cannock Chase, South Staffordshire and parts of Stratford-on-Avon. In 2014 the Greater Birmingham and Solihull Local Enterprise Partnership and the Black Country authorities jointly commissioned a study to assess future housing requirements within the two areas and to identify scenarios to provide for additional housing to meet any shortfall, including any unmet needs within Birmingham. The study area covers the majority of the Greater Birmingham HMA. The final phase of the study, together with additional work in relation to

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employment and sustainability, will provide a basis for a strategy to be agreed to accommodate additional housing provision to meet the shortfall arising in Birmingham and any other shortfalls within the study area. In the case of the Greater Birmingham and Solihull LEP, this will be reflected in the LEP Spatial Plan for Growth. The outcome of this will then be taken forward through revisions to individual Local Plans, where this is necessary, to ensure that additional land is allocated for new housing.”

- A1.27 The issue of Birmingham not being able to meet its own housing needs has been apparent to all the Greater Birmingham HMA authorities since 2012, this was made particularly clear when the Birmingham City Council attended the Exploratory Hearing for the Coventry City Council’s Local Plan, which we attended, and this plan was subsequently withdrawn from examination.
- A1.28 The work done by Birmingham City Council, through the GBSLEP has so far failed to reach agreement with the HMA authorities in seeking a sustainable solution to meet this significant unmet need, despite the Council’s initial promises to reach a solution during its development plan examination.
- A1.29 The vast majority of authorities within the Greater Birmingham HMA have now adopted Local Plans or Core Strategies. As yet no development plan has taken any housing need directly from Birmingham, some were found sound subject to Main Modifications which committed the councils to commit to a review, however none are currently at the stage of preparing a Local Plan review.
- A1.30 As there are no spatial plans or agreements to meet the OAHN within the Greater Birmingham HMA then this will have implications to migration patterns across the Great Birmingham HMA and into Telford and Wrekin.
- A1.31 The Telford and Wrekin Local Plan presents an opportunity to positively plan for changes to migration across the West Midlands and an uplift to the OAHN should be made to help address this long standing and significant issue.
- A1.32 It is notably that the increase in the output of the industry in recent years in Telford and Wrekin is being supported by much higher rates of migration than those that have occurred in the recent past. These rates appear more aligned with the experience of the council in the late 1990’s rather than in the 2000’s during which restrictions on greenfield development and then the recession subdued build rates and migration.

Conclusion on future levels of migration

- A1.33 The evidence, in our opinion, does not support the net out migration assumptions in the 2012 DCLG Household Projections which have been used as the starting point for the OAHN report (March 2015).
- A1.34 We also consider that a wider overview of housebuilding and migration in the longer time period would support a considerably higher rate of net in migration.
- A1.35 This is particularly the case with the emerging issue of unmet need in the Birmingham Housing Market Area.
- A1.36 Having reviewed the factors which have impacted on migration patterns in the last 20 years as well as the factors likely to influence migration in the next 10 years, then these very modest assumptions of limited net in migration in the OAHN Report 2015

appear to be an underestimation of the likely future levels of migration. An exploration of the factors likely to impact upon future migration levels such as economic growth, affordability and unmet need in other locations are covered in the next section of this report.

A1.37 In terms of migration as well as modelling the 2014 SNPP we have also modelled the Chelmer “Baseline” case which is based on a rolling five year average of migration taking into account the migration recorded in the 2015 MYE’s,

Conclusion on Demographic drivers of housing need

A1.38 In light of the above, we have taken to model the following scenarios:

- The 2014 SNPP
- The Chelmer Baseline projection which uses the latest migration figures from MYE’s but this has been adjusted to hold HRR for the 15 – 44 age groups constant (this adds some 600 dwellings to the projection, the equivalent of 30 a year)

Employment growth

Past rates of job growth

A1.39 The OAHN Report 2015 (figure 5.1) suggest that since 2001 workplace jobs increased by 5% until falling back as a result of the recession before increasing quickly by about 8% by 2015. Over the period to 2031 it is suggested that there will be an increase of some 19% in terms of workplace jobs (OAHN Report 2015 paragraph 5.5).

A1.40 Other indicators of past growth are available from local area statistics (Nomis) and these are set out in the table below and suggest a rate of some 600 jobs a year between 2000 and 2014 which at 0.72% a year is higher than for the region but lower than for England. At an average of 600 jobs a year it is also lower than the 810 jobs projected in the Experian Forecast in the OAHN report (March 2015 paragraph 5.9 and Figure 5.1 pages 31 and 33).

A1.41 There appears to have been a recent increase in the rate of job creation in the Council area with the five year average being higher than both the region and England (1.9% per year).

Table 11 Telford and Wrekin: Job Growth 2000 to 2014

Date	Telford and Wrekin	Great Britain	West Midlands
2000	83,000	28,973,000	2,588,000
2001	83,000	29,283,000	2,609,000
2002	88,000	29,477,000	2,616,000
2003	83,000	29,747,000	2,636,000
2004	88,000	30,042,000	2,661,000
2005	91,000	30,539,000	2,691,000
2006	89,000	30,339,000	2,694,000
2007	89,000	30,667,000	2,674,000
2008	89,000	30,689,000	2,666,000
2009	84,000	30,266,000	2,588,000
2010	86,000	30,235,000	2,600,000
2011	85,000	30,897,000	2,635,000
2012	88,000	31,132,000	2,659,000
2013	87,000	31,574,000	2,700,000
2014	92,000	32,621,000	2,766,000
Total Change 2004 to 2014	9,000	3,648,000	178,000
14 year Average Annual	600	243,200	11,867
14 year Percentage Change per year	0.72%	0.84%	0.46%
10 year Change 2004 to 2014	4,000	2,579,000	105,000
10 year Average Annual	400	257,900	10,500
10 year Percentage Change per year	0.5%	0.9%	0.4%
5 year Change 2009 to 2014	8,000	2,355,000	178,000
5 year Average Annual	1,600	471,000	35,600
5 year Percentage Change per year	1.9%	1.6%	1.4%

ONS Crown Copyright Reserved [from Nomis on 5 October 2016]

Past and Future rates of job growth

A1.42 The OAHN Report 2015 contains the following projections of job growth.

Table 12 Summary of employment growth

Source	Annual Jobs
Past Rate: 2001 – 2008 (OAHN Report 2015)	655
Past Rate: 2000 – 2014 (14 year - Nomis)	600
Past Rate: 2004 – 2014 (10 year - Nomis)	400
Past Rate 2009 – 2014 (5 year - Nomis)	1,600
Cambridge Econometrics (The Marches LEP 2014)	590
Experian baseline (OAHN report 2015 paragraph 5.9)	810

Sources: Nomis, OAHN report

A1.43 This evidence uses the average rate of job growth as calculated using the following projections from Cambridge Econometrics, Oxford Economics and Experian.

Table 13 Employment projections used in this evidence

	2011	2016	2021	2025	2026	2031	job growth from 2011	annual average rate of job growth from 2011
Cambridge Econometrics	84,000	94,100	96,700	99,100	99,800	103,000	19,000	950
Oxford Economics	84,328	92,682	92,309	93,590	93,519	92,697	8,370	418
Experian	86,100	93,900	94,700	97,400	98,000	100,300	14,200	710
Average rates of growth	84,809	93,561	94,570	96,697	97,106	98,666	13,857	693

Sources: Cambridge Econometrics, Oxford Economics and Experian

A1.44 As these projections have a different number of jobs at the start of the period we have used the rate of change rather than the actual number of jobs to calculate the required level of new housing. The calculation of this is shown below.

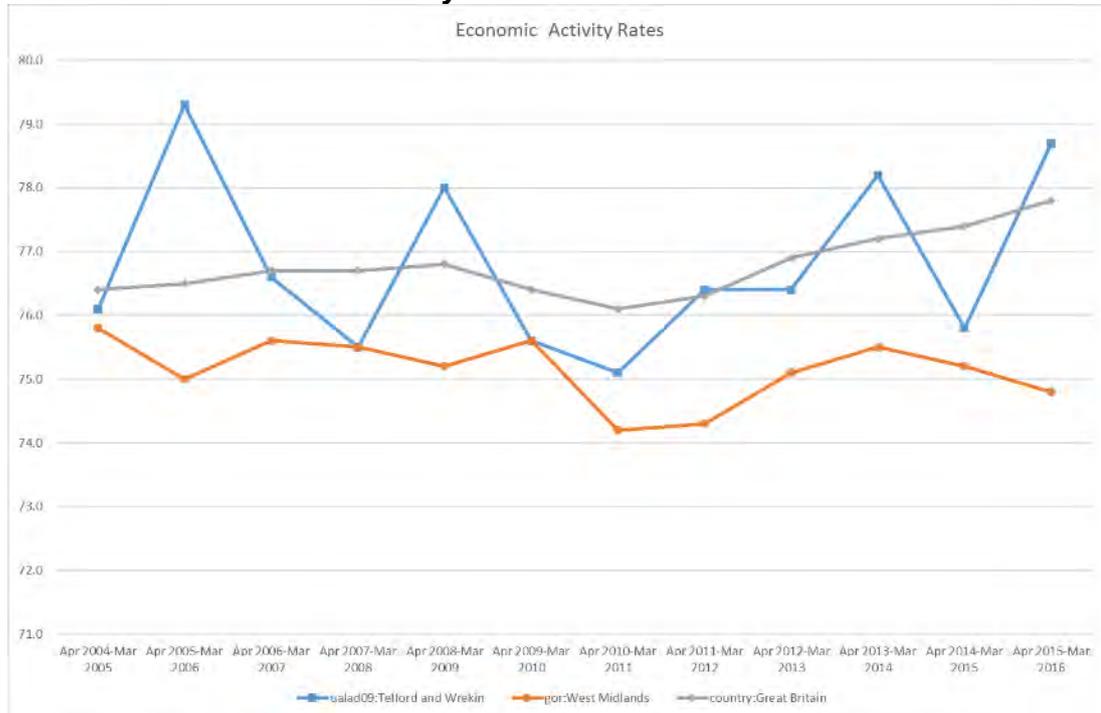
Table 14 Calculation of growth rates used in model

Rates of growth	2016	2021	2025	2026	2031	Average
Cambridge Econometrics	12.0%	2.8%	2.5%	0.7%	3.2%	4.2%
Oxford Economics	9.9%	-0.4%	1.4%	-0.1%	-0.9%	2.0%
Experian	9.1%	0.9%	2.9%	0.6%	2.3%	3.1%
Average rates of growth	10.3%	1.1%	2.2%	0.4%	1.6%	3.1%

Economic Activity Rates

A1.45 The economic activity rates for Telford and Wrekin have fluctuated in the last 10 years and there is on describable trend (see chart below). The Economic Activity Rates for the wider region have decreased slightly by 1 percentage point, while those for the whole of the UK have increased by about 1.5 percentage points over the last decade mainly due to the impact of London and the South East.

Chart 9: Economic Activity Rates 16 - 64

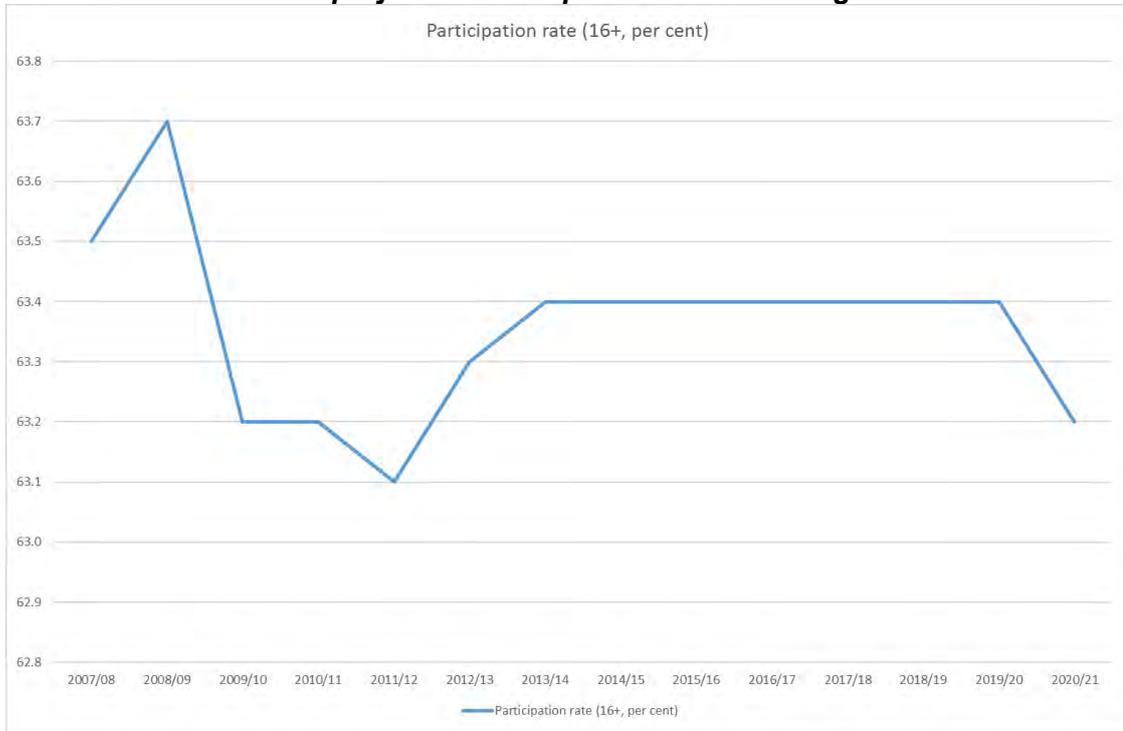


Source: ONS Crown Copyright Reserved [from Nomis on 7 October 2016] 20/07/2016 Data has been reweighted in line with the latest ONS estimates.

- A1.46 In general, the evidence is unconvincing to suggest substantive increases to activity rates in any future projection.
- A1.47 We have however considered the published evidence of Participant Rates¹ for England as a whole from the Office for Budget Responsibility (OBR). This is lower as it measured against the 16+ population rather than the 16 – 64 population in the Nomis material above). The OBR suggests that there will be a very small increase over the longer term although while predicting increases in activity rates in the period up to 2021 from 63.1 in 2011/12 to 63.4 in 2019/20 these are predicted to fall back to 63.2 in 2020/21 (see chart below).
- A1.48 The percentage change (0.48%) between the highest and lowest rates in between 2011 and 2021 has been used as a guide and we have applied a growth rate of 0.5% for each five-year period resulting in an overall increase of 2% over the 20 year projection period.
- A1.49 The table below illustrates that this approach represents a positive interpretation of the evidence on changing Participant Rates as presented by the Office for Budget responsibility.

¹ ONS definition - Those who are participating with the labour market by being either in employment or unemployed and searching for work

Chart 10: Past and projected Participation Rates for England



Source: Office for Budget Responsibility Table 1.6 Labour Market

- A1.50 The exception to this is the increased activity rates we have applied to the 60 to 64 and 65 to 69 age groups.

Economic Activity Rates – impact of the pension age changes

- A1.51 The approach adopted to pension age is based upon the ONS assessment of the changes of the state pension age as set out in an Edge Analytics report of December 2013 which stated:

‘ONS published its last set of economic activity rate forecasts from a 2006 base (ONS January 2006, Projections of the UK labour force, 2006 to 2020). These incorporated an increase in SPA for women to 65 by 2020 but this has since been altered to an accelerated transition by 2018 plus a further extension to 66 by 2020. Over the 2011–2020 period, the ONS forecasts suggested that male economic activity rates would rise by 5.6% and 11.9% in the 60-64 and 65-69 age groups respectively. Corresponding female rates would rise by 33.4% and 16.3% (Figure 14). Given the accelerated pace of change in the female SPA and the clear trends for increased female labour force participation across all age-groups in the last decade, these 2011–2020 rate increases would appear to be relatively conservative assumptions.’

- A1.52 These increases are slightly higher than those found as being realistic by the Inspector at the South Worcestershire Development Plan (page 7 Inspectors Interim Conclusions on the stage 1 matters and paragraph 4.4.3 page 15 NLP Miller Strategic Land “Updated Assessment of Housing Requirements to inform Examination Matter 1”). In that case the following assumptions were considered to represent a reasonable response to the changes to the pension age:

- a) Males 60 to 64: No change.
- b) Males 65 to 69: 2 percentage points between 2012 and 2018.
- c) Females 60 to 64: 8 percentage points between 2012 and 2018.
- d) Females 65 to 69: 2 percentage points between 2012 and 2018.

A1.53 In reaching the conclusion as to the approach to adopt in response to the changing pension age we have also taken into account the following:

- a. The findings of the Institute of Fiscal Studies ‘Incentives, shocks or signals: labour supply effects of increasing the female state pension age in the UK’ (IFS Working Paper W13/03), this found the impact of raising the state pension age was 7.3 percentage points for women and a corresponding increase of 4.2 percentage points in their male partners employment rates (page 28). This suggests that an increase in the activity rates for males in the 60 to 64 age group is appropriate.
- b. Table 4 of the ‘When the State Pension Age will increase to 66 Equality Assessment January 2011’ suggests the bringing forward of the state pension age to 66 will have an additional impact of increasing the numbers in employment by just over 4% at 2020 but that this impact will reduce to under 1% by 2026 (table 4). The impact of this change is only slight and temporal so has not been incorporated into the model.

A1.54 The changes to economic activity rates for these age groups are as follows.

Table 15 Changes to economic activity rates to reflect changes to pension age

Male	2011	2016	2021	2026	2031	2036	2011 to 2021
60-64	0.597	0.614	0.631	0.631	0.631	0.631	5.60%
65-69	0.237	0.250	0.265	0.265	0.265	0.265	11.90%
Female	2011	2016	2021	2026	2031	2036	2011 to 2021
60-64	0.352	0.379	0.409	0.409	0.409	0.409	16.30%
65-69	0.159	0.183	0.212	0.212	0.212	0.212	33.40%

Source: Chelmer model inputs

Double jobbing

A1.55 There are no official figures for those persons who take two or more jobs, commonly referred to as “double jobbing”.

A1.56 The Financial Times reported (25th January 2015) that there are now about 1.2m workers with two jobs, up from about 1.05m workers in 2007. This is out of a total workforce of 31.4m persons in the UK and therefore represents about 4% of the workforce having two jobs.

A1.57 This information would support the use of a 4% allowance for double jobbing.

A1.58 In the workings of the Chelmer model this is taken into account by reducing the target job growth as an input to the model by 4%.

APPENDIX 2: SUMMARY OUTPUTS FROM THE CHELMER MODEL

Summary of the projections

- A2.1 Summary of the projections run in the Chelmer model:
- A2.2 **SNPP** – this models the impact of the 2014 SNPP making no adjustments for improvements to household formation beyond the changes in the 2014 DCLG Household projections, no increased economic activity rates for the 60 – 65 age, no decrease in unemployment.
- A2.3 **Baseline** – this models the impact of the rolling average migration for the last 5 years 2010 to 2015 making no adjustments for improvements to household formation beyond the changes in the 2012 DCLG Household projections, no increased economic activity rates for the 60 – 65 age, and no decrease in unemployment.
- A2.4 **UE** – These projections contain an adjustment to reduce unemployment levels to 4.3% by the end of the plan period
- A2.5 **PA** – these projections include an increase in economic activity rates for the 60 to 70 age groups.
- A2.6 **PA EA** – these projections include an increase in economic activity rates for all age groups of 2% over the plan period and a higher increase in activity rates for the 60 – 65 age.
- A2.7 **HRR** – these projections hold the household representation rate constant for age groups between 15 and 44 and so prevents further decline in household representation rates in these groups.
- A2.8 **Average rate of Employment Change** – these projections model the impact of increasing in migration to meet the average rate of job growth projected by the three most recent employment projections.
- A2.9 **DJ** – these projections model the impact of increasing in migration to meet the average job growth projected by the three most recent employment projections but makes an allowance for 4% of new jobs being taken by persons already in employment (Double Jobbing).

Table 16 Summary of Chelmer Model outputs

	2011-2016	2016-2021	2021-2026	2026-2031	2011-2031	Annual Average 2011 - 2031
Dwelling change						
SNPP	555	546	483	422	10,032	502
Baseline	690	702	660	618	13,349	667
Baseline UE	690	702	660	618	13,349	667
Baseline UE PA EA	690	702	660	618	13,349	667
Baseline UE PA EA HRR	723	726	684	657	13,950	698
Average rate of Employment Change	2,109	927	1,194	911	25,701	1,285
Average rate of Employment Change UE	1,326	832	1,079	812	20,246	1,012
Average rate of Employment Change UE PA	1,326	769	980	787	19,306	965
Average rate of Employment Change UE PA DJ	1,269	759	961	780	18,843	942
Average rate of Employment Change UE PA DJ AR	1,198	687	876	696	17,287	864
Average rate of Employment Change UE PA DJ AR HRR	1,235	692	883	740	17,752	888
Labour force change						
SNPP	-10	-90	-175	-191	-2,325	-116
Baseline	52	52	7	-6	518	26
Baseline UE	52	52	7	-6	518	26
Baseline UE PA EA	132	205	196	86	3,097	155
Baseline UE PA EA HRR	132	205	196	86	3,097	155
Average rate of Employment Change	1,758	202	426	82	12,338	617
Average rate of Employment Change UE	836	135	346	29	6,728	336
Average rate of Employment Change UE PA	836	135	346	29	6,728	336
Average rate of Employment Change UE PA DJ	769	127	328	25	6,249	312
Average rate of Employment Change UE PA DJ AR	769	127	328	25	6,249	312
Average rate of Employment Change UE PA DJ AR HRR	769	127	328	25	6,249	312

Population change	2011-2016	2016-2021	2021-2026	2026-2031	2011-2031	Annual Average
SNPP	820	780	640	500	13,701	685
Baseline	1,128	1,185	1,102	966	21,909	1,095
Baseline UE	1,128	1,185	1,102	966	21,909	1,095
Baseline UE PA EA	1,128	1,185	1,102	966	21,909	1,095
Baseline UE PA EA HRR	1,128	1,185	1,102	966	21,909	1,095
Average rate of Employment Change	4,391	1,512	2,158	1,507	47,844	2,392
Average rate of Employment Change UE	2,528	1,324	1,925	1,321	35,489	1,774
Average rate of Employment Change UE PA	2,528	1,146	1,649	1,254	32,884	1,644
Average rate of Employment Change UE PA DJ	2,394	1,126	1,609	1,240	31,848	1,592
Average rate of Employment Change UE PA DJ AR	2,226	964	1,423	1,056	28,348	1,417
Average rate of Employment Change UE PA DJ AR HRR	2,226	964	1,423	1,056	28,348	1,417
Migration	2011-2016	2016-2021	2021-2026	2026-2031	2011-2031	Annual Average
SNPP	-64	-105	-156	-154	-2,400	-120
Baseline	244	347	374	377	6,712	336
Baseline UE	244	347	374	377	6,712	336
Baseline UE PA EA	244	347	374	377	6,712	336
Baseline UE PA EA HRR	244	347	374	377	6,712	336
Average rate of Employment Change	3,507	580	1,309	772	30,836	1,542
Average rate of Employment Change UE	1,644	435	1,121	630	19,147	957
Average rate of Employment Change UE PA	1,644	257	852	581	16,667	833
Average rate of Employment Change UE PA DJ	1,509	240	815	571	15,678	784
Average rate of Employment Change UE PA DJ AR	1,341	82	637	395	12,275	614
Average rate of Employment Change UE PA DJ AR HRR	1,341	82	637	395	12,275	614



Strategic Planning & Research Unit

	2011-2016	2016-2021	2021-2026	2026-2031	2011-2031	Annual Average 2011 - 2031
Workplace employment						
SNPP	-21	-88	-171	-187	-2,327	-116
Baseline	44	50	6	-6	474	24
Baseline UE	905	88	32	21	5,232	262
Baseline UE PA EA	987	247	228	117	7,897	395
Baseline UE PA EA HRR	987	247	228	117	7,897	395
Average rate of Employment Change	1,711	197	416	80	12,020	601
Average rate of Employment Change UE	1,711	197	416	80	12,021	601
Average rate of Employment Change UE PA	1,711	197	416	80	12,021	601
Average rate of Employment Change UE PA DJ	1,642	189	398	76	11,525	576
Average rate of Employment Change UE PA DJ AR	1,642	189	398	76	11,525	576
Average rate of Employment Change UE PA DJ AR HRR	1,642	189	398	76	11,525	576
Resident employment						
SNPP	-19	-81	-157	-172	-2,146	-107
Baseline	40	47	6	-6	436	22
Baseline UE	834	82	30	19	4,824	241
Baseline UE PA EA	910	228	211	108	7,281	364
Baseline UE PA EA HRR	910	228	211	108	7,281	364
Average rate of Employment Change	1,577	182	384	74	11,083	554
Average rate of Employment Change UE	1,577	182	384	74	11,084	554
Average rate of Employment Change UE PA	1,577	182	384	74	11,084	554
Average rate of Employment Change UE PA DJ	1,514	174	367	70	10,626	531
Average rate of Employment Change UE PA DJ AR	1,514	174	367	70	10,626	531
Average rate of Employment Change UE PA DJ AR HRR	1,514	174	367	70	10,626	531



Strategic Planning & Research Unit

	2011-2016	2016-2021	2021-2026	2026-2031	2011-2031	Annual Average 2011 - 2031
Resident unemployment						
SNPP	42	-9	-17	-19	-16	-1
Baseline	44	5	1	-1	244	12
Baseline UE	-750	-30	-23	-25	-4,144	-207
Baseline UE PA EA	-746	-22	-14	-21	-4,022	-201
Baseline UE PA EA HRR	-746	-22	-14	-21	-4,022	-201
Average rate of Employment Change	213	20	42	8	1,417	71
Average rate of Employment Change UE	-709	-47	-38	-45	-4,194	-210
Average rate of Employment Change UE PA	-709	-47	-38	-45	-4,194	-210
Average rate of Employment Change UE PA DJ	-713	-47	-38	-45	-4,215	-211
Average rate of Employment Change UE PA DJ AR	-713	-47	-38	-45	-4,215	-211
Average rate of Employment Change UE PA DJ AR HRR	-713	-47	-38	-45	-4,215	-211

BEDFORD - BRISTOL - CARDIFF - EAST MIDLANDS - LEEDS - LONDON - MILTON KEYNES - SHEFFIELD

BEDFORD

4 Abbey Court
Fraser Road
Priory Business Park
Bedford
MK44 3WH

Tel: 01234 832 740
Fax: 01234 831 266
bedford@dlpconsultants.co.uk

BRISTOL

1 Blenheim Court
Beaufort Office Park
Woodlands
Bradley Stoke
Bristol
BS32 4NE

Tel: 01454 410 380
Fax: 01454 410 389
bristol@dlpconsultants.co.uk

CARDIFF

Sophia House
28 Cathedral Road
Cardiff
CF11 9LJ

Tel: 029 2064 6810
cardiff@dlpconsultants.co.uk

EAST MIDLANDS

The Old Vicarage
Market Street
Castle Donington
DE74 2JB

Tel: 01332 856 971
Fax: 01332 856 973
eastmids@dlpconsultants.co.uk

LEEDS

Princes Exchange
Princes Square
Leeds
LS1 4HY

Tel: 0113 280 5808
leeds@dlpconsultants.co.uk

LONDON

1st Floor
3 More London Riverside
London
SE1 2RE

Tel: 020 3283 4140
london@dlpconsultants.co.uk

MILTON KEYNES

Midsummer Court
314 Midsummer Boulevard
Milton Keynes
MK9 2UB

Tel: 01908 440 015
Fax: 01908 357 750
miltonkeynes@dlpconsultants.co.uk

SHEFFIELD / SPRU

Ground Floor
V1 Velocity Village
Tenter Street
Sheffield
S1 4DE

Tel: 0114 228 9190
Fax: 0114 272 1947
sheffield@dlpconsultants.co.uk