



Northumberland
County Council

Northumberland Local Plan
Publication Draft Plan (Regulation 19)

Growth Strategy
Technical Paper

December 2018

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1. Introduction

- 1.1. The Northumberland Local Plan Publication Draft for Regulation 19 sets out a strategy for growing the Northumberland economy and boosting employment. The Plan's policies set out the minimum number of homes that will be required to support the level of job growth proposed, and protects land for employment uses, and for housing.
- 1.2. This paper, frames Northumberland's Growth Strategy in the context of the national policies, regional and sub-regional strategies and programmes, and provides a narrative and rationale for the approach taken. It does not provide new evidence to that which is available elsewhere, but is intended to provide the reader with a better understanding of the Growth Strategy, identifies and signposts the reader key evidence base documents which include more details on key matters.

2. Context

Economy

- 2.1. The National Planning Policy Framework (NPPF) indicates that planning policies should help create the conditions in which businesses can invest, expand and adapt. It indicates that they should address the needs of specific sectors, and enable economic development in rural areas. The aim of the Government's Industrial Strategy¹ is to boost productivity. It identifies four Grand Challenges including maximising the advantages of the global shift to Clean Growth through the development, manufacture and use of low carbon technologies, systems and services.
- 2.2. The North East Strategic Economic Plan (NESEP)² sets the strategic direction for the north east economy. It aims to increase the number of jobs in the North East economy by 100,000 by 2024, and ensure that 70% of the jobs growth is in better jobs. The NESEP identifies opportunities for growth in a number of sectors including the advanced manufacturing of medicines, and renewable and low-carbon energy.
- 2.3. In November 2018, a devolution deal was agreed between the North of Tyne Combined Authority (NTCA) and the Government, including the provision of £600 million of extra money over 30 years to invest in inclusive growth. The North of Tyne (NoT) vision document³ identifies much of

¹ Industrial Strategy: Building a Britain fit for the future (HM Government, 2017)

² More and better jobs: The North East Strategic Economic Plan (NESEP, 2017)

³ Home of Ambition, North of Tyne: The vision The Vision for the North of Tyne Combined Authority (Newcastle City Council, Northumberland County Council, North Tyneside Council 2018)

southeast Northumberland, including Morpeth, as part of an Industry Innovation Zone and the rest of the county as a Rural Scale Up area. Key priorities include supporting the rural economy and becoming a national rural scale-up exemplar. Complementary to this, the Council is pursuing through a Borderlands Initiative an Inclusive Growth Deal to support economic growth in the area that straddles the England - Scotland border⁴. The Borderlands Proposition⁵ identifies five growth corridors, three of which run through Northumberland.

- 2.4. The Council's new Economic Strategy (2018) identifies six priorities for delivery, including delivering industrial growth. Within this priority, it focuses on six areas where there is a market opportunity to deliver investment, to drive up productivity and growth: Energy, Offshore, and Subsea, Health and Life Sciences, Advanced Manufacturing, Tourism and Culture, Agri Tech, and Rural Scale Up.

Housing

- 2.5. The NPPF reinforces the Government's objective to significantly boost the supply of homes, and the requirement for sufficient land to come forward where needed to meet the needs of groups with specific housing requirements. It requires local planning authorities to identify a minimum housing requirement using a standardised methodology⁶ (unless exceptional circumstances justify an alternative approach), and supports the provision of housing in rural areas to meet local needs, and to enhance and maintain the vitality of rural communities.
- 2.6. One of the priorities in the North of Tyne vision is to increase the rate of homebuilding and to raise quality. While housing delivery in Northumberland has been strong in recent years, it is envisioned that the focus in the County will be providing extra-care, and affordable housing, including in rural areas where required.

3. Key evidence

- 3.1. A number of key pieces of evidence underpin the Local Plan growth strategy. These reports are signposted in this sections, and elements within them considered in more depth later in this paper.

⁴ The Borderlands Initiative includes Carlisle City Council, Cumbria County Council, Dumfries and Galloway Council, Northumberland County Council and Scottish Borders Council.

⁵ The Borderlands Inclusive Growth Proposition, (Borderlands Partnership,2017)

⁶ The Government recently consulted on a proposed short term change to the published standard methodology set out in Planning Practice Guidance, and is proposing to change the methodology in the longer term.

[Housing and economic growth options \(Peter Brett Associates, 2018\)](#) - This report sets out a number of job growth options for Northumberland, and considers the quantum of dedicated employment land and housing required to support each scenario. The level of job growth and housing in the Growth Strategy is aligned with the ambitious growth scenario presented.

[Employment land and premises demand study \(ES Group, 2015\)](#) - This report reviews the market demand for land and premises for industrial, office and warehouse development across Northumberland. While it considers that there is sufficient employment land in most parts of the County, it identifies a need for additional employment land in some locations, including in towns constrained by the designated Green Belt.

[Northumberland Employment Land Review \(NLP, 2011\)](#) - This report assesses the demand and supply of land for employment use in the County. While parts of the study have been superseded by the above study, this report assesses the suitability of sites for employment uses.

[Employment sites schedule 2016/17 \(NCC, March 2018\)](#) - This report which is updated annually indicates how much land is available on employment sites across the County. It is accompanied by an interactive [mapping tool](#) and an [analysis report](#). Together they give a clear understanding of where available land is located, across the County and more specifically within individual settlements and industrial estates. This helps justify the quantum of employment land proposed to be retained and provided.

[Strategic Housing Land Availability Assessment \(NCC, Dec 2018\)](#) - This report sets out the quantum of deliverable and developable land to accommodate the housing requirement set out in the plan. It considers individual sites and their ability to accommodate homes where they are required.

[Strategic Housing Market Assessment Partial Update \(Arc4, June 2018\)](#) - This report considers the housing mix required to meet the needs of different population groups, including the need for affordable homes, and accommodation for older people. While the quantum of housing proposed in the plan is informed by the ambitious growth scenario in the above PBA report, meeting the needs identified in the SHMA reinforces the justification to require housing at a level in excess of that derived from the standard methodology.

4. Alternative Growth Options

- 4.1. The Growth Options report, known as “the PBA report” identified in Paragraph 3.1 considered three growth options for Northumberland: a business as usual scenario, an intermediate jobs-led scenario and an ambitious growth scenario. These scenarios were prepared by Experian using an integrated economic model.
- 4.2. In developing the jobs-led scenarios, the Experian model considers the NELEP as a whole, not just Northumberland in isolation. The remainder of the above-trend job growth associated with the NESEP across the rest of the NELEP area is factored in so that levels of commuting, and migration across the LEP as a whole, remain realistic and consistent.
- 4.3. While the rates of migration, commuting and unemployment are calculated internally in the Experian model, Experian uses locally specific economic activity rates derived from the Annual Population Survey (APS). However, the economic activity rates in a local economy are ‘dynamic’ and flex in line with market demand. Rates therefore depend on the demand for jobs and the supply of labour⁷.
- 4.4. The Experian model⁸:
 - Makes trend-driven demographic projections to show how population would change if earlier demographic trends continued in the future. In the Northumberland scenarios the 2014-based population projections represent the starting point for the forecast. This information is used to calculate labour supply because economic activity rates vary between different age groups, and
 - Tests these projections against future job growth (labour demand) to see if they would provide enough workers (labour supply) to meet demand, and
 - If insufficient labour is identified, forecasts the additional migration, over and above past trends, that would be needed to close the gap between supply and demand.

⁷ The Experian economic activity rates differ from some other economic activity rates, for example those calculated by the Office for Budget Responsibility (OBR) which are generally lower. The Experian jobs output is only valid providing all the other variables remain as per Experian. This includes the size of the resident population and the economic activity rate applied. Should the size of the population increase, the demand for jobs may change. Experian have confirmed that the rates used are reasonable and sound.

⁸ The Experian Data Guide in Appendix A provides more details on the the workings of the integrated economic model.

- 4.5. In the business as usual scenario, the model assumes population change in line with the 2014-based population projections.
- 4.6. The jobs-led scenarios recognise the aspiration of the NESEP to deliver an additional 100,000 jobs across the North East Local Enterprise Partnership (NELEP) area from 2014-24. This above trend growth represents the starting point for developing alternative growth scenarios. The intermediate jobs-led scenario reflects half of the above business as usual level, forecast by the ambitious growth scenario. The PBA report sets out in detail a 4 stage approach to developing these scenarios. Elements of the preferred growth option, the ambitious growth scenario, are considered further in the Section 5 of this paper.
- 4.7. Given that the period the NESEP covers starts from 2014, the scenarios prepared by PBA cover the period 2014-36. However, key outputs from the three scenarios are also set out in Table 1 for the plan period 2016-36, together with local housing need numbers calculated using the standard methodology, to provide context.

Table 1: Employment and housing growth options

Growth Scenario	Additional workplace jobs (2014-36)	Annual average additional workplace jobs 2014-36	Additional workplace jobs over the plan period (2016-36)	Net additional dwellings 2016-36	Annual average net additional dwellings 2016-36
Baseline 'business as usual' scenario informed by the 2014-based population projections	6,900	314 pa	6,280	10,186	509 pa
Local housing need standard methodology (using 2016-based household projections)	N/A	N/A	N/A	11,160	558 pa
Intermediate jobs-led scenario	12,100	550 pa	11,000	15,533	777 pa
Ambitious jobs-led scenario	16,500	750 pa	15,000	17,708	885 pa

- 4.8. As indicated above, the ambitious jobs-led scenario is the scenario which has informed the level of job growth and housing that the Local Plan proposes to support and deliver. Elements of the alternative scenarios are

now considered briefly, while the rationale for the preferred scenario is considered in more detail in the following sections, together with further explanation of how the number of jobs is aligned with dwellings.

Business as usual scenario

- 4.9. The business as usual scenario indicates that workplace jobs will increase over the plan period at circa 314 per annum, and that full time equivalent employment (FTE) will increase by 250 per annum. In this forecast labour supply is not constrained (i.e. there are sufficient people to fill the forecast number of jobs) but there is very little slack in the labour market. While an increase in jobs is forecast, the labour market is finely balanced, primarily because of the ageing population, and a falling employment rate. The labour force is forecast to shrink by 3,900 people over the period 2014-36. In this scenario, the additional jobs will largely be filled by a reduction in overall net out-commuting, a fall in unemployment and increases in economic activity.
- 4.10. While the forecast changes in these variables represent positive outcomes, because of the squeeze in the labour market and the number of dwellings required to support this number of jobs is less than the minimum local housing need requirement as indicated by the standard methodology, this scenario is not considered to represent an appropriate growth strategy for the County. It is considered that additional growth is required.
- 4.11. To plan for growth in accordance with the business as usual scenario, or at a rate aligned with the population projections, has the potential to have a number of adverse effects including:
- A reduction in the wealth created and retained within the county;
 - Reduced local expenditure, reducing incomes to local businesses and threatening job losses;
 - Those with marketable or transferrable skills may move elsewhere to find employment, further or higher education or other training opportunities;
 - The county as a whole could become less competitive in increasingly competitive markets;
 - A reduction in wealth creation may be accompanied by reduced investment in the buildings and spaces;

- This in turn may impact on the ability to attract new investment in the economy and attract high skilled workers;
- A lack of choice in the housing market, inhibiting the ability of existing households to secure the homes they need, and attract a working age population.

Intermediate jobs-led scenario

- 4.12. The intermediate jobs-led scenario shows that workplace jobs will increase over the plan period by circa 550 per annum, and FTE jobs will increase by circa 414 per annum. In this forecast labour supply is constrained, so additional jobs are filled in part by additional migration into the County to increase the size of the workforce. Changes to net out-commuting, unemployment and economic activity are similar to the business as usual scenario.
- 4.13. It is considered that a Growth Strategy in accordance with this scenario, would have a positive effect, and help to counter some of the adverse effects identified above. However, it is not considered that planning for this level of growth reflects the economic ambitions of the Council, reflected in the NESEP, the NoT devolution deal, the Borderlands Initiative or the Council's new Economic Strategy. It is not considered that the level of housing needed to support this scenario will deliver sufficient choice in the housing market, or allow for the delivery of affordable homes and homes for the increasingly ageing population.

5. The Local Plan Development Strategy - Ambitious Growth

- 5.1. The level of job growth, and the minimum housing requirement in the Local Plan is aligned with the ambitious jobs-led scenario. This scenario sees workforce jobs increase by circa 750 per annum and FTE jobs by circa 568 per annum. In this scenario, like the intermediate scenario additional jobs are filled in part by additional migration into the County to increase the size of the workforce, while changes to net out-commuting, unemployment and economic activity are broadly similar to the business as usual scenario. A slightly lower reduction in out-commuting is identified however, as a result of additional above trend growth associated with the SEP's ambitions across the rest of the LEP area.
- 5.2. The overall level of job growth in the ambitious growth scenario is considered to be ambitious yet realistic. Northumberland's proportion of job growth over the period 2014-24 recognises that the Northumberland economy does not work in isolation, and is intrinsically linked to the regional and sub-regional economy. While Northumberland has strong economic

ambitions, these ambitions are replicated across the wider NELEP area, as identified by the NESEP. While the number of jobs across the NELEP area has increased over the last 20 years, Northumberland's share of the jobs across the area has decreased. Given the economic ambitions of other NELEP authorities it is considered reasonable to forecast that this trend will continue.

- 5.3. While the overall level of job growth reflects Northumberland's share of the NESEP job growth target, there are elements of the Northumberland economy which are somewhat different to that of the wider NELEP area. While there is inevitably an element of competition across the NELEP, the roles of each local authority in delivering the overall number of jobs are considered to be, on the whole complementary.
- 5.4. For example, Northumberland cannot compete with Newcastle City Centre in terms of a central location for high end retail, offices and professional services, while the scale of office developments in North Tyneside, including those at Cobolt and Quorum Business Parks may not be appropriate in much of Northumberland. Advantages that Northumberland have, include the availability of land for development, access to a deep water port at Blyth, the Catapult Offshore Renewable Energy facility, and a rural offer which is not replicated anywhere else in the northeast (except perhaps in parts of Durham). This rurality not only means that tourism and land based industries are represented more strongly in Northumberland, a countryside location provides an alternative offer to businesses, to that offered in more urban areas.
- 5.5. While a number of these differences are identified in the NESEP, it is important that Northumberland's economic forecasts reflect the County's strengths, which may not be fully reflected in the overall NESEP. The NoT Devolution Deal, the Borderlands Initiative and the Council's Economic Strategy identify strengths in the Northumberland economy and opportunities to grow. These strengths largely reflect those identified by stakeholders at an economic growth workshop, undertaken to inform the PBA report.
- 5.6. In the jobs-led scenarios, adjustments were made to the business as usual scenario, to reflect expected above trend growth in some economic sectors, and to reflect committed or future investment in infrastructure (e.g. the dualling of the A1 and reintroduction of rail passenger services on the Northumberland Line) and policy interventions (e.g. a Local Development Order covering parts of the Blyth area, enterprise zones and emerging local plan policies to support growth).

5.7. In the ambitious jobs-led scenario, manufacturing sectors account for approximately 11% of additional jobs above the business as usual scenario, transport, storage and distribution sectors 26%, and service sectors 64%. The service sector jobs may be delivered away from dedicated employment areas - e.g. in town centres, in the countryside, at tourist attractions and in home-based businesses. The growth in the level of service sector jobs is particularly relevant when the job forecasts are translated into employment land requirements.

6. Employment land requirements

6.1. The PBA report sets out how the number of jobs generated through the ambitious growth scenario translates into employment land requirements. In the ambitious jobs scenario, 70% of new jobs are forecast to be in non-B class land uses, with only 30% requiring dedicated employment land. In purely a countywide quantitative basis, the study identifies demand for only circa 40 hectares of employment land, with approximately 5 hectares of this for offices and 35 hectares for industrial uses.

6.2. The Council's Growth Strategy, proposes to protect significantly more land than this for employment uses. This is to take into account different job markets, locations, sizes of site and the quality of provision; factors not considered in the PBA report.

6.3. The Plan proposes to take forward a portfolio of available employment land totalling around **242 ha**, comprising **201 ha** of general employment land and **41 ha** on strategic employment sites. Included within the 201 ha of general employment land is the new allocation of **78 ha** to meet key requirements in certain locations.

6.4. Factors that have informed the quantum of employment land to be protected in the plan include:

- There are strategic employment needs that require their own, dedicated land supply;
- The importance of maintaining a wide portfolio of sites and premises at all times and in all areas - the geography of the County necessitates extra flexibility in the choice of land;
- The development of employment land does not always result in an increase in jobs, such as when a factory expands onto adjacent land simply to accommodate additional automation;
- Some land may be expected to be lost to non-employment uses, often for sound planning reasons, even where the land supply situation would suggest retaining land in employment use;

- Serviced sites in some areas which have not been taken up would not be suitable for other uses, being in the heart of serviced employment areas, and deallocation might threaten any future industrial / commercial investment at the site or even the continued existence of a business at the site;
 - Some specific cases require a policy intervention, for example, the closure of the former Alcan smelter site, affecting an area that strongly relied on the plant for its employment; and
 - Growth could be greater than current projections. For example, a major inward investment could result in unexpected uptakes of land.
- 6.5. In order to support economic growth across the County, it is considered essential to have a range of sites available to support job generation in the Industry Innovation Zone identified in the North of Tyne Devolution Deal, and to support rural growth in the Rural Scale Up area, and the Borderlands Initiative.
- 6.6. South-East Northumberland, with its tight-knit pattern of settlements allows greater scope for land in one town to serve another and the main factor that takes over and dictates supply here more strategic, of providing for the needs of a large working age population and a dynamic employment base.
- 6.7. The Local Plan identifies two strategic sites which are deliberately limited to specific types and forms of development:
- Blyth Estuary Strategic Site has a key role in providing for a range of low carbon, renewable energy, offshore and port-related industries; and
 - West Hartford, Cramlington, is available for large single users and smaller, 'prestige' developments needing a high quality setting.
- 6.8. Given that the SE Northumberland / Morpeth area is part of the Industry Innovation Zone, within the North of Tyne area, a number of other sites should also be regarded as strategic, including:
- Enterprise Zone Round 2 sites at:
- Ashwood Business Park, Ashington,
 - Fairmoor, Morpeth, and
 - Ramparts Business Park, Berwick-upon-Tweed, and
- Other sites on the A189, including:

- Northumberland Business Park, Cramlington (a successful office location);
- Wansbeck Business Park, Ashington (a successful regeneration project attracting new industry to this part of the County), and
- Lynefield Park, Lynemouth (new employment land regenerated from the former aluminium smelter site, which has already been the subject of much market interest).

- 6.9. The above sites, account about 60 percent of all the available employment land on sites that are proposed for allocation in the Local Plan.
- 6.10. The Employment land and premises demand study (ES Group, 2015) identified a difficulty in defining market areas, as they vary significantly depending on the size of the business, its customer base, the type of activity, and the economic sector in which they operate. It concluded that towns should be treated as individual market areas, as a starting point, with service centres and smaller settlements grouped in some cases.
- 6.11. Therefore, employment land supply has been considered in relation to towns and the hinterlands that they serve. Clearly employment markets can and will stretch across wider areas; but it is important to ensure an adequate supply of employment land in each of the rural market towns.
- 6.12. To this end, the Employment land and premises demand study (2015) concluded that there is a need for additional dedicated employment land in some locations. In responding to the market, the Local Plan allocates new employment land in the areas of Hexham, Ponteland and Prudhoe⁹. The new allocations in these settlements total some 17.5 hectares. An additional 8.5 hectares of land, in Morpeth and Ponteland is safeguarded for employment use beyond the plan period.
- 6.13. Details of the County's employment sites, including their location, and quantum of land available on them can be found in the Council's Employment Sites Schedule, together with its interactive map and analysis report.

⁹ The study also identified a need for additional employment land in Alnwick. No new employment is proposed in the Local Plan as additional land is identified in the Made Alnwick and Denwick Neighbourhood Plan.

7. Housing requirements

- 7.1. In the jobs led scenarios, the additional population needed to meet the jobs demand is calculated. In order to calculate the number of additional homes required to support the level of job growth:
- The forecast change in the non-household population is calculated from the increased population, and extracted from the calculation;
 - The household formation or representative rates from the 2014-based sub-national household projections are multiplied by the remaining household population¹⁰ to identify the change in the number of households;
 - It is assumed that the vacancy rate in the housing stock from the 2011 Census will remain constant over the forecast period. This is applied to the number of households to calculate the number of dwellings required.
 - The economic forecast is done over the period 2014-36. The net number of dwelling completions during 2014-16, is subtracted from the total to give a dwelling requirement over the plan period 2016-36.
- 7.2. The ambitious jobs-led scenario identifies a need for 17,708 dwellings over the plan period, equating to circa 885 per annum. This level of housing represents almost a 60% uplift from the minimum local housing need for Northumberland calculated using the standard methodology (558 per annum).¹¹
- 7.3. As set out elsewhere in this paper, it is considered appropriate to plan for job growth beyond the business as usual scenario (509 dwellings per annum) set out in Table 1. The minimum local housing need number is only marginally higher than this number, and is therefore not considered appropriate.
- 7.4. The Strategic Housing Market Assessment Partial Update report identifies an imbalance in the supply of affordable homes, and a need for homes to meet the needs of older people. It also identifies where there are mismatches between the types of homes provided by the existing housing stock, and the types of homes that are in demand. If housing was delivered

¹⁰ Further details regarding household representative rates can be found at the Office for National Statistics (ONS) website.

¹¹ If the 2014-based household projections are used for calculating local housing need, as proposed in the short term in the Government's recent consultation, the local housing need for Northumberland over the plan period would be 717 dwellings per annum. The housing requirement aligned with the ambitious jobs-led growth scenario represents a 23% uplift to this figure.

at a level comparable with the local housing need figure, it is considered that there is a significant risk that the homes required will not be delivered.

- 7.5. While the 885 per annum figure is significantly less than the amount of housing delivered in Northumberland over the first two years of the plan period¹², delivery in those years was considered to be exceptional. The number proposed is a minimum, and reflects the historic rate of delivery in the preceding 10 year period, covering both periods of growth, and recession.

8. Delivering the growth scenario

Employment

- 8.1. There has been a significant level of development and interest in a number of Northumberland's key employment sites¹³, and programmes in place to support their development, suggesting that employment ambitions can be realised:
- **Blyth Estuary Strategic Employment Area** - Energy Central (Enterprise Zones – Round 1) - Energy Central is a major development opportunity which combines access to expansive land development opportunities combined with deepwater access to open sea and associated port services provided by the Port of Blyth. Energy Central is a hub for national and regional electrical distribution with National Grid, Northern Power Grid and EDF Energy having active operations on the site as well as the Norway UK Interconnector which is the biggest project of this type in the world. Advance Northumberland, working in partnership with the Port of Blyth, have a selection of prime development opportunities which have Enterprise Zone status across four sites; East Sleekburn, Bates and Wimbourne Quay, Commissioners Quay and Dun Cow Quay. Local Development Orders provide for fast tracked planning for specified developments at East Sleekburn, and Bates and Wimbourne Quay. Market demand for Energy Central is strong. Advance Northumberland has undertaken significant 'de-risking' works at East Sleekburn and has designed a programme of reclamation and remediation, including modifications to the ash barge dock. These works will ensure the site is ready for private sector investment and future development.

¹² In 2016-17, 1,531 net additional homes were delivered, and in 2017-18, 1,376.

¹³ Information obtained from Arch, now relaunched as Advance Northumberland the County Council owned economic regeneration company.

- **West Hartford, Cramlington** - Provides an opportunity for a large single user and smaller, 'prestige' developments needing a high quality setting. Well located within the Industry Innovation Zone, the site has good access to the A189 spine road, the A19 and A1.
- **Ashwood Business Park, Ashington** (Enterprise Zone – Round 2) - Ashwood Business Park is strategically located within South East Northumberland with excellent connectivity including direct access to A1 (M) and A19 through the A189 arterial road. It offers good access to Newcastle International Airport and the Port of Blyth. The park was developed in 2003 and already houses Europe's most advanced paint and coatings production plant (Akzo Nobel, who have recently invested £120m, employing up to 130 people) as well the HQ for a major housing organisation (Bernica). Given its Enterprise Zone status, businesses benefit from Enhanced Capital Allowances on plant and machinery since April 2017. The site is proposed for office and industrial facilities for advanced manufacturing, process and pharmaceutical activities. Ashwood Business Park, Ashington, has been the subject of a number of enquiries from both indigenous and overseas based companies.
- **Fairmoor, Morpeth** (Enterprise Zone - Round 2) - Fairmoor is a greenfield development site linked to wider economic development in northern Morpeth. The site will benefit from its strategic location close to the A1 and the new Morpeth Northern Bypass. The site is intended to support knowledge intensive growth drawing on the high-skilled population of Morpeth and the surrounding area by developing an innovation park with new office, light industrial and incubator premises.
- **Ramparts Business Park, Berwick** (Enterprise Zone – Round 2) - Expanding on the existing Ramparts Business Park the site will improve the provision of business premises in Berwick. This will particularly focus on improving the quality of manufacturing and industrial premises building on these existing economic strengths in Berwick. The site is well located mid-way between Newcastle and Edinburgh close to the A1 and Berwick railway station. The park benefits from Enterprise Zone status for business rate discount allowances from April 2017. All previously vacant office buildings are now fully let or under offer.
- **Lynfield Park, Lynemouth** - Lynfield Park, the site of the former Alcan smelter, occupies a strategic location, in close proximity to the coastal transport corridor comprising the A189 linking to the A1 and A19 dual carriageway which stretches south from the site past Blyth

Cramlington Newcastle, Sunderland and Teesside. The Site's proximity to the North Sea provides a gateway to marine related industries and activities. It is located within an area that has an established track record for advanced manufacturing and process technologies. Owned and promoted by Harworth Estates which has a specialism of remediating and restoring brownfield sites across the North of England. A number of units on the site are already occupied by industrial users, who are expected to remain on the site in the longer term alongside new occupiers to be attracted to the area. Current occupancy as well as enquiries indicates that there is current and growing demand for a range of uses and accommodation.

- **Northumberland Business Park, Cramlington** - Northumberland Business Park is adjacent to the A19, which provides direct access to the A1, with good linkages with Newcastle City Centre, the rest of the region and nationally. A range of organisations occupy a number of the self-contained detached and semi detached buildings.
- **Wansbeck Business Park, Ashington** - Wansbeck Business Park offers a combination of offices, industrial and trade warehousing accommodation. Located in South East Northumberland, the park is home to a number of major international and local companies, attracted to the quality of the park and superior access to the A189 arterial road which links to the A19, A1 road network. The Park has excellent links to Newcastle International Airport and the Port of Blyth.

- 8.2. Other developments in the pipeline to generate employment on dedicated sites include Coquet Enterprise Park, Amble - A hotel and retail development is proposed to support circa 250 jobs¹⁴.
- 8.3. As well as policies in the plan to allocate land for employment purposes, which will be key to delivering industrial and office based jobs on dedicated sites, the Local Plan includes a number of policies which will help deliver the the economic objectives. A significant amount of land that is allocated, is so to support wider employment generating uses (not just B-class uses).
- 8.4. As identified in the PBA report, much of the job growth over the plan period is forecast to be in the service sector, and likely not to require dedicated employment land. The plan proposes to support service sector jobs, which will be essential in maintaining and enhancing the County's market towns, and rural areas. The plan includes positive policies to support the County's

¹⁴ Details of these schemes can be found on the Advance Northumberland website at <https://www.advancenorthumberland.co.uk/developments/live-projects>

tourism and visitor economy, as well as maintaining and enhancing the roles of town centres.

8.5. Other developments in the pipeline to generate employment include:

- Portland Park, Ashington - A major new cinema, leisure and restaurant development is proposed to expand and improve Ashington town centre;
- Bedlington Town Centre - A new retail led scheme is proposed to transform the area into an exciting new place to visit, live and shop¹⁵.

Housing

8.6. As identified elsewhere in this paper, the minimum housing requirement in the plan is for 17,700 homes over the period 2016-36, equating to 885 per annum. The Council is confident that this level of housing can be delivered.

8.7. In excess of 2,900 dwellings (net) were completed over the period 2016-18. The Strategic Housing Land Availability Assessment (SHLAA) identifies more than 14,200 dwellings remaining to be built on extant planning permissions, which when combined with the completions, nearly accounts for the total minimum housing requirement. In addition approximately 5,600 dwellings are 'minded to approve'.¹⁶

8.8. While many of the approved permissions are under construction, and in areas of high market demand, the Council recognises that not all the planning permissions will be implemented. It is also recognised that the permissions will not necessarily deliver the required types and tenures of homes, where they are needed across the County.

8.9. Therefore, the plan allocates additional land for housing, which together with outstanding allocations in neighbourhood plans can deliver more than 1,800 homes. The SHLAA also identifies capacity for more than 11,800 homes on other unallocated developable sites, which provides an element of flexibility in supply, should some of the commitments (permissions or minded to approve applications) not be realised.

8.10. Other policies in the Local Plan will also enhance the prospects of delivering the housing requirement number, such as supportive policies for housing for older people, and exception sites.

¹⁵ Details of these schemes can be found on the Advance Northumberland website at <https://www.advancenorthumberland.co.uk/developments/live-projects>.

¹⁶ The 'Minded to approve' figure includes 2,043 units in the Green Belt.

9. Concluding comments

- 9.1. The level of job growth, and the minimum amount of housing the Local Plan is proposing to deliver, reflects a growth scenario, which takes into account the ambitions of the NESEP, the North of Tyne Devolution Deal, the Council's Economic Strategy and the emerging Borderlands Initiative.
- 9.2. The level of growth, while ambitious, is considered to be realistic, and take into account the ambitions of local authorities in the NELEP area, and NTCA. The integrated Experian economic model used to develop the growth strategy, factors in growth across the wider NELEP area, and considers Northumberland's growth in this wider context.
- 9.3. While the growth strategy is ambitious, the Local Plan needs to consider how this is delivered, and recognise the need to support economic growth across the large diverse County of Northumberland. As such, significantly more employment land is proposed to be taken forward or allocated in the plan, than the PBA report suggests is necessary. This approach reflects the need to support strategically important sites, particularly in the southeast of the County, and provide employment sites in market towns in market towns where there is a shortage of land to meet demand. Given that much of the forecast employment growth is expected to be in the service sector, Local Plan policies are in place to support the delivery of these jobs.
- 9.4. While the Local Plan housing requirement is ambitious, in that it is significantly higher than the amount required by the Government's standard methodology, it is also deliverable. While the number of housing commitments exceeds the minimum requirement number, to support regeneration, and rural growth the Council has sought to allocate additional land for housing in some settlements across the County.
- 9.5. Overall, the plan includes policies to support economic growth, and growth in the housing market where there is market demand, but also encourage development where there has been relatively little in recent years. As such, it will support a sustainable future for Northumberland.

Appendix A: Data Guide: UK Regional Planning Service (Experian, March 2018)

Data Guide

UK Regional Planning Service
March 2018



Our main subscription website:
<http://economics.experian.co.uk/>



Data Guide

UK Regional Planning Service
March 2018

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Executive summary

This document outlines the current variable coverage in the March 2018 version of the UK Regional Planning Service, and the methodology behind the history and forecast.

[Appendix A](#) includes a glossary of terms.

[Appendix B](#) includes our definitions of the sectors.

[Appendix C](#) has the geography definitions.

[Appendix D](#) contains the most common Frequently Asked Questions

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1 Variable Coverage

To avoid implying spurious accuracy, we now round all county and local series to the nearest tenth of a unit. This means that people or job counts are now to the nearest 100 people or jobs and money counts are to the nearest £100,000, and rates are now to the nearest 0.1 percentage points. Forecasts for series with very small levels may appear to be very volatile when growth rates are considered. We, therefore, recommend viewing series with small values in levels not growth rates or considering growth rates over longer intervals than annually. Very small levels have been set to zero as they are essentially statistical artefacts.

Figure 1.1: Variable coverage in the RPS

- ✓ indicates that the variable is available in both the search query tool and the xls files.
- Xls indicates that the variable is available in the xls but not the search query tool.
- UK monthly forecast indicates that the variable is not produced as part of the RPS but can be found in the monthly UK macro forecast on our website.

Variable	UK	Region	County & Local Authority
PRODUCTION			
GDP	UK monthly forecast		
GDP by component of demand	UK monthly forecast		
Gross Value Added	✓	✓	✓
GVA by sectors	✓	✓	✓
LABOUR MARKET			
Employees by sector	✓	✓	✓
Self-employed by sector	✓	✓	✓
Government Trainees by sector	xls	xls	Upon request
Her Majesties Forces Total	xls	xls	Upon request
FTE Employment by sector	✓	✓	✓
Total ILO Employment – Residence based & Workplace based	✓	✓	✓
ILO Unemployment	✓	✓	✓
Unemployment rate	✓	✓	✓
Labour Force	xls	xls	Upon request
Activity Rate	xls	xls	Upon request
Inactivity Rate	xls	xls	Upon request
DEMOGRAPHICS			
Population: Total, Adult (16+)	✓	✓	✓
Age bands: 0-15, State Working age, State retirement 16-64, 65+	✓	✓	✓
Population by single or 5 year age band	Upon request	Upon request	Upon request
HOUSEHOLDS			
Nominal disposable Income	✓	✓	✓
Real disposable income	✓	✓	✓
Nominal income by component	xls	xls	Upon request
Nominal consumer spending	✓	✓	✓
Real consumer spending	✓	✓	✓
Consumer spending by COICOP category	Upon request	Upon request	
Cost of Living Index	✓	✓	
House price Index	✓	✓	Upon request
Hours worked	Upon request	Upon request	Upon request

Please note we are no longer publishing Claimant Count for Regional and Local Areas. This is due to the fact that complete data are no longer available due to the shift to Universal Credit.

2 Historical End-points

Figure 1.2: Last historic data point

Variable	UK*	Region	County & Local Authority
Gross Value Added	2017q4	2016q4	2016q4
GVA by sectors	2017q3	2016q4	2016q4
Labour market variables	2017q3	2017q3	All 2016q4 except ILO 2017q3
Income	2017q3	2016q4	2015q4
Consumer spending	2017q3	2017q3	2015q4

The historical end-point represents the last period in time for which we apply our processes to collect, calculate or derive data, details of which can be found in chapter 3: Methodology. All time-periods that are in the past but follow the historical end-point are Experian Economics' estimates.

We have not used any regional data published after January 2018 in producing this update of the RPS. It is possible that between this date and the release of the RPS some new history may have been released and/or revised.

Population

The population data provided are the Office for National Statistics (ONS) 2016 mid-year estimates for 1997-2016. For England, Scotland and Wales, the 2016-based national population projections are used for the first time while sub-national population projections are 2014-based. Further information on population changes is available in [section 4](#).

UK forecast

This forecast is consistent with an Experian Economics' February 2018 macroeconomic forecast which includes GVA for 2017q4. We explore this further in [section 4](#).

Geographic boundaries

As communicated in previous data guides, we publish data on post-2009 local authority boundaries.

With the ONS gradually phasing out the publication of data on the pre-2009 local authority boundaries, it had become increasingly less credible for Experian to publish up-to-date historical data on these definitions. The table below shows those local authorities which no longer exist as individual entities (2nd column) and the name of the new local authority that has been created by their merger.

Region	Disbanded local authorities	Merged to form:
<i>North East</i>	Chester-le-Street, Derwentside, Durham, Easington, Sedgfield, Teesdale, Wear Valley	County Durham
	Alnwick, Berwick-upon-Tweed, Blyth Valley, Castle Morpeth, Tynedale, Wansbeck	Northumberland
<i>North West</i>	Congleton, Crewe & Nantwich, Macclesfield	Cheshire East
	Chester, Ellesmere Port & Neston, Vale Royal	Cheshire West & Chester
<i>West Midlands</i>	Bridgnorth, North Shropshire, Oswestry, Shrewsbury & Atcham, South Shropshire	Shropshire
<i>East of England:</i>	Mid Bedfordshire, South Bedfordshire	Central Bedfordshire
<i>South West</i>	Caradon, Carrick, Kerrier North Cornwall, Penwith, Restormel	Cornwall
	Kennet, North Wiltshire, Salisbury, West Wiltshire	Wiltshire

3 Methodology

3.1 UK Methodology

The approach for the regional planning service takes the UK variables as exogenous, imposed from the monthly UK forecast.

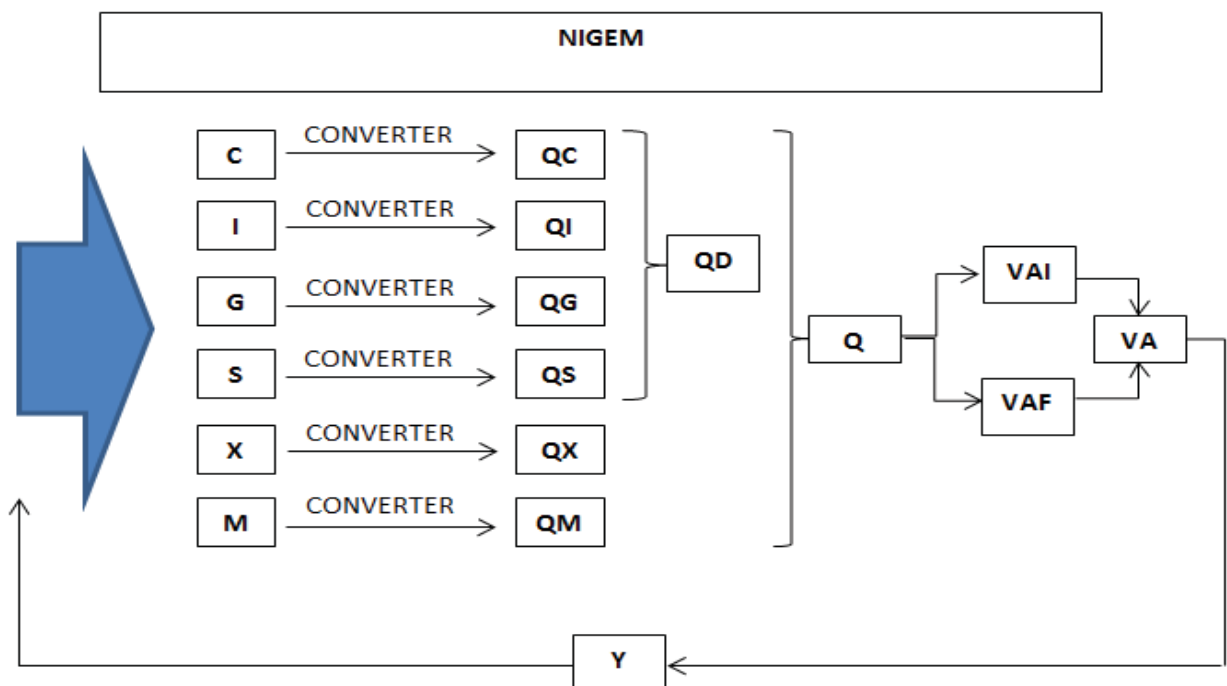
To produce the UK forecast we use a heavily customised version of the National Institute of Social & Economic Research's (NISER) model called NIGEM to provide our core macroeconomic forecast.

NIGEM is a general equilibrium model of the UK and World economy which forecasts, amongst other variables, aggregate GVA, expenditure, income and employment based on the UK National Accounts published by the Office of National Statistics.

To split this core forecast out into industries and sub-sectors we have a Sectoral Model which expands on the forecasts from the core NIGEM model.

We disaggregate total consumption (C), investment (I), government spending (G), stocks (S), exports (X) and imports (M) from NIGEM to a finer level of detail. This provides a highly detailed model of demand (Q) for industry GVA in the UK economy. Using converters derived from the ONS Supply and Use Tables, we convert demand into intermediate (VAI) and final (VAF) value added for each sector. This provides a comprehensive view of how value added is distributed across sectors. The growth rate of total value added (VA) for each industry determines its GVA (Y) growth rate. GVA is constrained in order to forecast total GVA from NIGEM. This Input-Output based model is iterative and captures intra-industry demand.

The industry GVA forecast is used together with wage forecasts to forecast employment by sector (E).



3.2 Regional methodology

3.2.1 History

All economic history used in the RPS is derived from official statistics published by the UK's Office for National Statistics (ONS). Our approach is to use existing statistics in the form they are published to the greatest extent possible. However, this is subject to the following exceptions:

- where there is a lag between an update of aggregate data and the corresponding disaggregation, the disaggregate data is constrained to match the latest aggregates;
- where ONS data is not published at quarterly frequency (for instance it is only annual data), we use a consistent methodology (described below) to construct quarterly data;
- where ONS data is not published at the geography required or in the detail required, we use a consistent methodology to add the necessary data ensuring that it constraints to published data at a higher level of geography or detail;
- on occasion, where ONS data is internally inconsistent we apply techniques to remove these inconsistencies.

The most timely and reliable data at the regional level is the workforce jobs series, published on a quarterly frequency by the ONS. There have been revisions to estimates of Workforce Jobs going back several years caused by benchmarking to the latest estimates from the annual Business Register and Employment Survey (BRES), updating seasonal factors and taking on board late information.

Employee jobs, self-employed jobs and government trainees are published at the level of the SIC 2007 Section providing us with 22 sectors.¹ In order to disaggregate this Section-level data to 2-digit sectors from which we can construct the Experian 38 sectors we use official survey data:

- In the case of employee jobs, we use the Annual Business Inquiry (ABI) and Business Register & Employment Survey (BRES). These are annual surveys which are not updated after being published – further the methodology has changed over the lifetime of these surveys. We apply a principled set of rules to derive consistent employee job shares within the Sections from the surveys.
- The March 2018 RPS uses the 2016 BRES, which provides data up to 2016. Pre-2010 we have made a working-owners adjustment, based on an overlapping year published by NOMIS in February 2013, in line with their recommended techniques for dealing with discontinuities.
- In the case of self-employed jobs, we use data from the Labour Force Survey (LFS).

Workforce jobs is the sum of employee jobs, self-employed jobs, government trainees and Her Majesty's Forces (who are assigned at the sector level to Public Administration and Defence).

To estimate full-time equivalent employment (FTE), we use data on hours worked in each sector and region derived from the Annual Survey of Hours and Earnings (ASHE). ASHE is also used to derive wage data for each region and sector.² We also use, for this purpose, compensation of employee data from the regional accounts.

GVA measured on the income basis is published in the regional accounts at an annual frequency in current prices. Total GVA and GVA by industry lag the latest complete year by 12 months. With the exception of manufacturing, the industry detail is only at the section level. Beginning with the December

¹ The ONS has ceased publishing official 2-digit employee jobs data for the regions. The approach we have taken is consistent with the approach recommended by the ONS to derive 2-digit estimates.

² We do not routinely publish sector level wage forecasts; however, it is available on request.

2013 Regional Accounts (which were first incorporated in the March 2014 RPS), manufacturing GVA is available at the sub-section level. To construct the Chain Volume Measure data we follow these steps:

- the data is disaggregated and made quarterly using workforce jobs data;
- the data is deflated at the industry level using the UK deflators for the industries;
- the data is aggregated to produce a regional total – this implicitly creates a regional deflator by taking into account the different weightings of industries within a region.

Income is published in the regional accounts on an annual basis with a full breakdown of income sources and deductions.

Income sources are:

- compensation of employees : wages and salaries *plus* employers social contributions
- self-employment income
- Net Property Income : made up of property income received *less* income paid
- transfers from the State (i.e. benefits and pensions)
- other Transfers

Income deductions are:

- taxes
- social contributions
- transfers to others

The sum of income sources *less* income deductions constitutes disposable income. To convert this annual data to quarterly jobs we use (depending on the component) employee jobs, self-employee jobs or the UK quarterly pattern. We constrain these quarterly series to the official UK published data. Real disposable income is obtained by deflating disposable income by the consumer price deflator.

Household spending is derived by sharing out UK nominal expenditure using regional shares of expenditure reported in the Living Costs and Food Survey by type of expenditure. Nominal regional spending is deflated by published UK deflators and then aggregated to produce a regional total. This again implicitly creates a regional cost of living measure which we also publish.

Sub-national population projections are obtained from the ONS, based on the 2014 sub-national projections for England, Scotland and Wales. These are spliced onto the 2016 mid-year estimates and constrained to the latest national 2016-based projections. The revisions back to 2002 due to the 2011 census were taken into account in the December 2014 RPS.

Our working-age definition incorporates all announced future changes in the state pension age:

- The state pension age for women is rising from 60 to 65, equal with males. Both will then rise, in step, to 67 in our current forecast period.
- Female state retirement age started to increase from 60 in April 2012 and will reach 65 by 2018q4.
- From April 2019, both men and women will see their state retirement age rise from 65 to 66, with men reaching 66 by April 2020, and women a few months later in October 2020.
- The move from 66 to 67 is scheduled from April 2026 until April 2028 for both men and women.

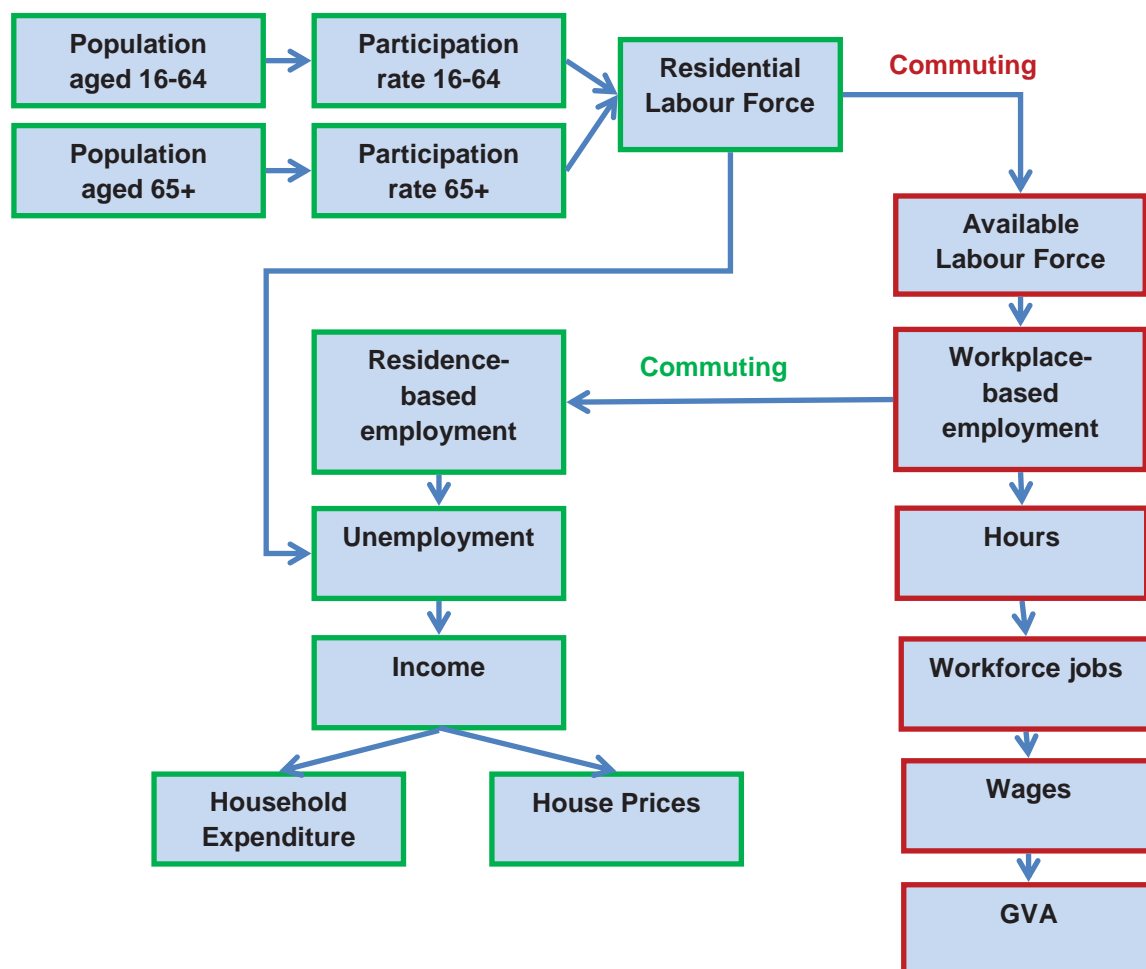
The 2013 Autumn Statement stated that the rise in state pension age to 68 would be moved forward from 2046 to the mid-2030's. However, with no firm date, we have not yet incorporated this into our working age and state retirement age definitions.

Under the current law, the State Pension age is due to increase to 68 between 2044 and 2046. Following a recent review, however, the government announced plans to bring this timetable forward. The State Pension age is now set to increase to 68 between 2037 and 2039. The policy change was announced as of July 2017

We publish the following breakdown of population: school age (ages 0-15), state working age, state retirement age, adult population (16 and over) and total. Beginning in the March 2015 RPS, we also publish both the population aged 16-64 and 65 and over. Although their respective participation rates are not published, they can be derived. Our overall participation rate is based on a ratio of the total labour force to the entire adult population (not only the working age population).

3.2.2 Forecast

The regional model is sequential. Each variable is dependent only on variables earlier in the sequence and not variables later in the sequence. Variables are either workplace-based (red outlined boxes) or residence-based (green-outlined boxes.) Workplace-based and residence-based variables are linked by commuting relationships derived from the 2011 Census.



The population – split into two age ranges – is taken from the National and Sub-National Population Projections. We forecast participation rates for these age bands separately as they are subject to different trends. The total residential labour force is the sum of the labour force aged 16-64 and 65-plus. The aggregate participation rate is determined by two factors:

- The participation rate of the two age bands; and
- The share of each of the two age bands in the adult population.

The participation rate for those aged 16-64 is expected to remain relatively stable throughout the forecasting period. However, the rate for those aged 65 and over will grow strongly due to factors such as increasing life expectancy and rising state pension ages.

At the UK level, the share of the adult population aged 65 and over is projected to rise sharply over the next twenty years. There is, however, considerable variation at the regional level. Greater London – the youngest region in the UK – is projected to have a stable share.

These factors combine to produce substantial variation in the labour force forecasts for different regions.

Commuting flows are used to derive the available labour force for a region. This is:

Workers Resident in the Region – Workers Commuting Out + Workers Commuting In

In the case of Greater London, the South East and the East of England, these flows lead to a substantial difference between the residential labour force and the available labour force. The effect is still present but less pronounced in other regions.

The available labour force is one of the drivers in forecasting workplace-based employment. The other drivers include the industry mix and the performance of industries at the UK level. If industries with a high share in the region are performing well at the UK level, this will benefit the region.

The workplace-based employment is converted back into residence-based employment. This is:

Workplace-based Employment – Workers Living Elsewhere + Residents Working Elsewhere

From this point, residence and workplace based variables are solved in parallel with residence-based variables dependent on residence-based employment and workplace-based variables dependent on workplace-based employment.

The residential labour force and residence-based employment are used to calculate unemployment. Residential income is driven by employment; and itself drives house price and household expenditure forecasts.

Workplace-based employment drives aggregate hours worked, wages and GVA. These aggregate variables feed into the detailed part of the model, which produces forecasts for each industry:



In each case, we forecast shares of the region within the UK industry. We then share out the UK industry data subject to the constraint of the total that has already been determined and the UK total.

3.3 Local methodology

3.3.1 History

As at the regional level, all local economic history used in the RPS is derived from official statistics published by the ONS. Our approach to using this data is identical to that given above at 3.2.1. However, data at the local level is more likely to be incomplete¹ or inconsistent² than is the case at the regional level. For this reason, there is greater call for the application of techniques to construct missing data and to remove inconsistencies than is the case at the regional level.

In all cases, local area data in a particular region is constrained to match the regional total for the same variable. This has two particular advantages:

- Local data is made consistent with regional data of the same vintage.
- Where local data has been estimated or constructed, the regional data ensure that the estimates together are consistent with more reliable data.

The ONS do not publish a workforce jobs series at the local level. Accordingly, we construct workforce jobs series for each local area using BRES/ABI in the same way that BRES is used at the regional level to disaggregate section estimates. The BRES share for a particular industry of a local area in its parent region is used to disaggregate the regional workforce jobs series for that industry. As BRES is a survey, the figures over time for a particular local area industry combination can be volatile³. Further, certain years' results may be withheld to prevent disclosure of confidential data. Accordingly, to obtain sensible data it is necessary for us to smooth out this volatility and to interpolate over the gaps.

At the local level, the most timely and comprehensive data are Annual Population Survey (APS) for residence and workplace-based employment and unemployment data⁴. These data are obtained directly from NOMIS and then constrained to the national numbers.

In September 2015, we re-visited the relationship between local workforce jobs and workplace-based employment. The local workforce jobs (which make use of BRES shares) was benchmarked to the ILO

¹ For some local areas, publication of certain data by the ONS is restricted because to do so would effectively disclose individual responses to ONS data-collection surveys (e.g. if there are only one or two firms in a certain industry in a particular locality.)

² In some cases, sample sizes in ONS data-collection surveys at the local level are very small. This leads to data of comparatively poor quality and relatively high volatility.

³ The volatility represents sampling variability rather than actual volatility in the population data.

⁴ In line with ONS guidelines, we use the official model-based estimates of local unemployment that are more accurate than survey data which suffers from volatility.

workplace-based employment which itself has first been benchmarked to the Census 2011 point with the pattern in years either side preserved.

Regional accounts data is provided at sub-regional level for both GVA and income as it is at the regional level. The same methods are used at the local level as at the regional level to process these data. However, sub-regional data is only published for NUTS2 and NUTS3. Since not all local authorities constitute a NUTS3, it is necessary to disaggregate these data to local level. Further, the data provided at NUTS3 are less comprehensive than those provided at NUTS2¹. We make use of this NUTS2 data by constraining our disaggregated NUTS3 estimates to their parent NUTS2. We then disaggregate these constrained NUTS3 data to local data³.

In the case of GVA, the data provided at NUTS2 is at the section level with sub-sectional data for manufacturing. For NUTS3, several sections are aggregated. In particular, there is less detail in the service sectors. Disaggregation (of industrial data and from NUTS3 to local data) takes place using workforce jobs data at the industry level.

In the case of Income, the data provided at NUTS2 has the same level of detail as at the regional level. For NUTS3, the ONS has previously only released data at the primary and secondary level. They have now produced the full breakdown of income, which we have included since our September 2015 RPS. Disaggregation from NUTS3 to local level takes place using employee jobs, self-employed jobs, unemployment or population.

No estimates of household spending are provided at the local level. Household spending is, therefore, derived by using the share of local disposable income in regional disposable income.

Since June 2016, we have applied a moving average procedure to smooth the Annual Population Survey data which has resulted in revisions to our historical data.

3.3.2 Forecast

The local authority model is run separately for the local authorities in each region and takes the regional forecast as given. Accordingly, as with local history, local forecasts are constrained to the regional forecasts of the parent region.

Our local model is based on the resolution of demand and supply for labour and it takes into account commuting between local areas within a region and across the regional boundary. The properties of the model are these:

- When unemployment is low, labour supply growth is the key determinant of growth.
- When unemployment is high, growth in demand for labour is the key determinant of growth.
- As unemployment decreases,
 - Labour supply growth becomes relatively more important
 - Growth in demand for labour becomes relatively less important
- An area's workplace employment growth depends on labour supply not only in the area but also
 - Labour supply growth in other local areas in the region from which it has historically drawn inward commuters.
 - Its historic share of incoming workers across the regional boundary.
- An area's residence based employment growth depends on demand for labour not only in the area but also

¹ NUTS2 is provided at the same level of detail as NUTS1 (i.e. regional) level.

- Growth in demand for labour in other local areas in the region to which it has historically supplied commuters.
- Its historic share of outgoing workers commuting across the regional boundary.
- Workplace based employment drives GVA growth.
- Residence based employment drives Income and, accordingly, spending growth.

The starting point is an estimate of the growth in the participation rate of those aged 16-64 and 65-plus in a local area. These are used to derive labour force growth.

In parallel, demand for labour is estimated. This is done at the industry level by linking job growth¹ in a local area to growth in the same industry at the regional level and then constraining demand for jobs by industry to demand for jobs for the same industry at the regional level. The effect of this is:

- Demand for jobs at the local level is fastest in those industries which are performing best at the regional level.
- Total demand for jobs at the local level depends on its industrial structure. Those local areas which have a more than proportionate share of the best performing industries will perform best overall.

The supply and demand for labour is then resolved in the following way:

- Total demand² for jobs for each local area is converted into demand for workers according to the historic ratio between jobs and workers into that local area.
- The inflow and outflow of workers across the regional boundary is shared out between local areas according to their historic commuting patterns leading to an adjustment in
 - The remaining demand for labour for a local area (*inflow*)
 - The remaining available labour for a local area (*outflow*)
- Workplace demands for workers are converted into residence-based demands according to historic commuting patterns.
 - If unemployment is sufficiently high, these demands are satisfied out of the growth in the labour supply and the pool of available (unemployed) workers.
 - If unemployment is sufficiently low, these demands can only be satisfied out of the growth in the labour supply.
 - If unemployment is above its lower bound but not too high, a proportion of demands are satisfied out of the pool of available workers and the rest are satisfied out of the growth in the labour supply.
 - The model makes short-term adjustments in the labour supply in response to demand conditions to reflect the economic reality that
 - When demand is high, the participation rate rises as potential workers are drawn into the labour force by the relatively buoyant conditions;
 - When demand is low, the participation rate declines as disillusioned workers leave the labour force because of the poor job market conditions;
 - The unemployment rate, accordingly, behaves as expected.
- The satisfied residence supply for labour is converted back into workplace demands and workplace based employment is calculated for each local area. This is then converted back into jobs and used to produce final workforce jobs estimates for each local area.

The consequence of this is that:

- Local areas with high demand may not see all of that demand satisfied if there is insufficient available labour supply to meet those needs. Jobs growth will, accordingly, be slower.

¹ Separately for employee jobs, self-employee jobs, government trainee jobs and Her Majesty's Forces.

² i.e. all industries and job types aggregated.

- Local areas with high labour supply may not see higher growth in residence employment if there is insufficient demand for labour to use it up.

GVA growth is then forecast based on growth in workplace-based employment according to equations, which link GVA growth to workplace-based employment. Income is forecast by component based on residence based employment (in the case of compensation for employees or self-employment), unemployment (in the case of benefits) and population in any other case. Spending depends on income by component.

4 Key changes since December 2017 RPS

4.1 UK forecast

The March RPS forecast is consistent with the February 2018 UK macro forecast.

Over the last year, the UK has shifted from being one of the fastest growing G7 economies to among the slowest. The economic recovery has lost momentum due to a weaker performance from consumer spending and investment. Household incomes have suffered from the combination of higher inflation and sluggish wage growth. Alongside this, companies continued to hold back on investment decisions due to uncertainty over Brexit negotiations.

These factors are set to keep the economy on a slower growth trajectory into next year. However, inflation should begin to unwind and allow for some recovery in household incomes and spending over the second half of 2018. Meanwhile Brexit negotiations will enter their second year and our baseline projections assume a transition arrangement will eventually be agreed. However, with so much still to be decided, uncertainty will persist over the final agreement for some time and investment decisions set to remain cautious. Given this, we project GDP growth to be around 1.5% in 2017 and 2018, down from close to 2% in 2016 and 2015.

The December 2017 RPS was consistent with the November 2017 UK macro forecast. The main change between the March 2018 and December 2017 forecasts is centred around productivity. Our productivity forecast has been revised lower in our February macroeconomic report. The latest revision has been due to a change in view brought about by new historical data and changes to our population projections. We have been gradually decreasing our productivity forecasts over the last 18 months as the data has continued to surprise on the downside. Our latest forecast more closely matches the OBR, but is still somewhat higher. We view the OBR's productivity projections as a lower bound to our forecast.

March RPS forecast. Previous forecast (November 2017 macro = December 2017 RPS) in brackets.

UK	2016	2017	2018	2019	2020-2026	2027-2038
GDP growth	1.9% (1.8%)	1.8% (1.6%)	1.5% (1.4%)	1.5% (1.8%)	1.7% (2.4%)	1.7% (2%)
Workforce growth	1.8% (1.6%)	1.4% (1.1%)	0.3% (0.3%)	0.6% (0.4%)	0.6% (0.6%)	0.5% (0.5%)
Jobs						
Unemployment rate	4.9% (4.9%)	4.4% (4.4%)	4.4% (4.5%)	4.5% (4.8%)	4.5% (4.6%)	4.5% (4.5%)
Real Income growth	0.3% (1.5%)	0.2% (-0.5%)	1.1% (1.1%)	0.6% (1.1%)	1.3% (2.1%)	1.8% (2.3%)
Spending growth	2.9% (2.8%)	1.4% (1.8%)	1.1% (0.9%)	1.3% (1.6%)	1.7% (2.2%)	1.8% (2.1%)
Volumes						
House price growth	7.6% (7.9%)	5.0% (3.7%)	2.0% (2.6%)	2.7% (2.2%)	3.8% (3.5%)	4.0% (4%)

March UK Outlook

The following was the outlook in February, consistent with the regional forecast. Our UK macro view is updated monthly and can be found on our website <http://economics.experian.co.uk>.

The first estimate of GDP for 2017q4, showed that the economy grew by 0.5% q-on-q in real terms, against 0.4% in the previous quarter.

While dominate service sector continues to drive the gains, comparing 2017q4 with the same period of 2016 there was a weakening, particularly in the more domestic consumer-facing type sectors. The slowdown was most noticeable for accommodation, motor trades and motion pictures.

The net trade deficit narrowed in the three months to November 2017, both on a q-on-q and quarter on the same period of the previous year basis, leaving it at £6.2 billion. On the annual measure the deficit narrowed by £4.3 billion.

A narrowing in the trade deficit for goods drove the deficit reduction. In the year to September – November goods exports rose by 10.6% (£8.4 billion), which was higher than the increase in goods imports.

In the coming months conditions are set to remain challenging for consumers. Inflation, which held steady at 3% in January continues to outstrip pay growth of 2.5% in the year to September - November, further eroding real incomes. This will continue to constrain service sector output gains through a lack of momentum in the consumer facing sectors.

Manufacturing output has grown by a strong 1.3% in the past two quarters, making up for some of the shortfall in the services sector, and will be an important contributor to the gains in the coming months.

The Monetary Policy Committee (MPC) are likely to make a modest upward adjustment to Bank Rate this year as they try to bring inflation back down to target. The up-tick in GDP growth in the final quarter of 2017, and a slight strengthening in regular pay growth in the year to September make this more likely.

Key risks

If sterling continues to appreciate against a number of key currencies, this should help inflation dissipate more quickly than anticipated which in turn could support healthier consumption growth this year. Conversely, the recent up-tick in manufacturing output could stutter as exports become relatively less price competitive.

EU and global trade growth has built some momentum in the last couple of quarters, which is providing a boost to UK exports. If the outlook weakens the UK will be unable to capitalise fully on the weak exchange rate.

Brexit uncertainty stifles the anticipated improvement in business investment.

If sluggish earnings growth deteriorates, consumer confidence and spending will suffer, renewing the strain on output growth in the consumer facing services industries.

4.2 Regional Forecast

In addition to changes to the UK history to which our regional data is constrained, changes to the regional history can be traced back to the following new quarterly data (December 2017 RPS endpoint in brackets):

- Regional Accounts 2016 (previously 2015) with new price base as 2015
- Regional Workforce Jobs 2017q3 (previously 2017q1)
- ILO data for 2017q3 (previously 2017q1)

- Business Register and Employment Survey (BRES) 2016 (previously 2015)
- Annual Survey of Hours and Earnings (ASHE) 2017 (previously 2016)
- 2016 mid-year population estimates (previously 2014)
- 2016-based national population projections (previously 2014)
- Revised participation based on the new 2016-based national population projections

March 2018 RPS forecast. Previous forecast (December 2017 RPS) in brackets.

Regional forecast 2017-38 ave. growth	SW	SE	GL	ET	EM	WM	NW	NE	YH	SC	WA	NI
GDP growth	1.7% (2.1%)	1.9% (2.3%)	2.1% (2.5%)	1.9% (2.2%)	1.6% (2%)	1.5% (1.9%)	1.4% (1.9%)	1.2% (1.7%)	1.4% (1.9%)	1.3% (1.7%)	1.3% (1.7%)	1.3% (1.7%)
Workforce Jobs growth	0.5% (0.6%)	0.7% (0.7%)	0.8% (0.9%)	0.6% (0.6%)	0.5% (0.6%)	0.6% (0.6%)	0.4% (0.4%)	0.4% (0.3%)	0.3% (0.5%)	0.3% (0.3%)	0.4% (0.3%)	0.3% (0.4%)
Unemployment rate	3.8% (3.7%)	3.2% (3.3%)	5.9% (6.1%)	4.1% (4.2%)	3.9% (3.9%)	5.6% (5.5%)	4.2% (4.3%)	5.5% (5.7%)	4.8% (4.7%)	4.1% (4.2%)	4.3% (4.3%)	4.5% (4.8%)
Real income growth	1.5% (2%)	1.7% (2.3%)	1.6% (2.1%)	1.7% (2.2%)	1.5% (2%)	1.3% (1.8%)	1.4% (1.8%)	1.1% (1.6%)	1.3% (1.8%)	1.2% (1.6%)	1.2% (1.6%)	1.3% (1.8%)
Spending volumes growth	1.6% (2%)	2.0% (2.3%)	2.3% (2.6%)	1.7% (2.1%)	1.6% (1.9%)	1.5% (1.8%)	1.6% (1.9%)	1.3% (1.6%)	1.6% (1.9%)	1.4% (1.7%)	1.3% (1.7%)	1.5% (1.9%)
House price growth	3.8% (3.7%)	4.2% (4.1%)	4.1% (4.1%)	4.2% (4.1%)	3.7% (3.6%)	3.7% (3.6%)	3.6% (3.5%)	3.0% (3%)	3.2% (3.2%)	3.6% (3.5%)	3.5% (3.4%)	3.3% (3.2%)

4.3 Local Forecast

In addition to revisions at the regional and the UK level to which our local data is constrained, changes to the local history can be traced back to the following new quarterly data (December 2017 RPS endpoint in brackets):

- Regional Accounts 2016 (previously 2015) with new price base as 2015
- APS data for 2017q3 (previously 2017q1)
- Business Register and Employment Survey (BRES) 2016 (previously 2015)
- Annual Survey of Hours and Earnings (ASHE) 2017 (previously 2016)
- 2016 mid-year population estimates (previously 2014)

The history for workforce jobs data for local authorities has also been revised resulting from the new data and other methodological improvements listed below:

- New BRES 2016 shares used to calculate employees data
- Revisions to the regional and UK workforce jobs data, which is used as a constraint for the local level data

For more information about how the history is constructed refer to [section 3.2.1](#) for regions and [section 3.3.1](#) for local authorities.

4.4 Population

The March 2018 RPS includes the 2016-based National population projections. The key points highlighted in the latest release are:

- The UK population is projected to increase by 3.6 million (5.5%) over the next 10 years, from an estimated 65.6 million in mid-2016 to 69.2 million in mid-2026.
- England is projected to grow more quickly than the other UK nations: 5.9% between mid-2016 and mid-2026, compared with 4.2% for Northern Ireland, 3.2% for Scotland and 3.1% for Wales.
- Over the next 10 years, 46% of UK population growth is projected to result from more births than deaths, with 54% resulting from net international migration.
- The UK population is projected to pass 70 million by mid-2029 and be 72.9 million in mid-2041.
- There will be an increasing number of older people; the proportion aged 85 and over is projected to double over the next 25 years.
- The UK population growth rate is slower than in the 2014-based projections; the projected population is 0.6 million less in mid-2026 and 2.0 million less in mid-2041.

2016-Based Population Projections							2014-Based Population Projections						
	millions							millions					
	2016	2021	2026	2031	2036	2038		2016	2021	2026	2031	2036	2038
UK	65.6	67.6	69.2	70.6	71.8	72.3	UK	65.6	67.8	69.8	71.7	73.4	74.0
England	55.3	57.0	58.5	59.8	60.9	61.3	England	55.2	57.2	59.1	60.9	62.4	63.0
Wales	3.1	3.2	3.2	3.2	3.3	3.3	Wales	3.1	3.2	3.2	3.2	3.3	3.3
Scotland	5.4	5.5	5.6	5.6	5.7	5.7	Scotland	5.4	5.5	5.5	5.6	5.7	5.7
Northern Ireland	1.9	1.9	1.9	2.0	2.0	2.0	Northern Ireland	1.9	1.9	2.0	2.0	2.0	2.0

Source: Office for National Statistics

As the table above demonstrates, the 2016-based projections for the total population of the UK are significantly lower than the previous 2014-based projections, the majority of which, derives from slower population growth in England. Part of the reason for the change is due to the fact that the latest projections are based on the population estimate from mid-2016 as well as the latest data on births, deaths and migration. The previous 2014-based projections meanwhile, were based on population estimates from mid-2014. Furthermore, according to the latest publication slower growth projections are also a result of “lower assumptions about future levels of fertility and international migration, and an assumption of a slower rate of increase in life expectancy.”

5 A note from the ONS on volatility

A change in methodology behind Office for National Statistics (ONS) employment surveys has produced widespread volatility in the historical data, particularly from 2010.

The following is an explanation directly from the ONS, please see [section 3](#) for more information on how we deal with volatility in the official data:

“A fundamental redevelopment of Workforce Jobs sources, classifications, methods and systems was recently undertaken and is explained clearly in the article ‘Revisions to Workforce Jobs’ (Barford 2010). One of the key changes highlighted in this article was the replacement of a matched-pairs estimator with a point-in-time ratio estimator, ONS’s standard method. This change was aimed at removing the bias caused by the matched-pairs method. A matched-pairs method tends to underestimate change over time, as it excludes the births and deaths of businesses in the sample. In essence, only those businesses sampled in two consecutive periods are used to produce estimates of change. This bias used to cause large revisions when the short-term employment surveys series were benchmarked retrospectively to Business Register Employment Survey (BRES) estimates. BRES is an annual survey which selects a larger sample and also uses a point-in-time ratio estimator. The point-in-time estimator includes all sampled businesses in each and every period, which reduces the bias over-time. The trade-off is an increase in volatility caused by the inclusion of the rotated part of the sample for small and medium sized businesses. Sample rotation spreads the administrative burden; ensuring businesses are selected for a limited number of periods.

Unfortunately, the volatility of regional estimates at an industry level has been far greater than anyone anticipated and in general has been met unfavourably by users, particularly those that are interested in regional data. There are a number of instances, for example, whereby businesses have been ‘rotated in’ to a particular region and served to distort the level of jobs for a particular industry, usually for a period of 5 quarters, which is the time a rotated business remains in the sample of the STES.”

Regional employment is the most timely and only source of quarterly data at this level of geography and is used to derive the quarterly profile of other variables in our regional models. Therefore this volatility is reflected in output as well as employment. Please see [section 3](#) for more information on how we deal with volatility in the official data.

Appendix A....Glossary of terms

Glossary of terms

Gross Domestic Product (GDP) Total work done in an economy in a period measured in one of three ways:

- Output Measure: Output of all goods and services less inputs
- Income Measure: Income earned by all parts of the economy
- Demand Measure: Demand for goods and services comprised of
 - Expenditure by Households, NPISH and Government
 - Investment (Gross Fixed Capital Formation) by business and Government
 - Changes in Inventories and Acquisitions less disposals of valuables
 - Exports less imports

GDP is measured in market prices: this means that the prices used to convert output of goods and services into money include taxes and subsidies by the government. Distributors' margins are credited to the industry producing the goods and services not to the distribution industry.

Gross Value Added (GVA) GVA is identical to GDP except that it is measured in basic prices. These prices do not include taxes and subsidies imposed by the government. Distributors' margins are credited to the distribution industry. GVA for an industry is described by either of the following identities:

- GVA is identical to output of the industry less inputs of the industry
- GVA is identical to the sum of
 - Compensation of Employees in the industry
 - Gross Operating Surplus (i.e. profit) earned by capital in the industry

When looking at GVA for an industry, it is important to realise that it only includes the output of that industry (i.e. the value added by that industry.) For example retailing GVA only includes the value added by retailers (e.g. customer service etc).

GVA in the RPS is measured by the place where the work is done (workplace based) and not where the worker resides.

Current Price / Chain Volume Measure (CVM) Data where the unit of measurement is money are available either in Current Price (or Nominal) terms or CVM (or Real) terms. The distinction is important because the buying power of money changes over time. For current price data, no adjustment is made for this fact. CVM data adjusts all figures in a time series to be consistent with the buying power of money in a given year (the reference year). Current Price data, thus, measures values while CVM data measures volumes. For example, Current Price GDP is the money value of production in a given period while CVM GDP is the amount of production. For years before the reference year, CVM data is not additive (thus the sum of GVA for all sectors will not equal total GVA.) In all other years, CVM data is additive.

Productivity A measure of efficiency calculated by estimating output per unit of input

Workforce Jobs A count of the total number of jobs in the UK, a region or industry. It is comprised of

- Employee Jobs: The number of jobs where the occupant is an employee.
- Self-employee Jobs: The number of jobs where the occupant is self-employed
- Government-Sponsored Trainees: The number of jobs where the occupant is on a government training scheme.
- Her Majesty's Forces: The number of jobs in the armed forces (part of Public Administration & Defence).

Workforce jobs and all its components count jobs and not people. This means that where a person has two or more jobs they are counted once for each job that they have. This can be contrasted with the ILO employment measures. Another consequence of counting jobs is that Workforce Jobs is based on the place of work not the residence of the worker

Full Time Equivalent Employment: Our definition is based on total hours worked and is as follows:

FTE = (HOURS) divided by (37.8*13)

Here a constant yard-stick of full-time employment for all industries, regions and industry-region based on thirteen working weeks in a quarter at 37.8 hours a week. 37.8 hours is the average hours worked by a full-time worker in the UK between 1990 and 2009.

ILO Employment The International Labour Organisation (ILO) provides an international standard method of measuring employment. In the UK this is implemented by means of a survey known as the Labour Force Survey (LFS) or Annual Population Survey (APS). It is a people count based on the main job that a person has. Employment comprises:

- Employees: People whose main job is as an employee.
- Self-employed: People whose main job is as a self-employed person.
- Government-Sponsored Trainees: People whose main job is on a government training scheme.
- Unpaid Family Workers: People whose main job is as an unpaid worker in a business owned by their own family.

There are two measures:

- Residence based, which depends on the place of residence of the worker (irrespective of where they work.)
- Workplace based, which depends on the place of work of the worker (irrespective of where they reside.)

The ILO Employment reported is based on the entire population in work ages 16+.

ILO Unemployment The International Labour Organisation (ILO) definition of unemployment covers people who are: out of work, want a job, have actively sought work in the previous four weeks and are available to start work within the next fortnight; or out of work and have accepted a job that they are waiting to start in the next fortnight.

ILO unemployment is only available on a place of residence basis and is based on the entire unemployed population ages 16+.

Labour Force / Economically Active The sum of ILO Unemployment and ILO Employment. That is all people who are in work or who are looking for a work. A person who is in the labour force is said to be Economically Active.

The Labour Force includes the entire Economically Active population ages 16+.

Economically Inactive A person who is not economically active. The principle categories are retirees, students, children, long-term sick or disabled, homemakers and carers. This does not include school-aged people.

Claimant Count Unemployment Measures the number of people who are claiming Jobseekers' Allowance (JSA). This is always less than ILO Unemployment because not everyone who is ILO unemployed is eligible to claim JSA and not all who are eligible claim. Particular important cases are:

- People whose partners work more than 16 hours a week – they cannot claim JSA but may be ILO unemployed.
- People who are past state retirement age – they cannot claim JSA but may be ILO unemployed.

Extra Regio In addition to the 9 English regions and the nations of Scotland, Wales and Northern Ireland, the UK's economic boundary includes the continental shelf and UK government operations abroad (i.e. embassies and HMF abroad). The ONS does not assign income or GVA attributable to these sources to any region or nation. Therefore, the sum of regional Income or GVA does not equal the UK. This also impacts on two industries Extraction & Mining and Public Administration & Defence.

School Age Population Population aged 0-15.

Working Age Population Population above the age of 15 but below the current state retirement age for their gender.

Retirement Age Population The population above state retirement age. The precise retirement date depends on date of birth and, for those born before 6th November 1953, on gender. At present, there is a phased equalisation in progress. After 6th November 2018, both men and women will retire at 65. This will rise to 66 between 6th March 2019 and 6th September 2020 and 67 between 6th April 2026 and 6th March 2027. Our forecasts take account of these changes to retirement legislation.

Adult (16+) Population Number of all people aged 16 and above.

Household Consumer Spending The accounts relate to consumption expenditure by UK resident households, either in the UK or the rest of the world. Spending by non-residents in the UK is excluded from the total

Household consumption includes goods and services received by households as income in kind, in lieu of cash, imputed rent for the provision of owner-occupied housing services and consumption of own production

For national accounting purposes, households are individuals or groups of people sharing living accommodation

Household Disposable Income Household disposable income is the total payment to households (from wages, interest, property income and dividends) less taxes, social security, council payments and interest

Cost of living index Regional consumer spending deflator. Gives an indication of how the value of consumer spending has grown in comparison to the volume.

NUTS (Nomenclature des Unités Territoriales Statistiques – Nomenclature of Territorial Units for Statistics) A European Union standard for classifying the subdivisions of member states. In the case of the UK, the English regions and the three nations are classified as NUTS1. The next level – NUTS2 – typically consists of aggregations of local authorities in the same region. The level below that, NUTS3 consists either of single local authorities or a small aggregation of local authorities in the same NUTS2. In Scotland, some local authorities are divided between NUTS3. NUTS4 and NUTS5 also exist but are not used in the RPS.

Appendix B...Sector definitions

Sector definitions

Experian 38-sector	SIC-2007 division	Falls within Experian 12-sector
Agriculture, Forestry & Fishing	01 Crop and animal production, hunting and related service activities	Agriculture, Forestry & Fishing
	02 Forestry and logging	
	03 Fishing and aquaculture	
Extraction & Mining	06 Extraction of crude petroleum and natural gas	Extraction & Mining
	05 Mining of coal and lignite	
	07 Mining of metal ores	
	08 Other mining and quarrying	
	09 Mining support service activities	
Food, Drink & Tobacco	10 Manufacture of food products	Manufacturing
	11 Manufacture of beverages	
	12 Manufacture of tobacco products	
Textiles & Clothing	13 Manufacture of textiles	
	14 Manufacture of wearing apparel	
	15 Manufacture of leather and related products	
Wood & Paper	16 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	
	17 Manufacture of paper and paper products	
Printing and Reproduction of Recorded Media	18 Printing and reproduction of recorded media	
Fuel Refining	19 Manufacture of coke and refined petroleum products	
Chemicals	20 Manufacture of chemicals and chemical products	
Pharmaceuticals	21 Manufacture of basic pharmaceutical products and pharmaceutical preparations	
Rubber, Plastic and Other Non-Metallic Mineral Products	22 Manufacture of rubber and plastic products	
	23 Manufacture of other non-metallic mineral products	
Metal Products	24 Manufacture of basic metals	
	25 Manufacture of fabricated metal products, except machinery and equipment	
Computer & Electronic Products	26 Manufacture of computer, electronic and optical products	

	27 Manufacture of electrical equipment	
Machinery & Equipment	28 Manufacture of machinery and equipment n.e.c.	
Machinery & Equipment	29 Manufacture of motor vehicles, trailers and semi-trailers	
	30 Manufacture of other transport equipment	
Other Manufacturing	31 Manufacture of furniture	
	32 Other manufacturing	
	33 Repair and installation of machinery and equipment	
Utilities	35 Electricity, gas, steam and air conditioning supply	Utilities
	36 Water collection, treatment and supply	
	37 Sewerage	
	38 Waste collection, treatment and disposal activities; materials recovery	
	39 Remediation activities and other waste management services. This division includes the provision of remediation services, i.e. the cleanup of contaminated buildings and sites, soil, surface or ground water.	
Construction of Buildings	41 Construction of buildings	Construction
Civil Engineering	42 Civil engineering	
Specialised Construction Activities	43 Specialised construction activities	
Wholesale	45 Wholesale and retail trade and repair of motor vehicles and motorcycles	Wholesale & Retail
	46 Wholesale trade, except of motor vehicles and motorcycles	
Retail	47 Retail trade, except of motor vehicles and motorcycles	
Land Transport, Storage & Post	49 Land transport and transport via pipelines	Transport & Storage
	52 Warehousing and support activities for transportation	
	53 Postal and courier activities	
Air & Water Transport	50 Water transport	
	51 Air transport	
Accommodation & Food Services	55 Accommodation	Accommodation, Food Services & Recreation
	56 Food and beverage service activities	
Recreation	90 Creative, arts and entertainment activities	
	91 Libraries, archives, museums and other cultural activities	
	92 Gambling and betting activities	
	93 Sports activities and amusement and	

	recreation activities	
Media Activities	58 Publishing activities	Information & communication
	59 Motion picture, video and television programme production, sound recording and music publishing activities	
	60 Programming and broadcasting activities	
Telecoms	61 Telecommunications	
Computing & Information Services	62 Computer programming, consultancy and related activities	
	63 Information service activities	
Finance	64 Financial service activities, except insurance and pension funding	Finance & Insurance
	66 Activities auxiliary to financial services and insurance activities	
Insurance & Pensions	65 Insurance, reinsurance and pension funding, except compulsory social security	
Real Estate	68 Real estate activities	Professional & Other Private Services
Professional Services	69 Legal and accounting activities	
	70 Activities of head offices; management consultancy activities	
	71 Architectural and engineering activities; technical testing and analysis	
	72 Scientific research and development	
	73 Advertising and market research	
	74 Other professional, scientific and technical activities	
	75 Veterinary activities	
Administrative & Supportive Activities	77 Rental and leasing activities	
	78 Employment activities	
	79 Travel agency, tour operator and other reservation service and related activities	
	80 Security and investigation activities	
	81 Services to buildings and landscape activities	
	82 Office administrative, office support and other business support activities	
Other Private Services	94 Activities of membership organisations	
	95 Repair of computers and personal and household goods	
	96 Other personal service activities	
	97 Activities of households as employers of domestic personnel	
	98 Undifferentiated goods- and services-producing activities of private households for	

own use	
Public Administration & Defence	84 Public administration and defence; compulsory social security
	99 Activities of extraterritorial organisations and bodies
Education	85 Education
Health	86 Human health activities
Residential Care & Social Work	87 Residential care activities
	88 Social work activities without accommodation

Appendix C...Geography definitions

We forecast at the following geographic breakdowns:

- UK
- Regions (12)
- Counties (64)
- Local authorities...post-2009 boundaries (347+33 London boroughs)

A full lookup in excel form can be found [here](#)

Appendix D...FAQ's

- Why does Experian's history for variable x differ from another source / raw survey data?
 - There are several possible reasons.
 - The first is a vintage mismatch. The ONS frequently revises its economic data in order to take account of new information or improved methodology. The date at which Experian has taken data for the current RPS is given in the body of this guide. Another source may have used earlier or later data.
 - The second relates to data processing. As explained in the body of this guide, it is sometimes necessary at the regional level and (particularly) at the local level to process or construct data. Our approach to doing this is explained in the body of this guide. We apply consistent methodologies to process the data. Other sources may carry this out in different ways. When compared against the raw source, our data may differ because, for example:
 - It has been constrained to other sources.
 - It has been converted into CVM data or quarterly data.
 - It has been made consistent with other data or a later vintage of data.
 - The third relates to raw survey data. Raw survey data is often volatile and does not take into account information outside the survey. Official statistics and our data are constructed from the raw survey data to take into account volatility, sampling issues and all available data sources.
- Why does Experian's job history differ from the *ABI* or *BRES*?
 - The ABI/BRES are surveys taken from a particular year; they are not updated.
 - ABI/BRES is a source for ONS' workforce jobs but it is not the only source.
 - BRES does not include government supported trainees, HM forces jobs and every self-employed small business. As a result, BRES's employment numbers (mainly consisting of total employees and working owners e.g sole traders) would be lower than the ONS's workforce jobs.
 - Experian's workforce job history is designed to be consistent with the latest available ONS workforce jobs estimates, which includes a broad range of jobs (i.e. employee jobs, self-employment jobs, government supported trainees and HM forces).
 - Raw survey is often incomplete and suffers from sampling variability, which does not represent true volatility in the underlying population data. This must be removed to ensure high quality data.
- How often are data updated?
 - We always use the latest available data at the cut-off date for history.
 - New GVA data is available from the ONS
 - At the UK Level, three times a quarter.
 - At the Regional and Local level, annually (normally in December.)
 - New Expenditure data is available from the ONS at the UK level twice a quarter.
 - New LFS Employment data is available from the ONS once a quarter.
 - New Workforce Jobs data is available from the ONS once a quarter.
 - New BRES is published once a year (normally in December.)
 - New Income data is available from the ONS
 - At the UK level, once a quarter.
 - At the Regional and Local level, once a year (normally in April.)
 - Population projections are published once every two years.
 - New mid-year population estimates are published annually.
 - New LCFS is published annually.
- How do revisions to historical data affect your history and forecasts?
 - As explained above, we always take into account the latest historical data.
 - The monthly UK macro forecast is updated after each ONS revision of GDP for a quarter.
 - The RPS is based on a particular UK macro forecast and includes the latest available regional and local data.

- Forecasts are updated to be consistent with the latest historical data. While this will typically only affect the short-to-medium term, there are times when the long-run is necessarily affected. This will usually be when there has been a substantial revision to history.
- How are past growth trends captured in the forecasts?
 - All our models are econometric models.
 - An econometric model is a model estimated on historical data.
 - The coefficients (i.e. interactions) in the model embed historical relationships between variables and historical growth rates in a variable.
 - Where we believe that the forecast relationships may differ from history, we make appropriate adjustments to the forecast. This may be the case, for example, where an area has been substantially redeveloped in recent years.
- How are industry/regional/local developments and policies reflected in forecasts?
 - If past developments and policies are reflected in model inputs (for example population) or in history then they will be automatically captured by the model.
 - Our forecasts are policy-neutral in the sense that in our baseline assumes that sufficient projects, infrastructure, jobs etc. will be provided in order to meet the needs of the population in the long term. Thus although the project may not be explicitly included, an assumption that a project of its nature may have been included in the baseline.
 - It is important to realise that many developments or policies may not be sufficiently large enough to affect growth rates or may be implicitly included in the forecast from a higher level of aggregation.
 - We are able to make appropriate adjustments to the forecast to take into account certain large projects.
 - At the industry level we can take into account announced developments in that industry which are large enough to affect the growth in the industry at the national, regional or local level (as the case may be).
 - At the regional and local, we taken into account announced developments or policies which are large enough to affect growth at the regional or local level. The local model, in particular, has the facility to take into account the impact of additional population or jobs in a particular area.
 - The final forecast will show the net effect of the adjustment, after the effects of population constraints, job cannibalisation, commuting patterns etc.
- How does population relate to the employment forecasts?
 - This is discussed in detail in the methodology section above for the regions and the locals.
 - It is important to remember that employment is forecast on both a residence and workplace basis.
 - Residence based employment depends on local population (labour supply) growth but also on demand for work throughout the region and across the regional boundary.
 - Workplace based employment depends on labour supply throughout the region and across the regional boundary.
- What is working age?
 - The definition of working age used based on the state pension age.
 - As the state pension age for men and women changes in line with announced policy, the working age population will change to take this into account.
 - The key changes to the state pension age that have been announced are:
 - A gradual equality in state pension age for men and women.
 - A gradual rise in state pension age for both men and women to 67 (and 68 after the forecast horizon.)
- What is the participation rate / economic activity rate?
 - The participation rate or economic activity rate is the proportion of the population who are either employed or seeking employment (i.e. unemployed.)
 - The participation rate used in our models is based on the entire adult population (16+). This differs from earlier versions of our models which used only the working age population.
 - The participation rate is an endogenous variable in all our models. It is not a fixed assumption.
- What assumptions have been made regarding commuting in the local model?
 - Commuting in the local model is based on estimates given by the ONS.

- These are based on the Census 2011.
- Commuting assumptions are fixed over the forecast.
- However, the outcome for commuting may differ from the assumption because (for example) there is insufficient demand or supply for labour to provide as many workers across a particular commuting relationship.
- How is Full-Time Equivalent employment derived?
 - This is based on the total hours worked (please see the glossary.)
 - The relationship between FTEs and hours is fixed by definition.
 - In different industries, the hours worked per job will differ.
 - Historical data for this is taken from ASHE (please see the body of the guide.)
 - The forecast takes into account changing trends in hours per job. This will necessarily alter the relationship between Full-Time Equivalent employment and jobs.
- How does the weighting of different factors change over the forecast period?
 - There is no fixed rule about the changes in this time.
 - The coefficients of the econometric equations are fixed over time
 - However, at the local level population growth becomes more important as unemployment decreases.

Appendix E...About us



Our economic forecasting expertise

Experian's team of 18 economists is a leading provider of global, national, regional and local economic forecasts and analysis to the commercial and public sectors. Our foresight helps organisations predict the future of their markets, identify new business opportunities, quantify risk and make informed decisions.

Experian's economics team is part of a 140-strong analytics division, which provides an understanding of consumers, markets and economies in the UK and around the world, past, present and future. As part of the Experian group, the analytics division has access to a wealth of research data and innovative software solutions. Its statisticians, econometricians, sociologists, geographers, market researchers and economists carry out extensive research into the underlying drivers of social, economic and market change.

For more information, visit www.experian.co.uk/economics

Experian

Experian is a global leader in providing information, analytical and marketing services to organisations and consumers to help manage the risk and reward of commercial and financial decisions.

Combining its unique information tools and deep understanding of individuals, markets and economies, Experian partners with organisations around the world to establish and strengthen customer relationships and provide their businesses with competitive advantage.

For consumers, Experian delivers critical information that enables them to make financial and purchasing decisions with greater control and confidence.

Clients include organisations from financial services, retail and catalogue, telecommunications, utilities, media, insurance, automotive, leisure, e-commerce, manufacturing, property and government sectors.

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