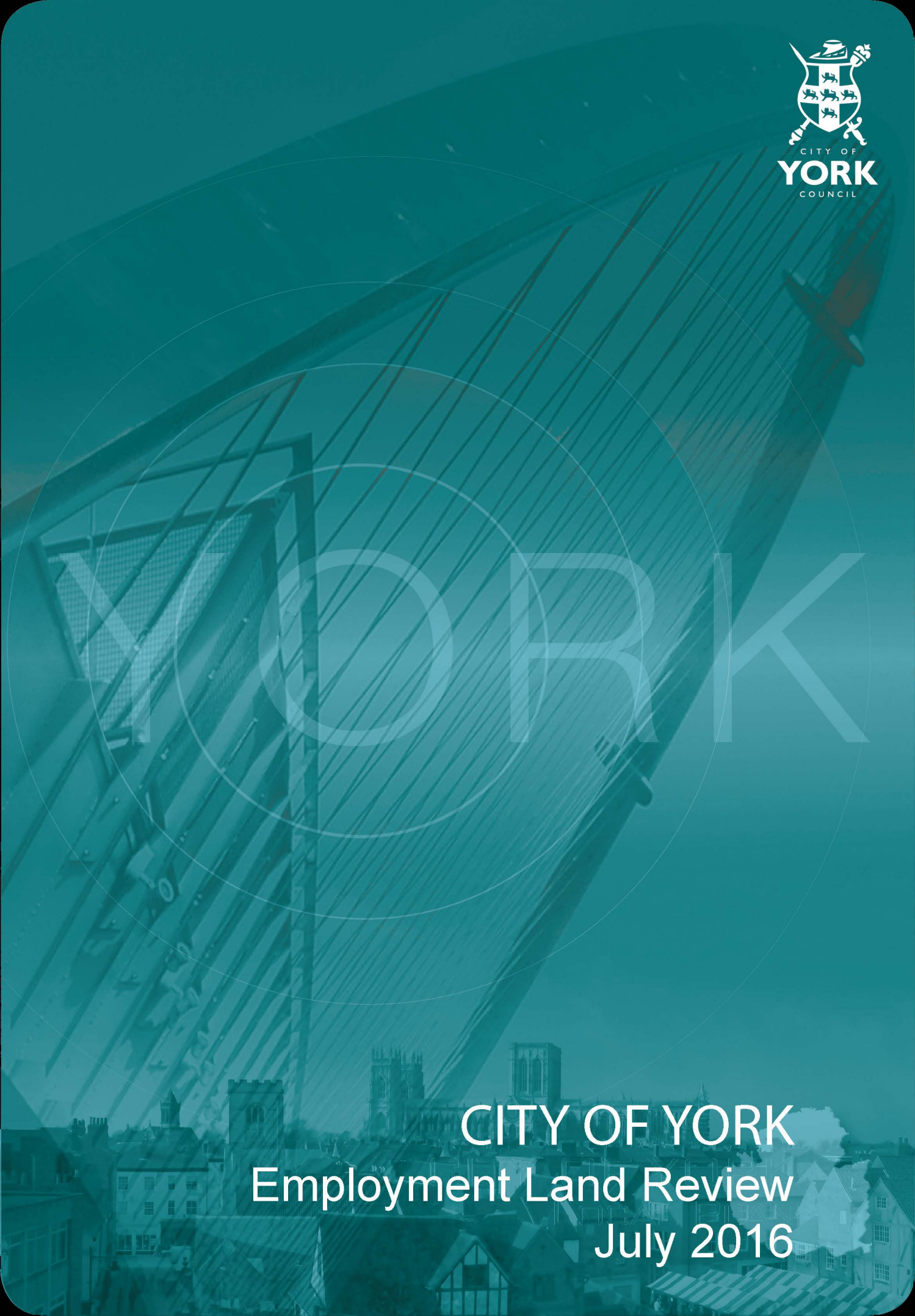

CITY OF YORK
Employment Land Review
July 2016

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1 INTRODUCTION

1.1 The Local Plan includes policies and land allocations to help to deliver economic growth in York. A key piece of evidence that underpins this part of the Plan is an Employment Land Review. A previous employment land review was carried out in 2009 by consultants ENTEC on behalf of the Council. Since that time work has been carried by the Council with support from consultants to maintain an up to date evidence base for the emerging Development Plan. The work has been drawn together by the Council's Local Plan team in this new Employment Land Review

1.2 A major piece of work was commissioned from DJD and EKOSGEN in 2012 to inform the work on the preferred options stage of the Local Plan which was published in June 2013. This work used economic forecasts provided by Oxford Economic Forecasting to help in understanding the future need and demand for employment land

1.3 Since the completion of the work by DJD and EKOSGEN the Council has reviewed its economic strategy and the economic forecasts by Oxford Economics have been updated. Consequently this employment land review predominantly draws on the more recent evidence of the economic strategy and economic forecasts. It also has regard to the Growth Deals and Strategic Economic Plans of the two Local Enterprise Partnerships which York is a member of.

1.4 Alongside this work the Council has gathered information on existing and potential sites for employment uses and assessed the suitability of these sites through the site selection methodology and viability testing. Key to this stage is a general 'call for sites' in 2012 and the further sites proposed by land owners in response to the consultation the Preferred Options Local Plan. This activity by the Council has brought up to date the supply side of the 2009 employment land review.

1.5 All of this work is now brought together in the form of an updated employment land review. This review looks at the current economic context of the City of York UA, including the wider functional economic area; considers the prospects for economic growth and the consequent development needs; it then reviews the policy approach to the identification and protection of employment sites, explores a range of employment land opportunities and identifies land allocations to meet the objectively assessed development needs for the local economy.

1.6 It does not directly address the evidence required to plan for future retail development which is dealt with separately in a report prepared for the Council by WYG Planning Consultants.

2 PLANNING POLICY CONTEXT

2.1 National Planning Policy

2.1.1 The NPPF sets out how the Local Plan should facilitate economic growth and includes useful analysis that helps to identify the key pieces of evidence that are required to justify the policy approach and sites allocated to help achieve economic growth. This national policy provides the framework for the Local Plan and helps to structure the evidence gathering required to justify the approach taken in the Plan.

2.1.2 Paragraph 14 of NPPF sets out the principles for planning for sustainable development, it says that: -

" Local planning authorities should positively seek opportunities to meet the development needs of their area; Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, unless:

- *any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or*
- *specific policies in this Framework indicate development should be restricted."*

2.1.3 Paragraph 21 and 22 provides further detail on how Local Plans sho**u**ld support economic growth

"In drawing up Local Plans, local planning authorities should:

- *set out a clear economic vision and strategy for their area which positively and proactively encourages sustainable economic growth;*
- *set criteria, or identify strategic sites, for local and inward investment to*
- *match the strategy and to meet anticipated needs over the plan period;*
- *support existing business sectors, taking account of whether they are expanding or contracting and, where possible, identify and plan for new or emerging sectors likely to locate in their area. Policies should be flexible enough to accommodate needs not anticipated in the plan and to allow a rapid response to changes in economic circumstances;*
- *plan positively for the location, promotion and expansion of clusters or networks of knowledge driven, creative or high technology industries;*
- *identify priority areas for economic regeneration, infrastructure provision and environmental enhancement; and*
- *facilitate flexible working practices such as the integration of residential and commercial uses within the same unit.*

Planning policies should avoid the long term protection of sites allocated for employment use where there is no reasonable prospect of a site being used for that purpose."

2.1.4 Paragraph 28 sets out the approach to be taken in rural areas. It says: -

"*Planning policies should support economic growth in rural areas in order to create jobs and prosperity by taking a positive approach to sustainable new development".*

2.1.5 Paragraph 160 which provides further information on the approach that should be taken in preparing a Development Plan, it says: -

"Local planning authorities should have a clear understanding of business needs within the economic markets operating in and across their area".

2.1.6 In doing this authorities are expected to work with their local business community and Local Enterprise Partnership and should use the evidence base to assess: -

"..needs for land or floorspace for economic development, including both the quantitative and qualitative needs for all foreseeable types of economic activity over the plan period" and ".existing and future supply of land available for economic development and its sufficiency and suitability to meet the identified needs."

2.2 National Planning Practice Guidance

2.2.1 The evidence of need and demand is that required to give effect to the policy approach set out in paragraph 14 of NPPF as described above. The NPPG goes further to set out the process for determining the objectively assessed need for land for the local economy. This methodology identifies how to determine the quantum of employment land required and which sites should be considered for inclusion in the Local Plan.

2.2.2 The NPPG refers to forecasting quantitative and qualitative need including floorspace with estimates of need broken down into sectors. It suggests authorities should draw on a range of data including forecasts and says:

2.2.3 Plan makers should consider:

- sectoral and employment forecasts and projections (labour demand);
- demographically derived assessments of future employment needs (labour supply techniques);
- analyses based on the past take-up of employment land and property and/or future property market requirements;

- consultation with relevant organisations, studies of business trends, and monitoring of business, economic and employment statistics.[1]

2.2.4 In respect of the land supply the core outputs for the employment land review identified in the NPPG are: -

- a list of all sites or broad locations considered, cross-referenced to their locations on maps;
- an assessment of each site or broad location, in terms of its suitability for development, availability and achievability including whether the site/broad location is viable) to determine whether a site is realistically expected to be developed and when;
- contain more detail for those sites which are considered to be realistic candidates for development, where others have been discounted for clearly evidenced and justified reasons;
- the potential type and quantity of development that could be delivered on each site/broad location, including a reasonable estimate of build out rates, setting out how any barriers to delivery could be overcome and when;
- an indicative trajectory of anticipated development and consideration of associated risks.

3 BACKGROUND

3.1 The York Economy - DJD and EKOSGEN study 2012

3.1.1 This section sets out the original work carried out for the early stages of the Local Plan which provides the context for the more recent work on the circumstance of the York economy that is considered later in the report.

3.1.2 The Council commissioned DJD and EKOSGEN in 2012 to undertake work on an economic (and retail) growth analysis and visioning to inform the preferred options draft of the Local Plan. This work provided a useful economic portrait of the city which has informed the analysis in this economic baseline. The work included growth forecasting and engagement workshops which tested the initial premises of the work in terms of both forecasting economic trends and the broader analysis of the prospects for the York economy including comparisons with other cities.

3.3.3 The work carried out by DJD and EKOSGEN included growth forecasting and engagement workshops. The growth forecast has been subsequently updated by Oxford Economic Forecasting who provided the original forecasts. The outcome of the growth forecasts is dealt with in the section on assessing need and demand for employment land.

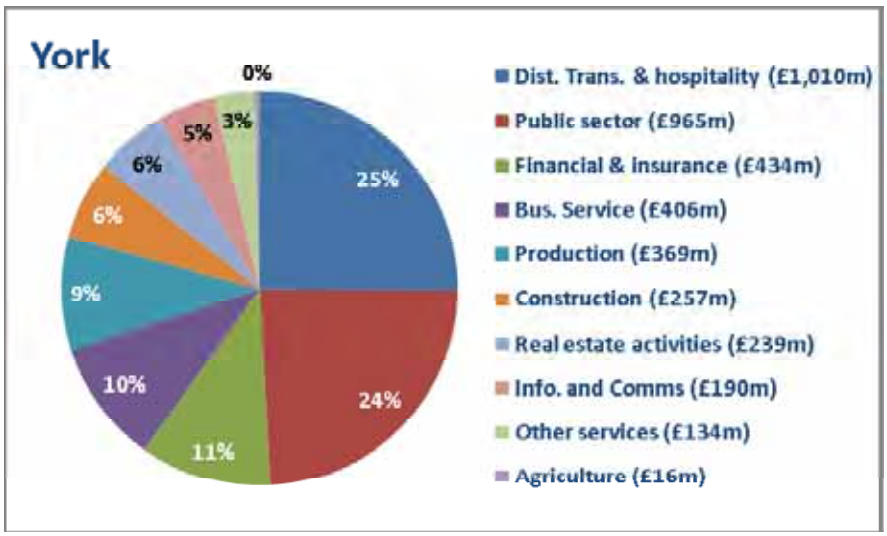
3.3.4 Economic circumstances in 2012 as described by DJD and EKOSGEN:

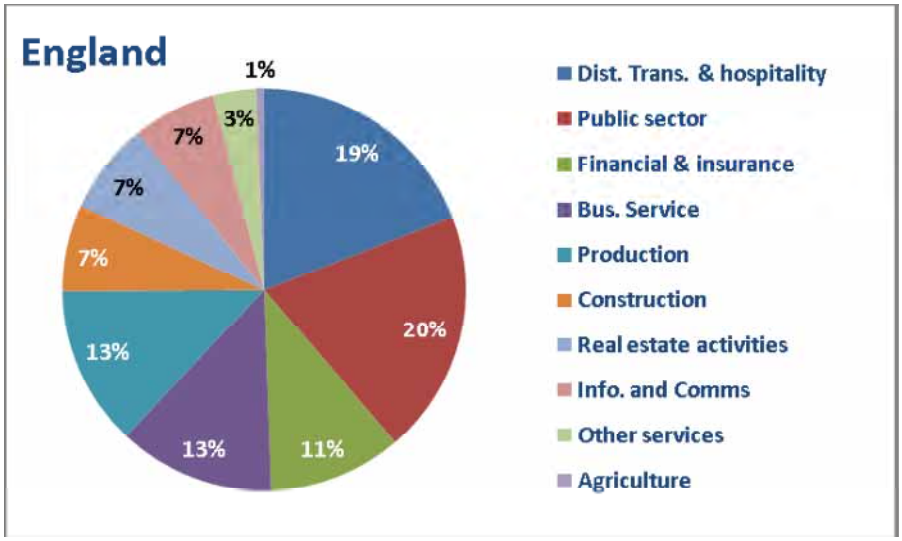
- An overview of the economy shows that York supports around 110,000 jobs with much of the growth secured in the 1990's;
- York consistently has lower than national unemployment rates;
- The transport and communications sector is having a major impact on overall employment trends, reflecting the employment fluctuations in the major rail companies;
- Key sector strengths include: financial and professional services and developing specialism's in healthcare and bioscience sectors; environmental and bio-renewable technologies;
- The public sector and financial, professional and business services are now York's two largest employment sectors;
- Health and social care has been the fastest growing sector with an increase of 40% between 2001 and 2011 ;
- York contributes £4bn of value to the national economy (5% of the regional total).

3.3.5 There are two main issues: (1) the level of GVA growth over this period has been low at 24% (compared to 39% nationally), and (2) low levels of productivity overall, with the GVA per FTE generated equivalent to 87% of the national average.

3.3.6 When the sector breakdown in the city is compared to the England average it shows an above average GVA contribution from the transport sector and the public sector.

Figure 1: GVA Contribution in York compared to England





3.3.7 The work by DJD and EKOSGEN also looked at how York has performed against comparator cities. These are; the historic University city of Cambridge and the 'new' University cities of Bath and Exeter along with Chester and Edinburgh. With Edinburgh characterised as the city which provides an aspirational target for York to aim for.

3.3.8 The key findings from these comparisons are:

- Comparator UK cities were more successful at attracting employment growth during 2001-2007 and minimising losses during 2008-11;
- York has performed relatively well in terms of the financial and insurance sector and public sector, but less well in other areas (hotels and restaurants, business services and manufacturing);
- York performs in line with the majority of other cities in terms of business start up rates.

3.3.9 Turning to the quality and distribution of employment premises in the city, an analysis of the office market shows a major challenge for the city. The distribution of premises in the city centre shows that there is not an established central business district, in part this is due to the constraints of the historic fabric of the city centre. Beyond the city centre most space is in a small number of office parks on the edge of the city. In terms of the quality of the offer there are very limited amounts of grade A accommodation both in the city centre and the peripheral locations which acts as a constraint on inward investment.

3.2 The York economy - current economic baseline 2015

3.2.1 Much of the wider context remains similar to that outlined in 2012: York is still a strong and diverse economy, but challenges around quality city centre office accommodation and lower productivity remain. There have been notable changes too in the national and local economic landscape since 2012. The current baseline is informed by the more recent analysis and strategies set out below and is underpinned by an updated econometric forecast provided by Oxford Economics.

3.2.2 The two Local Enterprise Partnerships which include the York UA (Leeds City Region and York, North Yorkshire and East Riding LEPs) produced Strategic Economic Plans in 2014 in response to a Government invitation to bid for funds through the Growth Deal. These Plans are in the process of being updated, but provide the strategic context for the SEP. Through the Strategic Economic Plans, both LEPs York are part of received two Growth Deal funding from Government, with a future bidding round announced with a deadline of summer 2016.

3.2.3 The review of the City's Economic Strategy, and its accompanying Overview of York's Economy, led by the York Economic Partnership carried out in summer and autumn 2015 identifies the strengths and weaknesses of the economy and articulates the economic ambition and priorities of the city.

3.2.4 The growth forecast has been subsequently updated by Oxford Economic Forecasting who provided the original forecasts. The outcome of the growth

forecasts in respect of the implications for future floorspace requirements is dealt with in the section on assessing need and demand.

Current economic circumstances

3.2.5 The new economic strategy for York sets out the following analysis of the city's current economic circumstances

3.2.6 York contributes £4.8bn of value to the national economy(5% of the regional total) with around 7,000 businesses and 110,000 jobs in the city.

3.2.7 York's local economy has many strengths:

- York has a highly skilled economy with over 40% of the local population with a degree level qualification or higher. We are also the only city in northern England in the top 10 of UK cities for skills.
- York is a key hub on the national rail network, less than 2 hours to London and with direct trains to every major city in England and Scotland.
- York has consistently had one of the lowest unemployment rates in the UK.
- York is a strong tourism destination, attracting 7m visitors a year
- The city also benefits from 'world-class' research and a number of industry facing centres of excellence in agri-food and biorenewables sectors.

3.2.8 As a city, York has sector strengths in certain industries, where the city employs more people than the national average. This includes insurance, retail and hospitality, education and rail. York's IT and digital has also seen rapid growth in recent years.

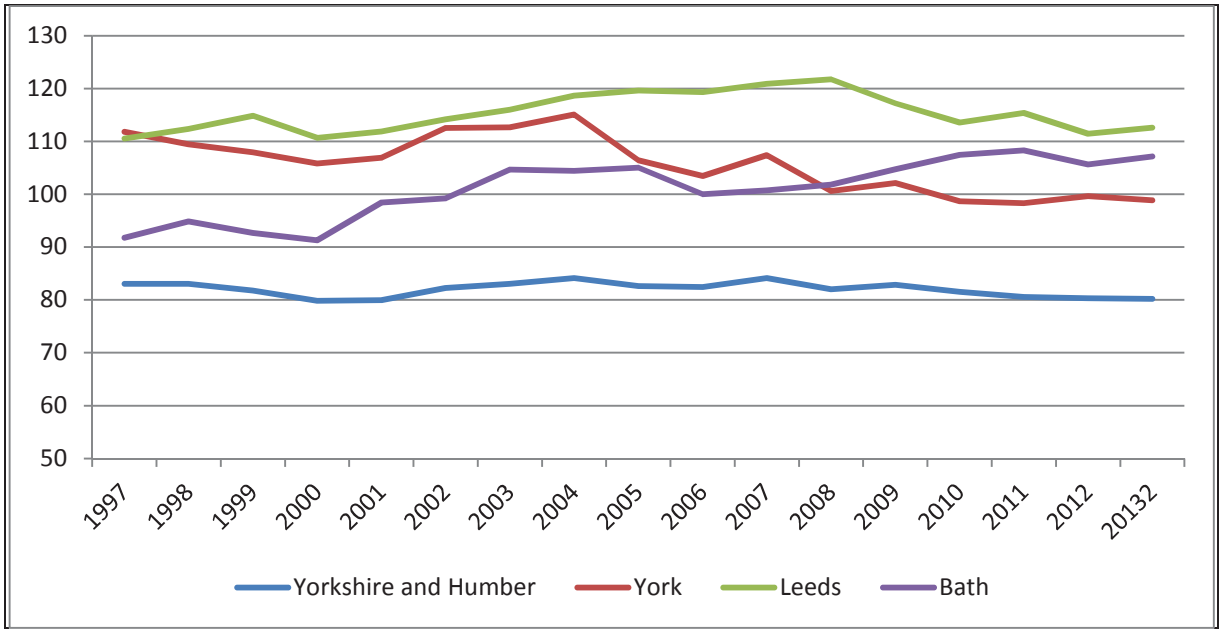
3.2.9 There are also a number of issues with the local economy that we need to address to ensure that we make the most of these strengths:

- First, as the overall level of manufacturing in the city has declined in the last twenty years with the closure of main sites such as Terrys, the city economy has had to reinvent itself. As shown in chart x below, our GVA per head used to be around 10 percent above the national average and is now just on par with the national average[2]. Over the same time, we have seen similar cities (such as Bath) go in the opposite direction.
- Second, our wage levels at £11.39 an hour[3] are behind national and regional averages and do not match our local skills levels and in recent years local wages have been falling.
- Third, the cost of housing in the city is high in the city and difficult to afford for residents given the low wages, this makes it hard for businesses to attract the workforce they need to foster growth.

[2] Office of National Statistics Workplace-Based GVA per Head 2014.
[3] Annual Survey of Household Earnings 2014.

- Forth, we need to ensure that there is more high-quality commercial office space in the optimal locations to take advantage of the city's excellent rail connectivity. A recent economic strategy consultation with York businesses identified that unlocking key employment and commercial sites was crucial to the future success of the city.
- Finally, as a medieval city, congestion is a significant issue for businesses and residents alike in the city.

Figure 2: Trends in Workplace Based Gross Value Added per Head in York Compared with other Cities (England = 100)



3.3 The Employment Land Market

3.3.1 The employment land market in York has been analysed by Peter Brett Associates to inform their work on the relative viability of different forms of development[4]. This work provides useful information about the health of the land market in respect of office and general industrial uses.

3.3.2 In the city centre office market good quality accommodation is expected to command rents of around £160 per sq m (or £15 per sq ft). The out of centre business parks have also out performed comparative sites in Harrogate district. However some of the building stock in the office parks developed in the 1980s and 90s is now judged to be functionally redundant and there has been consents

[4] City of York Local Plan Viability Study (Draft Report) (September 2014) Peter Bret Associates.

given for either conversions to housing utilising the relaxation of permitted development rights or demolition and redevelopment at Clifton Moor park.

3.3.3 Rents for industrial space are lower at £50 - £65 per sq m and these rates are dependent on the quality of the building stock that is on offer. That said, there remains a demand for B2 space for companies that are expanding (despite the forecast of job decline) or simply need more efficient building space.

3.3.4 Recent analysis that has accompanied planning applications seeking new uses for what are now functionally redundant office buildings have highlighted the over supply of grade B office space. Alongside this there have been a number of prior notifications required to exercise the permitted development rights to change offices to residential use. The government announcement in autumn 2015 to extend indefinitely the previous 3 year window to exercise this right will reduce the amount of grade B office space that is available.

3.3.5 In recent years the only new grade A office developments in the city have been purpose built for specific end users. The most recent of these being the Hiscox development on Hungate a 6,000 sq m (60,000 sq ft) headquarters building in which the company will occupy around 4,000 sq m (40,000 sq ft), with the balance being offered to let.

3.3.6 The University of York Science Park has some capacity to expand and there is further potential on the Heslington East campus. Furthermore, when compared to the other Universities in the Leeds City Region which are located on quite constrained inner urban sites, the University of York has greater potential to accommodate businesses which seek locations in proximity to a University. The recently published draft economic strategy for the city has identified the shortage of lab space and move on accommodation for small hi tech businesses as an important constraint which needs to be addressed..

3.3.7 In respect of general industrial uses the build for sale market has provided specific requirements. Rental units are provided through a limited amount of speculative investment on existing industrial estates and the re-letting of existing premises.

3.3.8 Looking ahead the market for commercial and industrial floorspace is recovering from the low point of the 2008 recession. In market briefings for the Leeds City Region In central Leeds the B1a market has seen a return to development in advance of lettings being agreed which is a good sign of increased confidence in the market. Also the market for B8 floor space in locations that have good motorway access has strengthened with demand for units of between 5,000 and 10,000 sq m. These shifts in market conditions will have spin off benefits for York, for example increased costs for B1a space in Leeds city centre may well divert some demand to York, particularly given the Enterprise zone designation for York Central which will give its B1a component a competitive advantage,

3.4 The Workforce

3.4.1 The key characteristics of the York force are summarised in the bullet points below :

- The York workforce is highly skilled – it is in the top 20% of LA areas and in the top 10 of English cities with regards to the proportion of people with degree level qualifications or above.
- Around 43% hold qualifications at NVQ Level 4 or above (compared to 31% regionally and 37% nationally);
- The highly skilled workforce has been a long standing feature of the York economy and levels of up-skilling have largely kept pace with the national economy;
- The proportion with no qualifications is also low (4% compared to 7% regionally and nationally) as a result of a low base in 2004 and similar rates of up-skilling
- York's occupational structure is largely in line with the national average, with 44% of workers in higher level occupations.
- However, in recent years, there has also been a sharp increase in elementary occupations, indicating that the local economy is 'hollowing out'. The overall impact of both of these trends has been a fall in average wage levels behind the regional and national average. . ;

3.4.2 This in part is also due to the significant decline in process, plant and machine operatives over the past decade reflecting the decline of manufacturing.

3.5 The Functional Economic Area

3.5.1 The Local Plan for York is being prepared for the York Unitary Authority area and in response to the Duty to Co-operate it is important to identify whether there are any strategic cross boundary planning issues that require particular policy interventions through the Local Plan. The economy of York is not restricted to the administrative geography of the Local Plan, people commute into the city for work and businesses have relationships such as supply chains which extend beyond the district. In recognition of York's position in the regional economy the Council is a member of two Local Enterprise Partnerships (LEP), the Leeds City Region and the York, North Yorkshire and East Riding LEPs.

3.5.2 In terms on the functional economic geography of the city, it is important to consider a number of issues, from a business and industrial perspective. The key issues of importance to York's functional geography include:

- The transport assets of the city which drives access to markets and a supply chain for goods and services as well as ease of access for customers, commuters and visitors.
- York is well connected by road and rail. Local manufacturers and retailers take advantage of the major distribution hub for the UK supply chain network located at the junction of the M1 and the M62 in nearby Wakefield.
- A further aspect of functional economic geography is that access to talent and knowledge both through the skilled population but also through one world-class research university (University of York), one civic university (York St John) and two outstanding further education colleges at York College and Askham Bryan.

3.5.3 From a sector perspective, York looks in several directions in terms of its economic geography:

- The professional service sectors, creative sector and healthcare all take advantage of close links to Leeds City Region where these are proportionately important industries.
- The insurance sector takes advantage of local agglomeration, with a number of large and medium sized insurers based in the city. The insurance sector also takes advantage of York's position as equidistant between London (the largest financial services centre in Europe) and Edinburgh (the second largest financial services sector in the UK) as well as being near to Leeds (the second largest financial sector in England).
- The tourism and agri-tech/biotech sector predominantly face north and east Yorkshire.

3.5.4 NPPG recommends looking at Travel to Work Areas (TTWA) that are drawn from analysis of travel to work patterns using data from the census. ONS published the TTWAs drawn from the analysis of the 2011 census in August 2015. The map below shows the extent of the York TTWA and the changes to the boundary when compared to the previous 2001 TTWA.

3.5.5 Figure 3 shows that the York TTWA covers a much larger area than the York UA and the consequent Local Plan area. Of particular note in this wider area is that it includes most of Selby District to the south and parts of Ryedale and East Riding to the east of the city.

3.5.6 Figure 4 outlines ONS data on travel to work patterns into and out of York, which provide further information on the functional relationships that York has with its neighbours. This highlights a significant amount of York's population commute out of York, predominantly to Leeds and significant numbers of people commute from the wider region to York.

Figure 3: 2011 TTWA compared with 2001 TTWA

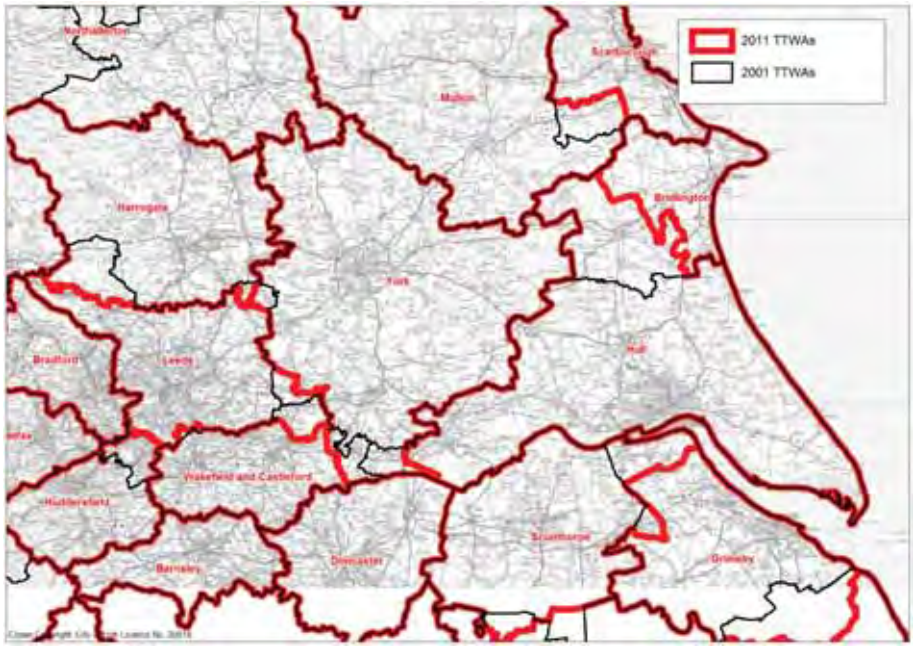
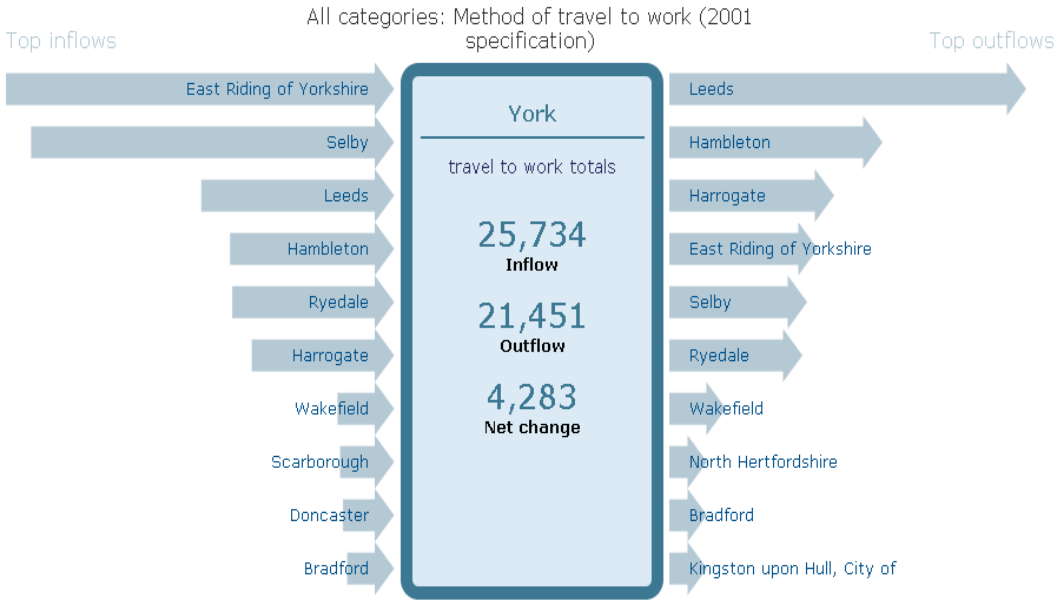


Figure 4: Method of Travel to Work



3.6 Economic Relationships

3.6.1 York currently sits in two Local Enterprise Partnerships (LEPs): Leeds City Region and York, North Yorkshire and East Riding. This is a reflection of the complex functional geography which York is a part of.

3.6.2 York is identified as a strategic economic centre in the Strategic Economic Plans that underpin the Growth Deals of both LEPs. In particular, it is recognised as a knowledge hub, with university, research and talent, able to support to regional strategic objectives of improving productivity and delivering quality jobs. The city's positioning on the rail network also provides further opportunity for York to develop in its role as an economic centre for the wider region, particularly into North Yorkshire and East Riding. Building on the existing net inflow of travel to work to the city, the LEP strategies focus on improving transport infrastructure into regional hubs such as York.

3.6.3 Both LEPs identify key regional sector strengths which can be further developed, including agri-food and biorenewables, healthcare innovation, financial & professional services which align closely with York's economy.

3.6.4 Both LEPs also acknowledge the need for, and are directly investing, unlocking and fast tracking employment sites suitable for high value sectors and jobs, specifically identifying York Central as a priority in the Leeds City Region growth deal, and by Enterprise Zone status gained through York, North Yorkshire and East Riding LEP.

3.6.5 Both the policy approach and the land supply should reflect the city's role in the wider regional economy, and role in helping deliver regional priorities, as part of the Duty to Cooperate.

4 THE OBJECTIVELY ASSESSED DEVELOPMENT NEEDS

4.0.1 The Council has commissioned a number of economic forecasts to better understand the likely growth rates and their sector implications. These forecasts have provided both a picture of change over time and a comparison between different forecasting houses. We have chosen this approach to help to manage the inherent uncertainty in such forecasting, which has been exacerbated by the impact of forecasting the recovery from the very severe 2008 recession.

4.0.2 The economic forecasts provide the main component for quantifying the objectively assessed development needs for the economy including the floorspace requirements by use class.

4.0.3 The main source of economic forecasts is Oxford Economic Forecasting (OEF) who provided the economic data for the earlier EKOSGEN work. Their most recent forecast was provided in April 2015 the analysis below is drawn from this forecast. This forecast provided by OEF also includes a comparison with the output from the Experian/REM forecast that has been used by the two Local Enterprise Partnerships in their respective Strategic Economic Plans and by adjoining Local Authorities in their Local Plans.

4.1 The Oxford Economics Forecast May 2015

4.1.1 The recession had a more detrimental impact on the York economy than nationally. The number of jobs in York fell by almost 5% between 2007 and 2010 compared with a reduction of less than 2% across the UK. And since then, employment growth has been weaker and more erratic in York than it has been nationally. The number of jobs in York is currently below its pre-recession peak, a benchmark already passed across the UK as a whole.

4.1.2 Workplace based people in employment remained fairly flat throughout the recessionary period, despite the fall in job numbers. This suggests a fall in the number of jobs held by one person. Residence based employment on the other hand, has enjoyed continual growth over recent years and is currently above pre-recession levels, thus implying a fall in net commuting.

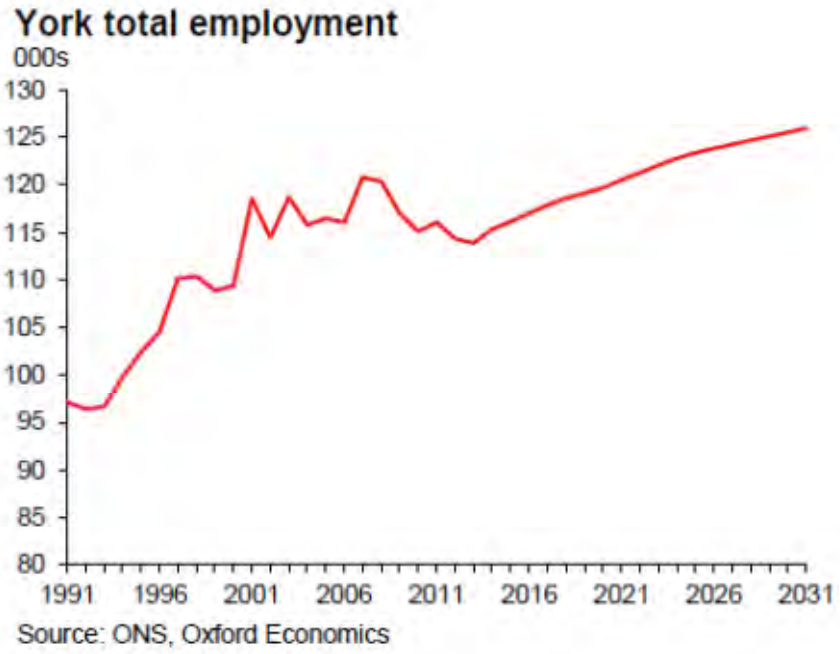
4.1.3 The outlook for employment is encouraging. Building on a year of strong job creation in 2014, employment in York is forecast to grow by 0.7% in 2015 and at a similar rate in 2016 and 2017.

4.1.4 The long term view for employment is for growth to average around 0.6% per year to 2025, slowing thereafter to nearer 0.3% per year as demographic

developments, most notably a slowdown in the growth of the working age population, become less supportive of employment growth. On this basis it is likely to be around 2021/22 that the number of jobs in York returns to the high recorded in 2007. Nonetheless, employment in York in 2031 is forecast to be 125,900, more than 10,000 higher than in 2014. This is equivalent to a change of 11,220 jobs between 2013/14 to 2030/312.

4.1.5 Job creation in York will be to the benefit of the local population. The number of York residents in employment is forecast to grow by 0.3% per year between 2014 and 2031, equivalent to an additional 6,200 local residents in work. This will be accompanied by a modest reduction in the rate of unemployment. That said, according to projections, job creation in York is likely to be slightly lower than the national average on both measures as strong performances by London and the wider south east boost the UK aggregate.

Figure 5: Total Employment in York



4.1.6 The sector composition of economic development in York is shaped by the wider UK trend of growth being centred on consumer spending and investment, particularly in the short to medium term. This means the private sector, and private services in particular, are expected to account for a significant proportion of growth. More than 80% of GVA growth in York will be provided by private services with the largest contributions from wholesale & retail trade, real estate and professional, technical & scientific services. Each of these sectors is expected to grow faster than the total economy, with professional, technical & scientific services the strongest growing (average 4.3% per year). Information &

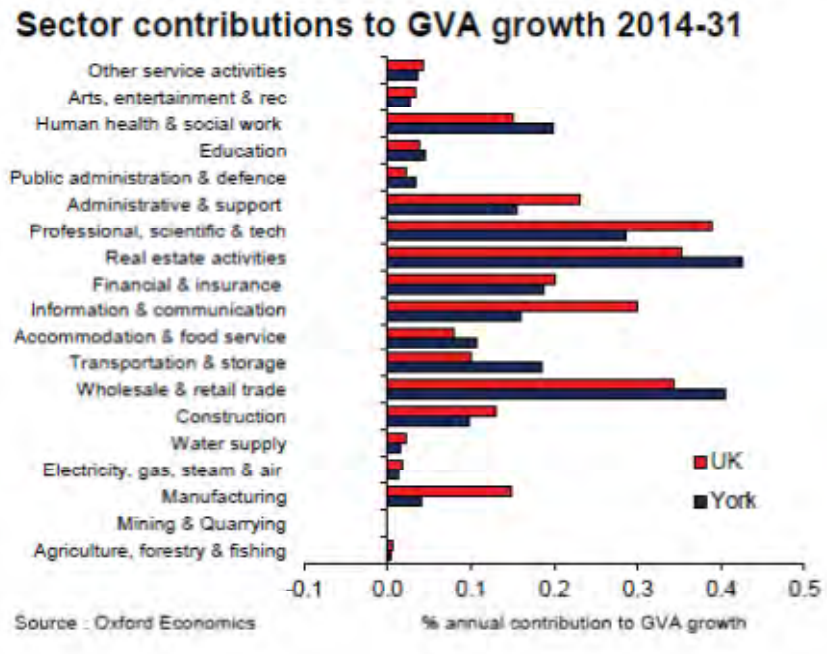
communication (4.0% per year) is also forecast to grow significantly faster than the rest of the economy.

4.1.7 The sector profile of employment growth in York is skewed even more heavily towards private services. This is largely underpinned by growth of around 1.5% per year in professional, technical & scientific services and administrative & support services, which equate to 4,500 more jobs in these two sectors alone by 2031.

4.1.8 The jobs outlook for other sectors is largely positive. Retail & wholesale trade is forecast to see a 1,600 rise in employment by 2031, although this is as much a reflection of the size of the sector rather than a particularly strong rate of growth. Around 1,000 jobs are expected to be created in each of construction, transport & storage and accommodation & food services. A smaller rise in absolute terms is forecast in information & communication despite the pace of job creation being twice the all economy average.

4.1.9 By contrast, around 700 public administration jobs are expected to be lost by 2020 with employment in the sector remaining flat thereafter. A more modest reduction in education employment is anticipated and health & social care again bucks the wider public sector trend with a 1,200 increase in employment by 2031. And it is our view that rising manufacturing activity will be achieved through the adoption of new technologies and increased productivity rather than through higher employment, a feature that will be important to maintain competitiveness in increasingly competitive international markets. Indeed, manufacturing employment in York is forecast to be 1,100 lower by 2031.

Figure 6: Sector contributions to GVA Growth in York



4.1.10 The forecast based on the trends described above leads to the pattern of sector based job growth described in Figure 7: Trend based growth by sector in York.

Figure 7: Trend based growth by sector in York

York employment - baseline forecast

	Level		Change 2014-31	
	2014	2031	%	level
Agriculture, forestry & fishing	669	534	-20.2	-135
Mining & Quarrying	0	0	-	-
Manufacturing	4,291	3,160	-26.3	-1,131
Electricity, gas, steam & air	92	111	19.9	18
Water supply	390	351	-9.9	-39
Construction	5,605	6,784	21.0	1,179
Wholesale & retail trade	18,347	19,922	8.6	1,575
Transportation & storage	10,914	11,929	9.3	1,015
Accommodation & food service	10,185	11,237	10.3	1,052
Information & communication	2,818	3,284	16.5	466
Financial & insurance	4,303	4,346	1.0	43
Real estate activities	1,890	2,265	19.9	375
Professional, scientific & tech	8,725	11,472	31.5	2,747
Administrative & support	6,324	8,028	26.9	1,704
Public administration & defence	6,141	5,355	-12.8	-787
Education	12,440	12,340	-0.8	-100
Human health & social work	15,861	17,073	7.6	1,212
Arts, entertainment & rec	3,020	3,836	27.0	815
Other service activities	3,364	3,914	16.3	550
Total	**115,377**	**125,937**	**9.2**	**10,560**

Source: Oxford Economics
Note: Data presented is on an annual basis

4.2 Economic Growth Scenarios

4.2.1 Local economic forecasting is not a precise science, to help to better understand the uncertainties scenarios are used to examine the impact on policy of different growth trajectories. We have chosen two scenarios to help quantify the uncertainty; first one which considers the effects on York of a stronger economic recovery driven by national and international factors; second we have considered how local priorities and interventions could affect the York economy.

Scenario 1 Higher Migration Faster recovery

4.2.2 Scenario 1 assumes higher migration and a faster recovery of the UK economy. The assumptions remain the same as per the original analysis in February 2012, namely:

- 0.4pp higher growth per annum 2014 onwards at UK level;
- Gradual productivity improvement (1.0% higher productivity by 2020, rising to 2.5 % higher by 2030); and
- 60% of additional jobs will be taken by migrants.

4.2.3 The scenario assumes that UK recovery accelerates with GVA growth increasing from 2.6% per annum to 3.0% per annum over the period 2014-2031. York is impacted by a similar magnitude with average growth also increasing by 0.4 percentage points. Faster rates of growth are also accompanied by productivity increases, with York's productivity growth expected to increase to 2.1% per annum.

4.2.4 The employment outlook is much stronger than the baseline, with the results suggesting an increase of 15,500 jobs, an additional 4,900 above the baseline. The employment level within York is thus expected to exceed 130,000 by 2030. Employment growth is expected to average 0.7% per annum compared with 0.5% under the baseline. This is equivalent to a change of 15,920 jobs between 2013/14 to 2030/31.

4.2.5 Within York, all sectors are expected to benefit under the scenario. Wholesale & retail trade is expected to enjoy the biggest gains in absolute terms, with a net additional 2,400 jobs forecast by 2031.

4.2.6 The scenario assumes increased investment and higher exports performance. This provides a significant boost to manufacturing, information & communications and professional services. Thus the contraction within manufacturing employment is expected to slow with the scenario suggesting a fall of 1000 jobs by 2031 compared with 1,130 under the baseline. Job creation within professional services and information and communications are expected to increase from 2,750 and 470 net jobs to almost 3,160 and 595 under the scenario.

Figure 8: Forecast comparison between Baseline and Scenario 1

York employment

Oxford Economics' forecasts comparison May 2015 & Scenario 1	Level - May 2015		Level - Scenario 1		Level change 2014-31		
	2014	2031	2014	2031	May 2015	Scenario 1	Diff
Agriculture, forestry & fishing	669	534	669	555	-135	-114	21
Mining & Quarrying	0	0	0	0	0	0	0
Manufacturing	4,291	3,160	4,291	3,294	-1,131	-997	134
Electricity, gas, steam & air	92	111	92	116	18	23	5
Water supply	390	351	390	366	-39	-24	15
Construction	5,605	6,784	5,605	7,039	1,179	1,434	256
Wholesale & retail trade	18,347	19,922	18,347	20,755	1,575	2,408	833
Transportation & storage	10,914	11,929	10,914	12,415	1,015	1,501	486
Accommodation & food service	10,185	11,237	10,185	11,683	1,052	1,498	446
Information & communication	2,818	3,284	2,818	3,413	466	595	129
Financial & insurance	4,303	4,346	4,303	4,546	43	244	201
Real estate activities	1,890	2,265	1,890	2,340	375	450	75
Professional, scientific & tech	8,725	11,472	8,725	11,885	2,747	3,160	413
Administrative & support	6,324	8,028	6,324	8,334	1,704	2,010	306
Public administration & defence	6,141	5,355	6,141	5,556	-787	-585	201
Education	12,440	12,340	12,440	12,765	-100	325	425
Human health & social work	15,861	17,073	15,861	17,718	1,212	1,857	645
Arts, entertainment & rec	3,020	3,836	3,020	3,983	815	962	147
Other service activities	3,364	3,914	3,364	4,081	550	717	167
Total	**115,377**	**125,937**	**115,377**	**130,842**	**10,560**	**15,464**	**4,904**

Source: Oxford Economics

Scenario 2 Re-Profiled Sector Growth

4.2.7 The second scenario considered was the impact of faster growth in professional services, financial & insurance, and information & communication accompanied with lower growth within wholesale & retail trade and accommodation & food services. The scenario assumes that the UK outlook remains unchanged from the baseline, with the assumptions being applied at the local level and thus aims to align future sectoral trends with the Strategic Economic Plans. The assumptions used are set out below:

- 20% higher growth than the baseline projection within professional services, financial & insurance, and information & communication
- 10% lower growth than the baseline projection within wholesale & retail trade, accommodation & food services

4.2.8 Under scenario 2, there is a positive impact on GVA growth within York, with minimal impact upon employment growth. GVA growth within York increases from 2.4% per annum to 2.5% per annum over the period 2014-2031. GVA growth with Yorkshire & Humber and the UK remains unchanged from the baseline. Employment growth is slightly higher under scenario 2, though considerably below the rate assumed within scenario 1. The results suggest an increase of over 11,050 jobs within York by 2031, 490 above the baseline. The employment level within York is expected to exceed 126,000 by 2031, with jobs growth forecast to average 0.54% per annum, slightly above the baseline rate of (0.52%). Such growth is equivalent to a change of 11,680 jobs between 2013/14 to 2030/31.

4.2.9 Within York, professional services are expected to enjoy the biggest gains under scenario 2, with employment expected to increase by almost 3,300 by 2031. Growth within information & communications is also faster, an increase of almost 570 jobs within York by 2031, over 100 above the baseline. As a result of the increased level of activity in these sectors, a number of other sectors including administrative & support and construction are also expected to enjoy small indirect gains compared to the baseline.

Figure 9: Employment in York

York employment

Oxford Economics' forecasts comparison May 2015 & Scenario 2	Level - May 2015		Level - Scenario 2		Level change 2014-31		
	2014	2031	2014	2031	May 2015	Scenario 2	Diff
Agriculture, forestry & fishing	669	534	669	534	-135	-135	0
Mining & Quarrying	0	0	0	0	0	0	0
Manufacturing	4,291	3,160	4,291	3,160	-1,131	-1,131	0
Electricity, gas, steam & air	92	111	92	111	18	18	0
Water supply	390	351	390	351	-39	-39	0
Construction	5,605	6,784	5,605	6,808	1,179	1,203	25
Wholesale & retail trade	18,347	19,922	18,347	19,759	1,575	1,412	-163
Transportation & storage	10,914	11,929	10,914	11,950	1,015	1,037	21
Accommodation & food service	10,185	11,237	10,185	11,132	1,052	947	-105
Information & communication	2,818	3,284	2,818	3,387	466	569	103
Financial & insurance	4,303	4,346	4,303	4,355	43	52	9
Real estate activities	1,890	2,265	1,890	2,273	375	384	8
Professional, scientific & tech	8,725	11,472	8,725	12,020	2,747	3,295	548
Administrative & support	6,324	8,028	6,324	8,057	1,704	1,733	30
Public administration & defence	6,141	5,355	6,141	5,355	-787	-787	0
Education	12,440	12,340	12,440	12,340	-100	-100	0
Human health & social work	15,861	17,073	15,861	17,073	1,212	1,212	0
Arts, entertainment & rec	3,020	3,836	3,020	3,843	815	822	7
Other service activities	3,364	3,914	3,364	3,921	550	557	7
Total	115,377	125,937	115,377	126,428	10,560	11,050	490

Source: Oxford Economics

Comparison with the Experian REM forecast

4.2.10 There are a number of different organisations who provide local regional and national economic forecasts that can be used to aid local policy making. The City of York Council has for a number of years used Oxford Economics in support of work in Development Plan preparation. However York's immediate neighbours with whom the city shares a Functional Economic Area have used Experian REM for their economic forecasting. Therefore, to help in developing a comparable evidence base through which any strategic issues identified through the Duty to Cooperate can be fully assessed we asked OE to compare their forecasts for York with the most recent forecasts of the Experian REM.

4.2.11 Oxford Economics' June 2015 long term employment forecasts for York are similar to those provided by the REIU. Oxford Economics forecast an additional 10,560 jobs in York between 2014 and 2031 compared with the REIU projection of 11,977, a difference of approximately 1,417 jobs. These absolute changes in the level of employment are equivalent to an average annual growth rate of 0.5% in the Oxford Economics' forecast compared with 0.6% from the REIU. The starting level (2014 estimate) of employment in York underpinning these forecasts is lower in Oxford Economics' dataset (115,377) than in the REIU dataset (117,699).

Figure 10: York's Employment Index

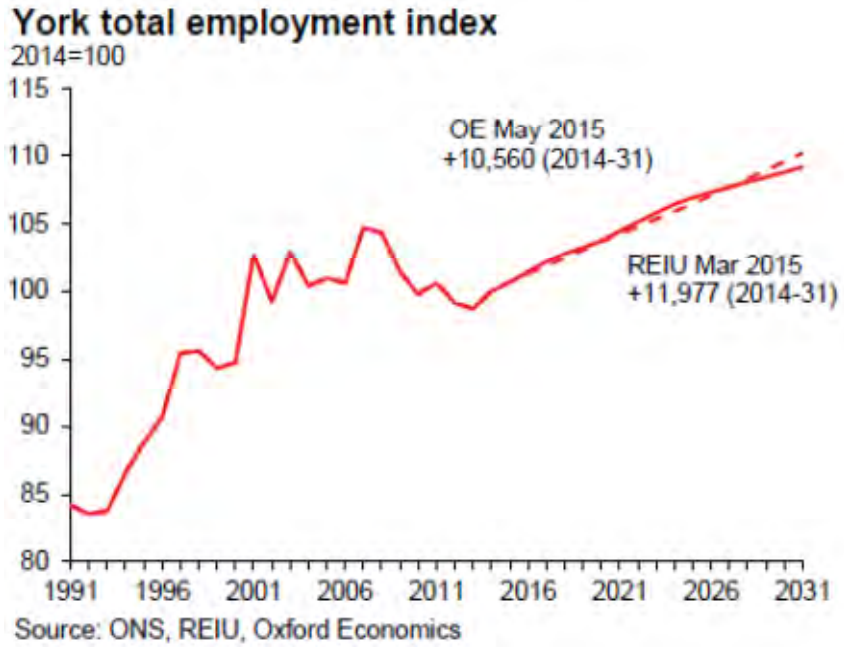


Figure 11: Comparison of employment Forecasts

York employment

Oxford Economics' May 2015 and REM Mar 2015 forecast comparison	Level - OE May 2015		Level - REM Mar 2015		Level change 2015-31		
	2015	2031	2015	2031	OE	REM	Diff
Accomodation, Food Servs & Rec	16,815	18,986	13,958	12,830	2,171	-1,128	3,299
Agriculture, Forestry & Fishing	642	534	745	472	-108	-273	164
Construction	5,628	6,784	5,841	6,160	1,156	319	837
Extraction & Mining	0	0	2	1	0	-1	1
Finance & Insurance	4,296	4,346	5,655	4,990	49	-664	714
Information & communication	2,867	3,284	2,733	2,321	416	-412	829
Manufacturing	4,303	3,160	4,298	3,475	-1,143	-822	-321
Professional & Other Private Servs	17,142	21,765	22,781	24,832	4,622	2,051	2,571
Public Services	34,416	34,768	35,909	46,903	352	10,994	-10,643
Transport & storage	11,101	11,929	8,479	9,522	828	1,043	-215
Utilities	485	462	407	421	-23	14	-37
Wholesale & Retail	18,434	19,922	17,709	17,747	1,487	38	1,449
Total	**116,130**	**125,937**	**118,516**	**129,675**	**9,807**	**11,160**	**-1,352**

Source: Oxford Economics, REIU

4.2.12 Despite the employment outlook's being similar, the sectoral composition of employment growth differs considerably between the two datasets. Oxford Economics' forecast is for job creation in York to be led by the private services sector, with about 46% of new jobs being created in professional, scientific & technical activities and administrative & support services activities (Professional and other private service in the table below). Forecasts from the REIU have a much smaller proportionate contribution from these sectors. The REIU forecasts suggest that growth will be led by public services, accounting for over 90% of growth. Oxford Economics' assumes public sector employment growth will be

restricted by government austerity, particularly in the short run, and forecast less than 5% of new jobs created in York by 2031 coming from these sectors.

4.3 Conclusions – Objectively Assessed Need Scenarios

4.3.1 Table xx below provides a summary of the outcomes of the different economic forecasts that have been considered earlier in the report.

Table 1: Summary of economic scenario outcomes

	Total employment at 2015	Job growth	Difference compared to baseline
	115,377		
OE trend		10,560	
OE Scenario 1		15,646	4,904
OE Scenario 2		11,050	490
Experian REM	118,516	11,977	

4.3.2 In light of the analysis of the evidence of future economic growth in the city the objectively assessed development needs should be flexible to allow for either the OE trend forecast or a change in sector mix as set out in Scenario 2 prepared by OE. The objectively assessed need should also be subject to further testing against trends in the past take up of employment land and any known constraints which have affected this historic take up. This further testing is addressed in Section 5 of this report.

4.3.3 The Experian REM forecast demonstrates that the forecast of job growth and consequent land requirements for York prepared by OE aligns with the forecasts of adjoining authorities within the Functional Economic Area. This will enable a coherent assessment of any strategic issues identified through activity under the Duty to Cooperate on strategic planning matters.

5 ASSESSING THE NEED AND DEMAND FOR EMPLOYMENT LAND

5.0.1 Having established the scale of the growth in jobs which is the first stage in determining the objectively assessed need for the local economy, this growth in jobs is converted into a requirement for land to accommodate the jobs.

5.0.2 This study has used two approaches to assessing the need and demand for employment land. The primary approach is that of using econometric forecasts of job growth to project the need for additional land to accommodate the growth in jobs. This work is then 'sense tested' against historic trends in the take up of employment land over a full cycle of the land market.

5.0.3 The forecasting of need and demand for employment land by using an econometric model to forecast job growth and converting that into a land requirement can be broken down into the four component parts set out below: -

5.1 Forecasting the demand for land using job growth

5.1.1 This approach to forecasting the need and demand for employment land can be divided into the following stages:

1. Analysis of change of supply 2012-16
2. Analysis of churn and flexibility requirements 2016-2032

1. Employment Land demand from forecast job growth

5.1.2 Using econometric forecasts as a basis for future employment land requirements is well established practice. In order to convert these econometric forecasts to floorspace requirements, a number of calculations are required. Namely,

a) Combining actual 2012-14 jobs growth figures with forecasts for 2014-2031
b) Converting forecasts to full time equivalent jobs
c) Allocating jobs to use class by sector
d) Converting jobs to floorspace based on employment densities for different uses
e) Factoring in vacancies

Stage a) Combining actual 2012-14 jobs growth figures with forecasts for 2014-2031

5.1.3 Considerations around econometric forecasts both from Oxford Econometrics and the Regional Econometric Model are detailed at length earlier in the report, with two scenarios being chosen for progression. These are the Oxford Economics Baseline Long Term Forecast May 2015 2014-31, and the adapted Oxford Economics Long Term Forecast 2014-31 with similar overall growth but re-profiled sector makeup based on local knowledge to deliver real wage growth rather than decline. These are 'OE baseline' and 'OE scenario 2' below.

5.1.4 Given the Local Plan period is from 2012, the most accurate figures for 2012 to 2014 are the actual change in jobs figures for this period, so these have been used in both scenarios.

Table 2: Job growth forecasts (headcount)

Sector	2012-14 BRES change	OE baseline forecast 2014-31	OE scenario 2 forecast 2014-31	Baseline 2012-31	Scenario 2 2012-31
Agriculture, forestry & fishing	0	-135	-135	-135	-135
Mining and quarrying	0	0	0	0	0
Manufacturing	-100	-1,131	-1,131	-1,231	-1,231
Electricity, gas, steam and air	-100	18	18	-82	-82
Water supply	-50	-39	-39	-89	-89
Construction	150	1,179	1,203	1,329	1,353
Wholesale & retail trade	1,000	1,575	1,412	2,575	2,412
Transportation & storage	-350	1,015	1,037	665	687
Accommodation & Food	900	1,052	947	1,952	1,847
Information & Communication	600	466	569	1,066	1,169
Financial and insurance	-500	43	52	-457	-448
Real estate	550	375	384	925	934
Professional, scientific & tech	-350	2,747	3,295	2,397	2,945
Admin & Support	200	1,704	1,733	1,904	1,933
Public Admin & Defence	200	-787	-787	-587	-587
Education	-50	-100	-100	-150	-150
Health & Social Work	0	1,212	1,212	1,212	1,212
Arts, Entertainment & Recreation	-350	815	822	465	472
Other service activities	200	550	557	750	757

Source: Oxford Economics / ONS

Stages b) Converting forecasts to full time equivalent jobs; c) allocating jobs to use class by sector and d); and converting jobs to floorspace based on employment densities for different uses.

5.1.5 In order to understand the demand for floorspace requirements, these jobs figures have been firstly converted to full time equivalent jobs because standard methodology for employment densities uses full time equivalent jobs, where as the econometric forecasts above provide total headcount counting both full time and part time jobs equally.

5.1.6 Secondly, these jobs figures have then been allocated to use class by sector, using a version of the Roger Tym Planning methodology. Finally, HCA employment density figures have been used to convert jobs to floorspace requirements. All these assumptions are detailed in Annex A.

Stage e) Factoring in vacancies

5.1.7 The normal operations of the market for land and buildings, requires a proportion of the stock to be vacant at any one time to enable movement between premises in the market. Experience of how the market for land and buildings for employment indicates that this should be a minimum of 5% and in weaker market conditions it could rise to 10%. We have chosen to apply a 5% vacancy factor.

Outcomes of Forecast :

5.1.8 Table 3 shows the forecast demand for employment factoring in 5% vacancy for both the baseline and Scenario 2 as converted from the job growth forecasts.

Table 3: Floorspace demand from forecast job growth 2012 – 2031 (original)

Use Class	Baseline 2012-31				Scenario 2 2012-31			
	Floorspace (m2)	With 5% vacancy	Land (Ha)	With 5% vacancy	Floorspace (m2)	With 5% vacancy	Land (Ha)	With 5% vacancy
B1a	44,551	46,779	7.4	7.8	51,887	54,481	8.6	9
B1b	5,949	6,246	1.5	1.6	7,541	7,918	1.9	2
B1c	5,193	5,453	1.3	1.4	5,570	5,849	1.4	1.5
B2	-19,035	-19,987	-4.8	-5	-18,746	-19,683	-4.7	-4.9
B8	56,838	59,680	11.4	12	56,359	59,177	11.3	11.9
D2	15,916	16,712	4	4.2	16,186	16,995	4	4.2

Total[5]	**128,447**	**134,870**	**26**	**27**	**137,543**	**144,420**	**27**	**29**

5.1.9 However, whilst the evidence base was commissioned to project to 2031, the plan period has adjusted to 2032. Therefore the figures in Table 4 have been adjusted by calculating the yearly average and adding one year to the original totals set out in Table 3.

Table 4: Floorspace demand from forecast job growth 2012 – 2032 (including extra Year)

Use Class	Baseline 2012-32				Scenario 2 2012-32			
	Floorspace (m2)	With 5% vacancy	Land (Ha)	With 5% vacancy	Floorspace (m2)	With 5% vacancy	Land (Ha)	With 5% vacancy
B1a	46,895.8	49,241.1	7.8	8.2	54,617.9	57,348.4	9.1	9.5
B1b	6,262.1	6,574.7	1.6	1.7	7,937.9	8,334.7	2.0	2.1
B1c	5,466.3	5,740.0	1.4	1.5	5,863.2	6,156.8	1.5	1.6
B2	-20,036.8	-21,038.9	-5.1	-5.3	-19,732.6	-20,718.9	-4.9	-5.2
B8	59,829.5	62,821.1	12.0	12.6	59,325.3	62,291.6	11.9	12.5
D2	16,753.7	17,591.6	4.2	4.4	17,037.9	17,889.5	4.2	4.4
Total[6]	135,207.4	141,968.4	26.9	28.4	144,782.1	152,021.1	28.6	30.1

Please note:

- Negative figures are included as 0 in the totals on the basis that floor space and consequent land losses are unlikely to be suitable for reuse by other employment uses.
- The assumptions used to convert floorspace to land requirements are detailed in annex A.

5.1.10 Given the need for land requirements to be able to meet both the OE baseline scenario and scenario 2, from this point on in the report only figures for scenario 2 are included on the basis that this is the higher of the two requirements. Provision for this scenario therefore also meets requirements for the trend scenario.

5.1.11 Neither forecast take an overly-ambitious perspective of significant additional jobs growth against baseline forecasts, so the differences between the scenarios on employment land requirements is minimal. Nevertheless, sensitivity testing has been carried out against both scenarios.

2. Analysis of change of supply 2012-16

5.1.12 The base date for the emerging Local Plan is 1st April 2012. Between 1st April 2012 and 31st March 2016 there have been changes to the employment land

[5] Totals only include positive land requirements, so exclude any projected negative demand for B2.
[6] Totals only include positive land requirements, so exclude any projected negative demand for B2.

supply based upon planning consents and completions. Table 5 shows the change of supply by use class over this time period.

5.1.13 A threshold of 400sqm has been applied to capture major development across the city.

Table 5: Change in supply by use class over threshold (400sqm) 2012-2016

Use Class	Gained	Lost	Net	
	Floorspace (m2)	Floorspace (m2)	Floorspace (m2)	Land (Ha)
B1a	21,579	-16,790	4,788	1.1
B1b	868	0	868	0.1
B1c	420	-412	8	0.03
B2	2,200	-2,236	-36	0
B8	2,233	-4,068	-1,835	0
Sub total for B uses	**27,300**	**23,506**	**3793**	**1.3**
D2	10,718	-2,262	8,456	2.2
Total	**38,018**	**-25,768**	**12,249**	**3.5**

5.1.14 The net change needs to be accounted for in order to ensure an accurate figure for the supply of employment land in York can be identified without double counting for development already completed since the beginning of the plan period.

5.1.15 It is important to note that the following assumptions have been made in relation to Table 5:

- Where land had functionally redundant for a significant number of years (for example Terry's), these developments or demolitions have not been included under employment land 'lost', as effectively these are viewed as spare or redundant capacity, so their inclusion would be a misrepresentation of employment land which needs to be resupplied. Additional historic spare capacity beyond this could be considered as part of future allocations, however it is difficult to accurately quantify therefore further adjustments have not been made on this basis.
- Developments below 400sqm have been excluded.
- Demolitions of employment premises are not included where they are individual applications for demolition. Figures in Table X therefore exclude the loss of 36,000sqm of B1a office demolished at Clifton Moor during 2015/16 (14/02641/DMNOT).
- Commitments are not included, as they are still subject to completion. These will be monitored throughout the Local Plan period and be taken account of through flexibility of land allocation.

Change of Supply Outcomes:

5.1.16 Factoring in the supply over the period 2012 to 2016 provides figures for the unmet requirements which will need to be provided for over the remainder of the local plan period, as shown by Table 6.

Table 6: Scenario 2 - Remaining unmet demand 2012-32 (inc 5% vacancy), factoring in change of supply 2012-16

Use Class	NET Floorspace Completions (2012-2016)		Scenario 2 - 2012-32			
	Floorspace (m2)	Land (Ha)	ORIGINAL REQUIREMENT (inc. 5% vacancy) (from Table X)		REVISED REQUIREMENT for 2016-2032 (inc. 5% vacancy + 2012-2016 completions)	
			Floorspace (m2)	Land (Ha)	Floorspace (m2)	Land (Ha)
B1a	4,788	1.1	57,348.4	9.5	52,560.4	8.4
B1b	868	0.1	8,334.7	2.1	7,466.7	2.0
B1c	8	0.03	6,156.8	1.6	6,148.8	1.5
B2	0 (-36)	0	0 (-20,718.9)	0 (-5.2)	0 (-20,718.9)	0 (-5.2)
B8	0 (-1835)	0	62,291.6	12.5	62,291.6	12.5
B uses sub-total	**5,664**	**1.23**	**134,131.5**	**25.7**	**128,467.5**	**24.4**
D2	8,456	2.2	17,889.5	4.4	9,433.5	2.2
Total	**14,120**	**3.5**	**152,021.1**	**30.1**	**137,901.1**	**26.6**

NB: Negative figures in the total calculation are 'set to zero' on the basis that floor space and consequent land losses are unlikely to be suitable for reuse by other employment uses.

5.2 Analysis of supply flexibility requirements

5.2.1 In a previous employment land review for the City carried out by ENTEC (2007), they describe accounting for 'churn' in the local property market as follows: *"The 'changing needs of potential occupiers over time, to ensure some degree of competition in the local land market and to recognise the fact that there will always be a degree of error in employment forecasts, especially the further into the future they go".* There are a number of factors to be considered here:

- Factoring in time for developments to complete
- Factoring in potential loss of employment land over the Plan period to other uses
- Factoring in choice

5.2.2 To take account of the considerations above ENTEC factored in an extra 2 years of supply to be included in land allocations.

5.2.3 It is more difficult to make accurate quantitative forecasts on the potential loss of employment land over the plan period to other uses. Potential approaches used are:

- A blanket assumption that a given % of stock will be lost each year
- Projecting forward past losses assuming that past trends will hold true for the Plan period
- A qualitative assessment of the existing stock of buildings from which conclusions are drawn as to how much of this stock could be lost over the plan period

5.2.4 Given that the demand forecasts already include 5% for vacancies (see 5.1) and a 5 year supply for green belt considerations (see 5.3), a quantitative figure for future change away from business use has not been applied to overall land requirement figures. While planning consents that have not been developed and future projections of churn are not included within assumptions, there is potential risk of undersupply due to the possibility of changes of use over the plan period, particularly given local trends since the introduction of permitted development rights for changing B1 to C3 use. Therefore, this is something which needs to be considered within the supply of sites. Furthermore, monitoring and responding to changes in supply is something which should continue to be done throughout the Plan period.

5.2.5 Ensuring flexibility for change of use has been considered within the supply of sites in Section 6 through the quantum and range of sites allocated. Likewise, flexibility in supply to enable choice is addressed through a range of complementary allocations of proposed sites.

5.3 Analysis of job growth requirements Post Plan (2032-37)

5.3.1 Whilst the General extent of York's Green Belt is identified in the saved Yorkshire and Humber RSS policies relating to York[7], the inner Green Belt boundaries will be set through the emerging Local Plan. The emerging plan allows for 5 years post plan period in order to provide a degree of permanency for the Green Belt taking the plan to 2037.

5.3.2 In order to be taken into account for green belt allocation to 2037, it is helpful to analyse 2032-37 employment land requirements. Given that it is difficult to accurately predict long term trends, the average demand over the period 2012-2031 using Oxford Econometrics baseline forecast has been used proportionally.

[7] The Regional Spatial Strategy for Yorkhsire and Humber (Partial Revocation) Order 2013

5.3.3 The resultant floorspace / ha will be added onto overall housing demand (see Table 7).

Table 7: Floorspace Requirements 2032-2037

Use Class	Baseline 2032-37			
	Floorspace (m2)	With 5% vacancy	Land (Ha)	With 5% vacancy
B1a	11,724	12,310	1.9	2.1
B1b	1,566	1,644	0.4	0.4
B1c	1,367	1,435	0.3	0.4
B2	-5,009	-5,260	-1.3	-1.3
B8	14,957	15,705	3.0	3.2
D2	4,188	4,398	1.1	1.1
Total[8]	**33,802**	**35,492**	**6.8**	**7.1**

5.4 Overall Demand

5.4.1 Taking into account the factors set out in sections 5.1 and 5.3 of this report, there is a resultant demand for 173,393 sqm of employment floorspace. This is delineated by use class in Table 8.

Table 8: Scenario 2 Employment land requirements 2016-37 (inc 5% vacancy), factoring in change of supply 2012-16

Use Class	Scenario 2 2016-32		Scenario 2 2032-37		Scenario 2 Total 2016-2037	
	Floorspace (m2)	Land (Ha)	Floorspace (m2)	Land (Ha)	Floorspace (m2)	Land (Ha)
B1a	52,560	8.4	12,310	2.1	64,870	10.5
B1b	7,467	2	1,644	0.4	9,111	2.4
B1c	6,149	1.5	1,435	0.4	7,584	1.9
B2	0 (-20,719)	0 (-5.2)	0 (-5,260)	0.0 (-1.3)	0 (-25979)	0.0 (-6.5)
B8	62,292	12.5	15,705	3.2	77,997	15.7
B uses sub-total	**128,468**	**24.4**	**31,094**	**6.0**	**159,562**	**30.4**
D2	9,434	2.2	4,398	1.1	13,832	3.3
Total	**137,901**	**26.6**	**35,492**	**7.1**	**173,393**	**33.7**

NB: This excludes churn and flexibility requirements (as set out in Section 5.2).

[8] Totals only include positive land requirements, so exclude any projected negative demand for B2.

5.4.2 In respect of identifying land for employment purposes in the Local Plan, the main requirements are to accommodate the 'B' use classes. This amounts to 30.4ha without discounting for the negative figure for B2 uses

5.4.3 Please be aware that the floorspace requirements for 'A' use classes are dealt with separately through a retail study undertaken for the Council by WYG. In addition, 'C' uses including hotels, types of supported living (e.g. care homes for the elderly and residential colleges) etc are likely to be accommodated on land allocated for residential purposes or come forward windfall sites. There is enough flexibility in these sources of supply to accommodate these uses.

5.4.4 The D1 uses such as health facilities and day nurseries are more likely to be accommodated in residential areas and as a consequence will use land allocated for housing rather than employment uses.

Indicative demand factoring in additional 2 years Land supply

5.4.5 As set out in section 5.2 of this report, an additional 2 year land supply to allow for time for developments to complete should be factored into allocations. Factoring this in the B use land supply increases the requirement by approximately 3 hectares to 33.3 ha.

Table 9: INDICATIVE Scenario 2 Employment land requirements 2016-37 (inc 5% vacancy), factoring in change of supply 2012-16 and including 2 years extra supply.

Use Class	Scenario 2 Total 2016-2037		Scenario 2 Total 2016-2037 INCLUDING 2 years extra supply	
	Floorspace (m2)	Land (Ha)	Floorspace (m2)	Land (Ha)
B1a	64,870	10.5	71,049	11.4
B1b	9,111	2.4	9,978	2.7
B1c	7,584	1.9	8,306	2.0
B2	0	0.0	0	0.0
B8	77,997	15.7	85,425	17.2
B uses sub-total	**159,562**	**30.4**	**174,758**	**33.3**
D2	13,832	3.3	15,149	3.6
Total	**173,393**	**33.7**	**189,907**	**37.0**

NB: This excludes flexibility for future potential change of use and choice, which as outlined in 5.2 will be dealt within the allocation of sites.

6 THE LAND SUPPLY

6.1 Site Identification

6.1.1 There were a number of stages undertaken to identify suitable sites for potential use as employment land. These were as follows:

Call for Sites and Site Submissions

6.1.2 City of York under took a call for sites in 2012 asking for landowners, developers and the public to submit land which could be considered for different potential uses. In addition, new sites and site modifications were also submitted through the Preferred Options Consultation (2013) and as part of the Further Sites Consultation (2014). All of the sites received have been taken through the site suitability process to help identify the most suitable sites for allocation.

6.1.3 In total 156 were considered for employment land (including alternative boundaries for the same site). Where sites were submitted for housing, we also assessed their potential for employment to identify where there may be alternative appropriate land uses.

Stage 1: Site Suitability using the emerging Spatial Strategy

6.1.4 All potential development sites included within this document complied with a four stage criteria based methodology reflecting the emerging Local Plan's Spatial Strategy. Sites which were located in the areas identified below were removed from the process or the site boundary amended to exclude the area within the identified asset. The key principles of this methodology were:

- **The protection of the City's unique heritage** –areas important to the historic character and setting of York, such as, land forming 'Green Wedges' around the historic Strays and river corridors, areas preventing coalescence of villages between themselves and to the main urban area; and areas that retain the rural setting of the city providing views of key landmarks such as the Minster.
- **The protection of environmental assets** – Green Infrastructure is considered central to managing any future growth, whether it is publicly or privately owned, statutory or non statutory, identified for its nature conservation or recreational value.
- **Appropriate management of Flood risk** – The geography of the city and its surroundings are such that there are significant areas at risk of flooding. Areas of high flood risk should therefore be avoided, where possible.
- **Achieving accessibility to sustainable modes of transport and a range of services –** York is a compact city with generally good public transport services. The relationship of potential sites to this network and ensuring that future sites are in proximity to basic service was a key factor in site selection.

Although it was acknowledged that sites over a certain size would be big enough to create their own services and public transport.

6.1.5 The site threshold for sites to be considered is 0.2 hectares and above. Any sites over 5 hectares have been considered as a Strategic Sites. Sites were also subject to a scoring mechanism wherein employment sites need to score above 13 points to be taken forward to the next stage. This reflected a minimum access requirement to sustainable transport (criteria 4). Nearly 60 sites passed this stage of the process.

6.1.6 Any sites which passed the criteria were then taken to CYC's Technical Officer Group for more detailed consideration regarding their potential for development. The Technical Officer Group consisted of specialist officers from around the Council who gave their expert opinion on suitability of sites. Further views were sought from consultants Driver Jonas Deloitte regarding the economic potential of any employment site. These comments were supplemented by those obtained from CYC Economic Policy Officers and were consulted at the Local Plan Preferred Options stage in 2013. This was followed by a Further Sites Consultation in 2014 and publication of the Site Selection Paper Addendum (2014).

6.1.7 On the basis of the work described Officers produced a publication draft Local Plan in autumn 2014. This process, however, was halted by Council resolution on the 9th October 2014. Following the Local Government Elections in May 2015 the agreement between the Conservative and Liberal Democrat Groups, to establish a joint administration for City of York Council from May 21st 2015 indicated that:

'We will prepare an evidence-based Local Plan which delivers much needed housing whilst focusing development on brownfield land and taking all practical steps to protect the Green Belt and the character of York.'

6.1.8 Within the context described above the aborted Local Plan provided the starting point to consider the employment land supply for the emerging Local Plan. The sites included in this aborted plan as set out in the draft Policy EC1are set out in Annex D.

6.2 Economic Assessment of Sites

6.2.1 The shortlist of sites has been subject to an economic appraisal to assess the extent to which proposed sites:

- Align with private sector requirements and demand for employment land, and market trends

- Help the city to achieve its economic ambitions, as outlined in its Economic Strategy, and that of the regional Strategic Economic Plans produced by the Local Enterprise Partnerships of which York is apart.

6.2.2 This appraisal does not seek to repeat the previous technical appraisal stages but has focused on weighing the evidence for the viability of sites for employment land against a number of key criteria outlined below and carried out by CYC economic policy officers.

Methodology for Economic Assessment

6.2.3 A set of criteria has been developed informed by previous economic appraisals by Drivers Jonas Deloitte and other Employment Land Review methodologies to undertake the economic assessment. While utilising this best practice, they have been developed in a way which is informed by local economic knowledge e.g. York railway station's key position on the national network.

6.2.4 The application of the criteria has also been determined by the city's Economic Strategy and the Local Enterprise Partnership Strategic Economic Plans. Specifically, the criteria are directly informed by stated priorities in these documents around raising wage levels in the city through high value sector, research/university led business growth and building on the city's rail connectivity assets with York Station as a High Speed Hub.

6.2.5 The economic assessment criteria include:

1. Travel time to motorway in peak time by car

6.2.3 Excellent connections to the strategic road network are vital for businesses in being able to transport their goods and people quickly and reliably, and enable an accessible location for suppliers, customers and workforce. In particular for York, this means proximity to the major A1(M) or M62 motorways which provides access to a significant pool of businesses, customers and workforce across the North, and road connections to the rest of the country.

6.2.4 This is particular true for sectors using B2 or B8 employment land (see weightings), particularly higher value businesses with widespread customer bases, and this trend bears out in local intelligence on demand for these use classes.

6.2.5 Given the primary issue for business in relation to connectivity is not so much distance but time and reliability, an estimate of peak travel times from sites to any point on the motorway network has been taken as the basis to assess this criteria.

2. Travel time to York railway station in peak time by any mode

6.2.6 As above, rail connections are important for many businesses in being able to enable an accessible location for suppliers, customers and workforce. For York

this is even more pertinent given the station's key position on the national rail network enabling travel times to London in 1 hour and 45 minutes.

6.2.7 This criterion also ensures that we reflect the benefit of sites with close proximity to the York's city centre, and the profile, customer base and agglomeration of businesses this affords (Beyond the High Street, Centre for Cities, 2013). Again, this is particularly significant in a city like York with an average annual footfall in the city centre of 9.6m, the national profile of the city's historic core, and higher than average commuting in York by foot or bicycle.

6.2.8 There is also strong evidence (Centre for Cities, 2013) that high value sectors requiring B1a office space tend to prefer city centre/ locations with high quality rail access due to their workforce requirements and business practices. This also reflects local experience of demand trends in the office market, particularly in light of the reduction of available city centre office space as an unintended consequence of Permitted Development Rights and conversions from office to housing. There is additionally the issue of the quality of the second hand space on offer.

6.2.9 Again, given the primary issue for business in relation to connectivity is not so much distance but time and reliability, an estimate of peak travel times from sites to York station by any mode of travel (given onward connectivity is public transport) has been taken as the basis to assess this criteria.

3. Current agglomeration with other businesses

6.2.10 Sites with a high agglomeration of businesses in the proximity provide a number of benefits for companies and therefore the comparative viability of sites. This includes strong opportunities for customer, supplier and collaborative relationships between businesses, a vibrant 'business environment' for the workforce and the market for support services and amenities, and opportunities arising for grow on space or relocation to larger premises within the vicinity of existing workforce.

6.2.11 This agglomeration could be through the expansion of existing business parks or where sites are in close proximity to a number of businesses on sites in discrete ownership. Therefore, the scoring is based on number of businesses in the vicinity, and type of agglomeration, rather than absolute density.

6.2.12 Given York's economic strategy's focus on raising wages and high value jobs, higher scores have been given where the agglomeration is around high value businesses or sectors. By this we mean industrial sectors (defined by SIC codes) with average wages above the national median.

4. Size of site offering potential for future agglomeration and market flexibility

6.2.13 As above, high agglomeration of businesses provides a number of benefits for companies and therefore the comparative viability of sites; which larger sites facilitate by their very nature. In considering flexibility to market conditions and business requirements, larger sites also facilitate greater adaptability to meet be able to accommodate a greater profile of business demand. This is particularly applicable for sectors requiring B2 and B8 employment land which often have greater floorspace requirements per business (see weighting).

5. Assessment of current demand

6.2.14 Clearly, there are huge economic benefits for sites where there is demonstrable market demand, either through businesses already located on / adjacent to proposed sites, or businesses seeking to locate to the specific site or one which matches the specification of the site being proposed. This is therefore reflected accordingly in the criteria, with clear parameters given within the scoring, with higher scores given where evidence is more robust or immediate. Nevertheless, it is difficult for this assessment to be entirely formulaic, and given the lead in time for Local Plan (i.e. some demand may have been met through alternative sites in the meantime) and issues around commercial confidentiality, this should be acknowledged.

6.2.15 Again, given York's economic strategy's focus on raising wages and high value jobs, higher scores have been given where the evidenced demand is from high value businesses or sectors.

6.2.16 We should not lose sight of the demand in local areas in locations which , on the face of it, don't score very well. With this in mind we should look at an evidence of demand provided by site owners once the general scoring of sites is complete.

6. Proximity to research and knowledge assets

6.2.17 Finally, many cities (including York), have seen rapid business growth and demand for sites in close proximity to research and knowledge assets such as Universities and other Centres of Excellence. The Witty Review (2013) outlined significant evidence of the role universities have had and are able to play in driving tangible business growth in their locality, and places such as Coventry (through Warwick University), Bath and Cambridge have seen much of their high value jobs stemming from these sources. There are a number of benefits of sites in close promixity to such knowledge assets, including access to research and IP, the opportunities arising from collaboration with institutions or research organisations, and access to graduate workforce.

6.2.18 York's economic strategy (as well as Local Enterprise Partnership Strategic Economic Plans)'s focus on research and university led growth makes clear the importance of this link, particularly around bioscience and digital sectors, hence the inclusion of this factor of promixity to research and knowledge assets.

6.2.19 By research and knowledge assets, we mean universities (particular university of York with 'world class' rated bioscience and digital research applicable to industry), Fera Science or Stockbridge Technology Centre in Cawood.

6.2.20 This criterion only has scores to 4 (rather than 5) given the relative impact on business demand in relationship to the location of specific sites.

Scoring against the Criteria

6.2.21 Each of the criteria is split into categories with an applicable score and weighted according to the relative different impacts on market demand. Figure 12 sets out the scoring mechanism used.

Figure 12: Economic Scoring mechanism					
	Score				
	1	2	3	4	5
1. Travel time to motorway in peak time by car	More than 30 minutes	Less than 30 minutes	Less than 25 minutes	Less than 20 minutes	Less than 15 minutes
2. Travel time to York railway station in peak time by any mode	More than 20 minutes	Less than 20 minutes	Less than 15 minutes	Less than 10 minutes	Less than 5 minutes
3. Current agglomeration with other businesses	No current industry/ offices on site	1-3 current businesses present on site or within 5 minutes walking distance	Several businesses present in the area within 5 minutes walking distance	Several high value businesses present on site or in the area within 5 minutes walking distance	Part of / expansion to bespoke high value business park
4. Size of site offering potential for future agglomeration and market flexibility	Size of site below 1 hectare	Size of site between 1 and 10 hectare	Size of site between 10 and 20 hectare	Size of site 20 to 50 hectare	Size of site 50 hectares +
5.Assessment of current demand	No evidence of demand; or evidence of low demand for site or similar sites (e.g. businesses leaving, low occupancy levels)	Some evidence of demand (e.g. strong take up/occupancy levels of similar specification sites, independent demand analysis)	Some evidence of demand with high value industry/ businesses (e.g. strong take up or occupancy levels of site/similar specification sites, independent demand analysis)	Demonstrable demand with occupiers lined up, e.g. businesses from existing/adjacent site expanding, specific end user interest awaiting planning decisions to proceed	Demonstrable demand with named high value occupiers lined up e.g. businesses from existing/adjacent site expanding, specific end user interest awaiting planning decisions to proceed
6. Proximity to research and knowledge assets	More than 20 minutes travel time from key research and knowledge assets (identified above)	Within 20 minutes travel time from key research and knowledge assets (identified above)	Within 10 minutes travel time from key research and knowledge assets (identified above)	Collocated with or within 5 minutes travel time from key research and knowledge assets (identified above)	

Weighting

6.2.22 Different criteria will have a different relative impact on market demand depending on the use classes of employment land. For example, it is more important for warehouses used for logistics to be near on a larger site near a motorway than a small IT firm mainly recruiting graduates. This is reflected in the way which each criteria has been weighted, and has been split into categories for B1 use, and B8/B2 use. While further breakdowns could be applied, given the range of industries within use class and flexibility between uses (e.g. between B1b and B1a for technical jobs), this feels like an appropriate level of differentiation.

For B1

6.2.23 Given the compound impact of proximity to intercity rail links and York's city centre and the impact this has on office demand, criterion 2 is triple weighted in scoring suitability for B1 land use, with criteria 3, 4, 5 and 6 all doubled weighted.

Criteria	Weighting
1: Travel time to motorway	x1
2: Travel time to York railway station (& city centre)	x3
3: Agglomeration	x2
4: Size of site	x2
5: Assessment of current demand	x2
6: Proximity to research and knowledge assets	x2

6.2.24 The maximum score for B1 suitability is therefore 58, with excellent score of 70%+ being 41 or above, a good score of 60%+ being 35 or above, and a moderate score of 50%+ being 29 or above.

For B8 / B2[9]

6.2.25 Given the importance of road and motorway access for warehouse and industrial sites, criterion 1 is triple weighted for B8/B2 use, with criterion 4 multiplied by 2 given the larger floorspace requirements from these use classes.

Criteria	Weighting
1: Travel time to motorway	x3
2: Travel time to York railway station (& city centre)	x1
3: Agglomeration	x1
4: Size of site	x2
5: Assessment of current demand	x1
6: Proximity to research and knowledge assets	x1

6.2.26 The maximum score for B8/B2 suitability is therefore 44, with a excellent score of 70%+ being 31 or above, a good score of 60% being 27 or above, and a moderate score of 45%+ being in the region of 19 or above.

[9] although there is negligible demand for new B2 provision projected within the local plan period)

6.3 Outcomes of Assessment

6.3.1 The following tables reflect the outcomes of the technical assessment. It also includes follow up clarifications through visiting sites and reviewing supporting information provided. The full scoring against the economic criteria is set out in Annex D.

Table 10: Outcomes of Economic Assessment

LPPd Ref (2014)	Site Ref	Site Name	Economic Score for B1 (Score out of 58)	Economic Score B2/B8 (Score out of 44)
ST5	293	York Central	44	22
ST27	794	University of York Heslington East Campus and Expansion	40	24
E15	828	Land at Hull Road	38	23
E17 (ST19)	847	Northminster Business Park	35	24
E12	684	York Business Park	32	22
ST26	97	South of Elvington Airfield Business Park	29	19
ST25	800	Land South of Designer Outlet	28	21
E16	742	Poppleton Garden Centre	27	20
E4	64	Land at Layerthorpe and James St	26	14
E5	307	Land at Layerthorpe and James St	26	14
E9	602	Elvington Industrial Estate	25	17
ST18	724	Monks Cross North	25	17
SF13 (ST6)	181	Land East of Grimston Bar	24	16
E10	706	Chessingham Park, Dunnington	24	16
E2	635	Land north of Monks Cross Drive	21	15
E7	599	Wheldrake Industrial Estate	21	15
E8	600	Wheldrake Industrial Estate	19	14
E11	639	Annamine Nurseries	17	13

6.2.3 In addition, 2 further allocations identified at the aborted Local Plan Publication Draft have since received planning consent as follows:

- ST16: Former Terrys Factory – Planning consent granted for mixed use development which is now part complete/under construction. Remaining land allocated for housing.
- E1/MU1: Hungate – Planning consent granted for offices (6,545sqm). Development Now complete. Planning application: 13/3302/FULM.

7 NEXT STEPS

7.1.1 Table 10 sets out the sites identified through the suitability and economic assessment which have the potential to be allocated for employment use.

7.1.2 Officers will undertake further work to refine and reconsider previous assessments as well as emerging evidence base to consider the sites, which best meet the employment need of the city or whether they are best suited for alternative uses.

7.1.3 The next stage of the process will include:

- Re-appraising all consultation comments previously received in relation to sites;
- Updating the Sustainability Appraisal, including up-to-date evidence base;
- Evaluating Agricultural Land Classification - to help understand whether the sites are identified on best and most versatile land;
- Sequential Flood Risk - looking again at the designated flood risk zone of every site;
- Additional work on transport;
- Site analysis against Green Belt purposes.

7.1.4 In addition, further work regarding transport and viability will be undertaken as part of the evidence base feeding into the emerging Local Plan.

ANNEX A: EXPLANATION OF ASSUMPTIONS USED IN THE FORECAST OF THE DEMAND FOR EMPLOYMENT LAND

Full time equivalent calculations

Standard methodology for employment densities uses full time equivalent jobs, where as the econometric forecasts above provide total headcount counting both full time and part time jobs equally. Therefore, a conversion is required.

BRES data provides information on the number of full time and part time employees in each industrial sector. We can use the information of the split between full and part time employment to help in making an adjustment to the floor space requirements to compensate for the forecast of job growth being expressed as overall headcount. BRES is a sample survey and is available for York to be able use a full time and part time assumptions that reflect the employment characteristics of the city.

Broad Industry Group	York 2014	
	FT %	PT %
Manufacturing	92.5	7.5
Construction	90.0	10.0
Motor Trades	86.7	13.3
Wholesale & Retail	47.4	52.6
Transport & Storage (inc Postal)	94.3	5.7
Accommodation & Food Services	39.1	60.9
Information & Communication	87.5	12.5
Finance & Insurance	84.4	15.6
Property	64.7	35.3
Professional, Scientific & Technical	84.1	15.9
Business Administration and Support Services	47.0	53.0
Public Administration	78.4	21.6
Education	51.7	48.3
Health	49.4	50.6
Other	52.1	47.9

Part time jobs are assumed to be on average 0.5 full time equivalent.

	Proportion of Jobs assigned to Use Class												
	B1a	B1b	B1c	B2	B8	A1	A2	A3-5	C2	D1	D2	C1	Notes
Manufacturing				100%									
Construction				48%									Based on RTP assumptions, construction jobs relevant for B space in York is 48% of total sector jobs
Wholesale and retail trade				3%	20%	77%							Retail is 77% total wholesale & retail in York; 3%is repair of motor vehicles or sale of parts
Transportation and storage	17%			2%	31%								Storage subsectors make up 31% of workforce in York. See below * for further details on rail.
Accommodation and food								75%				25%	From REM assumptions: Food and drink services are 75% of total sector jobs in York
Info and communication	82%		8%		10%								Telecoms is 18% of total sector jobs in York, REM assumptions for non-B1a space
Finance and insurance	100%												
Real estate activities	100%												
Prof scientific and tech	84%	16%											Given York has a strong number of science jobs using B1b space, yet the RTP methodology does not include this (100% office), the assumptions used for by DJD are instead to reflect this (16% B1b for sector)
Admin and support	39%				6%	13%	25%						39% of subsector jobs currently for office in York, non B percentages from REM
Public admin & defence	68%									37%			
Education	0%									100%			
Health and social work									18%	82%			18% of sector workforce is currently in residential care homes in York
Arts, entertainment, rec and other	0%									37%	63%		Excluding betting shops, based on sub-sectors 63% of workforce in sector in York is more suited to D2 than D1

Other service activities			6%			94%							Based on REM factor between B1c and A1 assuming no B1a in Roger Tym model

Allocating jobs to use class by sector assumptions

Clearly there is not a direct relationship between a business sector and a planning use class, however reasonable assumptions can be made about how sectors relate to use class.

There is no established single national methodology for converting sector jobs to use class, and implicit within many methodologies is the need to factor in local variations. The Roger Tym Planning methodology was used as the starting point which builds up use class assumptions based on local sub-sector employment information through BRES. Some jobs do not necessarily require land allocation (e.g. somebody working on trains), and the methodology is reflective of that, hence not all figures adding up to 100%. For further information about the methodology, see 'Planning for Employment Land: Translating Jobs into Land', Roger Tym Planning, April 2010.

This has also been checked against DJD and Regional Econometric Model (REM) assumptions to ensure that these are fair assumptions, with adjustment made and detailed below where there are.

The assumptions used are below:

**A note on adjustment for York's distinct rail sector*

The one element that is not factored into any of the models is York's unique rail sector which distorts the type of jobs under 'transportation and storage' against national trends. Therefore, we have made adjustments based on local data. Firstly, using the RTP assumptions around storage jobs, this accounts for 31% of jobs within the overall transportation and storage sector in York which require B8 space. Based on local knowledge and business rates property database, we know that approximately 1,400 out of the 8,300 FTE jobs in the sector are rail jobs based out of physical offices in York, and 200 are rail jobs based out of B2 general industrial land. These are approximations but still add greater nuance to simply applying national assumptions about the sector. These account for 17% and 2% of overall transportation and storage sector jobs accordingly.

Employment densities

Employment densities from the 2010 DJD/HCA Employment densities guide are used as established national practice (all figures m2)

B1a	B1b	B1c	B2	B8	A1	A2	A3-5	C2	D1	D2
12	20	47	36	70	25	16	20	50	36	80
NIA	NIA	NIA	GIA	GEA	NIA	NIA	NIA	GIA	GIA	GIA

NIA = net internal area
GIA = gross internal area
GEA = gross external area

While there is a newer 2015 guide, in most cases with this employment density figures are only split down further to specific uses within the use class (e.g. corporate, cinema etc.) therefore for the overall use class figures, the 2010 figures have been used. These are still consistent with the more recent assumptions.

For the C1 use class, the DJD/HCA guidance simply approaches this on the basis of number of bedrooms rather than floorspace. Therefore, local data has been used (which aligns with DJD/HCA figures and assumptions) from planning applications which shows that there is a range of employment densities between 80m2 per FTE and 200m2 for C1 uses, with a mean of around 120. It is this figure which has been used to translate C1-related employment figures to floorspace requirements.

Floor space to site area (plot ratio)

Different types of business activity require different building types and site layouts both of which affect the way a site is used and how much development can be accommodated on a specific site. Most business uses in new buildings except office type activity tend to occupy single storey premises. Furthermore, the amount of the gross site area that can accommodate buildings will depend to an extent on the type of business use. Taking the two extreme cases – B1a offices will quite intensely occupy a site with a multi storey building and some land allocated for car parking, whereas a warehouse use would be a single storey building with extensive manoeuvring space for large HGVs.

B1a city centre floorspace is expected to be delivered at a higher plot ratio. A two storey out centre office development would normally lead to a plot ratio of 40%. A four storey city centre building would have a higher plot ratio of 80%. (source ENTEC) A figure of 60% plot ratio for B1a space taking an average of the two has been used as a starting point for considering future land allocations. Where sites considered by the Local Plan are able to specify multi-storey provision in more detail, this should be factored in at site allocation stage and land requirements adjusted accordingly based on the actual figures sites can accommodate. B1b constructed at two storeys such as at the University of York Science Park would have a plot ratio of 40%.

Using ENTEC plot ratio figures as a basis, we have adopted the following assumptions:

B1a	B1b	B1c	B2	B8	A1	A2	A3-5	C1	C2	D1	D2
60%	40%	40%	40%	50%	80%	80%	80%	40%	40%	60%	40%

ANNEX B: TOWN AND COUNTRY PLANNING ACT USE CLASS DESCRIPTIONS

A1 Shops - Shops, retail warehouses, hairdressers, undertakers, travel and ticket agencies, post offices, pet shops, sandwich bars, showrooms, domestic hire shops, dry cleaners, funeral directors and internet cafes.

A2 Financial and professional services - Financial services such as banks and building societies, professional services (other than health and medical services) and including estate and employment agencies. It does not include betting offices or pay day loan shops - these are now classed as "sui generis" uses (see below).

A3 Restaurants and cafés - For the sale of food and drink for consumption on the premises - restaurants, snack bars and cafes.

A4 Drinking establishments - Public houses, wine bars or other drinking establishments (but not night clubs).

A5 Hot food takeaways - For the sale of hot food for consumption off the premises.

B1 Business - Offices (other than those that fall within A2), research and development of products and processes, light industry appropriate in a residential area.

B2 General industrial - Use for industrial process other than one falling within class B1 (excluding incineration purposes, chemical treatment or landfill or hazardous waste).

B8 Storage or distribution - This class includes open air storage.

C1 Hotels - Hotels, boarding and guest houses where no significant element of care is provided (excludes hostels).

C2 Residential institutions - Residential care homes, hospitals, nursing homes, boarding schools, residential colleges and training centres.

D1 Non-residential institutions - Clinics, health centres, crèches, day nurseries, day centres, schools, art galleries (other than for sale or hire), museums, libraries, halls, places of worship, church halls, law court. Non residential education and training centres.

D2 Assembly and leisure - Cinemas, music and concert halls, bingo and dance halls (but not night clubs), swimming baths, skating rinks, gymnasiums or area for indoor or outdoor sports and recreations (except for motor sports, or where firearms are used).

ANNEX C: ALLOCATED SITES IN THE ABORTED LOCAL PLAN PUBLICATION DRAFT (2014)

The following policy shows the site allocations included within the aborted Local Plan Publication Draft (2014) following the site assessment for suitability.

Policy EC1: Provision of Employment Land

Provision for a range of employment development during the plan period will be made broadly as follows:

Office (B1a):
- ST5: York Central : (80,000sq.m /3.33ha)
- ST16/MU2: Terry's (6,000 sqm)
- ST18: Monks Cross North: (64,000sq.m/8ha)
- E1/MU1: Hungate (12,000sq.m/1.51ha)

Research & Development (B1b/B1c)[10]
- ST27: University of York Heslington East Campus and Expansion (24,000 sq.m /25ha)
- E15: Land at Hull Road (16,000sq.m /4ha)

Light industrial, storage and distribution (B1b/B1c/B2/B8)
- E17: Northminster Business Park (10,000sq.m /2.5ha)
- ST25: Land South of Designer Outlet (23,520sq.m/ 9.8ha)
- ST26: South of Elvington Airfield Business Park (30,400sq.m/7.6ha)

Leisure (D2):
- ST21: York Designer Outlet (12,000sq.m) – where it can be demonstrated that there would not be a detrimental impact on the city centre's vitality and viability.

The City Centre will remain the focus for main town centre uses (unless identified above). Proposals for main town centre uses for non City Centre locations will only be considered acceptable where it can be demonstrated that they would not have a detrimental impact on the city centre's vitality and viability and the sustainable transport principles of the Plan can be met.

Further site allocations that will provide land to accommodate the remainder of the employment development in the Plan are set out below:

R&D, light industrial, storage and distribution (B1b/B1c/B2/B8):
- E2: Land North of Monks Cross Drive (3,000sq.m/0.4ha)

[10] Linked to University

- E4:Land at Layerthorpe and James Street Land at Layerthorpe (900sq.m/0.2ha)
- E5:Land at Layerthorpe and James Street Sites at James Street (900sq.m/0.2ha)
- E7:Wheldrake Industrial Estate (2,050sq.m/0.5ha
- E8:Wheldrake Industrial Estate (1,800sq.m/0.45ha)
- E9:Elvington Industrial Estate (3,980sq.m/1ha)
- E10: Chessingham Park, Dunnington (950sq.m/0.24ha)
- E11:Annamine Nurseries, Jockey Lane (4,150sq.m/1ha)[11]
- E12:York Business Park Land at York Business Park (3,300sq.m/0.8ha)
- E16: Poppleton garden centre (11,200 sq.m/2.8ha)

[11] Includes element of B1a if associated with existing use

ANNEX D: ECONOMIC ASSESSMENT OF LOCAL PLAN EMPLOYMENT SITES

The results presented below are based on the scoring mechanism detailed in Figure 11 of the report.

LPPd Ref (2014)	Site Ref	Site Name	Criterion 1: Travel time to motorway	Criterion 2: Travel time to York railway station (& city centre)	Criterion 3: Agglomeration	Criterion 4: Size of site	Criterion 5: Assessment of current demand	Criterion 6: Proximity to research & knowledge assets	Score for B1 (out of 58)	Score for B8 (out of 44)
ST5	293	York Central	1	5	4	5	3	2	44	22
ST27	794	University Expansion	2	2	4	5	3	4	40	24
E15	828	Land at Hull Road	2	2	5	2	4	4	38	23
E17 (ST19)	904	Northminster	3	2	5	3	4	1	35	24
E12	684	York Business Park	3	3	4	2	3	1	32	22
ST26	97	South of Airfield Business Park	2	1	4	3	3	2	29	19
ST25	800	Land South of Designer Outlet	3	1	2	4	3	2	28	21
E16	742	Poppleton Garden Centre	3	2	4	2	2	1	27	20
E4	64	Land at Layerthorpe and James St	1	3	3	1	2	2	26	14
E5	307	Land at Layerthorpe and James Street	1	3	3	1	2	2	26	14
E9	602	Elvington Industrial Estate	2	1	4	1	3	2	25	17
ST18	724	Monks Cross North	2	1	3	4	1	2	25	17
SF13 (ST6)	847	Land East of Grimston Bar	2	2	1	2	1	4	24	16
E10	706	Chessingham Park remaining land	2	2	4	1	1	2	24	16
E2	635	Land north of Monks Cross Drive	2	1	3	2	1	2	21	15

LPPd Ref (2014)	Site Ref	Site Name	Criterion 1: Travel time to motorway	Criterion 2: Travel time to York railway station (& city centre)	Criterion 3: Agglomeration	Criterion 4: Size of site	Criterion 5: Assessment of current demand	Criterion 6: Proximity to research & knowledge assets	Score for B1 (out of 58)	Score for B8 (out of 44)
E7	599	Wheldrake Industrial Estate	2	1	3	2	1	2	21	15
E8	600	Wheldrake Industrial Estate	2	1	3	1	1	2	19	14
E11	639	Annamine Nurseries	2	1	2	1	1	2	17	13

ANNEX E: YORK ECONOMIC FORECASTS BY OXFORD ECONOMICS (MAY 2015)

May 2015

OXFORD ECONOMICS

York economic forecasts

This briefing note has been prepared by Oxford Economics for the City of York Council. It sets out Oxford Economics' May 2015 long term forecasts for York, and compares these to forecasts prepared by Oxford Economics in 2014 and those available from the Regional Economic and Intelligence Unit (REIU). Two alternative growth scenarios are also described. The analysis is presented in four sections:-

1. An overview of the latest Oxford Economics' forecasts for York
2. An assessment of how Oxford Economics' current forecasts compare to those produced in 2014
3. A comparison of the Oxford Economics' forecast to those provided by the REIU
4. A comparison of the Oxford Economics' forecast with two alternative growth scenarios
5. A summary of the methodology used by Oxford Economics to produce the forecasts

This briefing note is accompanied by a detailed database of economic, labour market and demographic forecasts for York, Yorkshire & the Humber region and the UK. The database contains both the baseline forecasts and two alternative growth scenarios described in this briefing note.

York is defined as the City of York Unitary Authority District

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The economic outlook for York

This section provides an overview of Oxford Economics' May 2015 forecasts for the York economy, set within the broader UK and regional outlook.

Context

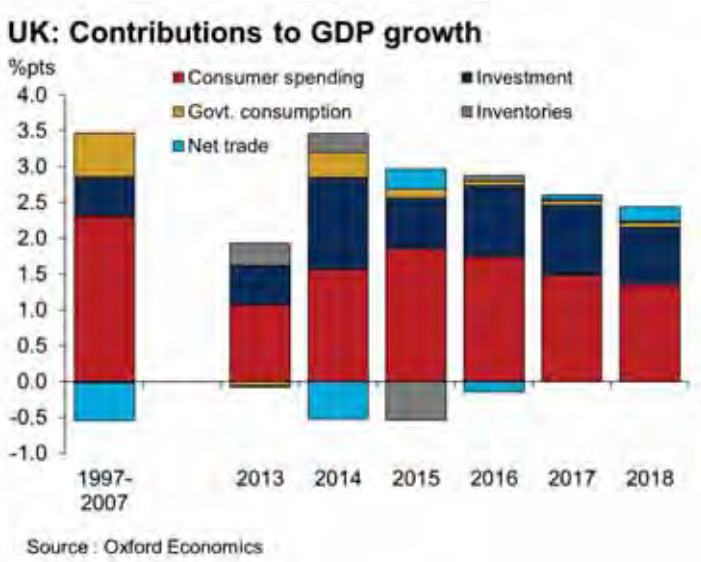
The UK's economic recovery is well established. GDP grew by 2.8% in 2014, the strongest rate of expansion since before the recession. The labour market has performed impressively with employment now at a record high, boosted by the creation of 1,085,000 jobs – most full time – in 2014. This has facilitated a sharp fall in the unemployment rate[1] from close to 3.5% at the start of 2014 to 2.4% in the first quarter of 2015.

The recovery is being felt across the UK, albeit with the gains being felt unevenly. Whilst it is true that London and the wider south east have achieved stronger than average rates of growth since the recovery took hold, the story is more complicated that a simple north/south divide. The North West for example created jobs at a faster pace than any other part of the UK through 2014, being particularly successful in creating professional services jobs. By contrast, employment in the North East and Yorkshire & Humber grew by just a third of the UK rate, showing that disparities within the north are as evident as between the north and the south.

Conditions remain supportive of relatively strong growth over the remainder of the decade. UK GDP is forecast to rise on average by 2.6% per year, with further, albeit more modest, increases in employment. The key drivers of the forecast are:-

- Stronger household spending power as inflation remains very low and a tightening labour market and growing recruitment difficulties slowly feed into a pickup in wage growth.
- Improving export outlook as both the US and Eurozone economies are forecast to strengthen over the short to medium term.
- Strong corporate finances supporting investment as businesses act on firm investment intentions and corporate finances are in a robust position.
- Sustained strength in house building will provide direct support to economic growth as well as helping to keep a lid on house prices.
- Low inflation means there is little pressure on the MPC to dramatically tighten monetary policy. The first interest rate rise is likely in the first half of 2016 and we assume the subsequent tightening comes at the very measured pace of 50bps per year such that rates end the decade at 3%.

This means consumer spending will continue to play an important role in driving the UK economy forward. But its contribution to overall growth is unlikely to be as large as it was in the decade leading up to the recession. Some of this gap will be filled by stronger investment as businesses increase spending to compensate for a number of years of very weak investment. Stronger demand from key export markets and slower growth in imports means net trade is



[1] Claimant count unemployment rate defined as the number of people collecting unemployment-related benefits expressed as a percentage of the working age population (persons aged 16-64).

unlikely to provide the drag on GDP growth that has been seen in recent years.

One of the key features of the UK's recent economic performance has been stronger than expected employment, both during the recession and through the subsequent recovery. A consequence of this has been very weak productivity growth. Many explanations have been offered to explain why productivity has been so weak. These include a collapse in investment as a result of many businesses having limited access to finance or the confidence to invest; strong labour supply growth, fuelled by migration, which has restricted wage growth and encouraged labour hoarding; and a suspicion that the official statistics underreport the true level of GDP and therefore productivity growth. Our forecast assumes the recent recovery in business investment, demand and confidence, alongside weaker labour supply growth and recovery in wages, will facilitate stronger productivity growth of around 2% per year.

The General Election yielded a surprise with the Conservatives winning a small majority. The result removed short term concerns that lengthy coalition negotiations would foster a climate of uncertainty which would be detrimental to growth. But attention will quickly turn to the substantial challenges the government face over the course of the next parliament, with fiscal policy coming towards the top of the list. These plans will be firmed up in July's emergency Budget, but it is clear a further period of government austerity is in prospect, and this means public spending will provide a much smaller contribution to growth over the medium term than has historically been the case.

The longer term outlook for the UK economy is influenced by supply side structural factors. Chief amongst these is demographics. Unlike many of its European peers, the UK is set to benefit from a rising population, most importantly among working age people, and this helps to support sustained job creation and economic growth. Between 2020 and 2031, GVA growth is forecast to average 2.5% per year, and employment 0.4%.

Of course, the forthcoming EU referendum provides a degree of uncertainty to the economic outlook. The baseline forecast is predicated on the UK remaining in the EU. But should the public vote for to leave the EU, whether an exit would be good or bad for the UK would depend on what terms of exit were negotiated. The UK could leave on good terms, preserve free trade with the EU, save on its contributions to the EU budget, remove some red tape for business – and see a boost to its economy. Equally, leaving on bad terms might result in EU tariffs with adverse consequences for exports and the economy. Or just as likely is that the impact would be negligible, with benefits largely offsetting costs. Ultimately, the success or otherwise of the UK economy, including our ability to sell to the European market, largely comes down to domestic issues around controlling costs, maximising productivity and producing goods and services that people want to buy.

York economic outlook – headline figures

The recession had a more detrimental impact on the York economy than nationally. The number of jobs in York fell by almost 5% between 2007 and 2010 compared with a reduction of less than 2% across the UK. And since then, employment growth has been weaker and more erratic in York than it has been nationally. The number of jobs in York is currently below its pre-recession peak, a benchmark already passed across the UK as a whole.

Workplace based people in employment remained fairly flat throughout the recessionary period, despite the fall in job numbers. This suggests a fall in the number of jobs held by one person. Residence based employment on the other hand, has enjoyed continual growth over recent years and is currently above pre-recession levels, thus implying a fall in net commuting.

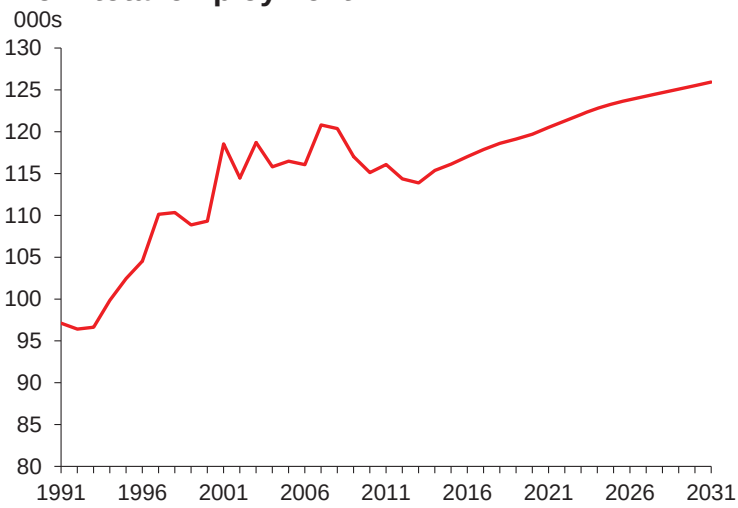
The outlook for employment is encouraging. Building on a year of strong job creation in 2014, employment in York is forecast to grow by 0.7% in 2015 and at a similar rate in 2016 and 2017.

The long term view for employment is for growth to average around 0.6% per year to 2025, slowing thereafter to nearer 0.3% per year as demographic developments, most notably a slowdown in the growth of the working age population, become less supportive of employment growth. On this basis it is likely to be around 2021/22 that the number of jobs in York returns to the high recorded in 2007. Nonetheless, employment in York in 2031 is forecast to be 125,900, more than 10,000 higher than in 2014. This is equivalent to a change of 11,220 jobs between 2013/14 to 2030/31[2].

Job creation in York will be to the benefit of the local population. The number of York residents in employment is forecast to grow by 0.3% per year between 2014 and 2031, equivalent to an additional 6,200 local residents in work[3]. This will be accompanied by a modest reduction in the rate of unemployment.

York GVA is forecast to grow at an average annual rate of 2.4% between 2014 and 2031, well ahead of the 1.6% per year recorded on average over the last 5 years. This equates to an additional £2.3bn of economic activity (measured in constant 2011 prices) and means the York economy will be almost 50% larger in 2031 than it was in 2014. Productivity growth over this period is forecast to average 1.9% per year. Whilst this is a little below the UK average it represents a marked improvement on the lacklustre productivity growth achieved in recent years and, alongside a tightening labour market and low inflation, should support a recovery in real wage growth.

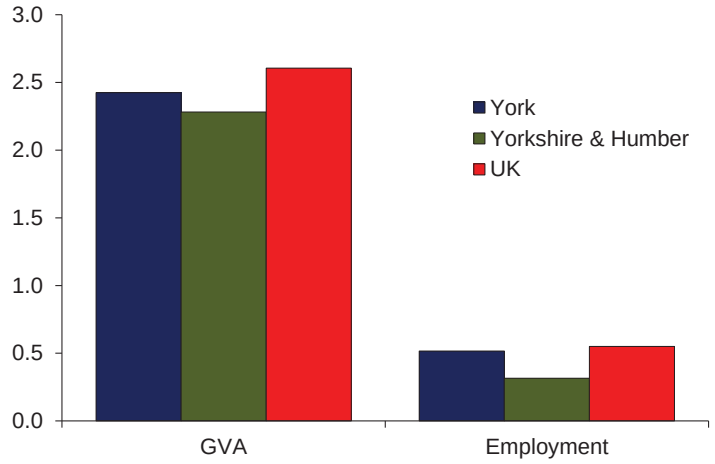
York total employment



Source: ONS, Oxford Economics

Headline economic growth 2014-31

% annual average growth



Source : Oxford Economics

The long term outlook for York compares favourably to the regional average. GVA growth is forecast to be stronger than across Yorkshire & Humber and ahead of almost all districts in the region – only Leeds and Harrogate are expected to have a clear growth premium over York.

A similar comparison can be drawn for employment, with growth in York at 0.5% per year in the period to 2031 well above the 0.3% Yorkshire & Humber average. Nevertheless, job creation in York is unlikely to match the national average on either measure as strong performances by London and the wider south east boost the UK aggregate.

[2] The figure quoted is on a financial year basis

[3] The growth in the number of jobs in York is different to the growth in the number of York residents in employment. This is because some of the new jobs created in York will be filled by in-commuters, and some of York's working residents will be employed outside of the local authority. Furthermore, the number of people in employment is lower than the number of jobs as some people hold more than one job. The ratio of jobs to the number of people in work is likely to rise over time as jobs creation becomes more heavily concentrated in sectors with higher incidence of part time or flexible employment.

York economic outlook – sectoral composition

The sector composition of economic development in York is shaped by the wider UK trend of growth being centred on consumer spending and investment, particularly in the short to medium term. This means the private sector, and private services in particular, are expected to account for a significant proportion of growth. More than 80% of GVA growth in York will be provided by private services with the largest contributions from wholesale & retail trade, real estate and professional, technical & scientific services. Each of these sectors is expected to grow faster than the total economy, with professional, technical & scientific services the strongest growing (average 4.3% per year). Information & communication (4.0% per year) is also forecast to grow significantly faster than the rest of the economy.

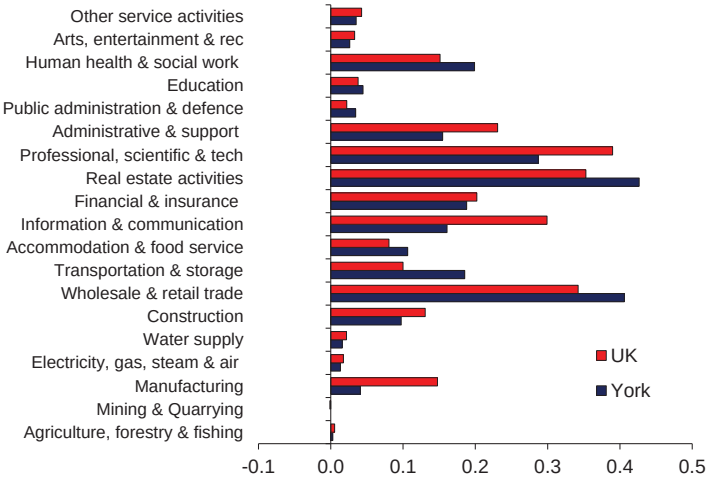
Public services account for almost a quarter of York GVA, compared with less than a fifth of the national economy. The outlook for public services is mixed. Public administration, and to a lesser extent education, will feel the impact of restrained government spending over the next five years, with pressures easing as we move into the next decade. Health and social work will not be immune to austerity, but the impact will be less severe as front line NHS spending is protected and an ageing and growing population increases demand for health and care services.

Construction and manufacturing each account for around 5% of the York economy. Construction is likely to be the faster growing of the two, particularly in the short term as the sector benefits from the pick-up in business investment and more buoyant housing market. But neither sector is expected to match the pace of growth achieved by private services over the medium to long term, so their contribution to overall growth is relatively small.

The sector profile of employment growth in York is skewed even more heavily towards private services. This is largely underpinned by growth of around 1.5% per year in professional, technical & scientific services and administrative & support services, which equate to 4,500 more jobs in these two sectors alone by 2031.

The jobs outlook for other sectors is largely positive. Retail & wholesale trade is forecast to see a 1,600 rise in employment by 2031, although this is as much a reflection of the size of the sector rather than a particularly strong rate of growth. Around 1,000 jobs are expected to be created in each of construction, transport & storage and accommodation & food services. A smaller rise in absolute terms is forecast in information & communication despite the pace of job creation being twice the all economy average.

Sector contributions to GVA growth 2014-31



Source : Oxford Economics

By contrast, around 700 public administration jobs are expected to be lost by 2020 with employment in the sector remaining flat thereafter. A more modest reduction in education employment is anticipated and health & social care again bucks the wider public sector trend with a 1,200 increase in employment by 2031. And it is our view that rising manufacturing activity will be achieved through the adoption of new technologies and increased productivity rather than through higher employment, a feature that will be important to maintain competitiveness in increasingly competitive international markets. Indeed, manufacturing employment in York is forecast to be 1,100 lower by 2031.

York employment - baseline forecast

	Level		Change 2014-31	
	2014	2031	%	level
Agriculture, forestry & fishing	669	534	-20.2	-135
Mining & Quarrying	0	0	-	-
Manufacturing	4,291	3,160	-26.3	-1,131
Electricity, gas, steam & air	92	111	19.9	18
Water supply	390	351	-9.9	-39
Construction	5,605	6,784	21.0	1,179
Wholesale & retail trade	18,347	19,922	8.6	1,575
Transportation & storage	10,914	11,929	9.3	1,015
Accommodation & food service	10,185	11,237	10.3	1,052
Information & communication	2,818	3,284	16.5	466
Financial & insurance	4,303	4,346	1.0	43
Real estate activities	1,890	2,265	19.9	375
Professional, scientific & tech	8,725	11,472	31.5	2,747
Administrative & support	6,324	8,028	26.9	1,704
Public administration & defence	6,141	5,355	-12.8	-787
Education	12,440	12,340	-0.8	-100
Human health & social work	15,861	17,073	7.6	1,212
Arts, entertainment & rec	3,020	3,836	27.0	815
Other service activities	3,364	3,914	16.3	550
Total	**115,377**	**125,937**	**9.2**	**10,560**

Source: Oxford Economics
Note: Data presented is on an annual basis

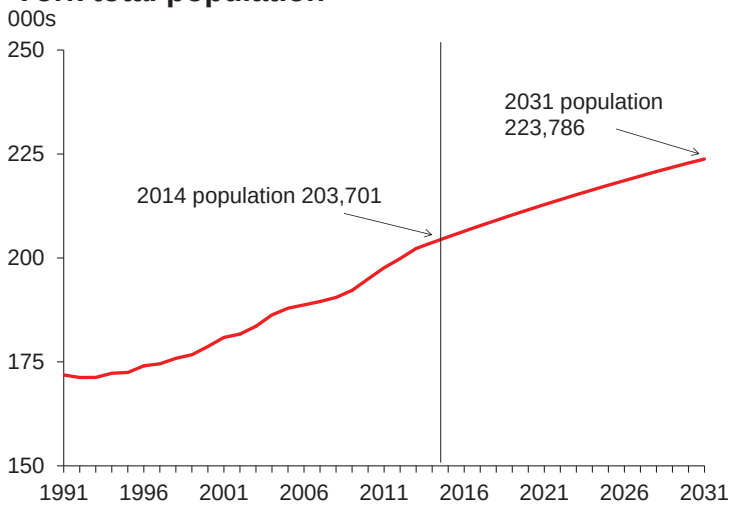
York demographic outlook

The population of York averaged 203,700 in 2014 having risen consistently throughout the past decade. Population growth in York has been above the Yorkshire & Humber and national averages in recent years, rising by 0.9% per year since 2005. The working age population of York has grown at a similar pace.

York's rising population has been predominately fuelled by positive net migration, adding around 1,400 to the population each year over this period. Natural change – the number of births less deaths – has made a smaller, yet still positive contribution, to population growth.

York's population is forecast to grow on average by 0.6% per year between 2014 and 2031, less than the 0.9% per year recorded over the past decade.

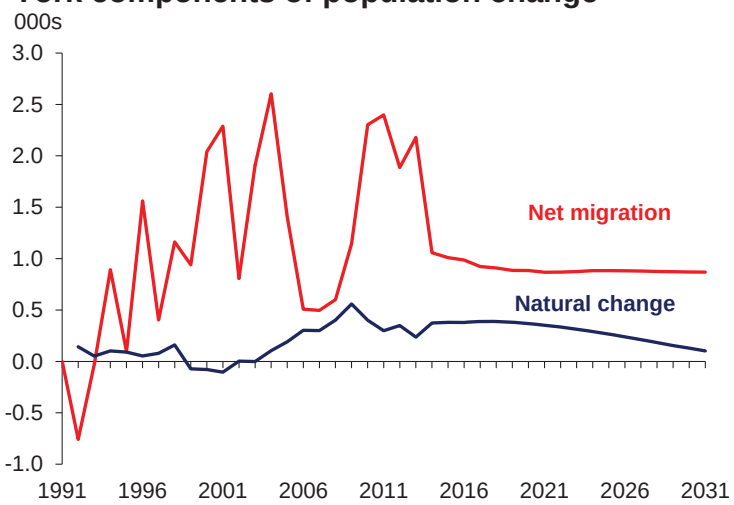
York total population



Source: ONS, Oxford Economics

This will see the number of people living in York rise to 223,800 in 2031, an increase of 20,100 compared to 2014 (this is equivalent to a change of 20,370 people between 2013/14 to 2030/31).Growth in York will be in line with the UK and above the Yorkshire & Humber average (0.4%). This forecast is comparable to the ONS 2012 projections. These show the population in York rising by 20,600 between 2014 and 2031, just 500 more than in the Oxford Economics forecast, again at an annual average growth rate of 0.6%.

York components of population change

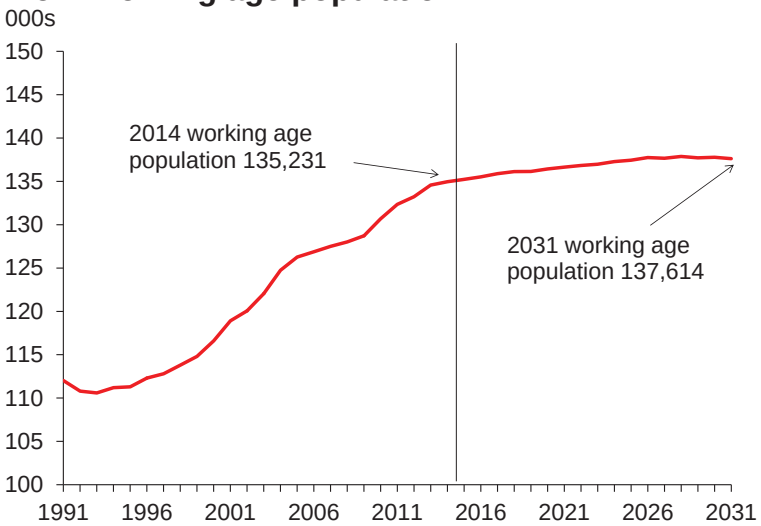


Source: ONS, Oxford Economics

Population growth in York will continue to be underpinned by a combination of natural change and net migration. Fertility and mortality rate assumptions used in the forecast are consistent with those incorporated in the ONS 2012 population projections. These show natural change making a modest yet positive contribution to York population growth, accounting on average for a rise of 300 people per year between 2014 and 2031. Falling birth rates mean the rise in population from this source weakens towards the end of the forecast period.

Net migration is affected by local economic prospects, the rationale being that migrants are attracted to areas where there is perceived to be relatively strong employment opportunities. We expect net migration into York to be weaker over the next decade than recently, averaging 900 people per year in the period to 2031. This reflects a general reduction in net migration into the UK as the one-off influence of EU enlargement fades and economic growth on the continent improves, thereby reducing the relative attractiveness of the UK as a place to find work.

York working age population



Source: ONS, Oxford Economics

The working age population[4], whilst influenced by the development of the existing population, is especially affected by migration as a high proportion of migrants are of working age. Therefore, lower net migration in the future is illustrated by a slowdown in the growth of York's working age population over the forecast period.

The working age population is forecast to rise from 134,900 in 2014 to 137,600 in 2031, an increase of 2,700 at an average annual rate of 0.1%. This compares to an increase of 10,200 at a rate of 0.8% per year over the past decade, and is also set against a modest fall in Yorkshire & Humber's working age population. This means the working age will account for a falling proportion of York's total population – from 66% in 2014 61% in 2030.

[4] The working age population is defined as people aged 16 to 64.

Forecast comparisons

This section compares Oxford Economics' forecasts for York presented in the first section of this paper with alternative datasets. The first is a set of forecasts produced by Oxford Economics in February 2014. The second comparison is against a forecast produced by Experian in May 2015 for the Regional Economic Intelligence Unit (REIU). Finally, two alternative growth scenarios are presented relative to the latest Oxford Economics' baseline.

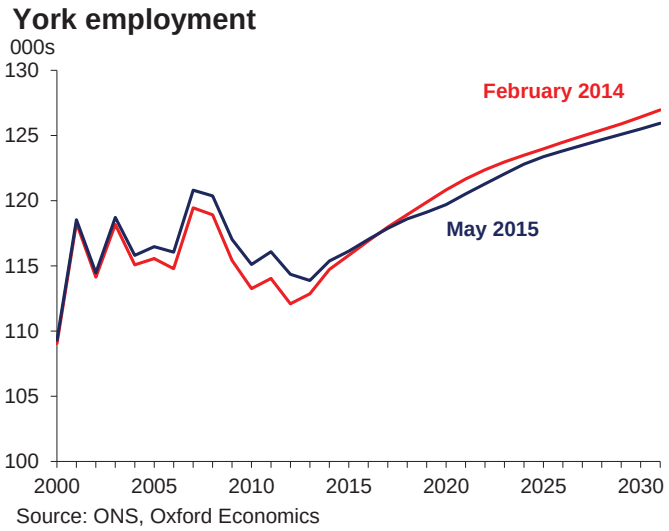
1 Oxford Economics' forecast February 2014 and May 2015

Differences between the two Oxford Economics' datasets are largely explained by two factors:-

1. **Changes to historical data.** The historical data underpinning the two datasets is different. Changes to the historical data affect the starting point for the forecasts and the structural composition of the economy upon which the forecast is based. Between February 2014 and May 2015 two key data sources provided new information. The BRES[5] – which provides detailed employment for York – provided data to 2012 when the February 2014 dataset was compiled, with 2013 data and revised 2012 data available for the May 2015 forecast. Secondly, the most recent Oxford Economics' dataset includes a broad range of information from the 2011 Census which wasn't available in February 2014. This includes information on commuting, self-employment and population.

2. **Revisions to the economic outlook.** The forecast for any location is predicated on assumptions about the scale and composition of future economic growth. These encompass a wide range of factors including an assessment of international growth prospects (for example, the strength of the global economy and risks to the outlook), domestic growth factors (such as the influence of government and monetary policy on national and local economic growth) and local demand and supply conditions. For example, very low inflation is currently providing a boost to real household disposable incomes and this means the short term outlook for UK consumer spending growth has been revised up in our latest forecasts.

The long term outlook for the York economy is broadly comparable between the two Oxford Economics' datasets. In February 2014, Oxford Economics' forecast total employment in York in 2031 to be 127,000, up from 114,700 in 2014. This represented an increase of 12,200 jobs at an average annual growth rate of 0.6%. New and revised official employment data for York, alongside a stronger than anticipated labour market over the past 18 months, means employment in York in 2014 is currently estimated at 115,400, 700 higher than predicted in February 2014. The latest forecast is for an increase in the number of jobs in York to 125,940 by 2031, equivalent to an additional 10,600 jobs at an average growth rate of 0.5% per year. The modestly weaker growth profile reflects a combination of a higher starting



Source: ONS, Oxford Economics

[5] The Business Register and Employment Survey (BRES) is the official source of employees in employment data for York. This is combined with Oxford Economics' estimates of self-employment to create a measure of total employment. See the methodological guide in the annex of this report for more information.

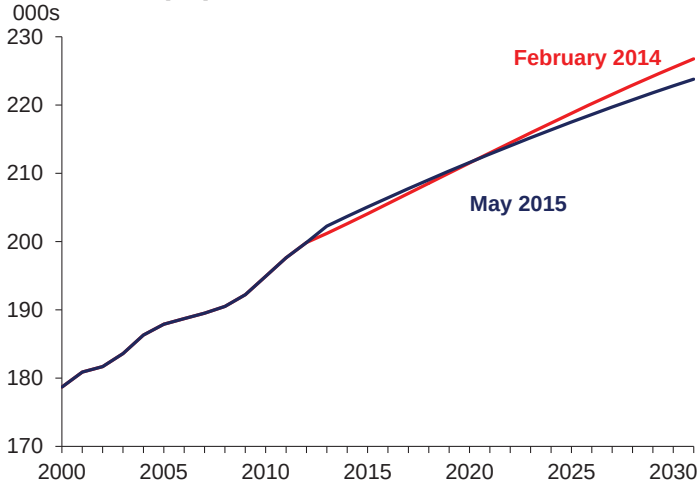
point for employment and smaller increase in the population.

These factors are reflected in the long term GVA forecasts. In February 2014, York GVA was forecast to grow at an average annual rate of 2.8% per year. The corresponding figure in the May 2015 dataset is 2.4%, with the downgrade reflecting the modest reduction in the pace of employment growth and stronger than anticipate growth over the past 18 months.

As noted above, the May 2015 economic forecast is accompanied by a smaller population increase for York than was presented in February 2014. In February 2014, York's population was forecast to be 226,800 in 2031, an increase of 24,100 from 202,600 in 2014. The latest forecast incorporates a revised 2014 estimate of 203,700, rising by 20,100 to 223,800 in 2031.

The projection for the growth York's working age population is largely unchanged. In February 2014 an increase of 2,900 was forecast between 2014 and 2031. This has been revised to 2,700 in the May 2015 dataset. But as with total population, the starting level in 2014 is higher than anticipated in February 2014, and given the similar growth profile, so too will it be in 2031.

York total population



Source: ONS, Oxford Economics

The sector profile of growth is similar in the two Oxford Economics' forecasts with a number of key trends remaining the same:-

- Private services dominate job creation in York. In both forecasts, more than half on net job creation in York is forecast to be in just three sectors – Professional, scientific & technical services, administrative & support services and wholesale & retail trade. Health & social work is the fourth largest contributor to job creation in both forecasts.
- Other private services sectors, especially transport & storage and accommodation & food services, and construction are forecast to create significant numbers of new jobs in York in both forecasts.
- Manufacturing and public administration remain the two sectors that are forecast to record the largest reductions in employment by 2031.

The smaller increase in total employment in the latest Oxford Economics forecast means most sectors are also expected to see more modest growth than was forecast in February 2014. The most notable revisions to the sector forecasts, and the reasons for the revisions, are:-

- The May 2015 forecast has education employment in York marginally lower in 2031 than 2014. This is in contrast to a small increase in the February 2014 forecast. The downward revision to growth reflects two factors. First, education employment in York is currently significantly higher than we had anticipated it would in February 2014. Second, the latest forecast incorporates a slightly lower population forecast and this has a modest impact on the growth in education employment. Nonetheless, the May 2015 forecast has a higher level of education employment in 2031 than previously forecast.
- The lower population forecast has implications for other parts of the public sector. In particular, the May 2015 forecast incorporates a larger fall in public administration jobs and smaller increase in health & social work than

forecast in February 2014. The level for public administration employment in 2014 is also higher than originally envisaged, and this too is factored into the latest outlook.

- The scale of employment growth in accommodation & food services has been increased in the latest forecasts to reflect an upward revision to growth at the UK level.

York employment

Oxford Economics' forecasts comparison Feb 2014 and May 2015	Level - Feb 2014		Level - May 2015		Level change 2014-31		
	2014	2031	2014	2031	Feb 2014	May 2015	Diff
Agriculture, forestry & fishing	566	471	669	534	-95	-135	-40
Mining & Quarrying	0	0	0	0	0	0	0
Manufacturing	4,202	2,923	4,291	3,160	-1,279	-1,131	149
Electricity, gas, steam & air	137	60	92	111	-77	18	96
Water supply	369	340	390	351	-28	-39	-10
Construction	5,268	6,291	5,605	6,784	1,023	1,179	155
Wholesale & retail trade	17,550	19,174	18,347	19,922	1,624	1,575	-49
Transportation & storage	10,937	12,290	10,914	11,929	1,353	1,015	-338
Accommodation & food service	10,158	10,918	10,185	11,237	761	1,052	291
Information & communication	2,964	3,661	2,818	3,284	697	466	-231
Financial & insurance	5,168	5,391	4,303	4,346	224	43	-181
Real estate activities	1,243	1,786	1,890	2,265	543	375	-168
Professional, scientific & tech	8,796	11,685	8,725	11,472	2,890	2,747	-143
Administrative & support	6,232	7,978	6,324	8,028	1,746	1,704	-43
Public administration & defence	5,536	5,170	6,141	5,355	-366	-787	-420
Education	11,779	11,902	12,440	12,340	122	-100	-222
Human health & social work	16,987	18,573	15,861	17,073	1,586	1,212	-374
Arts, entertainment & rec	3,742	4,735	3,020	3,836	992	815	-177
Other service activities	3,096	3,613	3,364	3,914	518	550	32
Total	**114,729**	**126,961**	**115,377**	**125,937**	**12,232**	**10,560**	**-1,672**

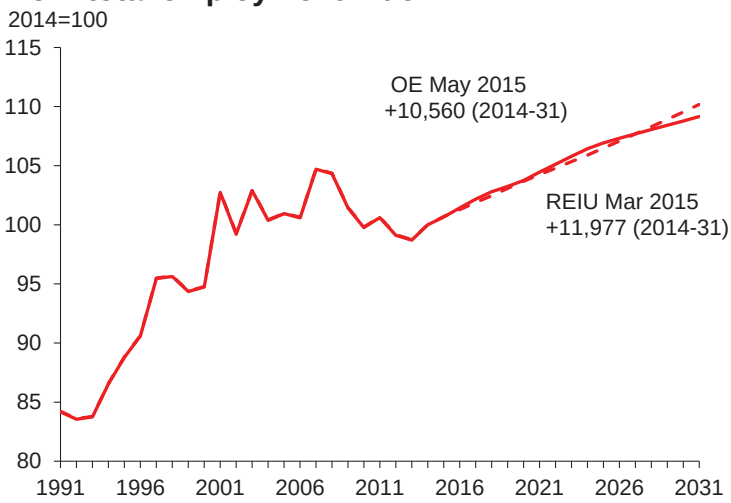
Source: Oxford Economics

2 Oxford Economics' forecast May 2015 and REIU

This section compares the Oxford Economics' forecast for York to those produced by the REIU. The REIU figures were provided to Oxford Economics in June 2015.

Oxford Economics' June 2015 long term employment forecasts for York are similar to those provided by the REIU. Oxford Economics forecast an additional 10,560 jobs in York between 2014 and 2031 compared with the REIU projection of 11,977, a difference of approximately 1,417 jobs. These absolute changes in the level of employment are equivalent to an average annual growth rate of 0.5% in the Oxford Economics' forecast compared with 0.6% from the REIU. The starting level (2014 estimate) of employment in York underpinning these forecasts is lower in Oxford Economics' dataset (115,377) than in the REIU dataset (117,699).

York total employment index



Source: ONS, REIU, Oxford Economics

Despite the employment outlook's being similar, the sectoral composition of employment growth differs considerably between the two datasets. Oxford Economics' forecast is for job creation in York to be led by the private services sector, with about 46% of new jobs being created in professional, scientific & technical activities and administrative & support services activities (Professional and other private service in the table below). Forecasts from the REIU have a much smaller proportionate contribution from these sectors. The REIU forecasts suggest that growth will be led by public services, accounting for over 90% of growth. Oxford Economics' assumes public sector employment growth will be restricted by government austerity, particularly in the short run, and forecast less than 5% of new jobs created in York by 2031 coming from these sectors. .

York employment

Oxford Economics' May 2015 and REM Mar 2015 forecast comparison	Level - OE May 2015		Level - REM Mar 2015		Level change 2015-31		
	2015	2031	2015	2031	OE	REM	Diff
Accomodation, Food Servs & Rec	16,815	18,986	13,958	12,830	2,171	-1,128	3,299
Agriculture, Forestry & Fishing	642	534	745	472	-108	-273	164
Construction	5,628	6,784	5,841	6,160	1,156	319	837
Extraction & Mining	0	0	2	1	0	-1	1
Finance & Insurance	4,296	4,346	5,655	4,990	49	-664	714
Information & communication	2,867	3,284	2,733	2,321	416	-412	829
Manufacturing	4,303	3,160	4,298	3,475	-1,143	-822	-321
Professional & Other Private Servs	17,142	21,765	22,781	24,832	4,622	2,051	2,571
Public Services	34,416	34,768	35,909	46,903	352	10,994	-10,643
Transport & storage	11,101	11,929	8,479	9,522	828	1,043	-215
Utilities	485	462	407	421	-23	14	-37
Wholesale & Retail	18,434	19,922	17,709	17,747	1,487	38	1,449
Total	**116,130**	**125,937**	**118,516**	**129,675**	**9,807**	**11,160**	**-1,352**

Source: Oxford Economics, REIU

Other notable differences in the sectoral composition of growth include the Oxford Economics forecast suggesting growth within the consumer sectors of wholesale & retail and accommodation, food service & recreation activities, where these are expected to account for 38% of growth. The REIU projections suggest a fall in employment within accommodation, food service & recreation activities and employment in wholesale & retail is expected to remain broadly flat. Other notable differences in the sectoral composition of growth include the Oxford forecast having a higher proportion of new jobs being created by construction than incorporated in the REIU projections. By contrast, Oxford Economics' forecast modest growth within information & communications and finance & insurance, whereas the REIU projections suggest a contraction. There is broad consensus between the two datasets that transport & storage will be an important source of new jobs, and that job shedding is likely to continue from the manufacturing sector.

Oxford Economics' projections show York residence-based employment growing at an average rate of 0.3% per year between 2014 and 2031. This is slower than Oxford Economics' forecast for workplace employment, which implies a rise in the number of jobs held by commuters. The REIU forecast has resident employment growing at a faster pace – 0.5% per year on average – broadly in line with workplace employment in the REIU dataset.

Oxford Economics forecast York GVA to grow on average by 2.4% per year in York between 2014 and 2031. This is in line with the REIU projection, despite REIU projecting faster employment growth. Oxford Economics' forecast productivity growth to average 1.9% per annum over the forecast period, above the REIU projection of 1.8% per year. This productivity differential is likely to be explained by the sectoral composition of growth assume in each forecast dataset. The REIU forecasts suggest almost all job creation in York over the next two decades will be from public services. These activities tend to exhibit low levels of productivity, at least in terms of their contribution to measured GVA, and the implication will be to significantly hold back overall productivity and therefore economic growth.

3 Oxford Economics' forecast May 2015 and scenario 1: Higher migration and faster recovery

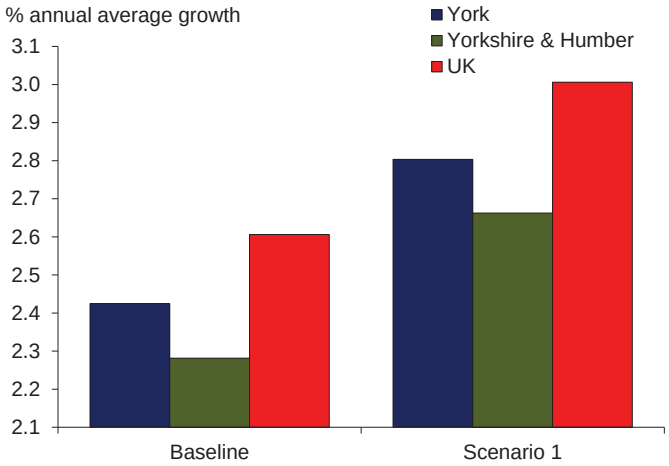
As part of this analysis, Oxford Economics assessed the impact of an alternative outlook for the UK and consequently Yorkshire & Humber and thus York. Under this scenario there is little in the way of policy influence to attract disproportionate shares of the alternate growth sectors to any given location – rather past performance in these sectors will generate future growth. The assumptions were applied at the UK level, with the model estimating the impact upon York.

Scenario 1 assumes higher migration and a faster recovery of the UK economy. The assumptions remain the same as per the original analysis in February 2012, namely:

- 0.4pp higher growth per annum 2014 onwards at UK level;
- Gradual productivity improvement (1.0% higher productivity by 2020, rising to 2.5 % higher by 2030); and
- 60% of additional jobs will be taken by migrants.

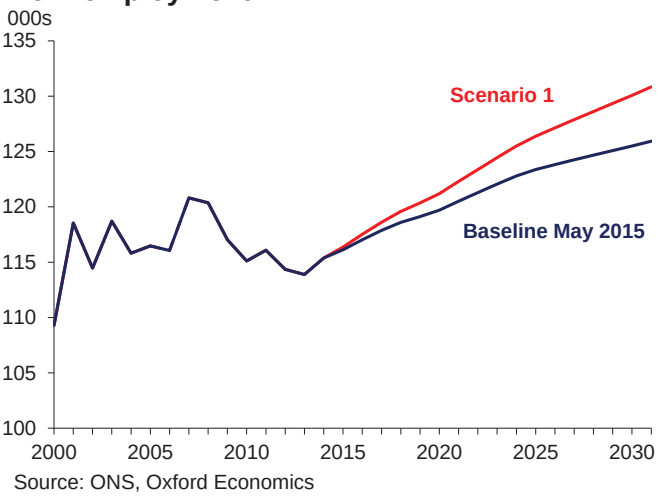
A summary of the impacts compared with the Oxford Economics May 2015 baseline forecast are set out below. The scenario assumes that UK recovery accelerates with GVA growth increasing from 2.6% per annum to 3.0% per annum over the period 2014-2031. York is impacted by a similar magnitude with average growth also increasing by 0.4 percentage points. Faster rates of growth are also accompanied by productivity increases, with York's productivity growth expected to increase to 2.1% per annum.

GVA growth 2014-31



Source : Oxford Economics

York employment



Source: ONS, Oxford Economics

The employment outlook is much stronger than the baseline, with the results suggesting an increase of 15,500 jobs, an additional 4,900 above the baseline. The employment level within York is thus expected to exceed 130,000 by 2030. Employment growth is expected to average 0.7% per annum compared with 0.5% under the baseline. This is equivalent to a change of 15,920 jobs between 2013/14 to 2030/31.

Within York, all sectors are expected to benefit under the scenario. Wholesale & retail trade is expected to enjoy the biggest gains in absolute terms, with a net additional 2,400 jobs forecast by 2031. Consumer confidence is assumed to rise given the improvements in wider economic conditions, accompanied with improved access to finance helping to boost consumer spending. This in turn benefits consumer led sectors including wholesale and retail trade and accommodation and food services.

The scenario assumes increased investment and higher exports performance. This provides a significant boost to manufacturing, information & communications and professional services. Thus the contraction within manufacturing employment is expected to slow with the scenario suggesting a fall of 1000 jobs by 2031 compared with 1,130 under the baseline. Job creation within professional services and information and communications

are expected to increase from 2,750 and 470 net jobs to almost 3,160 and 595 under the scenario.

Given the improved economic conditions, the government benefits from increased revenue and is able to ease the austerity program. As a result the contraction within the public sector employment slows. Health and social work will enjoy considerable gains with employment increasing to over 17,700 by 2031.

York employment

Oxford Economics' forecasts comparison May 2015 & Scenario 1	Level - May 2015		Level - Scenario 1		Level change 2014-31		
	2014	2031	2014	2031	May 2015	Scenario 1	Diff
Agriculture, forestry & fishing	669	534	669	555	-135	-114	21
Mining & Quarrying	0	0	0	0	0	0	0
Manufacturing	4,291	3,160	4,291	3,294	-1,131	-997	134
Electricity, gas, steam & air	92	111	92	116	18	23	5
Water supply	390	351	390	366	-39	-24	15
Construction	5,605	6,784	5,605	7,039	1,179	1,434	256
Wholesale & retail trade	18,347	19,922	18,347	20,755	1,575	2,408	833
Transportation & storage	10,914	11,929	10,914	12,415	1,015	1,501	486
Accommodation & food service	10,185	11,237	10,185	11,683	1,052	1,498	446
Information & communication	2,818	3,284	2,818	3,413	466	595	129
Financial & insurance	4,303	4,346	4,303	4,546	43	244	201
Real estate activities	1,890	2,265	1,890	2,340	375	450	75
Professional, scientific & tech	8,725	11,472	8,725	11,885	2,747	3,160	413
Administrative & support	6,324	8,028	6,324	8,334	1,704	2,010	306
Public administration & defence	6,141	5,355	6,141	5,556	-787	-585	201
Education	12,440	12,340	12,440	12,765	-100	325	425
Human health & social work	15,861	17,073	15,861	17,718	1,212	1,857	645
Arts, entertainment & rec	3,020	3,836	3,020	3,983	815	962	147
Other service activities	3,364	3,914	3,364	4,081	550	717	167
Total	**115,377**	**125,937**	**115,377**	**130,842**	**10,560**	**15,464**	**4,904**

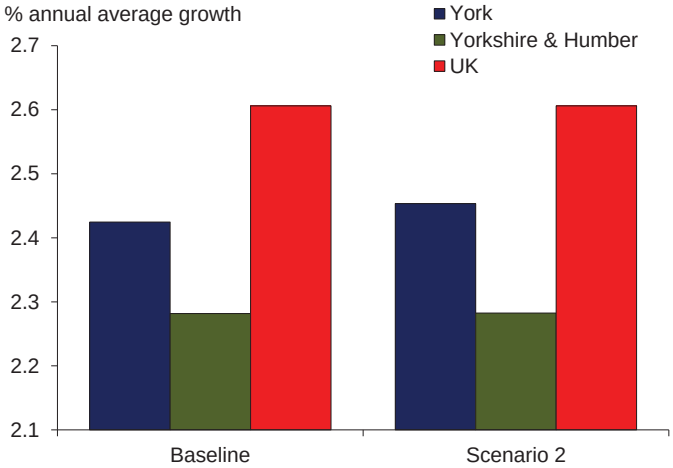
Source: Oxford Economics

4 Oxford Economics' forecast May 2015 and scenario 2: Re-profiled sectoral growth

The second scenario considered was the impact of faster growth in professional services, financial & insurance, and information & communication accompanied with lower growth within wholesale & retail trade and accommodation & food services. The scenario assumes that the UK outlook remains unchanged from the baseline, with the assumptions being applied at the local level and thus aims to align future sectoral trends with the Strategic Economic Plans. The assumptions used are set out below:

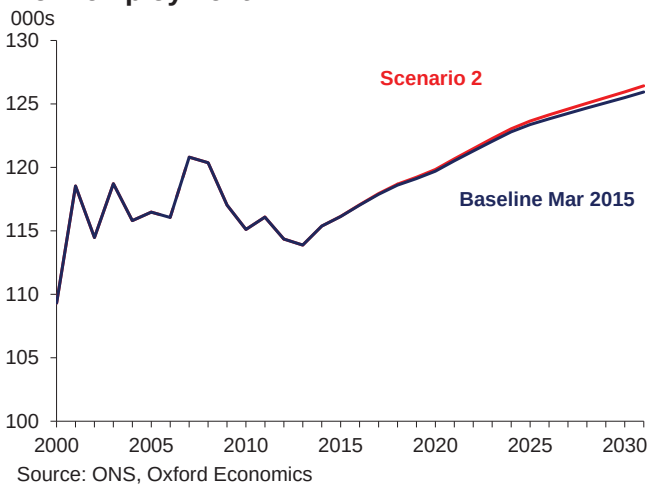
- 20% higher growth than the baseline projection within professional services, financial & insurance, and information & communication
- 10% lower growth than the baseline projection within wholesale & retail trade, accommodation & food services

GVA growth 2014-31



Source : Oxford Economics

York employment



Source: ONS, Oxford Economics

2031, over 100 below the baseline.

Under scenario 2, there is a positive impact on GVA growth within York, with minimal impact upon employment growth. GVA growth within York increases from 2.4% per annum to 2.5% per annum over the period 2014-2031. GVA growth with Yorkshire & Humber and the UK remains unchanged from the baseline.

Employment growth is slightly higher under scenario 2, though considerably below the rate assumed within scenario 1. The results suggest an increase of over 11,050 jobs within York by 2031, 490 above the baseline. The employment level within York is expected to exceed 126,000 by 2031, with jobs growth forecast to average 0.54% per annum, slightly above the baseline rate of (0.52%). Such growth is equivalent to a change of 11,680 jobs between 2013/14 to 2030/31.

Within York, professional services are expected to enjoy the biggest gains under scenario 2, with employment expected to increase by almost 3,300 by 2031. Growth within information & communications is also faster, an increase of almost 570 jobs within York by 2031, over 100 above the baseline. As a result of the increased level of activity in these sectors, a number of other sectors including administrative & support and construction are also expected to enjoy small indirect gains compared to the baseline.

Under the scenario, wholesale & retail trade is expected to increase by 1,412 jobs by 2031, 163 jobs below the baseline. Growth within accommodation & food services is also slower; around 950 additional jobs are expected by

York employment

Oxford Economics' forecasts comparison May 2015 & Scenario 2	Level - May 2015		Level - Scenario 2		Level change 2014-31		
	2014	2031	2014	2031	May 2015	Scenario 2	Diff
Agriculture, forestry & fishing	669	534	669	534	-135	-135	0
Mining & Quarrying	0	0	0	0	0	0	0
Manufacturing	4,291	3,160	4,291	3,160	-1,131	-1,131	0
Electricity, gas, steam & air	92	111	92	111	18	18	0
Water supply	390	351	390	351	-39	-39	0
Construction	5,605	6,784	5,605	6,808	1,179	1,203	25
Wholesale & retail trade	18,347	19,922	18,347	19,759	1,575	1,412	-163
Transportation & storage	10,914	11,929	10,914	11,950	1,015	1,037	21
Accommodation & food service	10,185	11,237	10,185	11,132	1,052	947	-105
Information & communication	2,818	3,284	2,818	3,387	466	569	103
Financial & insurance	4,303	4,346	4,303	4,355	43	52	9
Real estate activities	1,890	2,265	1,890	2,273	375	384	8
Professional, scientific & tech	8,725	11,472	8,725	12,020	2,747	3,295	548
Administrative & support	6,324	8,028	6,324	8,057	1,704	1,733	30
Public administration & defence	6,141	5,355	6,141	5,355	-787	-787	0
Education	12,440	12,340	12,440	12,340	-100	-100	0
Human health & social work	15,861	17,073	15,861	17,073	1,212	1,212	0
Arts, entertainment & rec	3,020	3,836	3,020	3,843	815	822	7
Other service activities	3,364	3,914	3,364	3,921	550	557	7
Total	**115,377**	**125,937**	**115,377**	**126,428**	**10,560**	**11,050**	**490**

Source: Oxford Economics

Oxford Economics' forecast methodology

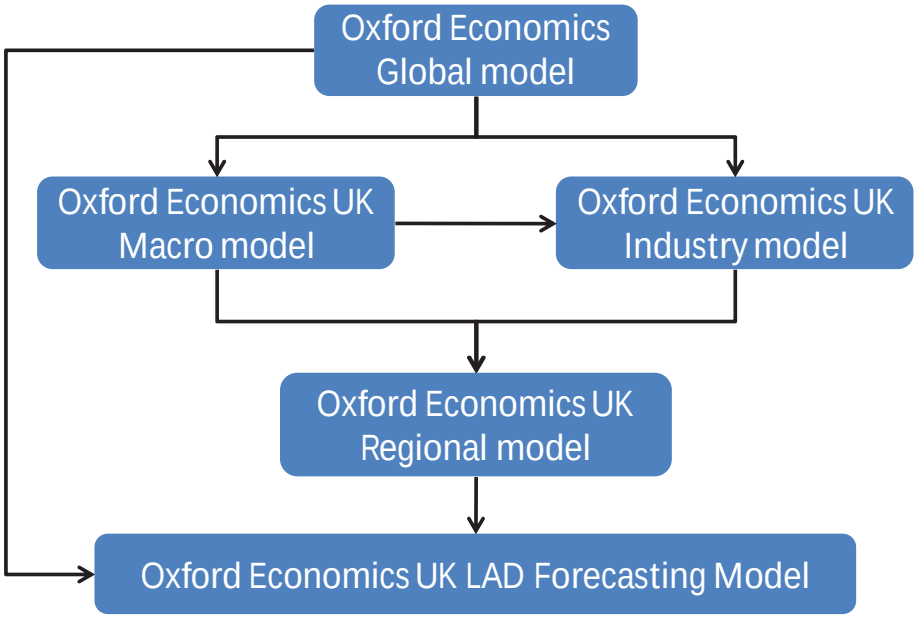
Model overview

This section provides technical information on the structure of Oxford Economics' Local Authority District Forecasting Model and details of the data sources and definitions of variables within the model. The model should be viewed as one piece of evidence in making policy decisions and tracking economic and demographic change. It is not intended to be used on its own to set employment targets for local authority areas. Such targets will need to take account of local opportunities, constraints and community aspirations. As with all models it is subject to margins of error which increase as the level of geographical detail becomes smaller, and relies heavily upon published data.

Models, though predominantly quantitative, also require a degree of local knowledge and past experience, or more generally forecasting art, to make plausible long term projections. To this end the Oxford Economics' model has been developed by a team of senior staff who have a long history in model building and forecasting at both local and regional levels.

The Local Authority District Forecasting Model sits within the Oxford suite of forecasting models. This structure ensures that global and national factors (such as developments in the Eurozone and UK Government fiscal policy) have an appropriate impact on the forecasts at a local authority level. This empirical framework (or set of 'controls') is critical in ensuring that the forecasts are much more than just an extrapolation of historical trends. Rather, the trends in our global, national and sectoral forecasts have an impact on the local area forecasts. For example, in the current economic climate of government austerity, this means most, if not all local areas in the UK will face challenges in the short-term, irrespective of how they have performed over the past 15 years.

Hierarchal structure of Oxford Economics' suite of models



The Local Authority District Forecasting Model produces base forecasts, which can be compared with other published forecasts (though care should be taken over data definition issues), and as a guide to aid commentary or analysis of a local economy. These forecasts can in one sense be considered to provide baseline 'policy off' projections with which the actual outturn under policy initiatives could be compared. The base projections are 'unconstrained' in the sense that they make no allowance for constraints on development which may be greater than in the past.

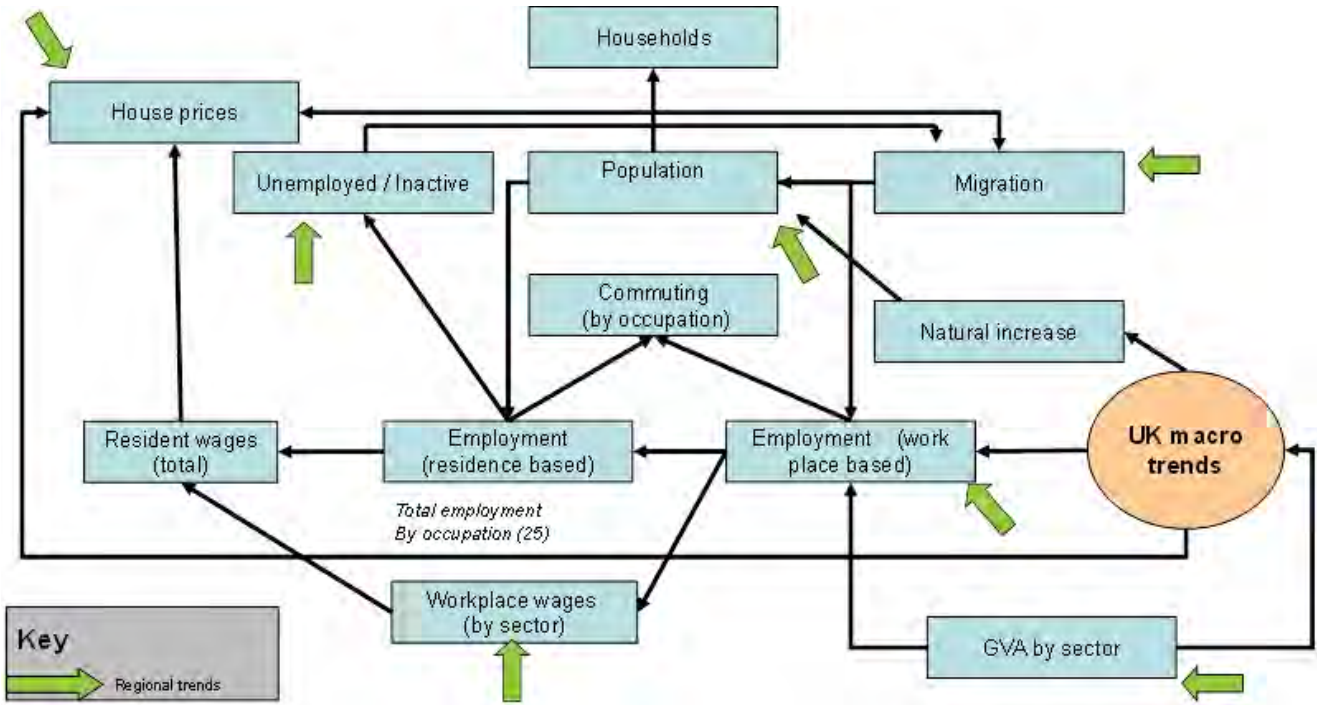
Our local area forecasts essentially depend on three factors:

- National/regional outlooks – all the forecasting models we operate are fully consistent with the broader global and national forecasts which are updated on a monthly basis;
- Historical trends in an area (which implicitly factor in supply side factors impinging on demand), augmented where appropriate by local knowledge and understanding of patterns of economic development built up over decades of expertise, and
- Fundamental economic relationships which interlink the various elements of the outlook.

Model structure

The main internal relationships between variables are summarised in Figure 1.2. Each variable is related to others within the models. Key variables are also related to variables in the other Oxford Economics models.

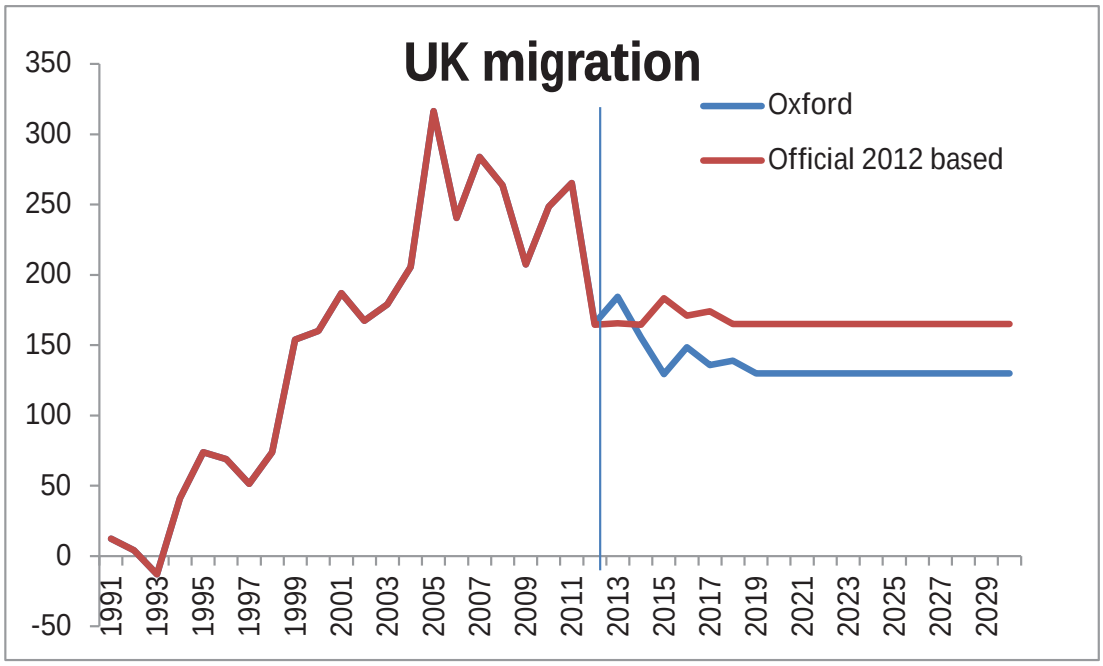
Main Relationships between variables in the Local Authority District Forecasting Model



Data sources and assumptions

Population and migration

Population and migration data are collected from the national Mid-Year estimates (MYE) for each area. These have been revised in line with the 2011 Census results. The latest data available is for 2013. Oxford Economics produce their own forecasts of population which are economically driven and thus differ from the official population projections. Official births and deaths projections from 2012-based population projections are used. The chart below sets out the Oxford migration forecast for the UK compared with the 2012-based population projection. Oxford Economics expect UK net migration to average 130,000 per annum in the long-term compared to 165,000 in the official projections.



The divergence reflects the removal of one-off effects from EU enlargement and weaker economic prospects. Oxford Economics' population forecasts are derived from an economically driven model whereas official projections are trend based and do not consider how demand in the economy (and the likely impact on employment rates) affects migration. At the local authority level, migration is linked to the employment rate forecast. If the employment rate within an area is falling too fast, migration reacts as the model assumes that people would not be attracted into this area to live, given that the employment prospects are weak. This approach ensures that the relationship between the labour market outlook and the demographic forecasts is sensible. This series is scaled to be consistent with the migration forecast for the respective region from the UK Regional Model. The total population forecast is then constructed using the forecast of migration and the natural increase assumptions. Natural increase for local areas is forecast based upon recent trends in both the historical data and the official projections.

Working age population

Working age population data is also collected from the Mid-Year estimates for each area up to 2013. It is defined as all people aged 16 to 64. The share of working age to total population is forecast using both trends in the official projections and trends in the forecast for the respective region from our UK Regional Model. This is applied to the total population forecast and scaled to be consistent with the working age population for the respective region.

Employees in employment

There are two key sources for the employee jobs data – ONS Workforce Jobs (WFJ) and the Business Register and Employment Survey (BRES):

- The WFJ series is reported on a quarterly basis, providing estimates of employee jobs by sector (based on the 2007 Standard Industrial Classification – SIC 2007) for the UK and its constituent government office regions, over the period 1981 Q3 to 2014 Q4.
- The Business Register and Employment Survey (BRES) is an employment survey which has replaced the Annual Business Inquiry (ABI). Similar to WFJ, BRES data is based upon SIC 2007, but it is only published for the years 2008-13. Prior to this, ABI and Annual Employment Survey (AES) data is available for employee jobs data, however this is based on an older industrial classification (SIC 2003). Data is available at local authority level and more detailed sector definitions. It is worth noting that the BRES is first and foremost a survey and is therefore subject to volatility, particularly when the level of detail becomes more refined. The survey is collected in September of each year and not seasonally adjusted.

There are a number of steps in constructing regional employee jobs. These address changes in sectoral classifications across the various sources and restrictions on data availability over particular periods of time. Initially, we take employee jobs data for each sector directly from the BRES over the years 2009-13, which reflects recent methodological changes to the BRES in accounting for working proprietors. This relates to September figures and is based upon SIC 2007 sectors. In 2008, levels of employee jobs are constructed by extrapolating back the trend in the old BRES. Data from the ABI and AES is used to construct the data back to 1991. This constructed local dataset is then scaled to be consistent with the UK employee jobs series from WFJ, by applying an adjustment factor to all sectors which converts the data to annual average values (seasonally adjusted). This is measured on a workplace basis.

The starting point for producing local authority employment forecasts is the determination of workplace-based employees in employment in each of broad 19 SIC2007 based sectors consistent with the regional and UK outlooks. At local authority level some of the sectors are driven predominantly by population estimates, others by total employment in the area, and the reminder relative to the regional performance (largely exporting sectors). All sectors are also influenced by past trends in the local area, and care is taken to ensure the forecast is not effected by volatility in the historical data. Taken in totality, employment is cross referenced with a number of variables (including population, relative performance across similar areas, historical cyclical performance and known policy) for checking and validation purposes. Where necessary, manual adjustments are made to the projected trends to reflect this validation process. The methods of sectoral projection are as follows, each of which are forecast based upon recent trends:

- Agriculture - share of the region
- Mining and quarrying - share of the region
- Manufacturing - share of the region
- Electricity, gas, & steam - share of the region
- Water supply; sewerage, waste management - share of the region
- Construction - location quotient based upon total employment
- Wholesale and retail trade - location quotient based upon consumer spending
- Transportation and storage - location quotient based upon consumer spending
- Accommodation and food service activities - location quotient based upon consumer spending
- Information and communication - share of the region

- Financial and insurance activities - share of the region
- Real estate activities - location quotient based upon total employment
- Professional, scientific and technical activities - location quotient based upon total employment
- Administrative and support service activities - location quotient based upon total employment
- Public administration and defence - location quotient based upon population
- Education - location quotient based upon population
- Human health and social work activities - location quotient based upon population
- Arts, entertainment and recreation - location quotient based upon consumer spending
- Other service activities - location quotient based upon consumer spending

Self-employment

Self-employment data for the region is taken from ONS Workforce Jobs survey (19 sector detail). Data for the local authorities is Census based (and scaled to the regional self-employed jobs estimates) and is broken down by sector using the employees in employment sectoral structure. Self-employment in each sector is forecast using the growth in the sectoral employees in employment data and the estimates are scaled to the regional estimate of self-employment by sector.

Total employment (jobs)

Total employment includes employees in employment, the self-employed and Her Majesty's Forces. This is measured on a workplace basis. No specific forecasting for this measure is required - it is calculated from the forecasted elements discussed above. Note that this estimate is a jobs and not people measure (i.e. one person can have more than one job and would be counted more than once in this indicator).

Unemployment

Claimant count unemployment data is provided by ONS, via NOMIS. Annual average values are calculated from the monthly data. The latest data available is April 2015. Unemployment (claimant count) is projected based on regional trends and a measure of overall labour market tightness (relative employment rate) in the local area. It is not at present directly affected by migration though they do impact indirectly through the employment rate (which has working age population as its denominator). The unemployment rate is defined as claimant count unemployment as a percentage of the working age population. No specific forecasting of this measure is required.

Resident employment

This is a measure of the number of people living in an area who are in work. Resident employment data is taken from the Annual Population Survey. The latest year of available data is 2014. Given that this data is survey based and tends to be very volatile, data is 'smoothed' by taking a 3 year average. Residence employment is based on a commuting matrix taken from the 2001 Census. This matrix tells us where employed residents of an area work. Using this information each available job (see workplace employment people based above) is allocated to a resident of a given local authority. This method assumes the proportions of commuting do not change over time. Employment rate is defined as residence employment as a percentage of the population aged 16 plus. No specific forecasting of this measure is required.

Labour force

Labour force is the sum of resident employment and unemployment (claimant count). No specific forecasting for this measure is required - it is calculated from the forecasted elements discussed above.

Gross Value Added

Regional GVA forecasts are available by sector from our UK Regional Model. For areas within the region, GVA is available at NUTS 3 level up 2013. This includes counties and former Metropolitan counties. Our forecasts at local authority level are obtained firstly by calculating an 'expected' GVA in each area. This is calculated by multiplying the region's GVA per employee in each sector by workplace employment in each sector within each local authority area. An adjustment factor based upon relative earnings is also applied as areas with higher wages should produce higher levels of GVA. Expected GVA is then scaled to add the GVA at NUTS 3 level and the regional sectoral forecasts from the UK Regional Model.

Workplace based wages

Regional data on average wages by sector is available from the Annual Survey of Hours and Earnings (ASHE), the latest year of data is 2014. At the level of individual local authorities estimates of total wages on a workplace basis and a residence basis are also available from the NES and now ASHE. The growth in UK wages by sector is applied to the local area sectoral wage series (constructed using ASHE totals for authorities and regional industry totals) to give an estimate of wages within each sector. An adjustment factor is applied to reflect the relative occupation structure of each area. Hence areas where higher paying occupations are growing faster than the regional average will have higher wages. These wages estimates are then scaled to be consistent with regional wage totals.

Residence based wages

Residence based wages are forecast within the model by adjusting the workplace based wages for local areas. An adjustment factor, which is based upon ASHE workplace based and residence based data, is applied to ensure consistency with the published data. This factor is held constant but can be adjusted for scenario purposes.