

**Fylde Coast SHMA Briefing Paper:  
Sense Check with regards to the  
Economic Modelling for Fylde**  
Fylde Borough Council

March 2017

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**Client**

Fylde Borough Council

**Our reference**

BLAM2004

March 2017

# 1. Scope of the Briefing Paper

## Purpose of this Briefing Paper

- 1.1 Fylde Borough Council ('the Council') requested that Turley undertake a headline 'sense check' to establish how the most up-to-date economic forecast data impacts upon the previous assessments of housing need for Fylde, set out within the Strategic Housing Market Assessment (SHMA) evidence assembled between 2013 and 2015. The SHMA evidence for Fylde includes:
- 2013 Fylde Coast SHMA (published February 2014);
  - Fylde Coast SHMA Addendum 1 'Analysis of Housing Need in light of the 2012 Sub-National Population Projections (published November 2014); and
  - Fylde Addendum 2: Analysis of Housing Need in light of the 2012 Sub-National Household Projections (published May 2015).
- 1.2 The analysis in this briefing paper draws upon demographic modelling commissioned by the Council and produced by Edge Analytics using the POPGROUP model. A full description of the modelling approach and the assumptions used to derive the projections of population and household growth and the implied need for new dwellings is included at Appendix 1.
- 1.3 The subsequent addendums to the original 2013 SHMA primarily sought to take into account the release of new demographic data – principally new population and household projections – and did not draw upon updated economic forecast data to that used in the 2013 SHMA.
- 1.4 The purpose of this paper is to provide the Council with a modelled indication as to how the latest economic forecasts compare with those used in the housing evidence published to date and used to inform the submission draft of the Local Plan. The report also considers in headline terms the implications this would have on housing need where a common modelling methodology is applied. The main content of the briefing paper presents the outputs of the POPGROUP modelling using broadly consistent assumptions to the previous SHMA evidence, albeit integrating the latest economic forecasts and the 2014-based sub-national population and household projections (SNPP/ SNHP). The analysis in this briefing paper is limited to a consideration of the implications of forecast job growth on housing need. This has not included the presentation of updated demographic scenarios, noting that the SHMA evidence considered a range of demographic sensitivity scenarios based upon different historic trend periods (i.e. a ten year historic trend period as well as the shorter trend period used in the SNPP).
- 1.5 It is important to recognise that this briefing paper should not be interpreted as representing a further update or addendum to the SHMA. The analysis presented in this briefing paper is **not intended to form a direct update to the conclusions arrived at regarding the range of objectively assessed needs (OAN) in Fylde, as set out in the SHMA and considered in the subsequent addendum reports.** Furthermore, the

paper should not be viewed as an update or replacement to the Council's existing economic evidence base<sup>1</sup>, which remains the latest detailed assessment of employment needs in Fylde,

- 1.6 An update to the OAN in accordance with the Planning Practice Guidance (PPG) would require a full consideration of the demographic projections of need, taking into account the latest 2014-based official population and household projections as well as an updated analysis of market signals and a re-consideration of calculated affordable housing need. Full consideration would need to be given to these factors in assessing the implications of the outputs of the modelling in this paper on the OAN in Fylde. In particular, this would need to reconsider the historic impact of affordability issues and the undersupply of housing on the demographic household projections, and a reassessment as to the extent to which there is evidence that market signals have worsened since the previous evidence was presented in the Addendum 2 report in May 2015, and therefore the evidenced need or otherwise for supply-based adjustment.
- 1.7 On this basis, it is important to re-assert that it is not intended for the analysis in this report to be used to infer an updated OAN for Fylde.

### **Scope of the Analysis**

- 1.8 The analysis in this briefing paper includes a comparison of updated iterations of the baseline economic forecasts used in the 2013 SHMA, sourced from the same economic forecasting houses and produced between December 2016 and January 2017.
- 1.9 The baseline employment growth forecast outputs of these two forecasting models have been input into the POPGROUP suite of software by Edge Analytics in order to derive employment-constrained projections of population and household growth. This approach is consistent with that employed in the 2013 SHMA and subsequent addendums.
- 1.10 In assessing the demographic impact of employment growth, the assumptions underpinning the most up-to-date demographic projections – namely the 2014-based sub-national population projections (SNPP) and sub-national household projections (SNHP), produced by ONS and DCLG respectively – have been used. This includes the application of population assumptions regarding fertility, mortality and migration rates, and the latest 2014-based household formation rates ('headship rates') for converting the population into households and a subsequent need for additional homes.
- 1.11 The Council requested that this modelling exercise be undertaken using a consistent set of principles of labour force adjustments to those used within the 2015 SHMA Addendum, albeit drawing upon the latest data available.
- 1.12 Appendix 2 also presents modelling which considers the implications of applying variant labour force assumptions to a single economic forecast which is based upon an average of the two up-to-date baseline forecasts prepared by Oxford Economics and Experian. This is presented to illustrate the relative sensitivity of the modelling of housing need to the underpinning labour force behaviour assumptions applied using the latest data and

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<sup>1</sup> AECOM (2012) Employment Land and Premises Study

nationally published projections and reflects the approach taken in the SHMA evidence documents which also considered the impact of variant sensitivity assumptions.

## 2. Up-to-Date Economic Forecasts for Fylde

- 2.1 The Council requested that up-to-date economic forecasts be procured from the economic forecasting houses to enable comparison with the forecasts previously used to inform the 2013 SHMA for Fylde. In order to be consistent with the 2013 SHMA, up-to-date forecasts have therefore been procured from both Oxford Economics and Experian. As in the evidence produced to date, it remains important to consider these forecasts in the context of the Council's latest published economic evidence<sup>2</sup>.
- 2.2 The analysis within the 2013 SHMA directly sought to consider the relationship between job growth and demographic change at an individual authority level, whilst recognising that the local authority areas of Fylde, Wyre and Blackpool collectively formed a single housing market area (HMA). The SHMA did not seek to apply any judgements on the subsequent distribution of housing or employment across the HMA with this falling outside of the OAN calculation and into the subsequent development of policy.
- 2.3 This section initially presents the outcomes of the two economic forecasts provided by Oxford Economics and Experian, comparing the two forecasts with a specific focus on the forecast level of employment growth. The latest forecasts are then contrasted with those used within the 2013 SHMA, and compared in headline terms with a third employment forecast sourced from Cambridge Econometrics. It is important to note that the wider implications of any policy interventions seeking to deliver higher levels of job growth relative to a baseline, 'policy off' position as represented by the sourced economic forecasts have not been considered in this briefing paper.

### Up-to-date Economic Forecasts

- 2.4 Experian's local market forecasts are produced and updated quarterly, with the latest forecast released in December 2016. Forecasts produced by Oxford Economics are similarly updated regularly, with the latest iteration published in January 2017. Collectively, these published datasets therefore represent the latest available position on forecast future baseline job growth, as previously used in the 2013 SHMA, in Fylde as of February 2017.
- 2.5 The following table compares the change in total employment forecast over the period from 2014 to 2032 by Experian and Oxford Economics.

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<sup>2</sup> AECOM (2012) Employment Land and Premises Study

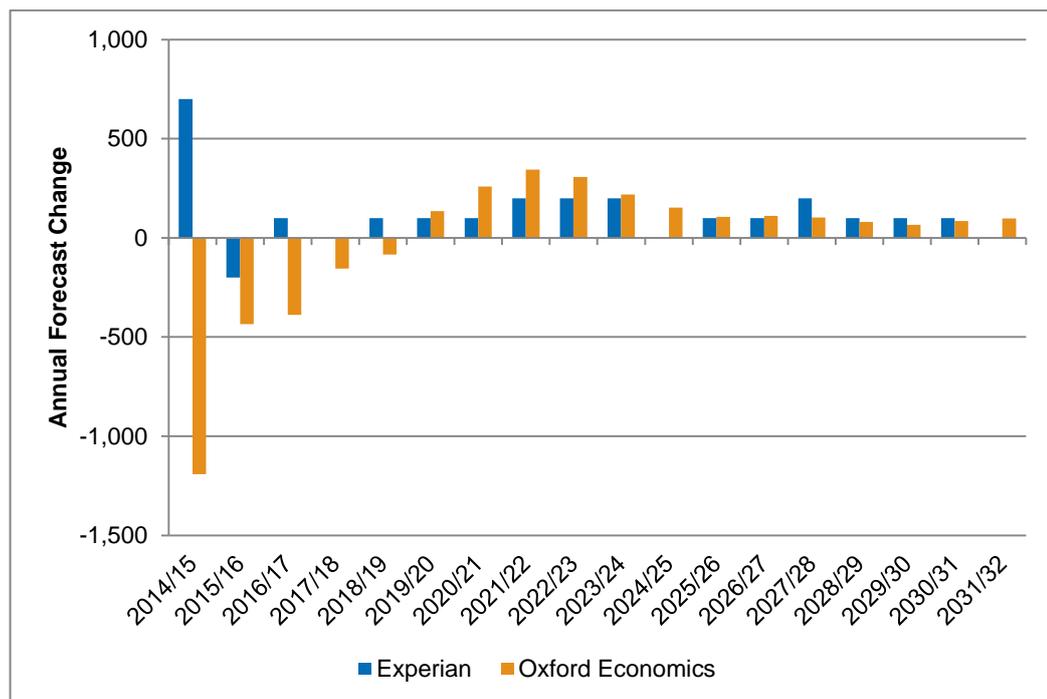
**Table 2.1: Forecast Change in Total Employment 2014 – 2032**

	Forecast change 2014 – 2032	Forecast average annual change 2014 – 2032
Experian	2,200	122
Oxford Economics	-189	-10

Source: Oxford Economics, 2017; Experian, 2016

- 2.6 At a headline level, it is evident that there is little commonality between the two forecasts. While Oxford Economics forecast a small decline in total employment in Fylde, Experian forecast the creation of 2,200 additional workforce jobs over the period to 2032.
- 2.7 This divergence is similarly evident when considering the trajectory of annual change in employment forecast, as illustrated in the following chart.

**Figure 2.1: Annual Change in Total Employment Forecast 2014 – 2032**



Source: Oxford Economics, 2017; Experian, 2016

- 2.8 This suggests that the greatest disparity between forecasts exists over the initial years of the period assessed within this report. Oxford Economics assume a decline in total employment over the short-term to 2020, with annual growth forecast over subsequent years. Indeed, Oxford Economics forecast a higher level of job growth from 2019 onwards (2,065 additional jobs between 2019 – 2032) than Experian (1,500) over the same period. The higher overall level of employment growth forecast by Experian is therefore primarily due to the more positive position forecast earlier in the assessment

period. This is reflected in the analysis presented below, which shows the level of change forecast over five year periods.

**Table 2.2: Changing Levels of Employment Growth Forecast**

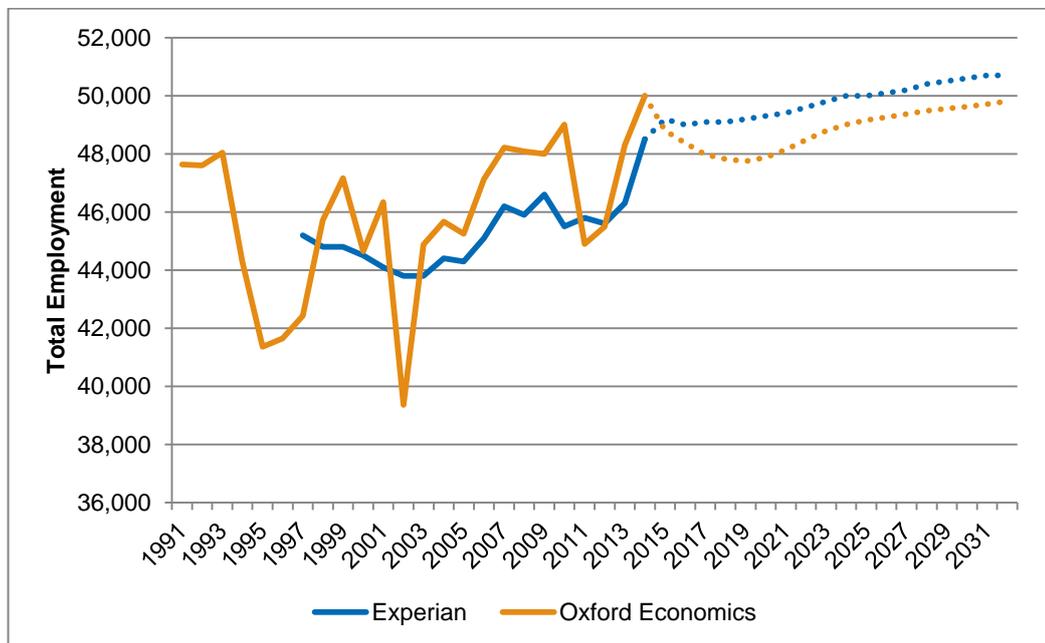
	2014 – 19	2019 – 24	2024 – 29	2029 – 32	2014 – 32
Experian	700	800	500	200	<b>2,200</b>
Oxford Economics	-2,253	1,264	554	247	<b>-189</b>

Source: Oxford Economics, 2017; Experian, 2016

2.9 In understanding this difference in the forecasts over the initial years, it is useful to consider the historic data upon which each is based. Each of the forecasts includes historic data on total employment in Fylde, which can be used to contextualise the trends implied by the latest forecasts but can equally demonstrate inconsistencies despite their shared reliance upon official data sources. It is understood that this primarily relates to the forecasting houses' analysis and aggregation of official data sources and their approach towards smoothing implied discrepancies in the data<sup>3</sup>.

2.10 The following chart shows the historic and forecast estimates of total employment in Fylde, based on data compiled by Experian and Oxford Economics. It is important to recognise that the historic data published by the former only extends back to 1997.

**Figure 2.2: Historic and Forecast Employment in Fylde**



Source: Oxford Economics, 2017; Experian, 2016

<sup>3</sup> Oxford Economics has confirmed that their forecast includes data up to 2015 with outputs forecast thereafter, with the historic data therefore showing a decline in jobs in the last year prior to the forecast. Experian's data note accompanying the forecast indicates data is input up to the end of 2014. It is noted in both cases that the forecasting houses retrospectively adjust historic levels of employment growth as new data is released.

- 2.11 Historically, it can be observed that there is a degree of consistency in the overall levels of employment recorded in Fylde, albeit with Oxford Economics largely suggesting higher overall levels of employment than Experian.
- 2.12 It is evident that Oxford Economics' data suggests that numerous years have seen significant levels of annual change, with a sharp implied decline most recently in 2010/11 preceding an assumed strong recovery between 2012 and 2014, albeit with a subsequent fall in 2015 (the last year of historic data in the Oxford Economics forecast). The Oxford Economics forecast appears to assume that the fall evident in the last year (2014 – 2015) continues for a number of years before resuming a modest overall growth trajectory. This assumption appears relatively cautious in the context of more recent growth recorded in the Oxford Economics data, in particular the sustained period of job growth between 2011 and 2014. It is equally apparent that overall since the mid-1990s Oxford Economics' historic data does suggest a modest positive overall job growth trend in Fylde, albeit with total employment susceptible to sharp annual change.
- 2.13 The historic data published by Experian suggests more limited volatility on an annual basis, with fewer historic 'spikes' in the number of jobs in Fylde. Between 1997 and 2014, Experian data suggests that there were between circa 44,000 – 48,500 jobs in the borough, with this range considerably narrower than suggested by Oxford Economics over the same period (39,400 – 50,000). This relatively stable position is reflected in the forecast, which assumes a continued modest growth in the number of jobs in Fylde with a small decline forecast in only one year (2015/16). This does, however, sustain employment at the high 2014 levels implied by Experian's historic data, noting that it is understood that Experian have not input historic data for 2015, although the strong growth over the preceding year (2013/14) is a feature of each of the forecasters' historic data.
- 2.14 In considering the implied historic volatility in employment in Fylde – and the variable position suggested by each forecasting house – it is important to reflect upon the findings of the SHMA, which noted the recognition from Experian that a change in the methodology employed by the ONS had introduced volatility to historic employment estimates<sup>4</sup>. Although not explicitly identified as an issue by Oxford Economics, its common use of official data published by the ONS – alongside other data sources – suggests that its historic estimates could be similarly affected. Indeed, with Oxford Economics' historic data suggesting a greater degree of volatility than Experian, the differences implied may be attributable to alternative methods of smoothing and adjusting discrepancies in historic data.
- 2.15 Furthermore, analysis by Lancashire County Council suggests that some of the changes in employee numbers implied over recent years resulted from administrative changes, rather than actual changes in physical jobs in local authority areas<sup>5</sup>. The large administrative movement of jobs from Fylde to Ribble Valley in 2009 is cited as one such example which created a 'spike' in the manufacturing sector in Ribble Valley, although it remains challenging – and beyond the scope of this briefing paper – to directly attribute implied annual change in employment to such specific administrative issues.

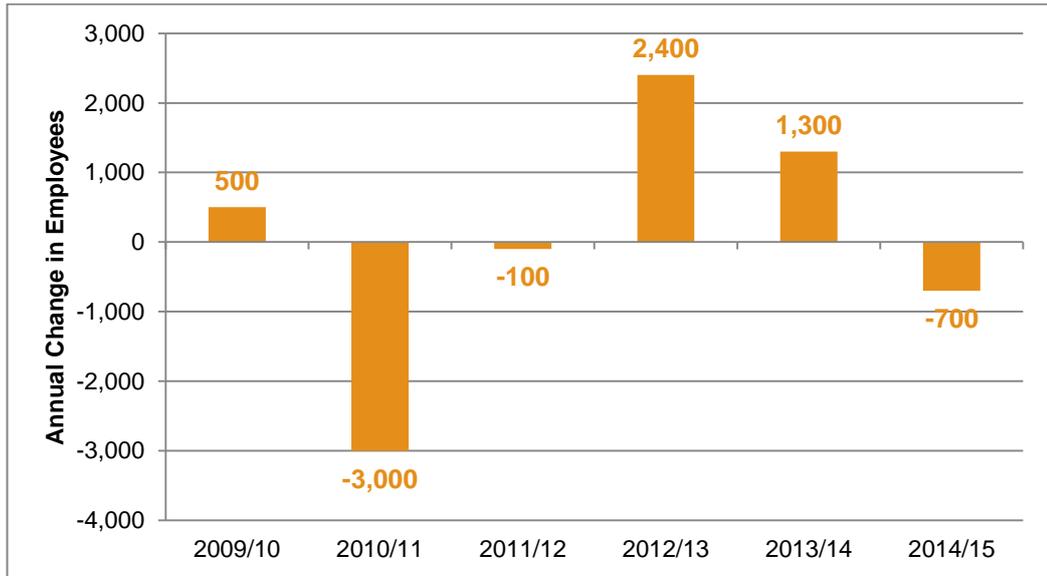
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<sup>4</sup> Turley Associates (2013) Fylde Coast SHMA, paragraph 5.72

<sup>5</sup> <http://www.lancashire.gov.uk/lancashire-insight/economy/employment-surveys/employee-change.aspx>

2.16 Consideration, has however, been given to the latest official historic jobs data in the Business Register and Employment Survey (BRES), published by the ONS. As shown in the following chart, BRES data suggests that the number of employees in Fylde declined significantly in 2010/11, before recovering strongly between 2012 and 2014. The modest decline in 2014/15 suggested by Oxford Economics similarly correlates with this data, noting that this is the last year for which historic data is input into its forecasting model.

**Figure 2.3: BRES – Annual Change in Total Employees in Fylde 2009 – 2015**



Source: ONS

2.17 Further analysis of BRES data indicates that the strong decline in 2010/11 was primarily driven by a loss of 1,300 employees in ‘other service activities’ and 1,000 employees in the manufacturing sector. Strong annual growth in the number of employees in ‘professional, scientific and technical activities’ appears to have driven the growth implied in both 2012/13 and 2013/14, with circa 1,000 additional employees in the sector recorded in each year. In the following year (2014/15), however, BRES data reported 1,000 fewer employees in this sector, with this contributing towards the overall decline implied by BRES. Indeed, when considering the sectors recording the strongest growth or decline on an annual basis – shown within the following table – it is evident that the sectors recording the strongest growth in employees are often those seeing the greatest decline in subsequent years. This creates further uncertainty as to whether the significant annual changes implied by BRES reflect the creation of new jobs or simply administrative changes in the recording of jobs.

**Table 2.3: Sectors Recording Largest Annual Growth or Decline in Employees 2009 – 2015 (BRES)**

	Largest growth in employees	Largest decline in employees
2009/10	Other service activities (1,000)	Manufacturing (-1,000)
2010/11	Professional, scientific and technical activities; accommodation and food service activities (both 500)	Other service activities (-1,300)
2011/12	Professional, scientific and technical activities; human health and social work activities (both 500)	Manufacturing (-1,000)
2012/13	Professional, scientific and technical activities (1,000)	Accommodation and food service activities (-500)
2013/14	Professional, scientific and technical activities; accommodation and food service activities (both 1,000)	Administrative and support service activities (-500)
2014/15	Administrative and support service activities (500)	Professional, scientific and technical activities (-1,000)

*Source: ONS*

- 2.18 Although a detailed sector breakdown of the Oxford Economics forecast is not available to inform this report, the Experian forecast can be analysed to identify the sectors assumed to see the greatest absolute change in overall employment over the period to 2032. For context, this can be also compared at a headline level against the recent change implied by Experian's analysis of historic data over the most recently available five year historic period (2009 – 2014).

**Table 2.4: Comparing Historic and Forecast Change in Employment by Sector (Experian, December 2016)**

	Forecast change 2014 – 2032	Historic change 2009 – 2014
Accommodation, food services and recreation	1,500	500
Professional and other private services	700	3,900
Construction	500	-200
Public services	300	100
Finance and insurance	200	0
Transport and storage	100	100
Extraction and mining	0	0
Utilities	0	0
Wholesale and retail	0	0
Information and communication	-100	-400
Agriculture, forestry and fishing	-200	200
Manufacturing	-700	-2,500

Source: Experian, 2016

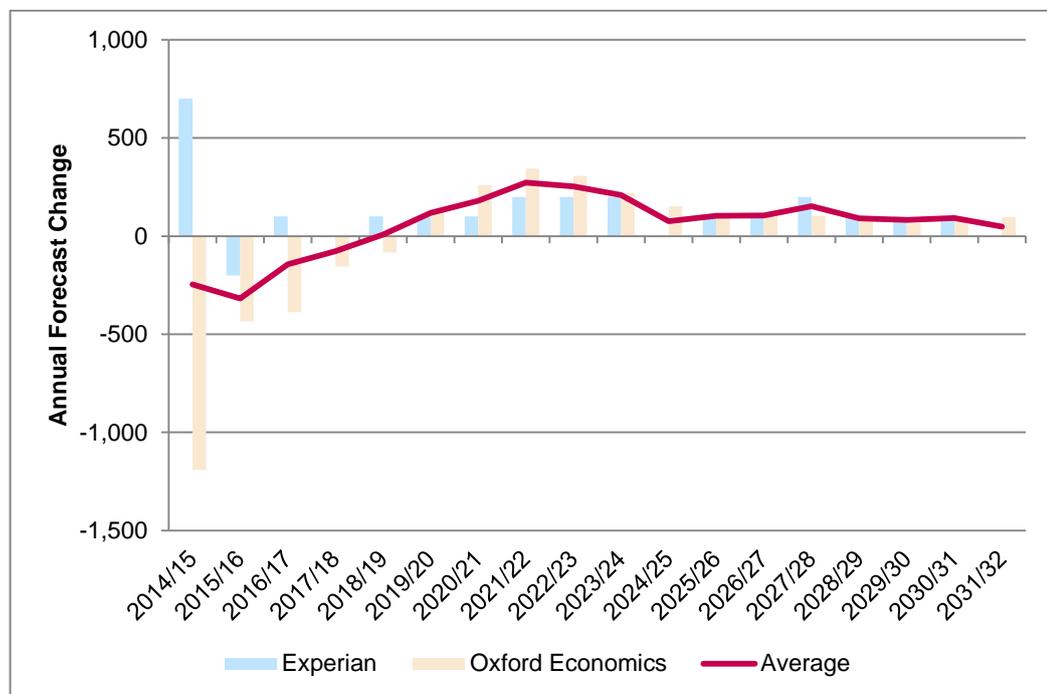
- 2.19 It is evident that the strongest growth is anticipated in accommodation, food services and recreation, continuing the increase suggested by Experian’s recent historic data. The forecast growth in professional and other private services does, however, appear more modest compared to the substantial recent growth recorded. The forecast growth in construction, in contrast, is assumed to reverse the decline implied by recent historic evidence. Other sectors seeing recent decline – most notably manufacturing – are assumed to continue to decline over the period assessed.
- 2.20 The comparison of the latest forecasts shows a complex picture of historic economic data, which it is evident has been influenced by significant volatility in the overall estimating of job levels in the borough which at least in part is likely to be the result of administrative or recording changes. This evidently has an impact on the forward looking forecasts which are in large part influenced by the historic data and its interpretation by each forecasting house. In this context it remains important to consider collectively the differing overall growth trajectories implied by each forecasting house.
- 2.21 The Inspector examining the South Worcestershire Development Plan noted that the variable forecasts produced by each forecasting house can be each considered ‘*up-to-date, representative and realistic*’, with ‘*no reason to presume that any of the employment forecasts is likely to be the most accurate*’<sup>6</sup>. The Inspector endorsed a

<sup>6</sup> Inspector’s Further Interim Conclusions on the Outstanding Stage 1 Matters, Stage 1 of the Examination of the South Worcestershire Development Plan, February 2016 (para 53)

figure which took account of all three forecasts, with an average of the forecasts seen to provide 'a better representation of the balance of outcomes'<sup>7</sup>.

2.22 Calculating an average based on the annual growth implied by each forecast – as illustrated below – provides an alternative forecast of future growth which inherently adopts a midpoint between the two. The averaging of the two forecasts results in a trajectory which assumes a loss of jobs each year until 2018 at which point a sustained positive growth in jobs is assumed each year. Whilst it is apparent that the latest BRES data suggests a loss of jobs in 2014/15 it is noted that the averaged position between the forecasts suggests that this is sustained for a number of additional years before a return to modest positive job growth. This position needs to be considered with some caution and requires further validation as to the extent to which this fits with the Council's economic evidence base and its assumptions around job growth and its associated economic policies.

**Figure 2.4: Averaging Employment Growth Forecasts**



Source: Oxford Economics, 2017; Experian, 2016

### Comparison with the 2013 SHMA Economic forecasts

2.23 The 2013 SHMA and subsequent addendum reports used two baseline forecasts for Fylde and the Fylde Coast HMA<sup>8</sup>:

- September 2013 forecasts produced by **Experian**, which would result in the creation of 990 jobs over the period 2011 – 2030; and

<sup>7</sup> Ibid (para 54)

<sup>8</sup> Turley Associates (2013) Fylde Coast SHMA, Figure 5.24

- 2013 **Oxford Economics** forecast provided by the Local Enterprise Partnership, which forecast the creation of 2,807 jobs over the period 2011 – 2030.
- 2.24 Consideration was also given to the scale of job growth identified within the Employment Land and Premises Study prepared by AECOM<sup>9</sup> and published in August 2012. A ‘policy-on’ scenario from the study was used within the analysis, which forecast an increase of approximately 2,400 jobs over the period 2012 – 2030 (133 jobs per annum)<sup>10</sup>.
- 2.25 All three forecasts previously referenced suggested that total employment in Fylde would increase by an average of circa 52 – 148 jobs per annum<sup>11</sup>.
- 2.26 Although the period of assessment varies, the latest Experian forecasts presented at Table 2.1 suggest that 122 jobs could be created annually on average over the remainder of the plan period, which evidently falls within this range. Oxford Economics forecast the loss of 10 jobs annually on average in Fylde over the full forecast period, although as recognised above average annual growth forecast from 2019 onwards (159pa) demonstrates a closer alignment with the upper end of this range.
- 2.27 This overall average annual loss does, however, fall below the range considered in the 2013 SHMA. It is noted that the analysis of job forecasts in the Addendum 1 report showed that a loss of jobs was also forecast by the Experian forecast when the period upon which job growth was input was altered to a 2013 – 2030 period (-51 jobs per annum). This was driven in this instance by Experian assuming a high job growth in 2012 and then a subsequent fall in employment.
- 2.28 Overall it is evident that the forecasts used over the various studies have been subject to notable variations, particularly in their short-term forecasts in Fylde. Each of the forecasting houses are credible and there is no reason to suggest that their outputs should not be viewed as robust. Given the scale of volatility it is considered as with the evidence prepared previously within the SHMA documents that there is a need to consider them as a whole to present a more balanced understanding. This report has not sought to critique the forecasts on the basis of a detailed local analysis of factors shaping the economy and therefore does not provide the evidence to prefer one forecast over another.
- 2.29 Considering an average of the two more recent forecasts, as presented at Figure 2.4 would suggest that 56 jobs are created annually over the period from 2014 to 2032. This does show a comparatively close alignment with the historic Experian forecast previously referenced in the SHMA which forms the lower end of the range presented above but evidently falls somewhat short of the upper end of the range of baseline forecast and the suggested level of job growth in the 2012 AECOM study, which as referenced earlier remains the last published detailed economic study of the borough.

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<sup>9</sup> AECOM (2012) Employment Land and Premises Study

<sup>10</sup> Turley Associates (2013) Fylde Coast SHMA, Figure 5.22

<sup>11</sup> Turley (2014) Fylde Coast SHMA Addendum 1 (para 5.19)

## Comparison with a Further Economic Forecast

- 2.30 The analysis presented above relates to forecasts produced by Experian and Oxford Economics, reflecting the use of earlier iterations of these forecasts within the 2013 SHMA and subsequent addendums.
- 2.31 To inform this analysis, however, the Council has also purchased a third forecast from Cambridge Econometrics. This local area forecast is based on the latest UK regional forecast dated November 2016, which integrates historic data to 2015. The implications of this forecast can be considered in the context of the conclusions reached and observations made earlier in this section.
- 2.32 Like Oxford Economics, over the period considered within this report (2014 – 2032), Cambridge Econometrics forecast an overall decline in total employment in Fylde. Interestingly the overall scale of decline forecast notably exceeds that forecast by Oxford Economics. As summarised in the following table, total employment in Fylde is forecast to reduce by some 2,020 jobs over this period.

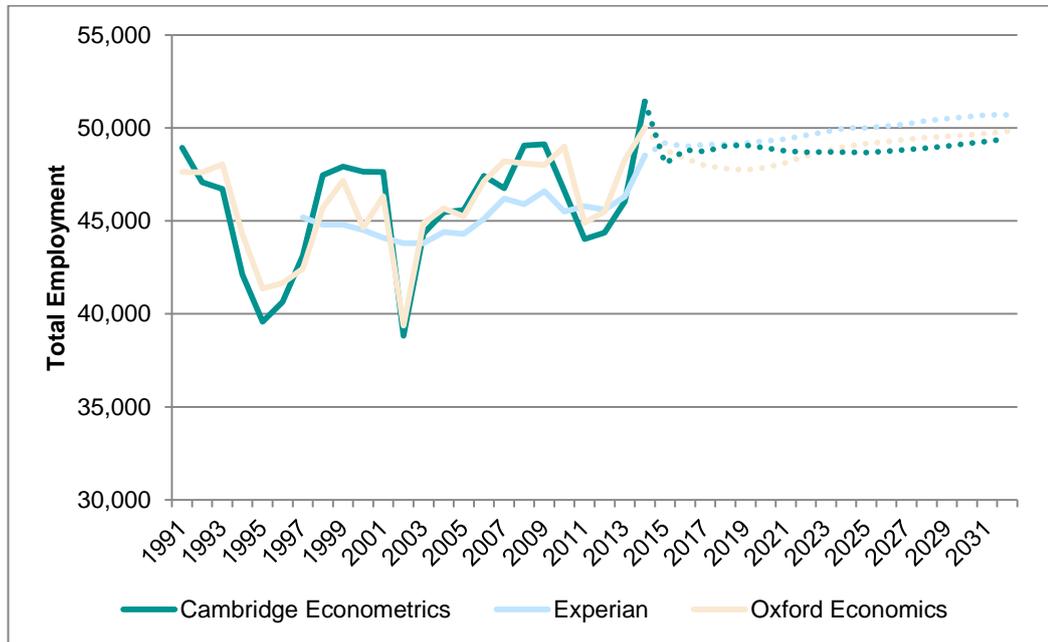
**Table 2.5: Forecast Change in Total Employment 2014 – 2032**

	Forecast change 2014 – 2032	Forecast average annual change 2014 – 2032
Experian	2,200	122
Oxford Economics	-189	-10
<b>Cambridge Econometrics</b>	<b>-2,020</b>	<b>-112</b>

*Source: Oxford Economics, 2017; Experian, 2016; Cambridge Econometrics, 2016*

- 2.33 When considering the trajectory of forecast change, however, it is clear that this overall decline primarily results from a sharp decline during the first year of the forecast (2014/15), one which is even more pronounced than that identified by Oxford Economics. This suggests that employment is not assumed to remain at the 2014 peak, which Cambridge Econometrics' analysis of historic data suggests was reached following two years of significant employment growth (+7,000, 2012 – 2014). While this is a greater level of change than implied by both Experian and Oxford Economics, it can be observed that the historic profile inferred by Cambridge Econometrics aligns relatively closely with that suggested by Oxford Economics.
- 2.34 Cambridge Econometrics' forecast decline from the implied 2014 peak does, however, have a significant impact on the overall change in employment forecast between 2014 and 2032. Excluding this first year of the forecast would suggest that 1,342 jobs will be created over the remaining years of the assessment period (2015 – 2032), or approximately 79 jobs per annum. Overall the consideration of a third forecast further highlights the level of uncertainty in both the historic and forecast employment picture in Fylde. As shown in Figure 2.5 outside of the initial years of volatility the general picture is one of forecast modest job growth across the three forecasts.

**Figure 2.5: Historic and Forecast Employment in Fylde – Cambridge Econometrics**



Source: Oxford Economics, 2017; Experian, 2016; Cambridge Econometrics, 2016

### 3. POPGROUP Modelling Outputs

- 3.1 The 2013 SHMA and subsequent addendums presented modelling prepared by Edge Analytics using the POPGROUP suite of software to assess the potential impact of forecast future job growth on the population of Fylde, as well as Blackpool and Wyre, and therefore the subsequent associated need for housing.
- 3.2 This modelling was subsequently used in the 2013 SHMA as part of the stepped process of arriving at an OAN for housing across the HMA and each of the component authorities.
- 3.3 The Council commissioned Edge Analytics to prepare a series of updated projections which took the up-to-date economic forecasts from Oxford Economics and Experian introduced in the previous section into account. In modelling these scenarios, Edge Analytics has also integrated the latest 2014 SNPP/ SNHP datasets within the POPGROUP modelling. A full report prepared by Edge Analytics explaining the modelling approach applied and the input assumptions is included at Appendix 1.
- 3.4 This section summarises the outputs of the modelling. This is presented in a comparable manner to the analysis presented in the 2013 SHMA, and is focused on this discrete stage of the OAN methodology as prescribed through the PPG. While relating to this stage of the OAN methodology, it remains important to note that the isolated modelling outputs presented in this section should not be used to infer an updated OAN for Fylde, and does not update the conclusions on OAN established through the SHMA and previous addendum reports.

#### **Modelling the Relationship between Employment Growth and Population**

- 3.5 Within the 2013 SHMA, the POPGROUP modelling suggested that under all of the employment-led scenarios (i.e. those linking population to forecast job growth) a higher level of population growth was projected than that implied by the trend-based demographic projections<sup>12</sup>.
- 3.6 The 2013 SHMA recognised that there were uncertainties associated with forecasting future labour-force behaviours as well as likely trajectories of employment growth. This recognised the changing economic prospects of each of the Fylde Coast authorities and the spatial impact of the delivery of employment opportunities<sup>13</sup>.
- 3.7 The modelling used in the 2013 SHMA and the Addendum 1 report sought to use the latest labour-force data available and apply prudent assumptions. In particular, at the time the modelling was undertaken within the 2013 SHMA, the macro-economic context remained uncertain given the preceding years of recession and sustained downturn.
- 3.8 The modelling therefore sought to assume relatively limited forecast changes to the key labour-force variables used in the demographic modelling, namely economic activity,

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<sup>12</sup> Turley Associates (2013) Fylde Coast SHMA, paragraph 7.28

<sup>13</sup> *Ibid*, paragraph 8.2

unemployment and commuting rates. For the core scenario outputs, the latter two variables were held constant and economic activity rates were only adjusted for older cohorts in recognition of planned changes to pension ages.

3.9 For the purposes of this briefing, the Council specified that the POPGROUP modelling be re-run with a consistent set of labour-force assumptions to those applied within the Addendum 1 report. This retained the approach taken in the 2013 SHMA, albeit with the use of updated data including 2011 Census data which had been released in the intervening period. The modelling therefore assumes that:

- The **commuting** rate for Fylde remains unchanged, based upon the 2011 Census ratio of 0.8. A ratio of less than 1 means that Fylde is a net importer of labour, with this therefore assumed to continue within the modelling;
- The **economic activity** rates of all but those aged 60 – 69 are held constant using data from the 2011 Census. The modest increases applied in the previous modelling to older cohorts are consistently applied; and
- The **unemployment** rate of 4.3% at the base date of the projections (2014) is applied and fixed over the projection period, with this considered appropriate as it reflects an up-to-date position. This rate is only slightly lower than the rate used in the previous modelling (5.3%) which was based on an average over the period 2008 – 2012. Importantly the approach taken to fix the rate over the full plan period is retained and therefore any implication of the use of the slightly lower rate inferred by the latest data is considered likely to be modest.

3.10 The outputs of the modelling are presented in the following sub-section.

3.11 Whilst the analysis in this briefing paper broadly retains the labour-force assumptions used in the SHMA, at the request of the Council, it is recognised that the 2013 SHMA presented sensitivities which explored the impact of changing commuting rates in Fylde and Wyre and economic activity rates in Blackpool. These sensitivities were not taken forward into the conclusions on the calculated OAN. In the context of the sensitivities relating to changing commuting rates, this recognised that this would essentially require a policy-led intervention which sought to address the current balance between housing and employment at a local authority level. This falls outside of the evidence-based approach required in the development of the OAN.

3.12 The Addendum 1 report also included an assumption which saw unemployment rates improve to the pre-recession average by 2018, recognising that at the time national indicators suggested a return to lower levels of unemployment<sup>14</sup>. The Addendum 1 report, however, did not seek to place significant weight on this sensitivity as it was recognised that further monitoring would be required to confirm a trend of falling unemployment rates, in the context of historic volatility in the area<sup>15</sup>. In this context, Appendix 2 to this briefing note also includes an updated consideration of the implications of sensitivity testing alternative labour-force behaviours but for the purpose

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<sup>14</sup> Turley (2014) Fylde Coast SHMA Addendum 1 'Analysis of Housing Need in light of the 2012 Sub-National Population Projections', paragraph 5.8 3<sup>rd</sup> bullet

<sup>15</sup> *Ibid* paragraph 5.18

of maintaining consistency with the approach taken in the previous SHMA documents this is presented by way of illustration only.

## Modelled Housing Need to Support Baseline 2017 Employment Forecasts

- 3.13 The modelling outputs prepared by Edge Analytics have assessed the impact of forecast job growth over the period 2014 to 2032<sup>16</sup>. The outputs of the modelling, however, are presented to align with the Local Plan period (2011 – 2032). For the years prior to 2014, population change and the derived need for housing is based on the input ONS mid-year estimates (MYE) of population. This approach is consistent with that used in the modelling within the Addendum 1 and 2 reports, albeit this previously used a 2013 base date reflecting the demographic information available at the time.
- 3.14 Table 3.1 shows the modelled population and household growth required to support the level of job growth forecast by Experian and Oxford Economics. As set out above, the household formation rates are directly derived from the 2014-based SNHP. Household growth is converted into a need for dwellings through the application of a vacancy rate sourced from the 2011 Census (6.6%) which is consistent with the assumption applied in the Addendum 2 analysis<sup>17</sup>.

**Table 3.1: 2017 Job Forecast Scenarios of Population and Household Growth – 2011 – 2032**

	Change 2011 – 2032				Average per annum	
	Population change	%	Households change	%	Net migration	Dwellings
Experian	14,470	19.0%	8,820	25.2%	1,082	450
Oxford Economics	10,183	13.4%	6,835	19.5%	891	349

Source: Edge Analytics, 2017

- 3.15 In aligning population and household growth with the two economic forecasts, the modelling implies that between 10,180 and 14,470 additional residents will be needed to support the employment growth forecast by Oxford Economics and Experian respectively.
- 3.16 The application of 2014-based SNHP headship rates and a vacancy rate assumption implies that between 349 and 450 homes per annum will be needed to accommodate this population growth over the plan period.
- 3.17 The Addendum 2 report highlighted that there was evidence of a historical suppression in the formation rates of younger households in Fylde which was assumed to continue

<sup>16</sup> Whilst the 2015 ONS MYE has been published the Council specifically requested that the modelling use a 2014 base date

<sup>17</sup> This is confirmed at paragraph 3.10 of the Addendum 2 report. It is noted that the 2013 SHMA applied a vacancy rate of 2.5% - as cited at paragraph 7.39 of the SHMA – where it was noted that this vacancy rate fell below levels evidenced from Council Tax.

within the 2012-based SNHP in the future for those aged 20 to 29<sup>18</sup>. A comparable analysis of the 2014-based SNHP has been produced by Edge Analytics, and is presented in section 4 of their report (Appendix 1 to this paper). This confirms that this continues to be the case in the 2014-based SNHP for those aged 15 – 35<sup>19</sup>.

- 3.18 On this basis, a comparable adjustment has therefore been applied to the household formation rates of younger households to that used in the Addendum 2 report which assumes a recovery of the headship rates of these groups to return to the levels seen in 2001 by 2024. The output of this modelling, as was the case in the modelling presented in the Addendum 2 report, is an elevation of the implied need for housing on the basis that more younger households are able to form. The outputs are shown in Table 3.2.

**Table 3.2: 2017 Job Forecast Scenarios of Population and Household Growth – 2011 – 2032: Adjusted 2014 SNHP headship rates for younger households**

	Dwellings per annum 2011 – 2032		
	Unadjusted 2014-based headship rates	Headship rate return sensitivity	Impact of adjustment
Experian	450	<b>459</b>	2%
Oxford Economics	349	<b>358</b>	3%

Source: Edge Analytics, 2017

- 3.19 The application of the adjustment to the formation rates of younger households serves to imply a higher level of housing need associated with each scenario. The level of upward adjustment is broadly comparable to that modelled in the Addendum 2 analysis. The two forecasts imply a need for between 358 and 459 homes per annum over the plan period.
- 3.20 It is important to note that this adjustment is not related to or informed by an updated analysis of market signals which would need to be undertaken as part of the derivation of an updated OAN following the stepped process for calculating housing need as set out in the PPG.

### Averaging Employment Growth Forecasts

- 3.21 The analysis in section 2 of this paper highlighted the divergent nature of the forecasts produced by Oxford Economics and Experian, but noted that each should be viewed as robust and credible. Reflecting on the conclusions of the Inspector examining the South Worcestershire Development Plan<sup>20</sup>, taking account of both forecasts through averaging could be considered as providing a more balanced position on future job growth in Fylde. This average is presented at Figure 2.4, and would result in the creation of 1,006

<sup>18</sup> Paragraphs 4.60 – 4.70 of the Addendum 2 report

<sup>19</sup> It is noted that Edge Analytics have used the Stage 2 Headship Rate datasets from the 2014 SNHP which use slightly different age categories than the Stage 1 datasets used in the Addendum 2 report.

<sup>20</sup> Inspector's Further Interim Conclusions on the Outstanding Stage 1 Matters, Stage 1 of the Examination of the South Worcestershire Development Plan, February 2016 (para 53)

jobs over the period assessed within this report (2014 – 2032), or 56 jobs per annum on average.

- 3.22 While a further forecast produced by Cambridge Econometrics is also presented in section 2, this is not taken into account in deriving an average scenario, given that earlier iterations of Cambridge Econometrics' forecasts were not analysed within the SHMA. Furthermore, owing to the significant decline forecast over the first year of the assessment period, including this forecast within the average would have a significant effect. Rather than forecast 1,006 jobs over the period 2014 – 2032, an average of the three forecasts would suggest an overall loss of 3 jobs. The uncertainty associated with the historic data – which clearly influences the overall forecast produced by Cambridge Econometrics – further suggests that caution should be exercised in including this forecast within any illustrative averaged position.
- 3.23 The following table shows the population and household growth required to support the creation of 1,006 jobs over the period 2014 – 2032, based on an average of Experian and Oxford Economics forecasts. The resultant annual need for dwellings is also presented, both with and without the adjustment to household formation rates applied above, although this only influences the change in households and dwellings.

**Table 3.3: Population and Household Growth Required to Support Average Forecast Job Growth 2011 – 2032**

	Change 2011 – 2032				Average per annum	
	Population change	%	Hholds change	%	Net migration	Dwellings
Unadjusted headship rates	12,327	16.2%	7,829	22.3%	987	399
Adjusted headship rates	12,327	16.2%	8,036	22.9%	987	410

Source: Edge Analytics, 2017

- 3.24 The modelling suggests that population growth of circa 12,300 persons would be required over the plan period to support the level of job growth implied by an average of the Experian and Oxford Economics forecasts. This inherently falls within the middle of the range implied by the scenarios modelled to consider the implications of each of the forecasts in isolation (Table 3.1). When allowing for an improvement in younger household formation rates, this suggests a need for 410 dwellings per annum in Fylde over the plan period.
- 3.25 In accordance with the PPG, any implied adjustment to the OAN for housing would need to consider the differing levels of implied housing need associated with the modelling outputs presented in this note which has only focused on the alignment between job growth and population change, alongside a fully developed and complete assessment which takes account of each of the prescribed methodological steps. It is evident that the economic forecasts continue to show a high degree of variance from each other and over time. This reinforces the importance of considering them alongside demographic and market signals evidence in understanding the long-term need for housing in Fylde.

# **Appendix 1: Edge Analytics Demographic Evidence and Assumptions**



# Fylde

## Demographic Evidence & Assumptions

March 2017

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## Acknowledgements

Demographic statistics used in this report have been derived from data from the Office for National Statistics licensed under the Open Government Licence v.3.0.

*The authors of this report do not accept liability for any costs or consequential loss involved following the use of the data and analysis referred to here; this is entirely the responsibility of the users of the information presented in this report.*

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# Introduction

## Context

- 1.1 In 2013, Edge Analytics provided demographic evidence for the three districts that comprise Fylde Coast (Blackpool, Fylde and Wyre). This demographic evidence considered the 2010-based Sub-National Population Projection (SNPP) from the Office for National Statistics (ONS), along with household and dwelling growth assessed using the 2008-based and 2011-based household projection models from the Department for Communities and Local Governments (DCLG). This demographic evidence was used to inform the Fylde Coast Strategic Housing Market Assessment (SHMA), published in 2014<sup>1</sup>.
- 1.2 Following the release of the 2012-based SNPP in May 2014 and the release of additional demographic and economic data, Edge Analytics provided an updated range of scenario evidence for Fylde Coast. This was presented in Addendum 1 of the Fylde Coast SHMA<sup>2</sup>, published in November 2014.
- 1.3 The later release of the 2012-based household projection model from the DCLG in 2015, led to a subsequent update of household and dwelling growth under the scenarios presented in Addendum 1, forming the evidence for Addendum 2<sup>3</sup>.
- 1.4 Since this demographic evidence was provided to Fylde Borough Council, a range of new demographic evidence has been released including the 2014-based SNPP from the ONS, 2014-based household projection model from the DCLG and mid-year population estimates providing additional years of historical data.

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<sup>1</sup><https://www.blackpool.gov.uk/Residents/Planning-environment-and-community/Documents/Fylde-Coast-SHMA-Report-Final-27thFeb14.pdf>

<sup>2</sup> [http://www.wyre.gov.uk/downloads/file/3390/shma - wyre addendum november 2014](http://www.wyre.gov.uk/downloads/file/3390/shma_-_wyre_addendum_november_2014)

<sup>3</sup> Addendum 2: Analysis of Housing Need in light of the 2012 Sub-National Household Projections. Fylde Borough Council [May 2015].

- 1.5 Fylde Borough Council is in the process of considering the impact of the most up-to-date economic forecasts from Experian (December 2016) and Oxford Economics (January 2017) on the housing need for Fylde, as outlined in the SHMA and subsequent Addendums.
- 1.6 Edge Analytics has been commissioned to develop scenarios in which the impact of the Experian and Oxford Economic employment forecasts on demographic, household and dwelling change is considered.
- 1.7 In all scenarios, historical data has been taken from the 2001–2014<sup>4</sup> period. Household growth has been assessed using headship rate and communal population assumptions from the 2014-based household projection model, which is underpinned by the ONS 2014-based SNPP. The DCLG household projections are derived through the application of projected headship rates to a projection of the private household population. The methodology used by DCLG in its household projection models consists of two distinct stages:
- **Stage One** produces the national and local authority projections for the total number of households by sex, age-group and relationship-status group over the projection period.
  - **Stage Two** provides the detailed ‘household-type’ projection by age-group, controlled to the previous Stage One totals.
- 1.8 In the scenarios presented in this report, the Stage Two headship rates have been applied by 10-year age group in an 8-fold household type classification. Two sets of headship rates have been applied to the scenarios; 2014-based (HH-14) and 2014-based Return (HH-14 Return) in which the headship rates in the younger age groups return to their 2001 rates by 2024, following the original trend thereafter. Dwelling growth outcomes have been evaluated through the application of a 2011 Census dwelling vacancy rate of 6.6% for Fylde, fixed throughout the forecast period.
- 1.9 This report provides a short summary of the scenarios developed for Fylde. **Section 2** presents the scenario evidence from the Experian and Oxford Economics employment trajectories, making comparisons with previous economic assumptions under the SHMA and Addendums. **Section 3** presents dwelling growth outcomes under the headship rate sensitivity scenarios. **Section 4** considers alternative economic assumptions, with **Appendix A** and **Appendix B** providing a

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<sup>4</sup> Note that at the request of the Council, the 2015 mid-year population estimate has been excluded from this analysis.

summary of the economic and demographic assumptions respectively. All scenario outcomes are presented for the 2011–2032 plan period<sup>5</sup>.

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<sup>5</sup> This plan period includes historical data for the years 2011, 2012, 2013 and 2014.

# 2 Employment Growth Scenarios

## Scenario Development

2.1 Edge Analytics has used POPGROUP technology to configure ‘jobs-led’ scenarios using the employment forecasts from the Experian and Oxford Economics employment forecasts and an ‘Average’ of the two (Figure 1). In the three jobs-led scenarios (**Jobs-led Experian**, **Jobs-led Oxford Economics** and **Jobs-led Average**), the annual change in employment has been applied over the 2014–2032 forecast period.

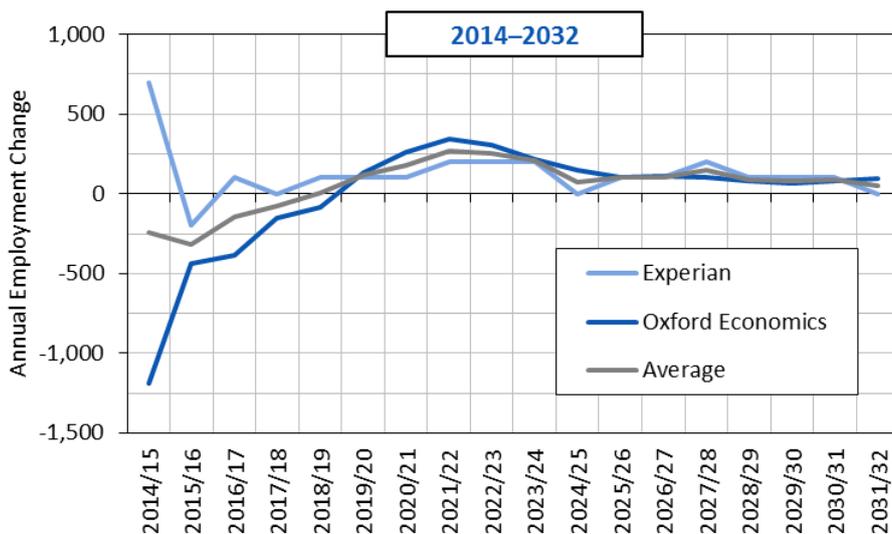


Figure 1: Experian (Dec 2016), Oxford Economics (Jan 2017) and ‘Average’ employment forecasts for Fylde (2014–2032)

2.2 In the jobs-led formulation of the POPGROUP model, the impact of the employment growth trajectory (as defined in Figure 1) is evaluated by measuring the relationship between the number of jobs in Fylde, the size of the resident labour force and the size of the resident population. Key to determining the level of population growth required to meet the defined jobs growth trajectory are assumptions on economic activity, unemployment and commuting.

## Commuting Ratio

- 2.3 The commuting ratio determines the balance between the resident number of ‘workers’ (i.e. the employed labour force) and the number of jobs in an area. A commuting ratio greater than 1.0 indicates a net out-commute (i.e. the number of resident workers in Fylde is greater than the number of jobs). A commuting ratio less than 1.0 indicates a small net in-commute (i.e. the number of jobs is greater than the number of workers).
- 2.4 A fixed commuting ratio of 0.80 has been applied to the **Jobs-led Experian**, **Jobs-led Oxford Economics** and **Jobs-led Average** scenarios, derived from the 2011 Census Travel to Work data (Table 1). This indicates a net in-commute to Fylde. This commuting ratio 0.80 is consistent with the scenario assumptions developed in the SHMA and subsequent Addendums.

Table 1: Commuting Ratio Comparison

Fylde		2001 Census	2011 Census
<b>Workers</b>	<i>a</i>	32,235	34,796
<b>Jobs</b>	<i>b</i>	40,633	43,270
<b>Commuting Ratio</b>	<i>a/b</i>	<b>0.79</b>	<b>0.80</b>

Note: 2001 data from Census Table T101 – UK Travel Flows; 2011 data from Census Table WU02UK - Location of usual residence and place of work by age.

- 2.5 In the SHMA, a commuting ratio sensitivity was also developed in which a balanced commuting ratio was applied. Under this assumption, all jobs created in Fylde were filled by the resident population.

## Unemployment Rate

- 2.6 The unemployment rate determines the proportion of the labour force that is unemployed (and as a result, the proportion that is employed). The historical unemployment rate profile presented in this analysis has been sourced from the ONS model-based estimates of unemployment. In the **Jobs-led Experian**, **Jobs-led Oxford Economics** and **Jobs-led Average** scenarios presented here, the unemployment rate tracks historical data to 2014 (an unemployment rate of 4.3%) and is fixed thereafter (Table 2).

Table 2: Fylde unemployment rate (2004–2014)

Unemployment Rate	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Fylde	2.6	3.1	3.3	3.7	3.5	4.4	4.9	4.6	5.3	4.7	<b>4.3</b>

Source: ONS model-based estimates of unemployment, from NOMIS

- 2.7 This unemployment rate assumption differs from that applied in the SHMA core scenarios, in which the unemployment rate over the historical 2008–2012 period was averaged (5.3%) and applied throughout the forecast period. Additional unemployment sensitivity scenarios were also developed in which the average unemployment rate was calculated over a longer historical period (2004–2012). This resulted in a lower unemployment rate of 4.7% being applied, fixed throughout the forecast period. In the SHMA, unemployment rate data was sourced from NOMIS.
- 2.8 In the subsequent Addendums (1 and 2) the average (2008–2013) unemployment rate of 5.3% was applied from 2013 onwards. This made use of the additional year of unemployment data released from NOMIS. Additionally an unemployment rate sensitivity scenario was developed, in which the unemployment rate reduced from the recession average (2008–2013) of 5.3% in 2013 to a pre-recession average (2004–2007) of 4.3% by 2018, fixed thereafter. This was to reflect the expected recovery in the economy following the economic recession.

### *Economic Activity Rates*

- 2.9 The economic activity rates determine the proportion of the working-age population that are economically active (i.e. the labour force). The labour force includes those who are in work (i.e. 'workers') and those who are unemployed. Forecasting changes to future economic activity rates is challenging, particularly with the ageing profile of most local authorities, meaning that the older age-groups increasingly make up a larger proportion of the population. Furthermore, with increased life expectancies and changes to the State Pension Age (SPA), people are remaining in the labour force for longer, resulting in increased participation rates in the older age groups.
- 2.10 Between the 2001 and 2011 Censuses, rates of economic activity increased, most notably for females and males in the older age groups (Figure 2).

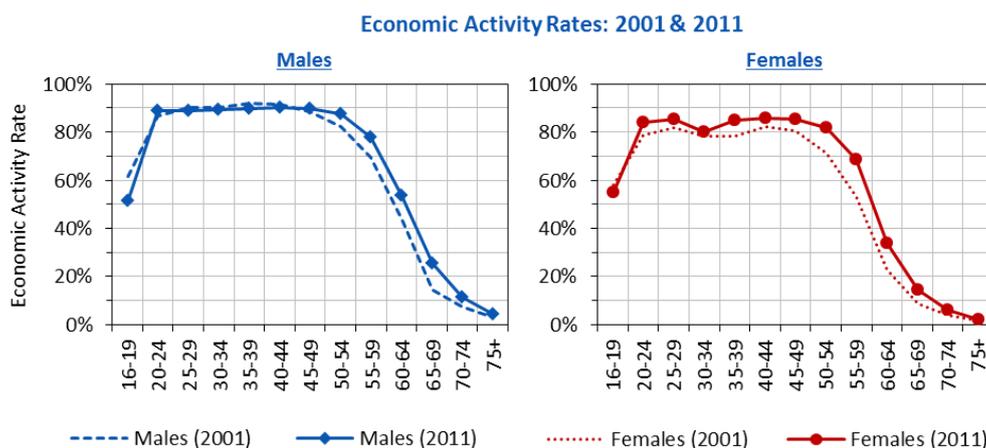


Figure 2: Fylde economic activity rates: 2001 and 2011 Census comparison (source: ONS)

- 2.11 In the scenarios developed for the SHMA, economic activity rates were calculated for the 16–74 age groups and sourced from the 2001 Census and LFS. Adjustments were made over the forecast period to the 60–64 and 65–69 age groups in order to account for changes in the SPA.
- 2.12 In the analysis for Fylde presented in Addendum 1 and Addendum 2, 2011 Census economic activity rates were adjusted to account for changes to the SPA for the 16–74 labour force age groups. These adjustments considered the ONS economic activity rate forecasts from a 2006 base<sup>6</sup>. 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, with corresponding female rates rising by 33.4% and 16.3%.
- 2.13 To take account of these changes suggested under the ONS forecast, economic activity rates for the 16–74 age group were applied, with adjustments made to the 60–64 and 65–69 age groups to account for changes to the State Pension Age (SPA). The following adjustments were made over the 2011–2020 period:
- Females aged 60–64: 40% increase from 2011 to 2020
  - Females aged 65–69: 20% increase from 2011 to 2020
  - Males aged 60–64: 5% increase from 2011 to 2020
  - Males aged 65–69: 10% increase from 2011 to 2020

<sup>6</sup> ONS January 2006, Projections of the UK labour force, 2006 to 2020

<http://www.ons.gov.uk/ons/rel/lms/labour-market-trends--discontinued-/volume-114--no--1/projections-of-the-uk-labour-force--2006-to-2020.pdf>

2.14 In the **Jobs-led Experian**, **Jobs-led Oxford Economics** and **Jobs-led Average** scenarios presented here, these economic activity rate adjustments have been applied, consistent with scenario assumptions in the Addendums. Figure 3 illustrates the impact of these adjustments in the start and end year of the plan period (2011 and 2032).

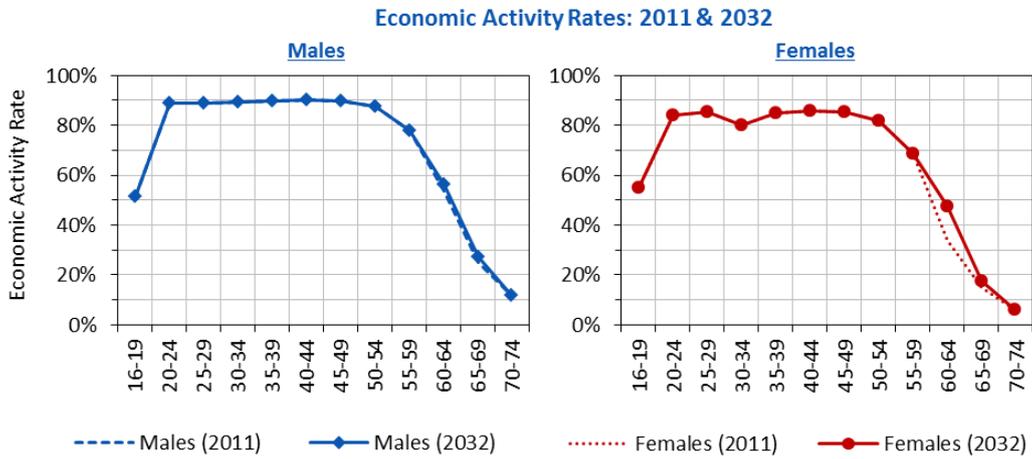


Figure 3: Fylde economic activity rates: 2011 and 2032 comparison (source: ONS)

# Scenario Outcomes

2.15 Population change over the 2001–2032 period under the three **Jobs-led Experian**, **Jobs-led Oxford Economics** and **Jobs-led Average** scenarios is presented in Figure 4. The population and household change, along with the associated average annual net migration and dwelling growth is presented for the 2011–2032 plan period in Table 3.

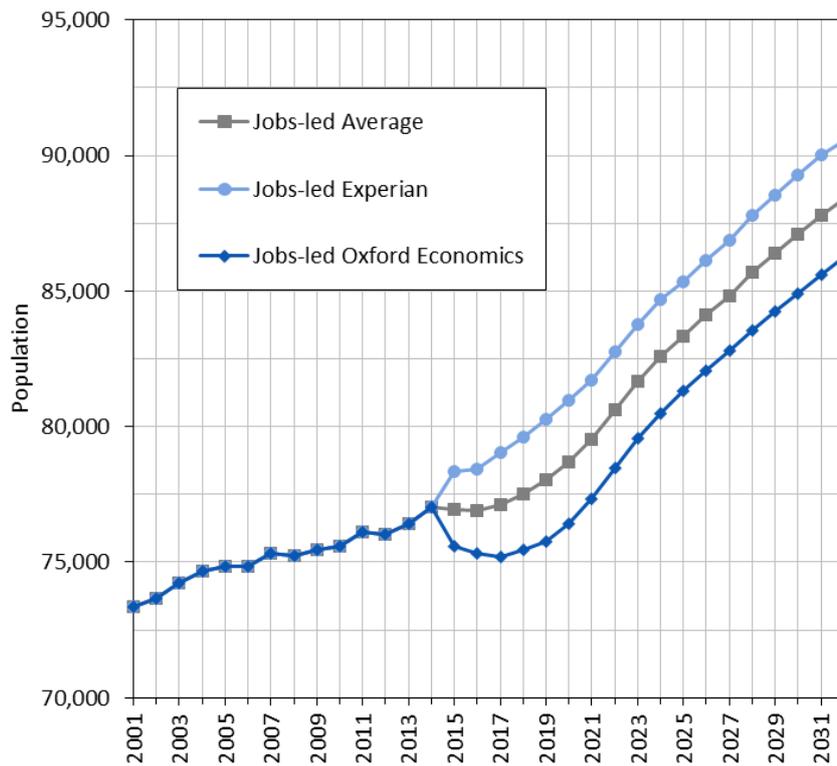


Figure 4: Population change 2001–2032

Table 3: Fylde Jobs-led scenario outcomes 2011–2032

Jobs-led Scenario	Change 2011–2032				Average per year		
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Employment
Experian	14,470	19.0%	8,820	25.2%	1,082	450	112
Average	12,327	16.2%	7,829	22.3%	987	399	55
Oxford Economics	10,183	13.4%	6,835	19.5%	891	349	-2

Note: Household and dwelling growth assessed using assumptions from the 2014-based household projection model. Scenarios ranked in order of population change.

## 3 Headship Rate Sensitivity Scenarios

- 3.1 In line with the analysis undertaken for the Addendum 2 in 2015 following the release of the 2012-based household projection model from DCLG, household and dwelling growth has been assessed under an alternative set of headship rate assumptions.
- 3.2 Under the 2014-based headship rate return (HH-14 Return) sensitivity, the headship rates in the younger age groups that are expected to decline over the 2014–2024 period, have been returned to their respective 2001 values by 2024. For Fylde, the 15–24 and 25–35 age groups have been returned (Figure 5), following their original trend thereafter.
- 3.3 Table 4 presents the household and dwelling growth outcomes under the 2014-based and 2014-based return headship rates for each of the jobs-led scenarios (**Jobs-led Experian**, **Oxford Economics** and **Average**). Higher headship rates in the younger 15–24 and 25–35 age groups result in a higher household change and average annual dwelling growth over the 2011–2032 plan period.

Table 4: Headship rate sensitivity scenario outcomes 2011–2032

Jobs-led Scenario	2011–2032					
	2014-based			2014-based Return		
	Households Change	Households Change %	Average Annual Dwellings	Households Change	Households Change %	Average Annual Dwellings
<i>Experian</i>	8,820	25.2%	450	9,033	25.8%	461
<i>Average</i>	7,829	22.3%	399	8,036	22.9%	410
<i>Oxford Economics</i>	6,835	19.5%	349	7,037	20.1%	359

Note: Population change is the same under the 2014-based and 2014-based Return headship rates.

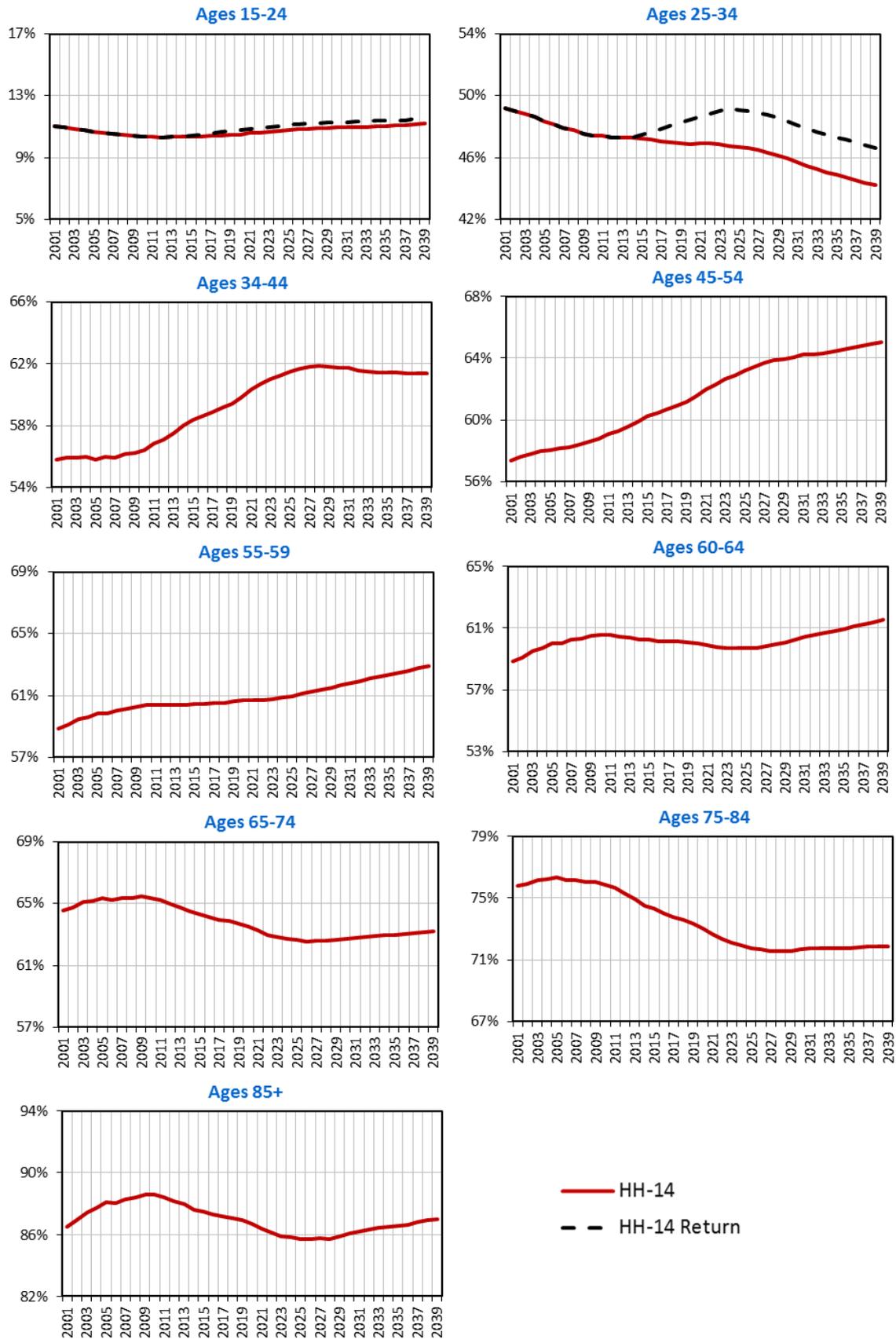


Figure 5: Fylde 2014-based and 2014-based return headship rates (2001–2039)

## 4 Employment Sensitivity Scenario

- 4.1 In the SHMA and subsequent Addendums, sensitivity scenarios were developed to evaluate the impact of alternative economic assumptions on the relationship between employment and population growth. In this report, a sensitivity scenario has been developed in which the most up-to-date economic assumptions are considered.
- 4.2 The jobs-led sensitivity scenario (**Jobs-led Average SENS**)<sup>7</sup> presented here draws on unemployment rate and economic activity rate assumptions from ONS and the Office for Budget Responsibility (OBR). A fixed 2011 Census commuting ratio of 0.80 has been applied, consistent with the scenarios developed in the SHMA and Addendums and the **Jobs-led Experian**, **Jobs-led Oxford Economics** and **Jobs-led Average** scenarios presented in Section 2.

### *Unemployment Rate*

- 4.3 The most recent data from ONS suggests a lower unemployment rate for Fylde (3.3%) than that in 2014. Therefore, this unemployment rate of 3.3% has been applied under the **Jobs-led Average SENS** scenario, fixed throughout the forecast period. This assumption differs from the unemployment rates applied in both the SHMA and subsequent addendums as these were calculated using an historical average (refer to the Section 2).

### *Economic Activity Rates*

- 4.4 In 2015, the Office for Budget Responsibility (OBR) undertook analysis of labour market trends in its Fiscal Sustainability Report<sup>8</sup>. Included within its analysis is a forecast of changing economic activity rates for males and females for the 16–89 age groups, extending to a long-term 2066 forecast horizon. This forecast has been used to generate economic activity rates (16–89) for Fylde under the **Jobs-led Average SENS** scenario. Table 5 presents the adjustments that have been made to all 16–89 age groups over the 2011–2032 plan period.

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<sup>7</sup> Note that as a result of the alternative economic assumptions, the 'Average SENS' scenario includes calculations that take account of 'double-jobbing'. Therefore, the annual employment growth trajectory under the *Jobs-led Average SENS* scenario differs slightly from that defined in the *Jobs-led Average* scenario.

<sup>8</sup> [http://budgetresponsibility.org.uk/docs/dlm\\_uploads/49753\\_OBR-Fiscal-Report-Web-Accessible.pdf](http://budgetresponsibility.org.uk/docs/dlm_uploads/49753_OBR-Fiscal-Report-Web-Accessible.pdf)

Table 5: OBR Economic Activity Rate adjustments

OBR Economic Activity Rates Change 2011–2032			
Males		Females	
16–19	1%	16–19	-2%
20–24	2%	20–24	1%
25–29	-2%	25–29	-3%
30–34	-3%	30–34	-4%
35–39	-4%	35–39	0%
40–44	-4%	40–44	3%
45–49	-1%	45–49	4%
50–54	-1%	50–54	1%
55–59	1%	55–59	6%
60–64	16%	60–64	72%
65–69	44%	65–69	89%
70–74	26%	70–74	103%
75–89	51%	75–89	250%

4.5 Figure 6 presents the economic activity rate profile for Fylde applying the OBR adjustments to the 2011 Census economic activity rates (16–89) over the 2011–2032 plan period.

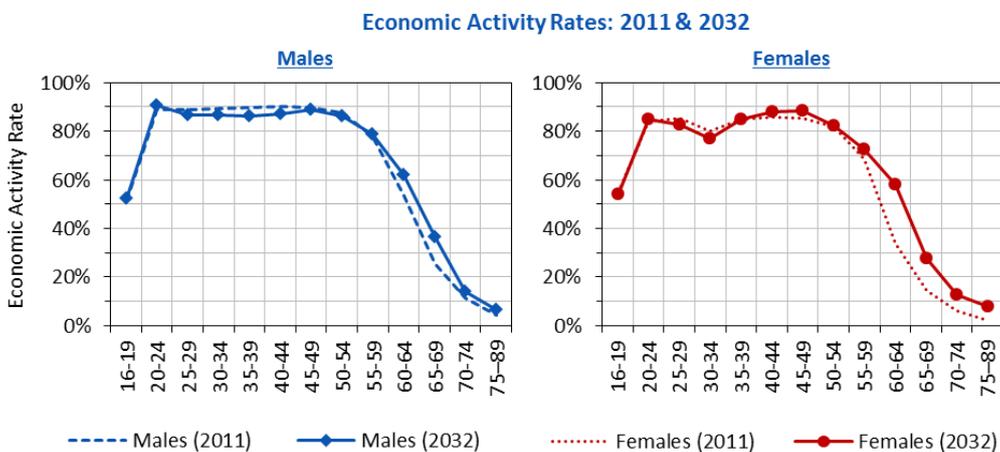


Figure 6: OBR economic activity rate profile for Fylde

4.6 The economic activity rates have been applied to the 16–89 age groups, compared to the 16–74 in the previous analysis (SHMA and Addendums) and three jobs-led scenarios presented in Section 2 (**Jobs-led Experian**, **Jobs-led Oxford Economics** and **Jobs-led Average**). Additionally, the OBR economic activity rate forecasts have been applied to *all* age groups (16–89), as opposed to only the older age groups (60–64 and 65–69) as previously used.

## Scenario Outcomes

4.7 Population growth under the **Jobs-led Average SENS** scenario is presented for the 2001–2032 period in Figure 7. Table 6 presents the population change, net migration and employment growth for the 2011–2032 plan period, along with the household and dwelling growth outcomes under the 2014-based and 2014-based return headship rate sensitivity assumptions. These headship rate assumptions are consistent with those presented in the previous section.

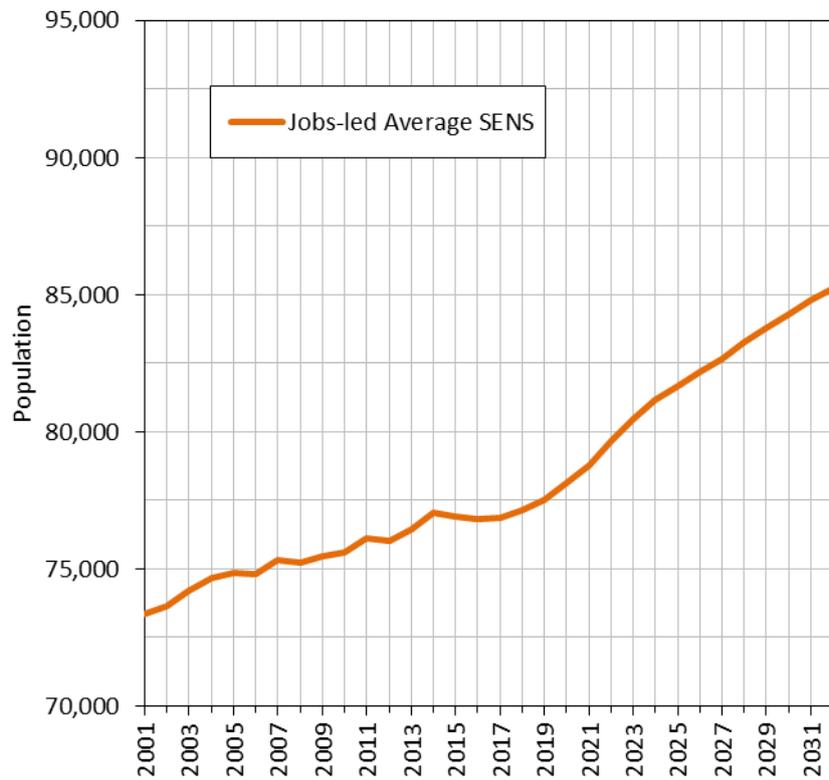


Figure 7: Jobs-led Average SENS scenario population change 2001–2032

Table 6: Fylde Jobs-led Average SENS scenario outcome (HH-14 & HH-14 Return) 2011–2032

Jobs-led Average SENS Scenario	Change 2011–2032				Average per year		
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings	Employment
2014-based	9,128	12.0%	6,426	18.3%	841	328	106
2014-based Return	9,128	12.0%	6,621	18.9%	841	338	106

Note: Household and dwelling growth assessed using under the 2014-based and 2014-based Return headship rate sensitivity scenario assumptions. Population change, net migration and employment growth are the same under the 2014-based and 2014-based Return scenarios.

## Appendix A Economic Assumptions

Table 7: Comparison of assumptions in the SHMA, Addendum &amp; Report (2017)

Assumptions	SHMA (2013)	Addendum 1 (2014)	Addendum 2 (2015)	Current (2017)
Historical Data	2001–2012	2001–2013		2001–2014
Official Projection	2010-based	2012-based		2014-based
<b>Household Assumptions</b>				
Household Model & Headship Rates	2008-based & 2011-based	2008-based & 2011-based	2012-based & 2012-based Return Sensitivity	2014-based & 2014-based Return Sensitivity
Dwelling Vacancy Rate	6.6%	6.6%	6.6%	6.6%
<b>Employment Forecasts</b>				
Employment Forecasts	Experian (Sept 2013) Oxford Economics (2013) AECOM	Experian (Sept 2013) Oxford Economics (2013) AECOM		Experian (Dec 2016) Oxford Economics (Jan 2017) Average
<b>Commuting Ratio Assumptions</b>				
Commuting Ratio (CR)	0.80 from the 2011 APS	0.80 from the 2011 Census		0.80 from the 2011 Census TTW
Commuting Ratio (Sensitivity)	'Balanced' CR assumed all jobs are taken up by residents in Fylde			
<b>Unemployment Rate Assumptions</b>				
Unemployment Rate (UR)	Fixed Average (2008–2012) 5.3%	Fixed Average (2008–2013) 5.3%		Fixed 2014 UR of 4.3%
Unemployment Rate (Sensitivity)	Fixed Average (2004–2012) 4.7%	Reducing from 'recession' average (2008–2013) in 2013 of 5.3% to pre-recession average (2004–2007) in 2018 of 4.3%, fixed thereafter		Fixed UR of 3.3%
<b>Economic Activity Rate Assumptions</b>				
Economic Activity Rates (EA)	EA rates from the 2001 Census and LFS (NOMIS)	2011 Census economic activity rates with uplifts in the 60–69 age groups to account for changes to the SPA. EA rates defined for the 16–74 age group.		2011 Census economic activity rates with uplifts in the 60–69 age groups to account for changes to the SPA. EA rates defined for the 16–74 age group.
Economic Activity Rate (Sensitivity)				OBR adjustments to the 2011 Census EA rates in all age groups. EA rates defined for the 16–89 age groups.

## Appendix B Demographic Assumptions

- B.1** Edge Analytics has developed four Jobs-led scenarios for Fylde using POPGROUP v.4 and the Derived Forecast model. The POPGROUP suite of demographic models draw data from a number of sources, building an historical picture of population, households, fertility, mortality and migration on which to base its scenario forecasts. Using historical data evidence for 2001–2014<sup>9</sup>, in conjunction with information from the latest 2014-based ONS sub-national population projection (SNPPs) and DCLG household projection, a series of assumptions have been derived which drive the jobs-led scenario forecasts.
- B.2** This appendix provides a narrative on the demographic data inputs and assumptions underpinning the four **Jobs-led Experian**, **Jobs-led Oxford Economics**, **Jobs-led Average** and **Jobs-led Average SENS** scenarios presented in this report.

### *Population*

- B.3** In each scenario of the scenarios (**Jobs-led Experian**, **Jobs-led Oxford Economics**, **Jobs-led Average** and **Jobs-led Average SENS**), historical population statistics are provided by the mid-year population estimates (MYEs), with all data recorded by single-year of age and sex up to 2014. These data include the revised MYEs for 2002–2010, which were released by the ONS in May 2013. The revised MYEs provide consistency in the measurement of the components of change (i.e. births, deaths, internal migration and international migration) between the 2001 and 2011 Censuses.

### *Births & Fertility*

- B.4** In each of the scenarios, historical mid-year to mid-year counts of births by sex have been sourced from the ONS MYEs, with historical births defined from 2001/02 to 2013/14. From 2014/15, an area-specific age-specific rate (ASFR) schedule, derived from the ONS 2014-based SNPP, is included in the POPGROUP model assumptions. Long-term assumptions on changes in age-specific fertility rates are taken from the ONS 2014-based SNPP.

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<sup>9</sup> At the request of the Council, the most recent 2015 Mid-Year Population Estimate (MYE) has been excluded from the scenario development.

- B.5 In combination with the ‘population-at-risk’ (i.e. all women between the ages of 15–49), the area-specific ASFR and future fertility rate assumptions provide the basis for the calculation of births in each year of the forecast period (i.e. from 2014 onwards).

### *Deaths & Mortality*

- B.6 In each of the four scenarios, historical mid-year to mid-year counts of deaths by 5-year age group and sex have been sourced from the ONS MYEs, with historical deaths defined from 2001/02 to 2013/14. From 2014/15, an area-specific age-specific mortality rate (ASMR) schedule, derived from the ONS 2014-based SNPP, is included in the POPGROUP model assumptions. Long-term assumptions on changes in age-specific mortality rates are taken from the ONS 2014-based SNPP.
- B.7 In combination with the ‘population-at-risk’ (i.e. the whole population), the area-specific ASMR and future mortality rate assumptions provide the basis for the calculation of deaths in each year of the forecast period (i.e. from 2014 onwards).

### *Internal Migration*

- B.8 In the **Jobs-led Experian**, **Jobs-led Oxford Economics**, **Jobs-led Average** and **Jobs-led Average SENS** scenarios, historical mid-year to mid-year estimates of internal in- and out-migration by 5-year age group and sex have been sourced from the ‘components of population change’ files that underpin the ONS MYEs. These internal migration flows are estimated using data from the Patient Register (PR), the National Health Service Central Register (NHSCR) and the Higher Education Statistics Agency (HESA).
- B.9 In the case of internal in-migration, the ASMigR schedules are applied to an external ‘reference’ population (i.e. the population ‘at-risk’ of migrating into the area). This is different to the other components (i.e. births, deaths, internal out-migration), where the schedule of rates is applied to the area-specific population (i.e. the population ‘at-risk’ of migrating out of the area). The reference population is defined by considering the areas which have historically contributed the majority of migrants into the area. In the case of Fylde, it comprises all districts which cumulatively contributed 70% of migrants into the Lancashire LEP over the 2008/09–2014/15 period.

B.10 In the **Jobs-led Experian**, **Jobs-led Oxford Economics**, **Jobs-led Average** and **Jobs-led Average SENS** scenarios, historical counts of internal in and out-migrants are used from 2001/02 to 2013/14. From 2014/15, these scenarios then calculate their own internal migration assumptions to ensure an appropriate balance between the population and the targeted increase in the number of jobs that is defined in each year of the forecast period. A higher level of net internal migration will occur if there is insufficient population and resident labour force to meet the forecast number of jobs under the Experian, Oxford Economics and Average employment growth trajectories. In each of the jobs-led scenarios, the profile of internal migrants is defined by an ASMiGR schedule, derived from the ONS 2014-based SNPP.

### *International Migration*

B.11 Historical mid-year to mid-year counts of immigration and emigration by 5-year age group and sex have been sourced from the 'components of population change' files that underpin the ONS MYEs. Any 'adjustments' made to the MYEs to account for asylum cases are included in the international migration balance.

B.12 In the **Jobs-led Experian**, **Jobs-led Oxford Economics**, **Jobs-led Average** and **Jobs-led Average SENS** scenarios historical counts of international in- and out-migrants are used from 2001/02 to 2013/14. From 2014/15 onwards international migration counts are taken from the ONS 2014-based SNPP. An ASMiGR schedule of rates from the ONS 2014-based SNPP is used to distribute future counts by single year of age.

## Appendix 2: Sensitivity Analysis using Alternative Labour Force Behaviour Assumptions

For consistency, the updated modelling presented within this paper applies assumptions on future labour force behaviour which are consistent with those applied in the Addendum 1 report. This largely retained the approach taken in the 2013 SHMA, albeit with the use of updated data including 2011 Census data which had been released in the intervening period.

However, the SHMA recognised the uncertainties involved with modelling labour force behaviour, and included a number of sensitivities relating to labour force assumptions. For illustrative purposes, a further sensitivity has therefore been modelled which considers the implications of variant labour-force assumptions.

These adjustments reflect recommendations made by a number of Planning Inspectors more recently through Local Plan examinations and S78 Inquiries and they are considered reasonable in presenting an up-to-date consideration of labour-force sensitivities in accordance with the approach followed in the previous SHMA evidence. It is recognised that Inspectors have provided varying advice on appropriate modelling assumptions for considering the link between housing and employment and the application of these adjustments would need to be considered in the context of the Council's wider economic evidence base as well as a full updating of the OAN.

No change to the commuting assumption has been made within this sensitivity, with the ratio identified at the 2011 Census held fixed throughout the modelling period. However, the following alternative assumptions have been applied in the POPGROUP modelling:

- **Unemployment** – the latest 2015 data shows a fall in unemployment levels to 3.3%. The sensitivity modelling has fixed this unemployment rate throughout the projection period. It is noted that this level falls below the pre-recession average of 4.3% used in the sensitivity scenario presented in the Addendum 1 report. The Blackpool Local Plan Inspector stated that in the case of Blackpool it was '*eminently sensible to plan on the basis that unemployment will gradually fall to the pre-recession average*<sup>21</sup>'. However, it is noted that this does need to be considered in the context of the level of job growth forecast for Fylde, which under the 'average' forecast as noted in section 2 of the briefing paper is relatively modest.
- **Economic activity rates** – the modelling applies economic activity rates adjusted to reflect national evidence provided by the Office for Budget Responsibility (OBR) which forecasts changing rates of different age groups over the longer-term<sup>22</sup>. An allowance for change in economic participation rates using the OBR dataset has been given weight

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<sup>21</sup> Blackpool Local Plan Part 1: Core Strategy, Inspector's Report November 2015, paragraph 35

<sup>22</sup> A sensitivity using OBR economic activity rates was run in the Wyre SHMA Addendum 2 report. This only applied an adjustment to those aged 60 – 74 whereas the Edge Analytics modelling here has applied the OBR adjustments to all age groups aged 16 – 89 which aligns with the projections prepared by OBR.

in a recent appeal decision<sup>23</sup> and featured within the recommendations made by the Local Plans Expert Group (LPEG)<sup>24</sup>.

- **People holding more than one job ('double jobbing')** – the previous modelling directly aligned total job growth with population change. This did not include any specific allowance for double jobbing, and therefore did not allow for the possibility that a single person can hold more than one job. The Annual Population Survey (APS) indicates that 3.6% of Fylde residents have a second job, based on an average over the past ten years (2006 – 2015). The modelling presented below therefore adjusts the employment forecasts to assume that the historic rate of double jobbing persists at a fixed rate over the plan period, resulting in a modest reduction in the labour force required to support job growth.

The variant labour-force adjustments have been applied to an illustrative employment growth scenario, based upon the averaging of the Oxford Economics and Experian forecasts presented at Figure 2.4 of this paper. This would result in the creation of 56 jobs annually over the period from 2014 to 2032. This presents a mid-range picture of the impact of the adjustments on potential housing need in Fylde, albeit one which is at the lower end of the range considered in the 2013 SHMA. This analysis is intended for informational purposes for the Council. Applying the same assumptions to each of the baseline forecasts would indicate a level of need either side of this averaged position.

Table 2.1 below shows the outputs of the modelling presented by Edge Analytics using the variant labour-force assumptions. The modelling outputs are only presented using the adjusted headship rate assumptions, although the modelling outputs presented at Appendix 1 include the outputs of the modelling exercise without this adjustment for reference.

**Table 2.1 Implied Growth Based on Variant Labour-Force Adjustments 2011 - 2032: Adjusted 2014 SNHP headship rates for younger households**

	Change 2011 – 2032				Average per annum	
	Population change	%	Households change	%	Net migration	Dwellings
Jobs-led (average)	9,128	12.0%	6,621	18.9%	841	338

Source: Edge Analytics, 2017

The implied need for housing is lower under this scenario, relative to the need for housing which would result from average job growth with the previously applied labour force assumptions (410dpa, Table 3.3 of the briefing paper). This primarily reflects an assumption that an element of job growth is supported by people currently not active in the workforce taking up employment opportunities, and an assumption that a higher proportion of older cohorts are retained in the workforce. The latter assumption in particular has an impact on Fylde, as it has a relatively high proportion of older age groups which are projected to grow over the plan period.

<sup>23</sup> Appeal Decision – Longbank Farm, Ormesby, Middlesbrough (APP/V0728/W/15/3018546) (para 21) – Appendix 4 (extract)

<sup>24</sup> Local Plans Expert Group (2016) Local Plans Report to Government, Appendix 6 - <http://lpeg.org/>

In this context it is important to recognise that the OBR assumptions are based on a set of national projections, with local projections not produced by the OBR. The assumed increase in older cohorts remaining in the workforce as a result of the application of these national assumptions in Fylde should be interpreted with caution as it is noted, based upon the POPGROUP outputs prepared by Edge Analytics, that the modelling under this scenario assumes there is no growth in the main working age groups (16 – 64) to support job growth over the plan period. Ensuring a higher level of growth in this age group through the retention and attraction of higher numbers of this core working age population – as is implied in the outcomes of the modelling shown in Tables 3.1 and 3.2 – would ensure a greater flexibility in the workforce to support job growth in Fylde.

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## SNPP-2014 Scenario Outcome (13.03.2017)

The **SNPP-2014** scenario has been developed for Fylde, which replicates the official 2014-based Sub-National Population Projection (SNPP) from the Office for National Statistics (ONS). Historical population is defined for the 2001–2014 period, following the trajectory of the ONS 2014-based SNPP thereafter. Household and dwelling growth has been assessed using assumptions from the Department for Communities and Local Government (DCLG) 2014-based household projection model and a 2011 Census vacancy rate of 6.6%, fixed throughout the forecast period. The **SNPP-2014** scenario outcome is presented for the 2011–2032 plan period.

Table 1: Fylde SNPP-2014 scenario outcome 2011–2032

Scenario	Change 2011–2032				Average per year	
	Population Change	Population Change %	Households Change	Households Change %	Net Migration	Dwellings
SNPP-2014	6,651	8.7%	5,375	15.3%	726	274