Northumberland County Council

Housing and economic growth options
Findings report

Peter Brett Associates
June 2018

33 Bowling Green Lane, Clerkenwell, London EC1R 0BJ
T: +44 (0)203 824 6600   E: london@peterbrett.com

Project Ref 43091

	Name	Position	Signature	Date
Prepared by	Joanna Lee Cathy Hall	Associate Senior Associate	JL/CMH	June 2018
Reviewed by	Cathy Hall	Senior Associate	CMH	June 2018
Approved by	Cristina Howick	Partner	CH	June 2018
For and on behalf of Peter Brett Associates LLP				

THIS REPORT IS FORMATTED FOR DOUBLE-SIDED PRINTING

CONTENTS

TABLES

FIGURES

APPENDICES

1 INTRODUCTION

1.1 This study, commissioned by Northumberland County Council, is part of the evidence base that will inform targets (requirements) for housing and employment land in its emerging Local Plan for the period 2016 to 2036. It develops and then considers the implications in terms of both housing and employment land of several different economic futures for Northumberland over the plan period 2016-36. The study will inform a refresh of the Council's economic strategy.

1.2 This study takes account of the draft planning reform package issued by the Government on 5 and 9 March 2018. On 5 March, the Government issued a consultation draft of revisions to the National Planning Policy Framework (NPPF). Subsequently, they issued a draft of revisions to the Planning Practice Guidance (PPG). The 5 March announcements also confirm that there has been further slippage in the Government's planning reform timetable. The announcements imply that the revised NPPF will apply to plans submitted after January 2019. As the Northumberland Local Plan is expected to be submitted in 2019, it is likely that the new NPPF will apply to it.

1.3 Below, Section 2 provides a brief overview of Northumberland's planning and economic context, including a review of the evidence base documents that remain relevant to this study. Section 3 considers economic futures, providing three alternative forecasts of jobs and output growth. Section 4 translates the forecasts into employment land demand and draws implications for the Local Plan. Section 5 translates the forecasts into housing demand, and again draws implications for the Local Plan. Section 6 summarises our conclusions.

1.4 In addition, Appendix J provides sub-county level analysis with reference to the overall findings of the report.

2 POLICY AND EVIDENCE BASE CONTEXT

National planning policy context

2.1 Since the publication of the National Planning Policy Framework (NPPF) in 2012 and the subsequent publication of the Planning Practice Guidance (PPG) in 2014, planning for housing and employment needs has followed a broadly standard method. A summary of this is provided at Appendix A.

2.2 However, in February 2017 the then-Department of Communities and Local Government (now Ministry for Housing, Communities and Local Government - MHCLG) announced in the housing white paper[1] that they would be revising the NPPF; a draft document was published in March 2018. This includes revisions on both housing and economic development policies.

Economic development

2.3 While the changes are primarily focused on housing, there are some shifts on economic development policy of particular relevance to Northumberland. There are now cross-references to the Government's Industrial Strategy (2017), and also the need for greater integration between planning policy and economic development strategies, particularly Local Industrial Strategies with a 'clear economic vision'. This goes on to state that planning policies should:

- *'set criteria, or identify strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period (including making provision for clusters or networks of knowledge driven, creative or high technology industries)*
- *seek to address potential barriers to investment, such as inadequate infrastructure, services or housing, or a poor environment*
- *be flexible enough to accommodate needs not anticipated in the plan, allow for new and flexible working practices (such as live-work accommodation), and to enable a rapid response to changes in economic circumstances'*[2]

2.4 The current version of the NPPF had an explicit paragraph (22) setting out that policy 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'. This paragraph is no longer within the economic development section of the revised NPPF; however, there a wider-reaching paragraph which extends to all allocations for any use that is of relevance, the plan-making elements of which are set out below:

> *'Planning policies and decisions need to reflect changes in the demand for land. They should be informed by regular reviews of both the land allocated for*

1 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/590464/Fixing_our_broken_housing_market_-_print_ready_version.pdf

2 Para. 83

development in plans, and of land availability. Where the local planning authority considers there to be no reasonable prospect of an application coming forward for the use allocated in a plan:

a) they should, as part of plan reviews, reallocate the land for a more deliverable use that can help to address identified needs (or, if appropriate, deallocate a site which is undeveloped)' (para. 120)

2.5 While the intention of the policy may be similar to the wording within the NPPF, it is worth flagging the drafting is loose. Notably, there being a 'reasonable prospect of an application' does not equate to a 'reasonable prospect of a site being used for that purpose'.

2.6 A new section on the rural economy (paras 84 and 85) has been introduced which underlines the need for policy to enable growth and expansion of businesses in rural areas, the development and diversification of agricultural businesses, and to support appropriate tourism and leisure developments in rural areas. This could include allocations outside existing settlement boundaries to meet needs.

Housing needs

2.7 In advance of publishing the draft revisions to the NPPF, MHCLG undertook consultation in September 2017 on further measures set out in the housing white paper to boost housing supply in England; this included a standard method for calculating local authorities' housing need. This standard method has been carried forward into the draft NPPF and associated draft revisions to the PPG.

2.8 If taken forward into the revised NPPF, which is expected to be published in late July 2018, this standard method will replace the existing PPG-derived method which is explained in Appendix A and which underpinned the approach taken in Northumberland's 2015 Strategic Housing Market Assessment. It is therefore highly material to this study and is likely to form the basis against which a plan will be tested.

2.9 The draft revisions to the PPG sets out that while the standard method to calculating need can be applied to the whole plan period, LPAs are required to review their plans every five years to ensure they remain up to date. It is relevant to note that:

'Plan-making authorities should not apply constraints to the overall assessment of need. Limitations including supply of land, capacity of housing markets, viability, infrastructure, Green Belt or environmental designations, are considerations when assessing how to meet need. These types of considerations are not relevant to assessing the scale of that need.' (p.25)

2.10 The draft PPG includes provisions for identifying need in excess of that derived from the standard method which is referred to as 'the minimum starting point'. It goes on to state that:

'Where it is likely that additional growth (above historic trends identified by household projections) will occur over the plan period, an appropriate uplift may be applied to produce a higher need figure that reflects that anticipated growth.

Circumstances where an uplift will be appropriate include, but are not limited to; where growth strategies are in place, strategic level infrastructure improvements are planned, funding is in place to promote and facilitate growth (i.e. Housing Deals, Housing Infrastructure Fund). In these circumstances, the local housing need figure can be reflected as a range, with the lower end of the range being as a minimum the figure calculated using the standard method. Where an alternative approach identifies a need above the local housing need assessment method, the approach will be considered sound, unless there are compelling reasons to indicate otherwise.' (p.26)

2.11 It is in this context, as well as the provisions set out in Appendix A on the alignment of jobs and housing under the current NPPF, that this study models a number of different economic futures for Northumberland and considers what the implications of these would be for housing need and employment land.

The Northumberland policy and evidence context

2.12 The Council reached an advanced stage in preparing a Core Strategy, submitting it for examination in April 2017. However, following the May 2017 local elections, the decision was taken in July 2017 to withdraw the document and review certain elements, including the housing and employment numbers.

2.13 Despite its withdrawal, several evidence base documents which informed the document remain relevant to this study. We discuss these briefly below. However, we do not discuss the Strategic Housing Market Assessment (SHMA) (2015, Arc4) and the Long-term Economic Sector Forecasts and Land Requirement Forecasts (2014, St Chad's) because the relevant elements[3] of those documents have been superseded following the publication of new official population and household projections and updated economic forecasts.

2.14 The SHMA followed the method set out in the PPG and summarised at Appendix A . However, because we expect the revised NPPF and guidance to be in place by the time Northumberland's plan progresses, we do not revisit this in the study. Furthermore, that study is underpinned by now superseded population projections. That said, it is relevant to review population change in Northumberland as this has implications for both housing need and labour supply.

Population change in Northumberland

2.15 The latest 2014-based sub-national population projections were published in May 2016[4]. These were then followed by the 2014-based sub-national household projections, published by the Department of Communities and Local Government (now the Ministry of Housing, Communities and Local Government, MHCLG), in

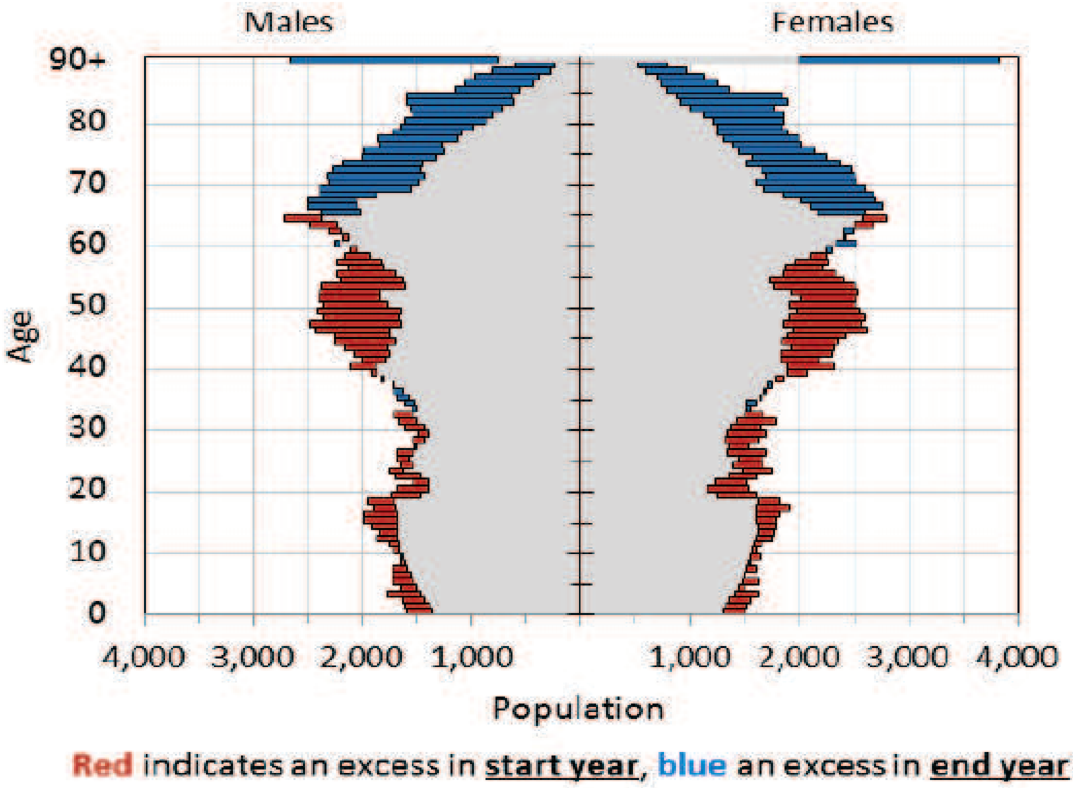
[3] Other elements of the SHMA, for example housing size and tenure, may continue to be relied upon but they do not inform this study.

[4] 2014-based Sub-National Population Projections published by the Office for National Statistics ('SNPP 2014')

August 2016. On the Council's behalf, these projections were tested in line with the current PPG by Edge Analytics[5] as a 'sense check' the objectively assessed housing need identified in the 2015 SHMA for the then-emerging Core Strategy for the period 2011-31[6].

2.16 With reference to the official projections, the age structure of Northumberland's current and future population is very relevant to understanding the potential for and implications of economic growth in the county, because of what it means for the county's labour force. The figure below, taken from the 2017 study clearly shows that by 2031, most growth is in those aged 65 and above, while below that age, decline is projected.

Figure 2.1 Northumberland age profile 2011-31



Source: Edge, 2017 (p.27)

2.17 Edge conclude that '*these changes to the age structure of the population will have an important impact upon Northumberland's ability to sustain its labour force under current economic participation and commuting conditions*'[7]. The figure below updates this analysis for the period relevant to this study but makes the same point: while

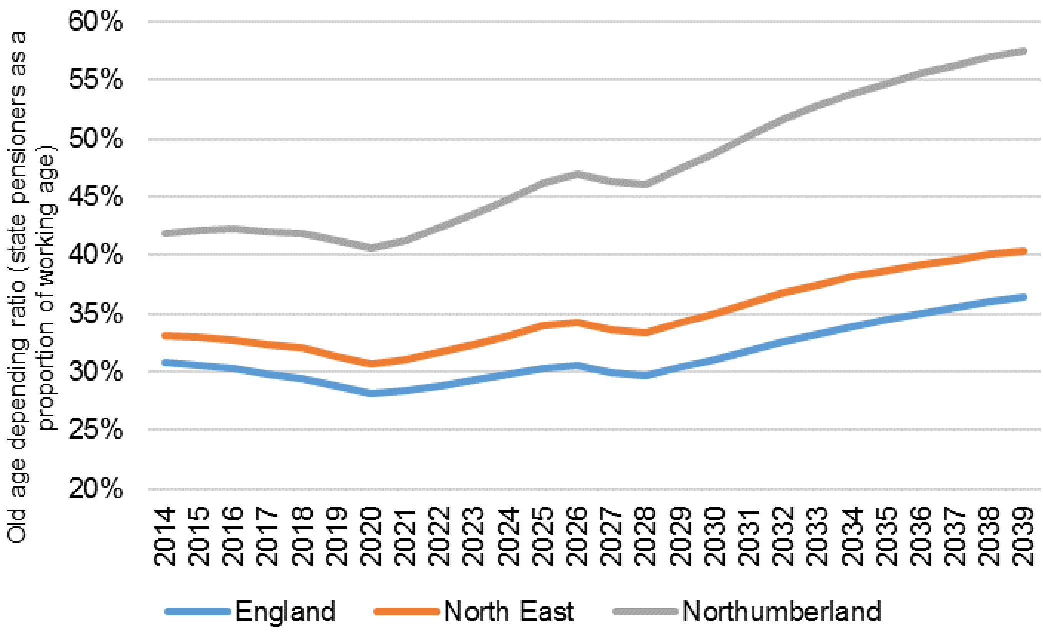
[5] Northumberland Demographic Analysis and Forecasts (March 2017

[6] The new plan for Northumberland will be based on the period 2016-2036. However, because the current PPG requirements to test the demography will fall away following the adoption of revisions to the NPPF in the summer, we do not in this study undertake a comprehensive update of the Edge study to reflect the new plan period.

[7] Para. 7.12

Northumberland currently has a higher level of old age dependency[8] than the region and England, the gap is expected to have widened further by 2036.

Figure 2.2 Old age dependency ratio change



Source: SNPP 2014, old age dependency ratios

2.18 In relation to jobs, rather than use an integrated forecasting model to understand the housing requirements generated by the jobs-led scenarios developed by St Chad's, both the 2015 SHMA and the 2017 Edge study used POPGROUP to model different sensitivities. These included making various manual adjustments to unemployment levels, economic activity rates and the commuting balance to identify the housing needs associated with the St Chad's scenarios.

2.19 The preferred jobs-led scenario which was taken forward in the now-withdrawn Core Strategy was for 1,216 dpa which reduced the unemployment rate to pre-recession levels and reduced the commuting ratio 'in line with the NOMIS line of best fit'; no adjustment was made to economic activity rates beyond reflecting the changes to state pension age. This was taken from the 2015 SHMA.

2.20 The 2017 study re-ran the same scenario, using the same unemployment and commuting assumptions to take account of the 2014-based projections and other updated data. This indicated a need for 914 dwellings pa, reduced from the previous 1,216pa.

2.21 This change is relevant to this study in that it shows that in order to support the same degree of economic growth, the 2017 study showed that fewer homes were needed to underpin growth in the county. By the same token then, when considering the

[8] The old age dependency ratio is the number of people over 65 years old for every 1,000 people aged between 16 and 64 years old

outcomes of this study, it should not necessarily be interpreted that a lower housing need figure equates to constrained economic growth.

Housing completions

2.22 Population growth is of course linked to household growth, and so housing completions. The latest published data from NCC on housing delivery covers the period 1 April 2016 to 31 March 2017. This confirms that since 2014, nearly 4,000 dwellings have been completed in the county.

Table 2.1 Net additional dwellings in Northumberland 2014-17

	2014/15	2015/16	2016/17
No. of dwellings	1,447	991	1,531

Source: NCC data

2.23 While further data is available from NCC on housing completions, for the purposes of this study the draft NPPF's standard method removes the need for scrutiny of housing completions[9], we only need to think about delivery since the base date of the projections i.e. 2014. In due course, when the projections are updated to a 2016 base, it will only be the 2016 completions and any subsequent full years' data that is available will be relevant.

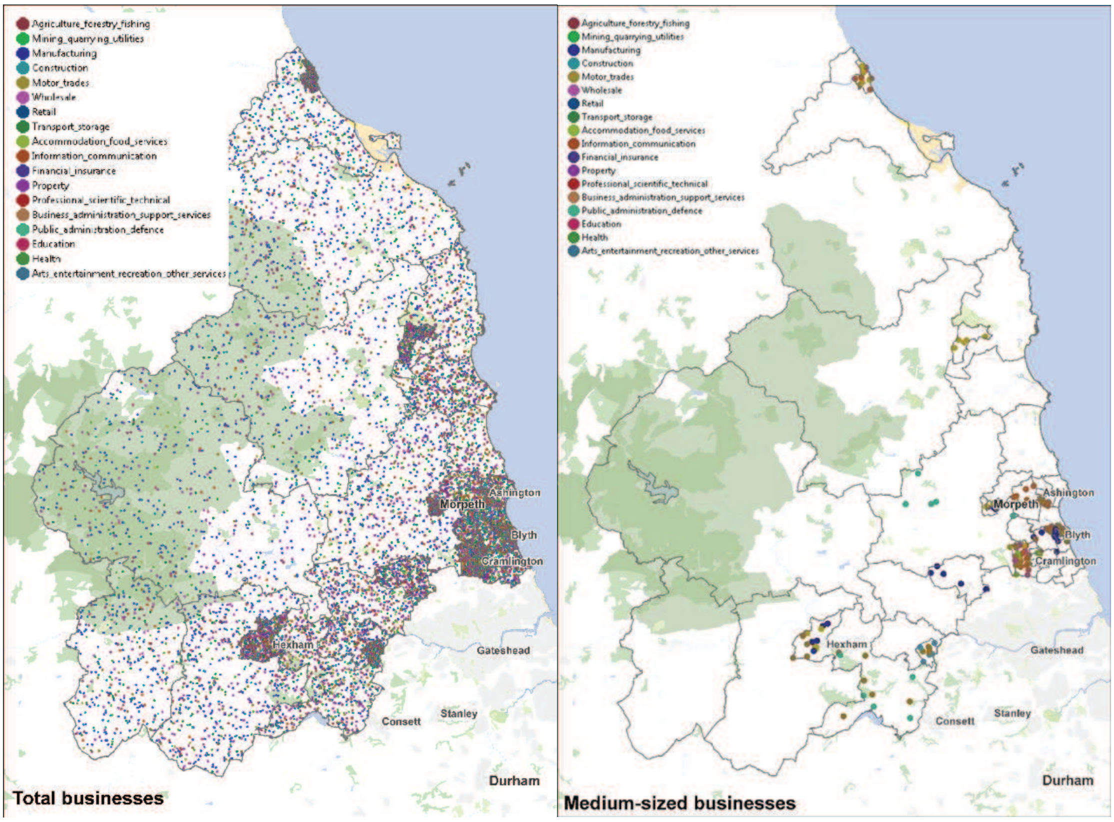
Employment land in Northumberland

2.24 Economic activity is unevenly spread across Northumberland. The figure below clearly shows the concentration of business numbers in the south eastern part of the county, focused on Cramlington, Ashington, Blyth and Morpeth, with Hexham and Ponteland also being key business locations. Other than in the south, Berwick and Alnwick are the only places where there are significant numbers of businesses.

2.25 This is amplified when business size is taken into account. The second map shows only medium-sized businesses (50-250 employees).

[9] Although other elements of the NPPF place particular emphasis on this (housing delivery test)

Figure 2.3 Distribution of businesses in Northumberland



Source: BRES 2016 (full maps in Appendix B

2.26 There are a number of key employment studies which are relevant to this study as we have not carried out any update of the site assessment work or local market analysis previously undertaken in Northumberland. Specifically, the full Employment Land Review (ELR) undertaken in 2011 and updated in 2013 ('2011 ELR' and '2013 ELR'); and the further bottom-up employment work commissioned in 2015 (Employment Land and Premises Demand Study, ELPDS), which looked at local demand in detail and confirmed the conclusions of the previous studies.

2.27 The 2011 ELR, prepared by NLP and BNP Paribas, provided evidence to demonstrate the need for, and deliverability of, employment allocations across the County in three service areas. This study provided a spatial understanding of economic activity across Northumberland, and the influence outside the county. These four 'functional economic areas' are summarised as:

- Berwick upon Tweed and the surrounding area, with the travel to work data indicating a high degree of self-containment because of its remoteness from urban centres. This covers part of North Northumberland.
- Alnwick, Morpeth, West Northumberland and surrounding area, including Hexham which while predominately rural includes Morpeth as a major centre of employment, as well as Alnwick and Hexham. Self-containment is between 60-70%, but with stronger commuting links to Tyneside in the south and South East Northumberland.

- South East Northumberland which is largely urban in character and includes Blyth, Cramlington and Ashington. There is commuting between this area and particularly Morpeth. The report refers to high levels of deprivation in this area.
- Newcastle, Gateshead and the area north of the Tyne which includes the three other authorities within the North of Tyne devolution area, as well as Ponteland and Prudhoe within the county. With reference to Northumberland, there are significant commuting flows from South East Northumberland and West Northumberland and while there is some out-commuting this is not significant against the scale of in-commuting.

2.28 In terms of the stock and quality of employment land, the best sites were found to be concentrated in the South East with an undersupply of unconstrained, available employment sites in Hexham, Ponteland, Prudhoe and Morpeth.

2.29 Because the study was premised on now-outdated demand analysis, we do not consider that analysis in detail. However, a significant oversupply of allocated employment land was identified. In the context of space requirements for in the region of 300ha of employment land[10], the study suggested that 137.6ha of land could be deallocated. For qualitative reasons stemming from the undersupply noted above, the study made a recommendation for between 64-87ha of new employment land focused on Morpeth, Alnwick, Hexham, Blyth, Prudhoe and Ponteland.

2.30 The ELPDS (ES Group) assessed the demand for employment land and premises in each of the County's main towns, service centres and their surrounding commercial property markets. The objective was to update demand using a bottom-up qualitative method and review whether the previous ELR recommendations are still valid. The study was informed by workshops, surveys and local market research to identify the scale and location of land requirements on a site-by-site basis looking at vacancy, rents and distribution of employment land.

2.31 It identified 384 ha of available and allocated employment land. Based on an average annual take-up of 6.22 ha, this equated to supply of over 60 years. As well as pointing to the continued need to de-allocate sites, in spatial terms the study supported the recommendations of the 2011 ELR for new employment land allocations in Prudhoe, Hexham, Morpeth and Ponteland. The Hexham recommendation was made in the context of the study identifying Cramlington as the most important employment location in terms of floorspace and take up, and while Hexham was second in terms of floorspace, it was suffering from constrained take up.

2.32 Taken together, these studies identify several common themes which remain relevant to this study in terms of devising policy solutions to accommodating economic growth in Northumberland:

- Economic activity is focused on the southern part of the county, with the strongest links in terms of transport infrastructure to the Newcastle conurbation.

[10] Figure subsequently halved in the 2013 report, drawing on the then-latest economic forecasts.

- Under the current development plan, there is a quantitative surplus of land allocated for employment uses.
- Despite this global oversupply, there is a geographical mismatch in the demand for and supply of employment land so that there is not sufficient land to meet demand in the economically-most active areas of the county.

Changes in the employment land stock in Northumberland

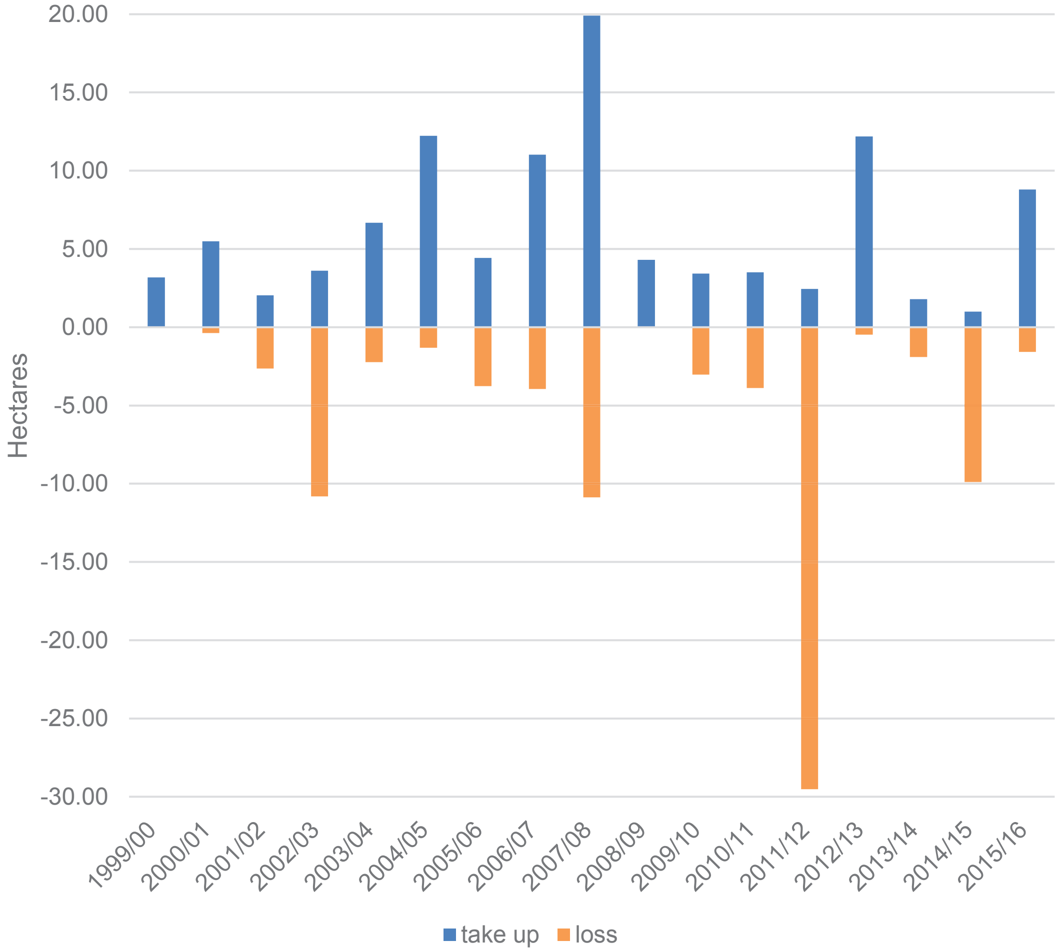
2.33 The Northumberland Employment Land Take-up Study 1999-2017 was published in March 2018 and provides a review of past rates and spatial patterns of the take-up of allocated employment land, as well as its development for other types of commercial activity or other types of land use such as housing.

2.34 In 2016, for the county as a whole, 241 ha of allocated employment land is identified as available. The majority of this land is in the South East delivery area (167 ha); the smallest proportion is in the West delivery area (8 ha)[11]. Further information is provided in relation to land under option, developed, held for expansion, and ancillary land. These other categories account for over 1,500 ha, and in each case, the majority is found in the South East Northumberland.

2.35 The figure below shows the take up and loss across the county of allocated land broken down chronologically between 1999 to 2016.

[11] The delivery areas are shown on Figure 3.2

Figure 2.4 Take up and loss of allocated employment land 1999-2016



Source: NCC Employment Land Take-up Study (2018) Table 32

2.36 This shows that while there were considerable losses in 2011/12, overall there has been a 19.8ha net gain in employment land over that period.

2.37 For the purposes of this study, understanding changes in employment stock is very relevant for forecasting land requirements. This is because the employment forecasts we use are based on net additional jobs; this means that if any existing jobs have been displaced by losses of employment land since the base date of the forecast, this must be factored into any allocations. For this study, this means the change in stock since 2014.

2.38 We have been advised by NCC that while they have extensive monitoring data, which has informed the figure above, this relates solely to allocated employment land, so does not cover any changes in unallocated land. Additionally, NCC carried out a 'cleanse' of their data within the last two years. This means that the scale of change is not likely to be representative of the single years for 2014-2016. We therefore instead use Valuation Office Agency (VOA) floorspace statistics[12] which shows that 19,000 sqm of employment space has been lost between 2014-2016 comprising 17,000 sqm of office space and 2,000 sqm of industrial space.

Summary

2.39 For the purposes of this study, we have used the emerging NPPF and associated guidance as the framework for our method.

2.40 We have had regard to the evidence base prepared in support of the withdrawn Core Strategy and have set aside those documents which relied on the previous set of economic forecasts, which are now some five years old. We have however, relied on the demographic analysis that underpinned the 2017 Edge study which considered the latest official projections. We also have regard to the market analysis provided in the 2015 employment study.

2.41 This review has revealed the following points which are relevant in developing the economic futures in the following section, and then in considering the housing need and employment land implications in the forthcoming sections:

- While there will be some population growth going forward, the population of the county is ageing and will continue to age faster than the national population so that the size of the working age population is becoming increasingly squeezed.
- There is a significant stock of allocated employment land but there are qualitative gaps in the more economically active areas in the county such as Hexham, Ponteland and Prudhoe.
- Recently, the level of housing completions has been very high, with nearly 4,000 units delivered in three years. Conversely, there have been net losses in employment space within the county in period to 2016, totalling some 19,000 sqm in the preceding two years from 2014. These losses of employment space will need to be factored into the need for employment land going forward.

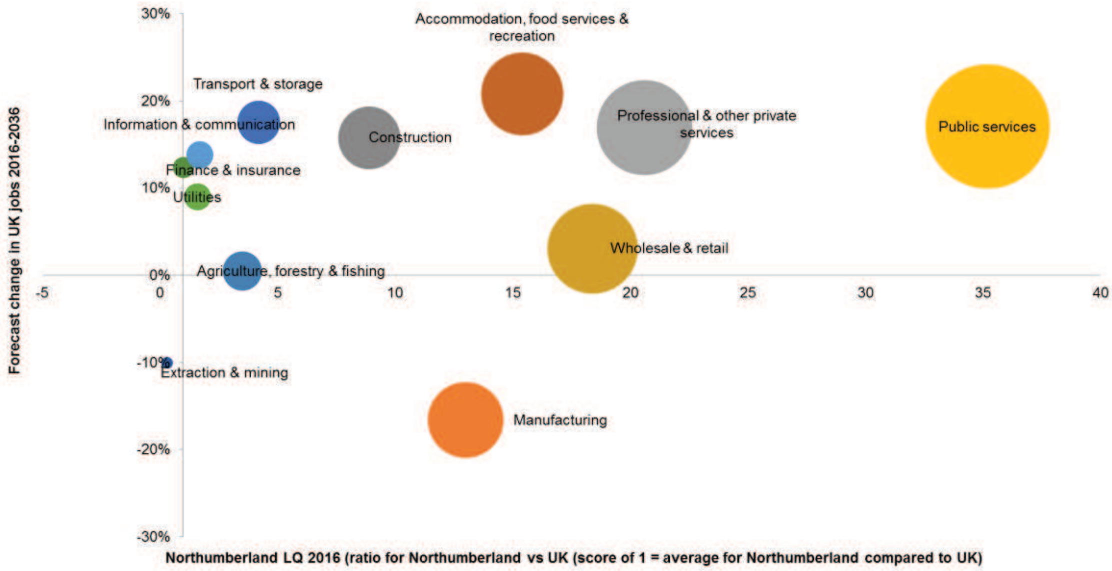
[12] https://www.gov.uk/government/statistics/non-domestic-rating-business-floorspace Non-domestic rating: business floorspace - providing a time series of statistics on the floorspace and rateable value of a range of classes of properties liable for business rates.

3 NORTHUMBERLAND'S ECONOMY

Introduction

3.1 The figure below shows the composition of the county's economy by sector. Each circle in the chart illustrates the current number of jobs in each broad sector in Northumberland. This shows that the service sector is very important to the county's economy (public services, professional and other private services and accommodation, food services and recreation and retail).

Figure 3.1 Northumberland location quotient (sector representation compared to UK, with sector size indicating employee numbers)



Source: Experian, PBA

3.2 The horizontal position on the chart shows the current representation relative to the UK, and the vertical position shows that sector's future job growth for the UK. This shows that it is these services sectors that are expected to grow in Northumberland, in line with growth at a UK level. Conversely, while manufacturing is a significant sector for the county which is also expected to grow over the period to 2036, this does not align with the national picture of declining manufacturing jobs.

3.3 However, this assumes that Northumberland performs as expected by forecasters and does not take account of the initiatives that may be coming forward as part of committed and future economic strategies. We therefore consider these below and factor this into the forthcoming section on Northumberland's economic future.

3.4 There are a wealth of economic development strategy documents relating to Northumberland. We do not in this study seek to provide a detailed analysis of these documents. This is largely because we use the North East Strategic Economic Plan (SEP), which the county's current Economic Strategy (2015) draws on, as the starting point for our economic futures analysis in the next section. The SEP itself is informed by the Northern Powerhouse economic work (Appendix C).

3.5 In addition, we are also aware of the recent announcement of the North of Tyne 'minded-to' devolution deal in November 2017. Northumberland, alongside Newcastle and North Tyneside, and with the support of the North East LEP, are the constituent members of the group which will make up the North of Tyne Combined Authority (NTCA). While little in the way of detail has come forward on what the NTCA will involve, it is likely to be a consideration in plan making. It is expected that a Housing and Land Board will be established to 'support the accelerated delivery of an ambitious target for new homes, informed by Local Housing Need figures'[13] and so too will an Employment Support Framework Agreement intended to foster inclusive economic growth in the NTCA.

Northumberland's current economic strategy

3.6 Within the context of the SEP, the Northumberland Economic Strategy 2015-2020 sets out a five-year vision and thematic priorities to achieve growth of 10,000 new jobs up to 2031.

3.7 The Economic Strategy sets out the current economic context and identifies the challenges of lower GVA than national, regional and LEP rates and falling employment. A further challenge is the interdependence between the different parts of the region given the dispersed rather than concentrated nature of both labour and employment provision.

3.8 The Strategy recognises the importance of both work and workers and that Northumberland's commuter role is vital as part of Northumberland's changing role in the wider region. The county provides key workers vital to the success and growth of the North East economy and as such it makes an important contribution in terms of workers and as a driver of regional prosperity. This interdependency is demonstrated by the significant flow of commuters to Tyneside which is shown by out-commuting exceeding in-commuting by a ratio of 2:1. Within this context it seeks a more balanced performance in the future.

3.9 As identified in the SHMA and in common with many areas, Northumberland has an ageing population and projections expect this to continue with a significant increase in the 65+ age groups. Linked to this, the strategy acknowledges that a continuing challenge will be attracting a more diverse demographic of working age migrants into the County. Another key challenge will be the ability to increase the resident working age population.

3.10 Under this strategy, future economic growth in Northumberland is premised on recognising connections, but also ensuring that the county has a strong economic base and can contribute more to regional output. The objective is to add enough jobs to keep communities and businesses sustainable and maintaining its role in the wider functional economic area, while ensuring that it does not become a dormitory location.

[13] North of Tyne 'minded-to' Devolution Deal (Nov 17) p.17

3.11 The strategy groups Northumberland's complex geography into four areas, two urban (south east and central) and two rural (north and west). This are shown on the figure below and explained following bullet points.

- **South East Northumberland** is the industrial heartland of the county with major employers and the majority of land available for development. It is well connected to Tyne and Wear and consists of a commuting population of locally focused residents and workers.
- **Central Northumberland** is accessible with good connectivity to Tyne and Wear, Durham and Carlisle and consequently a high proportion of residents commute to well-paid jobs in the conurbation. It includes some major employers around the principal towns and has a high concentration of public administration and defence jobs.
- **Rural Northumberland** (**North** and **West**) is large and sparsely populated with many distinct coastal and rural towns and villages and a host of distinctive landscape assets which are fundamental to the tourism and land-based industries which dominate the private sector economy. Together with agriculture, these industries are significant here compared with the England average.

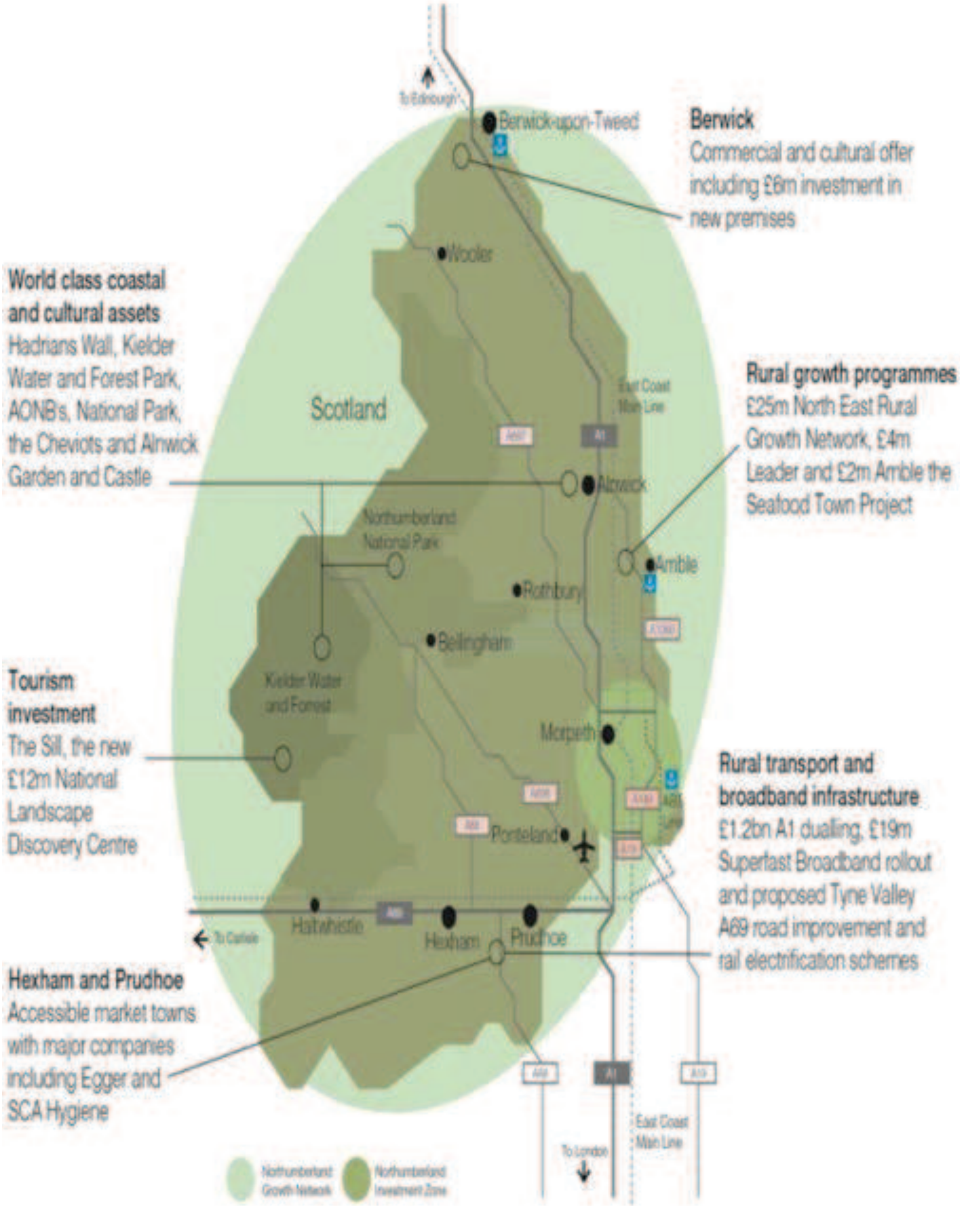
Figure 3.2 Northumberland's economic areas

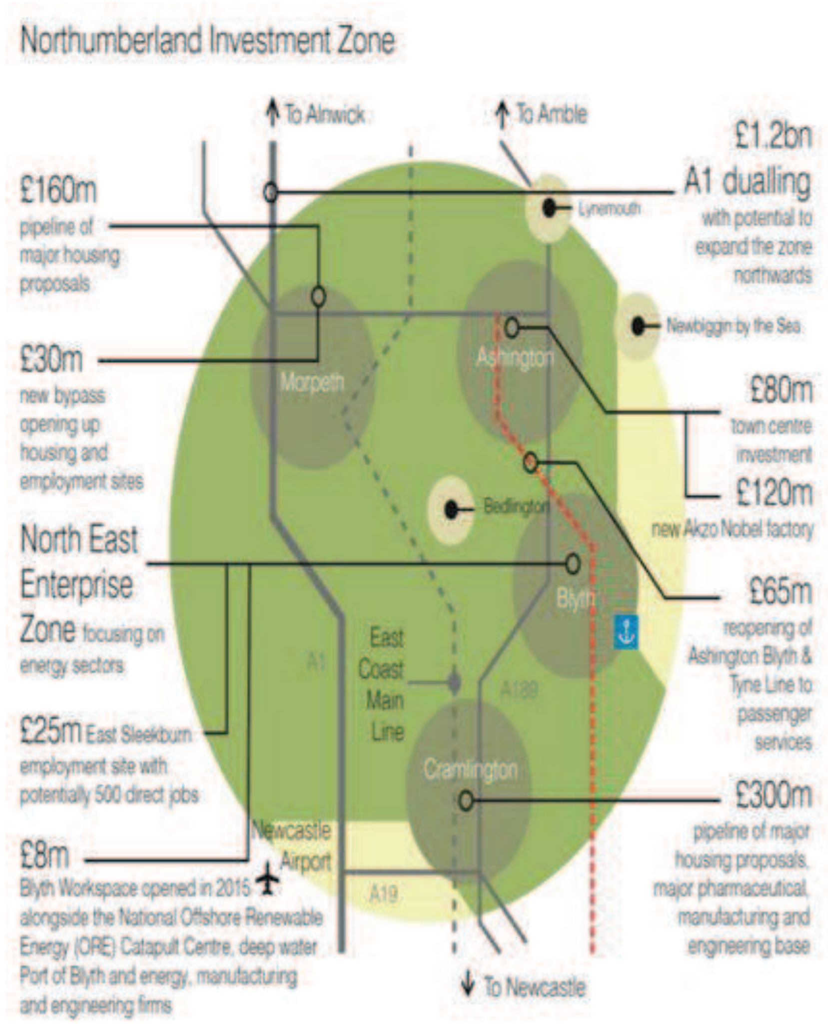
Source: Northumberland Economic Strategy 2015-20 p.30

3.12 As shown in Figure 3.3, the focus is on strengthening existing specialisms in the Investment Zone, supporting the diverse base across the Growth Network, and supporting tourism and cultural businesses, and the development and renewal of towns. The priority interventions are grouped around business, people and place and seek to: grow the sector strengths; strengthen the business base; enable a more inclusive economic; develop a competitive labour force, deliver infrastructure and connectivity and support successful towns and communities.

- The Investment Zone economic delivery programme will enable development of new jobs and business, new quality and diverse housing and excellent transport routes linked to the urban core of Tyne and Wear.
- The Growth Network economic delivery programme will support and facilitate the growth of the network of market towns and ensure the rural economy is an accessible and distinctive place to live, work and visit.

Figure 3.3 Northumberland's Growth Network and Investment Zone





Source: Northumberland Economic Strategy 2015-20 pp. 74 & 76

3.13 It is expected that these spatial delivery strategies will continue to influence economic growth and planning policy going forward in the refreshed economic strategy and the new local plan.

Borderlands Initiative

3.14 Since the Economic Strategy was published, the Council have been working in collaboration with Carlisle City Council, Cumbria County Council, Dumfries and Galloway Council and Scottish Borders Council ‘to promote the economic growth and competitiveness’ in the area.

3.15 The key economic and social challenges, together with the five strategic objectives (summarised in Appendix C) have been distilled into projects which form part of a list of priority activities, under several themes. Those relevant to Northumberland are summarised in the table below.

Table 3.1 Northumberland's priority projects

Transport and connectivity	Place development and regeneration	Key sectors and skills
Dualling of the A69 and the A1 **Upgrading and electrification of rail services** on the Tyne Valley Rail Line between Carlisle and Newcastle, including the provision of a new station at Gilsland **Improving the East Coast Main Line** Introducing a **Borderlands Digital Improvement Scheme** to accelerate access to superfast broadband and 4G mobile phone technology	Introducing a **Borderlands Town Regeneration Fund**, with Berwick and Haltwhistle identified as the initial priorities in Northumberland Creating **Community Growth Areas** that support the regeneration work of development trusts, parish councils and other community organisations Establishing a **Border Uplands Demonstrator Initiative**, as initial pilot within a wider Rural Development Demonstrator Programme to showcase new ways of working in a post Brexit context Developing a **Borderlands Developer and Investor Prospectus** Securing and applying further **Simplified Planning Zones and Enterprise Zones designations to key industrial sites**	Exploring the scope to **develop a Centre of Excellence or Innovation Centre for a key sector** examples could include energy; science and technology; food and drink; hospitality and tourism; or rural development demonstration Establishing key sector networks that bring together industry, academia and the public sector to share knowledge, information, identify **key issues and opportunities including addressing skill gaps and shortages** **Expanding the Supplier Development Programme**, operational in Scotland, to a pan Borderlands geography to make businesses procurement ready and strengthen supply chains Securing additional funding to **expand and unify enterprise support programmes** such as the Rural Growth Network operational in Northumberland Introducing a **pan Borderlands Digital Training scheme**

Source: NCC Cabinet report (April 2017)

Summary

3.16 This section clearly shows that there are a number of different but overlapping strategies being advanced to further Northumberland's economy including:

- Supporting growth in existing economic strengths, particularly in those parts of the county which have a strong relationship with the economy of the wider north east, focused on Newcastle and the Tyneside conurbation.
- Facilitating growth in the network of towns across Northumberland, including the market towns as focuses for the existing rural economy and tourist economy.
- An integral part of these strategies are infrastructure improvements, including:
  - Key north-south rail and road links run through Northumberland, as well as some east-west links in the southern part of the county. Some investment in the transport infrastructure of the county is committed but in the context of overall investment in the Northern Powerhouse, this is limited.

- The need to improve broadband infrastructure is a high priority for the Borderlands Initiative, so too are further rail improvements including electrification to local lines and upgrades to the East Coast mainline.

3.17 The following section goes onto consider how Northumberland's economy might grow in the future. This takes the 'business as usual' approach to growth i.e. the area continues to perform broadly as it has done in the past with reference to the broader expectations for the UK economy. However, it also considers several more ambitious scenarios which factor in improvements to key sectors and linked to infrastructure improvements, as outlined in the various economic development strategies considered in this section.

4 ECONOMIC GROWTH SCENARIOS

Introduction

4.1 To provide an integrated view of future jobs, population and housing, we have used the local economic forecasts (November 2017) produced by Experian Economics, together with additional scenarios specially commissioned from Experian. Experian is one of the three main economic forecasting houses (alongside Cambridge Econometrics and Oxford Economics) which provides local authority-level forecasts which align with their view of what will happen in the UK and region in the future. We use Experian as our preferred model as the most transparent of the three models. We choose to work with Experian for three reasons: their methods and assumptions are the most transparent of the three forecasters, we find their forecasts credible, and theirs is the only model that allows testing of alternative assumptions for demographic and labour market variables such as population and economic activity rates.

4.2 The baseline Experian model assumes population change in line with the latest ONS SNPP (currently ONS 2014). The forecast resident labour force (labour supply) for the local authority area is calculated from that population, plus activity rates and commuting. It therefore takes account of the changing age profile of Northumberland's workforce, as well as changes to retirement age and implications for the workforce across the period.

4.3 Another output of the model is job demand (labour demand) i.e. the number of jobs in the local authority that employers will want to fill. As its name indicates job demand is a demand-side view, unconstrained by local labour supply. Job demand is not shown in the published forecast on Experian's website, but Experian has provided it for this study.

4.4 The forecast also outputs *workplace jobs* (called by Experian 'workforce jobs'), which means the number of jobs located in the area. This number is the lower of the forecast labour demand and forecast labour supply:

- If labour supply is enough to fill the forecast demand, the workforce jobs equals demand.
- If labour supply is too low to meet demand, the number of jobs is the maximum that *can be* filled by the forecast labour supply. In that case, the forecast is saying that job growth in the area will be *supply-constrained*. In other words, to meet demand in full would require net in-migration over and above the official population projection. In line with the current PPG, where the projection understates housing need, it should be adjusted upwards.

Business as usual growth

4.5 Experian's baseline forecasts (November 2017) are provided at Appendix E . The table overleaf provides an overview of forecast change in terms of the main variables that sit within the Experian model.

Table 4.1 Northumberland business as usual forecast

(Thousands unless specified)	1997	2014	2036	Change 2014-36	Change p.a. 1997-2036	Change p.a. 2014-36
Labour force	142.90	160.80	156.90	-3.90	0.36	-0.18
Labour force - 16 to 64		154.40	142.20	-12.20	0.00	-0.55
Labour force - 65 Plus		6.30	14.80	8.50	0.00	0.39
Population - retired	60.70	77.30	97.80	20.50	0.95	0.93
Population - student	59.40	52.60	48.20	-4.40	-0.29	-0.20
Population - 16 plus	247.30	263.40	273.70	10.30	0.68	0.47
Population - 16 to 64	195.00	192.30	166.60	-25.70	-0.73	-1.17
Population - 65 plus	52.30	71.10	107.10	36.00	1.41	1.64
Total Population	306.70	316.00	321.90	5.90	0.39	0.27
Working Age Population	186.60	186.10	175.90	-10.20	-0.27	-0.46
Economic activity rate (%) - 16+	57.80	61.00	57.30	-3.70	-0.01	-0.17
Economic activity rate (%) - 16 to 64		80.30	85.40	5.10	0.00	0.23
Economic activity rate (%) - 65 Plus		8.90	13.80	4.90	0.00	0.22
Economic activity rate (%) - working age	76.60	86.40	89.20	2.80	0.32	0.13
Employment rate (% of 16+ population)	54.30	56.80	54.60	-2.20	0.01	-0.10
Productivity (£GVA per hour)	20.60	26.30	34.20	7.90	0.35	0.36
Total GVA (£mn 2013 prices)	4010.70	4819.80	6610.00	1790.20	66.65	81.37
Workforce jobs	122.70	122.60	129.50	6.90	0.17	0.31
Jobs demand	122.70	122.60	129.50	6.90	0.17	0.31
Excess jobs		0.00	0.00	0.00	0.00	0.00
FTE jobs	99.00	93.40	98.40	5.00	-0.02	0.23
Workplace-based employment		127.80	133.80	6.00	3.43	0.27
Residence-based employment	134.30	149.70	149.50	-0.20	0.39	-0.01
Net commuting (inflow)		-22.00	-15.70	6.30	-0.40	0.29
Unemployment	8.60	11.00	7.40	-3.60	-0.03	-0.16
Unemployment rate (% of labour force)	6.00	6.80	4.70	-2.10	-0.03	-0.10

Source: Experian (provided in full at Appendix E)

4.6 The forecast shows that the size of the local economy is expected to increase over the period:

- The number of jobs located in Northumberland ('workforce jobs'[14]) grows from 122,600 to 129,500, by 6,900 jobs in total (5.6%), equal to 314 jobs p.a.
- Productivity, which is real output (GVA) per hour worked[15], also grows - by 30.0% over the period.
- Growing job numbers and growing productivity drive growing output (GVA)[16], which increases by 37.1%.

4.7 As well as future jobs, the table shows a variable called 'job demand'. This is the demand for labour, i.e. the number of jobs that employers want to fill. In other words, it is the number of jobs that would exist in the local economy if growth were not constrained by local labour supply. In the Experian model, the calculation of job demand takes no account of local labour supply.

4.8 But the number of actual jobs, labelled 'workforce jobs', does take account of labour supply. If labour supply in an area – taking account of the age and sex profile of the population, economic activity rates[17], unemployment, double-jobbing and commuting - is enough to meet demand, then 'workforce jobs' equals labour demand. If labour supply is not enough to meet demand, then 'workforce jobs' equals the maximum number of jobs that labour supply can meet. The difference between job demand and workforce jobs is called 'excess jobs' or 'unfilled jobs'. The presence of unfilled jobs indicates that the local economy is constrained by labour supply.

4.9 In the baseline forecast, Northumberland is not labour supply constrained, although the occasional small shortfall in supply which appears in some years over the period indicates that there is very little slack in Northumberland's labour market. This is because while jobs are increasing, the resident labour force is expected to shrink by 3,900 over the period. Instead, additional jobs are largely filled by:

- a reduction in overall net out-commuting by 6,300, implying a tightening in the labour market with residents in Northumberland having a better chance of finding work locally by the end of the period.
- a fall in unemployment from 6.8% to 4.7%, in line with the UK average.
- increases in economic activity. For people aged 16-64, the rate increases from 80.3% to 85.4% in line with an increase for the UK as a whole. For those aged 65+, the economic activity rate increases from 8.9% to 13.8%; this is still below the UK rate in 2036 of 15.5%.

4.10 In summary, while an increase in jobs of 6,900 is predicted over the period, the labour market is finely balanced. This is primarily because of the ageing population; and is illustrated clearly in the falling employment rate i.e. the proportion of the 16+

---

[14] A better label for this number would be 'work**place** jobs', because it relates to workplaces in Northumberland. But Experian, following Government statistics, calls it 'work**force** jobs'. To avoid confusion, we will simply call it 'jobs'.

[15] Figures on output and productivity are provided in real terms, i.e. adjusted for inflation.

[16] Output = jobs x hours worked per job x productivity

[17] The activity rate is the proportion of the population that is economically active, or part of the labour force – which means either working or looking for work. It varies greatly by age and sex – as older people are less likely to be economically active than younger people, and women than men.

population that is in work (outcome of economic activity rate and unemployment rate). Even though unemployment in Northumberland is expected to fall, because economic activity rates for the 16+ is expected to decrease by 3.7 percentage points to 57.3% in 2036, the employment rate is also expected to fall from 56.8% to 54.6%.

Developing the alternative growth scenarios

4.11 NCC are in the process of updating their economic strategy. To develop economic growth options for this study, we have worked with NCC's economic development team, the LEP, local businesses and other stakeholders to identify the scale of additional growth and the sectors which have the potential to grow more than the business as usual forecast for Northumberland.

4.12 The North East Local Enterprise Partnership's (NELEP) Strategic Economic Plan (SEP) was first published in 2014 (then updated in 2017) and covers the period 2014 to 2024. The SEP sets out an aspiration to deliver 100,000 additional jobs across the NELEP. This figure represents an above-trend level of job growth in the NELEP area and we use this as our starting point for developing alternative growth scenarios for Northumberland.

4.13 There are other key targets outlined in the SEP in terms of improving productivity so that the productivity gap between the NELEP area and England (exc. London) is half closed by 2024, and that 60% of additional jobs are in 'better' sectors. These are clearly relevant to Northumberland's economic future; however, because the outcomes of this study are to understand the housing and employment land implications of economic growth, in developing these scenarios, we focus on job growth as the key measure.

4.14 We have separated our approach into a number of stages:

- Stage 1: identify options for the scale of above-trend jobs growth at a LEP level, using the SEP as our starting point
- Stage 2: identify options for what element of that growth might take place in Northumberland
- Stage 3: identify growth sectors in Northumberland by considering existing strengths, areas of policy commitment to improve performance and the impacts of future investment
- Stage 4: allocate additional growth between those growth sectors with reference to existing job shares

Stage 1: scale of additional growth at the LEP level

4.15 Under Experian's business as usual scenario, the number of jobs in Northumberland is projected to increase by 3,000 over the 10 years between 2014-24. At the NELEP level, jobs are projected to increase by over 49,000.

Table 4.2 Business as usual workforce jobs growth in Northumberland and in the LEP (thousands)

	2014	2024	Growth 2014-2024	Growth as percentage of 2014
NELEP	871.40	920.80	49.40	5.7%
Northumberland	122.60	125.60	3.00	2.5%
Northumberland's share of NELEP jobs	14.1%	13.6%		

Source: Experian 2017

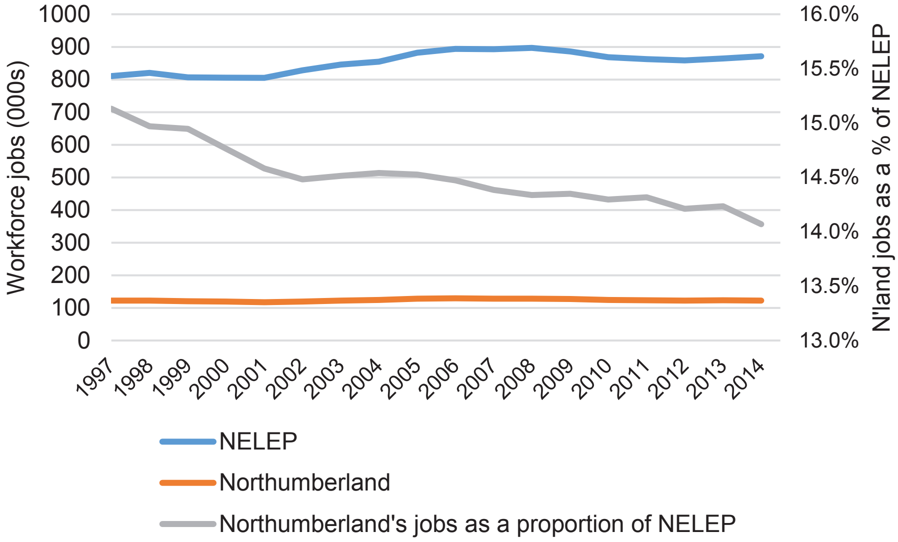
4.16 As set out above, the SEP aspiration is for an additional 100,000 jobs to be delivered in the NELEP area by 2024 i.e. a further 50,600 over that identified in Experian's business as usual view of growth in the NELEP area.

4.17 We considered whether above-trend growth might continue after 2024 and discussed this with the LEP. However, in line with the draft PPG guidance's emphasis on planning on the first 10 years and the direction for plans to be re-evaluated after five years, we do not factor in above-trend growth beyond the period covered by the current SEP.

Stage 2: scale of additional growth in Northumberland

4.18 Because the SEP does not disaggregate job growth into the constituent local authorities, we must take a view on what proportion of additional growth may take place in Northumberland. As discussed above, in the business of usual scenario, the relative scale of job growth in Northumberland is just over half that expected in the whole NELEP area. It is also relevant to consider how the county has performed in the past in the context of the performance of the NELEP area. As shown in the figure below, it is clear that while in the NELEP area, workforce jobs have grown over the period since 1997, jobs in Northumberland have remained largely static.

Figure 4.1 Workforce jobs in Northumberland and NELEP 1997-2014



Source: Experian

4.19 We considered several potential economic futures for Northumberland:

- Maintaining its current share of NELEP jobs i.e. Northumberland having 14.1% of the NELEP's jobs in 2024. This would result in 11,100 jobs more than the baseline level of growth i.e. 19,000 additional jobs over the period 2014-36.
- Northumberland's share of additional NELEP jobs declines in line with the baseline forecast i.e. 13.5% of NELEP's jobs in 2024. This would result in 8,400 jobs over the baseline level of growth i.e. a total addition of 15,300 jobs over the period 2014-36.

4.20 In the context of the limited job growth that has characterised Northumberland's past, we have not modelled the first option. Instead, we focus on the second option as our ambitious growth scenario. We also develop an intermediate growth scenario which would deliver 4,200 jobs over the baseline growth.

Stage 3: identifying the growth sectors

4.21 We refer in this report to growth sectors. What we mean by this is sectors which, in our policy-on scenarios, could experience higher growth (or slower decline) than in the business as usual scenario. This could be because of future or committed investment in infrastructure e.g. rail improvements, broadband etc. or through policy-on interventions such as designating LDOs or greater flexibility for employment-generating uses to attract businesses or promote expansion of existing businesses. It is important to stress that while in some instances, investment has taken place which might 'bend the trend' in the future above that forecast by Experian, in other instances, there is no such guaranteed investment

4.22 Through sectoral analysis of the business as usual growth scenario, engagement with the LEP and stakeholders at the economic growth workshop, three key areas of employment growth are identified in Northumberland: the rural economy, tourism and port-related activities. However, these areas do not neatly align to the economic sectors used in forecasting. We have therefore sought to adopt a pragmatic approach to best align these sectors; this is explained in Appendix F .

4.23 We have allowed for more than business as usual growth in agriculture, forestry and fishing, food and accommodation services, as well as several manufacturing sectors where Northumberland already has strengths. Accommodation and food services has clear links with Northumberland's tourism growth agenda; on this same point, we have allowed for above trend growth in recreation as the other key component of the tourist economy.

4.24 In relation to manufacturing, this is currently an important component of the rural economy in Northumberland, as well as the urban areas. Discussions with local stakeholders indicate that, linked to land availability pressures in North Tyneside arising from housing growth, there may be opportunities for Northumberland to bolster its manufacturing jobs, particularly in the south of the county where there is little distinction in market terms between areas that fall into Northumberland or North Tyneside.

4.25 The table in Appendix D summarises the approach taken in relation to each sector, with growth sectors shown in bold. Because Experian's sectors do not fully align with those used by BRES, we include the SIC category for ease for reference.

Stage 4: Attributing additional job growth across the sectors

4.26 The priority sectors are in two categories: ++ sectors, where the greatest uplift is made, and + sectors, with a lesser uplift. The above-baseline growth is divided between the priority sectors in proportion to numbers of jobs in Northumberland in the base year, with ++ sectors given double weight. These are summarised in Table 4.3.

Table 4.3 Attributing the growth between sectors

	Share of jobs in 2014	Weighting	Weighted share of jobs
Agriculture, forestry and fishing	11%	+	7%
Food, drink and tobacco	3%	++	4%
Wood & paper	4%	++	5%
Printing and reproduction of recorded media	2%	++	2%
Chemicals	2%	++	3%
Pharmaceuticals	2%	++	3%
Rubber, plastic and other non-metallic mineral products	4%	++	5%
Computer and electronic products	3%	++	4%
Other manufacturing	3%	++	3%
Utilities	3%	++	4%
Land transport, storage and post	10%	+	6%
Accommodation and food services	24%	++	30%
Recreation	11%	++	13%
Computing and information services	2%	+	1%

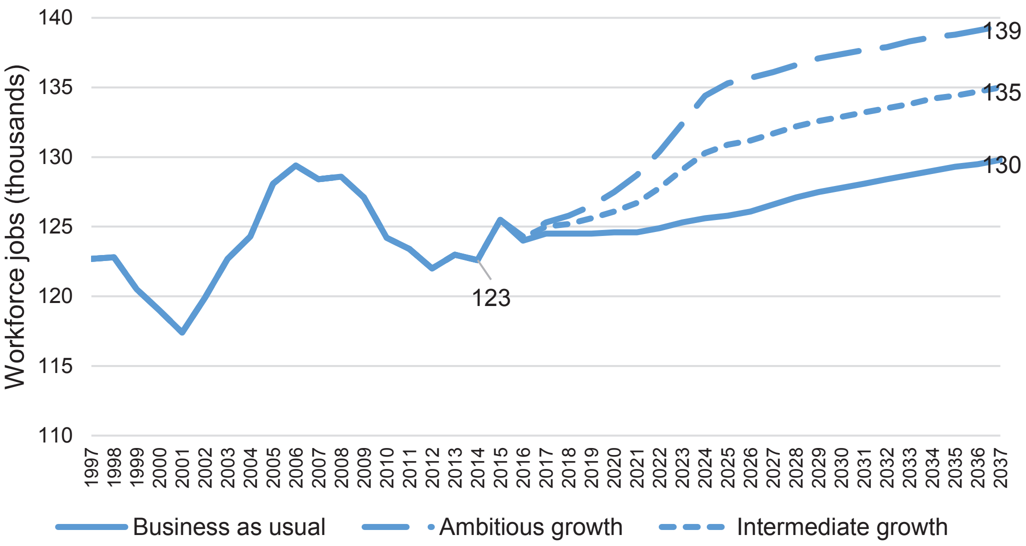
	Share of jobs in 2014	Weighting	Weighted share of jobs
Professional services	15%	+	9%
Total	100%		100%

Source: Experian/PBA

Alternative scenarios

4.27 In both the ambitious growth and intermediate growth scenarios run by Experian, due to spin-off jobs associated with the higher population, the total number of additional jobs increases. The figure below shows the two alternative scenarios in the context of the business-as-usual growth over the period, with all the additional (above-trend) job growth taking place in the years to 2024.

Figure 4.2 Workforce job growth in each scenario



Source: Experian 2017

4.28 As noted above, because the labour market in Northumberland is tight in the business-as-usual scenario, the job-led scenarios of course require additional population to live in Northumberland, above that shown in SNPP 2014. The forecasting model estimates that extra population, taking account of the factors that link workplace jobs to resident population which as mentioned earlier comprise economic activity rates, unemployment, double-jobbing and commuting. In the model, those variables are partly driven by national trends: for example, unemployment everywhere is higher in recessions than booms, and older people's activity rates are increasing everywhere, due to rising pension ages and life expectancies. The 'link factors' also respond to the local balance of supply and demand: for example, when the local market tightens unemployment may fall and activity rates increase, as mentioned earlier.

4.29 In the job-led scenarios, we have assumed that the additional population results from additional people moving to Northumberland from the rest of the UK, above the official demographic projection which rolls forward past trends. To estimate the numbers and age/sex profile of those additional migrants, we have applied percentage uplifts to the migration inflows shown in the SNPP. The calculation assumes that the likelihood of people moving to an area because job opportunities vary according to age, so in the older age groups fewer people move.

4.30 The job-led scenarios assume that the rest of the NELEP area, like Northumberland, receives additional migration to meet aspirational job demand. This assumption impacts on the results for Northumberland, because if other places in the NELEP area did not have enough population to meet demand they would attract more net commuting from Northumberland.

4.31 Table 4.4 below summarises the jobs-led scenarios, where labour demand is met in full because of above-baseline migration to Northumberland.

Table 4.4 Jobs-led scenarios

		Ambitious growth			Intermediate growth		
(Thousands unless specified)[18]	2014	2036	Change	Change p.a.	2036	Change	Change p.a.
Labour force	160.80	167.30	6.50	0.30	164.10	3.30	0.15
Labour force - 16 to 64	154.40	152.50	-1.90	-0.09	149.40	-5.00	-0.23
Labour force - 65 Plus	6.30	14.80	8.50	0.39	14.70	8.40	0.38
Population - retired	77.30	97.80	20.50	0.93	97.80	20.50	0.93
Population - student	52.60	51.00	-1.60	-0.07	50.20	-2.40	-0.11
Population - 16 plus	263.40	287.50	24.10	1.10	283.40	20.00	0.91
Population - 16 to 64	192.30	178.60	-13.70	-0.62	175.10	-17.20	-0.78
Population - 65 plus	71.10	108.90	37.80	1.72	108.40	37.30	1.70
Total Population	316.00	338.50	22.50	1.02	333.60	17.60	0.80
Working Age Population	186.10	175.90	-10.20	-0.46	175.90	-10.20	-0.46
Economic activity rate (%) - 16+	61.00	58.20	-2.80	-0.13	57.90	-3.10	-0.14
Economic activity rate (%) - 16 to 64	80.30	85.40	5.10	0.23	85.30	5.00	0.23
Economic activity rate (%) - 65 Plus	8.90	13.60	4.70	0.21	13.60	4.70	0.21
Economic activity rate (%) - working age	86.40	89.20	2.80	0.13	89.20	2.80	0.13
Employment rate (% of 16+ population)	56.80	55.50	-1.30	-0.06	55.20	-1.60	-0.07
Productivity (£GVA per hour)	26.30	33.90	7.60	0.35	34.00	7.70	0.35
Total GVA (£mn 2013 prices)	4819.80	7046.00	2226.20	101.19	6840.00	2020.20	91.83
Workforce jobs	122.60	139.10	16.50	0.75	134.70	12.10	0.55
Jobs demand	122.70	139.10	16.40	0.75	134.70	12.00	0.55
Excess jobs	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[18] Figures may not sum due to rounding

		Ambitious growth			Intermediate growth		
(Thousands unless specified)[18]	2014	2036	Change	Change p.a.	2036	Change	Change p.a.
FTE jobs	93.30	105.80	12.50	0.57	102.40	9.10	0.41
Workplace-based employment	127.80	143.60	15.80	0.72	139.10	11.30	0.51
Residence-based employment	149.70	159.50	9.80	0.45	156.40	6.70	0.30
Net commuting (inflow)	-22.00	-15.80	6.20	0.28	-17.30	4.70	0.21
Unemployment	11.00	7.80	-3.20	-0.15	7.70	-3.30	-0.15
Unemployment rate (% of labour force)	6.80	4.70	-2.10	-0.10	4.70	-2.10	-0.10

Source: Experian (provided in full at Appendices B and C)

4.32 This shows that for the ambitious growth scenario[19]:

- Job demand and workforce jobs increase by 750 jobs per annum as the gap between supply and demand is filled by population above the official projections (16,500).
- The change in net commuting is similar to the business as usual shift towards lower net out-commuting, but slightly smaller reduction due to the above-trend job growth associated with the SEP's ambitions elsewhere in the NELEP area.
- The fall in the unemployment rate and the changes in economic activity, other than very marginally in the 65+ category, is the same as the business as usual and the ambitious growth scenarios.

4.33 For the intermediate growth scenario[20]:

- Job demand and workforce jobs increase by 550 jobs per annum as the gap between supply and demand is filled by population above the official projections (12,100).
- The changes in commuting are similar to the business-as-usual view but are lower due to increased job growth elsewhere in the NELEP area. The reduction in the level of out-commuting is also lower than the ambitious scenario because the rest of the NELEP area is anticipated to take a greater share of the above-trend jobs in the intermediate scenario.
- As with the ambitious growth scenario, unemployment and economic activity changes are not substantively different to the business-as-usual view.

Implications for the sectors

4.34 The table below shows growth in jobs by sector for both job-led scenarios (above-baseline or extra jobs, and total jobs), as well as the number of jobs in 2014 as the start year of the SEP and the level of growth in each sector in the business-as-usual scenario.

[19] Figures may not sum due to rounding
[20] Figures may not sum due to rounding

Table 4.5 Jobs by sector for the jobs-led scenarios (000s)[21]

	2014 jobs	Business as usual growth to 2036	Intermediate growth to 2036		Ambitious growth to 2036	
			Extra	Total	Extra	Total
Agriculture, forestry and fishing	4.70	-1.70	0.10	-1.40	0.20	-1.20
Food, drink and tobacco	1.50	0.00	0.10	0.20	0.20	0.40
Wood and paper	1.90	-0.50	0.10	-0.30	0.20	0.00
Chemicals	1.00	-0.10	0.10	0.00	0.10	0.10
Rubber, plastic and other non-metallic mineral products	1.60	-0.20	0.10	0.00	0.10	0.20
Computer and electronic products	1.30	-0.20	0.00	0.00	0.10	0.10
Other manufacturing	1.20	0.10	0.10	0.20	0.10	0.40
Utilities	1.50	0.40	0.00	0.60	0.10	0.80
Construction of buildings	3.00	0.50	0.10	0.50	0.20	0.50
Specialised construction activities	4.60	0.40	0.20	0.40	0.30	0.40
Wholesale	5.40	0.00	0.20	0.00	0.30	0.00
Retail	13.80	-1.50	0.60	-1.40	1.00	-1.30
Land transport, storage and post	4.10	0.00	0.30	0.30	0.50	0.70
Accommodation and food services	10.40	2.00	0.50	3.30	0.90	4.50
Recreation	4.60	0.60	0.30	1.30	0.50	1.80
Finance	1.00	0.00	0.00	0.00	0.10	0.00
Real estate	2.00	0.30	0.00	0.30	0.10	0.30
Professional services	6.60	2.10	0.30	2.50	0.60	2.90
Administrative and supportive service activities	5.90	1.70	0.40	1.80	0.70	1.90
Other private services	3.80	0.50	0.20	0.60	0.30	0.60
Public administration and defence	5.50	-2.30	0.20	-2.30	0.20	-2.30
Education	9.70	1.80	0.60	2.00	1.00	2.10
Health	11.10	1.80	0.50	1.80	0.90	1.90
Residential care and social work	9.20	1.90	0.40	1.90	0.70	1.90
Total	**122.70**	**6.90**	**5.20**	**12.10**	**9.60**	**16.50**

Source: Experian, PBA. Sectors with fewer than 250 jobs are shown as zero, for reasons of commercial confidentiality. Totals may not sum due to rounding. Non-growth sectors not shown.

4.35 In the ambitious growth scenario, growth in the manufacturing sectors (rows shaded purple in the table above) represents 1,000 additional jobs above the baseline; transport, storage and distributions sectors (shaded blue) account for 2,400 jobs above baseline growth. The residual 6,000 additional jobs are provided in the service sectors (shaded green).

[21] Figures may not sum due to rounding

5 EMPLOYMENT LAND IMPLICATIONS

Introduction

5.1 This section of the report takes the job demand identified in the three scenarios, with specific reference to those falling into the B-Class uses, and uses this demand to calculate the employment land implications.

5.2 The reason why we do not discuss the non-B Class uses is because they are not linked in the same way as the B-Class uses and so land for those uses is allocated in a different way. For example, retail and leisure needs are identified primarily with reference to expenditure capacity and shopping/leisure usage patterns; local services such as health and social care are allocated with reference to residential growth; and other uses such as infrastructure are allocated on an ad hoc basis (or through the NSIP[22] process) and dealt with in other parts of the plan.

5.3 The reason why we make specific comment about these jobs here is because non-B Class job growth accounts for the majority of new jobs in all the growth scenarios. We summarise the figures in the table below. It can be seen in the higher growth scenarios that the proportion of B Class jobs is higher than the business as usual, reflecting the sectors that are forecast to grow more.

Table 5.1 Job growth by B and non-B Class, by scenario (2014-36)

	Business as usual		Intermediate		Ambitious	
	Jobs	%	Jobs	%	Jobs	%
B Class	1,000	14%	3,000	25%	4,900	30%
Non B Class	6,000	86%	9,000	75%	11,500	70%

Source: PBA. Figures may not sum to total job change due to rounding

5.4 However, what this does reveal is the importance of non-B Class jobs in Northumberland's future growth, the benefits of which should be factored into planning for economic growth.

Future demand

5.5 We have translated the baseline and job-led scenarios into expected demand for employment land. The results are summarised in the table below.

5.6 To translate job growth by sector into demand for floorspace by use, we have proceeded in two steps:

- Firstly, we estimate which sectors are based in different types of B-class space. The method used for this is in Appendix I . Broadly, it assumes that manufacturing, some transport and distribution activities occupy industrial /

[22] Nationally Significant Infrastructure Projects

- warehouse space, while offices are occupied by financial, professional, business and administrative services.
- Secondly, we estimate employment densities (floorspace per job) at 2016, as the ratio of jobs to floorspace. For this, we take jobs from the Experian dataset (which is based on official statistics) and floorspace from the VOA floorspace statistics (as explained in Section 2).

5.7 The second step produces the following job densities (floorspace includes vacant units):

- Industrial space (comprising both production and distribution): 66.6 sq m per job
- Office 11.2 sq m per job.

5.8 These ratios are close to those in the HCA Densities Guide, but in our view, are preferable, because they are specific to Northumberland and based on clear, up-to-date evidence.

5.9 The table shows both square metres of floorspace and hectares of land area, assuming a plot ratio of 40% for industrial space (including warehousing) and 60% for offices. For offices, the land areas are only indicative, because plot ratios may vary widely; sq m of floorspace are a better measure of need and provision. Further explanation on plot ratios is provided at Appendix J .

Table 5.2 Employment land demand for each scenario

Scenario	Business as usual		Intermediate		Ambitious	
	sqm	ha	sqm	ha	sqm	ha
Offices	21,500	3.6	27,200	4.5	31,400	5.2
Industrial	-63,000	-15.7	38,600	9.6	140,100	35.0
Total	-41,500	-12.2	65,800	14.2	171,500	40.3

Source. Experian, PBA. All figures rounded.

5.10 For office space the forecast demand is very low, less than 1,500 sq m p.a. in all the scenarios.

5.11 For industrial space, which covers both production (manufacturing) and warehousing, the forecast demand varies considerably between scenarios:

- In the baseline scenario, there is negative demand suggesting there will be small losses of industrial space over the period (15.7 ha or 0.7 ha per annum).
- In the ambitious scenario, this position is reversed and there is some demand for additional space because of higher growth in a number of the industrial and manufacturing sectors. This indicates annual demand for 1.6 ha, totalling 35 ha over the period.
- In the intermediate scenario, there is positive demand for additional space of 0.4 ha per annum, or 9.6 ha over the period. Again, this reflects the above-trend growth in some manufacturing and industrial sectors.

5.12 While the industrial figures could be split out further into the B1(c), B2 and B8 use classes, we do not consider this particularly useful for planning purposes given the extent of permitted development rights which allow space to switch without recourse for planning permission. Although there are size restrictions on this, given the highly rural nature of Northumberland's economy, this will in reality equate to a great deal of fluidity in existing and future stock. Added to this, it is noted that industrial practices now mean that the boundaries between the different use classes are less clear and this is underlined by the form that planning applications often now seek flexible B class permission across the industrial categories.

5.13 It is important to understand that the above figures in Table 5.2 relate to net change – the new employment space created in new development less the existing employment space. Gross development – the new space created without any deduction for old space lost has been higher: as set out at paragraph 2.38 for the period 2014-16, 19,000 sqm of employment has been lost. We consider this further below.

Losses and gains of employment land

5.14 As set out in Section 2, VOA data shows that, in net terms, 19,000 sqm of employment floorspace has been lost in Northumberland since 2014. In addition to this, NCC has identified a pipeline of 43,400 sqm with planning permission. A further 237 hectares are allocated in the development plan but do not yet have any planning permission in place.

5.15 MHCLG data indicates that there have been 11 prior approvals for office to residential permitted development since April 2014. However, conversations with officers indicate that the instances of this happening across the authority area are limited. We do not make special allowance for this in the forthcoming supply and market balance analysis.

Demand and supply balance

5.16 The tables below set out the floorspace need calculations that include additional jobs resulting from forecast growth under each scenario, and the scale of commitments (i.e. losses or gains of employment floorspace) to date and outstanding permissions that will absorb some of the demand. The assessment only takes in known current permissions and does not forecast what might be lost and gained in the future.

Table 5.3 Market balance (sqm) (2014-36)

Scenario	Office	Industrial	Total
Demand			
Business as usual	21,500	-63,000	-41,500
Intermediate	27,200	38,600	65,800
Ambitious	31,400	140,100	171,500
Committed supply			
Extant permissions for losses or gains in employment floorspace (net)	600	42,700	43,400
Change in stock 2014-2016 (VOA)	-17,000	-2,000	-19,000
Market balance - over (or under) supply			
Business as usual	-37,900	103,700	65,800
Intermediate	-43,500	2,100	-41,400
Ambitious	-47,700	-99,400	-147,100

Source: PBA/Valuations Office Agency/NCC. All figures rounded.

5.17 In this table, a positive figure in the market balance rows indicates oversupply and a negative figure undersupply. This shows that in the business as usual scenario, there is a significant oversupply of floorspace. For the ambitious and intermediate scenarios, there is a total undersupply. However, in all cases, there is shortfall in office supply and only in the ambitious scenario is there also a shortfall in industrial floorspace supply.

5.18 In the table below, we convert the floorspace market balance into land, and factor in the supply of allocated land. To convert floorspace to land, we apply the plot ratios outlined at paragraph 5.9 and explained in Appendix J

Table 5.4 Market balance (ha) (2014-36)

Scenario	Office	Industrial	Total
Market balance excluding allocations - over (or under) supply			
Business as usual	-6	26	20
Intermediate	-7	1	-7
Ambitious	-8	-25	-33
Potential supply			
Extant permissions			237
Market balance including allocations - over (or under) supply			
Business as usual			257
Intermediate			230
Ambitious			204

Source: PBA

5.19 This shows that in all cases, there is an oversupply of allocated employment land. While the oversupply is lowest in the ambitious scenario, the difference between the three scenarios is not significant in the context of the oversupply. This confirms that the position has not changed from the previous 2011, 2013 and 2015 employment studies reviewed in Section 2.

Future allocations

5.20 Both the existing NPPF and the draft revisions published on 5 March advise that plans should aim to meet needs for development across all land uses, unless an area does not have enough sustainable capacity – in which case authorities should seek to agree for neighbouring authorities to provide for some of their unmet needs through the duty to co-operate process. In this context, it is generally accepted that 'need' is synonymous with 'demand'. The forecasts shown above provide a measure of that demand.

5.21 Before translating the demand forecasts into plan targets, it will be essential to adjust them to take account of any future losses of existing employment space. As discussed earlier, the forecasts show net growth, whereas the Local Plan must provide land not only to accommodate that net growth, but also to replace any space that has been lost between 2014-16 (i.e. gross demand).

5.22 In translating the forecasts into plan targets, there are four further issues to be considered.

5.23 The first issue is that forecasts are highly imperfect and approximate, so they should not be accepted uncritically. They should be considered in conjunction with a commercial property market assessment that considers demand and viability for the different types of employment space.

5.24 Under current national guidance, such assessment is part of an economic development needs assessment (HEDNA), formerly known as an employment land review. We do not know if the revisions to the guidance will require a HEDNA. But we know that NCC commissioned employment land review evidence published in 2011, 2013 and 2015 and reviewed in Section 2. We have not undertaken a full review as part of this study; however, the stakeholder discussions undertaken indicate that the overall conclusions in relation to where the market is strongest and for what uses remains valid.

5.25 Secondly, the Council will need to decide which version of the forecast to choose – whether the business-as-usual scenario, the ambitious scenario or an intermediate version. This choice should take account of the market analysis mentioned above. In the interest of maximising economic growth, it may be right to allocate enough land to match the job-led scenarios, even if we cannot be certain that the corresponding demand will materialise.

5.26 In line with current Government proposals, authorities will be required to review local plans every five years, which would allow for allocations to be revised in future. Nevertheless, excessive oversupply is to be avoided, especially if the land concerned may be in demand for alternative uses, or if it requires infrastructure investment which will be wasted if it is not developed.

5.27 The third point to be considered is whether the plan should allow a margin for competition, choice and uncertainty. There is no Government guidance on this point, In our view, a simple and effective approach is to ensure that the plan provides at least five years supply of immediately available employment land at any one time, as it must do for housing. The British Chambers of Commerce support this approach. It means that a developer or occupier looking for land should always have a reasonable choice, and more than one landowner competing for their custom.

5.28 In deciding on total land supply, the NCC should also have regard to the balance of jobs and housing. In the current context of national planning reform this is a complex issue. We will return to it in Section 6 below.

5.29 Finally, these figures represent quantitative outputs and do not factor in uneven spatial distribution of market demand and economic activity against the supply of suitable employment land. This is something we consider further in the recommendations.

6 HOUSING NEED IMPLICATIONS

Introduction

6.1 Before we provide evidence to inform housing policy in the Local Plan, we need to understand Government requirements.

6.2 Current national planning guidance includes a detailed method for calculating housing need. This starts from the official household projections, which roll forward past demographic trends. By established practice, the projected household numbers are adjusted to allow for vacant and second homes (usually about 2-4% of the stock[23]), although the Guidance does not mention this. The Guidance allows four possible adjustments to the numbers:

i Technical – to correct for any anomalies that mean the projections are not a good reflection of past trends

ii For market signals – to correct for any past undersupply that might have suppressed past household growth. The Guidance lists the market signals that should be considered, but is unclear about how they should be used.

iii For future jobs – to ensure that there is enough population in future to meet the demand for labour (fill the available jobs)

iv For affordable housing need – possibly to increase the number of market homes so they provide more developer contributions towards affordable housing.

6.3 As noted earlier, the Government intends to replace the above with a new standard method. On 5 March the Government issued a response to the consultation, which confirmed that the new method would be taken forward. On 9th March 2018, it issued draft revisions to the PPG that included a new version of the method set out in September. This new version is for information rather than consultation.

6.4 In the new method, the assessments still start from the official household projections. This time there is no adjustment for vacant and second homes, and plan-makers are to use the annual average for a 10-year period. The adjustments to the projections are much reduced and simplified:

i The method allows the projections to be set aside in 'exceptional circumstances'. The exceptional circumstances are not defined. We believe they must include anomalies in the projections, as described above.

ii Market signals are replaced by a single signal, the housing affordability ratio (house prices divided by earning). The method provides a fixed formula for translating this into housing need.

iii-iv Future jobs and affordable need no longer impact on the total housing need. The only link between housing and job numbers is the general advice in the Framework – which appears both in the current draft and proposed revisions – that planning should

[23] Though in Northumberland's case, the figure is higher at 6.4%

'*ensure an integrated approach to the location of housing, economic uses and community facilities and services'.*

6.5 Under the new method and the draft revised Framework, '*the number produced by the above method sets a minimum for the housing target (requirement, provision) to be made in the Local Plan. While they cannot reduce that number; -plan-makers may put forward proposals that lead to a local housing need above that given by [the new method]. This could be as a result of a strategic infrastructure project, or through increased employment (and hence housing) ambition as a result of a Local Economic Partnership investment strategy, a bespoke housing deal with Government or through delivering the modern Industrial Strategy.'*

6.6 The consultation document that introduces the new method adds that, the Government wants to encourage such ambitious authorities:

> *'To facilitate this we propose to amend planning guidance so that where a plan is based on an assessment of local housing need in excess of that which the standard method would provide, Planning Inspectors are advised to work on the assumption that the approach adopted is sound unless there are compelling reasons to indicate otherwise. We will also look to use the Housing Infrastructure Fund to support local planning authorities to step up their plans for growth, releasing more land for housing and getting homes built at pace and scale.'*

6.7 The draft revisions to the PPG published on 9 March adds that, when the plan target is above the standard-method minimum, the housing number may be expressed as a range, of which the lower end is the standard-method minimum (and the higher end is presumably the uplifted target, though this is not stated).

6.8 Alongside the proposed method the Government provided illustrative numbers, to show its results for the period 2016-26, based on the latest official household projections – which are 2014-based. For Northumberland, the numbers showed:

- Projected growth 624 net new dwellings p.a. (dpa)
- Market signals (affordability) adjustment 13.2%
- Housing need 624 x 1.13% = 707 dpa.

6.9 Thus, while the 2014-based projections remain the latest available, 707 dpa is the minimum housing target that the Northumberland Local Plan should set. But it is free to set a higher number, which may be based on expected future job growth among other reasons. But once the 2016-based projections are published the number will change. Indeed, the latest affordability data[24] shows that Northumberland's relative affordability in 2017 has worsened from the previously published to 2016 level of 6.11 to 6.38. This has the effect of increasing the standard-method minimum number to 717 dpa.

[24] Published by ONS 26 April 2018 https://www.ons.gov.uk/peoplepopulationandcommunity/housing/datasets/ratioofhousepricetoworkplacebasedearningslowerquartileandmedian

Jobs and housing

6.10 In line with the current national guidance set out in the NPPF and PPG, under each of scenario we have ensured that jobs and housing are aligned. That is, we have taken an integrated view to understand whether housing provision in line with the demographic projections would support enough workers to match the future job growth expected in the area. We have done this for each scenario tested so that where the demographic projections would not provide sufficient workers, the official projections have been adjusted upwards.

6.11 In relation to the job-led scenarios tested, we have already calculated the additional population needed to meet demand. To convert that population into housing, we have used the assumptions of the 2014-based sub-national household projections regarding household formation rates and the size of the institutional (non-household) population. The resulting housing numbers are set out in the table below. The final two columns show the difference in the housing numbers against those provided under the MHCLG standard method (September 2017 illustrative number of 707 dpa and April 2018 update based on latest affordability data of 717 dpa).

Table 6.1 Housing need under each scenario

	Additional households 2014-36	Additional dwellings 2014-36	Dpa 2014-36	Additional dwellings 2016-36[25]	Dpa 2016-36	Additional homes over MHCLG 707 dpa	Additional homes over MHCLG 717 dpa
Business-as-usual official projections[26]	11,813	12,624	574	10,186	509	-198	-208
Intermediate jobs-led	16,816	17,971	817	15,533	777	70	60
Ambitious jobs-led	18,852	20,146	916	17,708	885	178	168

6.12 The above figures have first been provided based on the period 2014-36, and then adjusted to net off net completions in the years 2014-16 to reflect the plan period of 2016-2036. As set out in Table 2.1, 2,438 net dwellings were delivered in Northumberland between 2014 and 2016.

Need and target under the new system

6.13 If the plan is submitted under the new Guidance, it can make a voluntary uplift, so the housing need in the plan is above the minimum of 707 or 717 dpa set by the standard method. If the Council does opt for an uplifted target based on above-trend job numbers, it should make it very clear that this is a policy uplift, separate from the local housing need.

[25] Nets off completions 2014/5 and 2015/16 as set out in Table 2.2
[26] Included for reference only as it is lower than the MHCLG standard method number

6.14 This voluntary uplift can be based on a wide range of factors, of which future jobs is only one. But if the Council did choose to base it on future jobs, it would be advisable to present housing need as a range, with the minimum at 707 dpa and the maximum at 885. The assessment of five-year land supply and the delivery test would be based on 707/717 dpa, while housing land allocations would logically be based on 885 dpa.

6.15 Under the draft revisions to the PPG, the higher number in the range will be considered sound, unless there are compelling reasons to indicate otherwise.

7 SUMMARY OF FINDINGS

7.1 Northumberland's new plan is emerging at a time when the Government is in the process of revising much of the policy which relates to planning for housing and also employment. For the purposes of this study, we have used the emerging NPPF and associated guidance as the framework for our method.

7.2 In order to plan for the future, it is important to understand how Northumberland has performed in the past. In reviewing previous evidence base documents, as well as the latest population and household projections, we identified several points pertinent to planning for Northumberland's economic future. While there will be some population growth going forward, the population of the county is ageing and will continue to age faster than the national population so that the size of the working age population is becoming increasingly squeezed. However, recent levels of housing completions have been high. In relation to employment, while there have been net losses in space within the county, there is a significant stock of allocated employment land but there are qualitative gaps in the more economically active areas in the county such as Hexham, Ponteland and Prudhoe.

7.3 Northumberland's future growth will be influenced by the range of strategies in place including the emerging devolution deal and the SEP which outline key infrastructure improvements to enable growth such as enhancement of broadband provision and coverage, electrification to local rail lines and upgrades to the East Coast mainline, as well as improvement to major road links across the county. The focus of much of these planned and potential improvements is on building on the relationship with the Newcastle and Tyneside conurbation and facilitating growth in the network of towns across Northumberland, including the market towns as focuses for the existing rural economy and tourist economy.

7.4 It is in this context that we have considered how Northumberland's economy might grow in the future. This takes the 'business as usual' approach i.e. the area continues to perform broadly as it has done in the past. However, we have also considered two higher growth scenarios (ambitious and intermediate growth) which, in the context of the aspirations across the NELEP area and the current SEP targets, and linked to infrastructure improvements, factor in improvements to key sectors.

7.5 We worked with NCC and other stakeholders to identify key sectors where, under these higher growth scenarios, job growth may exceed the business as usual expectations for the county. An important part of this was considering the sectors which are important to the huge rural areas which make up the majority of the county and also the urban areas in the south which have a very different employment make up. These key sectors include agriculture, forestry and fishing; food and accommodation services and recreation (linked to Northumberland's tourism growth agenda); as well as several manufacturing sectors related to energy and ports where Northumberland already has strengths.

7.6 In relation to manufacturing, this is currently an important component of the rural economy in Northumberland, as well as the urban areas. Discussions with local stakeholders indicate that there may be opportunities for Northumberland to bolster its manufacturing jobs, particularly in the south of the county where there is little distinction in market terms between areas that fall into Northumberland or North Tyneside. The table below summarises workforce job growth in each scenario.

Table 7.1 Workforce job growth in Northumberland (000s) by scenario

Growth scenario	2014	2036	Change	Change p.a.	B Class jobs	Non-B Class jobs
Business as usual	122.60	129.50	6.90	0.31	14%	86%
Intermediate	122.60	139.10	16.50	0.75	25%	75%
Ambitious	122.60	134.70	12.10	0.55	30%	70%

Source: PBA/Experian

7.7 The columns on the far right show how this job growth relates to planning use classes. It is notable if not unsurprising given the importance of, for example tourism and the associated services to the Northumberland economy, that a significant proportion of job growth, both in the business as usual and higher growth scenarios is focused in the non-B class sectors.

7.8 These scenarios have been worked through to understand the implications for employment land and housing needs across the county. These are summarised in the table, which shows employment requirements without regard to existing allocations that have not been taken up and will therefore be subject to review in the emerging plan. However, it is clear from the latest market assessments and through discussions with stakeholders that while the current supply of allocated employment land exceeds requirements, there is a geographical mismatch whereby there are shortages of land in areas of higher market demand. Further allocations in locations such as Prudhoe, Hexham, Morpeth and Ponteland should be considered.

Table 7.2 Employment requirements and housing need by scenario

Growth scenario	Employment land (ha) 2014-36[27]	Additional dwellings 2016-36	Dwellings per annum 2016-36
Business as usual	-20	10,186	509
Intermediate	7	15,533	777
Ambitious	33	17,708	885

Source: PBA/Experian

7.9 However, these housing needs must be set in the context of the Government's draft standard method which indicates local need for 707-717 dpa as the minimum level of housing that the county should plan for. Furthermore, our analysis shows that should Northumberland choose to plan for a more ambitious future in terms of economic and job growth, it should plan for housing in excess of this draft Government minimum to

[27] Positive number denotes undersupply i.e. positive requirement. Negative number denotes oversupply i.e. negative requirement

ensure that there is a sustainable population to support this growth. This will mean setting a housing target at a level above that set out in the standard method.

7.10 In developing the scenarios tested in this study, we have looked critically at the role Northumberland might reasonably play in the wider economic growth aspirations for the area. This means that the highest growth option, our ambitious scenario, is realistic; so too is the intermediate scenario. However, to realise the scale of growth set out in the ambitious or intermediate scenarios, investment in infrastructure, particularly improvements to broadband to support rural employment, will be needed. So too will be housing growth in excess of the Government's emerging minimum need levels, in order to provide homes for the younger working age population necessary to support growth.

APPENDIX A NPPF AND PPG SUMMARY

A.1 Introduction

This appendix provides an overview of the housing and economic development policy and guidance set out in the current NPPF and PPG.

A.2 Housing need

The NPPF requires local planning authorities to 'boost significantly the supply of housing'. The first stage of this includes using 'their evidence base to ensure that their Local Plan meets the full, objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in this Framework' (paragraph 47).

In relation to plan making, LPAs are instructed to 'prepare a Strategic Housing Market Assessment to assess their full housing needs'. The housing need identified should meet 'household and population projections, taking account of migration and demographic change' (para. 159). The PPG provides a more detailed explanation of this in paragraphs 014-20[29].

The PPG sets out the stages which LPAs are required address in order to arrive at the 'overall housing needs figure' at paragraph 2a-020, commonly referred to objective assessed need (OAN).

The OAN is common-referred to as 'policy off' as it does not include any policy-based judgement such as constraints on housing land or labour supply.

A.3 Economic development

In respect of economic development, as for all other land uses, the guiding principle is that Local Plans should positively seek opportunities to meet the development needs of their areas.

Key paragraphs from the NPPF include:

- Planning should do all it can positively to support sustainable economic growth. It should not act as an impediment to such growth (paragraph 19).
- To help achieve economic growth, local planning authorities should plan proactively to meet the development needs of business (paragraph 20).
- Local Plans should inter alia (paragraph 21):
  - set out a clear economic vision and strategy for their area;
  - identify strategic sites, or set criteria to help identify other sites, for development in line with that strategy;
  - support existing business sectors and where possible plan for new or emerging sectors likely to locate in their area;
  - plan positively for clusters or networks of knowledge-driven, creative or high-technology industries;

[29] Reference ID: 2a-014-20140306 to 2a-020-20140306

In respect of sites allocated for employment use the NPPF (paragraph 22) makes clear that:

- planning policies should avoid long term protection where there is no reasonable prospect of a site being used for that purpose;
- land allocations should be regularly reviewed;

Local authorities should work strategically across local boundaries, and in particular:

- In building evidence bases, collaborate with neighbouring and county authorities and Local Enterprise Partnerships (paragraph 160)
- In policy-making, co-ordinate strategic priorities across boundaries and accommodate the needs of neighbouring authorities that do not have enough sustainable capacity in their own areas (paragraphs 179-180).

Local Plans should be supported by an evidence base that (paragraph 160/1):

- Assesses needs for land and floor space, both quantitative and qualitative, for all foreseeable types of economic activity over the plan period;
- Reflects a clear understanding of business needs
- Is based on close work with the business community to understand their needs and also identify and address barriers to investment, including lack of housing, infrastructure or viability.

The NPPF is clear that Local Plans should work proactively to identify and meet the development needs of businesses including business sectors likely to locate in the area. It is clear from this that business demand should be the major driver directing local strategy. Cooperation with the LEP is important in respect of developing the evidence base.

Allocations should be reviewed on a regular basis, and strategic needs (and storage and distribution comes into this category) should be considered across local boundaries.

Of relevance for this post-Brexit world is the Framework's advice to plan positively for growth and not to act to impede growth. Given that the effects of Brexit cannot be predicted with any level of assurance, and the timescales for any effect are also unknown, to prepare a 15-year Plan on the basis of a Brexit-led economic downturn would be contrary to the Framework.

A.4 Relationship between jobs and housing

Paragraph 70 says that planning should integrate the location of housing, economic activity and community facilities and services. The PPG discusses the relationship between housing need and employment at paragraph 018[30]. It advises that plan-makers should make an assessment of future job growth and notes that, if future labour supply is less than this projected job growth, this could 'result in unsustainable commuting… or reduce the resilience of local businesses. In such circumstances, plan-makers will need to consider how the location of new housing and infrastructure development could help address these problems.'

Planning Inspectors have interpreted this to mean that demographic projections should be tested against expected future jobs, to see if housing supply in line with the projections would be enough to support those future jobs. If that is not the case, the demographically projected

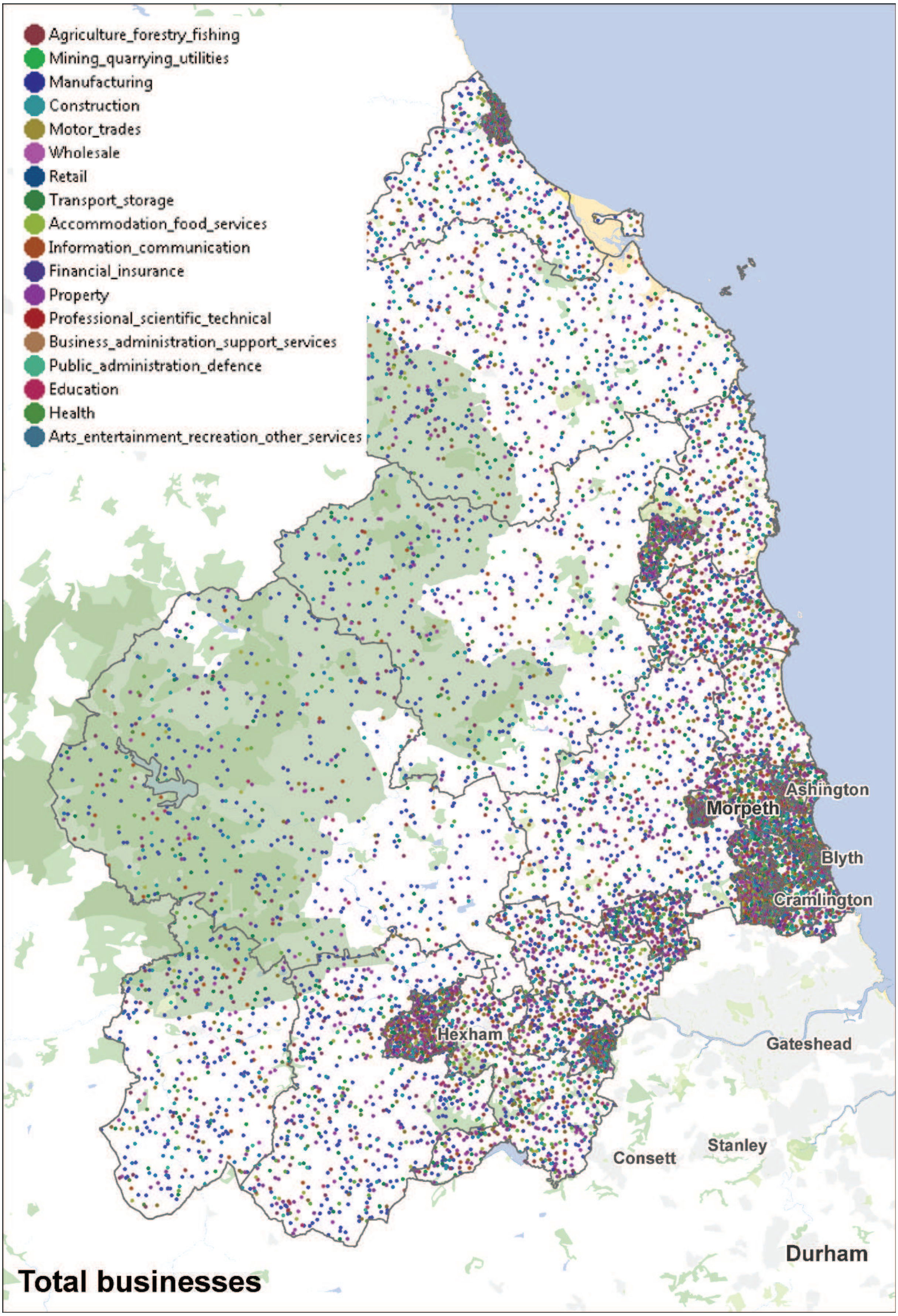
[30] Reference ID: 2a-018-20140306

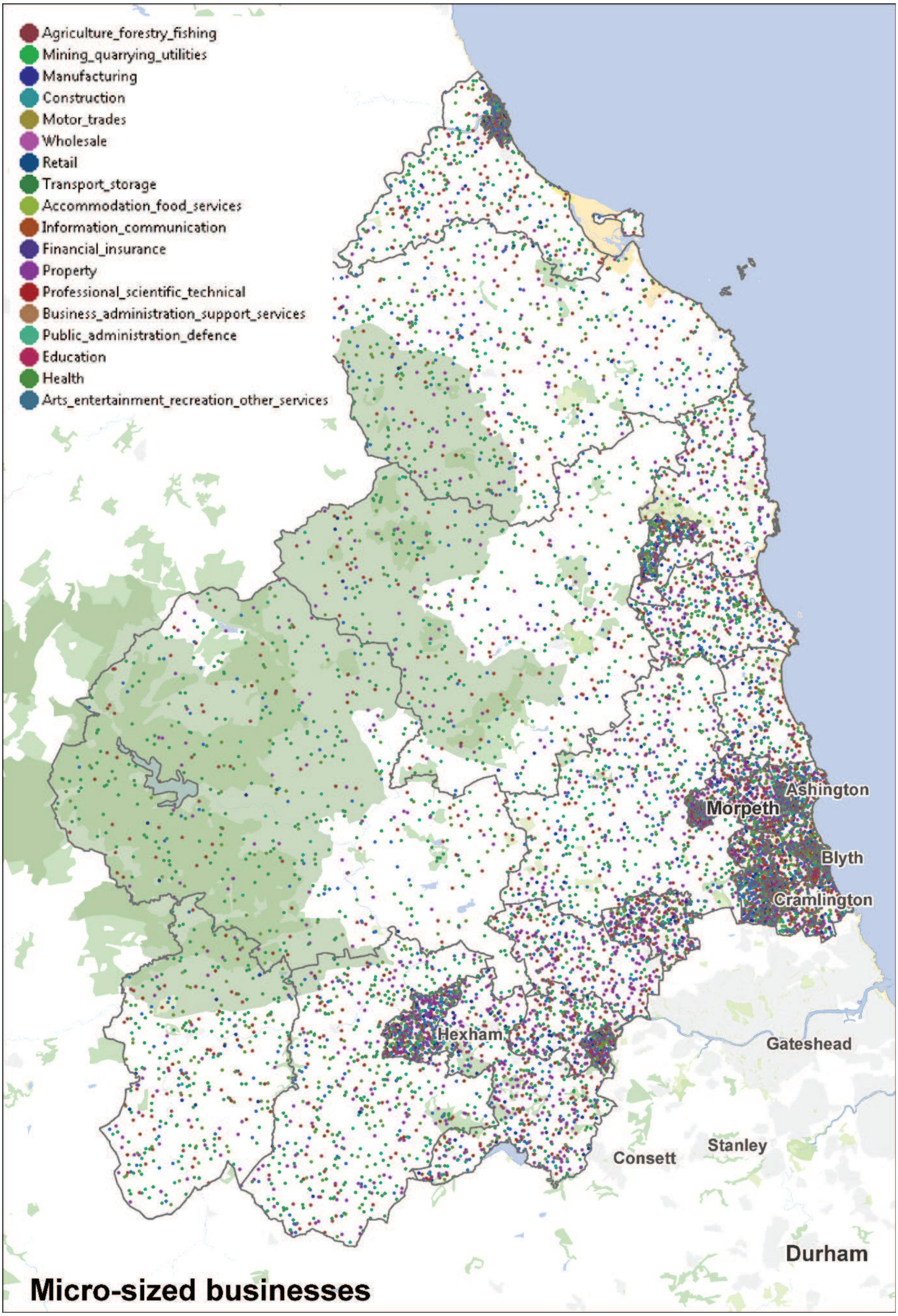
need should be adjusted upwards accordingly; such adjustments overlap with the adjustments for past supply and market signals discussed in Section 6[31]. An alternative solution may be changes in commuting, whereby a labour deficit in one area is balanced by a labour surplus in neighbouring areas, provided that the planning authorities concerned are in agreement and the resulting travel is sustainable.

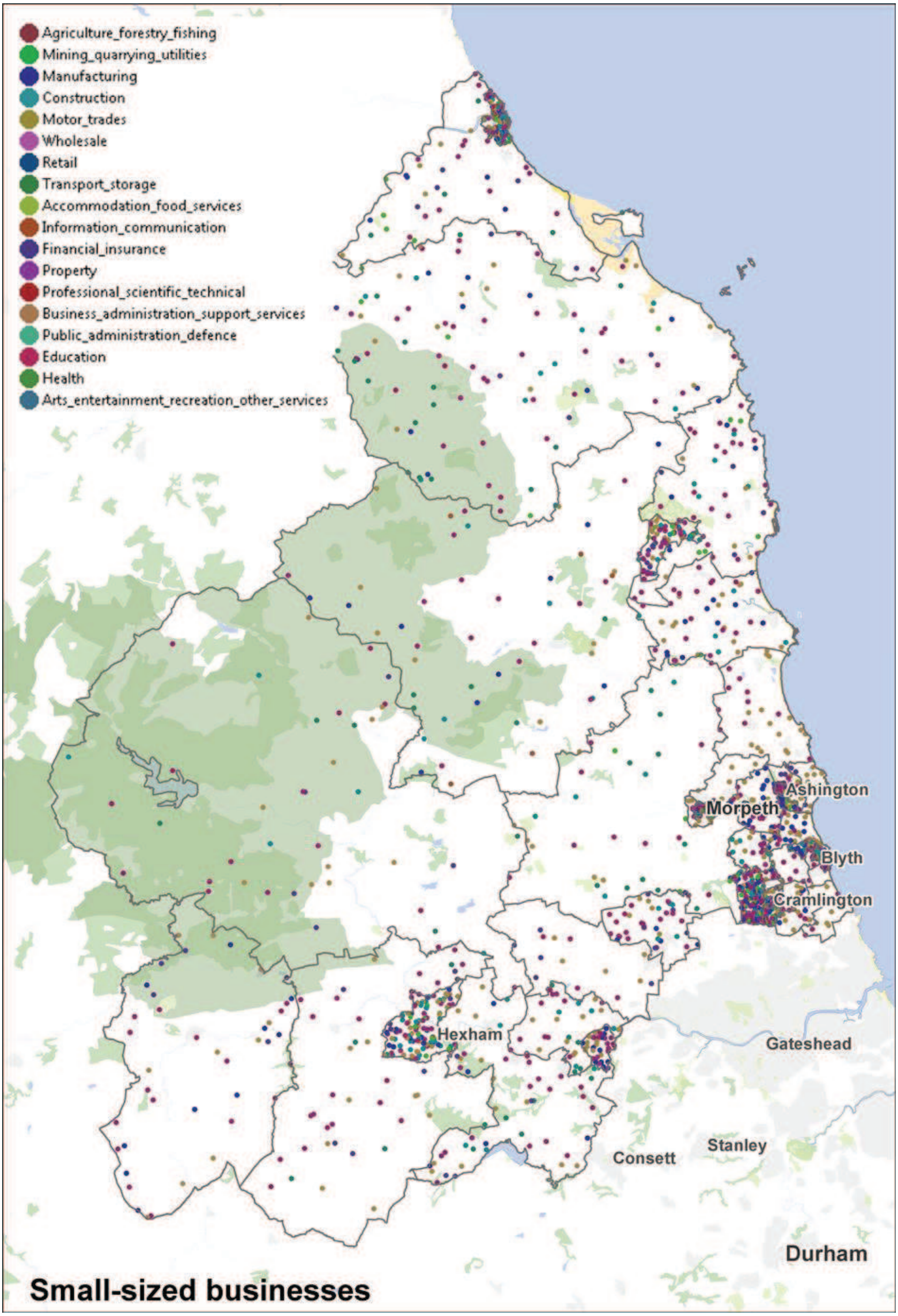
Inspectors' advice also suggests that future jobs cannot be used to cap demographic projections. In other words, if the demographic projections provide more workers than are required to fill the expected jobs, they should not be adjusted downwards. One reason for this, as explained by the Bath & North East Somerset Inspector amongst others, is that much of the demand for housing is not driven by job opportunities, and people who do not work also need somewhere to live.

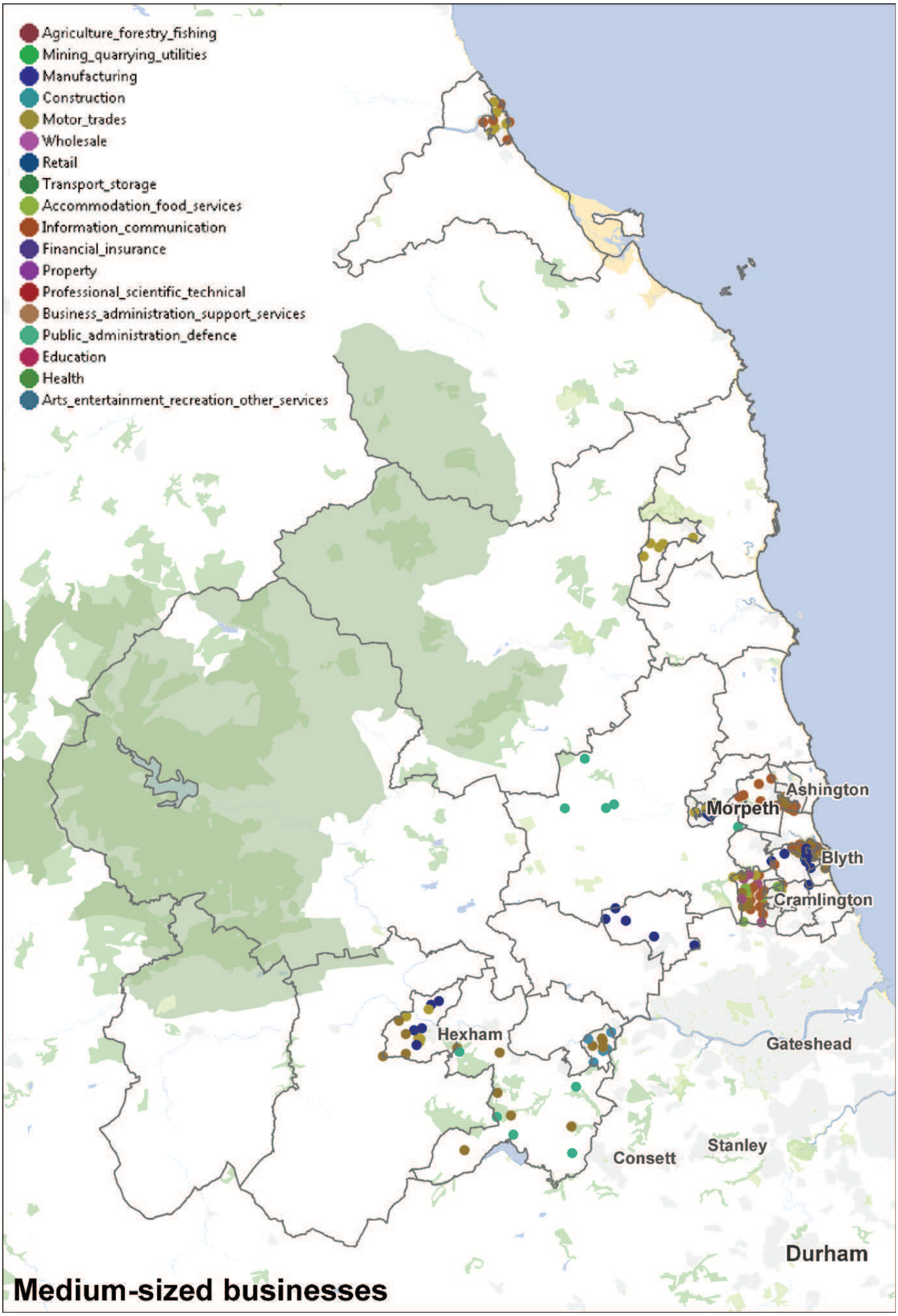
[31] All adjustments referred here are policy-off. As confirmed by the High Court securing a 'policy on' regeneration led job target is outside the housing OAN (most clearly in Borough Council of Kings Lynn and West Norfolk v Secretary of State for Communities and Local Government, ELM Park Holdings Ltd. EWHC 2464.)

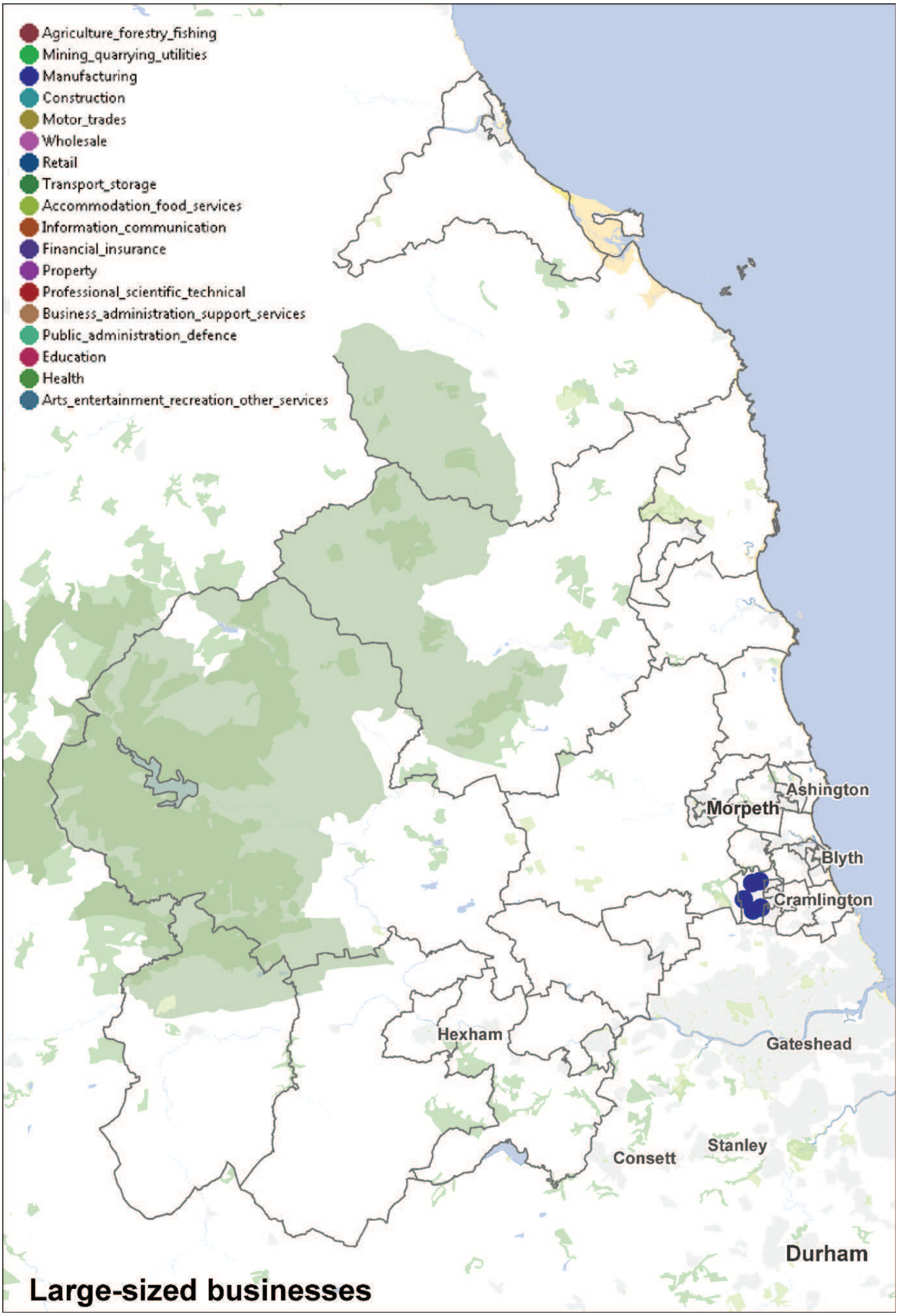
APPENDIX B BUSINESSES IN NORTHUMBERLAND


Agriculture_forestry_fishing
Mining_quarrying_utilities
Manufacturing
Construction
Motor_trades
Wholesale
Retail
Transport_storage
Accommodation_food_services
Information_communication
Financial_insurance
Property
Professional_scientific_technical
Business_administration_support_services
Public_administration_defence
Education
Health
Arts_entertainment_recreation_other_services
Ashington
Morpeth
Blyth
Cramlington
Hexham
Gateshead
Consett
Stanley
Durham
Total businesses


Agriculture_forestry_fishing
Mining_quarrying_utilities
Manufacturing
Construction
Motor_trades
Wholesale
Retail
Transport_storage
Accommodation_food_services
Information_communication
Financial_insurance
Property
Professional_scientific_technical
Business_administration_support_services
Public_administration_defence
Education
Health
Arts_entertainment_recreation_other_services
Ashington
Morpeth
Blyth
Cramlington
Hexham
Gateshead
Consett
Stanley
Durham
Micro-sized businesses


Agriculture_forestry_fishing
Mining_quarrying_utilities
Manufacturing
Construction
Motor_trades
Wholesale
Retail
Transport_storage
Accommodation_food_services
Information_communication
Financial_insurance
Property
Professional_scientific_technical
Business_administration_support_services
Public_administration_defence
Education
Health
Arts_entertainment_recreation_other_services
Ashington
Morpeth
Blyth
Cramlington
Hexham
Gateshead
Consett
Stanley
Durham
Small-sized businesses


Agriculture_forestry_fishing
Mining_quarrying_utilities
Manufacturing
Construction
Motor_trades
Wholesale
Retail
Transport_storage
Accommodation_food_services
Information_communication
Financial_insurance
Property
Professional_scientific_technical
Business_administration_support_services
Public_administration_defence
Education
Health
Arts_entertainment_recreation_other_services
Ashington
Morpeth
Blyth
Cramlington
Hexham
Gateshead
Consett
Stanley
Durham
Medium-sized businesses


Agriculture_forestry_fishing
Mining_quarrying_utilities
Manufacturing
Construction
Motor_trades
Wholesale
Retail
Transport_storage
Accommodation_food_services
Information_communication
Financial_insurance
Property
Professional_scientific_technical
Business_administration_support_services
Public_administration_defence
Education
Health
Arts_entertainment_recreation_other_services
Ashington
Morpeth
Blyth
Cramlington
Hexham
Gateshead
Consett
Stanley
Durham
Large-sized businesses

Note: all data sourced from BRES (2016) based on MSOA. Distribution of businesses within each MSOA not geographically accurate: density-based distribution.

Business sizes

Micro: 0-9 employees

Small: 10-49 employees

Medium: 50-249 employees

Large: 250 employees plus

APPENDIX C ECONOMIC STRATEGIES

C.1 Northern Powerhouse

The Northern Powerhouse Independent Economic Review (IER) undertaken in 2013 informs much of the economic development work relating to Northumberland. The IER identified that there was performance gap between the North and the rest of England 25%. Within this 25%, productivity accounts for 17 percentage points of the gap and employment rate five percentage points. The productivity gap is driven by a number of factors, most notably the skills gap but also technology, investment, poor connectivity, limited agglomeration and low enterprise rates.

The IER identified four main 'prime' capabilities where the north is very productive and able compete at a national and international level:

- advanced manufacturing, focusing on materials and processes
- health innovation including life sciences, medical, health and social care
- energy, focused on generation storage and low-carbon technologies
- digital

The IER looks at a 'transformed' economic future for the North including 850,000 jobs higher than the business as usual scenario in 2050 i.e. 1.56m additional jobs in total, GVA increased by 15% over business as usual growth and productivity 4% higher.

The draft Transport for the North (TfN) Strategic Plan (January 2018) sets out the 'strategic transport interventions that the evidence suggests are required to support the transformational growth scenario set out in the IER. This includes current commitments, as well as the looking further to the future.

The current commitments relevant to Northumberland relate primarily to the Strategic Road Network, rather than rail. These are:

- Road Investments Strategy (RIS1) covering the period up to 2020 and includes improvements to the A69 at Hexham and Corbridge
- A commitment that RIS2 (2020-2025) will fund the reconstruction of the A19 Moor Farm and Seaton Burn junctions

In relation to future schemes:

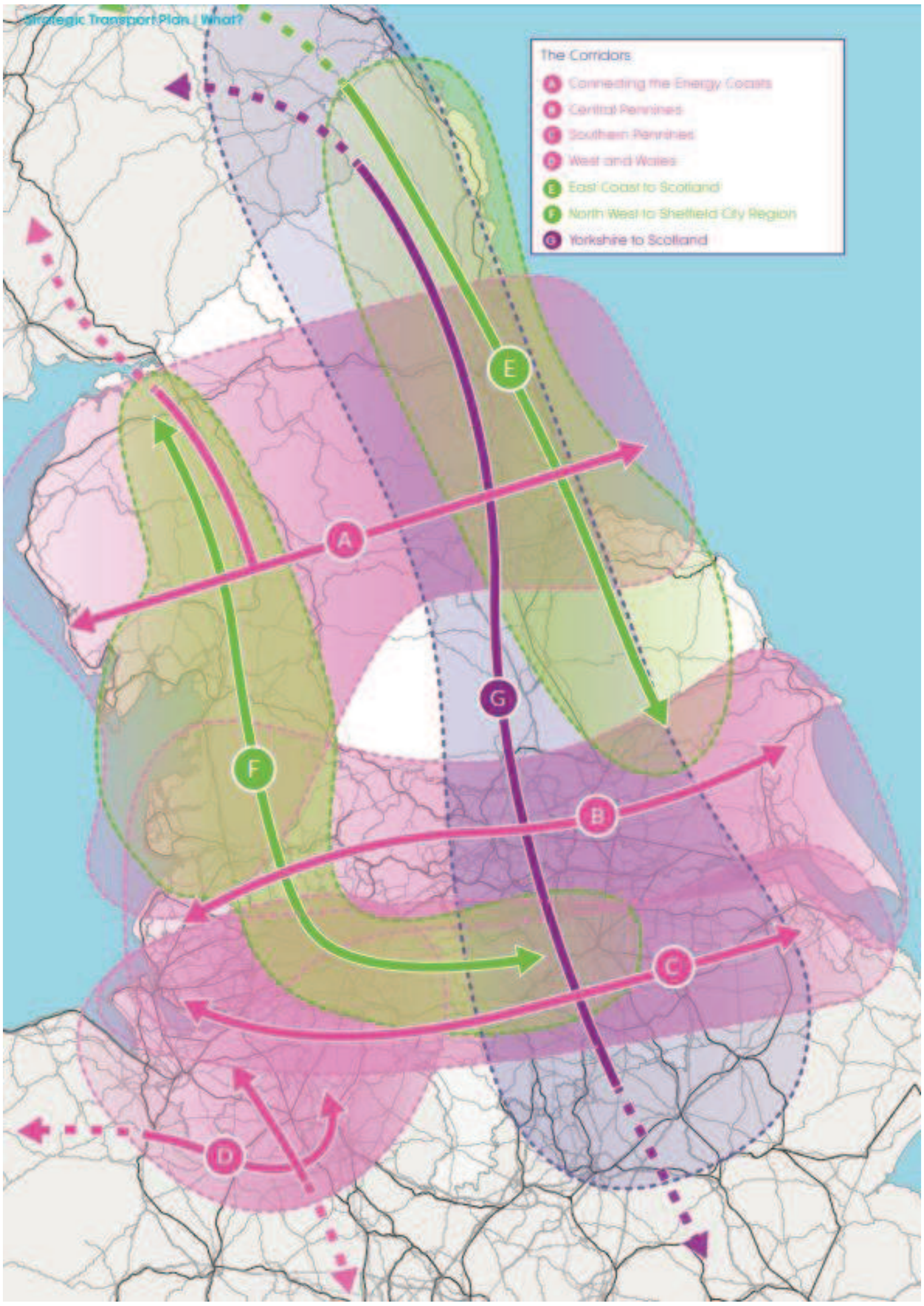
- Northern Powerhouse rail: this is intended to improve rail connections across the north, as well as to facilitate greater integration with HS2. While not directly linked into Northumberland, the existing connections into Newcastle, as a Northern Powerhouse hub station, will improve connectivity for Northumberland. A Strategic Outline Business Case will be completed by the end of 2018.
- Long-term rail strategy: the aim is delivering a 'single, cohesive, integrated rail network'. It is linked to Northern Powerhouse rail but other measures include longer trains and additional services and rationalised fare structures with the aim of promoting modal shift for both passengers and freight. While some enhancements are already committed, TfN will be 'developing an initial long-term Investment Programme, which will be further developed into a pipeline of

schemes through to 2050' and therefore has the potential to benefit Northumberland.

- Additional road network enhancements: beyond the RIS structure, TfN intend to make the case for further funding to support improvement to both the strategic and major road network. The implications for Northumberland are not yet clear.

Related to these committed and potential upgrades, the draft TfN plan identified as number of strategic development corridors across the region. Northumberland falls into three of these as shown on the figure below: the energy-related links to Blyth as well as routes up to Scotland from Yorkshire.

Strategic development corridors



Source: TfN

C.2 Borderlands Initiative

Preparatory work[32] for the group identified five key economic and social challenges:

- Low levels of productivity
- Low levels employment growth and entrepreneurialism
- A declining and ageing population
- Gaps in educational attainment and skills
- Poor transport links and digital connectivity

Five strategic objectives are identified, namely:

- Support regional economic development priorities to ensure the opportunities for economic growth and prosperity across the Borderlands are maximised.
- Invest in infrastructure to improve accessibility and connectivity within the region, and beyond to major centres of commercial opportunity.
- Attract additional private sector investment to the Borderlands.
- Grow the resident population with a focus on retaining and attracting young and working age professionals.
- Promote and take advantage of the regions natural environment and resources.

[32] ekos (December 2016) The Borderlands Inclusive Growth Initiative: ‘A Framework for Unlocking our Potential’

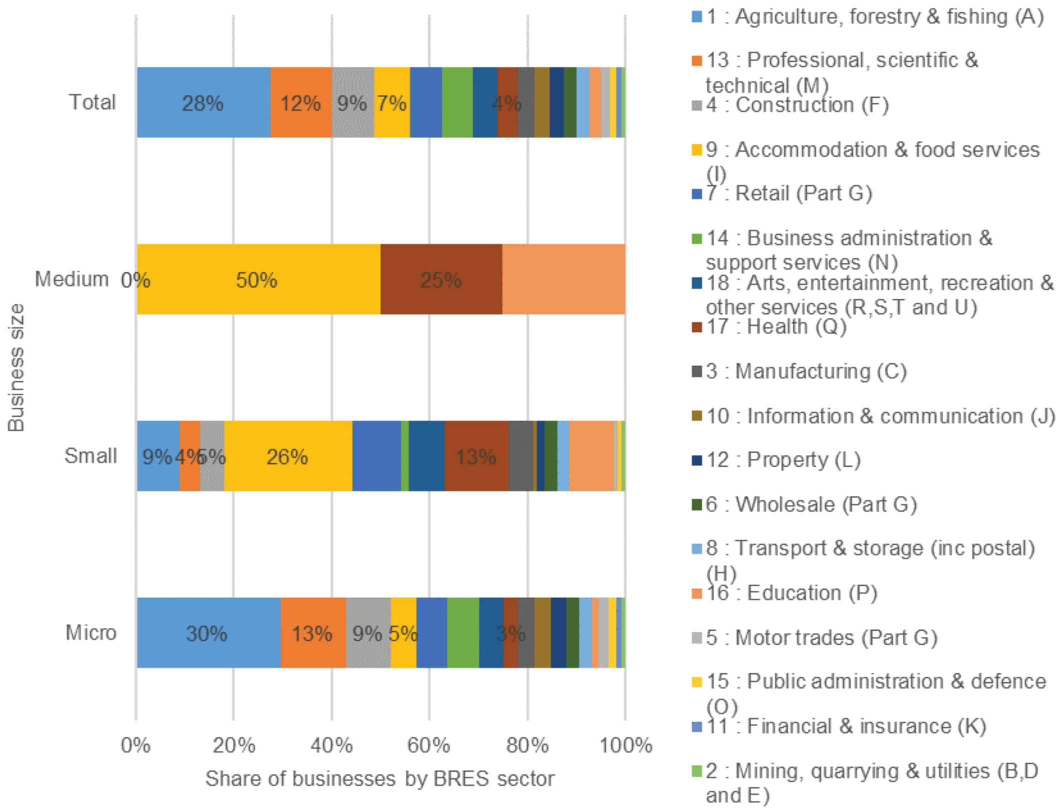
APPENDIX D RURAL ECONOMY AND RELATIONSHIP WITH THE SECTORS

D.1 What is the rural economy?

There is no formal definition of the rural economy; the November 2011 Coalition Government's Rural Economy Growth Review[33] stated that 'at the aggregate level, the industrial composition in rural England is broadly like that of England as a whole'. It goes on to state that in relation to employment, differences are more apparent between the whole of England, specifically that 'there are higher shares of rural employment in agriculture, construction and manufacture, and lower shares in education, wholesale and retail trade'.

Separately there is acknowledgement that understanding the local circumstances of an area's make-up is needed i.e. a place-based approach[34]; this is the approach we adopt to understand what sectors are most relevant to Northumberland's rural economy and which could grow at an above-forecast level in the future.

Share of rural businesses in Northumberland by BRES sector and size



Source: BRES 2016

33 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/86100/Rural_Economy_Growth_Review.pdf

34 Centre for Rural Economy, Newcastle University

The figure above draws on BRES data to show the shares of businesses by BRES sector in Northumberland. This shows that in overall terms, agriculture, forestry and fishing has the greatest share of rural businesses but that the majority of these businesses have fewer than 10 employees (micro businesses). The same holds true for professional, scientific and technical as the second largest sector by share. Accommodation and food services account for less than 10% of overall businesses but they are typically larger businesses employing between 10-50 people (small) or between 50-250 people (medium).

D.2 What does this mean for Northumberland?

With the above analysis in mind, and with reference to the current economic strategy's aim of growth the rural economy, tourism and port-related activities, the table below summarises the sectors which might grow above at an above trend level. These inform our bespoke forecasts.

Growth sectors in Northumberland

SIC category	Detailed Experian sector	Relevance to Northumberland
A	**Agriculture, forestry and fishing**	Job growth is expected in forestry. This follows on from discussions with local stakeholders (January 2018) which indicate scope for above trend growth.
C	**Food, drink and tobacco**	Manufacturing sectors where Northumberland performs well relative to elsewhere and which have the potential to exceed the baseline forecast growth because of overspill from adjoining authorities (this would be subject to duty to co-operate discussions), as well as accessibility improvements (A1 dualling and Blyth Ashington rail line)
C	**Wood and paper**	
C	**Printing and reproduction of recorded media**	
C	**Chemicals**	
C	**Pharmaceuticals**	
C	**Rubber, plastic and other non-metallic mineral products**	
C	**Computer and electronic products**	
C	**Other manufacturing**	
D/E	**Utilities**	Includes port-related activities and renewable energies which have benefited from recent Enterprise Zone status at Blyth and are likely to exceed forecast growth.
H	**Land transport, storage and post**	Not currently a significant sector but long-term improvements in transport infrastructure may mean there is some potential for growth above trend.
I	**Accommodation and food services**	Tourist-related activities which, with appropriate policy support, could grow above trend
R	**Recreation**	
J	**Computing and information services**	Broadband improvements as part of the Borderlands Digital Improvement Scheme to accelerate access to superfast broadband and 4G mobile phone technology likely to result in above-trend growth.
M	**Professional services**	This sector includes R&D which, in conjunction with port-related activities and displacement from neighbouring areas, has the potential to grow above trend.
B	Extraction and mining	Not sectors in which Northumberland performs strongly relative to elsewhere; and little evidence to
C	Textiles and clothing	
C	Fuel refining	

SIC category	Detailed Experian sector	Relevance to Northumberland
C	Metal products	support above trend growth as a consequence also of national trends
C	Machinery and equipment	
C	Transport equipment	
F	Construction of buildings	
F	Civil engineering	
F	Specialised construction activities	
G	Wholesale	
G	Retail	
H	Air and water transport	
K	Finance	
J	Media activities	
J	Telecoms	
K	Insurance and pensions	
L	Real estate	
N	Administrative and supportive service activities	
S	Other private services	
O	Public administration and defence	
P	Education	
Q	Health	
Q	Residential care and social work	

APPENDIX E BUSINESS AS USUAL SCENARIO

	Industry	Variable Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Northumberland		Labour Force	160.80	157.90	157.60	155.60	155.70	155.60	155.60	155.50	155.40	155.20	155.10	155.00	155.20	155.50	155.80	155.90	155.90	155.90	155.90	156.10	156.40	156.60	156.90	157.40
Northumberland		Labour Force - 16 to 64	154.40	151.00	150.90	148.60	148.40	148.00	147.70	147.20	146.80	146.20	145.70	145.10	144.70	144.20	143.70	143.20	142.70	142.30	142.00	141.90	142.00	142.10	142.20	142.50
Northumberland		Labour Force - 65 Plus	6.30	6.80	6.70	7.00	7.30	7.60	7.90	8.20	8.60	9.00	9.40	9.90	10.50	11.30	12.10	12.70	13.20	13.60	13.90	14.20	14.40	14.50	14.80	14.90
Northumberland		Population - retired	77.30	76.60	76.50	77.20	77.90	78.10	77.00	77.90	79.60	81.30	83.20	85.10	86.20	85.80	85.80	87.40	89.20	91.10	92.90	94.30	95.70	96.80	97.80	98.60
Northumberland		Population - student	52.60	52.20	52.00	51.90	51.90	51.80	51.70	51.60	51.50	51.40	51.00	50.80	50.40	50.10	49.70	49.40	49.20	49.10	48.90	48.80	48.60	48.40	48.20	48.00
Northumberland		Population - 16 Plus	263.40	263.90	264.30	264.70	265.10	265.60	266.20	266.70	267.30	267.90	268.60	269.20	269.90	270.60	271.20	271.70	272.00	272.30	272.60	272.90	273.20	273.50	273.70	273.80
Northumberland		Population - 16 to 64	192.30	191.10	189.80	188.70	187.50	186.30	185.40	184.20	183.10	181.70	180.40	179.10	177.90	176.60	175.40	173.90	172.30	171.00	169.80	168.90	168.10	167.40	166.60	166.00
Northumberland		Population - 65 Plus	71.10	72.80	74.50	76.10	77.60	79.30	80.80	82.50	84.20	86.20	88.20	90.10	92.00	93.90	95.80	97.80	99.70	101.30	102.80	104.00	105.10	106.10	107.10	107.80
Northumberland		Total Population	316.00	316.00	316.30	316.60	317.00	317.40	317.90	318.30	318.80	319.20	319.60	320.00	320.30	320.60	320.90	321.10	321.30	321.40	321.60	321.70	321.80	321.90	321.90	321.90
Northumberland		Working Age Population	186.10	187.30	187.90	187.50	187.20	187.50	189.20	188.80	187.80	186.60	185.40	184.10	183.70	184.80	185.40	184.30	182.80	181.20	179.80	178.60	177.60	176.70	175.90	175.20
Northumberland		Economic Activity Rate (%) - 16+	61.00	59.80	59.60	58.80	58.70	58.60	58.40	58.30	58.10	57.90	57.70	57.60	57.50	57.50	57.40	57.40	57.30	57.20	57.20	57.20	57.20	57.30	57.30	57.50
Northumberland		Economic Activity Rate (%) - 16 to 64	80.30	79.10	79.50	78.80	79.10	79.40	79.70	79.90	80.20	80.50	80.70	81.00	81.30	81.60	82.00	82.40	82.80	83.20	83.60	84.00	84.50	84.90	85.40	85.80
Northumberland		Economic Activity Rate (%) - 65 Plus	8.90	9.40	9.00	9.20	9.40	9.60	9.80	10.00	10.20	10.40	10.70	11.00	11.40	12.00	12.60	13.00	13.20	13.40	13.60	13.60	13.70	13.70	13.80	13.80
Northumberland		Economic Activity Rate (%) - Working Age	86.40	84.30	83.90	83.00	83.20	83.00	82.20	82.30	82.80	83.20	83.60	84.20	84.50	84.20	84.00	84.60	85.30	86.00	86.70	87.40	88.10	88.60	89.20	89.80
Northumberland		Employment rate (%)	56.80	55.90	56.20	56.00	55.80	55.60	55.40	55.30	55.30	55.30	55.10	55.00	54.90	54.80	54.80	54.70	54.70	54.60	54.50	54.50	54.60	54.60	54.60	54.70
Northumberland		Productivity	32.20	33.50	33.10	33.60	34.00	34.60	35.10	35.60	36.20	37.00	37.70	38.40	39.00	39.60	40.10	40.50	41.10	41.70	42.20	42.70	43.20	43.70	44.20	44.70
Northumberland		Total GVA	4819.80	4939.70	4926.50	4984.10	5034.00	5103.50	5174.00	5253.00	5356.70	5474.80	5584.20	5683.20	5778.90	5870.90	5954.60	6029.20	6107.50	6193.30	6279.50	6361.90	6443.40	6526.00	6610.00	6691.50
Northumberland		Workforce Jobs	122.60	125.50	124.00	124.50	124.50	124.50	124.60	124.60	124.90	125.30	125.60	125.80	126.10	126.60	127.10	127.50	127.80	128.10	128.40	128.70	129.00	129.30	129.50	129.80
Northumberland		Jobs Demand	122.60	125.50	124.00	124.50	124.50	124.50	124.60	124.60	124.90	125.30	125.60	125.80	126.10	126.60	127.20	127.60	127.90	128.20	128.40	128.70	129.00	129.30	129.50	129.80
Northumberland		Excess Jobs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00
Northumberland		FTE jobs	93.40	94.40	94.40	95.30	95.40	95.70	96.00	96.30	96.70	97.00	97.30	97.50	97.80	97.90	98.00	97.90	97.90	98.00	98.00	98.10	98.20	98.30	98.40	98.50
Northumberland		Workplace based employment	127.80	130.20	131.30	130.90	131.00	130.70	130.50	130.40	130.60	130.90	131.10	131.20	131.40	131.70	132.10	132.40	132.60	132.70	132.80	133.10	133.30	133.50	133.80	134.10
Northumberland		Residence based employment	149.70	147.50	148.60	148.20	148.00	147.70	147.40	147.40	147.80	148.00	148.10	148.10	148.10	148.30	148.50	148.70	148.70	148.70	148.70	148.80	149.10	149.30	149.50	149.80
Northumberland		Net Commuting (inflow)	-22.00	-17.30	-17.30	-17.30	-17.00	-17.00	-17.00	-17.10	-17.20	-17.10	-17.00	-16.90	-16.70	-16.60	-16.50	-16.30	-16.10	-16.00	-15.90	-15.80	-15.70	-15.70	-15.70	-15.70
Northumberland		Unemployment	11.00	10.30	8.90	7.40	7.70	7.90	8.10	8.00	7.60	7.20	7.00	6.90	7.10	7.20	7.30	7.20	7.20	7.20	7.20	7.30	7.30	7.40	7.40	7.60
Northumberland		Unemployment Rate (%)	6.80	6.50	5.70	4.80	4.90	5.10	5.20	5.20	4.90	4.60	4.50	4.50	4.60	4.60	4.70	4.60	4.60	4.60	4.60	4.70	4.70	4.70	4.70	4.80
United Kingdom		Workforce Jobs	33443.00	33961.00	34509.80	34906.30	35006.40	35141.70	35309.40	35492.60	35745.90	36013.30	36238.20	36440.60	36656.80	36887.90	37131.70	37372.60	37581.20	37785.80	37984.10	38180.10	38379.30	38577.50	38773.10	38972.70
United Kingdom		Productivity	52.20	52.50	52.70	53.00	53.50	54.40	55.30	56.20	57.30	58.50	59.70	60.80	61.80	62.70	63.60	64.50	65.50	66.50	67.50	68.50	69.50	70.50	71.50	72.50
United Kingdom		Employment rate (%)	58.60	59.20	59.60	59.90	59.80	59.60	59.40	59.30	59.40	59.40	59.30	59.20	59.20	59.10	59.10	59.10	59.00	59.00	58.90	58.80	58.80	58.80	58.80	58.80
Northumberland	Agriculture, Forestry & Fishing	Workforce Jobs	4.7	4.1	3.5	3.2	3.2	3.1	3.1	3.1	3.1	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Northumberland	Extraction & Mining	Workforce Jobs	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Northumberland	Food, Drink & Tobacco	Workforce Jobs	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Northumberland	Textiles & Clothing	Workforce Jobs	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Northumberland	Wood & Paper	Workforce Jobs	1.9	2.0	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.4
Northumberland	Printing and Reproduction of Recorded Media	Workforce Jobs	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
Northumberland	Fuel Refining	Workforce Jobs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Northumberland	Chemicals	Workforce Jobs	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Northumberland	Pharmaceuticals	Workforce Jobs	0.9	0.9	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Northumberland	Rubber, Plastic and Other Non-Metallic Mineral Products	Workforce Jobs	1.6	1.7	1.6	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Northumberland	Metal Products	Workforce Jobs	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
Northumberland	Computer & Electronic Products	Workforce Jobs	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1
Northumberland	Machinery & Equipment	Workforce Jobs	1.1	1.1	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
Northumberland	Transport Equipment	Workforce Jobs	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Northumberland	Other Manufacturing	Workforce Jobs	1.2	1.3	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Northumberland	Utilities	Workforce Jobs	1.5	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Northumberland	Construction of Buildings	Workforce Jobs	3.0	3.4	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.5
Northumberland	Civil Engineering	Workforce Jobs	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Northumberland	Specialised Construction Activities	Workforce Jobs	4.6	4.6	4.7	4.8	4.8	4.8	4.8	4.9	4.9	4.9	4.9	4.9	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Northumberland	Wholesale	Workforce Jobs	5.4	5.4	5.4	5.4	5.4	5.4	5.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Northumberland	Retail	Workforce Jobs	13.8	13.5	13.0	12.7	12.6	12.6	12.5	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.3	12.3	12.3	12.3	12.3
Northumberland	Land Transport, Storage & Post	Workforce Jobs	4.1	4.0	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.9	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1	4.1	4.1
Northumberland	Air & Water Transport	Workforce Jobs	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Northumberland	Accomodation & Food Services	Workforce Jobs	10.4	11.5	10.9	11.7	11.7	11.8	11.9	11.9	12.0	12.1	12.1	12.1	12.2	12.2	12.3	12.3	12.3	12.3	12.4	12.4	12.4	12.4	12.4	12.4
Northumberland	Recreation	Workforce Jobs	4.6	4.5	4.5	4.6	4.7	4.7	4.7	4.7	4.8	4.8	4.8	4.8	4.9	4.9	4.9	5.0	5.0	5.0	5.1	5.1	5.1	5.2	5.2	5.2
Northumberland	Media Activities	Workforce Jobs	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Northumberland	Telecoms	Workforce Jobs	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Northumberland	Computing & Information Services	Workforce Jobs	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Northumberland	Finance	Workforce Jobs	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Northumberland	Insurance & Pensions	Workforce Jobs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Northumberland	Real Estate	Workforce Jobs	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4
Northumberland	Professional Services	Workforce Jobs	6.6	8.0	8.0	7.6	7.7	7.7	7.7	7.7	7.8	7.8	7.9	7.9	8.0	8.1	8.1	8.2	8.3	8.3	8.4	8.5	8.6	8.6	8.7	8.8
Northumberland	Administrative & Supportive Service Activities	Workforce Jobs	5.9	6.1	6.3	6.7	6.7	6.8	6.8	6.8	6.8	6.9	6.9	6.9	7.0	7.0	7.1	7.1	7.2	7.3	7.3	7.4	7.5	7.5	7.6	7.7
Northumberland	Other Private Services	Workforce Jobs	3.8	4.1	4.4	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Northumberland	Public Administration & Defence	Workforce Jobs	5.5	4.8	4.6	4.5	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2
Northumberland	Education	Workforce Jobs	9.7	10.7	10.7	10.8	10.8	10.8	10.8	10.8	10.9	10.9	11.0	11.0	11.1	11.1	11.2	11.2	11.3	11.3	11.4	11.4	11.4	11.5	11.5	11.5
Northumberland	Health	Workforce Jobs	11.1	11.1	11.2	11.3	11.3	11.3	11.4	11.5	11.6	11.6	11.7	11.8	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0
Northumberland	Residential Care & Social Work	Workforce Jobs	9.2	9.0	8.8	8.6	8.7	8.8	8.9	9.0	9.2	9.4	9.5	9.6	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.8	10.9	11.0	11.1	11.2

	Industry	Variable Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Northumberland	Agriculture, Forestry & Fishing	GVA	237.8	234.3	217.8	220.4	223.6	225.9	226.8	227.4	229.2	231.3	232.7	233.6	234.4	235.1	235.4	235.1	235.0	235.1	235.1	234.8	234.5	234.0	233.6	233.1
Northumberland	Extraction & Mining	GVA	52.5	48.8	34.7	33.8	33.7	33.9	33.7	33.7	33.8	33.9	33.9	33.8	33.6	33.4	33.1	32.7	32.3	31.8	31.3	30.7	30.0	29.2	28.5	27.8
Northumberland	Food, Drink & Tobacco	GVA	75.9	80.3	80.6	81.5	81.6	82.3	82.8	83.1	83.5	84.0	84.5	84.8	85.1	85.2	85.2	85.1	84.9	84.9	84.8	84.6	84.4	84.3	84.1	83.8
Northumberland	Textiles & Clothing	GVA	5.3	5.5	5.2	5.7	5.8	5.9	5.9	6.0	6.0	6.1	6.1	6.2	6.2	6.3	6.3	6.3	6.4	6.4	6.5	6.5	6.5	6.6	6.6	6.6
Northumberland	Wood & Paper	GVA	75.4	80.4	80.2	85.7	86.2	86.6	86.6	86.1	85.7	85.5	85.2	84.7	84.2	83.7	83.2	82.6	82.1	81.5	80.9	80.2	79.5	78.7	77.9	77.1
Northumberland	Printing and Reproduction of Recorded Media	GVA	15.6	17.4	18.1	18.1	18.1	18.2	18.2	18.1	18.1	18.1	18.1	18.1	18.0	17.8	17.7	17.6	17.4	17.2	17.0	16.8	16.5	16.3	16.0	15.7
Northumberland	Fuel Refining	GVA	4.7	4.9	4.7	4.8	4.8	4.8	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.0	3.9	3.9
Northumberland	Chemicals	GVA	58.4	61.1	58.2	61.5	63.0	64.3	65.1	65.7	66.2	66.6	67.0	67.2	67.3	67.4	67.4	67.3	67.2	67.1	67.1	66.9	66.8	66.6	66.4	66.2
Northumberland	Pharmaceuticals	GVA	175.7	178.4	183.9	176.3	181.1	185.0	188.2	191.7	196.2	201.0	204.9	208.6	212.5	216.7	220.9	224.8	228.9	233.2	237.5	241.5	245.5	249.4	253.3	256.9
Northumberland	Rubber, Plastic and Other Non-Metallic Mineral Products	GVA	77.7	83.1	85.7	85.7	86.7	88.6	90.0	91.4	93.2	95.2	96.9	98.9	100.9	102.7	104.2	105.5	106.9	108.5	110.0	111.5	113.0	114.4	115.9	117.2
Northumberland	Metal Products	GVA	39.1	38.1	36.2	36.4	36.6	37.1	37.5	37.7	38.0	38.3	38.7	39.0	39.3	39.5	39.8	40.0	40.3	40.5	40.7	40.8	40.9	40.9	40.9	40.8
Northumberland	Computer & Electronic Products	GVA	49.1	51.3	50.7	52.6	53.7	54.6	55.4	56.3	57.4	58.8	59.8	60.7	61.6	62.5	63.4	64.4	65.4	66.4	67.2	67.8	68.5	69.0	69.7	70.4
Northumberland	Machinery & Equipment	GVA	61.1	55.8	55.4	58.6	59.7	62.2	63.9	65.7	67.8	70.1	72.0	73.5	74.8	75.8	76.9	77.8	78.8	79.9	81.1	82.2	83.2	84.2	85.3	86.4
Northumberland	Transport Equipment	GVA	14.3	14.6	14.5	14.8	15.0	15.4	15.8	16.0	16.3	16.6	16.9	17.0	17.1	17.1	17.1	17.2	17.3	17.3	17.4	17.5	17.5	17.6	17.7	17.8
Northumberland	Other Manufacturing	GVA	42.1	43.8	46.0	47.5	48.0	48.8	49.5	50.1	50.6	51.3	51.9	52.3	52.7	53.1	53.4	53.7	54.1	54.4	54.7	54.9	55.0	55.2	55.2	55.2
Northumberland	Utilities	GVA	134.0	141.8	145.8	146.1	147.8	150.3	152.4	154.5	156.6	158.8	160.5	162.2	163.8	165.3	166.5	167.4	168.3	169.2	170.0	170.5	170.8	171.0	171.0	170.9
Northumberland	Construction of Buildings	GVA	174.2	182.9	185.2	186.9	188.0	191.0	194.5	198.1	202.1	206.7	211.0	214.7	217.9	220.5	222.5	224.1	225.6	227.2	228.9	230.4	232.0	233.6	235.2	236.7
Northumberland	Civil Engineering	GVA	68.0	67.6	66.4	67.0	67.6	68.9	70.2	71.5	72.9	74.5	76.0	77.5	79.0	80.4	81.7	82.9	84.0	85.2	86.5	87.6	88.8	89.9	91.1	92.2
Northumberland	Specialised Construction Activities	GVA	128.3	132.4	132.2	133.4	134.2	135.9	138.3	141.0	144.0	147.5	150.7	153.7	156.6	159.4	161.8	164.0	166.3	168.7	171.2	173.5	175.9	178.4	180.9	183.4
Northumberland	Wholesale	GVA	207.5	217.6	223.6	227.5	229.3	232.3	236.3	240.8	246.7	253.5	260.3	266.4	272.2	277.2	280.9	283.6	286.1	288.9	291.6	294.2	296.7	299.3	302.0	304.4
Northumberland	Retail	GVA	322.8	335.3	340.5	345.9	350.1	355.4	360.9	368.2	378.0	387.5	395.6	403.2	410.9	418.9	426.7	434.1	441.7	449.8	458.0	465.8	473.5	481.5	489.3	496.7
Northumberland	Land Transport, Storage & Post	GVA	139.2	138.5	133.8	134.9	135.5	136.8	138.0	139.8	142.6	145.6	148.3	150.6	152.6	154.5	156.2	157.7	159.2	160.9	162.6	164.2	165.7	167.3	168.9	170.4
Northumberland	Air & Water Transport	GVA	5.0	5.7	6.1	6.0	6.1	6.1	6.2	6.3	6.4	6.6	6.8	6.9	7.0	7.2	7.3	7.5	7.7	7.9	8.1	8.3	8.5	8.7	9.0	9.2
Northumberland	Accomodation & Food Services	GVA	186.1	192.5	196.9	205.0	207.7	210.4	212.2	214.4	218.2	222.9	227.1	230.5	233.8	236.9	239.3	241.3	243.4	245.9	248.4	250.8	253.1	255.4	257.7	259.7
Northumberland	Recreation	GVA	89.0	82.0	78.3	79.8	80.8	81.9	83.3	84.9	87.0	89.4	91.6	93.4	95.2	96.8	98.2	99.6	101.1	102.7	104.4	106.1	107.8	109.5	111.3	113.1
Northumberland	Media Activities	GVA	20.8	23.9	25.3	26.4	27.1	27.7	28.5	29.4	30.6	32.1	33.4	34.6	35.7	36.7	37.7	38.7	39.7	40.8	42.0	43.1	44.2	45.4	46.6	47.7
Northumberland	Telecoms	GVA	12.9	11.9	10.4	10.1	10.3	10.5	10.9	11.4	11.9	12.6	13.2	13.8	14.4	14.9	15.3	15.8	16.4	16.9	17.4	18.0	18.6	19.2	19.8	20.3
Northumberland	Computing & Information Services	GVA	35.3	37.4	40.1	40.1	41.0	42.0	42.9	43.9	45.4	47.3	48.9	50.3	51.7	53.1	54.4	55.8	57.3	58.9	60.5	62.1	63.8	65.5	67.3	69.0
Northumberland	Finance	GVA	63.2	60.2	60.0	60.0	60.1	60.4	61.3	62.4	64.0	65.9	67.7	69.3	70.8	72.1	73.5	75.0	76.6	78.4	80.4	82.5	84.7	87.0	89.4	91.8
Northumberland	Insurance & Pensions	GVA	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.6	2.6	2.6	2.5
Northumberland	Real Estate	GVA	745.1	750.5	740.7	744.2	748.5	756.6	764.7	774.0	785.9	799.7	813.4	826.0	838.5	850.4	860.4	868.0	876.0	885.1	893.2	900.4	907.3	914.4	921.9	929.6
Northumberland	Professional Services	GVA	189.7	215.5	228.7	235.3	239.1	243.4	247.2	251.2	257.6	265.5	273.5	280.7	287.0	293.1	298.9	304.9	311.8	319.7	328.2	337.0	346.1	355.5	365.2	375.0
Northumberland	Administrative & Supportive Service Activities	GVA	124.7	136.2	139.4	144.8	148.4	151.9	156.3	161.4	167.5	174.4	181.3	187.8	194.3	200.7	207.2	213.9	220.9	228.4	236.1	244.0	252.1	260.5	269.3	278.2
Northumberland	Other Private Services	GVA	100.6	99.0	102.7	103.1	103.6	104.7	105.6	106.8	108.6	110.6	112.2	113.3	114.3	115.4	116.4	117.2	117.9	118.8	119.8	120.7	121.6	122.4	123.2	123.9
Northumberland	Public Administration & Defence	GVA	260.0	240.1	222.6	217.7	212.9	209.9	208.1	206.2	205.4	205.2	204.7	203.7	202.6	201.3	199.7	197.8	195.9	194.3	192.6	190.7	188.7	186.8	184.8	182.7
Northumberland	Education	GVA	321.0	342.3	341.5	344.3	346.5	349.6	352.6	355.9	361.0	366.9	372.2	376.7	381.0	385.4	389.1	391.6	394.1	397.0	399.9	402.5	404.8	407.1	409.1	410.7
Northumberland	Health	GVA	366.6	387.0	394.7	402.2	410.2	420.1	432.7	447.0	463.6	482.1	500.7	519.2	538.0	557.2	576.1	594.7	614.1	634.6	655.5	676.3	697.4	718.8	740.7	762.6
Northumberland	Residential Care & Social Work	GVA	137.5	138.6	136.8	137.5	138.7	141.1	144.0	147.1	150.9	155.1	159.1	162.8	166.4	170.0	173.3	176.4	179.5	182.8	186.2	189.4	192.6	195.7	198.8	201.8
Northumberland	Agriculture, Forestry & Fishing	Productivity	50.1	56.7	62.8	69.2	70.5	72.2	73.2	74.0	74.9	75.9	76.6	77.2	77.7	78.1	78.3	78.3	78.4	78.5	78.6	78.6	78.6	78.6	78.6	78.6
Northumberland	Extraction & Mining	Productivity	114.0	112.8	106.8	110.7	115.0	116.1	115.8	116.5	117.1	118.2	118.9	119.9	120.2	120.7	120.9	120.7	120.7	120.5	120.1	119.3	118.1	116.9	115.6	114.3
Northumberland	Food, Drink & Tobacco	Productivity	50.7	49.6	51.4	52.2	52.1	52.3	52.5	53.0	53.5	53.9	54.4	54.9	55.3	55.5	55.7	55.7	55.8	55.9	56.1	56.1	56.2	56.3	56.4	56.4
Northumberland	Textiles & Clothing	Productivity	28.1	28.4	24.3	26.9	27.6	28.3	29.1	30.1	31.0	32.0	33.0	34.0	34.8	35.6	36.5	37.5	38.7	40.0	41.4	42.7	44.2	45.7	47.2	48.8
Northumberland	Wood & Paper	Productivity	38.9	40.6	38.3	41.2	41.6	42.5	43.6	44.5	45.3	46.3	47.3	48.2	48.9	49.7	50.4	51.0	51.8	52.6	53.3	53.9	54.6	55.2	55.7	56.2
Northumberland	Printing and Reproduction of Recorded Media	Productivity	22.8	25.0	27.8	26.7	26.9	27.2	27.4	27.8	28.1	28.5	28.8	29.3	29.9	30.4	30.9	31.5	32.1	32.8	33.5	34.2	35.0	35.8	36.7	37.5
Northumberland	Fuel Refining	Productivity	97.6	115.3	104.8	105.7	106.9	108.3	107.3	106.2	104.4	103.9	104.4	104.4	104.1	103.7	103.2	102.7	102.4	102.4	102.2	101.9	101.3	100.6	100.0	99.3
Northumberland	Chemicals	Productivity	61.1	63.8	60.2	62.2	63.0	64.0	64.5	65.3	66.3	67.1	67.9	68.6	69.4	70.0	70.6	71.1	71.7	72.5	73.2	73.9	74.5	75.2	75.9	76.5
Northumberland	Pharmaceuticals	Productivity	190.7	200.2	217.8	174.0	188.8	193.5	195.3	198.3	202.6	206.5	208.8	210.8	212.6	214.4	215.9	217.1	218.4	219.8	221.0	221.8	222.4	223.1	224.1	224.7
Northumberland	Rubber, Plastic and Other Non-Metallic Mineral Products	Productivity	48.5	50.1	54.0	54.8	55.7	57.5	59.1	60.7	62.4	64.2	65.8	67.5	69.3	70.8	72.1	73.1	74.4	75.8	77.4	78.9	80.2	81.7	83.2	84.5
Northumberland	Metal Products	Productivity	37.7	39.0	40.0	39.9	40.5	41.1	41.9	43.1	44.3	45.4	46.6	47.6	48.6	49.5	50.4	51.3	52.2	53.1	54.0	54.7	55.5	56.2	56.8	57.3
Northumberland	Computer & Electronic Products	Productivity	37.8	37.7	38.0	39.8	41.2	42.5	43.7	45.1	46.6	48.1	49.5	50.7	51.8	52.8	53.8	54.8	55.9	57.1	58.2	59.3	60.3	61.2	62.2	63.2
Northumberland	Machinery & Equipment	Productivity	55.4	50.1	54.4	55.7	58.3	60.5	62.4	65.1	68.0	71.1	73.7	76.0	78.5	81.1	83.7	86.3	89.0	91.8	94.6	97.3	100.0	102.7	105.5	108.4
Northumberland	Transport Equipment	Productivity	44.7	46.1	46.1	48.4	49.1	51.1	53.3	54.7	56.3	58.0	59.7	61.1	62.7	64.4	66.1	67.9	69.9	72.0	74.0	76.0	78.1	80.2	82.4	85.0
Northumberland	Other Manufacturing	Productivity	35.8	32.7	31.0	31.0	31.5	32.4	33.4	34.5	35.4	36.4	37.4	38.2	38.8	39.4	39.9	40.4	40.9	41.5	42.0	42.4	42.8	43.2	43.5	43.7
Northumberland	Utilities	Productivity	86.6	87.3	89.4	88.3	88.1	88.6	89.2	89.7	90.2	90.5	90.6	90.8	90.9	90.9	90.8	90.5	90.3	90.1	89.9	89.6	89.1	88.7	88.3	87.7
Northumberland	Construction of Buildings	Productivity	58.3	54.1	53.4	52.6	52.8	53.7	54.7	55.7	56.8	58.0	59.2	60.2	60.9	61.6	62.2	62.7	63.3	63.9	64.6	65.2	65.7	66.3	66.8	67.3
Northumberland	Civil Engineering	Productivity	84.2	92.3	91.0	91.1	91.5	93.1	95.0	97.0	99.0	101.2	103.2	105.0	106.8	108.7	110.4	112.1	114.0	116.0	118.0	119.8	121.5	123.3	125.0	126.4
Northumberland	Specialised Construction Activities	Productivity	28.1	28.8	28.0	27.5	27.8	28.1	28.6	29.1	29.6	30.1	30.7	31.1	31.6	32.0	32.4	32.8	33.3	33.8	34.3	34.7	35.2	35.6	36.1	36.5
Northumberland	Wholesale	Productivity	38.7	40.2	41.3	42.0	42.1	42.7	43.3	44.3	45.3	46.6	47.8	49.0	50.1	51.0	51.7	52.2	52.7	53.3	53.9	54.4	54.9	55.4	55.9	56.4
Northumberland	Retail	Productivity	23.4	24.9	26.2	27.3	27.7	28.3	28.8	29.5	30.2	31.0	31.7	32.4	33.1	33.8	34.4	35.0	35.6	36.3	37.0	37.7	38.4	39.1	39.8	40.5
Northumberland	Land Transport, Storage & Post	Productivity	33.9	34.2	32.6	33.3	33.7	34.2	34.7	35.3	36.0	36.8	37.6	38.2	38.6	39.0	39.3	39.5	39.8	40.1	40.5	40.7	41.0	41.3	41.6	41.8
Northumberland	Air & Water Transport	Productivity	85.2	82.0	75.4	74.3	75.5	76.5	77.8	79.2	81.9	84.6	86.9	88.8	90.5	92.1	93.9	95.8	97.9	100.3	102.8	105.3	108.0	110.6	113.2	115.8
Northumberland	Accomodation & Food Services	Productivity	17.9	16.7	18.0	17.5	17.7	17.8	17.9	18.0	18.2	18.5	18.8	19.0	19.2	19.4	19.5	19.6	19.8	19.9	20.1	20.3	20.4	20.6	20.8	21.0
Northumberland	Recreation	Productivity	19.4	18.1	17.5	17.3	17.2	17.4	17.6	17.9	18.2	18.7	19.0	19.3	19.6	19.8	19.9	20.1	20.3	20.5	20.7	20.9	21.1	21.3	21.5	21.6
Northumberland	Media Activities	Productivity	35.9	41.2	45.5	44.9	47.0	47.8	48.6	49.7	51.3	53.3	55.3	56.9	58.4	59.6	60.8	62.0	63.3	64.7	66.2	67.6	69.0	70.6	72.1	73.5
Northumberland	Telecoms	Productivity	84.2	85.3	77.6	74.2	74.8	76.8	79.8	83.4	87.6	92.3	97.2	101.7	106.0	109.5	113.1	116.7	120.7	124.9	129.0	133.1	137.3	141.6	145.7	149.4
Northumberland	Computing & Information Services	Productivity	37.3	37.7	38.8	37.6	38.4	39.0	39.6	40.5	41.7	43.1	44.3	45.3	46.2	47.1	47.9	48.6	49.5	50.5	51.4	52.3	53.2	54.1	55.1	55.9
Northumberland	Finance	Productivity	64.0	62.7	59.1	59.0	59.0	59.8	60.9	62.3	64.1	66.1	68.0	69.8	71.4	72.8	74.1	75.4	77.0	78.7	80.6	82.6	84.6	86.7	88.9	91.1
Northumberland	Insurance & Pensions	Productivity	267.7	259.0	255.6	255.7	257.5	259.5	261.9	265.4	268.5	272.0	275.7	278.4	280.8	281.6	281.8	282.5	283.4	284.5	285.1	285.4	285.9	286.3	286.6	286.4
Northumberland	Real Estate	Productivity	374.8	378.3	376.0	372.8	366.3	366.7	367.6	370.2	373.1	376.7	380.5	383.4	385.9	388.2	389.6	390.1	391.2	392.4	393.1	393.1	392.9	392.8	392.6	392.0
Northumberland	Professional Services	Productivity	28.8	27.0	28.6	30.9	31.1	31.6	32.1	32.5	33.2	33.9	34.7	35.3	35.8	36.3	36.7	37.1	37.7	38.3	39.1	39.8	40.5	41.2	41.9	42.6
Northumberland	Administrative & Supportive Service Activities	Productivity	21.2	22.4	22.2	21.7	22.0	22.5	23.1	23.8	24.6	25.5	26.3	27.1	27.9	28.6	29.2	29.9	30.6	31.4	32.2	33.0	33.8	34.6	35.5	36.3
Northumberland	Other Private Services	Productivity	26.2	24.3	23.4	24.7	24.6	24.8	25.0	25.3	25.6	26.1	26.4	26.7	26.9	27.1	27.3	27.4	27.5	27.7	27.9	28.0	28.2	28.3	28.4	28.5
Northumberland	Public Administration & Defence	Productivity	47.6	50.3	48.7	48.3	49.2	49.9	50.7	51.2	51.7	52.3	53.0	53.6	54.0	54.5	54.8	55.0	55.3	55.7	56.1	56.4	56.7	56.9	57.2	57.4
Northumberland	Education	Productivity	33.2	31.9	31.9	32.0	32.2	32.5	32.7	32.9	33.1	33.5	33.9	34.2	34.4	34.6	34.8	34.8	34.9	35.1	35.2	35.3	35.4	35.5	35.5	35.6
Northumberland	Health	Productivity	32.9	34.8	35.2	35.6	36.4	37.1	38.0	39.0	40.1	41.4	42.7	44.0	45.2	46.4	47.5	48.6	49.8	51.0	52.3	53.5	54.8	56.1	57.4	58.7
Northumberland	Residential Care & Social Work	Productivity	14.9	15.5	15.6	16.0	16.0	16.1	16.2	16.3	16.4	16.6	16.7	16.9	17.0	17.1	17.1	17.1	17.2	17.3	17.4	17.5	17.6	17.8	17.9	18.0

APPENDIX F AMBITIOUS GROWTH SCENARIO

	Industry	Variable Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Northumberland		Labour Force	160.80	157.90	157.90	156.80	157.20	157.20	157.90	159.10	160.90	163.00	165.10	165.70	165.90	166.10	166.40	166.60	166.70	166.70	166.70	166.80	167.00	167.10	167.30	167.50
Northumberland		Labour Force - 16 to 64	154.40	151.00	151.20	149.80	149.90	149.60	150.00	150.80	152.30	154.00	155.60	155.80	155.40	154.80	154.40	153.90	153.50	153.00	152.70	152.60	152.60	152.60	152.50	152.70
Northumberland		Labour Force - 65 Plus	6.30	6.80	6.70	7.00	7.30	7.60	7.90	8.20	8.60	9.00	9.40	9.90	10.50	11.30	12.10	12.70	13.20	13.60	14.00	14.20	14.40	14.50	14.80	14.90
Northumberland		Population - retired	77.30	76.60	76.50	77.20	77.90	78.10	77.00	77.90	79.60	81.30	83.20	85.10	86.20	85.80	85.80	87.40	89.20	91.10	92.90	94.30	95.70	96.80	97.80	98.60
Northumberland		Population - student	52.60	52.20	52.10	52.30	52.30	52.30	52.30	52.60	53.00	53.50	53.80	53.80	53.40	53.00	52.60	52.40	52.20	52.00	51.90	51.60	51.40	51.20	51.00	50.80
Northumberland		Population - 16 Plus	263.40	263.90	264.80	266.50	267.20	267.70	269.20	271.60	275.00	278.70	282.50	284.20	284.80	285.30	285.90	286.40	286.70	286.90	287.00	287.20	287.40	287.40	287.50	287.50
Northumberland		Population - 16 to 64	192.30	191.10	190.20	190.20	189.40	188.20	188.00	188.50	189.80	191.20	192.60	192.20	190.90	189.50	188.20	186.70	185.10	183.70	182.40	181.40	180.40	179.60	178.60	177.90
Northumberland		Population - 65 Plus	71.10	72.80	74.60	76.30	77.90	79.50	81.20	83.10	85.20	87.60	89.90	92.00	93.90	95.80	97.70	99.70	101.60	103.20	104.60	105.80	106.90	107.80	108.90	109.50
Northumberland		Total Population	316.00	316.00	316.90	318.80	319.50	320.00	321.60	324.20	328.00	332.30	336.40	338.00	338.20	338.30	338.50	338.70	338.90	338.90	338.90	338.90	338.80	338.60	338.50	338.20
Northumberland		Working Age Population	186.10	187.30	187.90	187.50	187.20	187.50	189.20	188.80	187.80	186.60	185.40	184.10	183.70	184.80	185.40	184.30	182.80	181.20	179.80	178.60	177.60	176.70	175.90	175.20
Northumberland		Economic Activity Rate (%) - 16+	61.00	59.80	59.60	58.80	58.80	58.70	58.60	58.60	58.50	58.50	58.40	58.30	58.20	58.20	58.20	58.20	58.10	58.10	58.10	58.10	58.10	58.10	58.20	58.30
Northumberland		Economic Activity Rate (%) - 16 to 64	80.30	79.10	79.50	78.80	79.20	79.50	79.80	80.00	80.30	80.50	80.80	81.10	81.40	81.70	82.00	82.50	82.90	83.30	83.70	84.20	84.60	85.00	85.40	85.80
Northumberland		Economic Activity Rate (%) - 65 Plus	8.90	9.40	9.00	9.20	9.40	9.60	9.70	9.90	10.10	10.30	10.50	10.80	11.20	11.80	12.30	12.70	13.00	13.20	13.40	13.40	13.50	13.50	13.60	13.60
Northumberland		Economic Activity Rate (%) - Working Age	86.40	84.30	83.90	83.00	83.20	83.10	82.30	82.50	82.90	83.30	83.70	84.30	84.50	84.20	84.10	84.70	85.40	86.10	86.90	87.60	88.20	88.70	89.20	89.80
Northumberland		Employment rate (% of 16+ population)	56.80	55.90	56.30	55.90	56.00	56.00	55.90	55.90	55.80	55.80	55.70	55.60	55.50	55.50	55.50	55.50	55.40	55.40	55.40	55.40	55.40	55.40	55.50	55.60
Northumberland		Productivity (£GVA per hour)	26.30	26.60	26.60	26.60	26.80	27.10	27.40	27.70	28.10	28.60	29.00	29.50	29.90	30.30	30.70	31.10	31.50	31.90	32.30	32.70	33.10	33.50	33.90	34.30
Northumberland		Total GVA (£mn 2013 prices)	4819.80	4939.70	4937.30	5011.40	5082.90	5180.30	5288.00	5413.80	5575.00	5761.10	5946.50	6079.30	6179.60	6275.60	6362.70	6440.50	6522.40	6612.20	6702.20	6788.00	6872.70	6958.50	7046.00	7130.20
Northumberland		Workforce Jobs	122.60	125.50	124.30	125.30	125.80	126.50	127.50	128.70	130.40	132.40	134.40	135.30	135.70	136.10	136.60	137.10	137.40	137.70	137.90	138.30	138.60	138.80	139.10	139.40
Northumberland		Jobs Demand	122.70	125.60	124.30	125.30	125.80	126.50	127.50	128.70	130.40	132.40	134.40	135.30	135.70	136.10	136.60	137.10	137.40	137.70	137.90	138.30	138.60	138.80	139.10	139.40
Northumberland		Excess Jobs	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northumberland		FTE jobs	93.30	94.40	94.60	95.90	96.40	97.30	98.30	99.50	101.00	102.60	104.20	105.00	105.20	105.40	105.40	105.40	105.30	105.40	105.40	105.50	105.60	105.70	105.80	105.90
Northumberland		Workplace based employment	127.80	130.20	131.60	131.70	132.30	132.80	133.50	134.70	136.40	138.30	140.30	141.10	141.30	141.60	142.00	142.30	142.50	142.60	142.70	143.00	143.20	143.40	143.60	144.00
Northumberland		Residence based employment	149.70	147.50	149.00	149.10	149.60	149.90	150.60	151.70	153.50	155.50	157.40	158.10	158.10	158.30	158.60	158.90	158.90	158.90	159.00	159.10	159.20	159.30	159.50	159.70
Northumberland		Net Commuting (inflow)	-22.00	-17.30	-17.30	-17.30	-17.30	-17.10	-17.00	-17.10	-17.10	-17.10	-17.10	-16.90	-16.80	-16.70	-16.70	-16.60	-16.50	-16.30	-16.20	-16.10	-16.00	-15.90	-15.80	-15.70
Northumberland		Unemployment	11.00	10.30	8.90	7.80	7.60	7.30	7.30	7.40	7.40	7.50	7.60	7.70	7.70	7.80	7.80	7.70	7.70	7.70	7.70	7.80	7.80	7.80	7.80	7.90
Northumberland		Unemployment Rate (% of labour force)	6.80	6.50	5.70	5.00	4.80	4.70	4.60	4.60	4.60	4.60	4.60	4.60	4.70	4.70	4.70	4.60	4.60	4.60	4.60	4.70	4.70	4.70	4.70	4.70
Northumberland	Agriculture, Forestry & Fishing	Workforce Jobs	4.7	4.1	3.5	3.2	3.3	3.3	3.3	3.3	3.4	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5
Northumberland	Extraction & Mining	Workforce Jobs	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Northumberland	Food, Drink & Tobacco	Workforce Jobs	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8
Northumberland	Textiles & Clothing	Workforce Jobs	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Northumberland	Wood & Paper	Workforce Jobs	1.9	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8
Northumberland	Printing and Reproduction of Recorded Media	Workforce Jobs	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6
Northumberland	Fuel Refining	Workforce Jobs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Northumberland	Chemicals	Workforce Jobs	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1
Northumberland	Pharmaceuticals	Workforce Jobs	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4
Northumberland	Rubber, Plastic and Other Non-Metallic Mineral Products	Workforce Jobs	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Northumberland	Metal Products	Workforce Jobs	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
Northumberland	Computer & Electronic Products	Workforce Jobs	1.3	1.4	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4
Northumberland	Machinery & Equipment	Workforce Jobs	1.1	1.1	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
Northumberland	Transport Equipment	Workforce Jobs	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Northumberland	Other Manufacturing	Workforce Jobs	1.2	1.3	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Northumberland	Utilities	Workforce Jobs	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3
Northumberland	Construction of Buildings	Workforce Jobs	3.0	3.4	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.5
Northumberland	Civil Engineering	Workforce Jobs	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Northumberland	Specialised Construction Activities	Workforce Jobs	4.6	4.6	4.7	4.8	4.8	4.8	4.8	4.9	4.9	4.9	4.9	4.9	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Northumberland	Wholesale	Workforce Jobs	5.4	5.4	5.4	5.4	5.4	5.4	5.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Northumberland	Retail	Workforce Jobs	13.8	13.5	13.0	12.7	12.7	12.6	12.6	12.6	12.6	12.6	12.7	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.5	12.5	12.5	12.5	12.5
Northumberland	Land Transport, Storage & Post	Workforce Jobs	4.1	4.0	4.1	4.1	4.1	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.8	4.8	4.8
Northumberland	Air & Water Transport	Workforce Jobs	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Northumberland	Accomodation & Food Services	Workforce Jobs	10.4	11.5	11.0	11.9	12.1	12.3	12.7	13.0	13.5	13.9	14.4	14.6	14.7	14.7	14.8	14.8	14.8	14.8	14.9	14.9	14.9	14.9	14.9	14.9
Northumberland	Recreation	Workforce Jobs	4.6	4.5	4.5	4.7	4.8	5.0	5.1	5.3	5.5	5.7	5.9	6.0	6.1	6.1	6.1	6.2	6.2	6.2	6.3	6.3	6.3	6.4	6.4	6.4
Northumberland	Media Activities	Workforce Jobs	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Northumberland	Telecoms	Workforce Jobs	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Northumberland	Computing & Information Services	Workforce Jobs	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Northumberland	Finance	Workforce Jobs	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Northumberland	Insurance & Pensions	Workforce Jobs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Northumberland	Real Estate	Workforce Jobs	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4
Northumberland	Professional Services	Workforce Jobs	6.6	8.0	8.0	7.7	7.8	7.9	8.0	8.1	8.2	8.4	8.6	8.7	8.8	8.9	8.9	9.0	9.1	9.1	9.2	9.3	9.3	9.4	9.5	9.6
Northumberland	Administrative & Supportive Service Activities	Workforce Jobs	5.9	6.1	6.3	6.7	6.8	6.8	6.8	6.8	6.9	7.0	7.1	7.1	7.2	7.2	7.3	7.3	7.4	7.5	7.5	7.6	7.6	7.7	7.8	7.8
Northumberland	Other Private Services	Workforce Jobs	3.8	4.1	4.4	4.2	4.2	4.2	4.2	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.4	4.4	4.4	4.4	4.4
Northumberland	Public Administration & Defence	Workforce Jobs	5.5	4.8	4.6	4.5	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2
Northumberland	Education	Workforce Jobs	9.7	10.7	10.7	10.8	10.8	10.8	10.8	10.9	11.0	11.1	11.2	11.3	11.3	11.4	11.5	11.5	11.6	11.6	11.6	11.7	11.7	11.7	11.8	11.8
Northumberland	Health	Workforce Jobs	11.1	11.1	11.2	11.3	11.3	11.3	11.4	11.5	11.6	11.7	11.8	11.9	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0	13.1
Northumberland	Residential Care & Social Work	Workforce Jobs	9.2	9.0	8.8	8.6	8.7	8.8	8.9	9.0	9.2	9.4	9.6	9.7	9.8	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.0	11.1	11.1	11.2

	Industry	Variable Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Northumberland	Agriculture, Forestry & Fishing	GVA	237.8	234.3	218.9	223.3	229.1	234.9	240.2	246.0	254.0	263.4	272.8	277.2	278.4	279.3	279.6	279.4	279.4	279.4	279.5	279.3	278.9	278.5	278.0	277.5
Northumberland	Extraction & Mining	GVA	52.5	48.7	34.7	33.8	33.7	33.9	33.7	33.7	33.8	33.9	33.9	33.8	33.6	33.4	33.1	32.7	32.3	31.8	31.3	30.7	30.0	29.2	28.5	27.8
Northumberland	Food, Drink & Tobacco	GVA	75.9	80.3	81.2	82.9	84.2	86.5	88.9	91.7	94.8	98.6	102.7	104.6	105.1	105.3	105.3	105.2	105.1	105.0	105.0	104.8	104.7	104.6	104.4	104.1
Northumberland	Textiles & Clothing	GVA	5.3	5.5	5.2	5.7	5.8	5.9	5.9	6.0	6.0	6.1	6.1	6.2	6.2	6.3	6.3	6.3	6.4	6.4	6.5	6.5	6.5	6.6	6.6	6.6
Northumberland	Wood & Paper	GVA	75.4	80.5	80.7	87.1	88.8	90.9	93.0	95.1	97.9	101.3	105.2	106.7	106.6	106.4	106.2	106.0	105.8	105.6	105.3	104.9	104.4	104.0	103.4	102.8
Northumberland	Printing and Reproduction of Recorded Media	GVA	15.6	17.4	18.2	18.4	18.7	19.2	19.6	20.2	20.9	21.7	22.6	23.0	23.0	23.0	22.9	22.9	22.8	22.7	22.7	22.5	22.4	22.3	22.2	22.0
Northumberland	Fuel Refining	GVA	4.7	4.9	4.7	4.8	4.8	4.8	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.0	3.9	3.9
Northumberland	Chemicals	GVA	58.4	61.1	58.7	62.6	65.1	67.7	70.1	72.7	75.6	78.7	82.1	83.7	84.0	84.3	84.4	84.4	84.4	84.6	84.7	84.7	84.7	84.7	84.6	84.6
Northumberland	Pharmaceuticals	GVA	175.6	178.6	185.4	179.1	186.8	194.3	201.8	210.8	221.9	234.4	246.9	254.2	258.5	263.1	267.6	271.8	276.2	280.8	285.3	289.6	293.7	297.7	301.8	305.6
Northumberland	Rubber, Plastic and Other Non-Metallic Mineral Products	GVA	77.7	83.1	86.3	87.3	89.7	93.5	97.4	101.8	107.3	113.7	120.4	124.9	127.5	130.0	132.0	133.7	135.5	137.7	139.8	141.9	143.9	145.9	147.9	149.7
Northumberland	Metal Products	GVA	39.1	38.1	36.2	36.4	36.6	37.1	37.5	37.7	38.0	38.3	38.7	39.0	39.3	39.5	39.8	40.0	40.3	40.5	40.7	40.8	40.9	40.9	40.9	40.8
Northumberland	Computer & Electronic Products	GVA	49.1	51.3	51.1	53.5	55.4	57.6	59.8	62.6	66.0	70.0	74.2	76.6	77.8	79.0	80.2	81.5	82.9	84.3	85.4	86.4	87.3	88.2	89.1	90.1
Northumberland	Machinery & Equipment	GVA	61.1	55.7	55.4	58.6	59.7	62.2	63.9	65.7	67.8	70.1	72.0	73.5	74.8	75.8	76.9	77.8	78.8	79.9	81.1	82.2	83.2	84.2	85.3	86.4
Northumberland	Transport Equipment	GVA	14.3	14.6	14.5	14.8	15.0	15.4	15.8	16.0	16.3	16.6	16.9	17.0	17.1	17.1	17.1	17.2	17.3	17.3	17.4	17.5	17.5	17.6	17.7	17.8
Northumberland	Other Manufacturing	GVA	42.1	43.9	46.3	48.1	49.3	50.9	52.6	54.5	56.6	59.1	61.9	63.4	63.9	64.5	64.9	65.4	65.9	66.4	66.8	67.1	67.4	67.6	67.8	67.8
Northumberland	Utilities	GVA	134.0	141.9	146.8	148.5	152.2	157.4	162.8	168.9	175.7	183.2	190.8	195.0	196.6	198.1	199.3	200.1	200.9	201.8	202.5	202.8	203.0	203.0	202.9	202.5
Northumberland	Construction of Buildings	GVA	174.2	182.8	185.2	186.9	188.0	191.0	194.5	198.1	202.1	206.7	211.0	214.7	217.9	220.5	222.5	224.1	225.6	227.2	228.9	230.4	232.0	233.6	235.2	236.7
Northumberland	Civil Engineering	GVA	68.0	67.5	66.4	67.0	67.6	68.9	70.2	71.5	72.9	74.5	76.0	77.5	79.0	80.4	81.7	82.9	84.0	85.2	86.5	87.6	88.8	89.9	91.1	92.2
Northumberland	Specialised Construction Activities	GVA	128.3	132.3	132.2	133.4	134.2	135.9	138.3	141.0	144.0	147.5	150.7	153.7	156.6	159.4	161.8	164.0	166.3	168.7	171.2	173.5	175.9	178.4	180.9	183.4
Northumberland	Wholesale	GVA	207.4	217.4	223.6	227.5	229.3	232.3	236.3	240.8	246.7	253.5	260.3	266.4	272.2	277.2	280.9	283.6	286.1	288.9	291.6	294.2	296.7	299.3	302.0	304.4
Northumberland	Retail	GVA	322.7	335.1	340.7	346.6	350.9	356.2	362.1	370.3	381.2	392.3	401.8	410.0	417.8	425.8	433.7	441.2	448.9	457.1	465.3	473.2	481.0	489.0	496.8	504.3
Northumberland	Land Transport, Storage & Post	GVA	139.1	138.5	134.6	136.9	138.8	141.5	145.0	149.9	156.8	164.9	173.1	177.8	180.0	182.2	184.1	185.8	187.5	189.4	191.2	192.9	194.6	196.2	198.0	199.6
Northumberland	Air & Water Transport	GVA	5.0	5.7	6.1	6.0	6.1	6.2	6.2	6.4	6.6	6.9	7.1	7.3	7.4	7.5	7.7	7.9	8.0	8.2	8.5	8.7	8.9	9.1	9.4	9.6
Northumberland	Accomodation & Food Services	GVA	186.1	192.6	198.2	208.3	213.8	220.2	226.6	234.5	244.9	257.5	270.8	278.1	281.9	285.4	288.1	290.3	292.9	295.7	298.7	301.5	304.2	307.0	309.8	312.2
Northumberland	Recreation	GVA	89.0	82.1	78.9	81.4	83.6	86.4	89.9	94.3	99.7	106.1	112.9	116.7	118.8	120.7	122.2	123.8	125.5	127.3	129.3	131.2	133.1	135.1	137.2	139.2
Northumberland	Media Activities	GVA	20.8	23.9	25.3	26.4	27.1	27.7	28.5	29.4	30.6	32.1	33.4	34.6	35.7	36.7	37.7	38.7	39.7	40.8	42.0	43.1	44.2	45.4	46.6	47.7
Northumberland	Telecoms	GVA	12.9	11.9	10.4	10.1	10.3	10.5	10.9	11.4	11.9	12.6	13.2	13.8	14.4	14.9	15.3	15.8	16.4	16.9	17.4	18.0	18.6	19.2	19.8	20.3
Northumberland	Computing & Information Services	GVA	35.3	37.4	40.2	40.4	41.6	43.0	44.3	45.9	48.1	50.8	53.4	55.2	56.7	58.2	59.6	61.1	62.6	64.3	66.1	67.8	69.6	71.4	73.3	75.0
Northumberland	Finance	GVA	63.2	60.2	60.0	60.1	60.2	60.5	61.4	62.6	64.3	66.3	68.3	69.9	71.4	72.8	74.2	75.6	77.2	79.1	81.1	83.2	85.5	87.7	90.1	92.5
Northumberland	Insurance & Pensions	GVA	3.2	3.1	3.1	3.0	3.0	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5
Northumberland	Real Estate	GVA	744.9	750.0	740.7	744.2	748.5	756.6	764.7	774.0	785.9	799.7	813.4	826.0	838.5	850.4	860.4	868.0	876.0	885.1	893.2	900.4	907.3	914.4	921.9	929.6
Northumberland	Professional Services	GVA	189.7	215.5	229.4	237.1	242.5	248.9	255.4	262.7	273.0	285.6	299.1	308.7	315.4	321.9	328.1	334.4	341.7	350.1	359.2	368.6	378.2	388.2	398.4	408.8
Northumberland	Administrative & Supportive Service Activities	GVA	124.7	136.1	139.5	145.3	148.9	152.5	157.2	162.8	169.8	177.7	185.8	192.7	199.4	205.9	212.5	219.4	226.6	234.2	242.1	250.1	258.3	266.9	275.8	284.9
Northumberland	Other Private Services	GVA	100.5	98.9	102.7	103.3	103.8	104.8	105.9	107.2	109.2	111.4	113.3	114.5	115.5	116.6	117.6	118.4	119.1	120.0	121.0	122.0	122.8	123.6	124.5	125.1
Northumberland	Public Administration & Defence	GVA	259.9	239.9	222.6	217.7	212.9	209.9	208.1	206.2	205.4	205.2	204.7	203.7	202.6	201.3	199.7	197.8	195.9	194.3	192.6	190.7	188.7	186.8	184.8	182.7
Northumberland	Education	GVA	320.9	342.0	341.7	345.3	347.7	350.8	354.3	358.7	365.3	373.2	380.4	385.6	390.1	394.5	398.3	401.0	403.5	406.4	409.4	412.0	414.3	416.5	418.6	420.1
Northumberland	Health	GVA	366.5	386.8	394.7	402.4	410.6	420.4	433.2	447.8	465.0	484.0	503.3	522.2	541.0	560.2	579.3	598.0	617.5	638.0	659.0	679.9	701.0	722.5	744.5	766.4
Northumberland	Residential Care & Social Work	GVA	137.5	138.5	136.8	137.6	138.8	141.2	144.2	147.3	151.4	155.8	159.9	163.7	167.3	170.9	174.2	177.3	180.5	183.8	187.2	190.4	193.6	196.7	199.8	202.8
Northumberland	Agriculture, Forestry & Fishing	Productivity (£GVA per hour)	64.7	67.8	61.5	62.3	63.2	63.8	64.3	65.0	65.9	66.9	67.5	68.2	69.0	69.7	70.3	70.7	70.9	71.1	71.3	71.4	71.4	71.5	71.5	71.6
Northumberland	Extraction & Mining	Productivity (£GVA per hour)	62.5	72.3	68.7	73.2	73.2	73.6	73.4	73.9	74.4	75.1	75.5	75.9	76.2	76.8	77.6	78.2	78.4	78.5	78.5	78.2	77.6	76.9	76.2	75.6
Northumberland	Food, Drink & Tobacco	Productivity (£GVA per hour)	26.2	28.2	28.0	28.2	28.1	28.1	28.2	28.3	28.5	28.7	28.9	29.1	29.3	29.4	29.5	29.6	29.7	29.8	29.9	29.9	30.0	30.0	30.0	30.0
Northumberland	Textiles & Clothing	Productivity (£GVA per hour)	15.9	15.9	13.5	14.6	15.0	15.3	15.7	16.1	16.6	17.1	17.6	18.1	18.5	18.9	19.4	20.0	20.6	21.3	22.1	22.8	23.5	24.3	25.1	25.9
Northumberland	Wood & Paper	Productivity (£GVA per hour)	19.2	20.2	18.8	20.3	20.5	20.9	21.2	21.5	21.8	22.1	22.5	22.8	23.2	23.6	23.9	24.3	24.7	25.1	25.4	25.8	26.0	26.3	26.6	26.8
Northumberland	Printing and Reproduction of Recorded Media	Productivity (£GVA per hour)	12.0	13.1	14.5	14.0	14.1	14.2	14.4	14.5	14.7	15.0	15.2	15.5	15.8	16.2	16.6	17.0	17.4	17.8	18.3	18.8	19.3	19.9	20.5	21.0
Northumberland	Fuel Refining	Productivity (£GVA per hour)	48.6	59.2	52.8	53.5	53.0	53.1	52.0	50.9	49.5	48.6	48.1	47.7	47.4	47.1	46.9	46.6	46.4	46.1	45.8	45.3	44.7	44.0	43.3	42.7
Northumberland	Chemicals	Productivity (£GVA per hour)	32.3	34.1	31.8	32.9	33.6	33.8	33.9	34.2	34.6	35.0	35.3	35.6	36.0	36.3	36.6	36.9	37.2	37.6	38.0	38.4	38.7	39.0	39.4	39.7
Northumberland	Pharmaceuticals	Productivity (£GVA per hour)	109.1	121.6	127.3	118.4	119.4	120.1	121.4	123.4	126.0	128.5	130.2	132.0	133.9	136.0	138.0	140.0	141.9	143.9	145.8	147.4	148.9	150.1	151.4	152.6
Northumberland	Rubber, Plastic and Other Non-Metallic Mineral Products	Productivity (£GVA per hour)	22.8	24.7	26.7	26.9	27.5	28.4	29.1	29.8	30.6	31.5	32.4	33.3	34.2	35.1	35.9	36.6	37.3	38.2	39.0	39.9	40.6	41.4	42.1	42.8
Northumberland	Metal Products	Productivity (£GVA per hour)	18.0	19.3	19.6	19.4	19.6	19.9	20.4	20.9	21.4	22.0	22.5	22.9	23.4	23.8	24.3	24.8	25.3	25.7	26.1	26.5	26.8	27.1	27.4	27.6
Northumberland	Computer & Electronic Products	Productivity (£GVA per hour)	19.3	19.4	19.6	20.5	21.1	21.6	22.2	22.9	23.6	24.4	25.1	25.7	26.3	26.8	27.4	28.0	28.6	29.2	29.8	30.4	30.9	31.4	31.9	32.4
Northumberland	Machinery & Equipment	Productivity (£GVA per hour)	26.7	25.7	28.3	29.1	30.2	31.2	32.0	33.2	34.6	36.1	37.3	38.3	39.5	40.7	42.0	43.3	44.6	45.9	47.2	48.5	49.7	50.9	52.1	53.4
Northumberland	Transport Equipment	Productivity (£GVA per hour)	20.4	22.9	26.8	26.1	26.5	27.0	27.8	28.3	29.0	29.9	30.7	31.3	31.9	32.5	33.2	34.0	34.8	35.6	36.4	37.1	37.8	38.5	39.2	40.1
Northumberland	Other Manufacturing	Productivity (£GVA per hour)	18.8	17.8	16.9	16.8	17.1	17.6	18.2	18.7	19.2	19.8	20.3	20.8	21.2	21.5	21.9	22.2	22.6	23.0	23.3	23.6	23.8	24.0	24.3	24.4
Northumberland	Utilities	Productivity (£GVA per hour)	45.7	48.3	47.9	47.2	46.9	47.0	47.2	47.5	47.7	47.9	47.9	48.1	48.2	48.3	48.4	48.5	48.6	48.6	48.6	48.5	48.4	48.2	48.0	47.8
Northumberland	Construction of Buildings	Productivity (£GVA per hour)	44.9	42.5	40.6	39.0	39.2	39.8	40.5	41.1	41.8	42.7	43.4	44.0	44.6	45.1	45.7	46.3	46.9	47.5	48.2	48.7	49.2	49.7	50.2	50.6
Northumberland	Civil Engineering	Productivity (£GVA per hour)	45.9	49.4	49.0	48.1	48.7	49.4	50.2	51.1	52.1	53.1	54.0	54.8	55.7	56.7	57.7	58.7	59.8	60.9	62.0	62.9	63.9	64.8	65.6	66.4
Northumberland	Specialised Construction Activities	Productivity (£GVA per hour)	19.8	21.2	19.2	18.6	18.8	19.0	19.3	19.6	20.0	20.4	20.7	21.0	21.4	21.7	22.1	22.5	22.9	23.4	23.8	24.2	24.6	25.0	25.4	25.8
Northumberland	Wholesale	Productivity (£GVA per hour)	21.3	22.7	23.5	23.9	24.0	24.2	24.5	24.9	25.5	26.2	26.8	27.4	28.0	28.6	29.0	29.4	29.7	30.1	30.4	30.7	31.0	31.3	31.6	31.8
Northumberland	Retail	Productivity (£GVA per hour)	17.1	18.4	19.2	20.0	20.3	20.6	21.0	21.3	21.8	22.4	22.8	23.3	23.7	24.2	24.6	25.1	25.6	26.1	26.6	27.1	27.5	28.0	28.5	29.0
Northumberland	Land Transport, Storage & Post	Productivity (£GVA per hour)	18.5	18.4	17.1	17.2	17.4	17.7	17.9	18.1	18.5	18.9	19.3	19.5	19.7	19.9	20.1	20.2	20.4	20.5	20.7	20.8	20.9	21.0	21.1	21.2
Northumberland	Air & Water Transport	Productivity (£GVA per hour)	50.7	46.7	42.6	42.1	42.7	43.1	43.7	44.3	45.7	47.3	48.6	49.6	50.5	51.4	52.5	53.7	54.9	56.2	57.7	59.1	60.6	62.1	63.5	65.0
Northumberland	Accomodation & Food Services	Productivity (£GVA per hour)	15.3	13.4	14.0	13.5	13.5	13.6	13.6	13.6	13.7	13.9	14.1	14.3	14.4	14.6	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	16.1
Northumberland	Recreation	Productivity (£GVA per hour)	19.4	16.4	15.0	14.5	14.6	14.7	14.8	15.0	15.3	15.6	15.9	16.1	16.3	16.4	16.6	16.7	16.8	17.0	17.1	17.3	17.4	17.5	17.6	17.7
Northumberland	Media Activities	Productivity (£GVA per hour)	35.9	39.6	41.8	41.9	42.8	43.5	44.1	44.9	46.2	48.0	49.7	51.2	52.5	53.7	54.9	56.2	57.5	58.9	60.4	61.8	63.4	65.0	66.6	68.1
Northumberland	Telecoms	Productivity (£GVA per hour)	44.8	47.7	40.4	38.3	38.9	39.9	41.5	43.3	45.6	48.0	50.6	53.1	55.4	57.5	59.6	61.9	64.3	66.7	69.1	71.5	73.9	76.4	78.8	81.0
Northumberland	Computing & Information Services	Productivity (£GVA per hour)	21.1	21.8	22.4	22.0	22.4	22.7	23.1	23.5	24.2	25.0	25.7	26.3	26.8	27.4	28.0	28.6	29.2	29.8	30.4	31.0	31.5	32.1	32.7	33.2
Northumberland	Finance	Productivity (£GVA per hour)	38.6	40.0	37.4	36.7	36.7	37.1	37.8	38.5	39.6	40.8	41.9	43.0	44.0	44.9	45.8	46.8	47.8	48.9	50.1	51.3	52.6	53.9	55.3	56.6
Northumberland	Insurance & Pensions	Productivity (£GVA per hour)	161.9	152.2	150.3	145.9	146.1	146.5	147.0	148.2	149.7	151.5	153.4	154.7	156.0	156.7	157.1	158.1	158.8	159.6	160.0	160.3	160.6	160.8	161.0	161.0
Northumberland	Real Estate	Productivity (£GVA per hour)	244.6	235.5	229.7	226.3	224.1	223.8	224.0	225.1	226.7	228.9	231.0	232.4	234.0	235.6	237.0	238.0	239.1	240.1	240.7	240.9	240.9	240.8	240.8	240.8
Northumberland	Professional Services	Productivity (£GVA per hour)	20.9	18.5	20.5	22.0	22.4	22.8	23.2	23.5	24.1	24.6	25.2	25.7	26.1	26.5	26.9	27.3	27.8	28.3	28.9	29.4	30.0	30.5	31.0	31.5
Northumberland	Administrative & Supportive Service Activities	Productivity (£GVA per hour)	13.1	14.2	14.5	14.1	14.4	14.7	15.0	15.5	16.1	16.7	17.3	17.9	18.4	19.0	19.6	20.2	20.8	21.4	22.1	22.7	23.4	24.0	24.7	25.4
Northumberland	Other Private Services	Productivity (£GVA per hour)	23.7	24.4	22.7	24.6	24.5	24.6	24.7	25.0	25.4	25.8	26.1	26.3	26.5	26.8	27.0	27.2	27.4	27.6	27.8	28.0	28.2	28.3	28.5	28.6
Northumberland	Public Administration & Defence	Productivity (£GVA per hour)	27.5	29.5	29.7	29.5	29.9	30.1	30.4	30.5	30.6	30.9	31.2	31.5	31.8	32.1	32.4	32.7	33.0	33.3	33.6	33.8	34.0	34.2	34.4	34.6
Northumberland	Education	Productivity (£GVA per hour)	23.9	23.2	23.5	23.3	23.5	23.6	23.7	23.7	23.9	24.2	24.4	24.6	24.8	25.1	25.3	25.5	25.7	25.8	26.0	26.2	26.3	26.5	26.6	26.7
Northumberland	Health	Productivity (£GVA per hour)	20.0	21.7	22.7	22.8	23.2	23.6	24.1	24.6	25.2	26.0	26.8	27.6	28.4	29.2	30.0	30.8	31.7	32.6	33.5	34.3	35.2	36.0	36.9	37.8
Northumberland	Residential Care & Social Work	Productivity (£GVA per hour)	9.4	10.2	9.9	10.1	10.1	10.0	10.0	10.0	10.0	10.1	10.1	10.2	10.2	10.2	10.3	10.3	10.3	10.4	10.5	10.5	10.6	10.7	10.8	10.8

APPENDIX G INTERMEDIATE GROWTH SCENARIO

	Industry	Variable Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Northumberland		Labour Force	160.80	157.90	157.80	156.60	156.80	156.50	156.80	157.50	158.80	160.30	161.80	162.20	162.40	162.70	163.00	163.30	163.30	163.40	163.40	163.60	163.80	163.90	164.10	164.40
Northumberland		Labour Force - 16 to 64	154.40	151.00	151.10	149.60	149.50	148.90	148.90	149.30	150.30	151.40	152.40	152.30	151.90	151.40	151.00	150.60	150.10	149.80	149.50	149.40	149.40	149.40	149.40	149.50
Northumberland		Labour Force - 65 Plus	6.30	6.80	6.70	7.00	7.30	7.60	7.90	8.20	8.60	9.00	9.40	9.90	10.50	11.30	12.10	12.70	13.20	13.60	14.00	14.20	14.40	14.50	14.70	14.80
Northumberland		Population - retired	77.30	76.60	76.50	77.20	77.90	78.10	77.00	77.90	79.60	81.30	83.20	85.10	86.20	85.80	85.80	87.40	89.20	91.10	92.90	94.30	95.70	96.80	97.80	98.60
Northumberland		Population - student	52.60	52.20	52.10	52.20	52.20	52.10	52.10	52.20	52.40	52.80	53.00	52.80	52.50	52.10	51.70	51.50	51.30	51.20	51.00	50.80	50.60	50.40	50.20	50.00
Northumberland		Population - 16 Plus	263.40	263.90	264.70	266.20	266.80	266.90	267.80	269.60	272.20	275.20	278.10	279.50	280.10	280.70	281.30	281.90	282.30	282.50	282.80	283.00	283.20	283.30	283.40	283.40
Northumberland		Population - 16 to 64	192.30	191.10	190.10	190.00	189.00	187.50	186.80	186.70	187.40	188.10	188.70	188.00	186.80	185.50	184.20	182.80	181.30	179.90	178.70	177.70	176.80	176.00	175.10	174.40
Northumberland		Population - 65 Plus	71.10	72.80	74.60	76.20	77.80	79.40	81.00	82.90	84.90	87.10	89.40	91.40	93.30	95.20	97.10	99.10	101.00	102.60	104.10	105.30	106.40	107.30	108.40	109.00
Northumberland		Total Population	316.00	316.00	316.70	318.50	319.00	319.00	319.90	321.80	324.70	328.00	331.10	332.30	332.60	332.80	333.10	333.40	333.60	333.70	333.70	333.80	333.80	333.70	333.60	333.40
Northumberland		Working Age Population	186.10	187.30	187.90	187.50	187.20	187.50	189.20	188.80	187.80	186.60	185.40	184.10	183.70	184.80	185.40	184.30	182.80	181.20	179.80	178.60	177.60	176.70	175.90	175.20
Northumberland		Economic Activity Rate (%) - 16+	61.00	59.80	59.60	58.80	58.80	58.70	58.50	58.40	58.40	58.30	58.20	58.00	58.00	57.90	57.90	57.90	57.90	57.80	57.80	57.80	57.80	57.90	57.90	58.00
Northumberland		Economic Activity Rate (%) - 16 to 64	80.30	79.10	79.50	78.70	79.10	79.40	79.70	79.90	80.20	80.50	80.70	81.00	81.30	81.60	82.00	82.40	82.80	83.20	83.70	84.10	84.50	84.90	85.30	85.70
Northumberland		Economic Activity Rate (%) - 65 Plus	8.90	9.40	9.00	9.20	9.40	9.60	9.70	9.90	10.10	10.30	10.50	10.80	11.30	11.80	12.40	12.80	13.00	13.30	13.40	13.50	13.50	13.50	13.60	13.60
Northumberland		Economic Activity Rate (%) - Working Age	86.40	84.30	83.90	83.00	83.20	83.00	82.30	82.40	82.80	83.20	83.60	84.20	84.40	84.10	84.00	84.60	85.30	86.00	86.80	87.50	88.10	88.60	89.20	89.70
Northumberland		Employment rate (% of 16+ population)	56.80	55.90	56.20	55.90	55.90	55.90	55.80	55.70	55.70	55.60	55.50	55.40	55.30	55.20	55.20	55.20	55.20	55.10	55.10	55.10	55.10	55.20	55.20	55.30
Northumberland		Productivity (£GVA per hour)	26.30	26.60	26.60	26.60	26.80	27.10	27.40	27.70	28.10	28.60	29.10	29.50	30.00	30.40	30.80	31.20	31.60	32.00	32.40	32.80	33.20	33.60	34.00	34.40
Northumberland		Total GVA (£mn 2013 prices)	4819.80	4939.70	4932.20	4999.20	5060.20	5143.10	5232.30	5335.70	5470.10	5624.60	5774.20	5891.00	5989.20	6083.40	6169.10	6245.60	6326.00	6414.00	6502.20	6586.50	6669.80	6754.00	6840.00	6922.90
Northumberland		Workforce Jobs	122.60	125.50	124.20	125.00	125.20	125.60	126.10	126.70	127.80	129.10	130.30	130.90	131.20	131.70	132.20	132.60	132.90	133.20	133.50	133.80	134.20	134.40	134.70	135.00
Northumberland		Jobs Demand	122.70	125.60	124.20	125.00	125.20	125.60	126.10	126.70	127.80	129.10	130.30	130.90	131.20	131.70	132.20	132.60	132.90	133.20	133.50	133.80	134.20	134.40	134.70	135.00
Northumberland		Excess Jobs	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Northumberland		FTE jobs	93.30	94.40	94.50	95.70	96.00	96.50	97.20	98.00	98.90	99.90	101.00	101.50	101.70	101.90	101.90	101.90	101.90	101.90	102.00	102.10	102.10	102.20	102.40	102.40
Northumberland		Workplace based employment	127.80	130.20	131.50	131.40	131.70	131.80	132.10	132.60	133.70	134.90	136.00	136.50	136.70	137.00	137.40	137.70	137.90	138.00	138.20	138.40	138.60	138.80	139.10	139.40
Northumberland		Residence based employment	149.70	147.50	148.90	148.80	149.20	149.20	149.50	150.20	151.50	152.90	154.30	154.70	154.80	155.10	155.40	155.70	155.80	155.80	155.80	156.00	156.10	156.30	156.40	156.70
Northumberland		Net Commuting (inflow)	-22.00	-17.30	-17.40	-17.50	-17.40	-17.40	-17.40	-17.60	-17.80	-18.10	-18.30	-18.20	-18.10	-18.10	-18.00	-18.00	-17.90	-17.80	-17.70	-17.60	-17.50	-17.40	-17.30	-17.20
Northumberland		Unemployment	11.00	10.30	8.90	7.80	7.70	7.40	7.30	7.30	7.30	7.40	7.50	7.50	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.70	7.70
Northumberland		Unemployment Rate (% of labour force)	6.80	6.50	5.70	5.00	4.90	4.70	4.60	4.60	4.60	4.60	4.60	4.60	4.70	4.70	4.70	4.60	4.60	4.60	4.60	4.70	4.70	4.70	4.70	4.70
Northumberland	Agriculture, Forestry & Fishing	Workforce Jobs	4.7	4.1	3.5	3.2	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Northumberland	Extraction & Mining	Workforce Jobs	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2
Northumberland	Food, Drink & Tobacco	Workforce Jobs	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Northumberland	Textiles & Clothing	Workforce Jobs	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Northumberland	Wood & Paper	Workforce Jobs	1.9	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6
Northumberland	Printing and Reproduction of Recorded Media	Workforce Jobs	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5
Northumberland	Fuel Refining	Workforce Jobs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Northumberland	Chemicals	Workforce Jobs	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Northumberland	Pharmaceuticals	Workforce Jobs	0.9	0.9	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Northumberland	Rubber, Plastic and Other Non-Metallic Mineral Products	Workforce Jobs	1.6	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Northumberland	Metal Products	Workforce Jobs	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
Northumberland	Computer & Electronic Products	Workforce Jobs	1.3	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3
Northumberland	Machinery & Equipment	Workforce Jobs	1.1	1.1	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8
Northumberland	Transport Equipment	Workforce Jobs	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Northumberland	Other Manufacturing	Workforce Jobs	1.2	1.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Northumberland	Utilities	Workforce Jobs	1.5	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Northumberland	Construction of Buildings	Workforce Jobs	3.0	3.4	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.5
Northumberland	Civil Engineering	Workforce Jobs	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Northumberland	Specialised Construction Activities	Workforce Jobs	4.6	4.6	4.7	4.8	4.8	4.8	4.8	4.9	4.9	4.9	4.9	4.9	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Northumberland	Wholesale	Workforce Jobs	5.4	5.4	5.4	5.4	5.4	5.4	5.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Northumberland	Retail	Workforce Jobs	13.8	13.5	13.0	12.7	12.6	12.6	12.6	12.5	12.6	12.6	12.6	12.6	12.6	12.5	12.6	12.6	12.5	12.5	12.5	12.5	12.5	12.4	12.4	12.4
Northumberland	Land Transport, Storage & Post	Workforce Jobs	4.1	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Northumberland	Air & Water Transport	Workforce Jobs	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Northumberland	Accomodation & Food Services	Workforce Jobs	10.4	11.5	11.0	11.8	11.9	12.1	12.3	12.5	12.8	13.0	13.3	13.4	13.5	13.5	13.6	13.6	13.6	13.6	13.7	13.7	13.7	13.7	13.7	13.7
Northumberland	Recreation	Workforce Jobs	4.6	4.5	4.5	4.7	4.8	4.8	4.9	5.0	5.1	5.3	5.4	5.5	5.5	5.6	5.6	5.6	5.7	5.7	5.7	5.7	5.8	5.8	5.9	5.9
Northumberland	Media Activities	Workforce Jobs	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Northumberland	Telecoms	Workforce Jobs	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Northumberland	Computing & Information Services	Workforce Jobs	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Northumberland	Finance	Workforce Jobs	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Northumberland	Insurance & Pensions	Workforce Jobs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Northumberland	Real Estate	Workforce Jobs	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4
Northumberland	Professional Services	Workforce Jobs	6.6	8.0	8.0	7.7	7.7	7.8	7.8	7.9	8.0	8.1	8.3	8.3	8.4	8.5	8.5	8.6	8.7	8.7	8.8	8.9	9.0	9.0	9.1	9.2
Northumberland	Administrative & Supportive Service Activities	Workforce Jobs	5.9	6.1	6.3	6.7	6.8	6.8	6.8	6.8	6.9	6.9	7.0	7.0	7.1	7.1	7.2	7.3	7.3	7.4	7.5	7.5	7.6	7.6	7.7	7.8
Northumberland	Other Private Services	Workforce Jobs	3.8	4.1	4.4	4.2	4.2	4.2	4.2	4.2	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.4	4.4	4.4
Northumberland	Public Administration & Defence	Workforce Jobs	5.5	4.8	4.6	4.5	4.3	4.2	4.1	4.0	4.0	3.9	3.9	3.8	3.7	3.7	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.2	3.2
Northumberland	Education	Workforce Jobs	9.7	10.7	10.7	10.8	10.8	10.8	10.8	10.9	11.0	11.1	11.2	11.2	11.3	11.3	11.4	11.4	11.5	11.5	11.5	11.6	11.6	11.7	11.7	11.7
Northumberland	Health	Workforce Jobs	11.1	11.1	11.2	11.3	11.3	11.3	11.4	11.5	11.6	11.7	11.8	11.9	11.9	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	12.9	13.0
Northumberland	Residential Care & Social Work	Workforce Jobs	9.2	9.0	8.8	8.6	8.7	8.8	8.9	9.0	9.2	9.4	9.5	9.7	9.8	10.0	10.2	10.3	10.5	10.6	10.7	10.9	11.0	11.0	11.1	11.2

	Industry	Variable Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Northumberland	Agriculture, Forestry & Fishing	GVA	237.8	234.3	218.4	221.9	226.6	230.7	233.9	237.3	242.4	248.3	254.0	256.8	257.7	258.5	258.8	258.6	258.6	258.6	258.6	258.4	258.0	257.6	257.2	256.7
Northumberland	Extraction & Mining	GVA	52.5	48.7	34.7	33.8	33.7	33.9	33.7	33.7	33.8	33.9	33.9	33.8	33.6	33.4	33.1	32.7	32.3	31.8	31.3	30.7	30.0	29.2	28.5	27.8
Northumberland	Food, Drink & Tobacco	GVA	75.9	80.3	80.9	82.3	83.0	84.6	86.2	87.9	89.8	92.1	94.6	95.8	96.2	96.4	96.4	96.2	96.1	96.0	96.0	95.8	95.7	95.5	95.3	95.0
Northumberland	Textiles & Clothing	GVA	5.3	5.5	5.2	5.7	5.8	5.9	5.9	6.0	6.0	6.1	6.1	6.2	6.2	6.3	6.3	6.3	6.4	6.4	6.5	6.5	6.5	6.6	6.6	6.6
Northumberland	Wood & Paper	GVA	75.4	80.4	80.4	86.3	87.3	88.4	89.4	90.1	91.1	92.4	94.0	94.4	94.0	93.7	93.3	92.9	92.4	92.0	91.6	91.0	90.4	89.8	89.1	88.3
Northumberland	Printing and Reproduction of Recorded Media	GVA	15.6	17.4	18.2	18.3	18.4	18.8	19.0	19.4	19.8	20.3	20.8	21.0	21.0	20.9	20.8	20.7	20.6	20.5	20.4	20.2	20.0	19.8	19.7	19.4
Northumberland	Fuel Refining	GVA	4.7	4.9	4.7	4.8	4.8	4.8	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	4.4	4.4	4.3	4.3	4.2	4.2	4.1	4.0	3.9	3.9
Northumberland	Chemicals	GVA	58.4	61.1	58.4	61.9	63.9	65.7	67.1	68.6	70.1	71.6	73.3	74.0	74.3	74.4	74.5	74.4	74.4	74.4	74.4	74.3	74.2	74.1	74.0	73.8
Northumberland	Pharmaceuticals	GVA	175.6	178.5	184.6	177.6	183.7	189.3	194.5	200.5	208.1	216.4	224.3	229.6	233.8	238.1	242.5	246.5	250.8	255.2	259.6	263.7	267.7	271.7	275.7	279.4
Northumberland	Rubber, Plastic and Other Non-Metallic Mineral Products	GVA	77.7	83.1	86.0	86.5	88.3	91.1	93.9	96.8	100.6	104.9	109.1	112.4	114.7	116.9	118.6	120.1	121.8	123.6	125.5	127.3	129.0	130.8	132.5	134.1
Northumberland	Metal Products	GVA	39.1	38.1	36.2	36.4	36.6	37.1	37.5	37.7	38.0	38.3	38.7	39.0	39.3	39.5	39.8	40.0	40.3	40.5	40.7	40.8	40.9	40.9	40.9	40.8
Northumberland	Computer & Electronic Products	GVA	49.1	51.3	50.9	53.2	54.8	56.5	58.3	60.3	62.9	66.0	69.0	70.9	72.0	73.1	74.2	75.4	76.6	77.8	78.8	79.7	80.5	81.3	82.1	83.0
Northumberland	Machinery & Equipment	GVA	61.1	55.7	55.4	58.6	59.7	62.2	63.9	65.7	67.8	70.1	72.0	73.5	74.8	75.8	76.9	77.8	78.8	79.9	81.1	82.2	83.2	84.2	85.3	86.4
Northumberland	Transport Equipment	GVA	14.3	14.6	14.5	14.8	15.0	15.4	15.8	16.0	16.3	16.6	16.9	17.0	17.1	17.1	17.1	17.2	17.3	17.3	17.4	17.5	17.5	17.6	17.7	17.8
Northumberland	Other Manufacturing	GVA	42.1	43.8	46.1	47.7	48.4	49.5	50.6	51.6	52.7	54.0	55.3	56.2	56.6	57.0	57.4	57.8	58.2	58.5	58.9	59.1	59.3	59.5	59.6	59.5
Northumberland	Utilities	GVA	134.0	141.9	146.4	147.4	150.2	154.2	158.2	162.5	167.2	172.4	177.3	180.4	182.0	183.5	184.7	185.5	186.4	187.3	188.0	188.4	188.6	188.7	188.7	188.4
Northumberland	Construction of Buildings	GVA	174.2	182.8	185.2	186.9	188.0	191.0	194.5	198.1	202.1	206.7	211.0	214.7	217.9	220.5	222.5	224.1	225.6	227.2	228.9	230.4	232.0	233.6	235.2	236.7
Northumberland	Civil Engineering	GVA	68.0	67.5	66.4	67.0	67.6	68.9	70.2	71.5	72.9	74.5	76.0	77.5	79.0	80.4	81.7	82.9	84.0	85.2	86.5	87.6	88.8	89.9	91.1	92.2
Northumberland	Specialised Construction Activities	GVA	128.3	132.3	132.2	133.4	134.2	135.9	138.3	141.0	144.0	147.5	150.7	153.7	156.6	159.4	161.8	164.0	166.3	168.7	171.2	173.5	175.9	178.4	180.9	183.4
Northumberland	Wholesale	GVA	207.4	217.5	223.6	227.5	229.3	232.3	236.3	240.8	246.7	253.5	260.3	266.4	272.2	277.2	280.9	283.6	286.1	288.9	291.6	294.2	296.7	299.3	302.0	304.4
Northumberland	Retail	GVA	322.7	335.1	340.6	346.5	350.8	355.9	361.6	369.4	380.0	390.7	399.9	407.8	415.7	423.7	431.5	439.0	446.7	454.9	463.2	471.0	478.8	486.7	494.6	502.1
Northumberland	Land Transport, Storage & Post	GVA	139.1	138.5	134.2	136.1	137.2	138.9	141.0	144.3	149.2	154.8	160.2	163.6	165.7	167.7	169.6	171.2	172.8	174.6	176.4	178.0	179.6	181.2	182.9	184.5
Northumberland	Air & Water Transport	GVA	5.0	5.7	6.1	6.0	6.1	6.1	6.2	6.3	6.5	6.8	7.0	7.2	7.3	7.4	7.6	7.7	7.9	8.1	8.3	8.6	8.8	9.0	9.3	9.5
Northumberland	Accomodation & Food Services	GVA	186.1	192.6	197.6	206.7	210.8	215.5	219.7	224.8	232.1	240.9	249.8	255.2	258.7	262.1	264.6	266.8	269.1	271.8	274.5	277.1	279.6	282.2	284.8	287.0
Northumberland	Recreation	GVA	89.0	82.1	78.7	80.7	82.4	84.3	86.9	90.0	93.9	98.6	103.3	106.2	108.2	109.9	111.4	112.9	114.5	116.3	118.1	119.9	121.8	123.6	125.6	127.5
Northumberland	Media Activities	GVA	20.8	23.9	25.3	26.4	27.1	27.7	28.5	29.4	30.6	32.1	33.4	34.6	35.7	36.7	37.7	38.7	39.7	40.8	42.0	43.1	44.2	45.4	46.6	47.7
Northumberland	Telecoms	GVA	12.9	11.9	10.4	10.1	10.3	10.5	10.9	11.4	11.9	12.6	13.2	13.8	14.4	14.9	15.3	15.8	16.4	16.9	17.4	18.0	18.6	19.2	19.8	20.3
Northumberland	Computing & Information Services	GVA	35.3	37.4	40.2	40.4	41.5	42.9	44.2	45.7	47.9	50.5	53.0	54.8	56.3	57.8	59.2	60.7	62.2	63.9	65.6	67.4	69.1	71.0	72.8	74.6
Northumberland	Finance	GVA	63.2	60.2	60.0	60.1	60.2	60.5	61.4	62.5	64.2	66.2	68.1	69.7	71.2	72.6	74.0	75.4	77.0	78.9	80.9	83.0	85.2	87.5	89.9	92.3
Northumberland	Insurance & Pensions	GVA	3.2	3.1	3.1	3.0	3.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.6	2.5
Northumberland	Real Estate	GVA	744.9	750.2	740.7	744.2	748.5	756.6	764.7	774.0	785.9	799.7	813.4	826.0	838.5	850.4	860.4	868.0	876.0	885.1	893.2	900.4	907.3	914.4	921.9	929.6
Northumberland	Professional Services	GVA	189.7	215.4	229.1	236.2	240.8	246.2	251.4	257.0	265.4	275.6	286.4	294.8	301.3	307.6	313.6	319.8	326.9	335.0	343.8	352.9	362.3	371.9	381.9	392.1
Northumberland	Administrative & Supportive Service Activities	GVA	124.7	136.2	139.5	145.2	148.8	152.2	156.8	162.2	168.9	176.7	184.4	191.2	197.8	204.2	210.9	217.7	224.9	232.5	240.3	248.3	256.5	265.0	273.9	282.9
Northumberland	Other Private Services	GVA	100.5	99.0	102.7	103.2	103.7	104.8	105.8	107.0	109.0	111.2	113.0	114.2	115.2	116.2	117.2	118.0	118.8	119.7	120.7	121.6	122.5	123.3	124.1	124.7
Northumberland	Public Administration & Defence	GVA	259.9	240.0	222.6	217.7	212.9	209.9	208.1	206.2	205.4	205.2	204.7	203.7	202.6	201.3	199.7	197.8	195.9	194.3	192.6	190.7	188.7	186.8	184.8	182.7
Northumberland	Education	GVA	320.9	342.1	341.6	345.1	347.4	350.4	353.5	357.5	363.8	371.1	377.8	382.8	387.3	391.7	395.5	398.2	400.7	403.6	406.6	409.2	411.5	413.7	415.8	417.4
Northumberland	Health	GVA	366.5	386.9	394.7	402.4	410.5	420.3	433.0	447.5	464.5	483.4	502.5	521.2	540.1	559.3	578.3	597.0	616.5	637.0	658.0	678.9	700.0	721.4	743.4	765.3
Northumberland	Residential Care & Social Work	GVA	137.5	138.5	136.8	137.6	138.8	141.2	144.1	147.2	151.2	155.6	159.6	163.4	167.0	170.6	174.0	177.0	180.2	183.5	186.9	190.1	193.3	196.4	199.5	202.5
Northumberland	Agriculture, Forestry & Fishing	Productivity (£GVA per hour)	64.7	67.8	61.5	62.3	63.2	63.8	64.3	65.0	65.9	66.9	67.5	68.2	69.0	69.7	70.3	70.7	70.9	71.1	71.3	71.4	71.4	71.5	71.5	71.6
Northumberland	Extraction & Mining	Productivity (£GVA per hour)	62.5	72.3	68.7	73.2	73.2	73.6	73.4	73.9	74.4	75.1	75.5	75.9	76.2	76.8	77.6	78.2	78.4	78.5	78.5	78.2	77.6	76.9	76.2	75.6
Northumberland	Food, Drink & Tobacco	Productivity (£GVA per hour)	26.2	28.2	28.0	28.2	28.1	28.1	28.2	28.3	28.5	28.7	28.9	29.1	29.3	29.4	29.5	29.6	29.7	29.8	29.9	29.9	30.0	30.0	30.0	30.0
Northumberland	Textiles & Clothing	Productivity (£GVA per hour)	15.9	15.9	13.5	14.6	15.0	15.3	15.7	16.1	16.6	17.1	17.6	18.1	18.5	18.9	19.4	20.0	20.6	21.3	22.1	22.8	23.5	24.3	25.1	25.9
Northumberland	Wood & Paper	Productivity (£GVA per hour)	19.2	20.2	18.8	20.3	20.5	20.9	21.2	21.5	21.8	22.1	22.5	22.8	23.2	23.6	23.9	24.3	24.7	25.1	25.4	25.8	26.0	26.3	26.6	26.8
Northumberland	Printing and Reproduction of Recorded Media	Productivity (£GVA per hour)	12.0	13.1	14.5	14.0	14.1	14.2	14.4	14.5	14.7	15.0	15.2	15.5	15.8	16.2	16.6	17.0	17.4	17.8	18.3	18.8	19.3	19.9	20.5	21.0
Northumberland	Fuel Refining	Productivity (£GVA per hour)	48.6	59.2	52.8	53.5	53.0	53.1	52.0	50.9	49.5	48.6	48.1	47.7	47.4	47.1	46.9	46.6	46.4	46.1	45.8	45.3	44.7	44.0	43.3	42.7
Northumberland	Chemicals	Productivity (£GVA per hour)	32.3	34.1	31.8	32.9	33.6	33.8	33.9	34.2	34.6	35.0	35.3	35.6	36.0	36.3	36.6	36.9	37.2	37.6	38.0	38.4	38.7	39.0	39.4	39.7
Northumberland	Pharmaceuticals	Productivity (£GVA per hour)	109.1	121.6	127.3	118.4	119.4	120.1	121.4	123.4	126.0	128.5	130.2	132.0	133.9	136.0	138.0	140.0	141.9	143.9	145.8	147.4	148.9	150.1	151.4	152.6
Northumberland	Rubber, Plastic and Other Non-Metallic Mineral Products	Productivity (£GVA per hour)	22.8	24.7	26.7	26.9	27.5	28.4	29.1	29.8	30.6	31.5	32.4	33.3	34.2	35.1	35.9	36.6	37.3	38.2	39.0	39.9	40.6	41.4	42.1	42.8
Northumberland	Metal Products	Productivity (£GVA per hour)	18.0	19.3	19.6	19.4	19.6	19.9	20.4	20.9	21.4	22.0	22.5	22.9	23.4	23.8	24.3	24.8	25.3	25.7	26.1	26.5	26.8	27.1	27.4	27.6
Northumberland	Computer & Electronic Products	Productivity (£GVA per hour)	19.3	19.4	19.6	20.5	21.1	21.6	22.2	22.9	23.6	24.4	25.1	25.7	26.3	26.8	27.4	28.0	28.6	29.2	29.8	30.4	30.9	31.4	31.9	32.4
Northumberland	Machinery & Equipment	Productivity (£GVA per hour)	26.7	25.7	28.3	29.1	30.2	31.2	32.0	33.2	34.6	36.1	37.3	38.3	39.5	40.7	42.0	43.3	44.6	45.9	47.2	48.5	49.7	50.9	52.1	53.4
Northumberland	Transport Equipment	Productivity (£GVA per hour)	20.4	22.9	26.8	26.1	26.5	27.0	27.8	28.3	29.0	29.9	30.7	31.3	31.9	32.5	33.2	34.0	34.8	35.6	36.4	37.1	37.8	38.5	39.2	40.1
Northumberland	Other Manufacturing	Productivity (£GVA per hour)	18.8	17.8	16.9	16.8	17.1	17.6	18.2	18.7	19.2	19.8	20.3	20.8	21.2	21.5	21.9	22.2	22.6	23.0	23.3	23.6	23.8	24.0	24.3	24.4
Northumberland	Utilities	Productivity (£GVA per hour)	45.7	48.3	47.9	47.2	46.9	47.0	47.2	47.5	47.7	47.9	47.9	48.1	48.2	48.3	48.4	48.5	48.6	48.6	48.6	48.5	48.4	48.2	48.0	47.8
Northumberland	Construction of Buildings	Productivity (£GVA per hour)	44.9	42.5	40.6	39.0	39.2	39.8	40.5	41.1	41.8	42.7	43.4	44.0	44.6	45.1	45.7	46.3	46.9	47.5	48.2	48.7	49.2	49.7	50.2	50.6
Northumberland	Civil Engineering	Productivity (£GVA per hour)	45.9	49.4	49.0	48.1	48.7	49.4	50.2	51.1	52.1	53.1	54.0	54.8	55.7	56.7	57.7	58.7	59.8	60.9	62.0	62.9	63.9	64.8	65.6	66.4
Northumberland	Specialised Construction Activities	Productivity (£GVA per hour)	19.8	21.2	19.2	18.6	18.8	19.0	19.3	19.6	20.0	20.4	20.7	21.0	21.4	21.7	22.1	22.5	22.9	23.4	23.8	24.2	24.6	25.0	25.4	25.8
Northumberland	Wholesale	Productivity (£GVA per hour)	21.3	22.7	23.5	23.9	24.0	24.2	24.5	24.9	25.5	26.2	26.8	27.4	28.0	28.6	29.0	29.4	29.7	30.1	30.4	30.7	31.0	31.3	31.6	31.8
Northumberland	Retail	Productivity (£GVA per hour)	17.1	18.4	19.2	20.0	20.3	20.6	21.0	21.3	21.8	22.4	22.8	23.3	23.7	24.2	24.6	25.1	25.6	26.1	26.6	27.1	27.5	28.0	28.5	29.0
Northumberland	Land Transport, Storage & Post	Productivity (£GVA per hour)	18.5	18.4	17.1	17.2	17.4	17.7	17.9	18.1	18.5	18.9	19.3	19.5	19.7	19.9	20.1	20.2	20.4	20.5	20.7	20.8	20.9	21.0	21.1	21.2
Northumberland	Air & Water Transport	Productivity (£GVA per hour)	50.7	46.7	42.6	42.1	42.7	43.1	43.7	44.3	45.7	47.3	48.6	49.6	50.5	51.4	52.5	53.7	54.9	56.2	57.7	59.1	60.6	62.1	63.5	65.0
Northumberland	Accomodation & Food Services	Productivity (£GVA per hour)	15.3	13.4	14.0	13.5	13.5	13.6	13.6	13.6	13.7	13.9	14.1	14.3	14.4	14.6	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	16.1
Northumberland	Recreation	Productivity (£GVA per hour)	19.4	16.4	15.0	14.5	14.6	14.7	14.8	15.0	15.3	15.6	15.9	16.1	16.3	16.4	16.6	16.7	16.8	17.0	17.1	17.3	17.4	17.5	17.6	17.7
Northumberland	Media Activities	Productivity (£GVA per hour)	35.9	39.6	41.8	41.9	42.8	43.5	44.1	44.9	46.2	48.0	49.7	51.2	52.5	53.7	54.9	56.2	57.5	58.9	60.4	61.8	63.4	65.0	66.6	68.1
Northumberland	Telecoms	Productivity (£GVA per hour)	44.8	47.7	40.4	38.3	38.9	39.9	41.5	43.3	45.6	48.0	50.6	53.1	55.4	57.5	59.6	61.9	64.3	66.7	69.1	71.5	73.9	76.4	78.8	81.0
Northumberland	Computing & Information Services	Productivity (£GVA per hour)	21.1	21.8	22.4	22.0	22.4	22.7	23.1	23.5	24.2	25.0	25.7	26.3	26.8	27.4	28.0	28.6	29.2	29.8	30.4	31.0	31.5	32.1	32.7	33.2
Northumberland	Finance	Productivity (£GVA per hour)	38.6	40.0	37.4	36.7	36.7	37.1	37.8	38.5	39.6	40.8	41.9	43.0	44.0	44.9	45.8	46.8	47.8	48.9	50.1	51.3	52.6	53.9	55.3	56.6
Northumberland	Insurance & Pensions	Productivity (£GVA per hour)	161.9	152.2	150.3	145.9	146.1	146.5	147.0	148.2	149.7	151.5	153.4	154.7	156.0	156.7	157.1	158.1	158.8	159.6	160.0	160.3	160.6	160.8	161.0	161.0
Northumberland	Real Estate	Productivity (£GVA per hour)	244.6	235.5	229.7	226.3	224.1	223.8	224.0	225.1	226.7	228.9	231.0	232.4	234.0	235.6	237.0	238.0	239.1	240.1	240.7	240.9	240.9	240.8	240.8	240.8
Northumberland	Professional Services	Productivity (£GVA per hour)	20.9	18.5	20.5	22.0	22.4	22.8	23.2	23.5	24.1	24.6	25.2	25.7	26.1	26.5	26.9	27.3	27.8	28.3	28.9	29.4	30.0	30.5	31.0	31.5
Northumberland	Administrative & Supportive Service Activities	Productivity (£GVA per hour)	13.1	14.2	14.5	14.1	14.4	14.7	15.0	15.5	16.1	16.7	17.3	17.9	18.4	19.0	19.6	20.2	20.8	21.4	22.1	22.7	23.4	24.0	24.7	25.4
Northumberland	Other Private Services	Productivity (£GVA per hour)	23.7	24.4	22.7	24.6	24.5	24.6	24.7	25.0	25.4	25.8	26.1	26.3	26.5	26.8	27.0	27.2	27.4	27.6	27.8	28.0	28.2	28.3	28.5	28.6
Northumberland	Public Administration & Defence	Productivity (£GVA per hour)	27.5	29.5	29.7	29.5	29.9	30.1	30.4	30.5	30.6	30.9	31.2	31.5	31.8	32.1	32.4	32.7	33.0	33.3	33.6	33.8	34.0	34.2	34.4	34.6
Northumberland	Education	Productivity (£GVA per hour)	23.9	23.2	23.5	23.3	23.5	23.6	23.7	23.7	23.9	24.2	24.4	24.6	24.8	25.1	25.3	25.5	25.7	25.8	26.0	26.2	26.3	26.5	26.6	26.7
Northumberland	Health	Productivity (£GVA per hour)	20.0	21.7	22.7	22.8	23.2	23.6	24.1	24.6	25.2	26.0	26.8	27.6	28.4	29.2	30.0	30.8	31.7	32.6	33.5	34.3	35.2	36.0	36.9	37.8
Northumberland	Residential Care & Social Work	Productivity (£GVA per hour)	9.4	10.2	9.9	10.1	10.1	10.0	10.0	10.0	10.0	10.1	10.1	10.2	10.2	10.2	10.3	10.3	10.3	10.4	10.5	10.5	10.6	10.7	10.8	10.8

APPENDIX H SECTORS TO USE CLASSES

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Manufacturing	Food, Drink & Tobacco	10110 : Processing and preserving of meat
Manufacturing	Food, Drink & Tobacco	10120 : Processing and preserving of poultry meat
Manufacturing	Food, Drink & Tobacco	10130 : Production of meat and poultry meat products
Manufacturing	Food, Drink & Tobacco	10200 : Processing and preserving of fish, crustaceans and molluscs
Manufacturing	Food, Drink & Tobacco	10310 : Processing and preserving of potatoes
Manufacturing	Food, Drink & Tobacco	10320 : Manufacture of fruit and vegetable juice
Manufacturing	Food, Drink & Tobacco	10390 : Other processing and preserving of fruit and vegetables
Manufacturing	Food, Drink & Tobacco	10410 : Manufacture of oils and fats
Manufacturing	Food, Drink & Tobacco	10420 : Manufacture of margarine and similar edible fats
Manufacturing	Food, Drink & Tobacco	10511 : Liquid milk and cream production
Manufacturing	Food, Drink & Tobacco	10512 : Butter and cheese production
Manufacturing	Food, Drink & Tobacco	10519 : Manufacture of milk products (other than liquid milk and cream,butter, cheese) nec
Manufacturing	Food, Drink & Tobacco	10520 : Manufacture of ice cream
Manufacturing	Food, Drink & Tobacco	10611 : Grain milling
Manufacturing	Food, Drink & Tobacco	10612 : Manufacture of breakfast cereals and cereals-based foods
Manufacturing	Food, Drink & Tobacco	10620 : Manufacture of starches and starch products
Manufacturing	Food, Drink & Tobacco	10710 : Manufacture of bread; manufacture of fresh pastry goods and cakes
Manufacturing	Food, Drink & Tobacco	10720 : Manufacture of rusks and biscuits; manufacture of preserved pastry goods and cakes
Manufacturing	Food, Drink & Tobacco	10730 : Manufacture of macaroni, noodles, couscous and similar farinaceous products
Manufacturing	Food, Drink & Tobacco	10810 : Manufacture of sugar
Manufacturing	Food, Drink & Tobacco	10821 : Manufacture of cocoa, and chocolate confectionery
Manufacturing	Food, Drink & Tobacco	10822 : Manufacture of sugar confectionery
Manufacturing	Food, Drink & Tobacco	10831 : Tea processing
Manufacturing	Food, Drink & Tobacco	10832 : Production of coffee and coffee substitutes
Manufacturing	Food, Drink & Tobacco	10840 : Manufacture of condiments and seasonings
Manufacturing	Food, Drink & Tobacco	10850 : Manufacture of prepared meals and dishes
Manufacturing	Food, Drink & Tobacco	10860 : Manufacture of homogenised food preparations and dietetic food

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Manufacturing	Food, Drink & Tobacco	10890 : Manufacture of other food products nec
Manufacturing	Food, Drink & Tobacco	10910 : Manufacture of prepared feeds for farm animals
Manufacturing	Food, Drink & Tobacco	10920 : Manufacture of prepared pet foods
Manufacturing	Food, Drink & Tobacco	11010 : Distilling, rectifying and blending of spirits
Manufacturing	Food, Drink & Tobacco	11020 : Manufacture of wine from grape
Manufacturing	Food, Drink & Tobacco	11030 : Manufacture of cider and other fruit wines
Manufacturing	Food, Drink & Tobacco	11040 : Manufacture of other non-distilled fermented beverages
Manufacturing	Food, Drink & Tobacco	11050 : Manufacture of beer
Manufacturing	Food, Drink & Tobacco	11060 : Manufacture of malt
Manufacturing	Food, Drink & Tobacco	11070 : Manufacture of soft drinks; production of mineral waters and other bottled waters
Manufacturing	Food, Drink & Tobacco	12000 : Manufacture of tobacco products
Manufacturing	Textiles & Clothing	13100 : Preparation and spinning of textile fibres
Manufacturing	Textiles & Clothing	13200 : Weaving of textiles
Manufacturing	Textiles & Clothing	13300 : Finishing of textiles
Manufacturing	Textiles & Clothing	13910 : Manufacture of knitted and crocheted fabrics
Manufacturing	Textiles & Clothing	13921 : Manufacture of soft furnishings
Manufacturing	Textiles & Clothing	13922 : Manufacture of canvas goods, sacks etc
Manufacturing	Textiles & Clothing	13923 : Manufacture of household textiles (other than soft furnishings of 13921)
Manufacturing	Textiles & Clothing	13931 : Manufacture of woven or tufted carpets and rugs
Manufacturing	Textiles & Clothing	13939 : Manufacture of carpets and rugs (other than woven or tufted) nec
Manufacturing	Textiles & Clothing	13940 : Manufacture of cordage, rope, twine and netting
Manufacturing	Textiles & Clothing	13950 : Manufacture of non-wovens and articles made from non-wovens, except apparel
Manufacturing	Textiles & Clothing	13960 : Manufacture of other technical and industrial textiles
Manufacturing	Textiles & Clothing	13990 : Manufacture of other textiles nec
Manufacturing	Textiles & Clothing	14110 : Manufacture of leather clothes
Manufacturing	Textiles & Clothing	14120 : Manufacture of workwear
Manufacturing	Textiles & Clothing	14131 : Manufacture of men's outerwear, other than leather clothes and workwear
Manufacturing	Textiles & Clothing	14132 : Manufacture of women's outerwear, other than leather clothes and workwear
Manufacturing	Textiles & Clothing	14141 : Manufacture of men's underwear

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Manufacturing	Textiles & Clothing	14142 : Manufacture of women's underwear
Manufacturing	Textiles & Clothing	14190 : Manufacture of other wearing apparel and accessories
Manufacturing	Textiles & Clothing	14200 : Manufacture of articles of fur
Manufacturing	Textiles & Clothing	14310 : Manufacture of knitted and crocheted hosiery
Manufacturing	Textiles & Clothing	14390 : Manufacture of other knitted and crocheted apparel
Manufacturing	Textiles & Clothing	15110 : Tanning and dressing of leather; dressing and dyeing of fur
Manufacturing	Textiles & Clothing	15120 : Manufacture of luggage, handbags and the like, saddlery and harness
Manufacturing	Textiles & Clothing	15200 : Manufacture of footwear
Manufacturing	Wood & Paper	16100 : Sawmilling and planing of wood
Manufacturing	Wood & Paper	16210 : Manufacture of veneer sheets and wood-based panels
Manufacturing	Wood & Paper	16220 : Manufacture of assembled parquet floors
Manufacturing	Wood & Paper	16230 : Manufacture of other builders' carpentry and joinery
Manufacturing	Wood & Paper	16240 : Manufacture of wooden containers
Manufacturing	Wood & Paper	16290 : Manufacture of other products of wood; manufacture of articles of cork, straw and plaiting materials
Manufacturing	Wood & Paper	17110 : Manufacture of pulp
Manufacturing	Wood & Paper	17120 : Manufacture of paper and paperboard
Manufacturing	Wood & Paper	17211 : Manufacture of corrugated paper and paperboard; manufacture of sacks and bags of paper
Manufacturing	Wood & Paper	17219 : Manufacture of paper and paperboard containers other than sacks and bags
Manufacturing	Wood & Paper	17220 : Manufacture of household and sanitary goods and of toilet requisites
Manufacturing	Wood & Paper	17230 : Manufacture of paper stationery
Manufacturing	Wood & Paper	17240 : Manufacture of wallpaper
Manufacturing	Wood & Paper	17290 : Manufacture of other articles of paper and paperboard
Manufacturing	Printing and Reproduction of Recorded Media	18110 : Printing of newspapers
Manufacturing	Printing and Reproduction of Recorded Media	18121 : Manufacture of printed labels
Manufacturing	Printing and Reproduction of Recorded Media	18129 : Printing (other than printing of newspaper s and printing on labels and tags) nec
Manufacturing	Printing and Reproduction of Recorded Media	18130 : Pre-press and pre-media services
Manufacturing	Printing and Reproduction of Recorded Media	18140 : Binding and related services

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Manufacturing	Printing and Reproduction of Recorded Media	18201 : Reproduction of sound recording
Manufacturing	Printing and Reproduction of Recorded Media	18202 : Reproduction of video recording
Manufacturing	Printing and Reproduction of Recorded Media	18203 : Reproduction of computer media
Manufacturing	Fuel Refining	19100 : Manufacture of coke oven products
Manufacturing	Fuel Refining	19201 : Mineral oil refining
Manufacturing	Fuel Refining	19209 : Other treatment of petroleum products (excluding mineral oil refining petrochemicals manufacture)
Manufacturing	Chemicals	20110 : Manufacture of industrial gases
Manufacturing	Chemicals	20120 : Manufacture of dyes and pigments
Manufacturing	Chemicals	20130 : Manufacture of other inorganic basic chemicals
Manufacturing	Chemicals	20140 : Manufacture of other organic basic chemicals
Manufacturing	Chemicals	20150 : Manufacture of fertilisers and nitrogen compounds
Manufacturing	Chemicals	20160 : Manufacture of plastics in primary forms
Manufacturing	Chemicals	20170 : Manufacture of synthetic rubber in primary forms
Manufacturing	Chemicals	20200 : Manufacture of pesticides and other agrochemical products
Manufacturing	Chemicals	20301 : Manufacture of paints, varnishes and similar coatings, mastics and sealants
Manufacturing	Chemicals	20302 : Manufacture of printing ink
Manufacturing	Chemicals	20411 : Manufacture of soap and detergents
Manufacturing	Chemicals	20412 : Manufacture of cleaning and polishing preparations
Manufacturing	Chemicals	20420 : Manufacture of perfumes and toilet preparations
Manufacturing	Chemicals	20510 : Manufacture of explosives
Manufacturing	Chemicals	20520 : Manufacture of glues
Manufacturing	Chemicals	20530 : Manufacture of essential oils
Manufacturing	Chemicals	20590 : Manufacture of other chemical products nec
Manufacturing	Chemicals	20600 : Manufacture of man-made fibres
Manufacturing	Pharmaceuticals	21100 : Manufacture of basic pharmaceutical products
Manufacturing	Pharmaceuticals	21200 : Manufacture of pharmaceutical preparations
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	22110 : Manufacture of rubber tyres and tubes; retreading and rebuilding of rubber tyres
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	22190 : Manufacture of other rubber products

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	22210 : Manufacture of plastic plates, sheets, tubes and profiles
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	22220 : Manufacture of plastic packing goods
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	22230 : Manufacture of builders□ ware of plastic
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	22290 : Manufacture of other plastic products
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23110 : Manufacture of flat glass
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23120 : Shaping and processing of flat glass
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23130 : Manufacture of hollow glass
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23140 : Manufacture of glass fibres
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23190 : Manufacture and processing of other glass, including technical glassware
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23200 : Manufacture of refractory products
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23310 : Manufacture of ceramic tiles a nd flags
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23320 : Manufacture of bricks, tiles a nd construction products, in baked clay
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23410 : Manufacture of ceramic household and ornamental articles
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23420 : Manufacture of ceramic sanitary fixtures
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23430 : Manufacture of ceramic insulating fittings
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23440 : Manufacture of other technical ceramic products
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23490 : Manufacture of other ceramic products
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23510 : Manufacture of cement
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23520 : Manufacture of lime and plaster
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23610 : Manufacture of concrete products for construction purposes
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23620 : Manufacture of plaster products for construction purposes
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23630 : Manufacture of ready-mixed concrete
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23640 : Manufacture of mortars
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23650 : Manufacture of fibre cement
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23690 : Manufacture of other articles of concrete plaster and cement
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23700 : Cutting, shaping and finishing of stone

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23910 : Production of abrasive products
Manufacturing	Rubber, Plastic and Other Non-Metallic Mineral Products	23990 : Manufacture of other non-metallic mineral products
Manufacturing	Metal products	24100 : Manufacture of basic iron and steel and of ferro-alloys
Manufacturing	Metal products	24200 : Manufacture of tubes, pipes, hollow profiles and related fittings, of steel
Manufacturing	Metal products	24310 : Cold drawing of bars
Manufacturing	Metal products	24320 : Cold rolling of narrow strip
Manufacturing	Metal products	24330 : Cold forming or folding
Manufacturing	Metal products	24340 : Cold drawing of wire
Manufacturing	Metal products	24410 : Precious metals production
Manufacturing	Metal products	24420 : Aluminium production
Manufacturing	Metal products	24430 : Lead, zinc and tin production
Manufacturing	Metal products	24440 : Copper production
Manufacturing	Metal products	24450 : Other non-ferrous metal production
Manufacturing	Metal products	24460 : Processing of nuclear fuel
Manufacturing	Metal products	24510 : Casting of iron
Manufacturing	Metal products	24520 : Casting of steel
Manufacturing	Metal products	24530 : Casting of light metals
Manufacturing	Metal products	24540 : Casting of other non-ferrous metals
Manufacturing	Metal products	25110 : Manufacture of metal structures and parts of structures
Manufacturing	Metal products	25120 : Manufacture of doors and windows of metals
Manufacturing	Metal products	25210 : Manufacture of central heating radiators and boilers
Manufacturing	Metal products	25290 : Manufacture of other tanks, reservoirs and containers of metal
Manufacturing	Metal products	25300 : Manufacture of steam generators, except central heating hot water boilers
Manufacturing	Metal products	25400 : Manufacture of weapons and ammunition
Manufacturing	Metal products	25500 : Forging, pressing, stamping and roll-forming of metal; powder metallurgy
Manufacturing	Metal products	25610 : Treatment and coating of metals
Manufacturing	Metal products	25620 : Machining
Manufacturing	Metal products	25710 : Manufacture of cutlery
Manufacturing	Metal products	25720 : Manufacture of locks and hinges

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Manufacturing	Metal products	25730 : Manufacture of tools
Manufacturing	Metal products	25910 : Manufacture of steel drums and similar containers
Manufacturing	Metal products	25920 : Manufacture of light metal packaging
Manufacturing	Metal products	25930 : Manufacture of wire products, chain and springs
Manufacturing	Metal products	25940 : Manufacture of fasteners and screw machine products
Manufacturing	Metal products	25990 : Manufacture of other fabricated metal products nec
Manufacturing	Computer & Electronic Products	26110 : Manufacture of electronic components
Manufacturing	Computer & Electronic Products	26120 : Manufacture of loaded electronic boards
Manufacturing	Computer & Electronic Products	26200 : Manufacture of computers and peripheral equipment
Manufacturing	Computer & Electronic Products	26301 : Manufacture of telegraph and telephone apparatus and equipment
Manufacturing	Computer & Electronic Products	26309 : Manufacture of communication equipment (other than telegraph and telephone apparatus and equipment
Manufacturing	Computer & Electronic	26400 : Manufacture of consumer electronics
Manufacturing	Computer & Electronic	26511 : Manufacture of electronic instruments and appliances for measuring, testing, and navigation, except industrial process control equipment navigation, except industrial process control equipment
Manufacturing	Computer & Electronic	26512 : Manufacture of electronic industrial process control equipment
Manufacturing	Computer & Electronic	26513 : Manufacture of non-electronic instruments and appliances for measuring, testing and navigation, except industrial process control equipment
Manufacturing	Computer & Electronic Products	26514 : Manufacture of non-electronic industrial process control equipment
Manufacturing	Computer & Electronic Products	26520 : Manufacture of watches and clocks
Manufacturing	Computer & Electronic Products	26600 : Manufacture of irradiation, electromedical and electrotherapeutic equipment
Manufacturing	Computer & Electronic Products	26701 : Manufacture of optical precision instruments
Manufacturing	Computer & Electronic Products	26702 : Manufacture of photographic and cinematographic equipment
Manufacturing	Computer & Electronic Products	26800 : Manufacture of magnetic and optical media
Manufacturing	Computer & Electronic Products	27110 : Manufacture of electric motors, generators and transformers
Manufacturing	Computer & Electronic Products	27120 : Manufacture of electricity distribution and control apparatus
Manufacturing	Computer & Electronic Products	27200 : Manufacture of batteries and accumulators
Manufacturing	Computer & Electronic Products	27310 : Manufacture of fibre optic cables
Manufacturing	Computer & Electronic Products	27320 : Manufacture of other electronic and electric wires and cables

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Manufacturing	Computer & Electronic Products	27330 : Manufacture of wiring devices
Manufacturing	Computer & Electronic Products	27400 : Manufacture of electric lighting equipment
Manufacturing	Computer & Electronic Products	27510 : Manufacture of electric domestic appliances
Manufacturing	Computer & Electronic Products	27520 : Manufacture of non-electric domestic appliances
Manufacturing	Computer & Electronic Products	27900 : Manufacture of other electrical equipment
Manufacturing	Machinery & Equipment	28110 : Manufacture of engines and turbines, except aircraft, vehicle and cycle engines
Manufacturing	Machinery & Equipment	28120 : Manufacture of fluid power equipment
Manufacturing	Machinery & Equipment	28131 : Manufacture of pumps
Manufacturing	Machinery & Equipment	28132 : Manufacture of compressors
Manufacturing	Machinery & Equipment	28140 : Manufacture of other taps and valves
Manufacturing	Machinery & Equipment	28150 : Manufacture of bearings, gears, gearing and driving elements
Manufacturing	Machinery & Equipment	28210 : Manufacture of ovens, furnaces and furnace burners
Manufacturing	Machinery & Equipment	28220 : Manufacture of lifting and handling equipment
Manufacturing	Machinery & Equipment	28230 : Manufacture of office machinery and equipment (except computers and peripheral equipment)
Manufacturing	Machinery & Equipment	28240 : Manufacture of power-driven hand tools
Manufacturing	Machinery & Equipment	28250 : Manufacture of non-domestic cooling and ventilation equipment
Manufacturing	Machinery & Equipment	28290 : Manufacture of other general-purpose machinery nec
Manufacturing	Machinery & Equipment	28301 : Manufacture of agricultural tractors
Manufacturing	Machinery & Equipment	28302 : Manufacture of agricultural and forestry machinery (other than a gricultural tractors)
Manufacturing	Machinery & Equipment	28410 : Manufacture of metal forming machinery
Manufacturing	Machinery & Equipment	28490 : Manufacture of other machine tools
Manufacturing	Machinery & Equipment	28910 : Manufacture of machinery for metallurgy
Manufacturing	Machinery & Equipment	28921 : Manufacture of machinery for mining
Manufacturing	Machinery & Equipment	28922 : Manufacture of earthmoving equipment
Manufacturing	Machinery & Equipment	28923 : Manufacture of equipment for concrete crushing and screening roadworks
Manufacturing	Machinery & Equipment	28930 : Manufacture of machinery for food, beverage and tobacco processing
Manufacturing	Machinery & Equipment	28940 : Manufacture of machinery for textile, apparel and leather production
Manufacturing	Machinery & Equipment	28950 : Manufacture of machinery for paper and paperboard production

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Manufacturing	Machinery & Equipment	28960 : Manufacture of plastics and rubber machinery
Manufacturing	Machinery & Equipment	28990 : Manufacture of other special-purpose machinery nec
Manufacturing	Machinery & Equipment	29100 : Manufacture of motor vehicles
Manufacturing	Machinery & Equipment	29201 : Manufacture of bodies (coachwork) for motor vehicles (except caravans)
Manufacturing	Machinery & Equipment	29202 : Manufacture of trailers and semi-trailers
Manufacturing	Machinery & Equipment	29203 : Manufacture of caravans
Manufacturing	Machinery & Equipment	29310 : Manufacture of electrical and electronic equipment for motor vehicles
Manufacturing	Machinery & Equipment	29320 : Manufacture of other parts and accessories for motor vehicles
Manufacturing	Machinery & Equipment	30110 : Building of ships and floating structures
Manufacturing	Machinery & Equipment	30120 : Building of pleasure and sporting boats
Manufacturing	Machinery & Equipment	30200 : Manufacture of railway locomotives and rolling stock
Manufacturing	Machinery & Equipment	30300 : Manufacture of air and spacecraft and related machinery
Manufacturing	Machinery & Equipment	30400 : Manufacture of military fighting vehicles
Manufacturing	Machinery & Equipment	30910 : Manufacture of motorcycles
Manufacturing	Machinery & Equipment	30920 : Manufacture of bicycles and invalid carriages
Manufacturing	Machinery & Equipment	30990 : Manufacture of other transport equipment nec
Manufacturing	Other Manufacturing	31010 : Manufacture of office and shop furniture
Manufacturing	Other Manufacturing	31020 : Manufacture of kitchen furniture
Manufacturing	Other Manufacturing	31030 : Manufacture of mattresses
Manufacturing	Other Manufacturing	31090 : Manufacture of other furniture
Manufacturing	Other Manufacturing	32110 : Striking of coins
Manufacturing	Other Manufacturing	32120 : Manufacture of jewellery and related articles
Manufacturing	Other Manufacturing	32130 : Manufacture of imitation jewellery and related articles
Manufacturing	Other Manufacturing	32200 : Manufacture of musical instruments
Manufacturing	Other Manufacturing	32300 : Manufacture of sports goods
Manufacturing	Other Manufacturing	32401 : Manufacture of professional and arcade games and toys
Manufacturing	Other Manufacturing	32409 : Manufacture of games and toys (other than professional and arcade games and toys)
Manufacturing	Other Manufacturing	32500 : Manufacture of medical and dental instruments and supplies
Manufacturing	Other Manufacturing	32910 : Manufacture of brooms and brushes

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Manufacturing	Other Manufacturing	32990 : Other manufacturing nec
Manufacturing	Other Manufacturing	33110 : Repair of fabricated metal products
Manufacturing	Other Manufacturing	33120 : Repair of machinery
Manufacturing	Other Manufacturing	33130 : Repair of electronic and optical equipment
Manufacturing	Other Manufacturing	33140 : Repair of electrical equipment
Manufacturing	Other Manufacturing	33150 : Repair and maintenance of ships and boats
Manufacturing	Other Manufacturing	33160 : Repair and maintenance of aircraft and spacecraft
Manufacturing	Other Manufacturing	33170 : Repair and maintenance of other transport equipment
Manufacturing	Other Manufacturing	33190 : Repair of other equipment
Manufacturing	Other Manufacturing	33200 : Installation of industrial machinery and equipment
Other industrial	Utilities	37000 : Sewerage
Other industrial	Utilities	38110 : Collection of non-hazardous waste
Other industrial	Utilities	38120 : Collection of hazardous waste
Other industrial	Utilities	38210 : Treatment and disposal of non-hazardous waste
Other industrial	Utilities	38220 : Treatment and disposal of hazardous waste
Other industrial	Utilities	38310 : Dismantling of wrecks
Other industrial	Utilities	38320 : Recovery of sorted materials
Other industrial	Specialised Construction Activities	43210 : Electrical installation
Other industrial	Specialised Construction Activities	43220 : Plumbing, heat and air-conditioning installation
Other industrial	Specialised Construction Activities	43290 : Other construction installation
Other industrial	Specialised Construction Activities	43310 : Plastering
Other industrial	Specialised Construction Activities	43320 : Joinery installation
Other industrial	Specialised Construction Activities	43330 : Floor and wall covering
Other industrial	Specialised Construction Activities	43341 : Painting
Other industrial	Specialised Construction Activities	43342 : Glazing
Other industrial	Specialised Construction Activities	43390 : Other building completion and finishing
Other industrial	Specialised Construction Activities	43910 : Roofing activities
Other industrial	Specialised Construction Activities	43991 : Scaffold erection
Other industrial	Specialised Construction Activities	43999 : Specialised construction activities (other than scaffold erection)
Other industrial	Wholesale	45200 : Maintenance and repair of motor vehicles

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Other industrial	Wholesale	45400 : Sale, maintenance and repair of motorcycles and related parts and accessories
Warehousing	Wholesale	46110 : Agents involved in the sale of agricultural raw materials, live animals, texti and semi-finished goods
Warehousing	Wholesale	46120 : Agents involved in the sale of fuels, ores, metals and industrial chemicals
Warehousing	Wholesale	46130 : Agents involved in the sale of timber and building materials
Warehousing	Wholesale	46140 : Agents involved in the sale of machinery, industrial equipment, ships and aircraft
Warehousing	Wholesale	46150 : Agents involved in the sale of furniture, household goods, hardware and ironmongery
Warehousing	Wholesale	46160 : Agents involved in the sale of textiles, clothing, fur, footwear and leather goods
Warehousing	Wholesale	46170 : Agents involved in the sale of food, beverages and tobacco
Warehousing	Wholesale	46180 : Agents specialised in the sale of other particular products
Warehousing	Wholesale	46190 : Agents involved in the sale of a variety of goods
Warehousing	Wholesale	46210 : Wholesale of grain, unmanufactured tobacco, seeds and animal feeds
Warehousing	Wholesale	46220 : Wholesale of flowers and plants
Warehousing	Wholesale	46230 : Wholesale of live animals
Warehousing	Wholesale	46240 : Wholesale of hides, skins and leather
Warehousing	Wholesale	46310 : Wholesale of fruit and vegetables
Warehousing	Wholesale	46320 : Wholesale of meat and meat products
Warehousing	Wholesale	46330 : Wholesale of dairy products, eggs and edible oils and fats
Warehousing	Wholesale	46341 : Wholesale of fruit and vegetable juices, mineral waters and soft drinks
Warehousing	Wholesale	46342 : Wholesale of wine, beer, spirits and other alcoholic beverages
Warehousing	Wholesale	46350 : Wholesale of tobacco products
Warehousing	Wholesale	46360 : Wholesale of sugar and chocolate and sugar confectionery
Warehousing	Wholesale	46370 : Wholesale of coffee, tea, cocoa and spices
Warehousing	Wholesale	46380 : Wholesale of other food, including fish, crustaceans and molluscs
Warehousing	Wholesale	46390 : Non-specialised wholesale of food, beverages and tobacco
Warehousing	Wholesale	46410 : Wholesale of textiles
Warehousing	Wholesale	46420 : Wholesale of clothing and footwear
Warehousing	Wholesale	46431 : Wholesale of gramophone records, audio tapes, compact discs and video tapes and of the equipment on which these are played)

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Warehousing	Wholesale	46439 : Wholesale of radio and television goods and of electrical household appliances (other than of gramophone records, audio tapes, compact discs and video tapes and the equipment on which these are played)
Warehousing	Wholesale	46440 : Wholesale of china and glassware and cleaning materials
Warehousing	Wholesale	46450 : Wholesale of perfume and cosmetics
Warehousing	Wholesale	46460 : Wholesale of pharmaceutical goods
Warehousing	Wholesale	46470 : Wholesale of furniture, carpets and lighting equipment
Warehousing	Wholesale	46480 : Wholesale of watches and jewellery
Warehousing	Wholesale	46491 : Wholesale of musical instruments
Warehousing	Wholesale	46499 : Wholesale of household goods (other than musical instruments) nec
Warehousing	Wholesale	46510 : Wholesale of computers, computer peripheral equipment and software
Warehousing	Wholesale	46520 : Wholesale of electronic and telecommunications equipment and parts
Warehousing	Wholesale	46610 : Wholesale of agricultural machinery, equipment and supplies
Warehousing	Wholesale	46620 : Wholesale of machine tools
Warehousing	Wholesale	46630 : Wholesale of mining, construction and civil engineering machinery
Warehousing	Wholesale	46640 : Wholesale of machinery for the textile industry and of sewing and knitting machines
Warehousing	Wholesale	46650 : Wholesale of office furniture
Warehousing	Wholesale	46660 : Wholesale of other office machinery and equipment
Warehousing	Wholesale	46690 : Wholesale of other machinery and equipment
Warehousing	Wholesale	46711 : Wholes ale of petroleum and petroleum products
Warehousing	Wholesale	46719 : Wholes ale of fuels and related products (other than petroleum and petroleum products)
Warehousing	Wholesale	46720 : Wholesale of metals and metal ores
Warehousing	Wholesale	46730 : Wholesale of wood, construction materials and sanitary equipment
Warehousing	Wholesale	46740 : Wholesale of hardware, plumbing and heating equipment and supplies
Warehousing	Wholesale	46750 : Wholesale of chemical products
Warehousing	Wholesale	46760 : Wholesale of other intermediate products
Warehousing	Wholesale	46770 : Wholesale of waste and scrap
Warehousing	Wholesale	46900 : Non-specialised wholesale trade
Warehousing	Land Transport, Storage & Post	49410 : Freight transport by road

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Warehousing	Land Transport, Storage & Post	49420 : Removal services
Warehousing	Land Transport, Storage & Post	52101 : Operation of warehousing and storage facilities for water transport activities of division 50
Warehousing	Land Transport, Storage & Post	52102 : Operation of warehousing and storage facilities for air transport activities of division 51
Warehousing	Land Transport, Storage & Post	52103 : Operation of warehousing and storage facilities for land transport activities of division 49
Warehousing	Land Transport, Storage & Post	52211 : Operation of rail freight terminals
Warehousing	Land Transport, Storage & Post	52212 : Operation of rail passenger facilities at railway stations
Warehousing	Land Transport, Storage & Post	52213 : Operation of bus and coach passenger facilities at bus and coach stations
Warehousing	Land Transport, Storage & Post	52219 : Other service activities incidental to land transportation, nec (not including operation of rail freight terminals, passenger facilities at railway stations or passenger facilities at bus and coach stations or passenger facilities at railway stations or passenger facilities at bus and coach stations)
Warehousing	Land Transport, Storage & Post	52241 : Cargo handling for water transport activities of division 50
Warehousing	Land Transport, Storage & Post	52242 : Cargo handling for air transport activities of division 51
Warehousing	Land Transport, Storage & Post	52243 : Cargo handling for land transport activities of division 49
Warehousing	Land Transport, Storage & Post	53100 : Postal activities under universal service obligation
Warehousing	Land Transport, Storage & Post	53201 : Licensed Carriers
Warehousing	Land Transport, Storage & Post	53202 : Unlicensed Carriers
Office	Media Activities	58110 : Book publishing
Office	Media Activities	58120 : Publishing of directories and mailing lists
Office	Media Activities	58130 : Publishing of newspapers
Office	Media Activities	58141 : Publishing of learned journals
Office	Media Activities	58142 : Publishing of consumer, business and professional journals and periodicals
Office	Media Activities	58190 : Other publishing activities
Office	Media Activities	59111 : Motion picture production activities
Office	Media Activities	59112 : Video production activities
Office	Media Activities	59113 : Television programme production activities
Office	Media Activities	59120 : Motion picture, video and television programme post-production activities
Office	Media Activities	59131 : Motion picture distribution activities
Office	Media Activities	59132 : Video distribution activities

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Office	Media Activities	59133 : Television programme distribution activities
Office	Media Activities	59200 : Sound recording and music publishing activities
Office	Media Activities	60100 : Radio broadcasting
Office	Media Activities	60200 : Television programming and broadcasting activities
Office	Computing & Information Services	62011 : Ready-made interactive leisure and entertainment software development
Office	Computing & Information Services	62012 : Business and domestic software development
Office	Computing & Information Services	62020 : Computer consultancy activities
Office	Computing & Information Services	62030 : Computer facilities management activities
Office	Computing & Information Services	62090 : Other information technology and computer service activities
Office	Computing & Information Services	63110 : Data processing, hosting and related activities
Office	Computing & Information Services	63120 : Web portals
Office	Computing & Information Services	63910 : News agency activities
Office	Computing & Information Services	63990 : Other information service activities nec
Office	Finance	64110 : Central banking
Office	Finance	64191 : Banks
Office	Finance	64192 : Building societies
Office	Finance	64201 : Activities of agricultural holding companies
Office	Finance	64202 : Activities of production holding companies
Office	Finance	64203 : Activities of construction holding companies
Office	Finance	64204 : Activities of distribution holding companies
Office	Finance	64205 : Activities of financial services holding companies
Office	Finance	64209 : Activities of other holding companies (not including agricultural, production, construction, distribution and financial services holding companies) n.e.c
Office	Finance	64301 : Activities of investment trusts
Office	Finance	64302 : Activities of unit trusts
Office	Finance	64303 : Activities of venture and development capital companies
Office	Finance	64304 : Activities of open-ended investment companies
Office	Finance	64305 : Activities of property unit trusts
Office	Finance	64306 : Activities of real estate investment trusts
Office	Finance	64910 : Financial leasing

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Office	Finance	64921 : Credit granting by non-deposit taking finance houses and other specialist consumer credit grantors
Office	Finance	64922 : Activities of mortgage finance companies
Office	Finance	64929 : Other credit granting (not including credit granting by non-deposit taking finance houses and other specialist consumer credit grantors and activities of mortgage finance companies) n.e.c.
Office	Finance	64991 : Security dealing on own account
Office	Finance	64992 : Factoring
Office	Finance	64999 : Other financial service activities, except insurance and pension funding, (not including security dealing on own account and factoring) n.e.c.
Office	Insurance & Pensions	65110 : Life insurance
Office	Insurance & Pensions	65120 : Non-life insurance
Office	Insurance & Pensions	65201 : Life reinsurance
Office	Insurance & Pensions	65202 : Non-life reinsurance
Office	Insurance & Pensions	65300 : Pension funding
Office	Finance	66110 : Administration of financial markets
Office	Finance	66120 : Security and commodity contracts brokerage
Office	Finance	66190 : Other activities auxiliary to financial services, except insurance and pension funding
Office	Finance	66210 : Risk and damage evaluation
Office	Finance	66220 : Activities ofinsurance agents and brokers
Office	Finance	66290 : Other activities auxiliary to insurance and pension funding
Office	Finance	66300 : Fund management activities
Office	Real Estate	68100 : Buying and selling of own real estate
Office	Real Estate	68201 : Renting and operating of Housing Association real estate
Office	Real Estate	68202 : Letting and operating of conference and exhibition centres
Office	Real Estate	68209 : Letting and operating of own or leased real estate (other than Housing Association real estate and conference and exhibition services) n.e.c.
Office	Real Estate	68310 : Real estate agencies
Office	Real Estate	68320 : Management of real estate on a fee or contract basis
Office	Professional services	69101 : Barristers at law
Office	Professional services	69102 : Solicitors

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Office	Professional services	69109 : Activities of patent and copyright agents; other legal activities (other than those of barristers and solicitors) nec
Office	Professional services	69201 : Accounting, and auditing activities
Office	Professional services	69202 : Bookkeeping activities
Office	Professional services	69203 : Tax consultancy
Office	Professional services	70100 : Activities of head offices
Office	Professional services	70210 : Public relations and communication activities
Office	Professional services	70221 : Financial management
Office	Professional services	70229 : Management consultancy activities (other than financial management)
Office	Professional services	71111 : Architectural activities
Office	Professional services	71112 : Urban planning and landscape architectural activities
Office	Professional services	71121 : Engineering design activities for industrial process and production
Office	Professional services	71122 : Engineering related scientific and technical consulting activities
Office	Professional services	71129 : Other engineering activities (not including engineering design for industrial process and production or engineering related scientific and technical consulting activities)
Office	Professional services	71200 : Technical testing and analysis
Office	Professional services	72110 : Research and experimental development on biotechnology
Office	Professional services	72190 : Other research and experimental development on natural sciences and engineering
Office	Professional services	72200 : Research and experimental development on social sciences and humanities
Office	Professional services	73110 : Advertising agencies
Office	Professional services	73120 : Media representation
Office	Professional services	73200 : Market research and public opinion polling
Office	Professional services	74300 : Translation and interpretation activities
Office	Professional services	74901 : Environmental consulting activities
Office	Professional services	74902 : Quantity surveying activities
Office	Professional services	74909 : Other professional, scientific and technical activities (not including environmental consultancy or quantity surveying)
Office	Administrative & Supportive Service Activities	77400 : Leasing of intellectual property and similar products, except copyrighted works
Office	Administrative & Supportive Service Activities	78101 : Motion picture, television and other theatrical casting

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Office	Administrative & Supportive Service Activities	78109 : Activities of employment placement agencies (other than motion picture, television and other theatrical casting) nec
Office	Administrative & Supportive Service Activities	78200 : Temporary employment agency activities
Office	Administrative & Supportive Service Activities	78300 : Other human resources provision
Office	Administrative & Supportive Service Activities	80100 : Private security activities
Office	Administrative & Supportive Service Activities	80200 : Security systems service activities
Office	Administrative & Supportive Service Activities	80300 : Investigation activities
Office	Administrative & Supportive Service Activities	82110 : Combined office administrative service activities
Office	Administrative & Supportive Service Activities	82190 : Photocopying, document preparation and other specialised office support activities
Office	Administrative & Supportive Service Activities	82200 : Activities of call centres
Office	Administrative & Supportive Service Activities	82301 : Activities of exhibition and fair organizers
Office	Administrative & Supportive Service Activities	82302 : Activities of conference organizers
Office	Administrative & Supportive Service Activities	82911 : Activities of collection agencies
Office	Administrative & Supportive Service Activities	82912 : Activities of credit bureaus
Warehousing	Administrative & Supportive Service Activities	82920 : Packaging activities
Office	Administrative & Supportive Service Activities	82990 : Other business support service activities nec
Office	Public Administration & Defence	84110 : General public administration activities
Office	Public Administration & Defence	84120 : Regulation of the activities of providing health care, education, cultural services and other social services, excluding social security
Office	Public Administration & Defence	84130 : Regulation of and contribution to more efficient operation of businesses
Office	Public Administration & Defence	84210 : Foreign affairs
Office	Public Administration & Defence	84300 : Compulsory social security activities
Office	Other Private Services	94110 : Activities of business and employers membership organisations
Office	Other Private Services	94120 : Activities of professional membership organisations
Office	Other Private Services	94200 : Activities of trade unions
Office	Other Private Services	94910 : Activities of religious organisations
Office	Other Private Services	94920 : Activities of political organisations
Office	Other Private Services	94990 : Activities of other membership organisations nec
Other industrial	Other Private Services	95110 : Repair of computers and peripheral equipment

Employment land use	Sector (Experian)	Industry (5 digit SIC)
Other industrial	Other Private Services	95120 : Repair of communication equipment
Other industrial	Other Private Services	95210 : Repair of consumer electronics
Other industrial	Other Private Services	95220 : Repair of household appliances and home and garden equipment
Other industrial	Other Private Services	95230 : Repair of footwear and leather goods
Other industrial	Other Private Services	95240 : Repair of furniture and home furnishings
Other industrial	Other Private Services	95250 : Repair of watches, clocks and jewellery
Other industrial	Other Private Services	95290 : Repair of other personal and household goods

APPENDIX I EMPLOYMENT DENSITIES AND PLOT RATIOS

Land use plans commonly make new land allocations by releasing hectares of land. But at the plan making stage we can only estimate the likely use and format of the land being allocated. So this process is very uncertain.

To help inform planners' decisions it is common for employment land reviews and other evidence base documents to estimate the capacity of land to accommodate new employment floorspace. Most planners firstly estimate the number of jobs; then the amount of floorspace required to accommodate them; followed by the amount of land required to build the floorspace. The first part is typically done with reference to the Homes and Communities Agency Employment Density Guide[35]. The assumptions that inform the second part are less well-established.

The capacity of land to accommodate floorspace is commonly described as the 'plot ratio' and is expressed as the floorspace capacity of a hectare of land. For example a plot ratio of 1:4,000 indicates that each hectare can accommodate 4,000 sqm of floorspace. This is sometimes expressed as a percentage; for example 40%. This also indicates a nominal capacity of 4,000 sqm (i.e. 40% of a hectare).

But there is little evidence to support any assumptions planners make about plot ratios. Most recent studies still rely on research undertaken by Roger Tym & Partners in 2010 for the Yorkshire and Humberside region which involved surveying approximately 330 recent development schemes.

The research showed that there was very limited potential to increase plot ratios for general industrial or warehouse type sites. Most of these units are single story and the amount of circulation space means they cannot be built to a higher plot ratio. The only way of intensifying the employment capacity of these sites will be to dilute them with higher density office uses.

Office plot ratios are much more variable; in locations outside of town centres, a 40% plot ratio remains appropriate but within town centres density assumptions are almost meaningless. This is because they can be virtually infinite. What controls plot ratios in town centres is related to what the development capacity of the site is rather than any set plot ratio target. This can only be estimated site by site.

Alternatively, inconsistent and un-evidenced 'rules of thumb' are used. The most common 'rule of thumb' estimate is that each hectare of new greenfield land can accommodate between 3,500 and 4,000 sq metres of employment floorspace; either offices, warehouses or general industrial units (i.e. 35% - 40%). Separate ratios for brownfield redevelopment are rarely quoted.

[35] 3rd edition (November 2015)

APPENDIX J SUB-COUNTY FINDINGS

J.1 Introduction

This appendix provides an indicative breakdown of the overall study findings in terms of jobs, employment land and housing need into the county's four delivery areas, which we refer to as sub areas, shown on Figure 3.2 and used in the current Economic Strategy, namely:

- Central area
- North area
- South East area
- West area

These findings should be used as a broad guide because the smallest geography at which the economic forecasts which underpin this study are available is local authority level i.e. Northumberland county. We have therefore had to make a number of assumptions about the distribution of future job, employment land need and housing growth across the sub areas. We outline the method below under each topic.

J.2 Workforce job growth

The method used to attribute the forecast growth to the sub areas assumes that the existing distribution of employment by broad sector is apportioned across the sub areas based on the existing distribution. The method uses a four-stage approach as follows:

1. identify which Mid-Level Super Output Areas (MSOA) comprise each sub area.
2. attribute the existing employment (number of employees, including self-employed) at MSOA level by broad industry group from the BRES data to each of the sub areas.
3. calculates the proportion of existing employment in each broad industry by sub area.
4. applies these proportions to attribute the growth of workforce jobs in the Experian forecasts to each of the sub areas.

Because of limitations in the BRES data which includes rounding for lower statistical returns, we use BRES's 18 broad industry categories to understand the distribution of existing employment in the county. It should be noted that the BRES broad industry groups and the Experian sectors (either 38 detailed sectors which are set out for each of the scenarios underpinning this study, or 12 combined sectors) are classified differently. We use the same approach as set out in Section 5 of the main study (and Appendix H) to reconcile the two datasets. The sub area results are therefore reported based on 11 broad sectors as set out in the table below.

Aggregation of employment groups

Sub area broad sectors (11)	Experian broad sectors (12)	Experian detailed sectors (38)	BRES broad industry groups[36] (18)
Accommodation, Food Services & Recreation	Accommodation, Food Services & Recreation	Accommodation & Food Services Recreation	9 : Accommodation & food services (I) 18 : Arts, entertainment, recreation & other services (R,S,T and U)
Agriculture, Forestry & Fishing	Agriculture, Forestry & Fishing	Agriculture, Forestry & Fishing	1 : Agriculture, forestry & fishing (A)
Construction	Construction	Civil Engineering Construction of Buildings Specialised Construction Activities	4 : Construction (F)
Extraction & Mining & Utilities	Extraction & Mining	Extraction & Mining	2 : Mining, quarrying & utilities (B,D and E)
	Utilities	Utilities	
Finance & Insurance	Finance & Insurance	Finance Insurance & Pensions	11 : Financial & insurance (K)
Information & communication	Information & communication	Computing & Information Services Media Activities Telecoms	10 : Information & communication (J)
Manufacturing	Manufacturing	Chemicals Computer & Electronic Products Food, Drink & Tobacco Fuel Refining Machinery & Equipment Metal Products Other Manufacturing Pharmaceuticals Printing and Reproduction of Recorded Media Rubber, Plastic and Other Non-Metallic Mineral Products Textiles & Clothing Wood & Paper	3 : Manufacturing (C)
Professional & Other Private Services	Professional & Other Private Services	Administrative & Supportive Service Activities Other Private Services Professional Services Real Estate	12 : Property (L) 13 : Professional, scientific & technical (M) 14 : Business administration & support services (N)
Public services	Public services	Education Health Public Administration & Defence Residential Care & Social Work	15 : Public administration & defence (O) 16 : Education (P) 17 : Health (Q)
Transport & Storage	Transport & Storage	Air & Water Transport Land Transport, Storage & Post	8 : Transport & storage (inc postal) (H)
Wholesale & Retail	Wholesale & Retail	Retail Wholesale	5 : Motor trades (Part G) 6 : Wholesale (Part G) 7 : Retail (Part G)

[36] UK SIC sections provided in brackets for each group

For each of the scenarios (business as usual, intermediate and ambitious), these tables set out the growth in workforce jobs between 2014 and 2036 for each of the sub areas.

Business as usual scenario: growth in workforce jobs between 2014-2036 by broad sector for the sub areas

Sub area	Central	North	South East	West
Accommodation, Food Services & Recreation	600	750	840	400
Agriculture, Forestry & Fishing	-440	-670	-50	-610
Construction	240	230	330	110
Extraction & Mining & Utilities	60	80	10	30
Finance & Insurance	0	0	0	0
Information & communication	130	60	90	40
Manufacturing	-340	-350	-830	-220
Professional & Other Private Services	1590	970	1,400	730
Public services	950	750	1,010	530
Transport & Storage	-10	0	-10	0
Wholesale & Retail	-360	-380	-520	-200
Total	**2,400**	**1,400**	**2,300**	**800**

Intermediate growth scenario: growth in workforce jobs between 2014-2036 by broad sector for the sub areas

Sub area	Central	North	South East	West
Accommodation, Food Services & Recreation	1,060	1,330	1,470	700
Agriculture, Forestry & Fishing	-370	-560	-40	-510
Construction	240	230	330	110
Extraction & Mining & Utilities	120	170	20	70
Finance & Insurance	10	0	10	0
Information & communication	170	80	120	60
Manufacturing	-110	-110	-260	-70
Professional & Other Private Services	1,790	1,090	1,560	820
Public services	1,030	820	1,100	580
Transport & Storage	70	60	120	60
Wholesale & Retail	-330	-350	-470	-180
Total	**3,700**	**2,800**	**4,000**	**1,600**

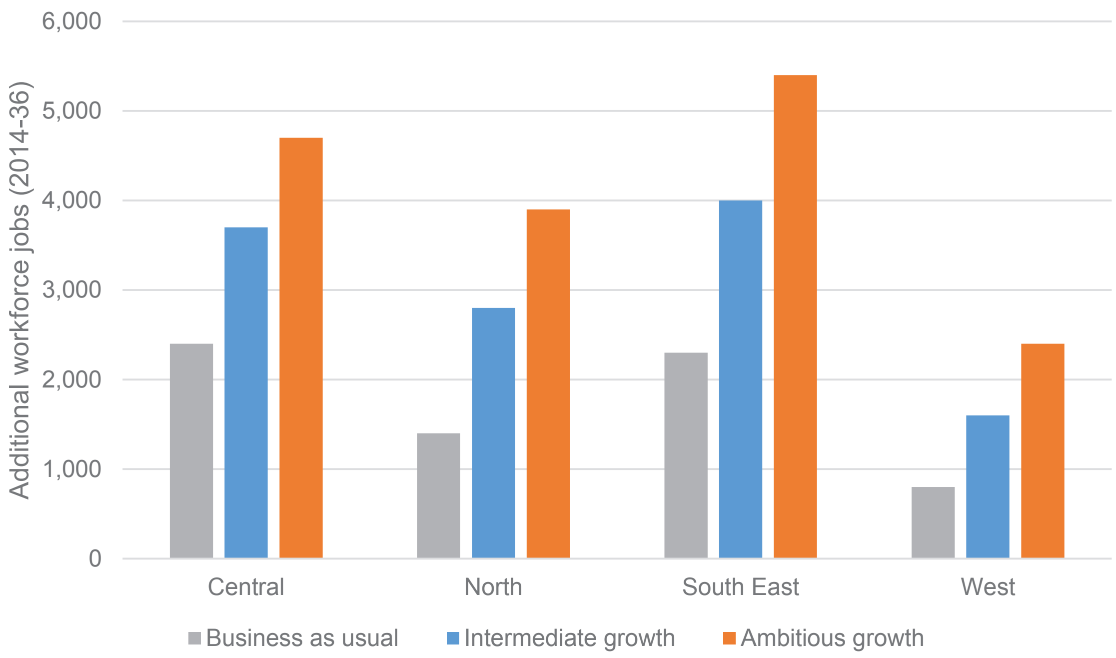
Ambitious growth scenario: growth in workforce jobs between 2014-2036 by broad sector for the sub areas

Sub area	Central	North	South East	West
Accommodation, Food Services & Recreation	1,470	1,830	2,030	970
Agriculture, Forestry & Fishing	-300	-460	-30	-420
Construction	240	230	330	110
Extraction & Mining & Utilities	170	240	30	100
Finance & Insurance	10	10	10	0
Information & communication	170	80	120	60
Manufacturing	130	140	330	90
Professional & Other Private Services	1,940	1,180	1,700	890
Public services	1,060	840	1,140	600

Sub area	Central	North	South East	West
Transport & Storage	150	140	250	140
Wholesale & Retail	-320	-330	-450	-180
Total	**4,700**	**3,900**	**5,400**	**2,400**

The figure below summarises the total growth in workforce jobs between 2014 and 2036 by scenario for each of the sub areas.

Growth in workforce jobs 2014-36, by sub area and growth scenario



This shows that under every scenario, workforce job growth is greatest in the South East sub area, while the West sub area accounts for the smallest proportion of job growth. However, this assumes that job growth will be distributed according to each sub area's existing sector strengths.

J.3 Employment land

The method used to apportion the future demand in terms of floorspace requirement to 2036 to the sub areas applies the share of B class jobs by area and use. Based on the approach outlined above in relation to job growth by sub area, this is translated into demand for floorspace and then land in each of the sub areas, split by office and industrial. This uses the same plot ratio and density assumptions as set out in the report at Appendix I.

The table below provides an indication of the amount of new floorspace required for office and industrial use for each sub area. It should be noted that because the workforce job demand relates to gross demand, these sub area figures are also gross. The main report findings set out net demand i.e. factoring in the effect of any losses or gains of employment land between 2014-16; however, because VOA data sourced at a county level was used, it is not possible to provide equivalent figures at a sub-area level.

Gross employment land requirements for each scenario and sub area 2014-2036 (ha)

Sub area	Central		North		South East		West	
Scenario	**Office**	**Industrial**	**Office**	**Industrial**	**Office**	**Industrial**	**Office**	**Industrial**
Business as usual	1.20	-2.60	0.70	-2.90	1.10	-8.30	0.60	-1.90
Intermediate growth	1.5	6.6	0.9	5.5	1.3	-5.4	0.7	2.9
Ambitious growth	1.8	8.6	1.1	8.6	1.5	12.4	0.8	5.3

Source: County-wide employment land requirements set out at Table 5.2

In broad terms, this shows that office land requirements are relatively evenly spread across the county. The requirements for industrial land are more varied: it is only the ambitious growth scenario that further land is needed in every sub area, and in that scenario, the South East sub area has the highest theoretical need.

However, these figures must be treated with caution: this represents on the long-term demand position and is premised on jobs, and therefore land requirements, being distributed in line with the current distribution of employment in the county. Land supply and market viability, together with planning policy decisions, will be critical influences in how this need is met within the county.

J.4 Housing need

The same overall method has been used to apportion the additional housing required between 2016-2036 to the sub areas. We have used 2011 Census data on dwelling type[37] as the baseline position in terms of the existing distribution across Northumberland. This is the latest available data at MSOA level. By attributing the MSOAs to the appropriate sub areas, it is possible to identify a broad distribution of dwellings which has then been used to apportion the dwelling growth for each scenario to the different sub areas. The table below shows the new housing required for each Scenario by each sub area.

Additional dwellings 2016-2036 for the sub areas

	Central	North	South East	West
Business as usual	*2,360*	*2,180*	*4,560*	*1,090*
Intermediate growth	3,600	3,320	6,960	1,670
Ambitious growth	4,100	3,780	7,930	1,900

Because the business as usual scenario does not deliver enough homes against the Government’s draft standard method outputs of 707-717 dpa, this is only shown indicatively in the table above.

[37] Census 2011: Nomis Key Statistics table KS401EW Dwellings, household spaces and accommodation type

J.5 Summary

The tables below summarise the workforce jobs, employment land requirements and housing needs under the two jobs-led scenarios. For the reasons set out above, we do not provide the business as usual growth here.

Sub area summary

	Central	North	South East	West
Intermediate growth				
Workforce jobs growth (2014-36)	3,700	2,800	4,000	1,600
Gross employment land (2014-36) (ha)	8.1	6.4	-4.1	3.6
Additional dwellings (2016-36)	3,600	3,320	6,960	1,670
Ambitious growth				
Workforce jobs growth (2014-36) (ha)	4,700	3,900	5,400	2,400
Gross employment land (2016-36)	10.4	9.7	13.9	6.1
Additional dwellings (2016-36)	4,100	3,780	7,930	1,900

This data should be used and interpreted with caution because it is not necessarily the case that allocations in the future will follow the existing distribution as the past. For both employment and housing, it is important to recognise that the market plays an important role in determining future locational needs.

APPENDIX K STAKEHOLDER WORKSHOP

Attended by representatives from

- Northumberland County Council
- Newcastle City Council
- North East LEP
- Forestry Commission
- Northumberland Tourism
- Northumberland College
- Harworth Estates
- Northumberland Estates
- Northumbrian Water
- Lugano
- Port of Blyth
- Hexham & Northern Marts
- Arch
- Greater Morpeth Development Trust
- Bradley Hall
- Edwin Thompson
- Gavin Black & Partners
- HTA Real Estate
- Knight Frank
- Fusion PR (UK) Limited
- Northern Farmers & Landowners
- Northumberland Business Network
- Community Action Northumberland
- Federation of Northumberland Development Trusts
- Ethical Partnership

Northumberland Economic growth options workshop

17 January 2018

Peter Brett Associates LLP

Introduction

Paul Johnston

NCC Interim Service Director: Place

Peter Brett Associates LLP

Local Plan and economic strategy

- Northumberland Core Strategy was withdrawn in July 2017 – In part to ensure it can better reflect the aspirations of the Strategic Economic Plan
- The Council is preparing a new full Local Plan and will be refreshing the Economic Strategy later in 2018.
- The Local Plan timetable is set out in the Local Development Scheme (LDS)
- Local Plan initial consultation - **Spring 2018**
- Peter Brett Associates have been commissioned to identify housing and economic growth options for Northumberland which will inform both the Local Plan and economic strategy.
- The draft Local Plan which will be subject to consultation in **summer 2018**.
- The draft Local Plan will identify the quantity and distribution of housing and employment land which is required to deliver the strategy from 2016 to 2036.
- The Council is committed to delivering the Local Plan in accordance with the timetable set out in the LDS with submission in summer 2019.

Economic growth workshop

Background

- The Council supports economic growth
  - It is committed to making its contribution to deliver the aspirations of the North East Strategic Economic Plan
  - It has signed up to a North of Tyne Devolution Deal with Newcastle City Council and North Tyneside Metropolitan Borough Council
  - It has signed up to the Borderlands Initiative (with Scottish Borders and Carlisle Councils) to support economic growth across rural areas.

Purpose of the study

- To provide robust, up to date evidence to support the Local Plan and Economic Strategy.

Purpose of the workshop

- To enable the Council to draw upon the knowledge and expertise of stakeholders across Northumberland.
- To ensure that factors which are unique in the county, and that Northumberland's strengths and opportunities, are appropriately reflected in Northumberland's economic forecasts.

Overview of the study

Peter Brett Associates LLP

Our brief

- Develop growth options for Northumberland
- Future jobs by sector 2016-36
- Two versions
  - 'Policy off'
  - Aspirational (but also realistic)
- Policy implications of each
  - Including employment land allocations
    - For industry, warehousing, offices ('B-class uses')
  - Other job-creating uses
    - Including for 'non-B uses'
    - E.g. tourism, rural economy
  - How many new houses
- Feed into the emerging local plan and economic strategy

Purpose of today's session

- At the beginning of our programme of work
- We haven't fixed any of our growth scenarios yet
  - Other than looking at 'business as usual'
  - And we'll share a bit with you on this
- We want your input to shape the scenarios
- Because you all have interests in and know the area
- This is an informal session
  - We have no fixed ideas (yet)
  - We're here to listen to you
  - Do share your thoughts

What's happening in Northumberland now?

Peter Brett Associates LLP

Northumberland
Northumberland County Council

Our starting point

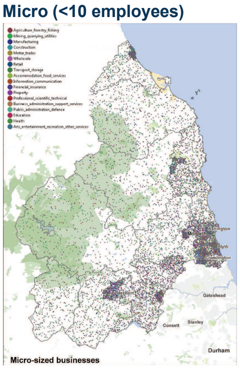
- You've been asked about some of this before, not long ago
- Why are we asking again?
- We *will* reuse evidence supporting the withdrawn plan
  - Including the previous employment studies
    - Land and Premises Demand Study (2015, ES Group) - parts
    - Land Take-Up Study (2017, NCC)
- We aim to fill gaps and update for what has changed
- But we're **not** reviewing the property market
  - So please tell us about it now
  - We'll ask you some questions in a minute
- What needs updating?
  - We're setting aside earlier forecasts / scenarios
  - Partly because pre-Brexit
  - And any studies that relied on these
    - This includes part of the Land and Premises Demand Study
    - Specifically the land requirements identified
- And we also extend the period covered
  - Now 2016-2036

The Northumberland market

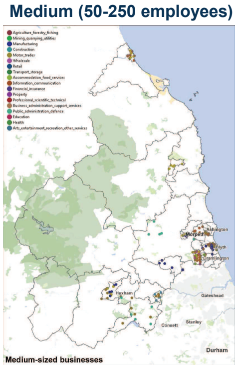
- 1,763 hectares employment land in the county
  - Of which 240 hectares is available for development
- Majority (1,215 hectares) in the south east
  - Close to Tyneside
- Just over 1,000 hectares is in the main towns
- But a significant proportion located outside the main towns
- This reflects the largely rural geography
- And the importance of smaller businesses

Businesses in Northumberland

Micro (<10 employees)

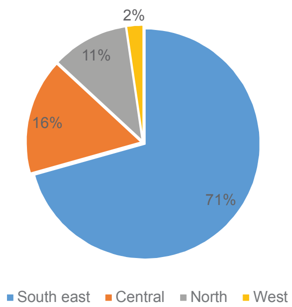


Medium (50-250 employees)



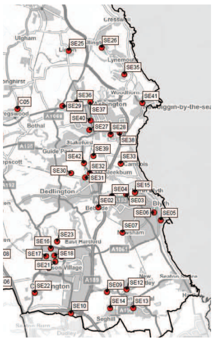
Source: BRES 2016

Employment land across Northumberland

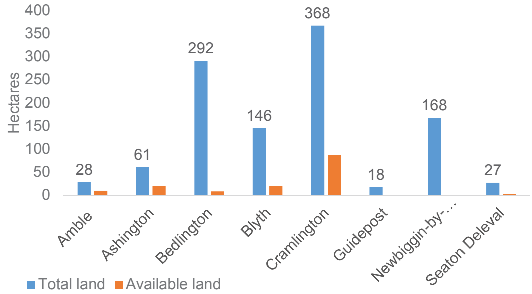


South east Northumberland

- Main towns
  - Amble
  - Ashington
  - Blyth
  - Bedlington
  - Cramlington
- 1,215 hectares employment land
  - 166 hectares available
  - 255 hectares for expansion
- 17.76 hectares employment land developed (2011-16)
- But change is expected
  - Alcan site redevelopment
  - Energy Central

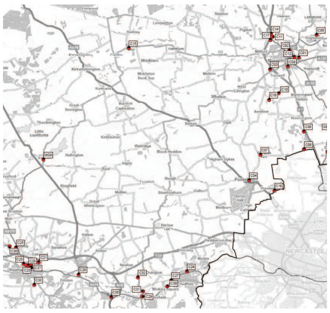


South east Northumberland

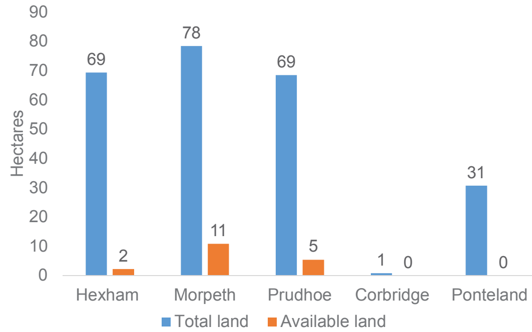


Central Northumberland

- Main towns
  - Hexham
  - Morpeth
  - Ponteland
  - Prudhoe
- 318 hectares employment land
  - 31 hectares available
- Very limited change
- Net loss of employment land 2011-16
  - -5.4 hectares



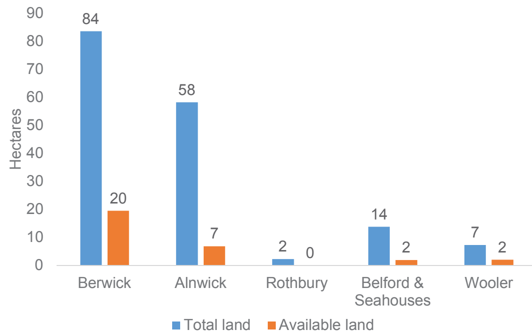
Central Northumberland



North Northumberland

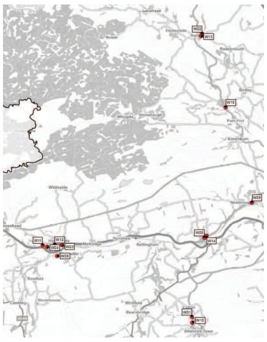
- Main towns
  - Alnwick
  - Berwick-upon-Tweed
- Includes large swathes of national park
- 117 ha employment land
  - 35 hectares available
- Net loss of employment land 2011-16
  - -2.5 hectares

North Northumberland

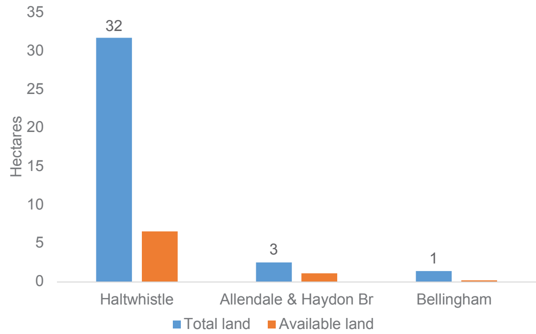


West Northumberland

- Main town
  - Haltwhistle
- Several service centres
- Includes national park and AONB
- Smallest portion of employment land
  - 44 hectares in total
  - 8 hectares available
- Between 2011-16 little change
  - 0.4 hectares land developed



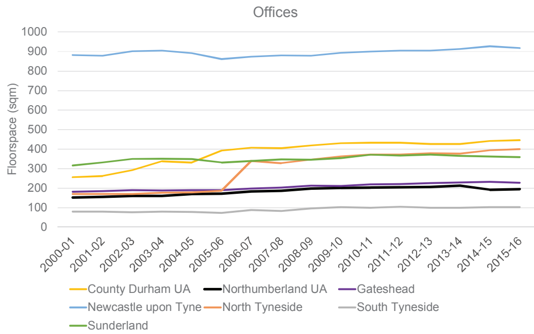
West Northumberland



Northumberland in the North East LEP area

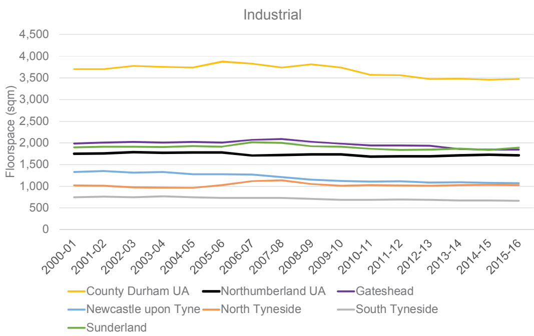
- Offices
  - Newcastle city centre main location in the LEP
  - Little new development since the recession
  - Speculative office development not currently viable
  - But may return in locations on the edge of Tyne and Wear
    - Northumberland Business Park, Ponteland
  - Across the LEP, oversupply of out-of-town space
    - Including Berwick, Alnwick and Cramlington
- For industrial
  - Within Northumberland, Cramlington strongest location
    - But speculative development still not viable
    - May return but subject to competition from Tyneside
  - Enterprise zones haven't had a huge impact (by 2015)

What's happening in the wider North East



Source: VOA 2016

What's happening in the wider North East



Source: VOA 2016

Discussion session 1
The commercial property market

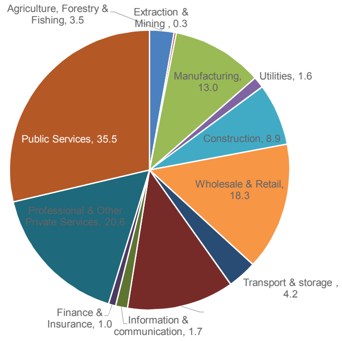
- Who has been taking up business space?
  - i.e. industrial units, workshops, warehousing, offices?
  - Business activity - where from (local or further afield?)
  - Where?
  - Why do they want to be there?
  - What have they been looking for?
  - Can they get it?
  - What's changing?
- Supply and market conditions
  - Is availability (vacancy) high or low?
  - What has been / is being built?
  - Is development viable?

Jobs by sector – now and in the future

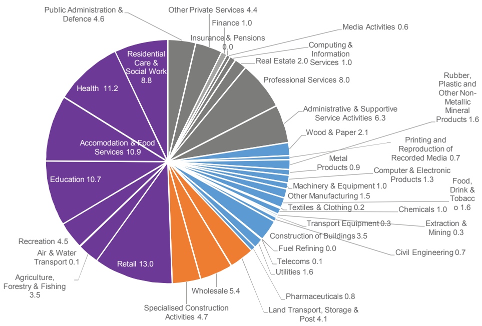
Peter Brett Associates LLP

NORTHUMBERLAND
Northumberland County Council

Jobs (000s) in Northumberland 2016



Jobs (000s) in Northumberland in 2016



Source: Experian 2017

'Business as usual' growth in Northumberland

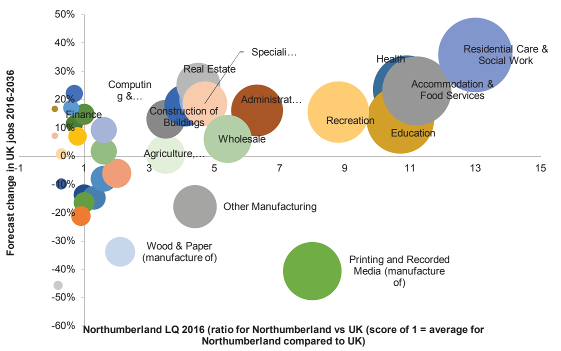
Peter Brett Associates LLP

NORTHUMBERLAND
Northumberland County Council

What would business as usual growth mean?

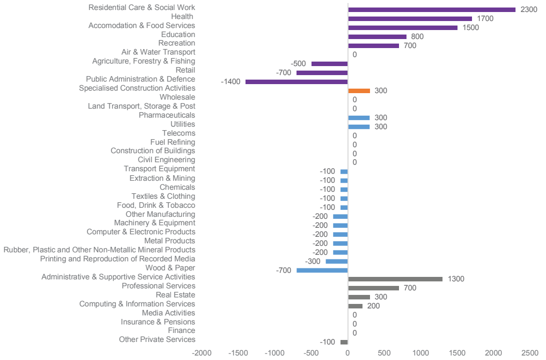
- From a starting point of 124,000 jobs in 2016
- To 129,200 jobs in 2036
  - Very similar to previous peak (129,100 in 2006)
- So over 20 years, an increase of 5,200 jobs
  - 4% increase
- Thinking about planning use classes, this means
  - 1,000 more office jobs (B1a)
  - 1,900 fewer manufacturing jobs (B2)
  - 300 more distribution/storage jobs (B8)
  - 5,800 more jobs in non-B class uses
- What does this mean for sectors?
  - Linked to what might happen in the UK as a whole

How does Northumberland compare to the UK?



Source: Experian 2017

Growth in Northumberland 2016-36 by sector



Source: Experian 2017

Looking at alternative scenarios

Peter Brett Associates LLP

NORTHUMBERLAND
Northumberland County Council

Developing alternative scenarios

- Taking cues from the North East LEP
  - Strategic Economic Plan (January 2017)
- They set out various targets including
  - 100,000 additional jobs between 2014-2024
  - 70% of new jobs higher skilled, more productive, better quality
- For the LEP area as a whole
- The following sectors are identified as areas of growth
  - Passenger vehicle manufacture
  - Sub-sea and offshore technology
  - Life sciences and health
  - Creative, digital software and technology-based services

Relating this to Northumberland

- Remember these figures are for the LEP as a whole
  - LEP is a polycentric region
  - Economic activity and employment spread widely
  - But with Newcastle at its core
- We have to think about how much might relate to Northumberland
- And in which sectors
- Initial view suggests Northumberland has strengths in
  - Life sciences
  - Renewable energy
  - Logistics
  - Advanced manufacturing
- But this is at a headline job numbers level
  - We need to understand what this might mean on the ground
  - In market terms and spatially

And we also need to think about infrastructure

- Some improvements/investments have happened
  - Morpeth bypass
- And are on-going
  - Broadband upgrades
- Some projects haven't started yet or don't have funding
  - A1 dualling (Morpeth to Ellingham)
  - Northumberland rail line reopening to passengers
- These could open up different parts of the county to investment
- As well as impacting on the market geography

Our suggested approach

- For the LEP as a whole
  - Take the extra jobs over business as usual growth
  - Assume that they are only in the growth sectors
    - Subsea and off-shore
    - Life sciences
    - Passenger vehicle manufacture
    - Creative technology-based services
  - Split extra jobs based on current share of those sectors
  - So we'll have an additional jobs in each sector
    - At the LEP level
- Then break this down to the Northumberland level
  - The sectors which are more relevant to the county
  - To work out the share of additional jobs to the county

Discussion session 2
Implications for the sectors

Peter Brett Associates LLP

Northumberland County Council

Sector-based break out discussions

- Topics
  - Rural and tourist economy
  - Port-related activities
  - Life sciences and health
  - Town centres and business parks

Break out discussion

- What are Northumberland good at?
  - What are the main business activities?
  - What kinds of businesses are growing?
  - Or have potential to grow?
  - What places are growing?
  - Or have potential to grow?
- What are Northumberland's opportunities?
  - What could they be good at in the future?
- What are the barriers to growth?
  - More / different development sites?
    - For what kinds of businesses?
    - Where?
  - More /better infrastructure?
    - What?
    - Where
  - What could be done to unlock growth?
    - Potential for inward investment?
    - Public sector intervention?

Discussion notes

What is Northumberland good at? What are the main business activities?

Food and agricultural sectors - not just farming

Tourism key sector – view that the contribution of tourism to the economy is underestimated

'Energy Central' has been a successful rebranding, concentrating on advanced manufacturing.

Offshore energy, wind, oil and gas / 'subsea' and decommissioning of sea related infrastructure.

What kinds of businesses are growing? Or have potential to grow?

Potential for further growth in Northumberland of Energy Central, the pharmaceuticals and life sciences

Recent take-up of office space by service providers (e.g. recruitment consultancies, general service offices, veterinary clinics, gymnasiums and physiotherapy)

SEP growth sectors should not be applied to Northumberland blindly without further thought: tourism was mentioned again as a Northumberland-specific growth sector. Northumberland is an atypical part of the LEP

Port-related activities also growing

What places are growing? Or have potential to grow?

Transport for the North Spatial Vision has just been released. Within Northumberland, it places emphasis on the Airport, Ashington, the Port of Blyth and Morpeth in terms of future communications networks. The significance of this (e.g. the absence of Cramlington from that list) needs to be considered carefully. The continuing importance of the main north-south and east-west transport corridors is also emphasised.

Important not to consider boundaries too much. For example the 'Quorum' and 'Cobalt' office areas in N. Tyneside have a strong draw on Northumberland. Similarly, Northumberland may have a future role in accommodating workspace as North Tyneside becomes 'filled up'.

Former Alcan Site at Lynemouth is seeing a lot of interest from small businesses who want a place to start, but with the capacity to grow/develop - office/warehouse space with outside space desirable, but with flexible contracts.

Many land and waterfront opportunities for port related uses still remain to be fully exploited but there is a great deal of interest, including in the former Blyth Power Station site.

Hexham noted as a strong office market area (some workspace being delivered, including shared working spaces) but in most centres, land is constrained.

What are Northumberland's opportunities? What could they be good at in the future?

Freeing up agricultural land assets (farms) to enable tourism and recreation.

Developing a higher-end visitor accommodation offer – oversupplied in self-catering etc.

Unmet demand around airport and north of the Tyneside conurbation – office demand in Northumberland suppressed for a long time due to Quorum and Cobalt developments but now growing. In the future, unmet manufacturing needs may also spill over in Northumberland

A1 dualling likely to improve accessibility and open up some areas to business growth

Future jobs may have to reflect and cater for the ageing population and mobility issues

What are the barriers to growth?

- **More / different development sites?**
- **For what kinds of businesses? Where?**
- **More /better infrastructure? What? Where?**

Lack of space for short-term business needs.

No speculative building of offices or workshops, although some refurbishments have been successful in attracting new users. One factor is that rental levels have not gone up so new stock not viable.

Residential value of land is placing constraints on retail opportunities in popular towns (i.e. Morpeth).

Need to consider how businesses will be impacted by some infrastructure improvement e.g. some concern expressed that the reopening of the Ashington, Blyth and Tyne rail line to passengers could have an adverse impact on the ability of freight rail traffic to access the port via the branch line that runs from that line.

What could be done to unlock growth? Potential for inward investment? Public sector intervention?

Broadband and mobile coverage to be key to the successful blossoming of business away from dedicated business areas. At present this was considered to be inadequate and patchy.

Rural Growth Network hubs as a way of keeping people (and their spending) local – benefits in terms of sharing information, networking, reducing social isolation associated with home working. For small businesses, often easier and cheaper to work from home and not take on the cost and liability of rent/business rates.