Cumbria Local Industrial Strategy: Evidence Base

Prepared by:
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Contents

Acknowledgments:
This evidence base has been prepared by Ginny Murphy of the Cumbria Intelligence Observatory (Cumbria County Council) and Stephen Nicol of Nicol Economics. The authors acknowledge the very helpful observations and comment on drafts provided by Professor Frank Peck of CRED at the University of Cumbria.

1. INTRODUCTION AND SUMMARY

Introduction to this evidence base

- This evidence base has been produced as part of the process of developing the Local Industrial Strategy (LIS) for Cumbria - a process that started in May 2018.
- The evidence base covers the following:
  - Section 2 provides an overview of the economy covering economic structure, overall economic performance and key sectors.
- The rest of the evidence base is structured around the 5 foundations of productivity as set out in the national Industrial Strategy:
  - Section 3: covers ideas and innovation
  - Section 4: covers people and skills
  - Section 5: covers infrastructure
  - Section 6: covers business environment
  - Section 7: covers our places.
- Appendices covering more detailed sectoral data and the list of sources used are included.

- The evidence base has been prepared for the LEP by Cumbria Intelligence Observatory and Nicol Economics. There has also been very helpful challenge, advice and input from CRED at the University of Cumbria and members of the Steering Group.
- The evidence base has been prepared using the range of data sources available to the LEP. In some cases there is a lack of consistent publicly available data that limits the analysis.
- There are also limitations with some of the data sources used at a Cumbria level and, more often, with information below the county level due to sample sizes or robustness of estimates. Where this is the case, it is flagged up.
- The following areas of gaps in the evidence are being addressed:
  - A more detailed analysis of Cumbria's innovation ecosystem;
  - Development of an internationalisation strategy;
  - A comprehensive and consistent review of sites and premises supply and demand across Cumbria.

Summary: overarching opportunities and challenges

Opportunities and Assets

- Particular sectoral strengths in nuclear, advanced manufacturing, shipbuilding, food manufacturing, agriculture/ land based industries and tourism. A unique mix of rural, visitor economy and manufacturing expertise.
- Strategic location in the centre of northern Britain, well serviced by north-south road (M6) and rail links and east road links (A66/A69).
- Accessible location to major cities of Glasgow, Edinburgh, Newcastle, Leeds, Manchester and Liverpool.
- Outstanding natural environment and landscape providing key current and future resources for the UK in:
  - Recreation and outdoors activities
  - Green energy (wind and tidal)
  - Food products
  - Water.
- Potential site for major investment in new nuclear and innovative smaller reactors, new green energy and £40 billion nuclear deterrent Dreadnought programme and Sellafield supply chains.
- Space providing clean air, clear skies, limited congestion and offering an outstanding quality of life, but with skilled job opportunities.
- Strong performing vocational education and training sector and workforce with vocational skills and qualifications.
- Strong and resilient communities.

Challenges and Issues

- Patchy and underperforming levels of productivity with significant productivity gaps on all measures caused by: (1) our sectoral mix; and (2) often lower than average rates of productivity within sectors.
- Declining working age population: with a projection of a significant reduction in the workforce over the next 10 years.
- Thin pool of higher level skills: a small number of highly qualified residents spread across a large geographical area.
- An innovation ‘gap’ and weak ecosystem: there is an innovation “deficit” across the wider economy and a thin innovation ecosystem.
- Low rate of business start-ups and enterprise: a start-up rate less than two thirds of the England average, yet performs well on other enterprise measures.
- Few faster growing firms: in both absolute and relative terms fewer businesses that grow faster.
- Serious cold spots of worklessness and deprivation: higher than national levels of workless families and deprivation in a number of locations, predominantly the West Coast, Barrow and some areas of Carlisle. Plus concerning levels of unemployment among young adults in the same areas.
- Over-dependent parts of our economy: several of our areas are heavily dependent on one or two sectors and in some instances one major employer.
- Infrastructure connectivity challenge: issues in connectivity in a physical and digital sense given the needs of our dispersed population, labour force and economy.

Summary: ideas/innovation and people/skills

Ideas/Innovation

- Assets to build upon:
  - There is a reasonable level of business R&D that takes place in Cumbria (although it is likely to be concentrated in a few firms).
  - There is a world-class concentration of assets related to the nuclear sector in Cumbria, particularly linked to decommissioning, safety and environmental clean-up.
  - The University of Manchester Dalton Cumbria facility is the largest single nuclear research institution in the UK.
  - There is a wide range of activity and some excellent assets linked to green energy, environmental sustainably and land management in Cumbria.
- Challenges to address:
  - Within Cumbria itself there is relatively limited Higher Education based R&D, although Lancaster University is just on Cumbria's doorstep and works in partnership in the county.
  - On average it appears that Cumbrian firms are less likely to be engaged in innovation activity and to engage with national R&D programmes and opportunities – although there is a lot of innovation which is unrecorded by standard metrics.
  - Outside the nuclear sector there are many firms carrying out excellent innovation but overall there is a lack of a well-functioning innovation ecosystem.

People/Skills

- Assets to build upon:
  - Cumbria has a strong and well-functioning vocational educational system. We are particularly successful in recruiting and then training apprentices. Our workforce is well-endowed with technical and vocational qualifications.
  - Overall school performance is good and in some areas exceptional.
- Challenges to address:
  - The primary challenge is the declining workforce as the rate of in-migration of people of working age is not matching retirement rates and there is limited labour market slack.
  - This is coupled with a large replacement demand as the current workforce retires and the difficulty of travelling and matching need for jobs with where extra labour supply exists.
  - The broad future skills requirements are for a higher proportion of workers with high level skills and qualifications than currently exist in the labour force.
  - There are stubborn pockets of worklessness and lower skills in some of our communities – especially in Barrow and the towns of the west coast in spite of the strong economic opportunities there.

Summary: infrastructure and business environment

Infrastructure

- Assets to build upon:
  - Excellent strategic transport connectivity down M6 spine and across A66 to east of Britain.
  - Good train service to south and north down West Coast Mainline, potentially enhanced by HS2.
  - Vast majority of county covered by superfast broadband.
  - Major energy opportunities (tidal, further wind and future oil and gas).
  - Excellent natural assets (air quality, water, natural beauty).
  - Capacity in some key employment locations (eg Enterprise Zone in Carlisle).
- Challenges to address:
  - Poorer connectivity across other parts of Cumbria by rail and underused and underexploited train services (east-west from Carlisle to Barrow and also the west coast).
  - Pinch points and lack of resilience in road network outside M6 corridor.
  - Lack of 4G and mobile coverage to premises and across the land area.

Business Environment

- Assets to build on:
  - Large business stock per head of population and engagement with self-employment in parts of the county (helping an enterprise culture).
  - Major supply chains and supply chain opportunities (nuclear, defence, energy (in the future), tourism and value added processing from agriculture).
- Challenges to address:
  - Low rates of business start-ups.
  - Low rates of faster growing business (smaller and other businesses).
  - Firms which are not currently in export markets.
  - Reliance of many firms on purely local markets (in what has been a slow growing economy).

Summary: places

- Cumbria has a range of diverse places. It is not dominated by any one settlement, but is rather a poly-centred area with different settlements having overlapping functional geographies and spheres of influence.
- Carlisle is the largest settlement with the largest catchment for workers and fulfils a key role as a sub-regional centre for north Cumbria and parts of southern Scotland (i.e. much of the Borderlands area). It has important concentrations of food manufacturing and transport and logistics. The 10,000 home St Cuthbert's Garden Village, with the now funded link road, has a key role to play in helping support population and workforce growth for Cumbria as a whole.
- Barrow is the second largest settlement centred on the shipyards and the submarine building programmes. It has some of the highest wages, highest GVA per job and engagement with vocational training in Cumbria. However, in spite of recent economic growth there as a result of the scaling up of shipbuilding, it has the largest concentration of worklessness and deprivation in Cumbria. There are strong links between Barrow and parts of South Lakeland (especially Ulverston).
- Kendal is the town that is most accessible to the south (Lancashire and the rest of the North West) and is the area with the pool of most highly qualified and skilled residents. It has significant concentrations of cultural activity/assets and advanced manufacturing in surrounding areas. However, housing affordability is a key issue locally.
- Penrith is a key market town that sits in a large and low density rural area, but benefits from excellent north-south and east-west communications. It is major centre for the transport sector and food manufacturing and for businesses servicing the whole of Cumbria and the rural economy. There are plans for substantial housing development there as the area has particularly low rates of unemployment and a tight labour market.
- Whitehaven is an historic town with a harbour and sits in the heart of one of the key centres of the UK nuclear industry. There are ambitious plans to invest in new development in the town centre to help diversify the economy. There are opportunities to develop the tourism offer and product in and around the town. Whitehaven/Copeland and Workington/Allerdale are very closely tied by travel to work and other links.
- Workington is the main retail centre for the west coast with a significant port. There is still substantial manufacturing employment in and around the town including paper board, heavy engineering and further afield in dairy processing and plastics.
- The Lake District National Park covers around 35% of Cumbria's land area. It is the main concentration of the visitor economy which largely dominates its economy. It also has much of Cumbria's hill farming contributing to its special man-made landscape. There are acute housing affordability issues in the National Park.

2. OVERVIEW OF THE ECONOMY

Introduction and summary

Scope of this section

- This section reviews the overall size and structure of Cumbria's economy. It highlights the county's key areas of specialisation and recent absolute and relative economic performances.
- It also considers the evidence on the extent to which Cumbria's economy has delivered inclusive growth.

Key implications for the LIS

- Cumbria's geography – its size and location – is a key driver of our economic structure and performance.
- Cumbria has an unusual poly-centred industrial structure and our £12 billion economy has particular strengths in:
  - agriculture/land-based industries and tourism on the one hand and in
  - food manufacturing and nuclear and advanced manufacturing on the other.
- We also have strengths in logistics, construction, some technical services and in social care (linked to our elderly population).
- Cumbria LEP's 9 key sectors account for about 60% of our economy.
- There are wide variations across the county in our economic success and performance, in large part because of the location and concentration of different industrial sectors.

- Cumbria has a series of to some degree overlapping but distinct economic areas. This means that the industrial structure varies widely. At a local level some areas have a high and indeed overly high degree of dependence on some sectors and businesses.
- Our relative productivity performance is poor to middle ranking in a UK context. We sit 13% to 15% behind national productivity levels. Productivity performance is patchy across sectors (and geographies).
- Much of our relative productivity difference is caused by our industrial structure, but there is evidence of below national productivity rates in some sectors, especially in private sector services and digital/creative.
- Cumbria performs better on other economic measures such as our employment rate, our relatively high average wage levels and average household incomes.
- We have ranked in the top 25% of LEP areas in terms of how inclusive our growth has been recently, but there is more to do.

Size and overall nature of the economy

Large geographic area, but dispersed activity

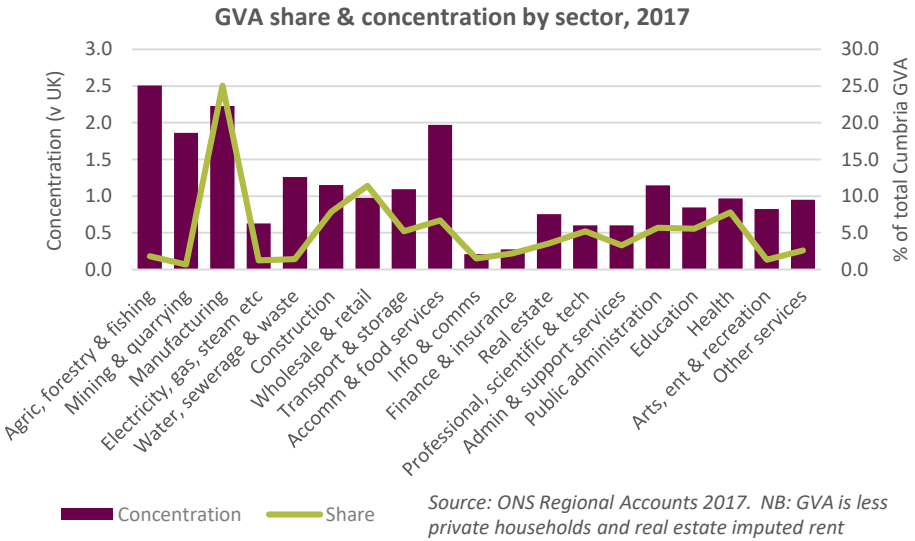
- At around 6,800 sqkms Cumbria is the 8th largest LEP by area, but this is combined with a relatively low population (at around 500,000 the third smallest LEP area population).
- Cumbria's land area is nearly 50% of that of the North West, 18% of the whole Northern Powerhouse area and is over a third the size of the South East
- This means that Cumbria has by far the lowest population density and also economic output density (GVA per square km) of any LEP area.
- Two districts (Eden and South Lakeland) have respectively the 1st and the 8th lowest population densities of any district in England.

Area	Area (sq km)	Population	Population Density	England Index (Eng = 100)
England	130,310	55,977,200	430	100
Cumbria	6,767	498,900	74	17
Allerdale	1,242	97,500	79	18
Barrow	78	67,100	860	200
Carlisle	1,039	108,400	104	24
Copeland	732	68,400	93	22
Eden	2,142	52,900	25	6
South Lakeland	1,534	104,500	68	16

Source: ONS Mid Year Estimates 2018

Unique economic structure

- The latest estimate of GVA (2017, balanced) for Cumbria is £11.6 billion (£11.25m excl households & imputed rent). Our economy has a unique structure with a combination of strong specialisms in manufacturing (25% of GVA which is 2.5 times the national share of GVA) coupled with specialisations in land-based industries and tourism-related activities



Source: ONS Regional Accounts 2017. NB: GVA is less private households and real estate imputed rent

Details of our economic structure (1)

	GVA 2017			Employment 2017			GVA per job	
Sector	£m	%	LQ (GB = 1.00)	No	%	LQ (GB = 1.00)	£	GB Index (GB=100)
Agriculture, forestry & fishing	185	1.8	2.51	13,500	5.5	3.44	£13,704	58.39
Mining & quarrying	71	0.7	1.86	350	0.1	0.87	£202,857	171.85
Manufacturing	2,568	25.0	2.23	38,500	15.6	1.96	£66,701	90.96
Electricity, gas, steam etc	125	1.2	0.63	650	0.3	0.59	£192,308	84.47
Water, sewerage & waste	147	1.4	1.26	1,625	0.7	0.98	£90,462	103.22
Construction	809	7.9	1.15	14,000	5.7	1.15	£57,786	79.91
Wholesale & retail	1,168	11.4	0.98	38,500	15.6	1.04	£30,338	75.35
Transport & storage	533	5.2	1.09	10,500	4.3	0.91	£50,762	95.95
Accommodation & food services	685	6.7	1.97	25,500	10.3	1.39	£26,863	113.19
Information & communication	155	1.5	0.21	3,250	1.3	0.31	£47,692	53.57
Finance & insurance	227	2.2	0.28	2,375	1.0	0.28	£95,579	78.04
Real estate activities (less imputed rent)	362	3.5	0.75	3,500	1.4	0.80	£103,429	75.76
Professional, scientific & technical	534	5.2	0.60	12,000	4.9	0.57	£44,500	84.63
Administrative & support services	337	3.3	0.60	12,000	4.9	0.55	£28,083	87.97
Public administration	581	5.7	1.15	9,500	3.8	0.94	£61,158	98.25
Education	569	5.5	0.85	19,000	7.7	0.89	£29,947	76.00
Health	798	7.8	0.97	31,500	12.8	0.98	£25,333	79.06
Arts, entertainment & recreation	137	1.3	0.82	6,000	2.4	0.96	£22,833	68.67
Other services	264	2.6	0.95	4,500	1.8	0.89	£58,667	85.67
All industries (less households, less imputed rent)	10,255	100.0	1.00	247,000	100.0	1.00	£41,518	80.02

Sources: ONS Regional Accounts 2017 / ONS Business Register Employment Survey 2017 / Cumbria LEP calculations, shading indicates degree of concentration relative to GB (red = low, green = high)
Note: Analysis is based on principal activity of businesses using Standard Industrial Classification (SIC) data from ONS. This may not reflect the full range of activity in each sector as it does not capture supply chain activity and may not capture contractor activity. See Appendix for definition of SICs included in each CLEP sector.

- This is the underlying data for 2017 on our broad sectoral structure.
- The specialisations in agriculture, manufacturing and accommodation/food services (linked to tourism) stand out as to a lesser extent does construction.
- The very low shares of the economy in higher value service sectors of ICT, financial services and professional scientific also stand out.
- [Note: "real estate services" & total GVA is excluding imputed rent].

Details of our economic structure (2)

GVA, Employment & Productivity for Cumbria LEP Sector Groups								
	GVA 2017			Employment 2017			Productivity (GVA per job)	
Sub-Sector	£m	%	LQ (GB = 1.00)	No	%	LQ (GB = 1.00)	£	GB Index (GB = 100)
Agriculture & hunting	163	1.6	2.53	13,000	5.3	3.49	£12,538	58.06
Manufacture of food products	278	2.7	2.05	5,000	2.0	1.68	£55,600	97.50
Manufacture of wood & paper products	246	2.4	4.63	2,525	1.0	2.55	£97,426	145.03
Manufacture of rubber & plastic products	187	1.8	3.50	3,000	1.2	2.12	£62,333	132.01
Manufacture of other non-metallic mineral products	95	0.9	2.58	1,500	0.6	2.25	£63,333	91.60
Manufacture of basic metals	435	4.2	20.02	10,000	4.0	18.77	£43,500	85.37
Manufacture of other transport equipment	559	5.5	7.95	7,000	2.8	6.99	£79,857	90.99
Construction of buildings	270	2.6	0.97	5,000	2.0	1.34	£54,000	58.00
Motor trades	217	2.1	1.02	6,000	2.4	1.37	£36,167	59.61
Land transport	308	3.0	1.55	6,500	2.6	1.45	£47,385	85.33
Accommodation	405	3.9	4.25	11,000	4.5	2.96	£36,818	114.78
Architectural & engineering activities	268	2.6	1.51	4,750	1.9	1.16	£56,421	104.76
Residential care activities	205	2.0	2.23	8,000	3.2	1.38	£25,625	128.97
All industries	10,255	100.0	1.00	247,000	100.0	1.00	£41,518	80.02

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017 (excl households and imputed rent)

Note: Analysis is based on principal activity of businesses using Standard Industrial Classification (SIC) data from ONS. This may not reflect the full range of activity in each sector as it does not capture supply chain activity and may not capture contractor activity.

A more detailed picture of the sectors of the economy in which Cumbria specialises is shown with key features being:

- Agriculture;
- Key manufacturing sectors (food, paper/wood, rubber/plastics, nuclear reprocessing and shipbuilding);
- Accommodation (linked to tourism);
- Land transport (linked to Cumbria's strategic position);
- Construction and engineering activities (linked in part to the nuclear sector and specialisms in rail engineering);
- Residential care (linked to our particularly large and ageing population).

Details of our economic structure (3)

- The LEP has developed a series of sector groups covering key areas of its economy. We have approximated the ONS GVA and employment data to these sectors. Collectively they account for around 60% of the economic value and jobs in our economy.
- They fall into three groups:

1. Sectors in which Cumbria has significant current **specialisations**: advanced manufacturing, nuclear, visitor economy, rural and, to some degree, construction.
2. Sectors where overall Cumbria has around **average** shares of GVA and jobs but are important sources of employment and supporting sectors (health and logistics).
3. Sectors which are currently **unrepresented** but which are seen as having growth potential (professional and scientific services and creative/digital).

Note: Analysis is based on principal activity of businesses using Standard Industrial Classification (SIC) data from ONS. This may not reflect the full range of activity in each sector as it does not capture supply chain activity and may not capture contractor activity. See Appendix for definition of SICs included in each CLEP sector.

- Recorded GVA per job varies widely across these sectors in absolute terms and relative to the national average. Relative GVA per job compared to the national average is particularly low in creative/digital (reflecting the nature of the activity that currently takes place in Cumbria).

- The very low recorded GVA per job in our rural/agricultural sector reflects the current importance of subsidy/agri-environment payments made to our farmers, supporting incomes in the sector.

GVA, Employment & Productivity for Cumbria LEP Sector Groups

	GVA 2017			Employment 2017			Productivity (GVA per job)	
CLEP Sector	£m	%	LQ (GB = 1.00)	No	%	LQ (GB = 1.00)	£	GB Index (GB = 100)
Advanced manufacturing	1,342	13.1	2.14	16,000	6.5	1.81	£83,875	95.00
Construction	809	7.9	1.15	14,000	5.7	1.15	£57,786	79.91
Creative, cultural & digital	268	2.6	0.36	9,000	3.6	0.57	£29,778	51.06
Health & social care	798	7.8	0.97	31,500	12.8	0.98	£25,333	79.06
Logistics	533	5.2	1.09	10,500	4.3	0.91	£50,762	95.95
Nuclear	435	4.2	20.02	10,000	4.0	18.77	£43,500	85.37
Professional services	991	9.7	0.68	17,500	7.1	0.64	£56,629	84.95
Rural & food production	502	4.9	2.05	19,000	7.7	2.63	£26,421	62.44
Visitor Economy	685	6.7	1.97	25,500	10.3	1.39	£26,863	113.19
Other sectors	3,891	37.9	0.81	95,000	38.5	0.80	£40,958	81.26
All industries	10,255	100.0	1.00	247,000	100.0	0.98	£41,518	81.96

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017 (excl households and imputed rent)

Key economic differentiators for Cumbria

Key sectoral strengths

- A major concentration of **manufacturing** and engineering:
  - Nuclear reprocessing, decommissioning, environmental management and associated engineering skills – with a £2 billion pa supply chain spend and national research bodies and university research.
  - Nuclear submarine building – centre for £40 billion "national endeavour" for Dreadnaught nuclear submarines.
  - Assortment of advanced manufacturing activity in plastics, rubber, paper and engineering.
  - Food manufacturing from large multi-nationals to artisan producers.
- Major **tourism** sector – latest estimate is that the 47 million visitors to Cumbria support around 8% of GVA and around 38,000 jobs and this rises to around 11% to 12% when supply chain and multiplier effects are taken in to account. Supports jobs in food and beverages, accommodation, retail, transport and other sectors.
- Significant **land-based industries** (agriculture and forestry). Cumbria has major concentrations of sheep, beef and dairy cattle and associated upstream (dairy, feed stuff etc) and down stream (food processing) activity.
- Strategic road and rail location for the North of England and Scotland (M6/A66) and important road transport sector in Carlisle (linked to motorway location).

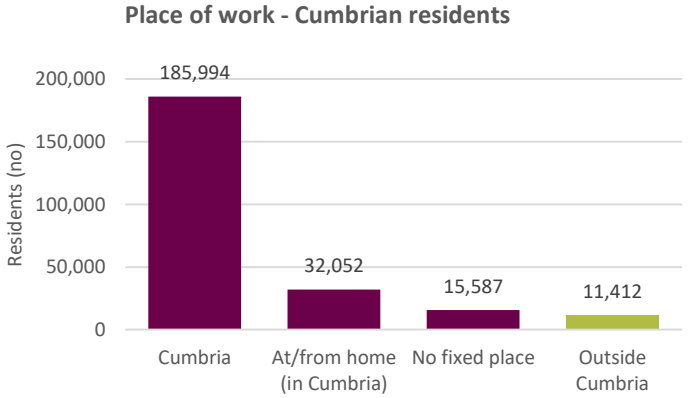
Other assets

- University of Cumbria is located in Carlisle and Ambleside (and with smaller campuses in Barrow and Workington); Lancaster University is within 20 miles of south Cumbria; the University of Manchester and UCLAN both have facilities in Cumbria.
- Extensive and successful vocational training sector (FE Colleges and private providers).
- Although not a major source of direct employment, there are important **energy assets** in Cumbria (beyond the nuclear sector):
  - Offshore wind farms (20% of UK capacity)
  - Oil and gas (Morecambe Bay/Irish Sea)
  - Tidal power potential in Solway Firth and Morecambe Bay
  - Biomass and micro hydro.
- Major water assets and supplier of water to North West.
- Other natural assets and associated natural capital and ecosystem services - linked to the visitor economy.
- Largest concentration of protected landscapes in UK (Lake District National Park now a World Heritage Site, large part of Yorkshire Dales National Park, Hadrian's Wall WHS, three AONBs).
- Lowest population density of any LEP in England: space to visit and air to breathe.

How our economy functions geographically

Overall, significant degree of self-containment….

- Cumbria is the most self-contained LEP area in terms of travel to work flows (at the level of the overall LEP area).
- According to the 2011 Census, 96% of Cumbria's residents worked in Cumbria and 94% of all jobs based in Cumbria were filled by Cumbrian residents.
- The rate of self-containment does of course vary across the county with Carlisle (links to Scotland) and South Lakeland (links to Lancashire) being the most "porous" areas in terms of commuting. Overall, 2,700 commuted daily into Cumbria from Scotland and 4,600 from Lancashire in 2011.



Source: Census 2011

….but several functional economic areas

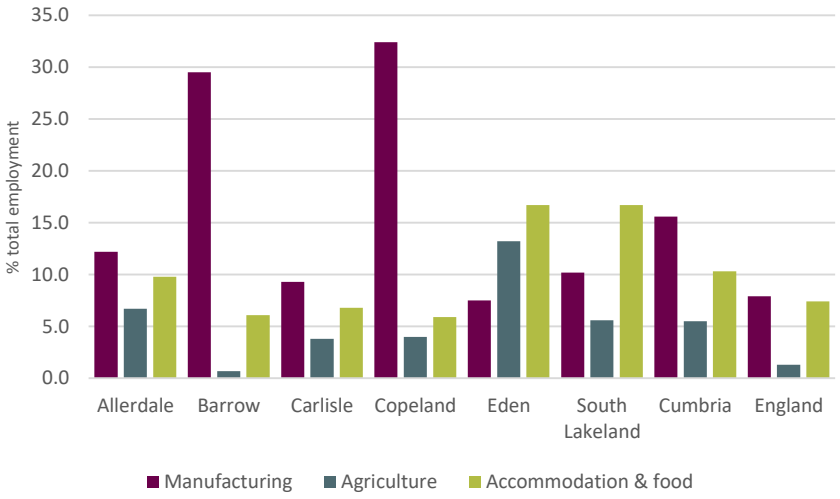
- The county does not function as one single travel to work or functional economic area. The size and typography of Cumbria means that the county has a series of overlapping economic and housing areas centred on our main towns and city.
- The ONS has divided Cumbria into six travel to work areas based on the 2011 Census. These show the east/west and north/south divisions in terms of travel patterns and cut across local authority boundaries (these are non-overlapping areas where 75% of economically active residents work and 75% of workers reside).

Different economic structures across Cumbria…

Varied role of manufacturing and tourism, farming

- The economic structure of Cumbria varies widely from place to place with Cumbria's specialism far from being evenly distributed.
- Manufacturing employment is particularly concentrated in Barrow (BAE Systems shipbuilding and other employers) and Copeland (Sellafield and other nuclear sector employers); there are also above average concentrations in Allerdale and Carlisle.
- In all areas bar Barrow agricultural employment is proportionally more important than nationally, but Eden stands out as the district with the greatest dependence on agriculture.
- Tourism related employment (as proxied by accommodation and food services) is most important in Eden and South Lakeland and to a lesser extent Allerdale – all areas that have substantial parts of the Lake District's main tourism centres.
- Carlisle, with its role as a sub-regional centre, has a more mixed economy, with retail, business services, health and also road transport important sectors.

- The figures below measure the direct sector roles in three key sectors. Work carried out on the economic impact of Sellafield suggests that 60% of Copeland's GVA depends on Sellafield. The wider role of the tourism sector in Eden and South Lakeland is larger than suggested below just by employment in accommodation and food services.

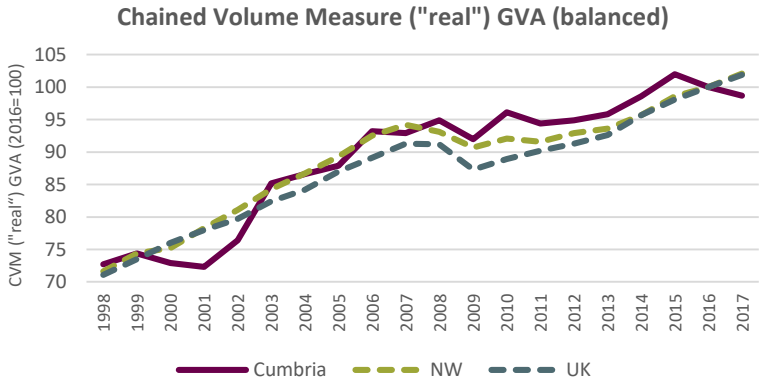


Source: ONS BRES 2017

Economic growth and change over time

Changes in GVA

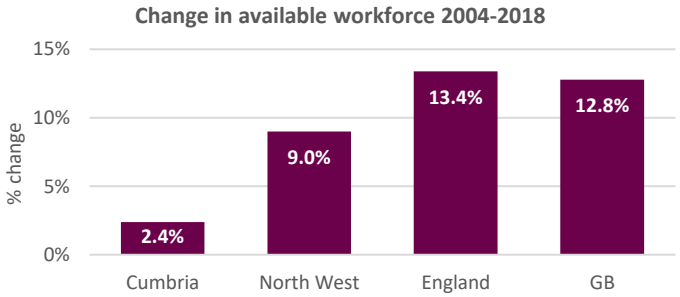
- The mix of industries in Cumbria means that our economy tends not to follow the same trajectory as the national economy.
- Cumbria weathered the last recession much better than most areas, but GVA growth has dropped off since 2015.
- Over the last two decades average economic growth has been 1.6% pa compared to 1.9% pa for the UK/North West.
- A major reason for our slower economy growth has been slower workforce growth than elsewhere.



Source: ONS Regional Accounts 2017. CVM ("real") GVA has the effect of inflation removed and uses 2016 as the base year. NB: 2017 data are provisional.

Changes in workforce

- Over the past 15 years the available workforce (economically active population aged 16+) in Cumbria has barely changed in size, growing by just 5,700 to around 246,000 which is just 2.4%, well below the regional and national rates.



Source: ONS Annual Population Survey

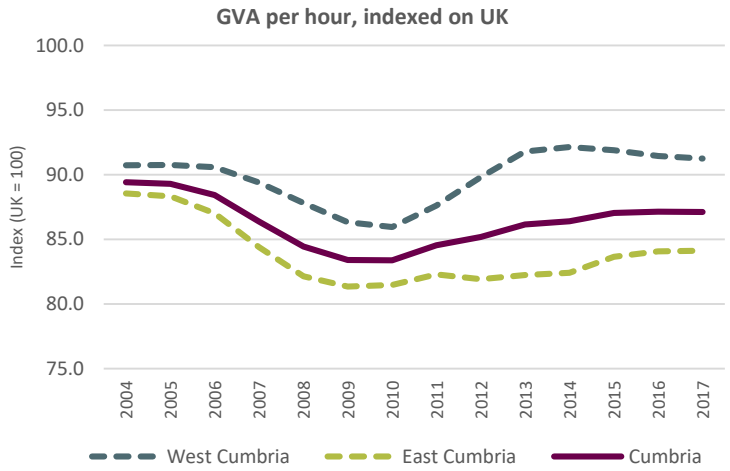
Changes in Jobs

- The path of changes in jobs has broadly followed the path of the available workforce as there is very little slack in the labour market in Cumbria. The economic activity rate rate at 81% (those in work or actively seeking work as % of all aged 16-64) is one of the highest outside the south of England.
- The latest estimates are that there are around 270,000 workplace jobs in Cumbria (inc self employed, Govt supported trainees & HM Forces, with net in-commuting and double jobbing accounting for the difference between jobs and available resident workforce).

Current productivity performance (1)

GVA per hour and per filled job

- The latest data (2017) suggests that overall productivity levels at £29.3 per hour worked and £46,000 per job are 13% below and 15% below the respective UK averages. Overall relative productivity, as measured by ONS, fell from 2004 to 2010 then has risen slightly.

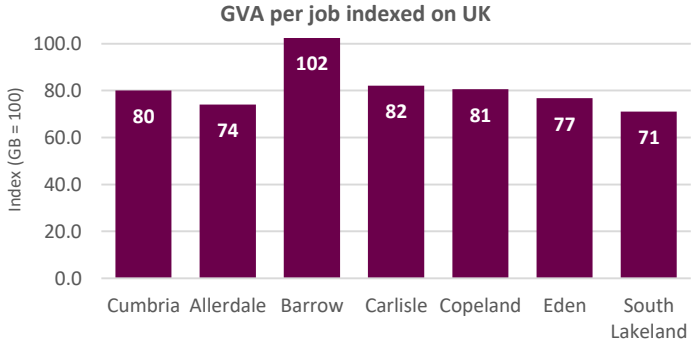


Note: West Cumbria is defined as Allerdale, Barrow and Copeland; East Cumbria as Carlisle, Eden and South Lakeland

Source: ONS Subregional Productivity 2017 (smoothed) NB: 2017 data are provisional.

Variation by area

- The overall Cumbria headline productivity masks wide variations from area to area. As shown in the first diagram, productivity levels per hour worked are higher in West Cumbria, although the gap has been narrowing since 2014 as levels have dropped in that area.
- In 2017 GVA per filled job was 90% of the UK average in West Cumbria (Allerdale, Barrow, Copeland), but lower at 81% in East Cumbria (Carlisle, Eden, South Lakeland), reflecting the industrial structure of the two areas.
- Official productivity data is not available at district level but using an alternative local calculation, the higher GVA per job in West Cumbria is particularly noticeable in Barrow, where levels are above the national average, mostly due to BAE Systems and related activity.

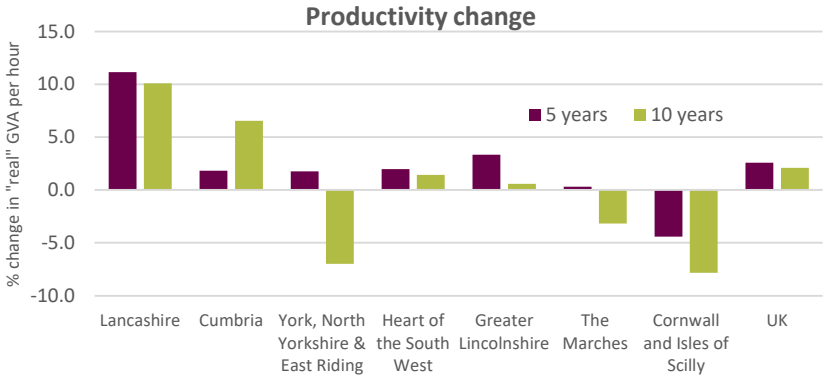


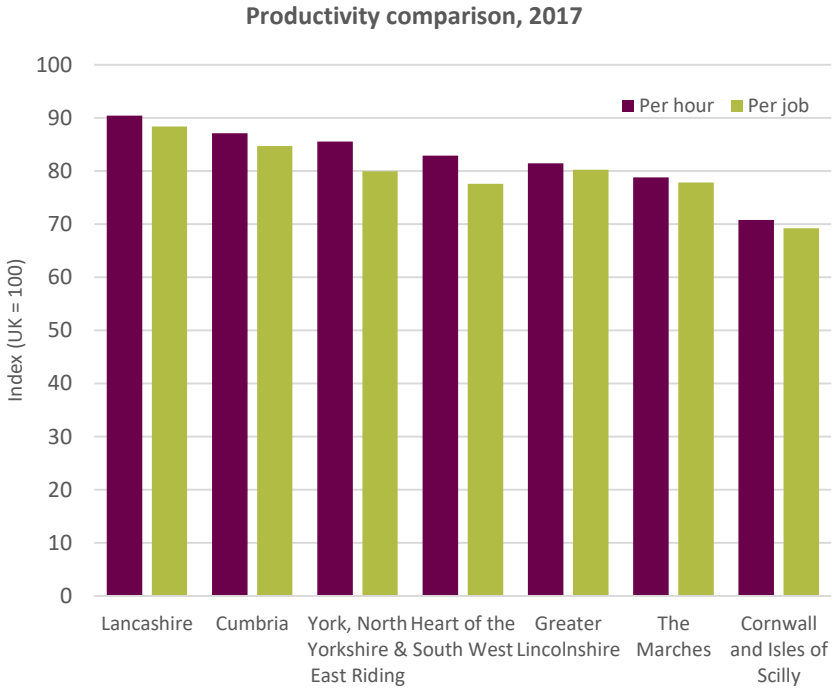
Source: ONS Regional Accounts 2017 / ONS Business Register Employment Survey 2017 / Cumbria LEP calculations.

Current productivity performance (2)

Comparison

- We have compared current productivity with a group of comparator LEPs (selected on the basis of their similarity to Cumbria on a range of measures). On this basis, Cumbria's productivity performance is quite strong and only surpassed by Lancashire.
- The differences to a large degree reflect economic structure with Cumbria having a much more significant manufacturing sector than many of the other more rural LEPs.
- Productivity growth per hour (CVM GVA) over the last 10 years has surpassed all other comparator LEPs apart from Lancashire. However, as with the UK overall the real increase has been very low.

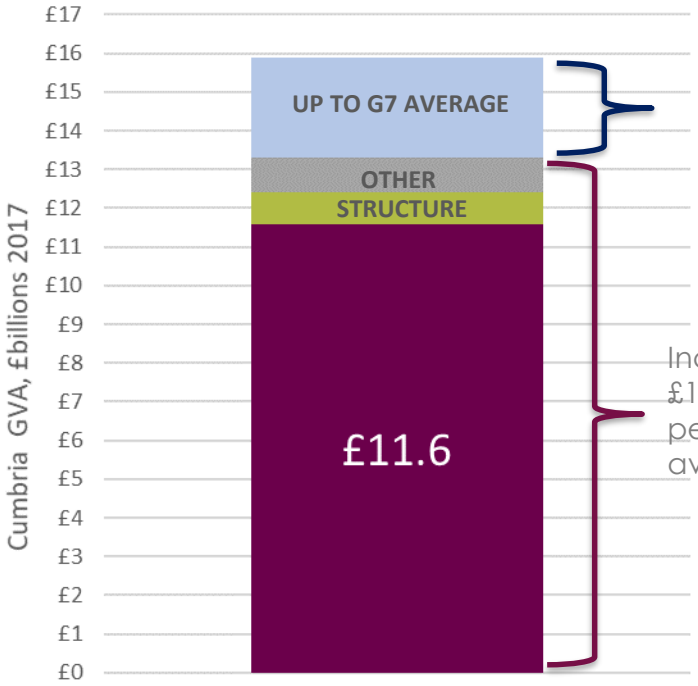




Source: ONS Subregional Productivity 2017 (smoothed)

Source: ONS Regional Accounts (CVM GVA) / Subregional Productivity 2017 (hours worked)

Current productivity performance (3)



Further increase of some £2.6bn (20%) if GVA per hour were the average of the G7 (less UK)

Increase of some £1.7bn (15%) if GVA per hour were the UK average

Around 40% to 45% due to the **structure** of our economy, the rest "other factors"

Source: OECD Eurostat 2015/16 / ONS Regional Accounts 2017 and Subregional Productivity 2017 / Cumbria LEP calculations

Cumbria's productivity unpicked (1)

- There are several factors that explain Cumbria's overall productivity performance: our economic structure and performance within each sector.

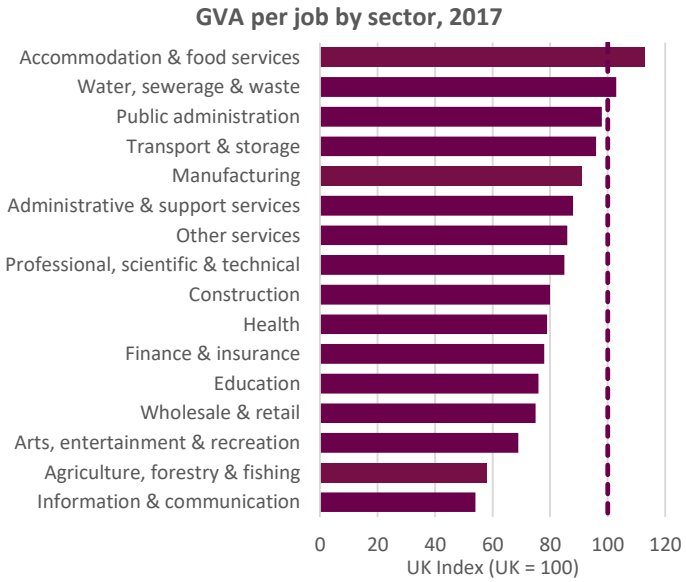
Role of our economic structure

- As noted earlier, Cumbria has an unusual economic structure. Overall, our economic structure accounts for about a third to 2/5ths of the productivity gap (around £800m or 40% if we had the current productivity per sector but UK share of jobs by sector based on the 71 sector breakdown for which GVA data is now available).
- This is because although we have a high share of our economy in the higher productivity manufacturing sector, we also have high shares in agriculture and accommodation/food services (both relatively low productivity) and a low share of our economy in those private sector services where productivity tends to be higher – computing/digital, financial services and professional and scientific.

Role of other factors

- There is some evidence that the particular mix of activity within some of our sectors also contributes to lower productivity.

- In most sectors at an **aggregate** level our average productivity per job is below the UK average for that sector. However, this is in some case misleading as the businesses in the **sub-sectors** have productivity levels on par or above the national average. So in the case of manufacturing, the apparent overall below average productivity is a result of the sectoral mix.



Source: ONS Regional Accounts 2017 / BRES Employment 2017

Cumbria's productivity unpicked (2)

Manufacturing productivity

- Productivity levels as measured by GVA per job are driven in large part by the capital intensity of manufacturing activity. We have drilled down to the key manufacturing sub-sectors in our economy that account for 80% of all manufacturing activity.
- As can be seen, productivity levels compared to the UK average vary but across the seven sub-sectors collectively, overall productivity levels are similar and indeed slightly above the national average.
- We can conclude from this that by and large productivity levels in our manufacturing sector are largely a result of the composition of manufacturing activity. With the exception of other transport equipment (shipbuilding), all the manufacturing sectors that are particularly important ones in Cumbria are also those that at a national level have below average productivity levels.

Note: Analysis is based on principal activity of businesses using Standard Industrial Classification (SIC) data from ONS. This may not reflect the full range of activity in each sector as it does not capture supply chain activity and may not capture contractor activity. See Appendix for definition of SICs included in each CLEP sector.

- In the case of "other transport equipment" it is important to note that at a UK level the aerospace sector accounts for a large part of this sector which tends to have higher productivity levels than shipbuilding. Hence in Cumbria the sector's productivity rates reflect the type of activity that takes place here.
- Productivity levels are markedly lower in the basic metals sector both relative to the sub-sector but also in absolute terms. As reprocessing activity at Sellafield ceases, recorded productivity levels may fall further.

Manufacturing sub-sector	Employment 2017			Headline "productivity" (GVA per job)		
	GB	Cumbria		GB	Cumbria	
	%	No	%	£	£	GB Index (GB = 100)
Food products	1.2	5,000	2.0	£57,024	£55,600	98
Wood & paper products	0.4	2,525	1.0	£67,176	£97,426	145
Rubber & plastic products	0.6	3,000	1.2	£47,217	£62,333	132
Other non-metallic mineral products	0.3	1,500	0.6	£69,139	£63,333	92
Basic metals/nuclear	0.2	10,000	4.0	£50,955	£43,500	85
Fabricated metal products	1.0	2,750	1.1	£55,126	£55,126	131
Other transport equipment	0.4	7,000	2.8	£87,766	£79,857	91
All of above	**4.1**	**31,775**	**12.9**	**£59,708**	**£62,911**	**105**
Other manufacturing	3.9	6,7257	2.7	£87,640	£84,610	97
All manufacturing	8.0	38,500	15.6	£73,334	£66,701	91

Sources: ONS Regional Accounts 2017 / ONS Business Register Employment Survey (BRES) 2017 / Cumbria LEP calculations. Totals may not sum due to rounding.

Other measures of economic performance

Economic measures

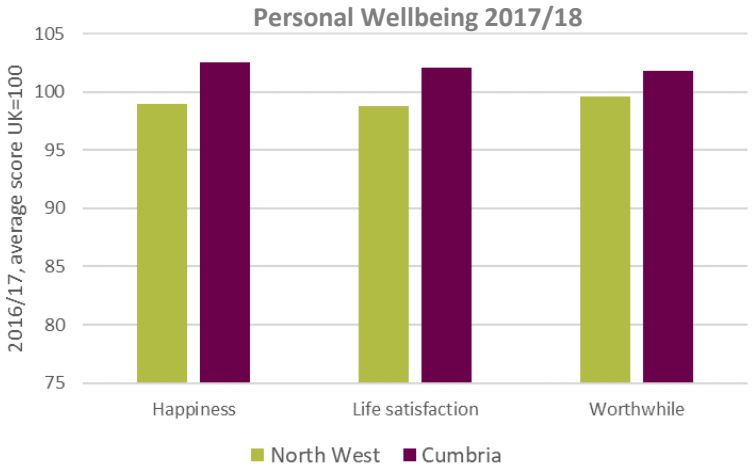
- Cumbria performs well in terms of other overall economic measures.
  - **Unemployment** rates overall are low and **employment** rates are high – well above national and regional average.
  - Average **full-time wages** are also relatively high in Cumbria and indeed are very close to the national average. However, the average masks wide variations by sector and area.
  - Disposable household **incomes** are also close to the national average and well above regional levels.

Measure	Cumbria	NW	UK
Jobless rate 2018	2.0	4.1	4.3
Economic activity rate 2018	80.9	76.9	78.3
Employment rate 2018	79.3	73.8	75.0
Gross weekly f/t resident earnings 2018	£559	£530	£569
Indexed on UK (UK = 100)	98	93	100
Gross hourly f/t resident earnings 2018	£13.74	£13.44	£14.37
Indexed on UK (UK = 100)	96	94	100
Gross disposable household income per head 2017	£18,537	£16,861	£19,514
Indexed on UK (UK = 100)	95	86	100

Sources: ONS Annual Population Survey, Annual Survey of Hours Earnings, Regional Accounts

Social measures

- An important feature of Cumbria is the strength of its communities and the social cohesion in most of its settlements.
- This is reflected in recorded measures of happiness, life satisfaction and the extent to which people describe their lives as worthwhile which are consistently above national and regional average in Cumbria.

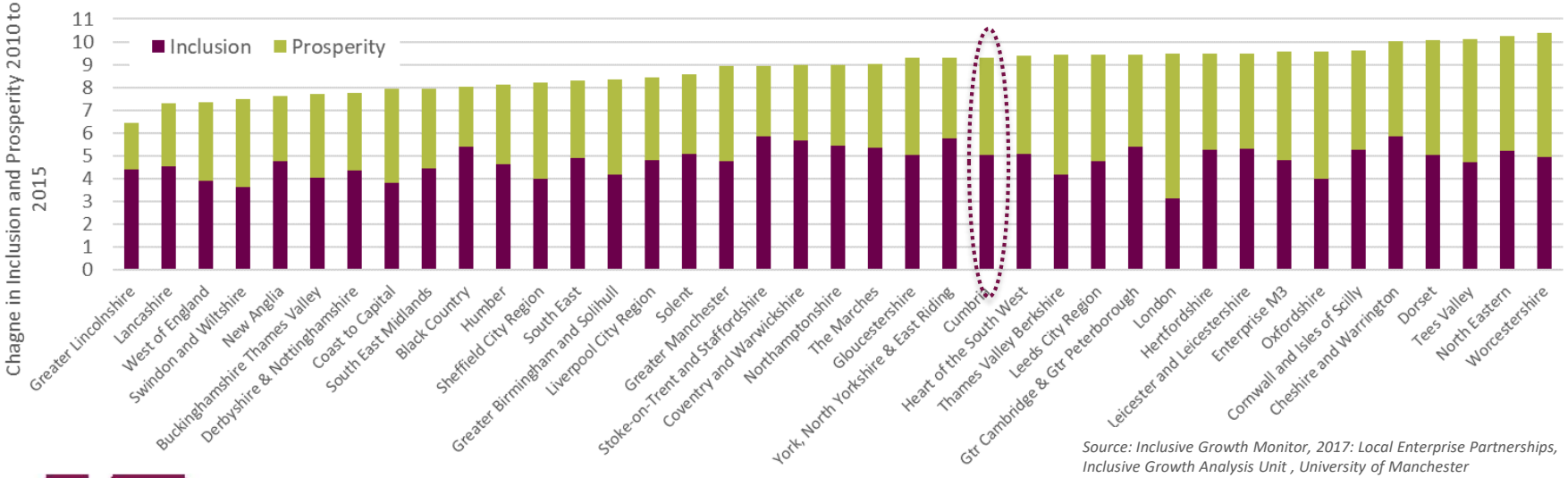


Source: ONS Annual Population Survey Personal Wellbeing 2017/18

Degree of inclusivity in our economic performance

What is inclusive growth?

- The RSA Inclusive Growth Commission defined inclusive growth as "*enabling as many people as possible to contribute to and benefit from growth*".
- There is no one correct way of measuring inclusive growth. However, there is interesting work developing metrics to assess whether growth has been more or less inclusive. This work compares changes in poverty scores and in economic inclusion over time across England's LEPs.
- On both scores (see next slide for explanation) Cumbria has fared reasonably well over the period considered (2010 to 2015). This suggests that compared to other parts of England, especially London and parts of the South East with very high housing costs, recent economic growth has been relatively inclusive and shared.
- This index does not measure the extent to which growth has been shared within Cumbria and because it is a relative measure it does not measure the extent to which there has been an absolute improvement in reducing the number of workless households or the scale of the cold spots of deprivation in the county.



Source: Inclusive Growth Monitor, 2017: Local Enterprise Partnerships, Inclusive Growth Analysis Unit , University of Manchester

Measures of inclusive growth

Measure of Inclusive Growth			
Economic Inclusion	Income	Out of work benefits	% of working-age population receiving out-of-work benefits
		In-work tax credits	% of Households in Receipt of HMRC Working Tax and Child Tax Credits
		Low earnings	20th percentile of weekly full-time earnings (residence-based)
	Living costs	Housing affordability (ownership)	Ratio of lower quartile house price to lower quartile earnings
		Housing costs (rental)	Private Rented Sector Median Monthly Rent Levels
		Fuel poverty	% Households estimated as being fuel poor
	Labour market inclusion	Unemployment	Unemployment rate 16-64 (APS WAP as denominator)
		Economic inactivity	Economically inactive as % of working-age population
		Workless households	% of workless households
Prosperity	Output Growth	Output (GVA/capita)	Workplace based GVA per head
		Private sector businesses	Private sector businesses only (local units) per 1000 Working Age residents
		Wages/earnings	Median gross weekly pay for full-time workers (workplace based)
	Employ-ment	Workplace jobs	Workplace jobs density per working-age resident
		People in employment	Employment rate 16-64
		Employment in High-tech Sectors	% of employees in Knowledge Intensive Services or High-tech Manufacturing Industries
	Human capital	Higher level occupations	% workers in managerial, professional and technical occupations (SOCs 1, 2 and 3)
		Intermediate & higher level skills	% of working-age population with NVQ Level 2 qual or above
		Educational attainment	% achieving 5+ A* to C at GCSE/KS4 including English and Maths

Source: Inclusive Growth (IG) Monitor, 2017: Local Enterprise Partnerships, Inclusive Growth Analysis Unit (IGAU), University of Manchester

- The factors used to measure the degree of prosperity and of inclusivity of growth are shown here.
- Cumbria tends to score well at an aggregate level in terms of employment rates, housing affordability and out work benefit; but less well in terms of fuel poverty and in work tax credits.

Key external influences on Cumbria

Policy and economic drivers

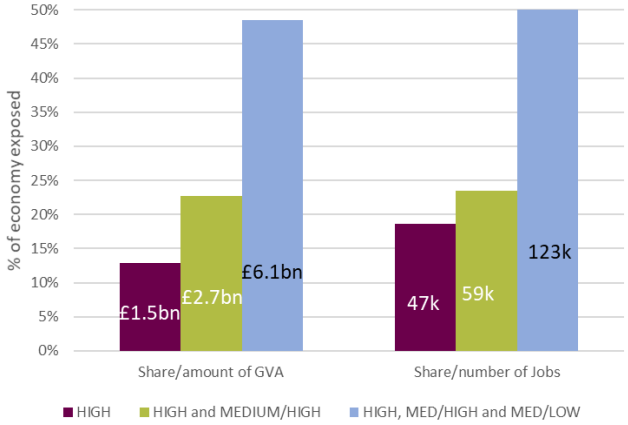
- The Cumbrian economy is strongly affected by a range of government policy decisions – particularly in relation to the nuclear sector, energy more widely and also defence.
- Future UK policy, post-Brexit, towards environment/agriculture will impact our land-based industries, landscape and rural communities.
- Especially outside our food manufacturing sector, many manufacturers serve a mix of overseas and domestic markets and so are tied, but not overly so, to the fortunes of the UK economy.

Environmental factors

- Climate change is already starting to impact our economy and our communities with the impact of flooding in particular a key issue in many parts of Cumbria. With significant parts of our economy and communities dependent on agriculture and tourism, climate and weather changes will have important economic effects.
- The long range forecasts suggest that Cumbria's weather will become warmer and wetter (especially in the winter) (*Source: UKCP18 Derived Projections of Future Climate over the UK, November 2018, Met Office*).

Brexit

- The LEP has examined the potential medium to longer impacts of Brexit and assessed the degree of the exposure of different sectors to changes in trade access, regulatory/financial and supply of migrants.
- The sectors with the highest exposure ("high" or "medium/high") are our tourism sector (access to workers), agriculture sector (range of factors) and a variety of export focused manufacturing sectors. These make up 20% to 25% of our economy whether measured by jobs or GVA.



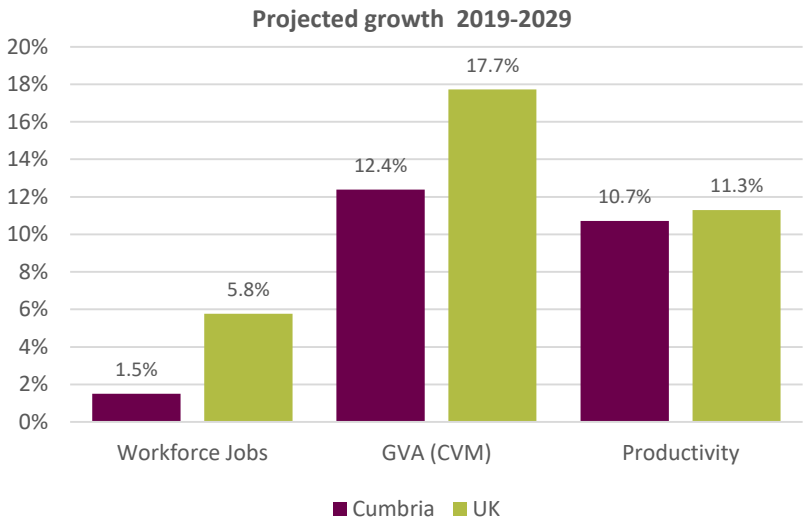
Source: Cumbria LEP Brexit Analysis, Dec 2018

Baseline economic projections (1)

2019 baseline forecasts

The latest baseline economic projections for Cumbria are taken from the Experian Regional Planning Service. These project that over the next 10 years (2019 to 2029):

- There could be an increase of around 4,300 in workforce jobs (1.5%) in Cumbria compared to growth of 5.8% for the UK. This is the slowest growth of 78 areas in England.
- GVA could grow by around 12.4% in Cumbria compared to 17.7% for the UK.
- Both represent rates of growth that are considerably lower than past long term rates of growth and reflect a less positive view about the future path of the UK economy.
- Productivity could growth by 10.7% which is just below the forecast growth of 11.3% for the UK.
- **Note:** At the time of writing, there is still a great deal of uncertainty about Brexit - these projections have built into them the best assessment by Experian of the long term potential impact of Brexit on the UK economy, based on an "orderly" Brexit.



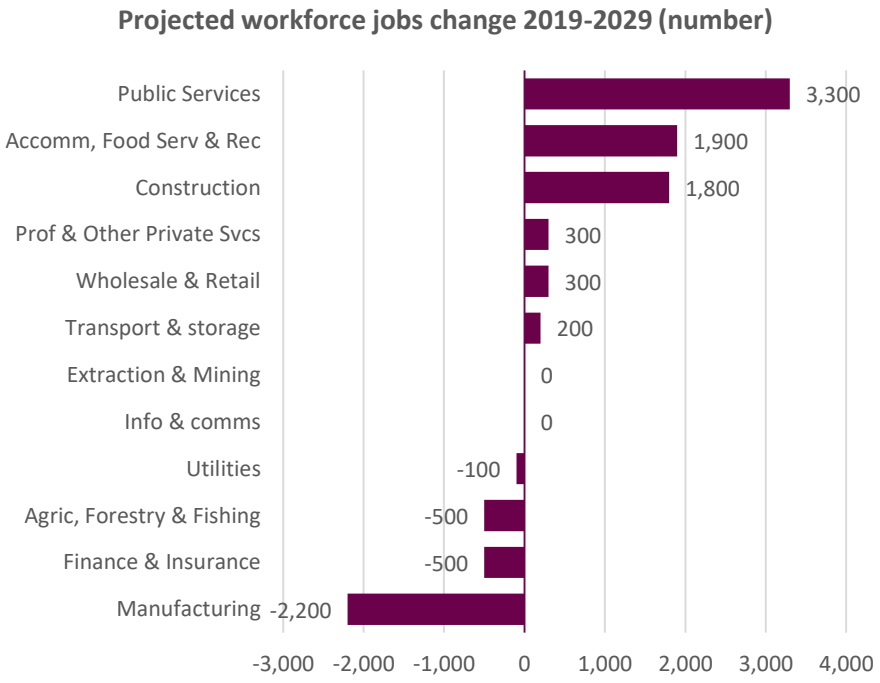
Source: Experian Regional Forecasting Service, June 2019

These are standard baseline projections for Cumbria from Experian's regional forecasting service to which no additional adjustments have been made. They incorporate Experian's view of prospects for the UK economy as at March 2019. Details of the methodology are available on request.

Baseline economic projections (2)

Workforce jobs

- The most recent baseline workforce projections for Cumbria, taken from the Experian Regional Forecasting Service, estimate that there could be growth of 4,300 in workforce jobs between 2019 and 2029.
- The sector showing the largest numerical growth is public services with most of the growth accounted for by a rise in health sector jobs.
- Accommodation, food services & recreation and construction are also projected to see workforce gains approaching 2,000.
- Manufacturing is projected to see the largest decline, -2,200, with the largest fall projected to occur in Copeland as reprocessing activity reduces.



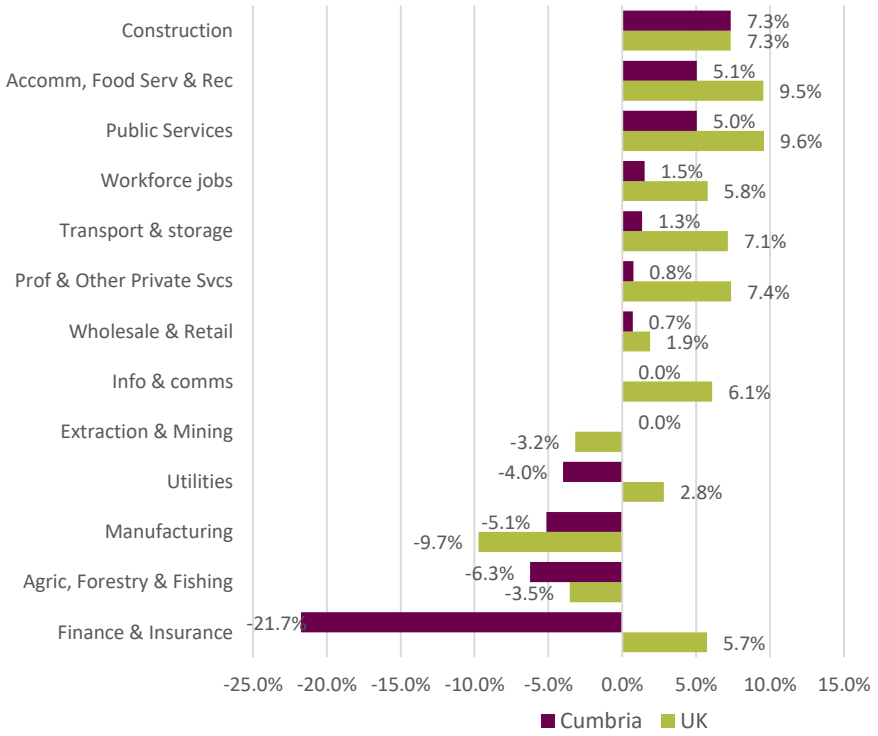
Source: Experian Regional Forecasting Service, June 2019

Baseline economic projections (3)

Workforce jobs

- Despite a projected fall in manufacturing sector jobs in Cumbria, this is less pronounced than nationally (-5.1% v -9.7%), which is largely down to the nature of manufacturing activity that takes place in Cumbria and recent jobs stability at major employers such as BAE Systems.
- Construction and wholesale & retail are projected to grow in line with national averages.
- Most other sectors however are projected to grow at a slower rate than nationally and in particular, the financial services sector which is already much smaller locally than nationally, is projected to contract in Cumbria.

Projected % change in workforce jobs by sector 2019-2029



Source: Experian Regional Forecasting Service, June 2019

3. IDEAS AND INNOVATION

Introduction: Ideas and Innovation

Scope of this section

- In this section we examine the evidence on the innovation assets and strengths that exist in Cumbria or relate to Cumbria. This draws on:
  - "The North West Nuclear Arc Science and Innovation Audit" Bangor University and partners for Department for Business, Energy & Industrial Strategy, 2018.
  - "North West Coastal Arc Clean Growth Partnership: Science and Innovation Audit", Lancaster University and partners, June 2018.
  - "Innovation North' – Progressing Innovation in the Northern Powerhouse, Steer Economic Development for Innovate UK and the 11 Northern LEPs, July 2018.
  - "Business research and innovation activity in Cumbria: a review of evidence", Professor Frank Peck and Dr Gail Mulvey, CRED, for Cognitive Cumbria, February 2016.
  - Planning for a step change: Informing where the North West should focus innovation to drive up productivity, Regeneris Consulting for Innovate UK and North West Business Leadership Team, July 2018.
- We also review the evidence on the innovation activity that is taking place in Cumbria within our businesses and other organisations. This draws on a number of sources including data from the Smart Specialisation Hub and the Enterprise Research Centre (at Warwick University) "UK Local Growth Dashboard, June 2018".
- However, overall **there is limited data for this foundation**. In recognition of this Lancaster University are carrying a review for CLEP of the evidence on the innovation ecosystem in Cumbria, relevant national and international experience and the potential to enhance the innovation ecosystem. This research will be reporting during 2019/20.

Key implications for the LIS

- There is a strong innovation base in terms of innovation assets, business and skills in the nuclear sector and its supply chain (including areas such as robotics and the use of AI).
- There are some excellent examples of Cumbrian firms engaged in innovation activity and innovative firms in terms of business processes (Innovia, Pirelli, Crown).
- However many of these firms are no longer locally controlled and, as with submarine building at BAE Systems, the knowledge is constrained within the firm and the collaborations are more vertical (up and down the supply chain) than horizontal with other firms in Cumbria.
- Outside the nuclear sector, the innovation activity and networks purely within Cumbria are patchy. For instance, although Cumbria has a lot of practical applications of low carbon technologies or land and landscape management, it has few businesses or researchers located in Cumbria working on these matters.
- The 2016 Peck report noted "qualitative data from published sources suggests that while innovative activity may be less widespread in the county, the R&D that does occur can be high quality and leading edge in particular sectors".
- Overall there is therefore a patchy innovation "ecosystem" due to the small and spread nature of economy and businesses across Cumbria…
- …this means that that businesses and business managers are less likely than in many other locations to be able to tap into a local network of innovators – there is a weak innovation ecosystem.
- **This is one of Cumbria's fundamental challenges.**

Overall innovation activity metrics (1)

Higher Education R&D

- There are several research-based HEIs active in Cumbria including Manchester and Lancaster (with its strong research base located just outside Cumbria). However, relatively little HE R&D takes place in Cumbria. The University of Cumbria is not a research-based HEI, although it is developing its research capabilities and has extensive experience of projects to support business development, innovation and skill formation. Around 130 staff based in Cumbria were submitted to the Research Excellence Framework (REF) 2014 in STEM disciplines (medicine/dentistry and biological sciences).
- There is limited R&D activity in government research institutions (which tend to be concentrated in the South East). The exception is the National Nuclear Laboratory, headquartered at Sellafield

Patent Applications

- Cumbria recorded one of the lowest levels of patent applications in England (55 recorded in technology areas 2015-2017). However, when benchmarked to our GVA our rate of patent applications was around 20% below the England average. There will also be patents that involve businesses in Cumbria that are registered elsewhere.

Business R&D

- Cumbria performs considerably better in measurable business R&D activity. Recorded business R&D per FTE employee was, at £554 per FTE employee (based on £106m in 2015), some 70% of the average across all LEP areas and placed Cumbria 17th out of 38 LEP areas. The nuclear sector is the main source of R&D spend. Much of the spend is delivered in institutions outside Cumbria.
- However, we have no data on how far this R&D was spread across a number of firms or whether it was concentrated in a few major firms and sectors. At a UK level R&D spend is highly concentrated in a few sectors – especially pharmaceuticals, aerospace, motor vehicles, chemicals and computing/IT. These are not sectors with a strong representation in Cumbria. Many of the key sectors in Cumbria – agriculture, food, tourism – are not ones with high rates of recorded R&D nationally.

Accessing external funding for innovation: Innovate UK grants

- Data from Innovate UK indicates that around 32 Cumbria firms have been involved in projects, accessing Innovate UK grant funding of some £6m.
- Research for Innovate UK and the NWBLT indicates that the take up of its grants by firms in Cumbria is however one of the lowest in absolute and relative terms in England.

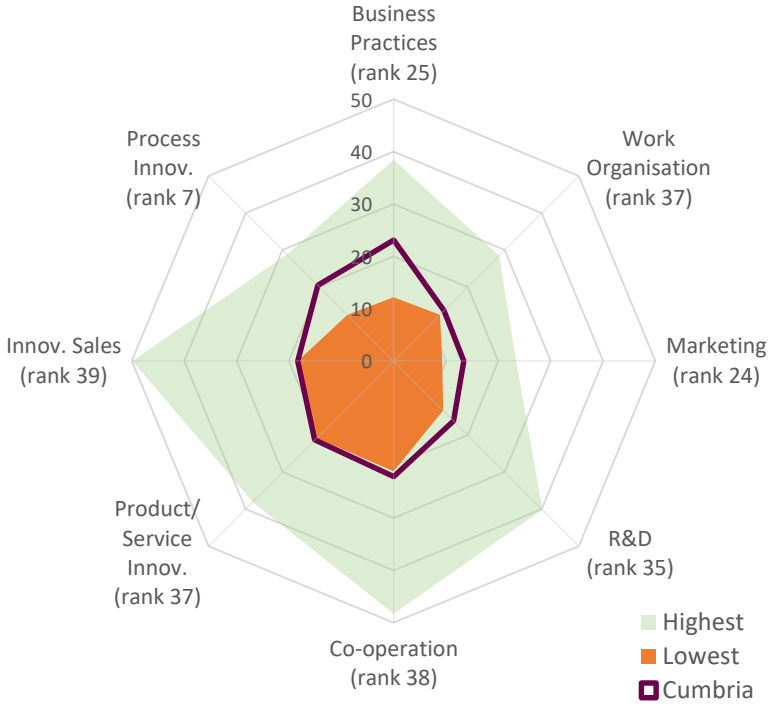
Overall innovation activity metrics (2)

Firm innovation activity

- There is limited reliable data on rates of business innovation in Cumbria. The UK Innovation Survey, commissioned by BEIS, provides the main source of information on business innovation in the UK and feeds into the Europe-wide Community Innovation Survey.
- The 2017 UKIS survey is based on activity between 2014-16 and in June 2019 ERC released benchmarking analysis from this at LEP level on various aspects of innovation activity. It should be noted that the survey is based on a small sample size and has been re-weighted to produce the LEP analysis and so needs to be treated cautiously.
- The ERC benchmarking suggests that Cumbria is in the lower rank of LEPs on all aspects of innovation except process innovation (introduction of a new or significantly improved process) which is typically higher in northern and peripheral areas where product/service innovation is less common.
- However, the 2015/16 Cumbria Business Survey (which had a much larger sample) recorded that 25% of private sector businesses, established for at least a year, had reported an increase in turnover in the last year. Of these around 42% said they had "introduced new products or services" and 34% had made "investment in new technology or premises".
- This suggests that rates of innovation more broadly defined are likely to **be running at a higher rate** than that defined by the UK Innovation Survey.

ERC Enterprise Research Centre

Innovation Benchmarks: 2014-16 (% firms)



Source: ERC "Benchmarking local innovation - the innovation geography of England: 2019"

Mapping innovation assets in Cumbria - nuclear

- Cumbria has a strong concentration of nuclear innovation assets recently mapped as part of the North West Nuclear Arc Science and Innovation Audit (SIA). These included:

Nuclear skills

- Cumbria has the largest concentration of nuclear skills in the UK and one of the world's major concentrations of civil nuclear expertise, especially in decommissioning, waste management and environmental clean-up. There are around 15,700 direct jobs in the sector in Cumbria or 24% of the UK total (Source: NIA, 2017 Jobs Map). There are also at least 400 firms and 8,000 jobs in the supply chain. The Nuclear Skills Strategy Group workforce assessment also recognises the defence nuclear contribution and estimates a 27,000 direct and supply chain figure. Cumbria is the location for approximately 31% of UK nuclear jobs (including both direct and supply chain).

Research and testing

- Key facilities include:
  - NNL, Workington Laboratory, test facilities (technical assessment, solution proposition, design, manufacture and build of test rigs, rig testing, operator training, design and development for remote operations, 3D modelling and simulation).
  - NNL, Central Laboratory, Sellafield (Nuclear Science, Waste and Residue Management, Plant Process Support, Homeland Security and Non-proliferation, Specialist Analytical Services).
  - Dalton Cumbrian Facility, The University of Manchester (part of the National Nuclear User Facility specialising in nuclear decommissioning and radioactive waste management).
  - Deep Test Pit Facility, Ansaldo Nuclear Ltd.

Innovation and R&D active firms

- Cumbria has key players in the nuclear sector – Sellafield Ltd and a range of research intensive firms such as James Fisher Nuclear, Ansaldo Nuclear Ltd, the Wood Group, React Engineering.

Knowledge transfer

- Sellafield's Game Changers: engaging businesses, academia and individuals who can bring their innovative, smart technologies and digital solutions into the nuclear arena and help accelerate the decommissioning programme. Run by Sellafield and supported by the University of Manchester Dalton Institute and the National Nuclear Laboratory

Other expertise

- Cumbria has specialist skills facilities for the nuclear sector (National Nuclear College), the Centre for Nuclear Excellence (CoNE) and the 30 hectare Westlakes Science Park which is focussed on nuclear technology.
- There are very significant numbers of graduates and apprentices on programme in Cumbria, with up to 2,000 across civil and defence nuclear. This is more than any other region of the UK nuclear sector. This training is supported by extensive employer training facilities, notably at Sellafield Ltd and BAE Systems.

Cumbria LEP Nuclear Road Map

Existing Nuclear Capabilities within Cumbria

NDA

The national headquarters of the Nuclear Decommissioning Authority - a non departmental public body for the Dept. for Business, Energy and Industrial Strategy, formed by the Energy Act 2004. The NDA includes subsidiary companies INS and PNTL

- Annual spend £15m
- 300 employees

BECBC

Britain's Energy Coast and Business Cluster (BECBC). BECBC is one of Britain's most mature business networking organisations providing the voice of the supply chain with over 300 member companies.

National Nuclear Laboratory

The National Nuclear Laboratory is hosted on the Sellafield site - arguably the UK's most advanced centre for research & development in nuclear fuel technologies covering manufacture,testing and characterisation.

- Turnover £100m p.a.
- 550 employees in Cumbria (from 950 UK total)
- 23 Graduates (on programme)
- 24 Apprentices (on programme)

Data from Dept Business NNL

Sellafield Ltd

From pioneering civil nuclear power in the 1950's, and the subsequent UK/International fuel reprocessing programmes, Sellafield is now a global-leading centre for decommissioning.

Sellafield Ltd makes a GVA contribution of £2.1 billion, with its direct contribution £720m and a further £960m generated from its UK Supply Chain activity.

- 11,112 employees
- 82 Graduates on programme [301 inc. supply chain]
- 543 Apprentices on programme [694 incl supply chain]

LLWR Ltd

The national Low-Level Waste Repository located south of Sellafield is a strategic asset for the UK supporting the disposition of low level nuclear-contaminated materials from a variety of industry sectors:

- Turnover £92.3m p.a.
- 415 employees
- Delivering waste services including characterisation,packaging, transport, treatment/ recycling and disposal

BAE Systems - Maritime (Submarines)

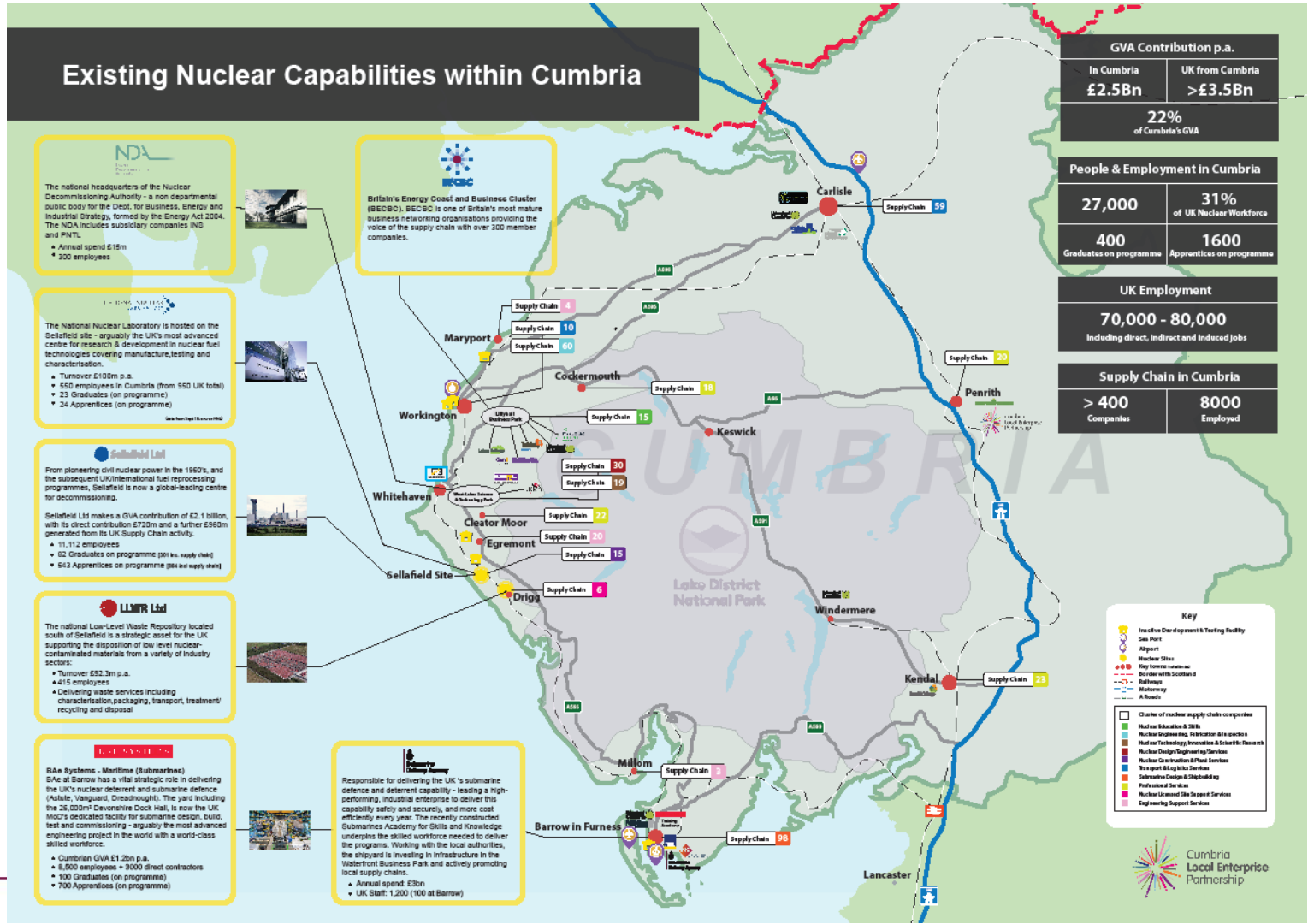
BAe at Barrow has a vital strategic role in delivering the UK's nuclear deterrent and submarine defence (Astute, Vanguard, Dreadnought). The yard including the 25,000m² Devonshire Dock Hall, is now the UK MoD's dedicated facility for submarine design, build, test and commissioning - arguably the most advanced engineering project in the world with a world-class skilled workforce.

- Cumbrian GVA £1.2bn p.a.
- 8,500 employees + 3000 direct contractors
- 100 Graduates (on programme)
- 700 Apprentices (on programme)

Submarine Delivery Agency

Responsible for delivering the UK 's submarine defence and deterrent capability - leading a high-performing, industrial enterprise to deliver this capability safely and securely, and more cost efficiently every year. The recently constructed Submarines Academy for Skills and Knowledge underpins the skilled workforce needed to deliver the programs. Working with the local authorities, the shipyard is investing in infrastructure in the Waterfront Business Park and actively promoting local supply chains.

- Annual spend: £3bn
- UK Staff: 1,200 (100 at Barrow)



GVA Contribution p.a.	
In Cumbria	UK from Cumbria
£2.5Bn	>£3.5Bn
22% of Cumbria's GVA	

People & Employment in Cumbria	
27,000	31% of UK Nuclear Workforce
400 Graduates on programme	1600 Apprentices on programme

UK Employment
70,000 - 80,000 Including direct, indirect and induced jobs

Supply Chain in Cumbria	
> 400 Companies	8000 Employed

Cumbria Local Enterprise Partnership

Mapping innovation assets in Cumbria – non-nuclear

Environmental technologies and sustainability

- The recent North West Coastal Arc Clean Growth Partnership: Science and Innovation Audit identified a range of strengths relevant to Cumbria:
  - Research capabilities in the University of Cumbria (Centre For National Parks & Protected Areas (CNPPA) research group, the National School of Forestry and the Institute For Leadership And Sustainability (IFLAS)).
  - Lancaster University has a large and well regarded school of environmental sciences that is active in Cumbria.
  - Cumbria has been the location for a wide range of research and work on environmental management and the new areas of ecosystems services including several demonstrator and pilot projects.
- Cumbria has businesses involved in the cutting edge of green technologies such as Gilkes Energy Ltd who specialise in the design and development of turbine systems for hydro power.

Shipbuilding/submarines

- Very advanced technology is being deployed in Barrow in the submarine building programme.

Health Technologies and Innovation

- UCLan has opened a Health Campus at Westlakes Science Park and the Centre for Remote and Rural Medicine.
- Cumbrian Centre for Health Technologies (CaCHeT) is an applied research and innovation centre at the University of Cumbria. It focuses on technology adoption and technology translation models for digital technologies in health and social care.
- Lancaster University has been involved in health innovation activity in Cumbria (the Lancashire and Cumbria Innovation Alliance Test Bed programme for digital healthcare technologies) and is opening £40m new health innovation campus.

Other sectors and technologies

- Cumbria has many larger and smaller firms that are innovation active and developing new products and services ranging from:
  - Advanced paper products (James Cropper)
  - Plastics (Innovia)
  - Marl (LEDs)
  - Tritech (sub-sea sensor technology)
  - Createc (novel sensing solutions for hazardous environments)

Mapping innovation activity in Cumbria – test beds

- Cumbria has been and is the location for a range of **test bed** activity where new technologies, research and new ideas are explored.
- These include:
  - Work on digital **healthcare technologies** (the Lancashire and Cumbria Innovation Alliance (LCIA) Test Bed programme)
  - Lake District National Park is part of a feasibility study to explore new technologies which will allow **people to access** the National Park in an environmentally sustainable way.
  - 5G **Rural Integrated Testbed** involving Lancaster University and Cybermoor, Alston.

Cumbria's pilots of environmental measurement and payment

- Cumbria has been the focus of a wide range of activity looking at how ecosystem services and natural capital can be measured, and how systems can be developed to find ways of paying for ecosystem services. These include:
  - Catchment Pioneer Pilot Project: to 'test new tools and methods as part of applying a natural capital approach in practice' in Braithwaite, Glenridding and Staveley
  - Lake District Ecosystem Accounting Pilot, funded by Defra
  - Petteril River catchment improvements led by United Utilities developing new ways of paying for land management to improve water quality
  - Bassenthwaite Ecosystem Services Pilot Project
  - Cumbria BogLIFE project
  - Wild Ennerdale Natural Capital Assessment

Grand Challenge – Clean Growth (1)

"To maximise the advantages for UK industry from the global shift to clean growth"

- Cumbria has a range of assets and opportunities to build upon in relation to clean growth.

Nuclear energy

- The government in the nuclear sector deal set out that "The future success of the industry is central to achieving the Clean Growth Grand Challenge set out in the Industrial Strategy". As noted above, the nuclear sector assets located in Cumbria are second to none. Its important role is acknowledged in the nuclear sector deal.
- Cumbria has a range of development site assets that can drive the future growth of a new nuclear electricity generation capability for the UK. It has nuclear licensed sites and adjacent land assets combined with an unrivalled track record in nuclear site license and facility asset management across 70 years of experience.

Current renewable energy assets

- We are a major player in the UK's renewable energy generation. Cumbria's coast is home to over 20% of the UK's **wind farm generation capacity** (including the UK's current largest offshore wind farm at Walney II with a capacity of 659 megawatts sufficient to power the equivalent of 590,000 homes).
- Outside Scotland, Cumbria is one of the more important locations for small and **mini-hydro generation** schemes. It has 25% of all of England's installed non-domestic capacity on the Feed in Tariff*.

** 4,494 Kw cumulative installed capacity (Sub-national Feed-in Tariff Statistics, BEIS, March 2019*

Offshore wind farms in Cumbria			
Name	**Installed capacity Megawatts**	**% of UK total**	**When installed**
Walney Extension	659	8.8%	2018 Sept
West of Duddon Sands	389	5.2%	2014 Oct
Robin Rigg	180	2.4%	2010 Apr
Walney	367	4.9%	2010 Feb
Barrow	90	1.2%	2006 Jul
All Cumbria	1,685	22.4%	

Source: Wind Power database accessed 2019
Note: Robin Rigg included as it is serviced via Port of Workington, although classified as in Scotland

- Cumbria also has very significant potential **tidal energy** resources (second only to the Severn). There are two locations in different parts of Cumbria where the feasibility of installing tidal energy schemes is being explored:
  - Morecambe Bay: Northern Tidal Power Gateways are proposing tidal barrages across the Morecambe Bay and Duddon Estuary.
  - A variety of schemes (tidal lagoons and tidal barrages) in the Solway Firth.

Grand Challenge – Clean Growth (2)

Renewable energy and low carbon expertise

- Apart from the important exceptions of the nuclear sector with NNL and the Dalton Nuclear Institute of the University of Manchester, there is limited direct R&D capability in Cumbria related directly to renewable and clean energy sources.
- However, Cumbria has some important skills and capabilities in its business sector in the design and delivery of support to the renewables sector:
  - Gilkes Hydro, based in Kendal, are world-leaders in designing, manufacturing and commissioning hydro schemes. They have particular expertise in small hydro and have been involved in the design and delivery of several small hydro schemes in Cumbria.
  - A cluster of expertise in businesses supplying advanced materials, products and services for the offshore sector including offshore wind including: Marl (LED technology); Siemens Sub-Sea; Link Subsea; James Fisher Marine and Sub-Sea divisions; Forth Engineering and James Walker who supply specialist engineering parts to a range of sectors from nuclear, to marine to offshore wind.
  - With some firms there is cross-over in the use of technologies such as robotics between the offshore sector and the nuclear sector, both hostile working environments.

Sustainable development expertise

- Cumbria also has an important concentration of expertise and activity linked to solutions for sustainable and low carbon growth, in part linked to its role as one of the centres of thinking about national parks and tourism including:
  - University of Cumbria's work in sustainability and environment (Institute for Leadership and Sustainability and Centre for National Parks and Protected Areas).
  - The Lake District National Park Authority itself is one of the leaders in delivering sustainable development in a national park context and has trialled a range of measures to improve the sustainability and the carbon footprint of the national park (see the LEP's Local Energy Plan*)

Finally, as noted above, Cumbria also has organisations and businesses engaged in active and sustainable land management practices. It is one of the parts of the country actively engaged in a range of test bed activities around the new approach to environment land management and ecosystems services.

** Local Energy Plan: A Partnership Plan for Cumbria, Consultation draft: July 2018*

Grand Challenge – Ageing Society

"To harness the power of innovation to help meet the needs of an ageing society"

- Cumbria is a location that throws up several challenges of an ageing population in often remote and rural locations where the delivery of health services can be challenging. It has the 3rd highest proportion of those aged 65+ of any LEP area (2018 Mid Year Population estimates) spread across a large area generally of low population density with dispersed settlements. It faces challenges in recruiting and retaining specialist medical staff and providing a cost-effective network of hospitals and medical facilities.
- UCLAN has recently established a School of Remote and Rural medicine based at its campus in West Cumbria (including a Digital Health Institute).
- The University of Cumbria has established the Cumbrian Centre for Health Technologies (CaCHeT), an applied research and innovation centre which focuses on technology adoption and technology translation models for digital technologies in health and social care.
- Lancaster University, working from its soon to be established £40m Health Innovation Campus, is active in engaging with this grand challenge in Cumbria. The University was part of the recent NHS Test Bed programme developed by the Lancashire and Cumbria Innovation Alliance to support frail and elderly and people living with long-term conditions and dementia to be cared for outside of hospitals.
- Cumbria does not have any significant research base amongst its local businesses in the fields of digital health or other areas of innovation related to this grand challenge. However, it is, as noted, a perfect test bed location for testing and developing solutions to the delivery of better healthcare in remote and rural areas.

Grand Challenge – Future of Mobility/Artificial Intelligence

Future of Mobility: *To become a world leader in the way people, goods and services move*"

- Although the county does have an important logistics sector, Cumbria has limited assets in terms of its research or business base relating to expertise in mobility and transport.
- However, the area faces particular challenges and opportunities for the use of new movement technologies in relation to sustainable transport within its rural and national park areas and in visitor management.
- In response to these challenges there is an Innovate UK-funded collaborative feasibility study between Westfield Technology Group and the Lake District National Park exploring how people could access the National Park in an environmentally sustainable way (including trialling electric self-driving vehicles or "pods").
- There are opportunities for similar projects and trialling other emerging and disruptive transport technologies and solutions in Cumbria.

AI and data: *"To put the UK at the forefront of the artificial intelligence and data revolution"*

Cumbria has a limited "digital sector" in the sense of firms involved in the development of digital applications. However, there is considerable digital expertise and the use of advanced robotic and software technologies that take place in the nuclear sector (in the context primarily of decommissioning and environmental management)

- Sellafield Ltd itself has been at the forefront of the use of robotics and, via their Game Changer programme, are seeking innovative solutions including for the use of robotics and AI across a range of challenges at Sellafield.
- Createc have developed a unique radiation software modelling system for characterising nuclear facilities.
- The University of Manchester Dalton Institute is part of the national RAIN Hub (Robotics and AI in Nuclear), funded by the Industrial Strategy Challenge Fund. The hub aims to deliver new cost effective solutions for nuclear decommissioning (and also partners with local firms such as Sellafield Ltd).

4. PEOPLE AND SKILLS

Introduction: People and Skills

Scope of this section

- Quantity of our skills base and how it functions
- How the labour force is changing over time
- The quality of our skills base
- Future skills needs and key issues
- The skills and education system in Cumbria

Key implications for the LIS

- Cumbria faces a challenging workforce supply issue. There is already a very tight labour market and limited spare capacity; forecasts suggest a severe worsening of overall skills supply relative to demand and there is a need to consider how to:
  - Retain and attract more people of working age
  - Encourage more of our older residents to enter or stay in the labour markets, and
  - Find ways to increase employment rates amongst those out of the labour markets.
- We have an ageing workforce which is also driving a growing need for replacement demand and ways to upskills the existing workforce.

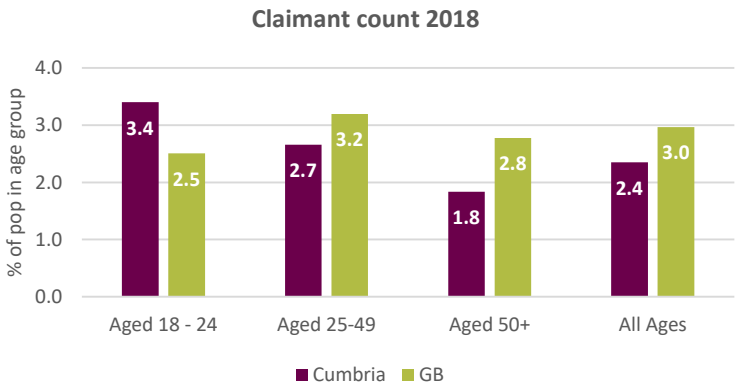
Key implications for the LIS

- The proportion of our workforce with high level qualifications has increased considerably since 2007 (from 25% to 31%) but there is still a significant gap on the national average (39%).
- In absolute terms, there is is a relatively thin pool of higher levels skills (measured by qualifications or occupations) and growing demand on this pool which is also spread across the county in what are in effect separate labour markets.
- The evidence suggests there is strong performance in vocational education and training, with a well-functioning apprenticeship system and strong employer engagement.
- Our school system performs reasonably well overall. However, there are concerns about the performance and progress of disadvantaged pupils at GCSE level.
- Overall unemployment rates are low, but our young adult unemployment rates are above average.
- There are significant concentrations of worklessness and low skills in some of our communities - often ones with large and important employers and growing employment (eg Barrow).

The size and spread out nature of our labour force

Overall scale of the workforce

- Our population of working age is around 298,000 and there are around 245,000 people living in Cumbria who are economically active. Our economic activity rate is around 81% which is above the regional rate (77%) and the national rate of 78%.
- Overall, employment rates are high (79% compared to 74% in the North West and 75% for Great Britain) and unemployment rates are low across most of Cumbria. However, they are above the national rates for those aged 18 to 24.



Source: DWP Alternative Claimant Count (inc modelling for the impact of UC)

Travel to work patterns in Cumbria

- Cumbria has some of the smallest travel to work areas in terms of the size of the labour force in England (although geographically some of the TTWAs are very large). Even Carlisle is only just inside the top 100 English travel to work areas by size of workforce.
- This present challenges in terms of the "thinness" of the labour markets in Cumbria and the number and type of jobs and career roles is, in many sectors, relatively limited in any travel to work area.
- Anecdotally there has been an increase in net in-commuting to Cumbria since 2011.

Travel to work area	Economically Active population	Working age population	Rank of Ec Act pop size
Carlisle	65,000	81,300	99th
Barrow	41,400	51,900	122nd
Workington	39,000	48,100	125th
Kendal	37,200	44,000	127th
Whitehaven	32,800	41,900	132nd
Penrith	23,400	28,500	139th

Source: ONS Annual Population Survey 2018. Rank out of 154 English TTWAs

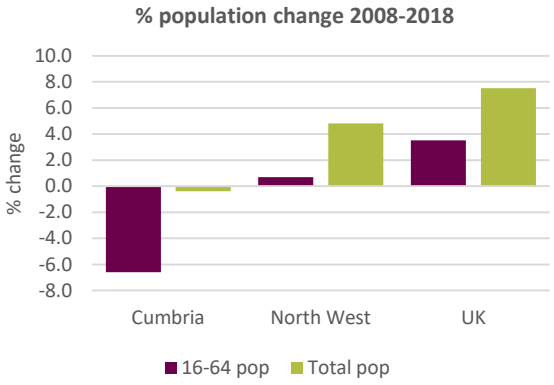
Changes in Cumbria's workforce

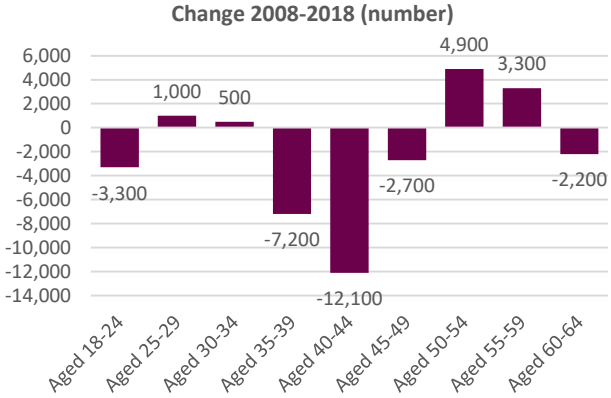
Demographic trends

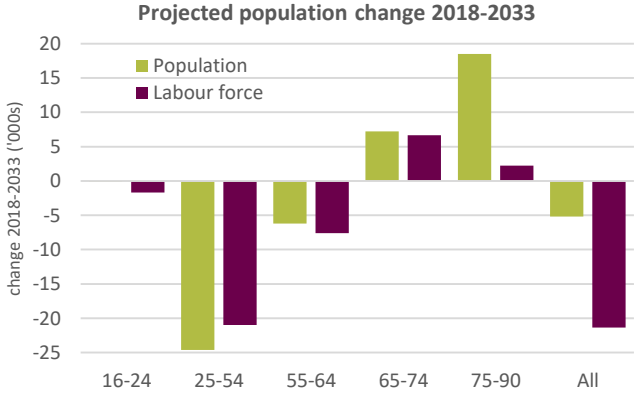
- Cumbria has seen barely any growth in total population over the last 25 years (11,700 or 2%) and indeed our total population peaked in 2008 and has fallen slightly since then. In the rest of the North West and nationally there has been much stronger population growth.
- Our population of working age (16-64) has been contracting and fell by 21,000 or 7% over the last 10 years. This is the fastest rate of decline of any LEP area, although within this age group it is a complex picture with growth in some age groups.

Future forecasts

- The latest official projections are for continued population decline with total population falling from the current 497,000 to 490,000 by 2030.
- Our projected overall population of working age (16-64) could fall by 7% (20,000) over the 10 years to 2028 and by 11% (33,000) over the 15 years to 2033. However, this is likely to be offset to some degree by increases in economic activity rates for those over 60, particularly women. The overall available labour force is projected to fall by over 20,000 over the next 15 years in the absence of a change in current population trends. Within the overall total, older workers will become much more important.







Source: ONS Mid Year Population estimates 2018

Source: ONS Subnational population projections, 2016-based

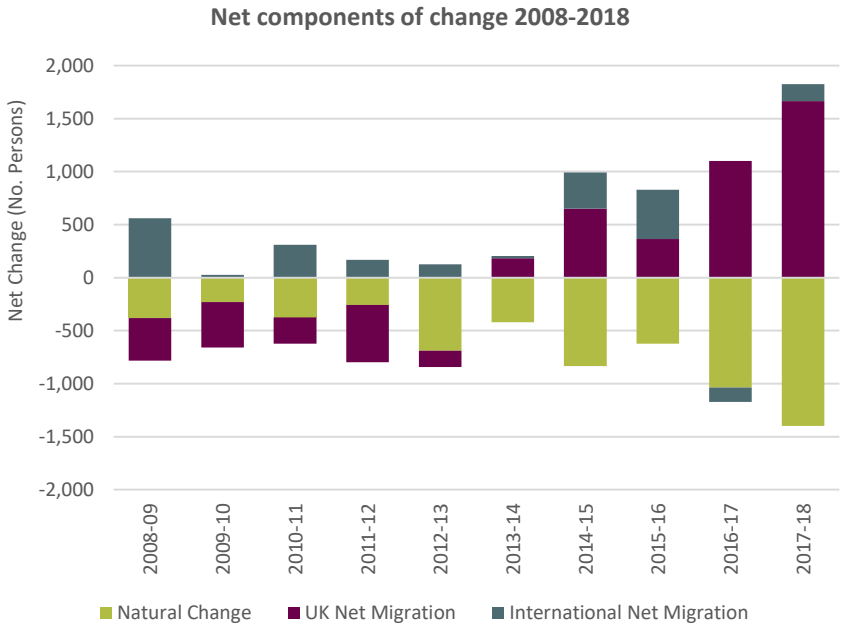
Factors explaining the change (1)

Natural change

- Cumbria has the third highest percentage of population aged over 65 (24%) of any LEP area: a feature it shares in common with other rural and seaside LEPs.
- Because of the relatively old population, the current rate of natural change leads to a contracting population and a decline in those of working age unless offset by in-migration.

Low net in-migration

- Cumbria has experienced positive net internal (UK resident) migration since 2013/14 which has largely offset the natural decline which has been negative in each of the past 10 years.
- Net international migration has fluctuated year on year and is likely to be further impacted by Brexit.



Source: ONS Mid Year Population estimates, components of change

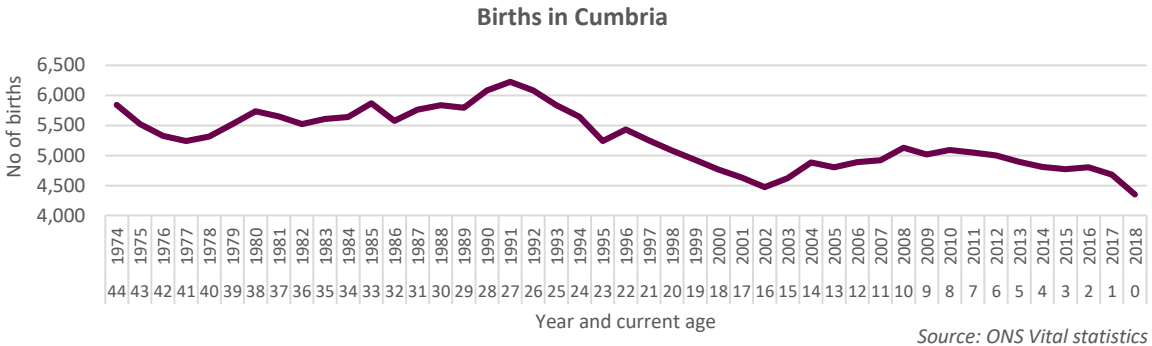
Factors explaining the change (2)

Births

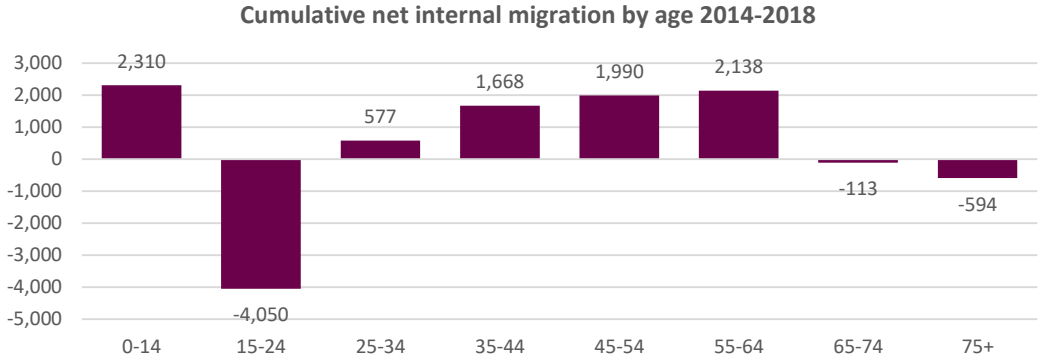
- In 2018 total births in Cumbria were 4,350 and deaths 5,750. The volume of births has fluctuated since the late 1970s, often linked to workforce change at major employers in previous years resulting in an outward migration of young adults who would have gone on to have children. The ongoing impact is then seen in the working age population 18+ years later.

Outward migration of young people

- Cumbria has a large migration out of young people (in common with other relatively rural areas and ones where there is limited HE presence). Over the past 5 years, the cumulative outward net migration of young people aged 15-24 has been 4,050, although there has been positive net inward migration in most other age groups.



Source: ONS Vital statistics



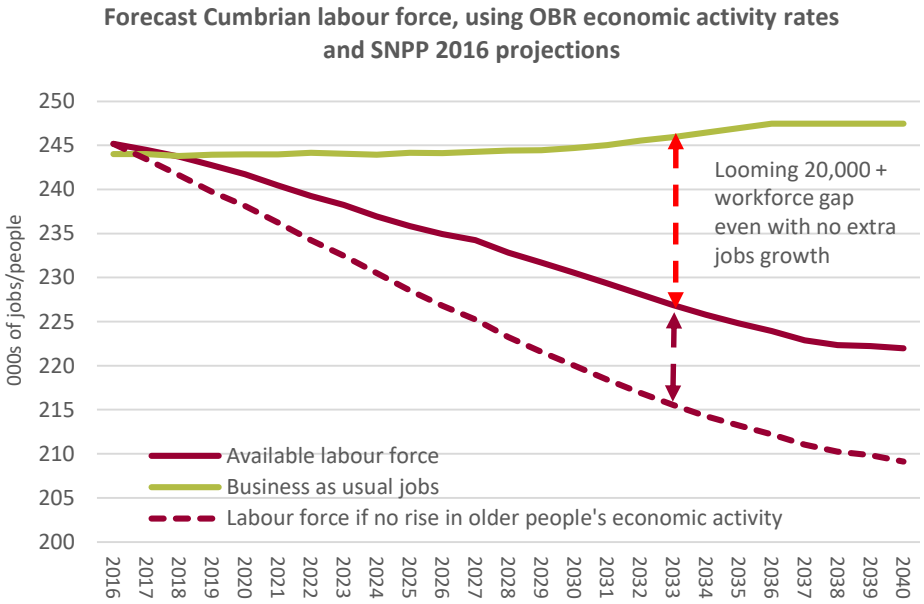
Source: ONS Mid Year Population estimates, components of change

Implications for the future

A declining workforce based on current trends

- Even with employment remaining at current levels and very modest jobs growth, the current trends projected forward are for a steady reduction in the available workforce in Cumbria.
- The effect of the assumed growth in economic activity rates for those over 60 offsets the decline in core working age population (by around 10,000 people by the 2030s). However, it is important to stress that these rises are not guaranteed.
- Even with this growth, based on the latest official population forecasts the available labour force will fall by 16,000 to 2032, increasing to a fall of 22,000 by 2037. This takes place in the context of the already very tight labour market in Cumbria.

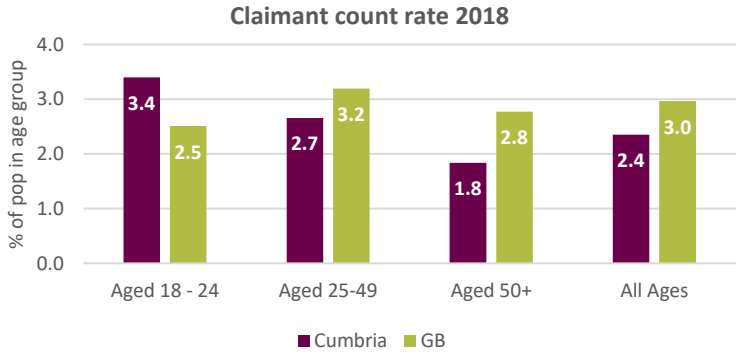
Change on 2017, 000s	2022	2027	2032	2037
No economic activity rate rise	-9.2	-18.2	-26.5	-32.4
Effect of rises in economic activity	4.0	7.9	10.1	10.8
With economic activity rate rise	-5.2	-10.3	-16.4	-21.6



Source: ONS population projections 2016, OBR economic activity rates

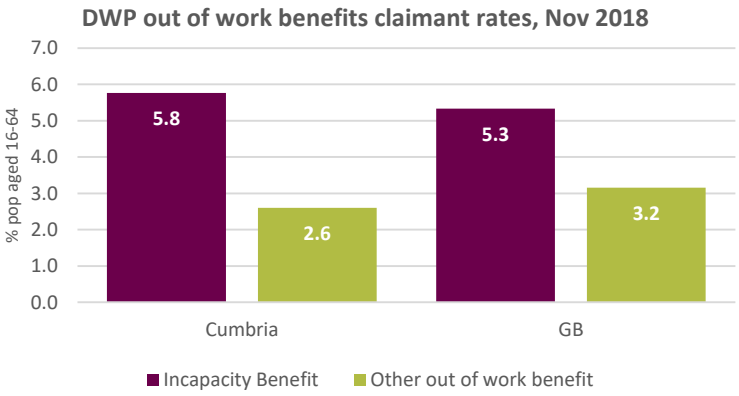
Unemployment and worklessness

- Overall on measures of unemployment & joblessness the rates in Cumbria are low.
- On average in 2018 there were 7,000 claimants of JSA/UC (not including in-work UC or those not required to seek work), giving a claimant rate of 2.4% in Cumbria (v 3.0% nationally).
- However, a particular feature of Cumbria is that although average unemployment rates are well below the national averages, this is not true for younger people. Claimant count rates (using the "alternative" claimant count which models in the impact of Universal Credit) are higher than average for those aged 18-24, largely because of much higher youth unemployment rates in Allerdale, Barrow and Copeland.



Source: DWP Alternative Claimant Count (inc impact of UC)

- However, there were 25,000 people of working age claiming some type of DWP out of work benefit in Nov 2018, demonstrating the potential labour force supply if more of those who are not actively seeking work could be supported to do so.
- The overall DWP out of work benefits rate in Cumbria is 8.4% which is similar to the GB rate of 8.5% but within this, the rate of incapacity benefit claims is higher in Cumbria than nationally and accounted for more than 17,000 people.



Source: DWP Benefit Combinations

Broad occupations

Residents' occupations

- At broad occupation level, the largest occupation among residents in Cumbria is skilled trades (39,900 persons, 16.3% of all employed residents). This reflects the concentration of manufacturing employment in Cumbria and is the second highest proportion of any LEP area in England.
- Cumbria also has relatively higher shares of residents working as process, plant & machine operatives and in elementary occupations than nationally.
- Conversely, Cumbria has lower proportions of residents working in professional occupations, associate professional & technical occupations, and administrative & secretarial occupations than nationally and amongst the lowest of any LEP area.

Source: Census 2011

NB: occupations data uses 2011 Census data as more recent survey data is subject to high margins of error

Cumbria: specialist occupations in 2011

2011 Census		% all occupations		
Occupation	000s	England %	Cumbria %	LQ
1221 Hotel & accommodation managers and proprietors	2.4	0.2	1.0	4.68
2122 Mechanical engineers	1.2	0.3	0.5	1.54
2129 Engineering professionals n.e.c.	1.6	0.3	0.6	2.04
5111 Farmers	5.8	0.4	2.4	5.80
5223 Metal working production & maintenance fitters	3.3	0.7	1.4	1.82
5241 Electricians & electrical fitters	2.9	0.8	1.2	1.56
5315 Carpenters & joiners	2.9	0.8	1.2	1.41
5319 Construction & building trades	2.8	0.9	1.1	1.25
5434 Chefs	2.4	0.8	1.0	1.26
5435 Cooks	1.0	0.3	0.4	1.51
6145 Care workers & home carers	7.9	2.5	3.2	1.28
8111 Food, drink & tobacco process operatives	2.6	0.6	1.1	1.88
8114 Chemical & related process operatives	1.0	0.1	0.4	3.30
8211 Large goods vehicle drivers	3.0	0.9	1.2	1.39
9111 Farm workers	1.5	0.2	0.6	3.72
9120 Elementary construction occupations	1.7	0.5	0.7	1.36
9272 Kitchen & catering assistants	4.0	1.3	1.6	1.25
9273 Waiters & waitresses	2.5	0.8	1.0	1.36
Note: only occupations with more than 1,000 or an LQ over 1.25				

Source: Census 2011

NB: occupations data uses 2011 Census data as more recent survey data is subject to high margins of error

- A comparison of the number of people in particular occupations with the national proportion shows the importance in absolute and relative terms of workers in:
  - Tourism related occupations (managerial and also chefs etc)
  - Engineering occupations (linked to manufacturing/nuclear)
  - Food industry workers
  - Farming
  - A wide range of construction occupations.
- The occupational areas where Cumbria is noticeably under-represented are in creative design, professional (legal and other) and ICT occupations. The 9,000 (or 3.7%) working in these occupations represent only half the rate nationally.

	000s	% England	% Cumbria	LQ
Creative/design	2.2	1.7	0.9	0.52
Professional	3.7	2.9	1.5	0.53
ICT	3.1	2.8	1.3	0.45

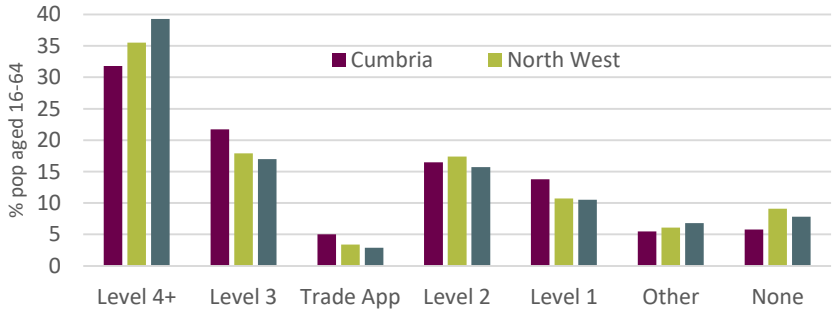
Source: Census 2011

Overall qualification levels

Picture on NVQ levels

- Cumbria has a considerably lower proportion of its workforce qualified to NVQ4 or higher level (broadly graduate level) than either regionally or nationally, although this has improved over the last decade (but at a slower rate than regionally or nationally).
- However, the proportion of the workforce with NVQ level 3 qualifications is higher than average, as is the proportion holding a trade apprenticeship. This reflects the importance of manufacturing and skilled trades in the county.

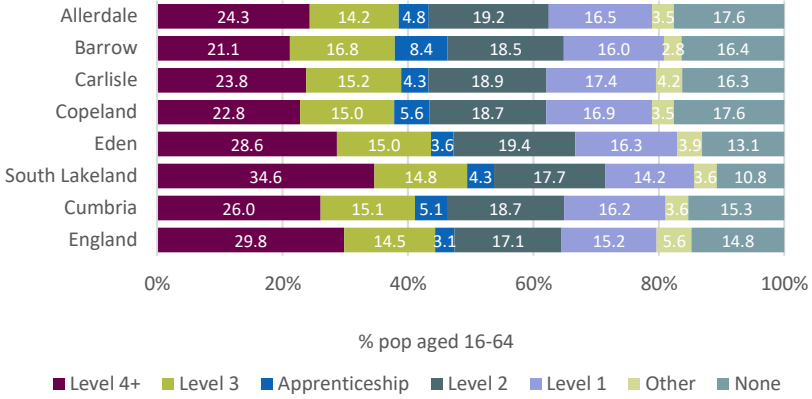
Highest qualification level of working age population, 2018



Source: ONS Annual Population Survey 2018

- The picture varies across Cumbria with South Lakeland and Eden having higher proportions of residents with NVQ Level 4 qualifications. Barrow and Copeland have higher shares of people with apprenticeship qualifications (*NB: district data uses the 2011 Census as more recent survey data is subject to high margins of error below county level*).

Highest qualification level of working age population, 2011

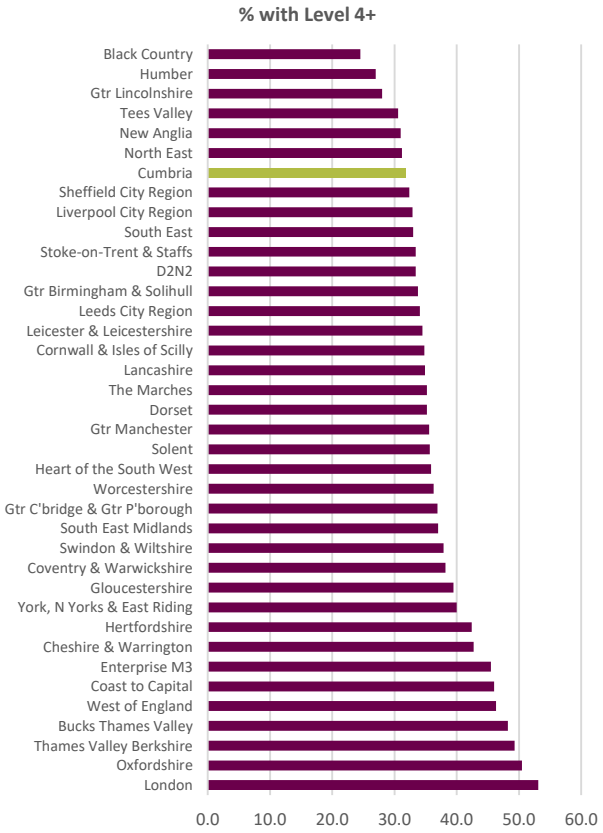


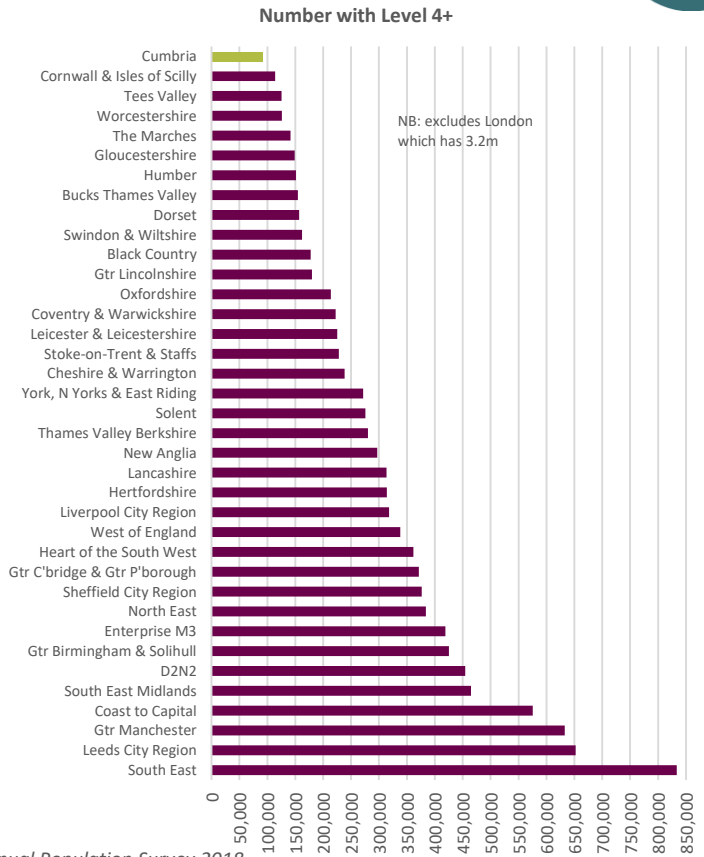
Source: Census 2011

Higher qualification levels

Picture on NVQ 4 levels

- Cumbria has by far the smallest pool of residents qualified to Level 4 or better (degree level) of any LEP area with around 92,100.
- This is around 32% of all those aged 16-64 which is one of the lower rates in England.
- However, the relatively low rate coupled with Cumbria's geography (and relative isolation from other areas) means that the effective pool of higher level skills is very modest overall and within each travel to work geography.
- This means that the labour market for higher level skills is particularly "thin", creating an issue for employers and also in attracting people to live and pursue a career in Cumbria.





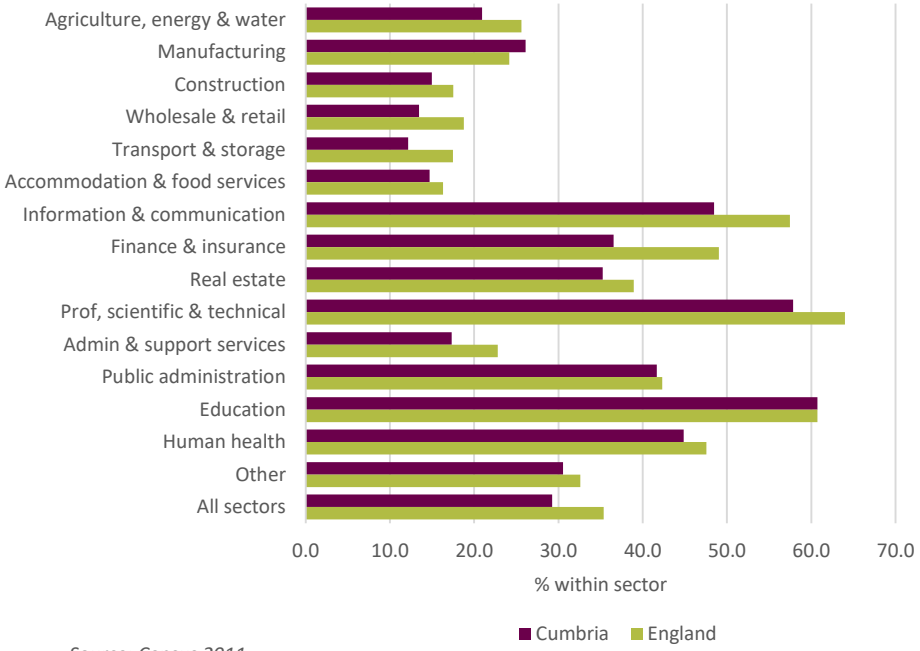
Source: ONS Annual Population Survey 2018

Higher qualification levels – by sector

Sector demand

- The factors that explain the use and prevalence of higher level skills (as proxied by qualifications) are the sector and occupational mix in Cumbria. As can be seen, the pattern of NVQ4 qualifications in Cumbria by sector closely matches that at a national level.
- It is very similar in the **public sector** (health, education and public admin) and it is also very similar in the tourism sector (accommodation and food services)
- It is actually slightly above the national rate in **manufacturing** – reflecting the high level of skills in sectors such as nuclear and shipbuilding.
- However, there are noticeably lower proportions of those with graduate level qualifications in ICT, in finance and in professional/technical services. These are also the private knowledge-based sectors where relative productivity is lower than nationally.
- So we can see that the proportion of higher level skills in the Cumbrian economy is partly a composition effect (importance of sectors with relatively low rates of people with NVQ4 (such as tourism and agriculture) and also a **below average rate within the private sector knowledge based service sector**.

Employed residents with level 4 qualifications by sector, 2011



Source: Census 2011

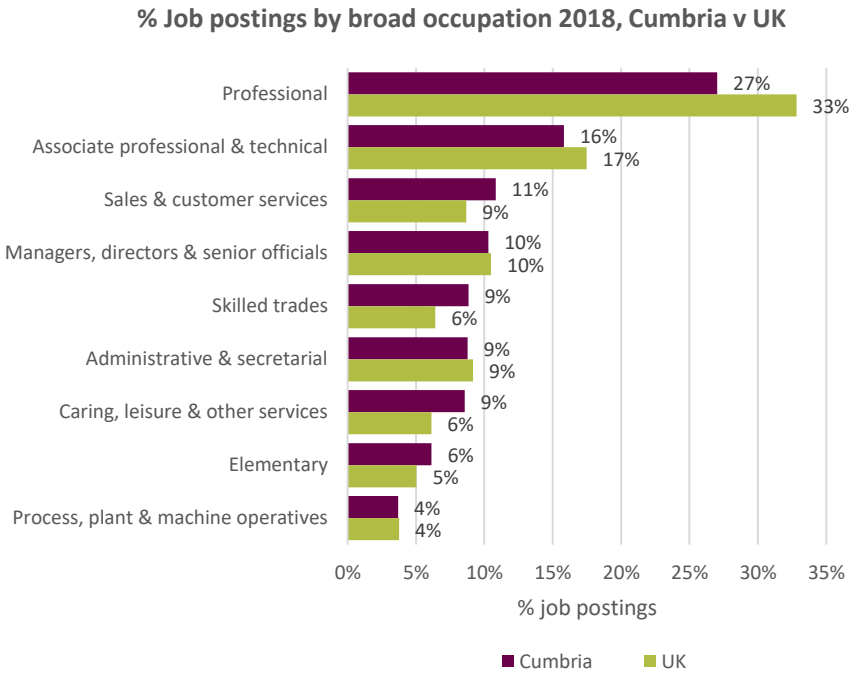
(*NB: sector data uses the 2011 Census as more recent survey data is subject to high margins of error*).

Demand for skills – job postings by occupation (1)

What type of jobs are employers recruiting for?

- By monitoring online job postings, we can get an insight into the occupations and skills that are most in demand by local employers and how this is changing over time.
- In 2018 there were 38,243 job postings for opportunities in Cumbria, the highest proportion (27%) in professional occupations, although this was slightly below the national rate of 33%.
- In line with the occupation structure in Cumbria, there was greater demand for skilled trades than nationally and the same was true for caring, leisure & other services occupations.
- The balance of occupation demand has changed little across the past 5 years, although there has been a slight increase in the share of postings for caring, leisure & other services occupations and a slight reduction in the share of postings for skilled trades.

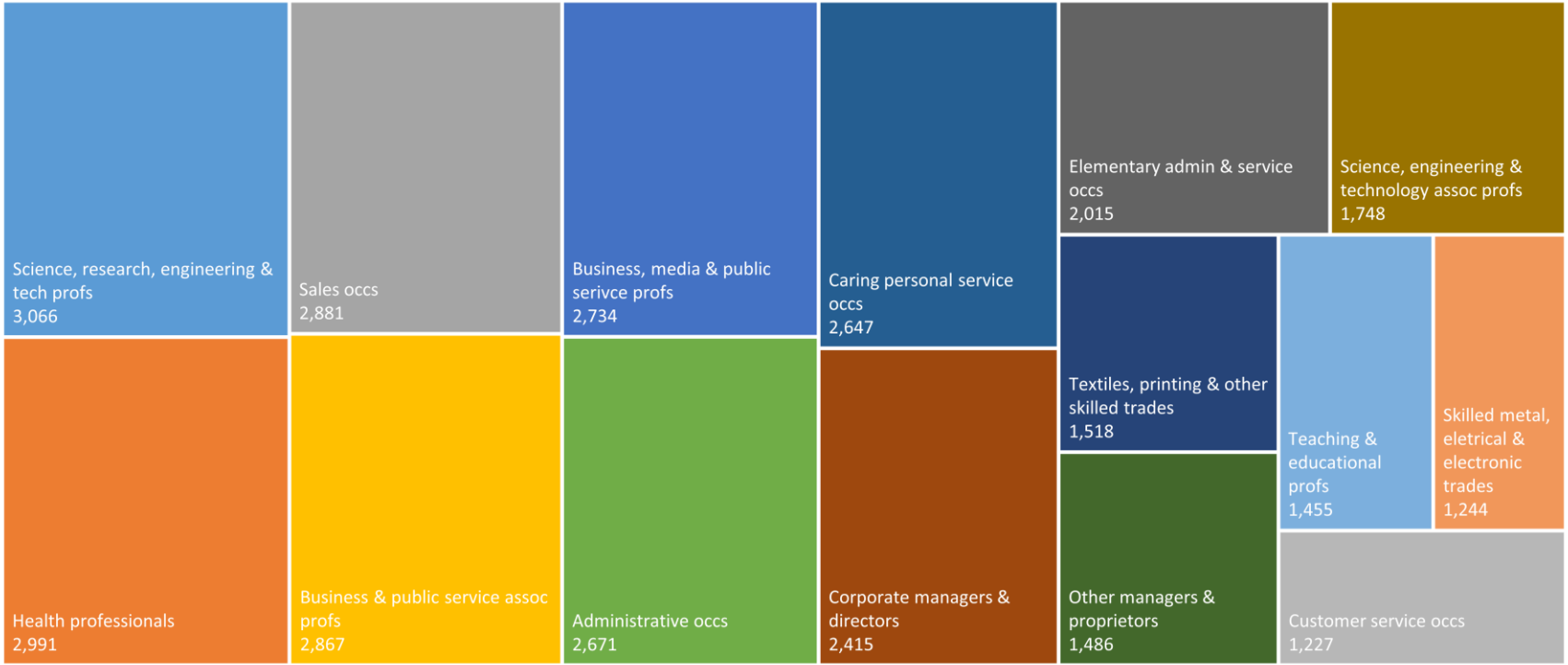
Note: the Labour Insight tool monitors online job postings and uses the content of postings to analyse according to occupation, sector and skills. Not all postings contain sufficient information to analyse. In addition, not all sectors/occupations will utilise online recruitment to the same extent.



Source: Labour Insight (Burning Glass Technologies)

Demand for skills – job postings by occupation (2)

Top 15 occupations in Cumbrian job postings, 2018



Source: Labour Insight (Burning Glass Technologies)

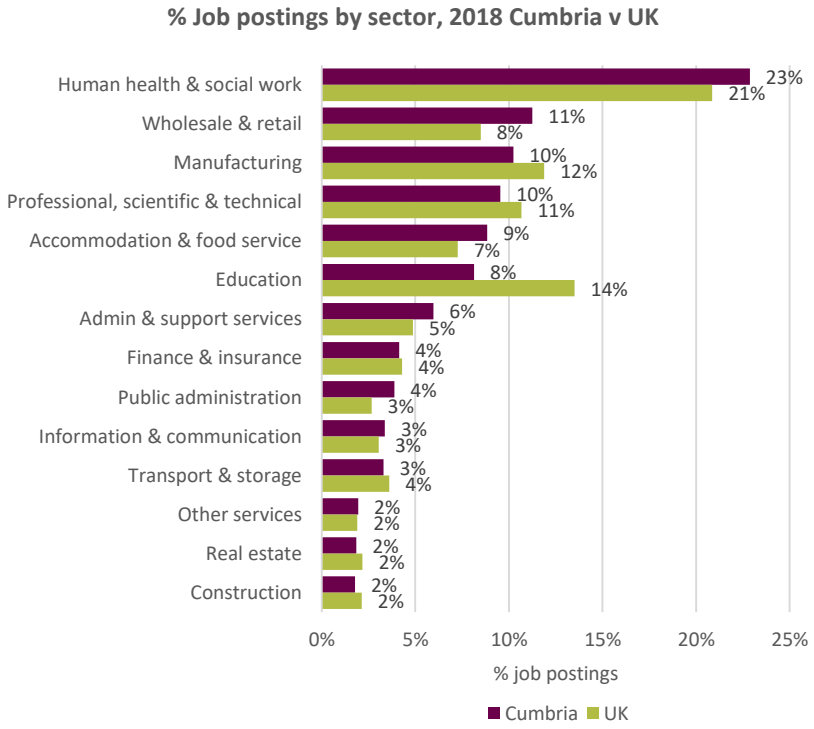
Demand for skills – job postings by sector and skill (1)

Which sectors are recruiting?

- During 2018, the highest proportion of job postings in Cumbria were from the health sector, as was the case nationally. Nationally education was the second highest sector but in Cumbria it was wholesale & retail.
- Sectors such as construction which often use word of mouth to recruit or those which use specialist recruitment methods, were much lower down the list.

What type of skills are employers looking for?

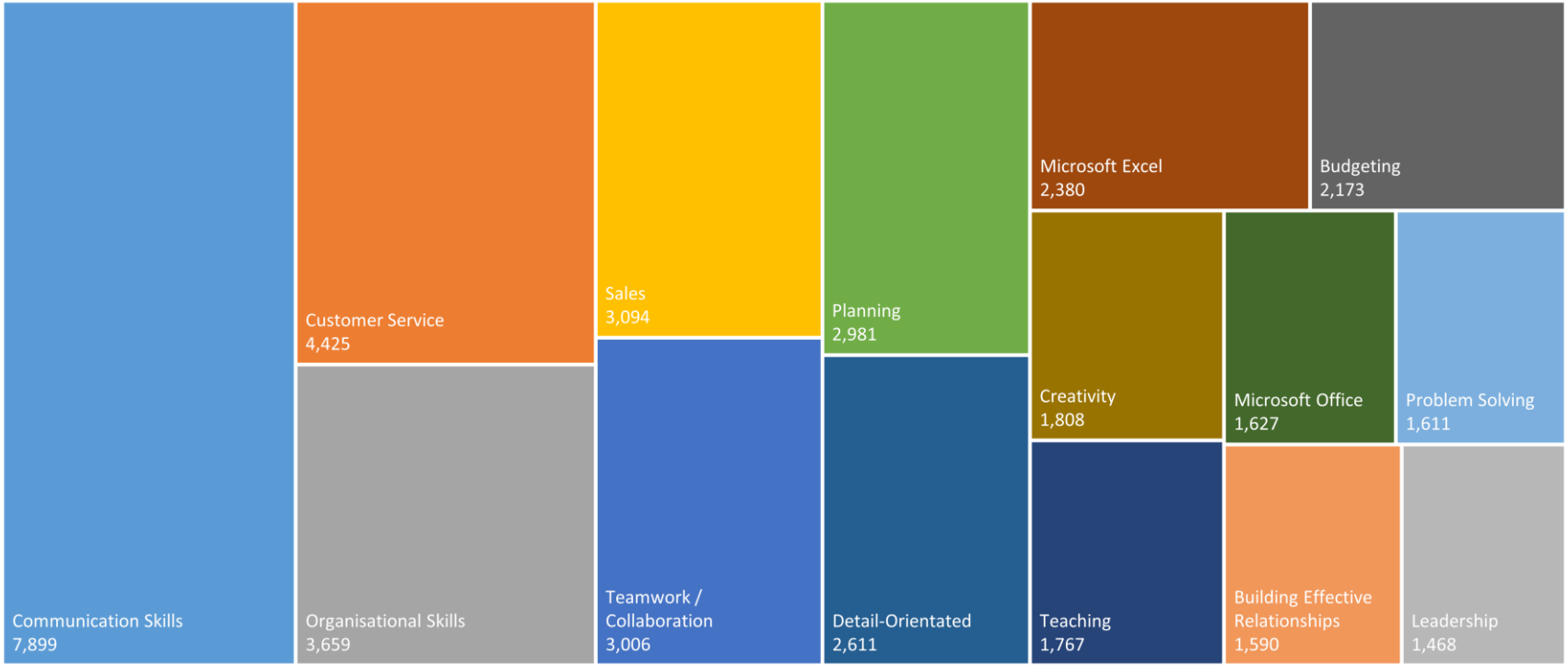
- In many cases, job postings refer to "soft" skills rather than job-specific skills. Phrases such as communication, teamwork, planning, organisation and problem solving are frequently used, together with terms such as customer service and sales.
- As one would expect, job specific skills are mentioned less frequently and are often sector related.



Source: Labour Insight (Burning Glass Technologies)

Demand for skills – job postings by skills required (2)

Top 15 most commonly mentioned skills in Cumbrian job postings, 2018

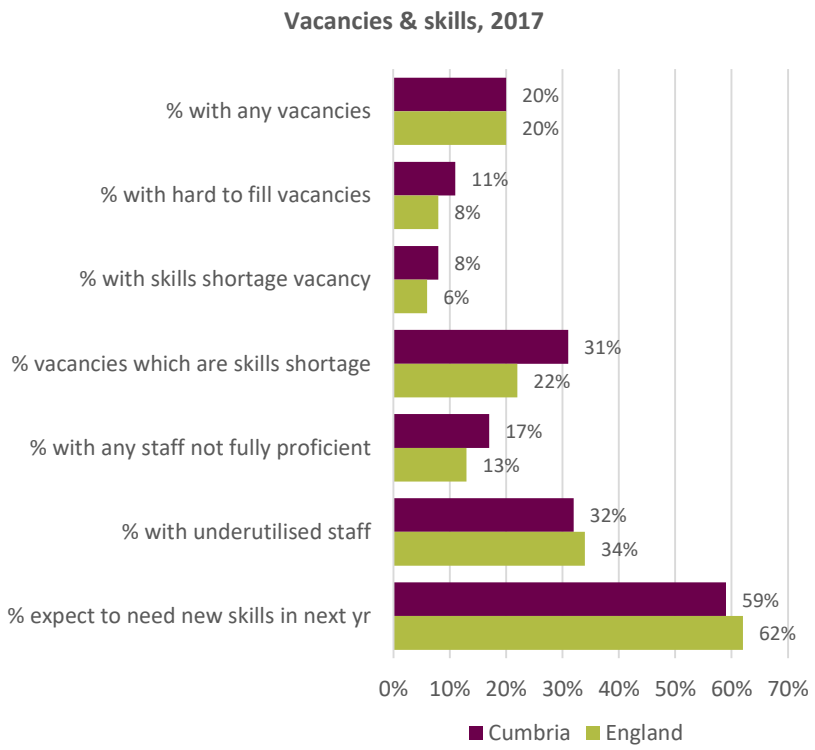


Source: Labour Insight (Burning Glass Technologies)

Employer recruitment & skills

Employer recruitment & skills

- The 2017 DfE Employer Skills Survey reported that 20% of employers surveyed in Cumbria had vacancies which is the same as the national average. The sector most likely to report vacancies was manufacturing where 37% of businesses had at least one at the time of the survey, followed by hotels & restaurants with 30%.
- 11% of businesses Cumbria said they had at least one hard to fill vacancy which is higher than the national average of 8%. This was highest amongst hotels & restaurants where 20% of firms said they had at least one hard to fill vacancy.
- 8% of businesses in Cumbria said they had at least one skills shortage vacancy, slightly above the national average of 6%. The proportion of skills shortage vacancies represented almost a third of all reported vacancies which is substantially higher than the national average of 22%.
- 17% of businesses in Cumbria said they had some staff who were not fully proficient, higher than the national average of 14% while 32% said they had under-utilised staff, slightly below the national average of 34%.
- 59% of businesses in Cumbria expected to need new skills in the next 12 months, just below the national average of 62%. This was most likely to be reported by businesses in business services (78%), arts & other services (65%) wholesale & retail (63%) and least likely to be reported by businesses in construction (48%).

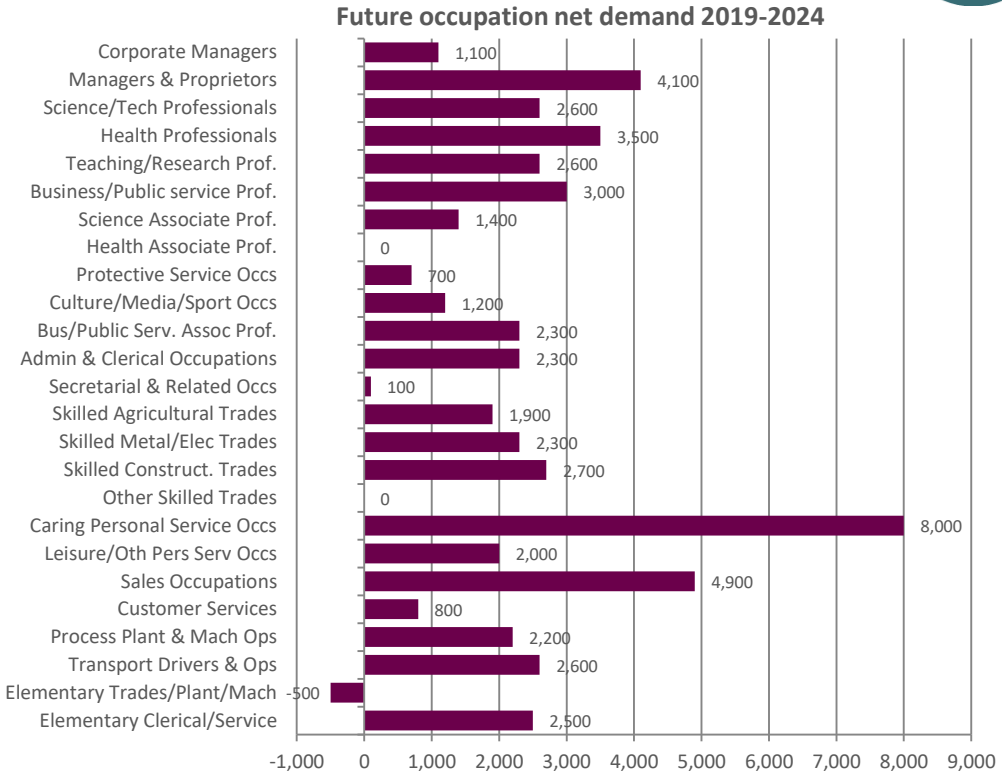


Source: Department for Education National Employer Survey 2017

Future occupation & skills demand (1)

Occupation Projections

- Projections derived from the Sept 2019 Cambridge Econometrics Local Economy Forecasting Model (LEFM) for Cumbria suggest that there could be a net demand for 54,100 jobs to be filled between 2019 and 2024.
- This demand will come almost entirely from replacement demand (51,300) with just a small element from expansion demand (2,800).
- Most of the replacement demand (95%) is due to retirements from the existing workforce although changes in economic activity rates among those over 65 may reduce some of this demand slightly.
- The demand for health care occupations, partly due to an ageing population, is immediately apparent but there is also significant demand for sales occupations.
- The only occupation group expected to contract is elementary trades/plant/machine operatives, partly as a result of automation and digital technologies.
- **Note:** At the time of writing, there is still a great deal of uncertainty about Brexit - these projections have built into them the best assessment by Cambridge Econometrics of the long term potential impact of Brexit on the UK economy, based on an "orderly" Brexit.



These are standard baseline projections for Cumbria from Cambridge Econometrics Local Economy Forecasting Model to which no additional adjustments have been made. Details of the methodology are available on request.

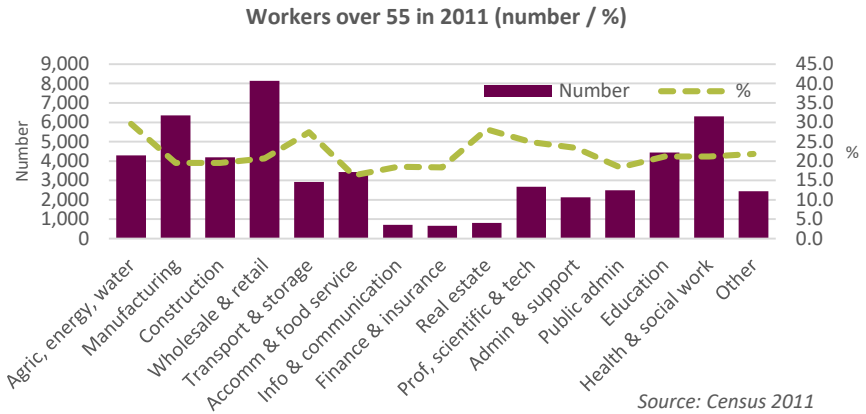
Future occupation & skills demand (1)

Sectors most impacted by replacement demand

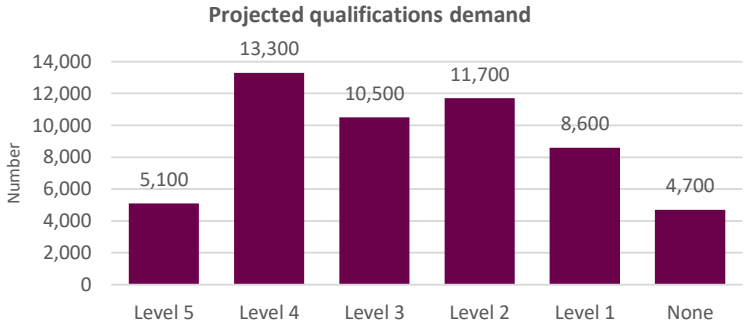
- Sectors which are most impacted by replacement demand are those which already have an older age profile. Agriculture, energy and water, and professional services are the sectors in Cumbria that have the highest proportions of workers aged 55+ and for whom the replacement demand challenge is arguably the most immediate.
- However, in terms of overall scale, the challenge is greater in wholesale & retail and in the health sector.
- *Note: this age/sector data is from the 2011 Census as no reliable more recent data exists for Cumbria.*

Qualification demand

- An estimated 34% of the replacement demand jobs in Cumbria between 2019 and 2024 are expected to require Level 4 or above qualifications which is higher than the current share of Level 4+ qualifications in the working age population.
- Cumbria's annual Year 11 cohort is around 5,000 pupils, around 1,850 of whom (based on recent participation rates) progress on to university. Historically, many of this cohort have not returned to the county on completion of their higher education studies. If this were to continue, it could be assumed that approximately 3,150 young people will enter Cumbria's working age population each year which is well short of the replacement demand required.



Source: Census 2011

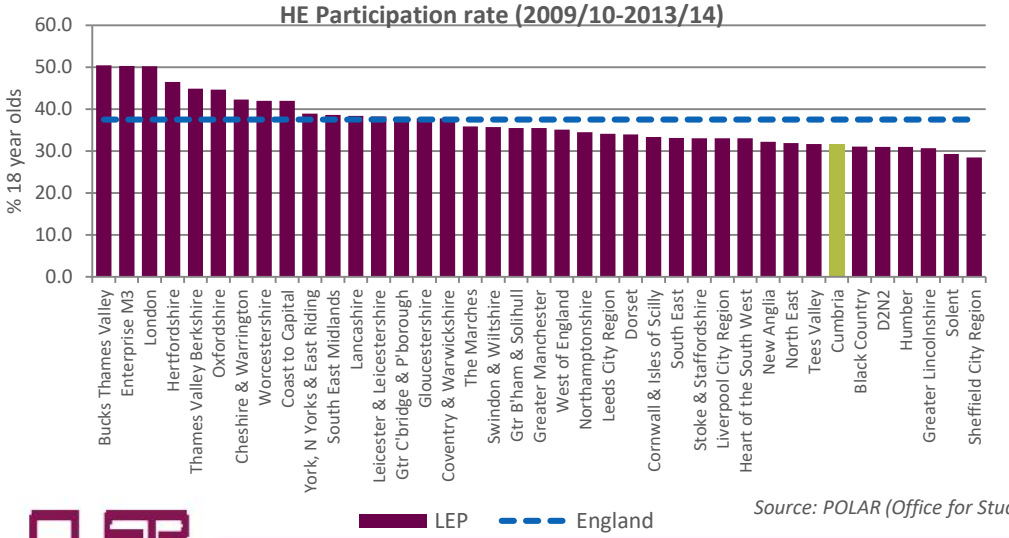


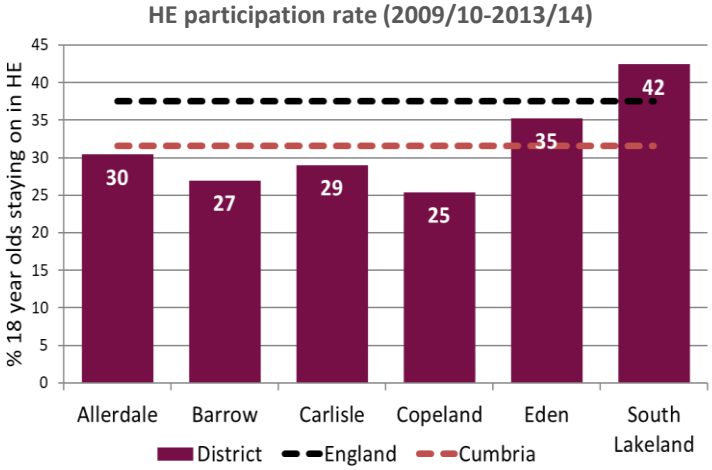
Source: Cambridge Econometrics Local Economy Forecasting Model for Cumbria, Sept 2019

Staying on in higher education (1)

- Cumbria has a relatively low rate of young people who stay on in higher education. The national rate of HE participation was 37.5% while Cumbria's rate was 31.6% but this varied around the county, from 42% in South Lakeland to 25% in Copeland.
- Data on the home residence and study location of HE learners reveals that 27.3% of HE students who were resident in Cumbria, stayed in the area to study. This places the LEP 24th out of 38 (where 1 has highest proportion of home learners).

- Staying on rates in Copeland (25.4%) and Barrow (27.0%) were substantially below the national rate (note that apprenticeship rates are high in these areas). Rates in Carlisle (29.0%), Allerdale (30.4%) and Eden (35.3%) were also lower than nationally but the rate in South Lakeland (42.4%) was higher than nationally

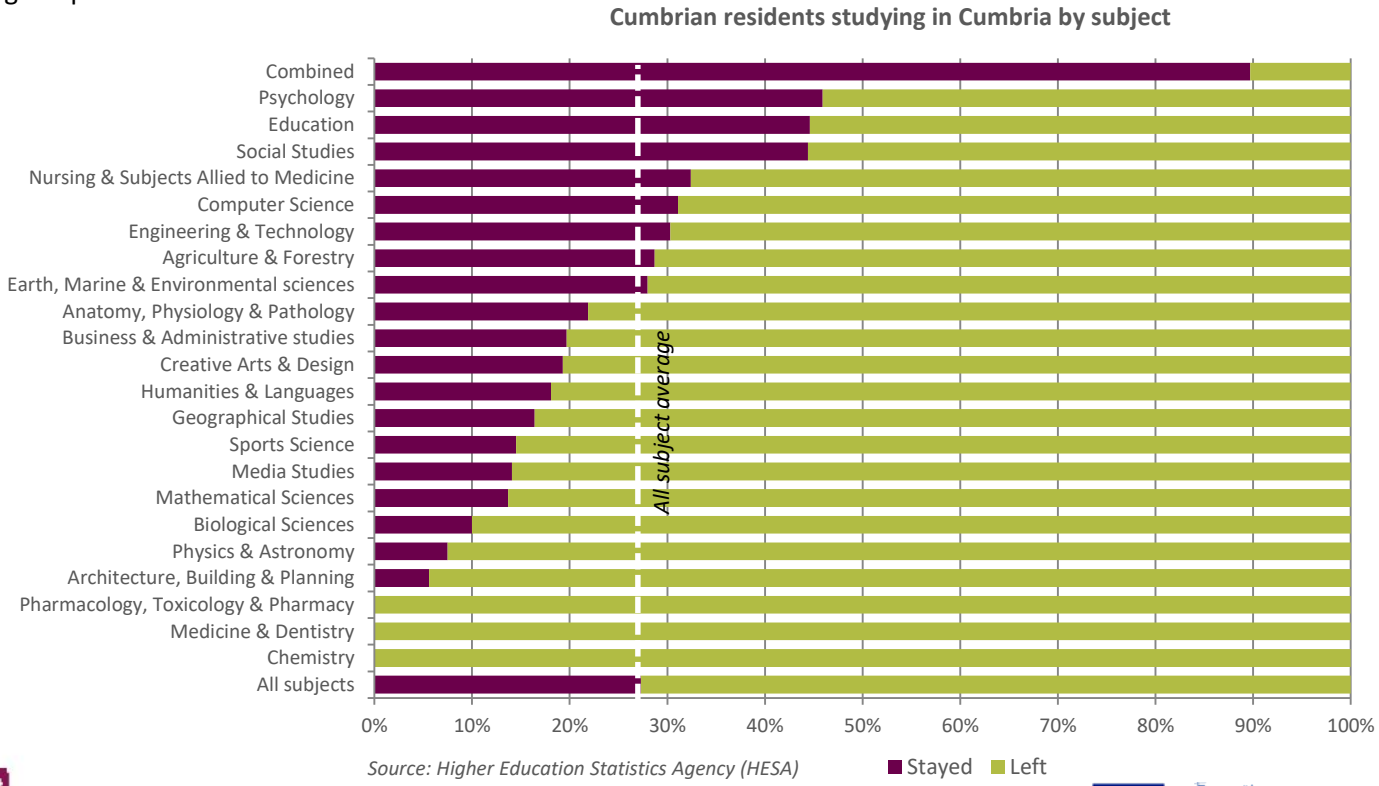




Source: POLAR (Office for Students). Data are for young people who were aged 15 at start of school years 2006-2011

Staying on in higher education (2)

- The extent to which Cumbrian residents study HE locally varies widely by subject, reflecting the range of provision that is available in Cumbria

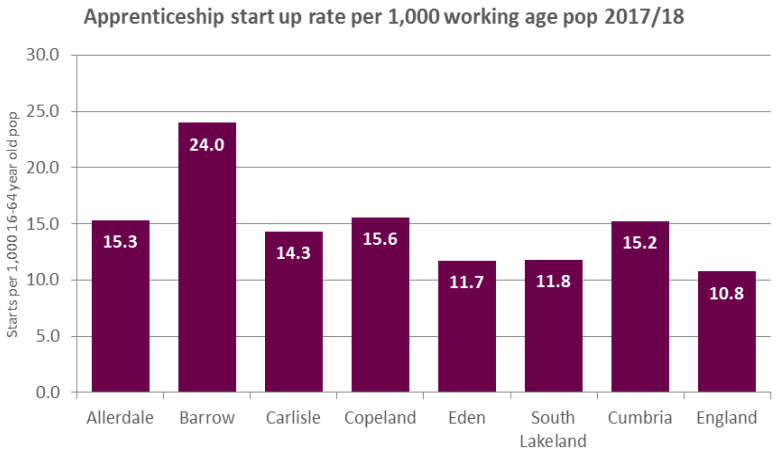


Source: Higher Education Statistics Agency (HESA)

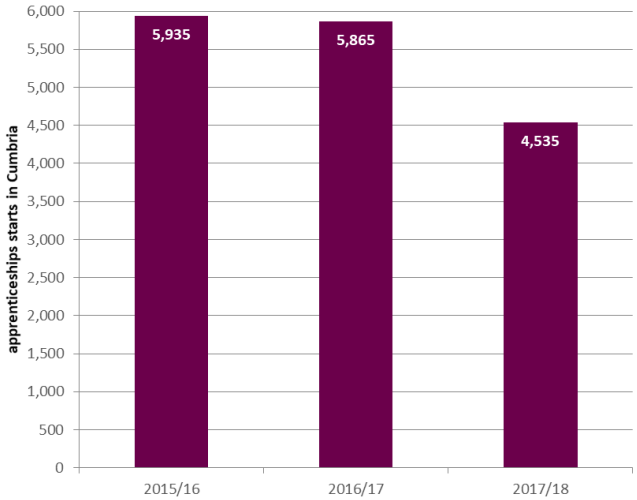
Vocational education and training (1)

Performance in apprenticeships

- In 2017/18 there were 4,535 apprenticeship starts in Cumbria, a rate of 15.2 per 1,000 head of working age population, substantially above the national rate of 10.8.
- All districts in Cumbria had rates above the national average with rates particularly high in Barrow (24).
- However, the number of starts had fallen significantly in 2017/18 (by 23%) in line with the national fall (24%). There were falls across Cumbria but rate of decline varied from 12% in Barrow (improved by the growth of apprenticeships at BAE Systems) to 31% in Copeland and 27% in South Lakeland.



Source: DfE, LEP Datacube

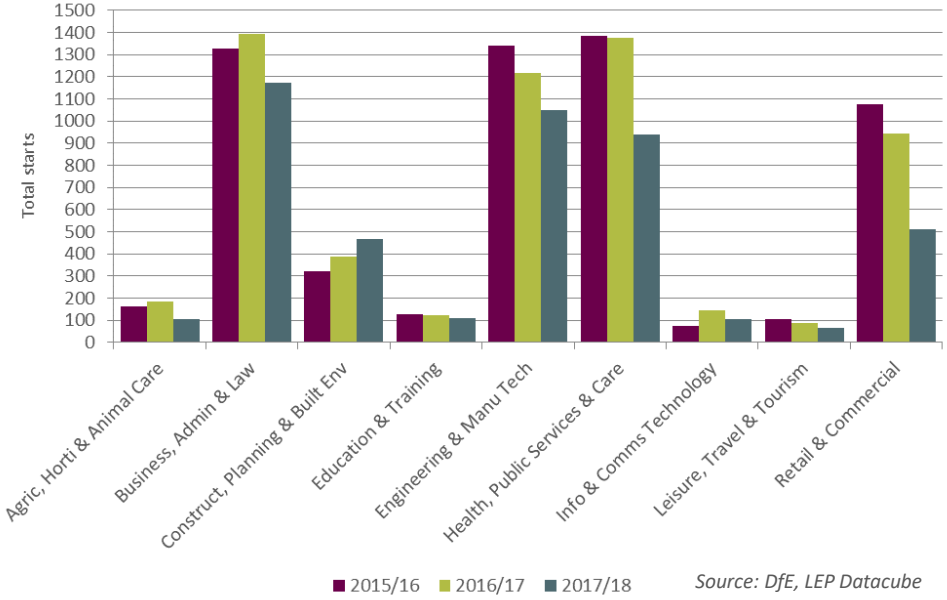


Source: DfE, LEP Datacube

Vocational education and training (2)

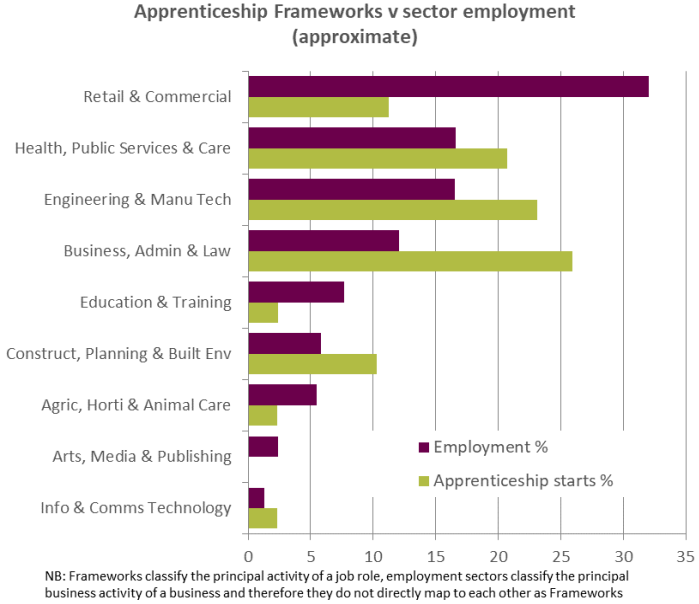
Apprenticeships by sector

- The pattern of our apprenticeships is concentrated in a few sectors and relatively over-represented in business, admin & law (although there will be these types of starts within many sectors)



Source: DfE, LEP Datacube

- The number and proportion of starts in engineering/manufacturing is broadly in line with share of employment.



Source: DfE, ONS BRES 2017, Cumbria LEP calculations

Our school system

Primary

- Cumbria's school system performs fairly well in terms of recorded attainment levels at Key Stage.
- The performance in respect of disadvantaged pupils was slightly less strong in 2018 compared to national benchmarks (having been ahead in 2017).

Secondary

- At secondary school there is a complex picture which is different between disadvantaged and other pupils. On average performance is very similar to the national average, except in the level of progress during secondary school but performance is less strong with Cumbria's disadvantaged pupils.
- On all 5 of the main accountability measures, the gap between disadvantaged pupils in Cumbria is wider than the national gap between disadvantaged and non-disadvantaged pupils.
- For the Progress 8 measure, the gap is -0.81, compared to a national gap of -0.57. This means disadvantaged pupils in Cumbria perform, on average, around four-fifths of a GCSE grade below national non-disadvantaged pupils, whereas in the country as a whole disadvantaged pupils perform just over half a grade below the non-disadvantaged.
- For Attainment 8, the Cumbria gap is -15.2 compared with -13.5 nationally. Cumbria's figure is 35.1 compared to 36.8 in the country as a whole

	Cumbria	England (state funded schools)	England (all schools)
Progress 8 score	-0.11	-0.02	#
Grade 5 or above in English & maths GCSEs	0.43	0.43	0.4
Attainment 8 score	46.7	46.5	44.5
Ebacc average point score	4.03	4.04	3.85
Staying in education or entering employment (2016 leavers)	95%	94%	#

Key Stage 4 Attainment 2018 - Disadvantaged/Non-Disadvantaged

	2018 Cumbria Disadvantaged	2018 National Non-Disadvantaged	2018 National Disadvantaged	All Pupils Cumbria/ National Difference	All Pupils National Difference
Average Adjusted Progress 8	-0.68	0.13	-0.44	-0.81	-0.57
Average Attainment 8	35.1	50.3	36.8	-15.2	-13.5
% Eng/Maths Grades 4-9	40.9	71.7	44.6	-30.8	-27.1
% Eng/Maths Grades 5-9	19.1	50.3	24.9	-31.2	-25.4
EBacc Avg Points	2.90	4.41	3.07	-1.51	-1.34

The "disadvantage gap" is defined as the difference between the score for disadvantaged pupils locally and the score for non-disadvantaged pupils nationally

Source: Cumbria County Council

5. INFRASTRUCTURE

Introduction: Infrastructure

Scope of this section

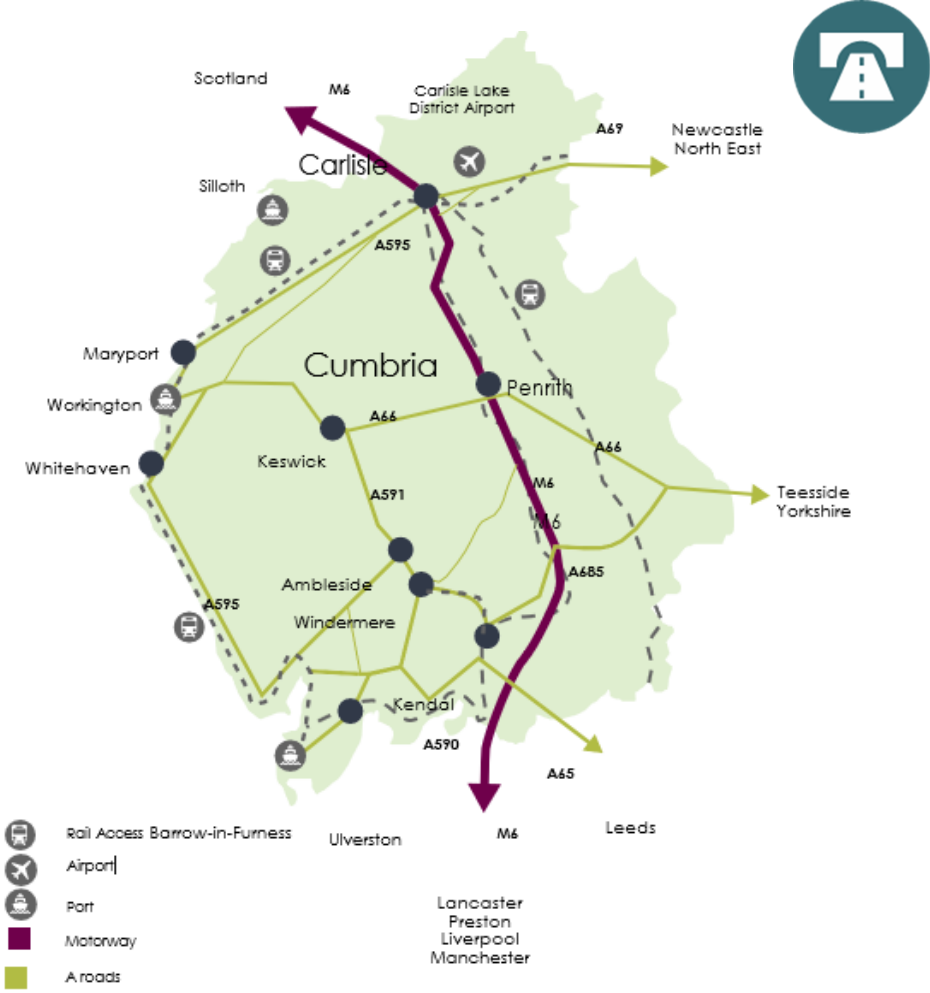
- This section provides a review of information and data related to:
  - Transport infrastructure: road and rail, airports and ports
  - Digital connectivity
  - Energy
  - Natural assets/environment
  - Sites and premises.

Key implications for the LIS

- Parts of the county benefit from excellent strategic accessibility down M6/West Coast Mainline rail spine in the east of county from Carlisle through Penrith and the A66 provides a strategic link to the east side of Britain
- The geography of Cumbria means that the car, and therefore the roads, are particularly important for travel to work and for the functioning of the labour market and economy.
- There are significant road pinch points and resilience issues on the A590 in South Cumbria and on the A595 and A66 in West Cumbria.
- Although superfast broadband coverage has improved strongly in recent years, there are still rural parts with limited access.
- There is poor 4G and mobile coverage;
- Cumbria has strong natural capital infrastructure and green energy prospects.

Key transport links

- Cumbria has number of key internal and external transport links. Our main external links are:
  - M6/M74 into Scotland, M6 south
  - A66 and A69 transpennine routes to the North East
  - The West Coast Mainline north and south to Scotland, North West, West Midlands and London
  - The Settle-Carlisle and the Tyne Valley line to Newcastle
  - Opened in 2019, Carlisle Lake District Airport has direct services to London (Southend), Belfast and Dublin.
  - Cargo shipping services operate from Barrow Workington and Silloth ports.
- Within Cumbria the key roads are the A595 linking Carlisle to the west coast, the A66 linking Penrith to the west coast and the A590 linking Barrow to the M6 and Kendal.
- The Lakes line to Windermere, the Cumbrian Coast line from Carlisle to Barrow and the Furness line from Lancaster to Barrow provide actual or potential important internal rail links.



Importance of road and rail links (1)

Usage of road and rail by workers

- In terms of travel to work, Cumbria is very much dominated by the use of cars reflecting the largely rural area of much of the county. Cumbria has one of the lowest proportions of its workforce travelling to work by public transport of any LEP area.
- Travel to work methods vary by area reflecting the urban/rural split in the county. The highest bus usage is in Carlisle (7.3% compared to 4.5% overall).

Method of travel to work, 2011				
	Car/van/ motorbike	Public transport	Bicycle/ foot	Other
Allerdale	77.1%	5.1%	16.8%	1.0%
Barrow	66.9%	7.2%	23.7%	2.2%
Carlisle	70.9%	8.0%	20.1%	1.0%
Copeland	79.6%	6.7%	12.6%	1.1%
Eden	75.1%	3.4%	20.2%	1.2%
South Lakeland	71.9%	3.7%	23.0%	1.4%
Cumbria	73.4%	5.8%	19.5%	1.3%
North West	72.6%	12.2%	13.7%	1.5%
England	66.4%	17.9%	14.5%	1.2%

Source: Census 2011

- The main places where rail is used for travel to work were Barrow, Copeland and South Lakeland (where there are the most stations serving local communities).

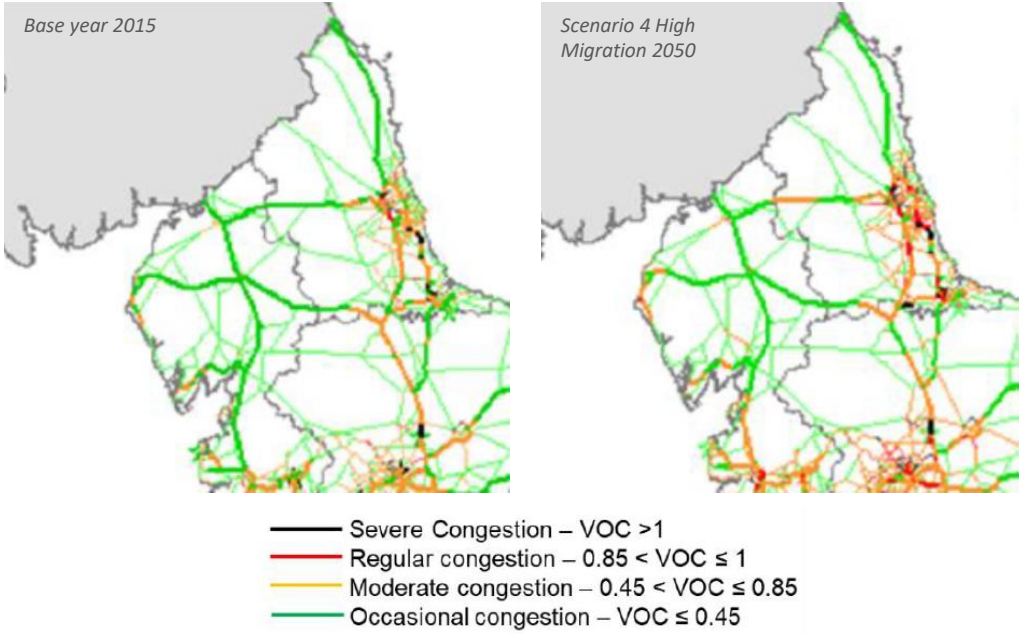
Main issues

- Average road speeds on the county's local authority A roads (31.7 mph) are in line with those in other predominantly rural counties, but slightly slower than the neighbouring areas of Durham and North Yorkshire (both 34 mph) and Northumberland (36 mph).
- Overall the evidence suggests that Cumbria's roads do not suffer particularly high rates of congestion compared to many other parts of the country.
- However, our road network has some serious pinch points along the A595 along the west coast and the A590 towards Barrow and there are serious resilience and reliability issues due to the lack of alternatives and the single carriageway nature of many of our roads.
- The road traffic fatality and serious injury rates in Cumbria are well above national averages (*DfT Casualties Involved in Reported Road Accidents*).
- As noted elsewhere in the evidence base the effective travel to work areas in Cumbria are limited by geography and the speed of travel.

Importance of road and rail links (2)

- Stress maps from the DfT's Road Traffic Forecasts, 2018 show where the main morning congestions points are in Cumbria now and where they might be in the future under a high migration scenario.
- These are along the A590 to Barrow and the A595 around Whitehaven.
- It should be noted that this type of road traffic congestion forecast tends to underestimate congestion in Cumbria for a number of reasons. These include major employers with associated commuting trips outside of the usual peak periods (such as Sellafield, BAE Systems) and the fact that the forecasts are based on link congestion, whereas bottlenecks at key junctions tend to cause the majority of congestion in Cumbria.
- Other work on travel trends and the opportunities for improved rail services have been developed in separate business cases and assessments by the County Council.

Congestion in the AM peak – VOC measure



Source: DfT Road Traffic Forecasts 2018. National Transport Model v2R; RASM division, DfT
@Crown Copyright and database rights 2015 Ordnance Survey licence number 10003924.

Importance of road and rail links (3)

- By far the most used station in Cumbria at present is Carlisle, which has the best services (Cumbria Coastal line, services to Dumfries and to Newcastle as well as the West Coast Main Line).
- In 2016/17 there were around 2.2 million passengers using this station or around 6,0000 a day. This puts it as the 19th most used station in the North West (and the most used station in the Borderlands area).
- Two out of the next three most used stations are on the West Coast Mainline.
- Relative to the size of their populations, the stations in Whitehaven and Workington are quite poorly used – reflecting the current availability and range of services.

Station Name	Passengers 2016/17 ('000s)
Carlisle	2,177
Barrow	649
Oxenholme Lake District	814
Penrith	574
Windermere	420
Ulverston	302
Whitehaven	251
Kendal	204
Sellafield	200
Millom	195
Workington	187
Granger over Sands	154
Arnside	111
Maryport	90
Dalton	77
Cark & Cartmel	76

Source: ORR Estimates of Station Usage 2016/17

Other transport

Ports

- Cumbria has three working ports.
  - **Barrow**: operated by ABP and handled 167,000 tonnes of traffic in 2017. The port plays a key role in serving the offshore energy industry (with specialist facilities for construction of offshore windfarms) and the nuclear submarine building programme. It also handles dry bulks (eg wood pulp and aggregates) and liquid bulks (condensate, the liquid by-product of gas production). It also has facilities to cater for passenger and cruise traffic.
  - **Workington**: owned and operated by Cumbria County Council and handled 278,000 tonnes of cargo in 2017. Handles a mix of dry bulk, liquid bulk, forest products, renewable energy, nuclear energy, project and unitised traffic. Has direct rail connections.
  - **Silloth**: operated by APB and handled 128,000 tonnes of traffic in 2017. It caters for grain for milling locally, agribulks are imported for onward supply to the region's farming industry, liquid bulks (a storage and distribution facility for molasses is located at the port), imports of wood pulp for regional manufacturers and it caters for general cargo.
- Whitehaven harbour is an important marina and centre of regeneration plans.

Airports

- The only airport available for commercial passage use is **Carlisle Lake District** which opened in 2019. The airport will be a gateway to the Lake District National Park, the Pennines, South West Scotland and Border regions. It is located just six miles east of Carlisle City and the M6 (J43 or J44). This airport is operated by the Stobart Group and has recently seen £5m investment from the LEP to improve the terminal and runway.
- It caters for general aviation (private aircraft, helicopters and larger business jets) and has direct scheduled services to Belfast, Dublin and London Southend Airport (resurrecting commercial services which last operated in 1993).
- Cumbria is surrounded by international airports. There are direct train services to Manchester Airport (from Carlisle, Penrith and Oxenholme/Kendal and connecting services to Barrow and Windermere), whilst Glasgow, Newcastle and Edinburgh airports are readily accessible from the north of the county.

Digital connectivity

Broadband

- Access to fast broadband has been an issue in parts of Cumbria. However, the Connecting Cumbria project led by Cumbria County Council with BT has supported the roll-out of superfast broadband across the county
- By Q4 2018 93% of the 258,000 premises (residential and commercial) had access to superfast broadband, slightly below the national rate of 96%. Some 18,500 premises were without access. Parts of Cumbria (Eden and parts of the National Parks) are much less well served.
- 16% of premises in the LDNPA were not served by super-fast broadband.
- As can be seen, coverage of ultra-fast broadband is low across most of Cumbria with the exception of Carlisle.

	Super fast >24 Mbps	Ultra fast >100 Mbps
UK	95.8%	56.2%
Cumbria	92.9%	9.5%
Allerdale	92.6%	1.1%
Barrow	99.0%	0.4%
Carlisle	93.9%	35.1%
Copeland	96.2%	0.5%
Eden	79.8%	3.9%
South Lakeland	92.4%	5.0%

Source: Think Broadband Q4 2018

Mobile and 3G/4G

- Access to a good mobile signal and data services is a particular issue in Cumbria, with in some places patchy reception and limited choice of providers. The coverage of 4G to premises and in terms of land area coverage is well below the England average. The coverage rate of 4G is particularly low in Copeland and to a lesser extent Allerdale.
- Across all of Cumbria apart from Barrow, the coverage of 4G in terms of land area is below the average for England's rural areas.
- This is a particular concern for the tourism sector, mobile workers and land based industries.

	4G to premises inside	4G coverage of land area
England	69.0%	73.1%
England Rural	29.4%	68.4%
England Urban	74.7%	95.2%
Cumbria	42.2%	46.6%
Allerdale	35.4%	39.5%
Barrow	60.5%	90.1%
Carlisle	40.3%	42.8%
Copeland	32.9%	21.0%
Eden	45.6%	44.9%
South Lakeland	38.9%	41.5%

Source: Ofcom Q1 2018

Energy

Current activity and investment

- Cumbria has significant energy resources. There are five main offshore wind farms that together account for over 20% of the UK's current installed capacity. The Walney Extension is currently the largest offshore wind farm in the world. This offshore wind farm is serviced from Barrow as are most of the others.

Name	Installed capacity MW	% of UK total	When installed
Walney Extension	659	8.8%	2018
West of Duddon Sands	389	5.2%	2014
Walney	367	4.9%	2010
Robin Rigg (part in Scotland)	180	2.4%	2010
Barrow	90	1.2%	2006
All Cumbria	1,685	22.4%	

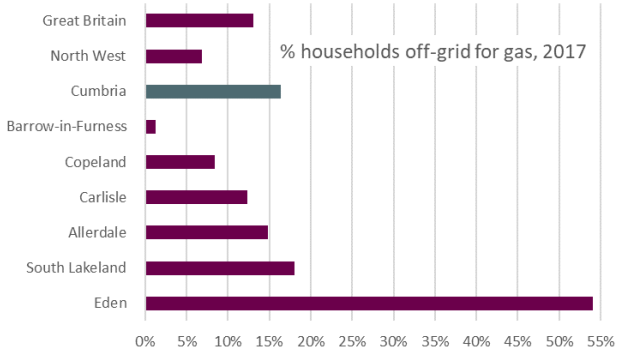
Type	Cumbria Installations		Cumbria installed capacity	
	Nos	% of UK	MW	% of UK
Onshore Wind	9,586	2.5%	200.0	1.6%
Hydro	1,507	3.6%	6.7	0.4%
Anaerobic Digestion	585	3.4%	8.3	1.8%
All households		*0.9%*		*0.9%*
Source: BEIS, Renewable electricity by local authority				

There are significant gas fields in the Irish Sea/Morecambe Bay some of which link to the Rampside Gas Terminal situated in Barrow.

Future opportunities

- In 2013 DECC estimated that wave and tidal stream energy has the potential to meet up to 20% of the UK's current electricity demand, representing a 30-to-50 gigawatt (GW) installed capacity, with estuaries in the North West of England being one of the major potential sources. There are significant potential opportunities for tidal generation in the tidal waters around Cumbria in the Solway, Duddon Estuary and Morecambe Bay.

- There are around 37,000 households in Cumbria not connected to the gas network, with Eden having the highest proportion in England. There are significant opportunities for renewable energy generation activity in the county.

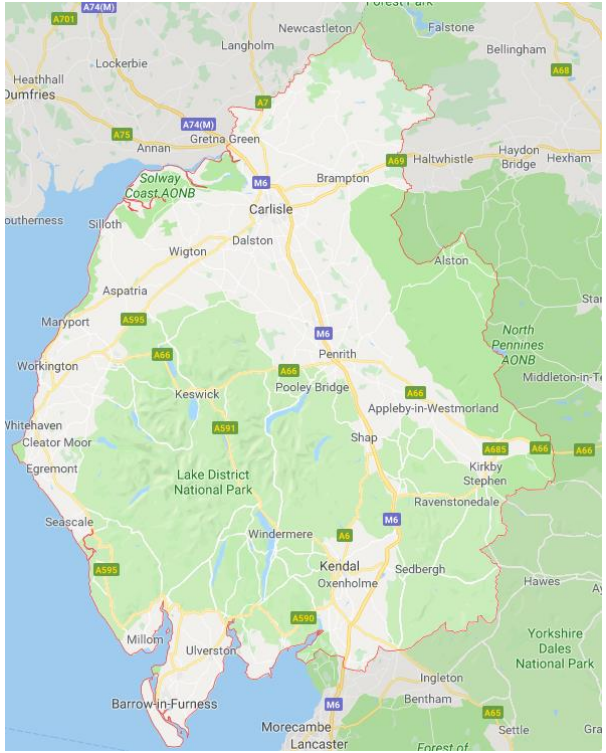


Source: Sub-national estimates of households not on the gas grid, BEIS 2018

Natural environment (1) - Landscape

Natural Capital in our landscape

- Cumbria is fortunate to have a particularly rich concentration of **protected landscapes**. The county houses the 2,362 sqkm Lake District National Park, the largest National Park in England which is now also a World Heritage Site and covers 35% of our land area. It was designated as a WHS by UNESCO in 2017 due to its unique role as a "cultural landscape".
- A significant part of the Yorkshire Dales National Park (610 sqkm), especially since its recent extension, is located in Cumbria (9% of our land area).
- All or part of three Areas of Outstanding Natural Beauty (AONBs) are located in Cumbria: North Pennines, Solway Coast, and Arnside & Silverdale. Overall 12% of our land area is covered by these special areas.
- Therefore National Parks and AONBs together cover 3,762 sqkm in Cumbria, or **56% of Cumbria's** total area of 6,768 sqkm.
- Cumbria is also the location for a significant part of Hadrian's Wall World Heritage Site.
- There are 280 SSSIs in Cumbria including the internationally important wetlands of Morecambe Bay, the Solway and the Duddon Estuary.



Source: Google maps

Natural environment (2) – Air Quality

Very low levels of pollution

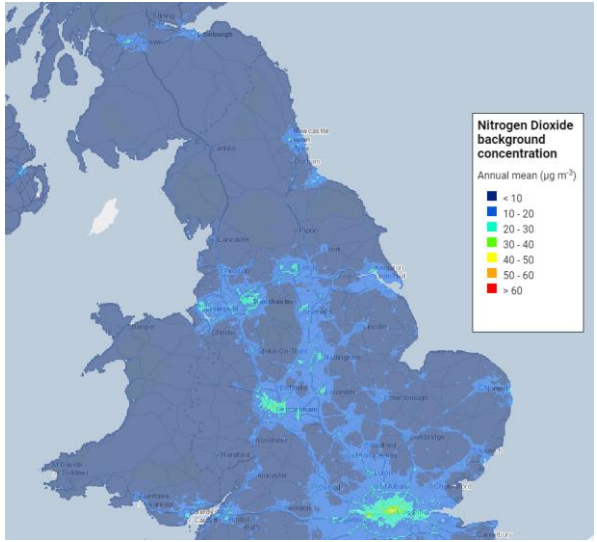
- Cumbria is fortunate to have generally particularly high air quality, water quality and many areas with no or limited light pollution.
- It does not suffer the problems of concentrations of air pollution (particularly Nitrogen Dioxide from vehicle emissions) of many urbanised areas.
- Cumbria has the lowest level overall of $PM_{2.5}$ pollutants weighted by population of any county area in England ($PM_{2.5}$ is a measure of the small particulate matter that is particularly bad for human health).

- Five out of the six districts in Cumbria have the lowest recorded particulate pollution levels of any areas in England and, overall, the county has by some way the lowest levels of pollution of any county area in England.

Levels of particulate pollution, 2017			
	PM2.5 2017 (anthropogenic)	England = 100	Rank
Allerdale	4.97	56	317
Barrow-in-Furness	6.56	74	292
Carlisle	5.63	63	313
Copeland	5.01	56	316
Eden	5.06	57	315
South Lakeland	5.32	60	314
Cumbria	**5.42**	**61**	
North West	7.12	80	
England	8.90	100	
Note: rank is from (highest) to 317 (lowest) level of recorded pollution by local authority areas in England			

Source https://uk-air.defra.gov.uk/data/pcm-data#population_weighted_annual_mean_pm25_data

Nitrogen Dioxide background concentration



Source: UK Ambient Air Quality Interactive Map values for 2017

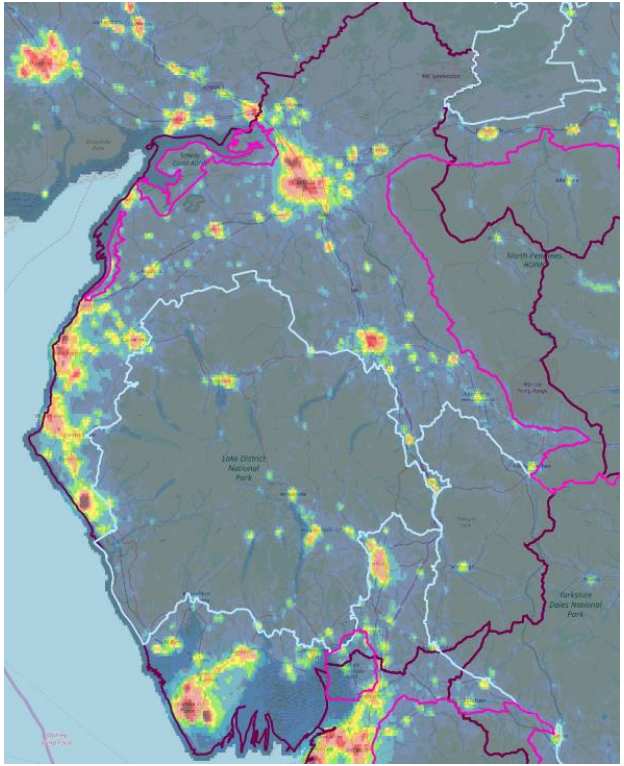
Source: www.nightblight.cpre.org.uk/maps/

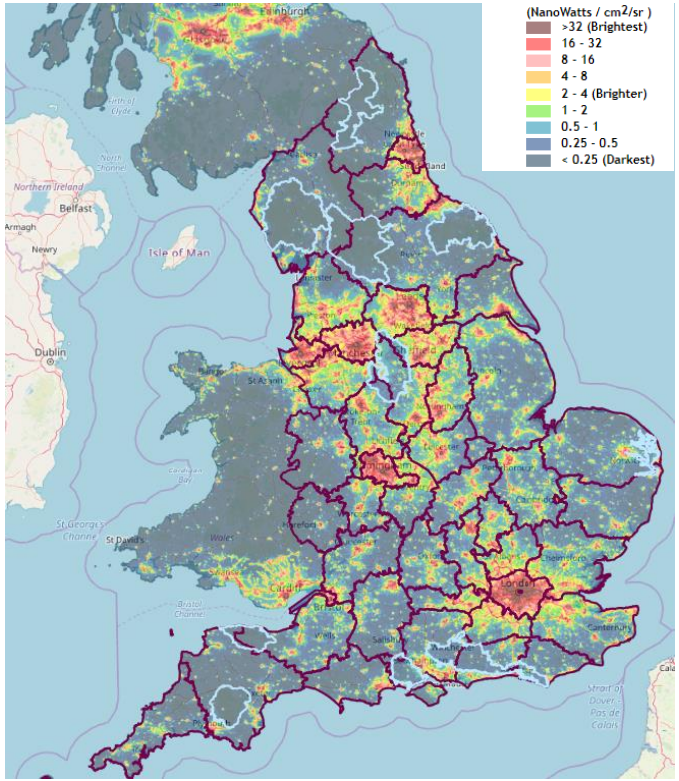
Natural environment (3) Dark Skies

Low levels of light pollution

- Cumbria has some of the few areas of genuine dark skies in England. This is particularly true in its National Park areas and AONB areas, but also in many other parts of the county

Levels of night light





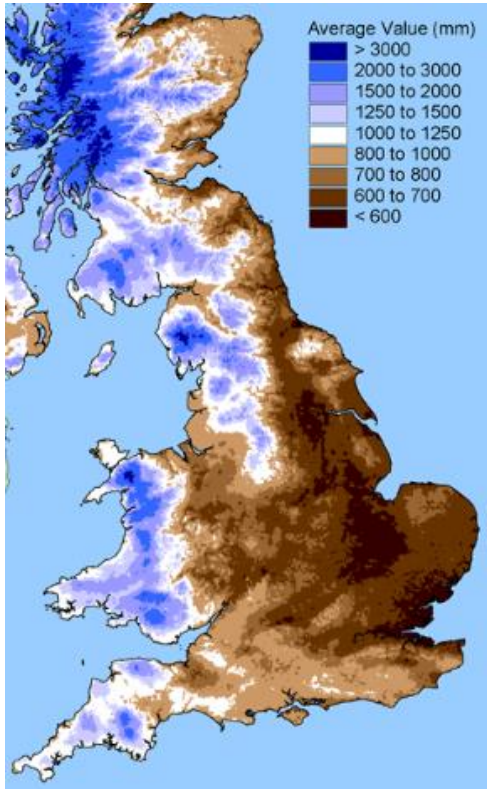
Source: www.nightblight.cpre.org.uk/maps/

Natural environment (4) Water Resources

Abundant water resources

- Cumbria has some of the greatest water resources in England.
- We have two of the largest reservoirs in England that supply water to Lancashire and the Greater Manchester conurbation (over pipelines that each extend some 100 miles). A large share of the North West's water is supplied from the two reservoirs.
- Cumbria, as shown by the map, has abundant and reliable rainfall (the greatest rainfall resource in England) proving water resources for our agricultural sector and for the reservoirs.

Average annual rainfall, 1981-2010



Source: Met Office

Largest reservoirs by volume in England & Wales

Rank	Name	Owner	Location	Year Built	Nominal volume m³	% of Kielder	Surface area m²
1	Kielder Water	Northumbrian Water	Northumberland	1981	199,000,000	100%	10,860,000
2	Rutland Water	Anglian Water	Rutland	1976	124,000,000	62%	12,600,000
3	Haweswater	United Utilities	Cumbria	1935	84,840,000	43%	3,900,000
4	Llyn Celyn	Welsh Water	Gwynedd	1965	80,930,850	41%	3,300,000
5	Llyn Brianne	Welsh Water	Powys	1972	64,400,000	32%	2,096,000
6	Llyn Brenig	Welsh Water	Denbighshire	1976	61,500,000	31%	3,725,000
7	Lake Vyrnwy	Severn Trent Water	Powys	1888	59,700,000	30%	4,536,000
8	Grafham Water	Anglian Water	Cambridgeshire	1965	57,800,000	29%	6,280,000
9	Llyn Clywedog	Severn Trent Water	Powys	1967	49,940,000	25%	2,490,000
10	Cow Green Reservoir	Northumbrian Water	Teesdale	1971	40,914,000	21%	3,120,000
11	Thirlmere	United Utilities	Cumbria	1894	40,714,999	20%	3,290,000
12	Claerwen	Welsh Water	Powys	1952	40,307,000	20%	2,630,000
13	Derwent Reservoir	Northumbrian Water	County Durham	1965	40,060,000	20%	405,000
14	Roadford Lake	South West Water	Devon	1989	36,910,000	19%	2,987,000
15	Caban Coch	Welsh Water	Powys	1904	35,531,000	18%	2,023,000
16	Llyn Trawsfynydd	Magnox Ltd	Gwynedd	1928	33,190,000	17%	4,800,000
17	Nant y Moch	Statkraft	Ceredigion	1964	32,564,000	16%	2,630,000
18	Queen Mother Reservoir	Thames Water	Greater London	1976	31,492,000	16%	1,922,000
19	Bewl Water	Southern Water	Kent	1975	31,000,000	16%	3,120,000
20	Queen Mary Reservoir	Thames Water	Greater London	1931	30,363,000	15%	2,863,000

Source: Environment Agency "Public Register of Reservoirs" via Wikipedia June 2019

Natural environment (5) Economic Contribution

Economic contribution – agriculture and forestry

- The farming sector, which is very important in Cumbria, relies on the natural environment and indeed is shaped by the natural environment and in turn shapes the environment.
- Cumbria has large shares of the stock of cattle and particularly of sheep and over a fifth of all the "less favoured area" grazing area in England. This reflects the climate and the typography in Cumbria which supports dairy and meat production as the main sources of farming, with limited arable or horticultural production.

Farming in Cumbria 2016		
Livestock type	**Total ('000s)**	**% of England total**
Dairy herd	200	10.0%
Beef herd	142	7.9%
All cattle	449	8.5%
All sheep	2,035	13.4%
Farmed area type	**Hectares ('000s)**	**% of England total**
Dairy	84	10.0%
Grazing livestock, less favoured areas (LFA)	275	21.7%
Grazing livestock, lowland	85	6.1%
All farmed area	508	5.6%

Source: Defra June Survey, 2016

- Cumbria, including the Lake District, has woodland cover of 58,500ha, nearly 9% of the county area which contributes to the tourism sector by providing important recreation resources (eg Whinlatter and Grizedale Forests). Cumbria has an important timber processing sector which draws on resources from across the North of England and South Scotland.

Economic contribution - tourism

- Our natural assets are critical to two of our key economic sectors: tourism/visitor economy and agriculture/land-based industries.
- Cumbria received 47 million tourism visits in 2018 made up of 6.6 million overnight stays, 40.4 million day visits and a total of 63 million tourist days. These visitors brought in around £3 billion. A large part of the draw for tourists is the landscape and natural environment.
- The Lake District National Park in 2018 saw 19 million visits (40% of the total), 29 million visitor days (41% of the total) and around 49% of all the spend. The two main reasons for visits to Cumbria (according to a 2015 visitor survey) were:
  - Because of the physical scenery and landscape of the area (61% overall, 69% for visitors to the LDNP).
  - Because of the atmospheric characteristics of the area - peaceful, relaxing, beautiful etc (23% overall, 48% for visitors to the LDNP).
  - Both were more important for staying visitors than day trip visitors.

Role of Natural Capital in Cumbria

- The evidence base has identified the critical role of our natural capital in supporting key industries such as tourism and farming/other land based industries. It also plays a wider role in the supply of water (and other ecosystems services) outside Cumbria.
- There is also a strong link between our natural capital (its role in creating the wonderful environment for living) and the key challenge identified in the skills section around attracting and retaining residents of working age in Cumbria.
- Our natural capital faces pressures especially from tourism (nearly 50 millions visitors a year creating congestion and environmental degradation in key locations) and to a lesser extent from the impact of farming practices and other developments.
- It follows therefore that it is vital to maintain (and in some areas enhance) our natural capital against the pressures from visitors and residents, to ensure this key driver of the economy and our prosperity is secured for the future for Cumbria and the nation.
- There is a complex relationship between the natural environment farming, land management, visitor management and tourism.
- Currently funding for maintaining (or enhancing) the natural capital of Cumbria comes from various sources (EU agricultural payments, private utilities, the National Trust, other charities/voluntary bodies, and government bodies such as Natural England etc). Changes in these funding streams, especially linked to agriculture and land management, will have important implications for Cumbria and particularly the Lake District.
- A key challenge going forward is to find ways to ensure that those who benefit from natural capital pay for its maintenance/enhancement (ie Payment for Environmental Services).
- As we identified in the Ideas section, there is an opportunity to build on existing work and for Cumbria to be a beacon in the development of practical ways of measuring and paying for the maintenance/ enhancement of natural capital .

Built and historic environment

- As well as its natural environment Cumbria has a fine collection of historic buildings with over 7,500 listed buildings or 1 in every 50 in England. Cumbria has a relatively large share of listed historic buildings and ancient monuments per head of population.
- Many of these buildings are open to the public and form part of Cumbria's unique tourism offer. The county has 18 of the 416 historic houses in England (over 4%) that are part of the Historic Houses association.
- The National Trust lists 18 houses, gardens/parks, castles/forts, sites/monuments, mills and churches in Cumbria (out of around 60 across the whole of the North of England).
- Cumbria's historic places of interest include the ancient city of Carlisle and the market towns of Alston, Appleby, Brampton, Broughton-in-Furness, Cockermouth, Kendal, Keswick, Kirkby Stephen

Historic Buildings in Cumbria			
Type	Cumbria	England	Cumbria s %
Grade I Listed	187	9,467	2.0%
Grade II* Listed	467	22,481	2.1%
Grade I and II* Listed	654	31,948	2.0%
Grade II Listed	6,965	348,376	2.0%
All Listed	7,619	380,324	2.0%
Scheduled ancient monument	867	19,873	4.4%
All dwellings (2016)	245,910	23,733,000	1.0%
All population (2017)	498,375	55,619,430	0.9%

Sources: search of National Heritage List for England (June 2019); DCLG Live Table 125: Dwelling stock estimates by local authority district 2001-2016

Sites and premises

There is a lack of consistent information on the property market across Cumbria. To address this, the LEP is to commission county-wide research covering.

- Supply of different types of site and premises (including workspace, co-working space and incubator space).
- Demand for different types of sites and premises.

Key locations for development

- There are several key locations for development and investment identified in Local Plans and also where the LEP has supported investment. These include:
  - Kingmoor Park, the only Enterprise Zone in Cumbria, covering some 70 hectares near Junction 44 of the M6 in North Carlisle.
  - Solway 45 at a former MoD site in Longtown near Carlisle.
  - Barrow Waterfront Business Park covering some 20+ hectares for development.
  - Lillyhall Estate near Workington extending across over 160 hectares covering a wide range of uses including sites for nuclear related businesses and training.
  - The Westlakes Science and Technology Park south of Whitehaven with around 25+ hectares for development.
- Future development opportunities include:
  - The re-use of part of the GSK site in Ulverston.
  - Development of a new business park area around Junction 41 on the M6 near Penrith.

6. BUSINESS ENVIRONMENT

Introduction: Business Environment

Scope of this section

- Enterprise
- Business size and structure
- Business growth
- Exporting and markets

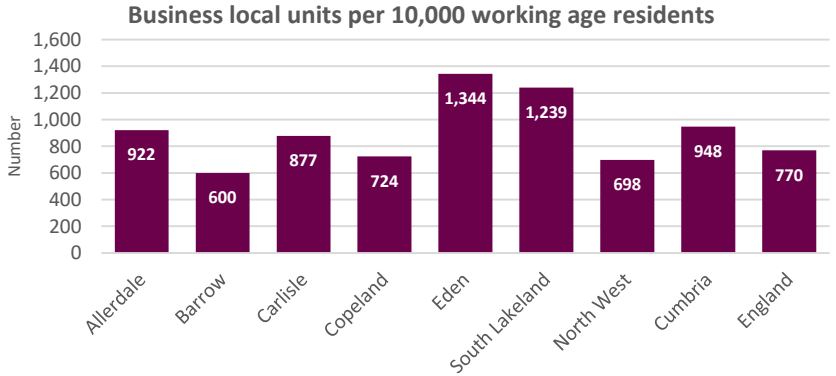
Key implications for the LIS

- Cumbria has very variable levels of business stock per head and rates of self employment. These range from very high in Eden and South Lakeland to low in Barrow and Copeland reflecting the important of agriculture and tourism in the former areas and large manufacturing employers in the latter areas.
- The county has low rates of business start-ups across all geographies, but high rates of business survival.
- The available evidence suggests that there are relatively few fast growing firms in Cumbria – that is likely to be a combination of the sectoral focus, the small size of the local market and, potentially, the attitudes to growth.
- Rates of exporting vary, but there is considerable scope to increase exporting and to further develop local value added and supply chains linked to nuclear sector, defence and tourism and land-based sectors.

Enterprise in Cumbria (1)

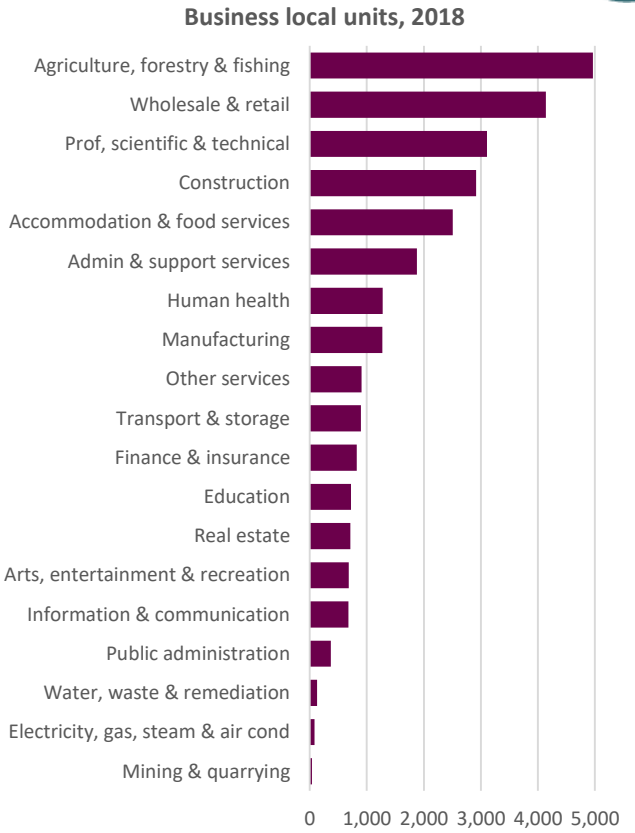
Business stock and self-employment

- There were 28,100 business local units in Cumbria in 2018 or around 950 for every 10,000 residents of working age (16-64). This rate is substantially higher than the national rate of 770. However, the stock of business local units is proportionally much higher in Eden and South Lakeland reflecting the importance of land based industries and the tourism sector there. Overall, agricultural businesses account for 18% of the stock compared to just 4% in England
- Rates of self-employment follow these patterns. In 2011 the 39,000 self employed in Cumbria were 15% of all economically active residents, slightly above the England average of 14%. It rose to 21% in South Lakeland and 25% in Eden, but was just 9% in Barrow.



Source: ONS UK Business Activity, Size & Location / Mid Year Estimates 2018

Note: A local unit is an individual site associated with an enterprise

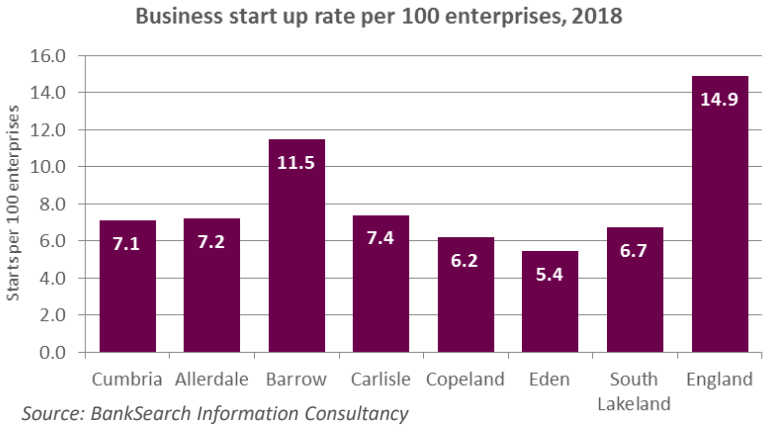


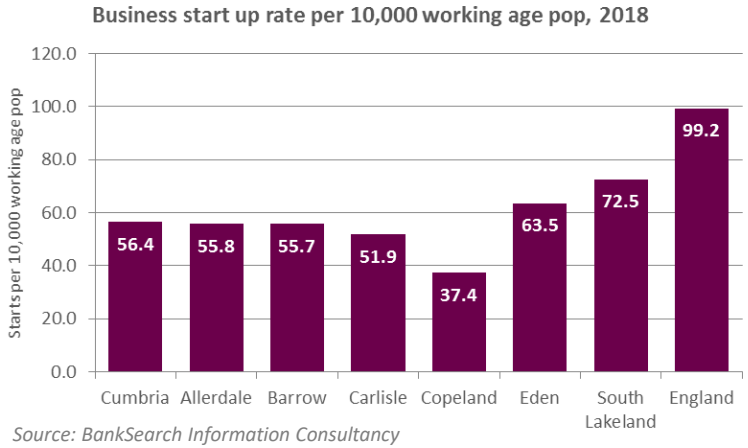
Source: ONS UK Business Activity, Size & Location

Enterprise in Cumbria (2)

Business start-up rates

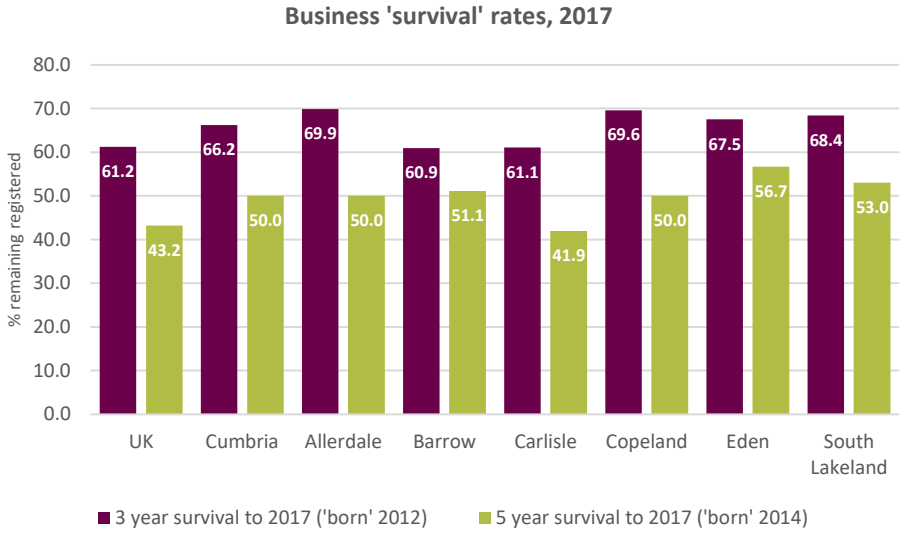
- As can be seen the rate of new firm start-ups (measured by Banksearch) is consistently below the England average across all parts of Cumbria. This is true whether measured per head of population or as % of the existing stock.
- The start-up rates per 10,000 working age population are just over 40% below the England average for Cumbria as a whole, but are particularly low in Copeland and somewhat higher in Eden and then South Lakeland. Start up rates per 100 business appear low in Eden and South Lakeland but, as noted, these have high business stocks per head of population.





Business survival rates

- Business survival rates are noticeably higher than nationally in Cumbria both over 3 and 5 year periods.
- There are likely to be a number of reasons for this:
  - First, the importance of agricultural businesses which tend to have high survival rates. Also business survival rates generally are higher in more rural areas.
  - Second, the lower rate of population churn in Cumbria reducing the number of businesses voluntarily being wound down as people leave the area.
  - Third, the evidence of lower start-up rates and growth rates suggests that there is perhaps a degree of caution in running businesses in Cumbria which may help support higher survival rates.
- However, higher survival rates are not universal across Cumbria, with 5-year survival rates noticeably lower in Carlisle.

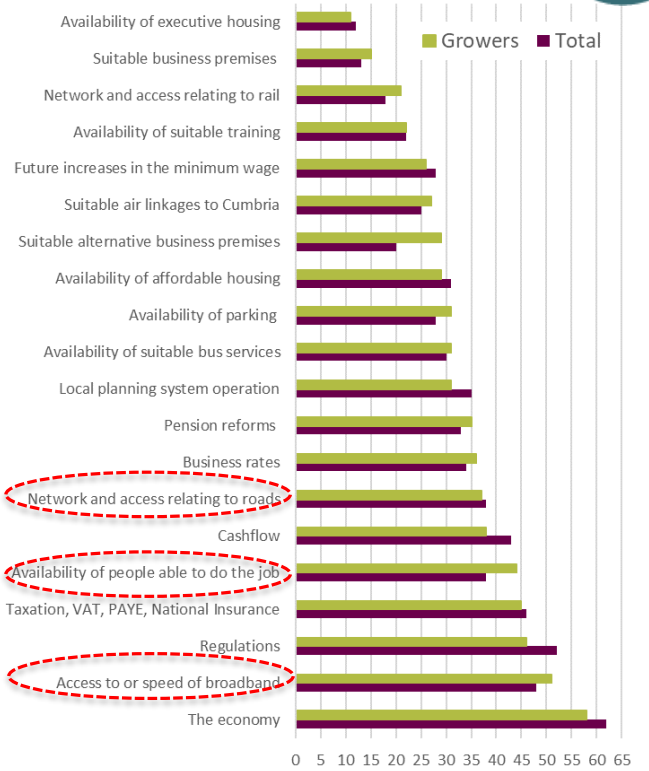


Source: ONS UK Business Activity, Size & Location - demography
Note: Survival = remaining registered for PAYE and/or VAT after first registration

Business growth in Cumbria

Attitudes to growth

- The 2015/16 Cumbria Business Survey identified business experience of, attitudes towards and plans for growth. From this we know that:
  - 34% were "Growers": had increased the number of staff employed by 5% or more in the last year or had increased turnover by 5% or more in the last year; and 10% were High growers.
  - 43% were "Stable": had the same number of staff or employed less than 5% more or fewer employees than 12 months ago and whose turnover had remained the same or increased or decreased by less than 5%.
  - 22% were "Shrinkers": had reduced the number of staff employed by 5% or more in the last year or reported a reduction in turnover of 5% or more compared with 12 months ago.
- Key issues that were seen as a barriers to growth that are **local** in their nature were:
  - Access to/speed of broadband (although this has improved subsequently)
  - Access to staff (but not to training)
  - Road access issues
- Business premises and executive housing were minor issues but affordable housing and parking were seen as more important issues.



Perceived significant barriers to business performance and efficiency, 2015/16 %

Source: Cumbria Business Survey 2015/16

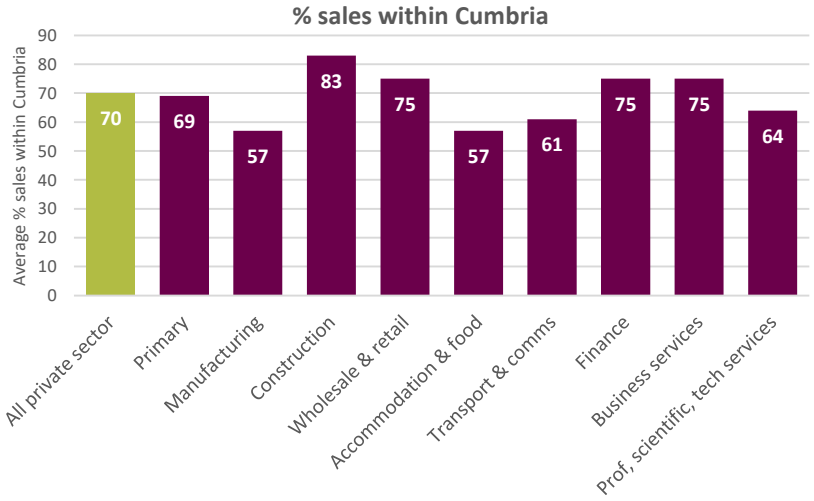
Rate of growth of Cumbria's firms

- The Enterprise Research Centre at Warwick University publish the UK Local Growth Dashboard (June 2018) that measures the proportion of faster growing firms by LEP area under different definitions. This showed that Cumbria had:
  - Growth of Existing Businesses - Stepping Up: 4.5% of £1-2m turnover businesses in 2014 grew to a minimum of £3m by 2017, compared to 7.5% for England and 7.2% for the UK – this is one of the lowest rates of "stepping up".
  - High growth firms incidence rates. There are different measures:
    - OECD 20% employment growth definition, (2014-2017). Cumbria had a 5.0% incidence rate compared to 6.3% in the UK – one of the lowest rates.
    - OECD 10% employment or turnover growth definition, (2014-2017). Cumbria had a 13% high-growth firms incidence rate compared to 15% in the UK – one of the lower rates.
  - Small high-growth firm incidence rate (2014-2017) was 1.2% compared to 1.4% for England as a whole.
  - 7.3% of job-creating firms with positive productivity growth (2014-17) compared to 8.4% for the UK.
- On all these metrics Cumbria falls well into the lower quartile of LEP areas.
- There are likely to be many reasons for the generally lower number and proportion of firms that are faster growing in Cumbria.
  1. First, the size of the local market is a constraint – there is a smaller population of people and businesses to sell to locally.
  2. Second, the structure of Cumbria's economy includes, as we have seen, a large share of business stock that is unlikely to grow quickly (eg farming businesses and to some degree tourism business that account for 27% of all business in Cumbria compared to 11% in England).
  3. Third, it is possible that attitudes to business growth may differ in Cumbria. Anecdotally Cumbria has a perhaps a large proportion of so-called **lifestyle businesses** where the focus is on maximising the business owner's quality of life and work life balance rather than maximising business growth.

Business markets and exporting (1)

Sources of markets

- The 2015/16 Cumbria LEP business survey shed some light on the markets that were important to Cumbria firms.
- In terms of geographic markets, there is a trend away from concentration on the local market and a move towards supplying markets further afield. One in three private sector businesses (32%) reported all their sales in Cumbria, compared with nearly half (46%) five years previously.
- Around 20% of businesses only made sales within Cumbria and 70% made at least half their sales to customers in Cumbria. Even amongst manufacturing firms, around 20% sold only to customers in Cumbria.
- On average, 70% of sales, by value, were made within Cumbria. The Cumbria market was particularly important to businesses in Barrow in Furness (80%) and Allerdale (77%) and to construction businesses (83%) and those in the health services sector (89%).
- One in five private sector businesses in Cumbria exported (22%); 15% of all respondents reported sales within the EU; 11% outside the EU.



Source: Cumbria Business Survey 2015/16

Business markets and exporting (2)

Evidence on exporting

- There is a lack of robust export data at the Cumbria level. HMRC has released a set of experimental statistics that subdivide the existing Regional Trade in Goods Statistics (RTS) into smaller UK geographic areas. This information is somewhat unreliable as it relies on an apportionment method at a company level that has flaws and should be treated with caution.
- The latest release reports on trade in goods at NUTS2 and NUTS3 geographical levels for 2017.
- The analysis is based on the whole number method of business counting. If a business has at least one branch trading in any area they count as 1 in the business count of that area. However, it will mean the sum of the business count for each sub-area will be greater than that of the broader area.

Value of goods exports & count of exporting firms

	£m		Business count	
	EU	non EU	EU	non EU
Cumbria	745	1,220	921	754
East Cumbria	344	288	721	588
West Cumbria	401	932	343	330

Source: HMRC Regional Trade Statistics 2017

- According to the HMRC data, 921 firms based in Cumbria export goods to the EU and 754 outside the EU which represents respectively 4.5% and 3.6% of total active business stock, which is above the overall UK rates of 3.6% and 2.1%.
- HMRC estimated that the value of goods exports by firms with a base in Cumbria was around £1.965 bn in 2017. By export value, the largest exported commodity from Cumbria in 2017 was machinery and transport (£794 million – predominantly to non EU countries), followed by manufactured goods. Other top commodities were chemicals and miscellaneous manufactures.

Goods exports by commodity type

	£m		Business count	
Commodity	EU	non EU	EU	non EU
0 Food and Live Animals	92	32	88	70
1 Beverages and Tobacco	2	1	43	27
2 Crude Materials	7	1	96	81
4 Animal and Vegetable Oils	9		36	
5 Chemicals	183	149	185	213
6 Manufactured Goods	246	186	223	360
7 Machinery and Transport	132	662	220	450
8 Miscellaneous Manufactures	72	162	247	459
9 Other commodities nes	1	28	47	7

Source: HMRC Regional Trade Statistics 2017

Business markets and exporting (3)

- Germany, France and the Irish Republic are the largest EU export destinations (goods) for Cumbria whilst Saudi Arabia, the USA and Oman are the non EU countries where export values are their largest.

Exporting destinations for Cumbria (goods)

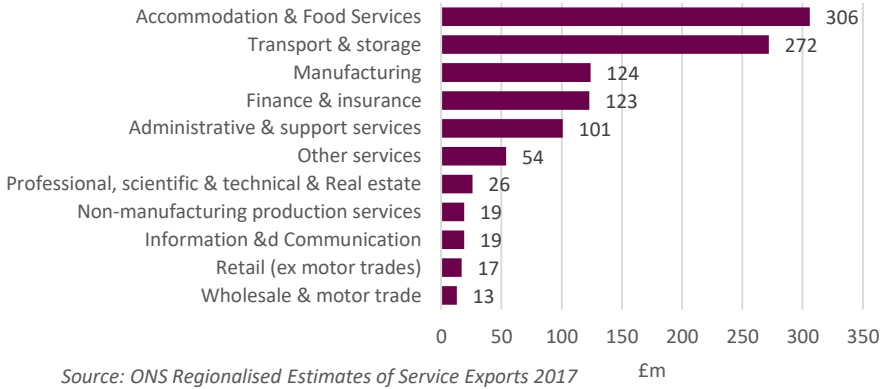
Top 10 Export Destinations					
EU	£ million	Business count	Non EU	£ million	Business count
Germany	175	260	Saudi Arabia	359	129
France	111	244	USA	243	426
Irish Republic	78	308	Oman	243	55
Italy	66	203	China	31	194
Netherlands	56	250	Turkey	26	153
Spain	54	227	Canada	24	187
Poland	50	179	Norway	23	193
Belgium	47	214	Japan	19	150
Hungary	18	121	Australia	19	236
Finland	14	135	South Africa	18	155

Source: HMRC Regional Trade Statistics 2017

Exports of services

- Experimental data from ONS suggests that the value of exports of services from Cumbria were £1,075m in 2017. East Cumbria was responsible for 62% (£664m) of this and West Cumbria 38% (£411m).
- It was estimated that almost of half of Cumbria's service exports (47%) were to EU countries, the 4th highest EU proportion of any of the 40 NUTS 3 areas.
- The highest value of service exports were from the accommodation & food services sector with £306m. This represents over a quarter of all service exports (28.5%), the third highest proportion of any of the 40 NUTS2 areas. Transport was responsible for the second largest value of service exports from Cumbria, the proportion of 25.3% being the 5th highest nationally.

Value of exports of services, 2017 (£m)

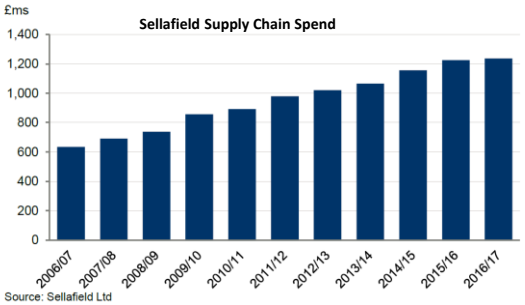


Source: ONS Regionalised Estimates of Service Exports 2017

Supply chain opportunities

Key Supply Chain activity

- There are number of major supply chains and supply chain opportunities that largely emanate from or are based in Cumbria.
- **Sellafield** currently spends around £1.2 billion per annum in its supply chain. Of this some £700 million (57%) is spent with its Tier 2 suppliers based in Copeland (and to a lesser extent Allerdale). The spend in Tier 3 (next round) of suppliers is much more widespread across the UK.
- The Sellafield spend is across a diverse range of sectors but particularly in engineering and specialist construction services.



Sector	Total spend (£ms)	%
71 Architectural and engineering activities; t	£464	37.8
43 Specialised construction activities	£196	16.0
84 Public administration and defence; comp	£81	6.6
62 Computer programming, consultancy an	£58	4.8
26 Manufacture of computer, electronic an	£56	4.6
78 Employment activities	£49	4.0
82 Office administrative, office support and	£41	3.3
42 Civil engineering	£35	2.9
41 Construction of buildings	£31	2.6
28 Manufacture of machinery and equipme	£25	2.0
Total	£1,226	100.0

THE ECONOMIC IMPACT OF SELLAFIELD, Oxford Economics, JUNE 2017

- **BAE Systems Maritime - Submarines** in Barrow is another major source of supply chain spend. There is limited information on how much and where this is spent. A report in 2017 by Oxford Economics indicated that compared to the then 7,100 direct jobs in Cumbria (in Barrow) a further 700 were supported in the supply chain in Cumbria (Barrow and South Lakeland in large part).
- There are also supply chain opportunities linked to the **tourism sector** based on the £2.9 billion in tourism spend (2017). Many of these opportunities are exploited but there will be a degree of leakage of the spend out of the county for bought in goods and services from elsewhere.
- The **agriculture** sector is a major producer of unprocessed products – milk and meat. There is some processing of milk by major firms (eg Nestle near Carlisle and Kendal Nutricare), and dairy products in local creameries, but opportunities to expand this activity.

7. PLACES

Introduction - Places

Scope of this section

- What are Cumbria's main places?
- How do they link together?
- How are they performing?
- Housing

Key implications for the LIS

- Cumbria is an area of many places with no one or two dominant towns and cities. This reflects its dispersed and often rural geography.
- Each place has different economic drivers and functions and often faces quite different opportunities and challenges.
- On most measures of deprivation, Barrow and Copeland face the biggest challenges.
- Cumbria's places have relatively ambitious targets for housing delivery and at present are performing well overall.
- Housing need and house prices/affordability vary widely across Cumbria. House prices and affordability are most acute in the National Parks and surrounding rural towns and villages in Eden and South Lakeland
- There are common challenges in terms of town centre performance, although this varies to some extent on how far the tourism sector helps bolster town centres (eg in the Lake District and parts of South Lakeland and Eden).

Cumbria's Places

Defining the geography of Cumbria

This figure only shows settlements with a population of 5,000 or more in 2011. The size of the circle is proportional to population.

What sizes are our places?

- Cumbria is a place of many towns and villages with a population spread across a large number of settlements.
- The largest settlement and only city, Carlisle, has a population of around 73,000 or around 15% of Cumbria's total.
- Even the 5 largest settlements only account for 45% of the population.
- Eden has the lowest population density of any local authority in England (0.2 people per hectare), which is just 6% of the England average. South Lakeland and Allerdale are the 9th and 12th least densely population areas respectively. However, the density is much higher in Barrow.

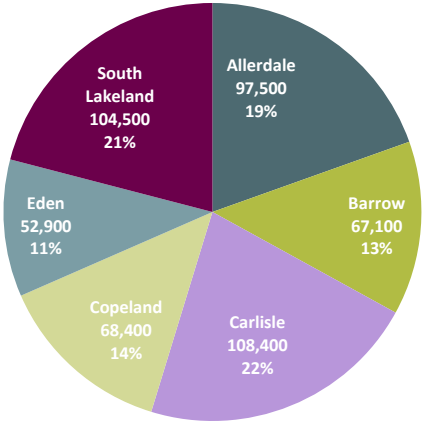
Settlements	District	2011 Population 000s	Share of total	Cumulative share
Carlisle	Carlisle	73.3	14.7%	14.7%
Barrow-in-Furness	Barrow-in-Furness	56.7	11.4%	26.1%
Kendal	South Lakeland	28.4	5.7%	31.8%
Workington	Allerdale	25.4	5.1%	36.9%
Whitehaven	Copeland	23.8	4.8%	41.7%
Penrith	Eden	15.5	3.1%	44.8%
Dalton-in-Furness	Barrow-in-Furness	12.3	2.5%	47.3%
Maryport	Allerdale	12.1	2.4%	49.7%
Ulverston	South Lakeland	11.7	2.3%	52.1%
Bowness-on-Windermer	South Lakeland	8.4	1.7%	53.7%
Cockermouth	Allerdale	8.2	1.7%	55.4%
Egremont	Copeland	8.2	1.6%	57.0%
Millom	Copeland	7.8	1.6%	58.6%
Dalston	Carlisle	7.1	1.4%	60.0%
Cleator Moor	Copeland	7	1.4%	61.4%
Wigton	Allerdale	5.8	1.2%	62.6%
Keswick	Allerdale	4.8	1.0%	63.6%
Grange over Sands	South Lakeland	4.8	1.0%	64.5%
All 18		**321.4**	**64.5%**	

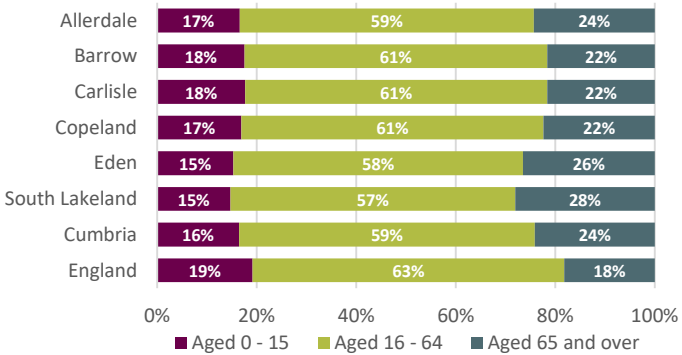
Source: Census 2011 - data is for built up areas as defined for the 2011 Census .

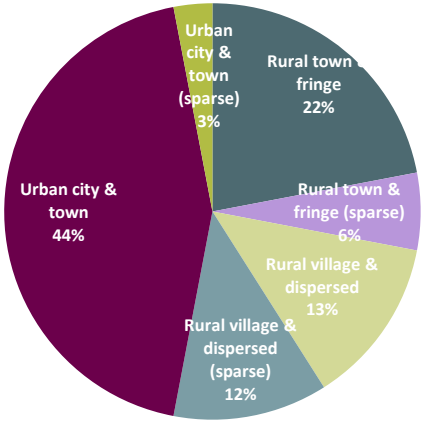
Rural v urban (1) - population

Demographic trends

- Cumbria's population in 2018 was estimated to be 498,900 (0.9% of the England total). Carlisle has the biggest population at 108,400 (22% of Cumbria's total), closely followed by South Lakeland with 104,500 (20%). The smallest district is Eden with 52,900 residents (11%).
- In the past 10 years, Cumbria's population has fallen by 2,000 or 0.4%, the only LEP area to show a decline. In particular, the population aged 0-15 has fallen by 4.3% (3,700) and the population aged 16-64 has fallen by 6.6% (20,800), both are the biggest declines of any LEP area.
- Cumbria has the lowest proportion of 0-16 year olds of any LEP area (16%), amongst the lowest proportion of 16-64 year olds (59%, rank 34 out of 38 LEPs) and the third highest proportion of 65+ year olds (24%, rank 3rd).





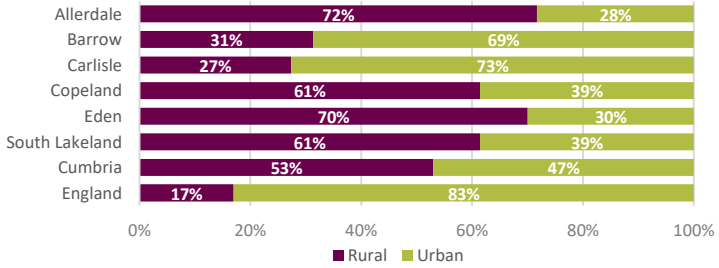


Source: ONS Mid Year Estimates 2018

Rural population

- 53% of Cumbria's population lives in areas designated as rural (cf 17% in England) with 18% in areas that are sparsely populated (6% in sparse rural towns and 12% in sparse rural villages/dispersed).

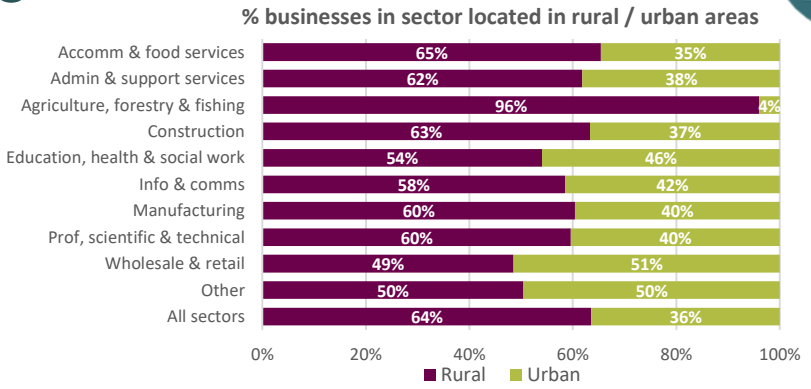
	Cumbria		England
	Population	%	%
Rural town and fringe	109,809	22%	9%
in a sparse setting	31,034	6%	0%
Rural village and dispersed	65,378	13%	7%
in a sparse setting	58,076	12%	1%
Total rural	**264,297**	**53%**	**17%**
Urban city and town	218,251	44%	43%
in a sparse setting	15,827	3%	0%
Urban major conurbation	-	0%	36%
Urban minor conurbation	-	0%	4%
Total urban	**234,078**	**47%**	**83%**
All	498,375		



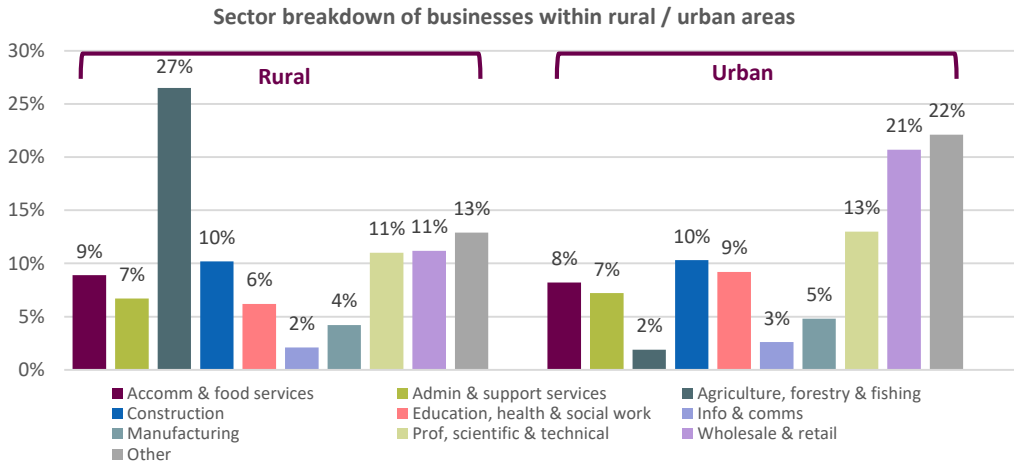
Source: ONS Small Areas Population Estimates 2017; Defra Rural/Urban classifications

Rural v urban (2) - businesses

- Of the 28,264 registered business units in Cumbria, 64% are located in rural areas. However, this varies enormously by sector – 96% of all agriculture, forestry & fishing businesses are located in rural areas of the county, as are 65% of accommodation & food service businesses, compared to 49% of wholesale & retail businesses.
- Within rural parts of the county, over a quarter of businesses are in the agriculture, forestry & fishing sector. In urban areas, the highest proportions of businesses are in wholesale & retail and 'other'.



	All rural	Rural hamlets & isolated dwellings	Rural village	Rural town and fringe	Urban city & town	Total
Accomm & food services	1,598	408	478	720	845	2,443
Admin & support services	1,203	312	390	496	742	1,945
Agriculture, forestry & fishing	4,759	2,781	1,718	272	196	4,955
Construction	1,832	457	661	708	1,061	2,893
Education, health & social work	1,113	234	354	514	948	2,062
Info & comms	377	96	130	157	268	645
Manufacturing	754	216	242	290	495	1,249
Prof, scientific & technical	1,975	426	685	871	1,340	3,315
Wholesale & retail	2,011	463	543	998	2,133	4,145
Other	2,317	607	702	1,016	2,277	4,594
All sectors	17,959	6,007	5,903	6,049	10,305	28,264

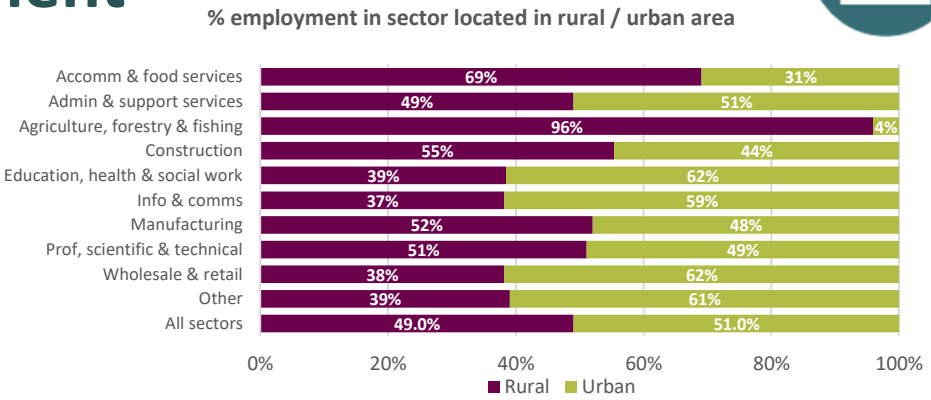


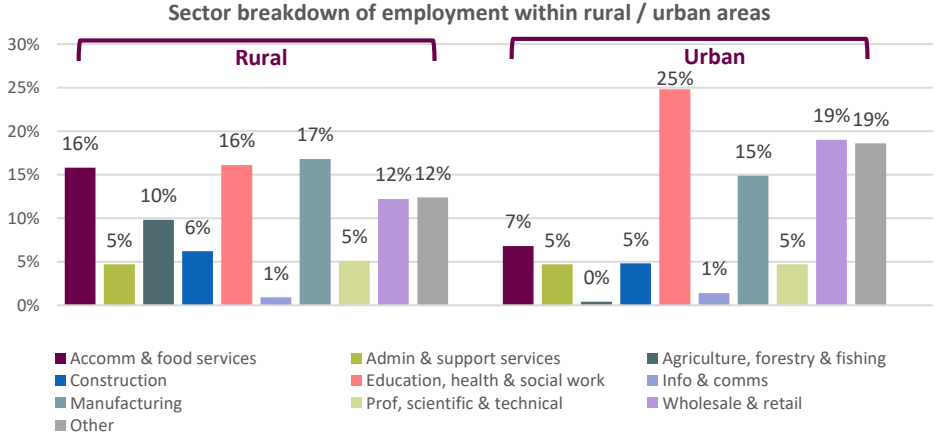
Source: Defra, LEP Rural Analysis, May 2019

Rural v urban (3) - employment

- Of the 242,000 jobs in Cumbria, 49% are located in rural areas. However, this varies enormously by sector – almost all agriculture, forestry & fishing jobs (96%) are located in rural areas of the county, as are two thirds of jobs in accommodation & food services and just over half of construction jobs, compared to just over a third of jobs in information & comms, wholesale & retail, education, health & social work and 'other'.
- Within rural parts of Cumbria, around a sixth of jobs are in manufacturing workplaces with similar proportions in education, health & social work and accommodation & food services. In urban areas, a quarter of jobs are in education, health & social work workplaces and a fifth in wholesale & retail and in 'other'.

	All rural	Rural hamlets & isolated dwellings	Rural village	Rural town and fringe	Urban city & town	Total
Accomm & food services	18,763	6,327	5,922	6,456	8,390	27,119
Admin & support services	5,581	1,162	2,360	2,096	5,799	11,380
Agriculture, forestry & fishing	11,638	6,725	4,442	545	494	12,107
Construction	7,363	1,712	3,331	2,264	5,922	13,318
Education, health & social work	19,119	3,729	4,812	10,564	30,599	49,638
Info & comms	1,069	336	370	377	1,727	2,906
Manufacturing	19,951	2,506	13,695	3,773	18,384	38,500
Prof, scientific & technical	6,056	1,131	2,406	2,599	5,799	11,865
Wholesale & retail	14,488	2,782	3,701	7,965	23,443	37,774
Other	14,725	4,157	5,228	5,324	22,949	37,774
All sectors	118,754	30,567	46,266	41,921	123,384	242,138





Source: Defra, LEP Rural Analysis, May 2019

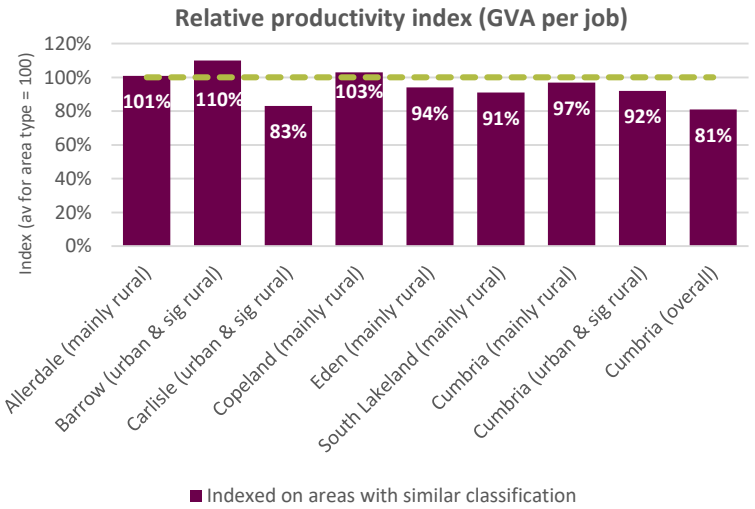
Rural v urban (4) - productivity

- Overall productivity is around 81% of the national average but this includes the productivity of major conurbations such as London.
- Comparing the Mainly Rural districts of Cumbria with similar areas nationally, productivity is broadly similar (97%) and comparing the Urban with Significant Rural districts in Cumbria with similar areas nationally productivity is slightly lower (92%).

- At individual district level, Allerdale, Barrow and Copeland each have productivity above that of similarly classified districts nationally.
- Carlisle is the district with the biggest gap to similarly classified authorities nationally with productivity running at 83% of average for all Urban with Significant Rural districts.

Area	Rural urban classification	GVA (£m)	Workforce jobs	GVA per job	Productivity indexed on similar authorities
Allerdale	Mainly rural	1,836	43,667	£42,054	101%
Barrow	Urban with significant rural	1,792	33,667	£53,241	110%
Carlisle	Urban with significant rural	2,702	67,667	£39,938	83%
Copeland	Mainly rural	1,584	37,000	£42,817	103%
Eden	Mainly rural	1,279	33,000	£38,771	94%
South Lakeland	Mainly rural	2,373	63,000	£37,667	91%
Cumbria	Mainly rural	7,073	176,667	£40,036	97%
	Urban with significant rural	4,495	101,333	£44,358	92%
	Total	11,568	278,000	£41,612	81%

Source: Defra, LEP Rural Analysis, May 2019



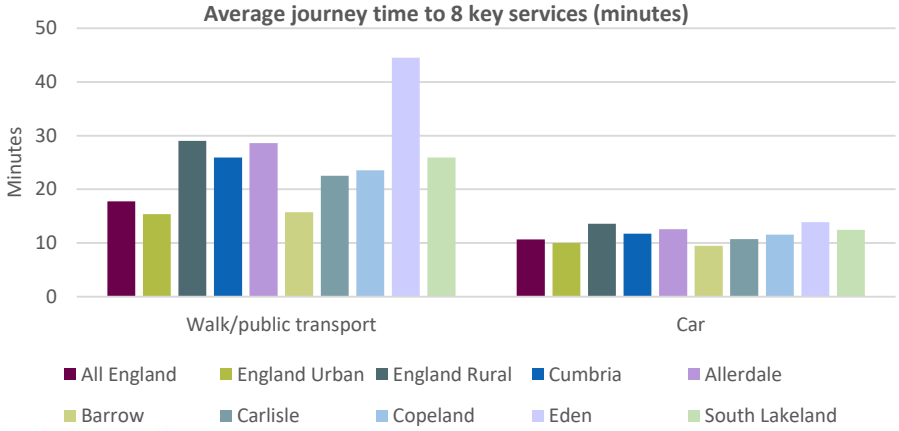
Source: Defra, LEP Rural Analysis, May 2019

Accessibility (1) – journey time to services

- Department for Transport data estimates that on average it takes residents in Cumbria 25.9 minutes to access 8 key services by public transport/walking and 11.7 minutes by car. This compares to averages of 17.7 minutes (public transport/walking) and 10.6 minutes (car) nationally. Residents in Eden have the biggest challenges in accessing services, particularly by public transport / walking.

The 8 services are:

Places with 500-4999 jobs	GP
Primary school	Hospital
Secondary school	Food store
Further education	Town centre



Source: DfT Journey Time Statistics 2016

- Looking specifically at employment centres, it can be seen that Eden has longer average travel times to all sizes of employment centre than average even for rural parts of England.
- Only Barrow and Carlisle have journey times to places with 5,000 or more jobs that are in line with national averages.

Average travel time (minutes)						
	Public transport / walking			Car		
	Places with 100-499 jobs	Places with 500-4999 jobs	Places with 5000 or more jobs	Places with 100-499 jobs	Places with 500-4999 jobs	Places with 5000 or more jobs
England	12.9	13.4	32.9	7.7	8.6	18.4
England Urban	9.3	11.4	28.0	7.3	8.1	16.8
England Rural	29.7	23.0	55.8	9.8	10.9	26.3
Cumbria	23.3	21.4	61.3	9.1	9.8	28.1
Allerdale	23.0	19.9	82.2	8.9	10.0	38.3
Barrow	7.6	13.8	23.2	6.9	8.6	12.5
Carlisle	17.3	19.0	29.4	8.2	9.0	13.4
Copeland	14.5	22.1	70.6	8.0	10.4	24.1
Eden	48.9	37.6	84.0	13.1	11.5	39.9
South Lakeland	33.2	21.3	82.3	10.6	10.1	41.1

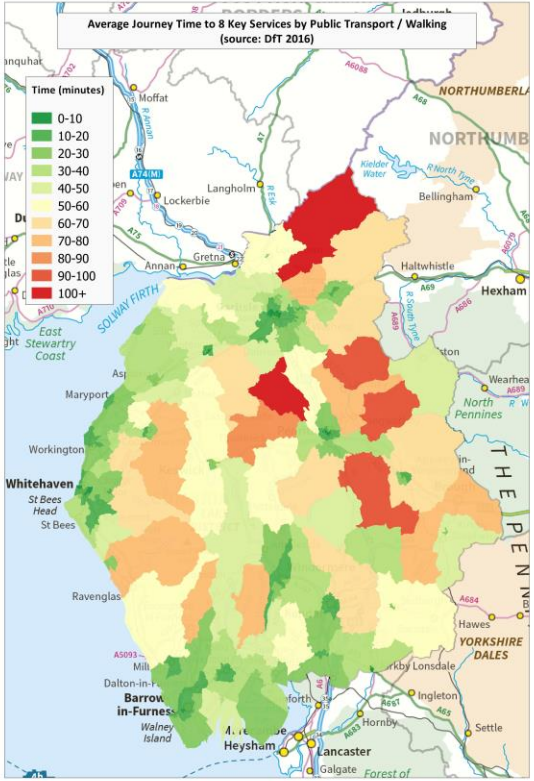
Source: DfT Journey Time Statistics 2016

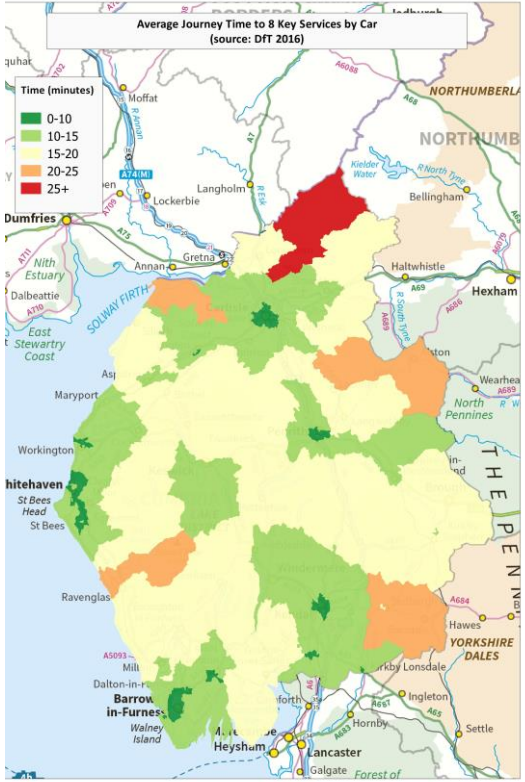
Accessibility (2) – journey time to access to 8 key services

- There are 25 communities (LSOAs) where it takes more than an hour to access all 8 of the key services by public transport/walking and in 5 of these it would take more than an hour and a half.
- In 53% of Cumbria's communities it takes longer than the national average to access the 8 key services by Public Transport / Walking and in 51% it takes longer than the national average by car.

The 8 services are:

Places with 500-4999 jobs
Primary school
Secondary school
Further education
GP
Hospital
Food store
Town centre

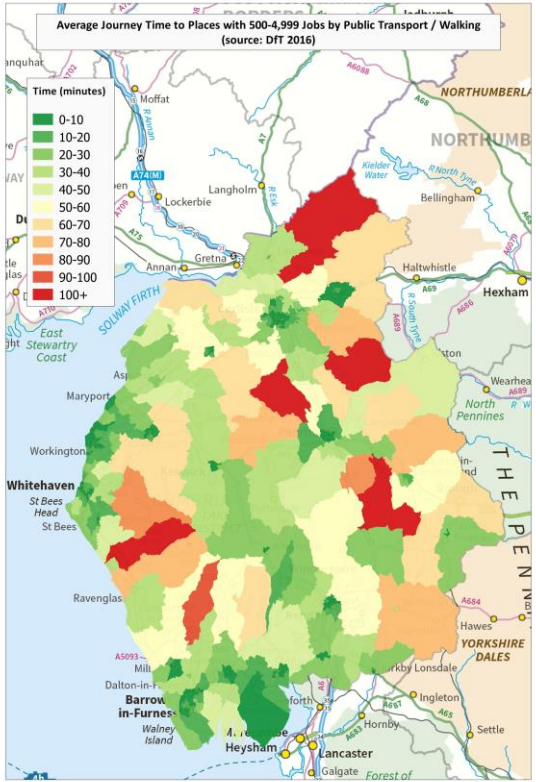


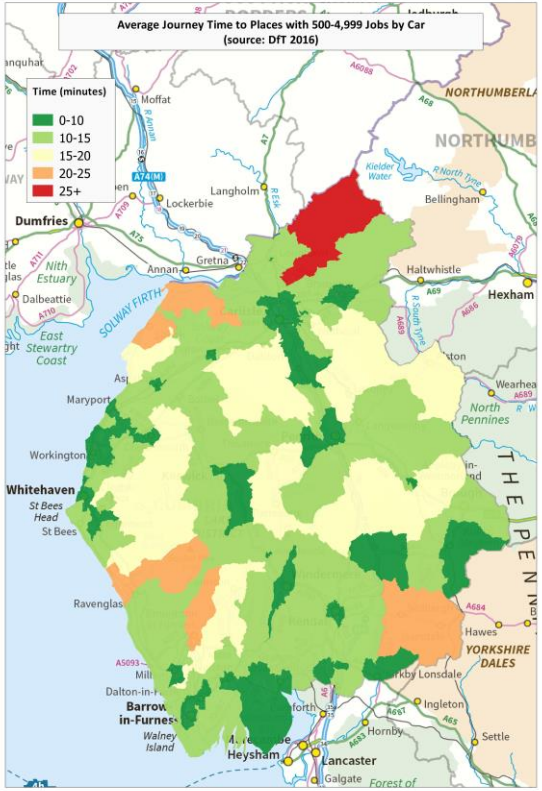


Source: DfT Journey Time Statistics 2016

Accessibility (3) – journey time to places with 500-4,999 jobs

- There are 22 communities (LSOAs) where it takes more than an hour to access a place with between 500 and 4,999 jobs by public transport/walking and in 6 of these it would take more than an hour and a half.
- In 53% of Cumbria's communities it takes longer than the national average to access a place with between 500 and 4,999 jobs and in 51% it takes longer than the national average by car.





Source: DfT Journey Time Statistics 2016

Cumbria's Places – how they are linked together

- Cumbria is a county of different geographies that are linked together in different ways. Overall, in most districts the great majority live and work in that district.
- Allerdale has the largest outflows (to Copeland and Carlisle), followed in proportional terms by Copeland to Allerdale, Eden to Carlisle and South Lakeland to Barrow and vice versa.

Outflows: where residents work, 2011						
	Commuting FROM …					
Travelling TO …	Allerdale	Barrow	Carlisle	Copeland	Eden	South Lakeland
Allerdale		200	1,300	3,500	600	200
Barrow	300		200	500	100	3,300
Carlisle	3,800	300		500	2,100	300
Copeland	5,500	700	400		200	300
Eden	1,100	100	2,400	400		600
South Lakeland	200	2,700	200	400	800	
Travel outside Cumbria	1,000	800	2,500	700	1,100	4,300
Inflows: where workers come from, 2011						
	Commuting TO …					
Travelling FROM …	Allerdale	Barrow	Carlisle	Copeland	Eden	South Lakeland
Allerdale		300	3,800	5,500	1,100	200
Barrow	200		300	700	100	2,700
Carlisle	1,300	200		400	2,400	200
Copeland	3,500	500	500		400	400
Eden	600	100	2,100	200		800
South Lakeland	200	3,300	300	300	600	
Live outside Cumbria	800	800	5,300	1,000	1,700	5,400

- Carlisle and South Lakeland are the only parts of Cumbria where there are significant inflows from outside Cumbria.

Outflows: where residents work, 2011						
	Commuting FROM … % of all living in area					
Travelling TO …	Allerdale	Barrow	Carlisle	Copeland	Eden	South Lakeland
Allerdale		0.6%	2.9%	12.2%	3.0%	0.5%
Barrow	0.7%		0.5%	1.9%	0.3%	8.6%
Carlisle	10.3%	0.9%		1.9%	10.7%	0.8%
Copeland	14.7%	2.6%	0.8%		0.9%	0.9%
Eden	2.8%	0.5%	5.3%	1.4%		1.7%
South Lakeland	0.6%	9.8%	0.4%	1.4%	3.9%	
Travel outside Cumbria	2.7%	3.0%	5.4%	2.5%	5.8%	11.1%
Live/work in district	68.2%	82.5%	84.6%	78.7%	75.3%	76.4%
Inflows: where workers come from, 2011						
	Commuting TO … % of all working in area					
Travelling FROM …	Allerdale	Barrow	Carlisle	Copeland	Eden	South Lakeland
Allerdale		1.0%	7.6%	18.0%	5.1%	0.6%
Barrow	0.5%		0.5%	2.3%	0.6%	6.9%
Carlisle	4.2%	0.8%		1.2%	11.4%	0.5%
Copeland	10.9%	1.9%	1.1%		1.9%	1.0%
Eden	1.8%	0.2%	4.1%	0.6%		2.0%
South Lakeland	0.6%	12.0%	0.6%	1.1%	3.1%	
Live outside Cumbria	2.5%	2.8%	10.5%	3.2%	8.2%	13.9%
Live/work in district	79.6%	81.3%	75.7%	73.6%	69.7%	75.2%

Source: Census 2011 Origin Destination.
NB: does not include those who work from home, offshore, abroad or have no fixed workplace

The economies of our places (1)

Different economic structures…

- The economic structure of each part of Cumbria is quite distinct. Even where manufacturing varies in importance, the type of manufacturing is also quite different.
- Barrow: shipbuilding accounts for 5/6ths of all manufacturing employment;
- Copeland: the nuclear sector accounts for nearly 95% of all manufacturing activity;
- Allerdale: has a more diverse manufacturing base with pulp/paper, plastics and engineering;
- Carlisle: manufacturing is focused on food manufacturing but with rubber/tyres and metal containers;
- South Lakeland: has a diverse manufacturing base from paper to electrical engineering and mechanical engineering;
- Eden: manufacturing is focused more towards food products.

	% of employment 2017	GB	LEP Comparators	Cumbria	West Cumbria	East Cumbria	Allerdale	Barrow	Carlisle	Copeland	Eden	South Lakeland
A	Agriculture, forestry & fishing	1.6%	4.2%	5.5%	4.3%	6.4%	6.7%	0.7%	3.8%	4.0%	13.2%	5.6%
B	Mining & quarrying	0.2%	0.1%	0.1%	0.1%	0.2%	0.1%	0.0%	0.0%	0.1%	0.7%	0.1%
D-E	Energy and water	1.1%	1.1%	0.9%	1.1%	0.8%	1.0%	1.5%	0.7%	0.9%	0.8%	0.9%
C	Manufacturing	8.0%	11.2%	15.6%	23.7%	9.5%	12.2%	29.5%	9.3%	32.4%	7.5%	10.2%
F	Construction	4.9%	5.4%	5.7%	6.2%	5.3%	7.3%	4.5%	5.1%	6.6%	5.7%	5.6%
G	Wholesale & retail	15.0%	16.3%	15.6%	13.3%	17.3%	17.1%	13.9%	18.6%	8.1%	14.0%	17.6%
H	Transport & storage	4.7%	4.1%	4.3%	3.1%	5.3%	3.7%	3.3%	7.6%	1.9%	5.7%	2.3%
I	Accommodation & food servic	7.4%	9.3%	10.3%	7.6%	12.4%	9.8%	6.1%	6.8%	5.9%	16.7%	16.7%
J	Information & communication	4.2%	2.1%	1.3%	0.9%	1.5%	0.7%	1.8%	1.5%	0.6%	0.9%	1.8%
K	Finance & insurance	3.4%	1.5%	1.0%	0.7%	1.2%	0.6%	1.0%	1.5%	0.4%	0.9%	0.9%
L	Real estate activities	1.8%	1.6%	1.4%	0.9%	1.8%	1.5%	0.4%	1.7%	0.6%	1.1%	2.1%
M	Professional, scientific & tech	8.5%	5.8%	4.9%	5.2%	4.6%	4.3%	4.9%	5.1%	6.6%	3.9%	4.6%
N	Administrative & support servi	8.9%	6.7%	4.9%	4.5%	4.9%	5.2%	2.5%	6.4%	5.5%	3.9%	4.2%
O	Public administration	4.1%	4.0%	3.8%	4.0%	3.9%	4.0%	3.0%	4.7%	5.1%	5.3%	2.1%
P	Education	8.6%	8.6%	7.7%	7.6%	7.4%	9.1%	8.2%	7.2%	5.5%	7.5%	7.9%
Q	Health	13.0%	13.5%	12.8%	12.8%	12.7%	11.6%	15.6%	16.1%	11.8%	8.8%	11.1%
R	Arts, entertainment & recreatic	2.5%	2.4%	2.4%	2.3%	2.7%	3.0%	1.8%	2.1%	1.6%	1.4%	3.7%
S	Other services	2.0%	1.8%	1.8%	1.5%	2.1%	2.1%	1.2%	1.6%	1.3%	1.9%	2.5%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Total			247,000	105,500	141,500	41,000	30,500	59,000	34,000	28,500	54,000

Location Quotients Eng=100

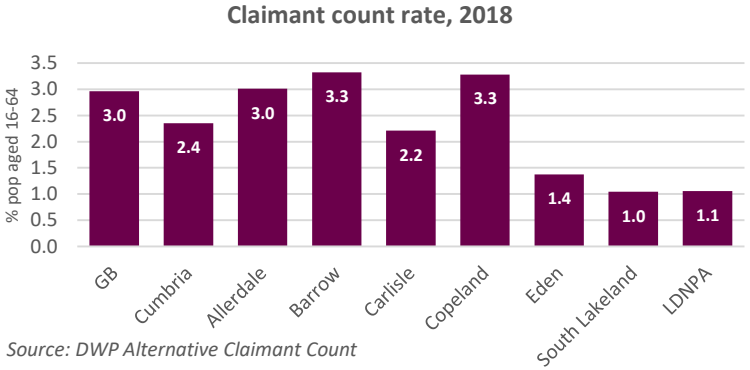
	Agriculture, forestry & fishing	2.6	3.4	2.7	4.0	4.2	0.4	2.4	2.5	8.3	3.5
	Mining & quarrying	0.8	0.9	0.3	1.2	0.7	0.0	0.2	0.4	4.3	0.7
	Energy and water	1.0	0.8	1.0	0.7	0.9	1.4	0.6	0.8	0.7	0.8
	Manufacturing	1.4	2.0	3.0	1.2	1.5	3.7	1.2	4.1	0.9	1.3
	Construction	1.1	1.2	1.3	1.1	1.5	0.9	1.0	1.3	1.2	1.1
	Wholesale & retail	1.1	1.0	0.9	1.2	1.1	0.9	1.2	0.5	0.9	1.2
	Transport & storage	0.9	0.9	0.7	1.1	0.8	0.7	1.6	0.4	1.2	0.5
	Accommodation & food servi	1.3	1.4	1.0	1.7	1.3	0.8	0.9	0.8	2.2	2.2
	formation & communicatio	0.5	0.3	0.2	0.4	0.2	0.4	0.4	0.1	0.2	0.4
	nce & insurance	0.4	0.3	0.2	0.4	0.2	0.3	0.4	0.1	0.3	0.3
	eal estate activities (less im	0.9	0.8	0.5	1.0	0.8	0.2	1.0	0.4	0.6	1.2
	Professional, scientific & tec	0.7	0.6	0.6	0.5	0.5	0.6	0.6	0.8	0.5	0.5
	Administrative & support ser	0.8	0.5	0.5	0.6	0.6	0.3	0.7	0.6	0.4	0.5
	Public administration	1.0	0.9	1.0	0.9	1.0	0.7	1.1	1.3	1.3	0.5
	Education	1.0	0.9	0.9	0.9	1.1	1.0	0.8	0.6	0.9	0.9
	Health	1.0	1.0	1.0	1.0	0.9	1.2	1.2	0.9	0.7	0.9
	Arts, entertainment & recreat	1.0	1.0	0.9	1.0	1.2	0.7	0.8	0.6	0.6	1.5
	Other services	0.9	0.9	0.8	1.0	1.0	0.6	0.8	0.6	0.9	1.2

Source: ONS BRES 2017

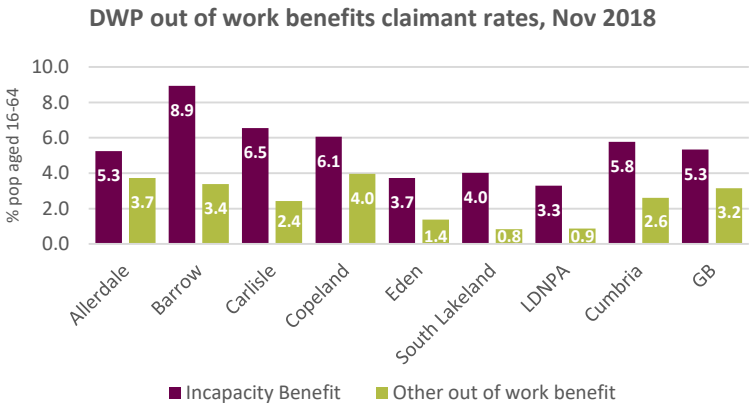
The economies of our places (2)

Unemployment and worklessness

- Although overall Cumbria has high rates of employment and low rates of unemployment and worklessness, this is not true across all parts of the county.
- There are strong and stubborn concentrations of residents who are either unemployed or economically inactive in Barrow, the west coast and in certain parts of Carlisle.
- On average in 2018 there were estimated to be 7,000 people claiming JSA or UC in Cumbria who were in the seeking work group giving a rate of 2.4% compared to 3.0% nationally. However rates were higher than nationally in Barrow (3.3%) and Copeland (3.3%).
- For a range of reasons, not all those on DWP benefits are available to the labour market, but with appropriate support some could be assisted to become job ready.
- In Nov 2018 there were 46,000 working age people receiving any DWP benefits, 25,000 of whom were receiving an out of work benefit, 8.4% of all of working age. However, the rate was much higher in Barrow (12%) and also higher in Copeland (10%), Allerdale and Carlisle (both 9%). The rate of Incapacity Benefit claimants is particularly high in Barrow at 8.9% of the working age population.



Source: DWP Alternative Claimant Count



Source: DWP Benefit Combinations

The economies of our places (3) - deprivation

Index of Multiple Deprivation

- The extent of deprivation varies widely across Cumbria. Barrow and Copeland are our districts that contain the highest proportion of areas with the highest levels of deprivation.
- Generally this pattern is true looking at most indices of deprivation. However, it differs when considering "barriers to housing and services" which tends to be associated with the degree of rurality and here Eden, followed by Copeland, are the most deprived parts of Cumbria.

Local Authority	IMD - Rank of average rank	IMD - Rank of average score	IMD - Proportion of LSOAs in most deprived 10% nationally	IMD - Rank of proportion of LSOAs in most deprived 10% nationally
Barrow	44	29	22.5%	29
Copeland	63	72	12.2%	73
Allerdale	114	115	11.7%	79
Carlisle	112	116	7.4%	112
Eden	182	200	0.0%	200
South Lakeland	251	258	0.0%	200

Source: IMD 2015, note rank out of 326 local authories in England 1 is most and 326 least deprived

	Barriers to Housing and Services			
Local Authority	Rank of average rank	Rank of average score	Proportion of LSOAs in most deprived 10% nationally	Rank of proportion of LSOAs in most deprived 10% nationally
Eden	49	42	31%	21
Copeland	92	85	12%	92
South Lakeland	209	184	15%	71
Allerdale	214	191	13%	81
Carlisle	228	205	9%	129
Barrow-in-Furness	324	325	0%	264

Source: Index of Deprivation 2015

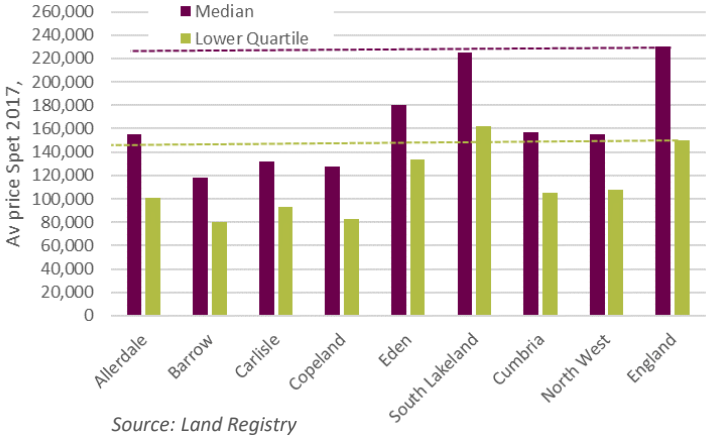
The economies of our places (4)

House prices

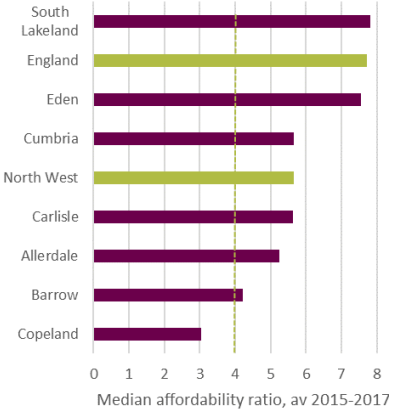
- House prices vary widely across Cumbria. Average house prices are highest in South Lakeland (around the England average) and lowest in Copeland and Barrow.
- House prices are significantly higher in the Lake District and the Eden Valley, with prices lowest along the West Coast from Barrow all the way to Carlisle.

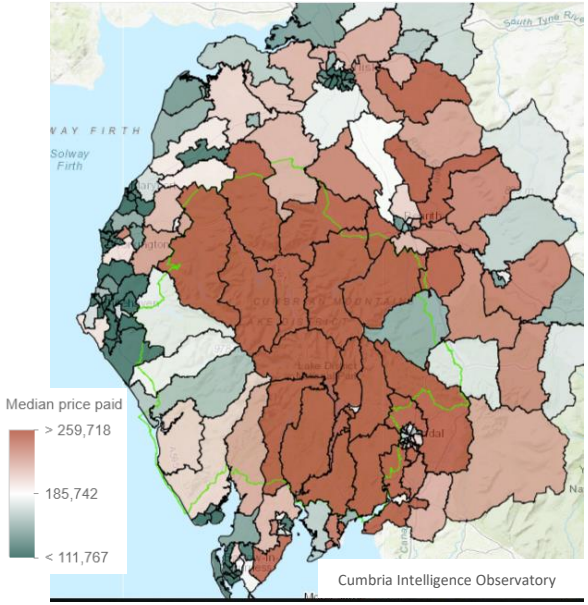
House and rental affordability

- On average housing is relatively affordable in Cumbria but rates of affordability vary widely. In South Lakeland and Eden housing is very unaffordable (combination of high prices and low wages). Housing in Barrow and Copeland is particularly affordable.



Source: Land Registry





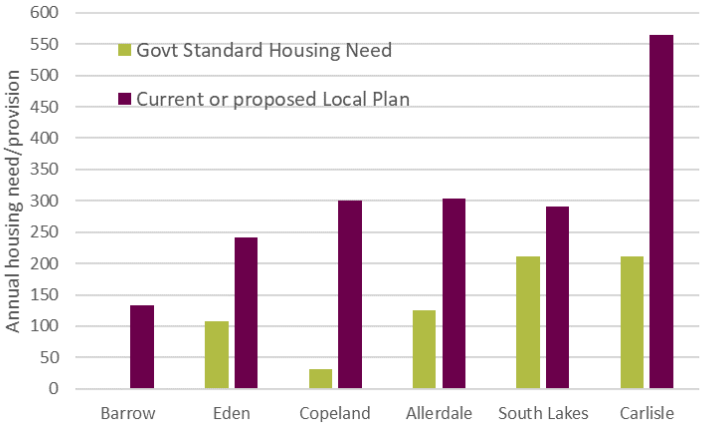
The economies of our places (5) – housing delivery

Housing delivery

- Cumbria has been performing well in terms of housing delivery recently as housing completions have picked up since 2013/14 to nearly 1,800 in 2017/18.
- The current rate of delivery far exceeds the "need" assessed by the MHCLG standard formula, as this reflects the historic slow rate of population growth and not future needs for workforce.
- Local authorities in Cumbria have adopted housing targets that are deliberately set at well above base demographic forecasts.
- Collectively across Cumbria the rate of new housing delivery is now running overall at the collective overall planned figure (around 1,900 dwellings a year).
- Major new areas for housing are being progressed at St Cuthbert's Garden Village in South Carlisle (10,000 homes), in South Ulverston and in Penrith.

Recent Delivery (Net New Homes)						
Area	2013/14	2014/15	2015/16	2016/17	2017/18	Average, last 3 years
Allerdale	256	302	385	250	480	372
Barrow	73	116	91	67	98	85
Carlisle	190	419	502	541	505	516
Copeland	133	134	123	154	134	137
Eden	175	129	258	198	188	215
South Lakes	206	256	374	245	291	303
Lake District National Park	75	145	48	110	93	84
TOTAL	**1,108**	**1,501**	**1,781**	**1,565**	**1,789**	**1,712**
Government standard housing number	687	687	687	687	687	687
Delivery as % of SHN	161%	218%	259%	228%	260%	249%

Source: District councils



Source: District councils

Creative and cultural activity

- There is a considerable amount of creative and cultural activity that takes place across Cumbria's different places. There are 12 arts organisations that receive ongoing support from Arts Council England covering a range of art forms. Several key cultural facilities and artists in Cumbria (such as craft makers) are helped by spend from visitors to the county. As well as professional cultural activities there is a thriving amateur and voluntary creative sector in Cumbria.
- The University of Cumbria has a strong Institute of the Arts based in Carlisle and around 800 students studying a mixture of creative subjects there (and its own Stanwix theatre).
- Cultural facilities have seen recent investment in the Rosehill Theatre (Whitehaven) and at Abbotts Hall, Kendal and the Wordsworth Trust museums (supported by the Northern Cultural Regeneration Fund).
- Although overall employment levels in the cultural and creative sectors are relatively low, South Lakeland has an important concentration of the creative industries and is seen by Arts Council England as one of its priority investment area for the North West.

Organisation	*Discipline*	*Total Portfolio grant 2018/22 £000s*	*Local Authority*
Tullie House / Wordsworth Trust / Lakeland Arts	Museums	£4,663	Carlisle / South Lakeland
Cumbria Theatre Trust / Theatre by the Lake	Theatre	£2,416	Allerdale
Brewery Arts Centre	Combined Arts	£1,287	South Lakeland
Lakes Arts Festivals Ltd	Combined Arts	£936	South Lakeland
Grizedale Arts	Visual Arts	£791	South Lakeland
Highlights Productions	Combined Arts	£479	Eden
Art Gene Limited	Visual Arts	£440	Barrow-in-Furness
Eden Arts	Combined Arts	£400	Eden
The Ashton Group Theatre	Theatre	£322	Barrow-in-Furness
Octopus Collective Ltd	Music	£281	Barrow-in-Furness
Rosehill Arts Trust	Combined Arts	£249	Copeland
Prism Arts	Combined Arts	£202	Carlisle
Total		**£12,466**	

Source: Arts Council England

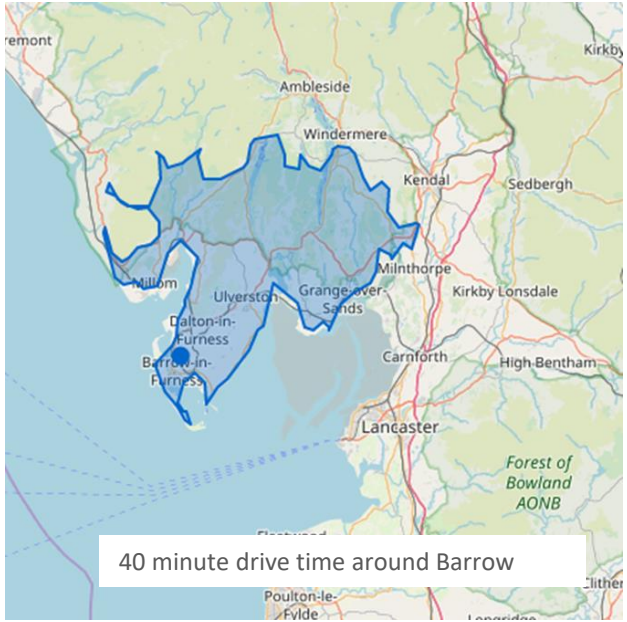
Barrow and surrounds

Key features of the economy

- Barrow has a population of around 57,000 (84% of that of Barrow-in-Furness district). It has close functional links with Ulverston (in South Lakeland) as part of a Furness peninsula travel to work area.
- The economy of Barrow is dominated by its shipyard where there are currently some 8,500 workers plus contractors on top of that. This has grown by around 3,000 since 2013.
- Barrow is the centre of the "national endeavour" to develop a new generation of nuclear deterrent submarines (the £40 billion Dreadnought programme).
- As well as BAE Systems there are other manufacturing employers including Kimberly-Clark and Robert McBride.
- Barrow port acts as an important base for the oil and gas and the offshore wind farms in the Irish Sea.
- In the wider Furness area around Ulverston there are important knowledge-based businesses such as GSK, Siemens Subsea and Tritech.

Opportunities and threats

- The fortunes of the economy of Barrow are heavily dependent on the rollout and development of the Dreadnought programme.
- In spite of its recent economic growth Barrow has the largest concentration of worklessness, poor housing and people with poor skills and health in Cumbria.
- Transport access to Barrow is poor with the road access along the A590 suffering from resilience issues and there is a relatively limited train service.
- The town centre of Barrow has been struggling in spite of economic growth as its location means it has a very limited catchment.
- There are development opportunities around the Barrow waterfront for housing and business employment and in Ulverston for housing and employment (for instance as part of the GSK site).



40 minute drive time around Barrow

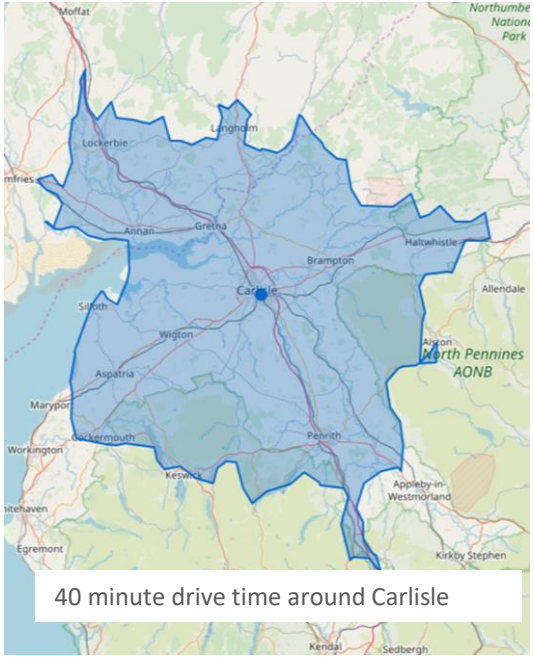
Carlisle and surrounds

Key features of the economy

- Carlisle city has a population of around 73,000 (68% of the district). It is the largest settlement and only city in Cumbria.
- Its economic role is in part as a sub-regional centre for northern Cumbria and large parts of southern Scotland (in the Borderlands area). It has the largest concentration of retail and business services activity in the county and also serves as the administrative centre for the county.
- There is substantial in-commuting from Scotland.
- It is well connected by road (M6) and rail (north south and also local feeder services) and has an important transport and logistics sector.
- Food manufacturing is a key element of the economy as is a range of activity linked to agriculture and wood/forestry as it sits centrally in a large farming area.

Opportunities and threats

- St Cuthbert's Garden Village is being progressed to provide 10,000 new homes to the south of Carlisle – the largest garden village in England, with funding in place for a £115m relief road.
- The University of Cumbria has its main operations in Carlisle currently at two campuses. There is the potential to expand the presence of the university in the city.
- The employment area around Junction 44 to the north of the city has the largest concentration of employment and Kingmoor Park benefits from Enterprise Zone status.
- The opening of Carlisle Airport to commercial flights in 2019 will help improve accessibility.



40 minute drive time around Carlisle

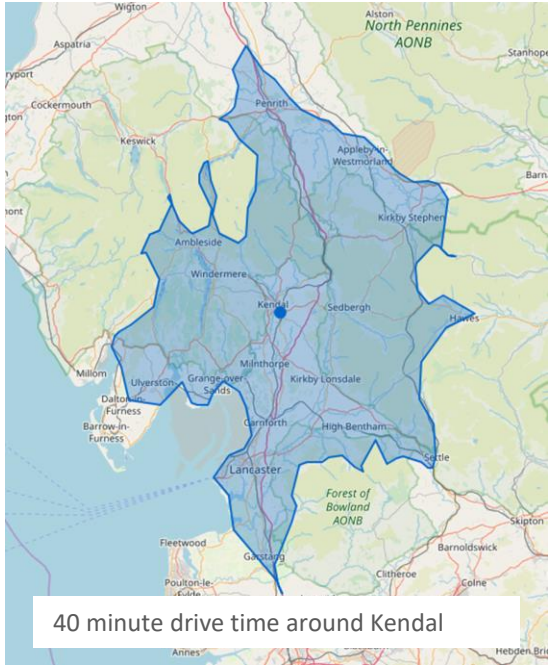
Kendal and surrounds

Key features of the economy

- Kendal has a population of around 28,000 (27% of that of South Lakeland).
- Its sphere of influence extends across the whole of the district, but it is accessible northwards up the M6 and southwards to Lancaster.
- South Lakeland has the best qualified population in Cumbria and the highest rates of business start-up.
- Kendal has traditionally been a manufacturing town as well as a market town and there is still important advanced manufacturing activity that takes place there (James Cropper, Gilkes) and in the rest of South Lakeland (around Ulverston).
- Tourism and to a lesser extent agriculture are important in surrounding areas - particularly toward the two national parks. The area gets the heaviest volume of tourism in Cumbria due to its accessibility.

Opportunities and threats

- Kendal has one of the best strategic locations in Cumbria with good road and rail links southwards to London and Manchester and it is well connected to Lancaster.
- The area has perhaps the greatest concentration of creative sector employment, assets and activity in Cumbria and potentially scope to grow this sector. There are successful examples of new spaces for creative businesses in Kendal.
- Housing is however relatively unaffordable in South Lakeland and congestion and lack of sites is an issue in Kendal.



40 minute drive time around Kendal

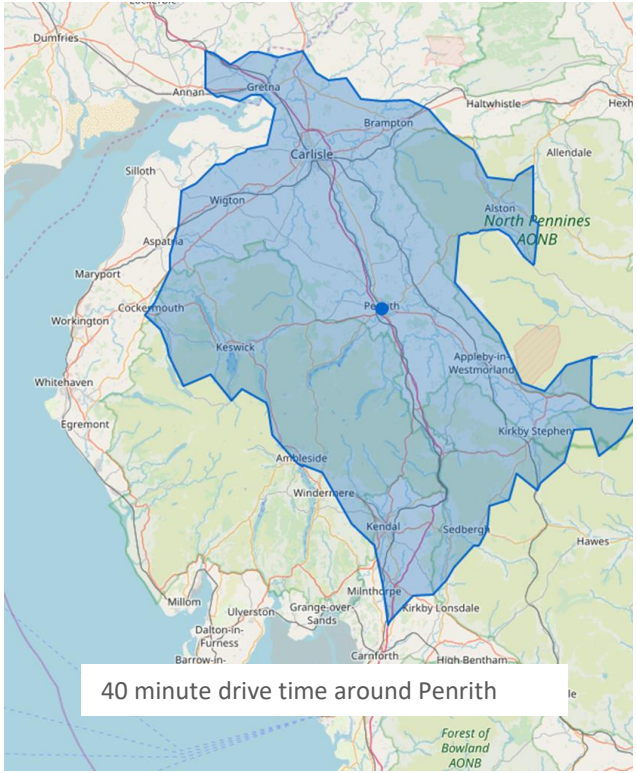
Penrith and surrounds

Key features of the economy

- Penrith has a population of around 16,000 (29% of Eden district).
- Penrith is well located on the M6 and A66 which is a factor in some of its key industries (logistics and food manufacturing) and as a location of service sector businesses needing access to all of Cumbria. Carlisle is accessible from Penrith as it sits centrally on the north/south spine in Cumbria.
- Agriculture is a very important sector in Eden, the district with the lowest population density in England. It supports many businesses activities in the town and surrounding areas.
- Tourism is important in surrounding areas - particularly in the Lake District.

Opportunities and threats

- Penrith and surrounds offer a good quality of life (5th best in the UK according to a recent Halifax assessment).
- The employment space in Penrith is largely used up and there is a shortage of accommodation.
- Penrith/Eden have particularly low unemployment rates and a very small and spare labour supply and so recruitment is a major challenge for businesses. Increasingly larger firms have had to rely on bussing workers in from outside the areas.
- It is one of the less affordable housing areas in Cumbria, in part because wage levels are low in the district.
- Eden District Council has been pursuing plans for a major expansion of Penrith.



40 minute drive time around Penrith

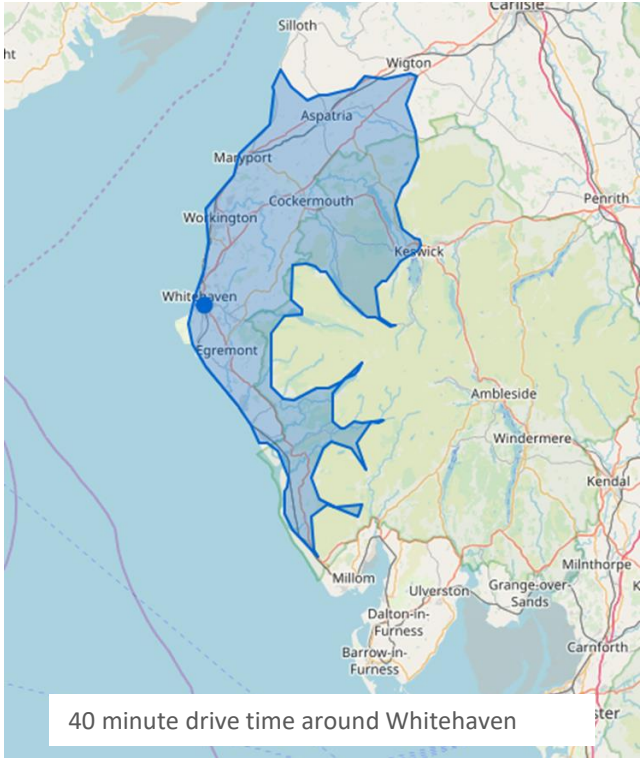
Whitehaven and surrounds

Key features of the economy

- Whitehaven has a population of around 24,000 (34% of the Copeland total). It is one of the least accessible parts of Cumbria.
- The economy of Whitehaven and other settlements in Copeland are dominated by the nuclear sector with an estimated 60% of jobs dependent on Sellafield.
- As well as Sellafield and the Drigg low level waste repository, the district has a major concentration of a wide range of nuclear research activities, training/skills development and supply chain firms (many at Westlakes Science Park).
- The economy benefits from high wages paid by the nuclear sector, but there are low rates of enterprise and some significant pockets of worklessness and deprivation.

Opportunities and threats

- The Moorside site is designated for nuclear new build and potential use for other new nuclear activity.
- West Cumbria Mining is planning to open a new mine to the south of Whitehaven.
- The western side of the Lake District is designated as the quiet part of the National Park but considerable scope exists to increase visitor numbers here and in towns outside the National Park.
- Improvements to the A595 around Whitehaven and to the coastal line would make it much more accessible for visitors and workers alike.
- The North Shore regeneration proposals in Whitehaven centre around the harbour offer potential for business and tourism.



40 minute drive time around Whitehaven

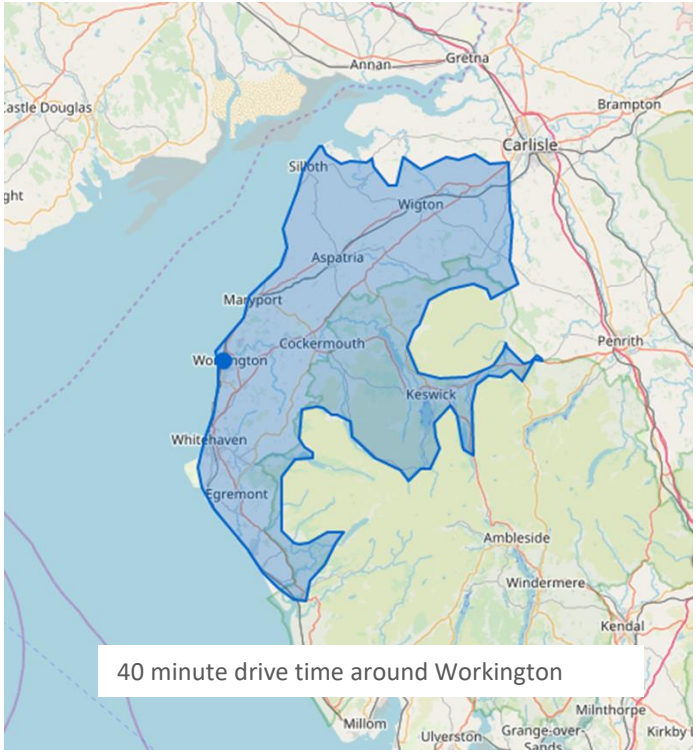
Workington and surrounds

Key features of the economy

- Workington has a population of around 25,000 (26% of that of Allerdale). It is close to Maryport, Cockermouth and Whitehaven.
- Manufacturing is a key feature of many of the towns in Allerdale with paperboard and heavy precision engineering in Workington, engineering in Cockermouth and plastics in Wigton.
- The town and surrounds also link to the nuclear sector with major travel to work flows. Indeed around 26% of Sellafield's wage bill is paid to residents of Allerdale.
- Workington is an important port that handles a variety of cargo.
- Inland there are large parts of Allerdale district where agriculture is important (the north part of the district) and tourism (in the west of the district around Keswick).

Opportunities and threats

- Main shopping centre for West Cumbria.
- Important port with potential for an increased role in supporting major development proposals.



40 minute drive time around Workington

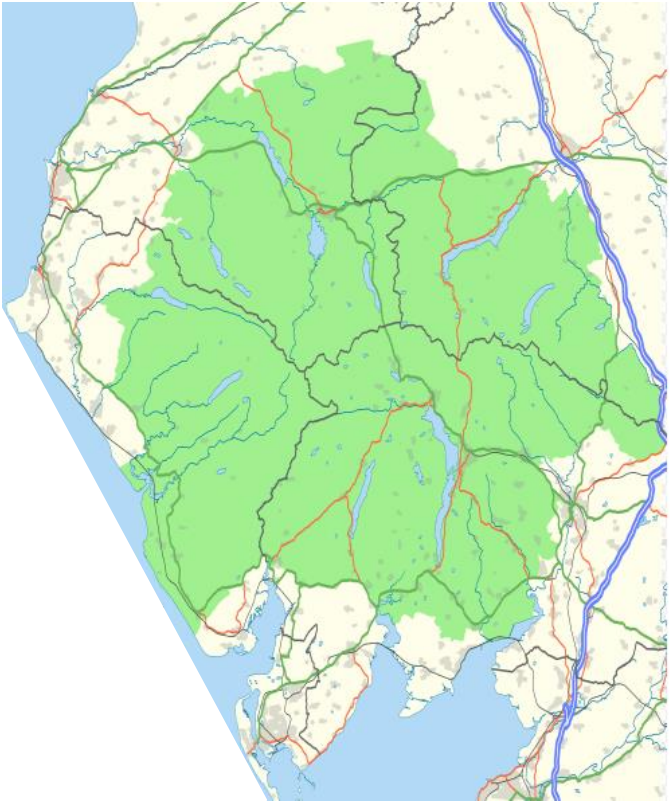
Lake District National Park

Key features of the economy

- The Lake District National Park covers roughly 35% of Cumbria's land area and houses a resident population of around 41,000 (just 8% of Cumbria's population). It has a large number of second homes and holiday lets (an estimated 24% in 2011) and the highest house prices and worst levels of affordability in Cumbria.
- There is an estimated 25,000 employees working in the National Park in 4,000 businesses and a large number of self-employed proprietors.
- It one of the most visited National Parks in the UK (accounting for over 50% of all overnight spend in England's Parks) with a very strong national and international brand, enhanced by recent designation of World Heritage Site status. In 2017 there were 19 million visitors staying 29 million nights in around 4,000 accommodation establishment and spending £1.1 billion supporting an estimated 19,000 jobs.
- The economy is therefore dominated by tourism and to a lesser extent agriculture where there are around 1,000 commercial farms with 2,400 workers.

Opportunities and threats

- WHS status provides an opportunity to develop the international tourism offer and to help brand high quality products produced in the Lake District.
- Access to high quality 4G and 5G services is an issue across much of the National Park.
- Potential challenges ahead for the farming sector in the Lake District depending on how any future regime for payments to land managers for the production of “public goods” (including ecosystem services) operates.



8. APPENDICES

Appendix A: Sectoral economic data

Introduction

This section provides a summary of key statistics for Cumbria LEP's 9 Sector Groups which are as follows:

- Advanced Manufacturing
- Construction
- Creative, Cultural & Digital
- Health & Social Care
- Logistics
- Nuclear
- Professional Services
- Rural & Food
- Visitor Economy

Each of the sector groups is developing a work plan which will include:

- an assessment of the sector's full value to Cumbria and beyond;
- an assessment of strengths, weaknesses, opportunities and threats;
- identification of gaps and objectives;
- the sector group's role in achieving objectives;
- flagship programmes and the actions required to deliver them.

Important note:

The evidence in this section includes an overview of publicly available official datasets which are available on a consistent basis for all sectors and geographies, supplemented with some limited evidence from other sources. A broader range of evidence is being developed to support the LEP's 9 sector groups, including locally commissioned work, qualitative information and consultation outcomes.

It is important to recognise the limitation of official datasets which, in most cases, use the 2007 Standard Industrial Classification (SIC) system of coding. This classifies business establishments according to the principal economic activity in which they are engaged. However this may not reflect the full range of activities performed by a business or capture the full economic contribution of a sector through for example supply chain activity, agency or contractor operations etc. Nor does it take account of customer types (particularly an issue for the visitor economy).

The SIC classifications included in the analysis for each of the 9 sector groups are detailed on the following page.

Cumbria LEP Sectors - definitions (SIC 2007 2-digit)

Advanced manufacturing	16 Manufacture of wood products 17 Manufacture of paper products 19 Manufacture of coke & refined petroleum 20 Manufacture of chemicals & chemical products 21 Manufacture of pharmaceutical products 22 Manufacture of rubber & plastic products 26 Manufacture of computer, electronic & optical products 27 Manufacture of electrical equipment 28 Manufacture of machinery & equipment 29 Manufacture of motor vehicles 30 Manufacture of other transport equipment
Construction	41 Construction of buildings 42 Civil engineering 43 Specialised construction
Creative, cultural & digital	18 Printing & reproduction of recorded media 58 Publishing 59 Film & TV production 60 Programming & broadcasting 62 Computer programming & consultancy 63 Information services 90 Creative, arts & entertainment 91 Libraries, archives, museums & other cultural activities 92 Gambling & betting activities 93 Sports, amusement & recreation activities
Health & social care	86 Human health 87 Residential care 88 Social work

Logistics	49 Land transport 50 Water transport 51 Air transport 52 Warehousing & transport support activities 53 Postal & courier activities
Nuclear	24 Manufacture of basic metals
Professional services	68 Real estate 69 Legal & accounting 70 Head offices & management consultancy 71 Architectural & engineering 72 Scientific research & development 73 Advertising & market research 74 Other professional, scientific & technical activities 75 Veterinary activities 94 Activities of membership organisations
Rural & food production	01 Agriculture 02 Forestry 03 Fishing 10 Manufacture of food products 11 Manufacture of beverages 12 Manufacture of tobacco products
Visitor Economy	55 Accommodation 56 Food & beverage service activities

Cumbria LEP Sectors (1) – key statistics

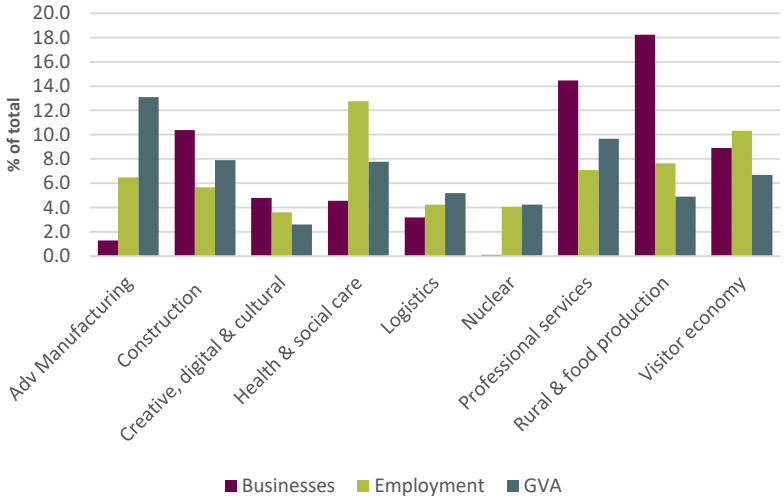
- Cumbria LEP's sector groupings between them account for around two thirds of the economy, represented by 18,500 business units, 152,900 jobs and producing £6.3m in gross value added, giving an average productivity of £41,600 per job.
- The sectors account for varying shares of each economic measure. Advanced manufacturing for example accounts for relatively few businesses (1.3%) but a much greater proportion of employment (6.5%) and GVA (13.1%). Conversely, rural & food production accounts for nearly a fifth of business units (18.2%) but less employment (7.6%) and GVA (4.9%).
- Productivity varies widely between the sectors with advanced manufacturing having the highest at £83,875 per job and health & social care the lowest at £25,333. This in part is reflective of different employment patterns between sectors (higher incidence of part time working in health for example) but also the nature of the activities carried out and the economic value derived from them.

Cumbria LEP Sectors - Key Statistics

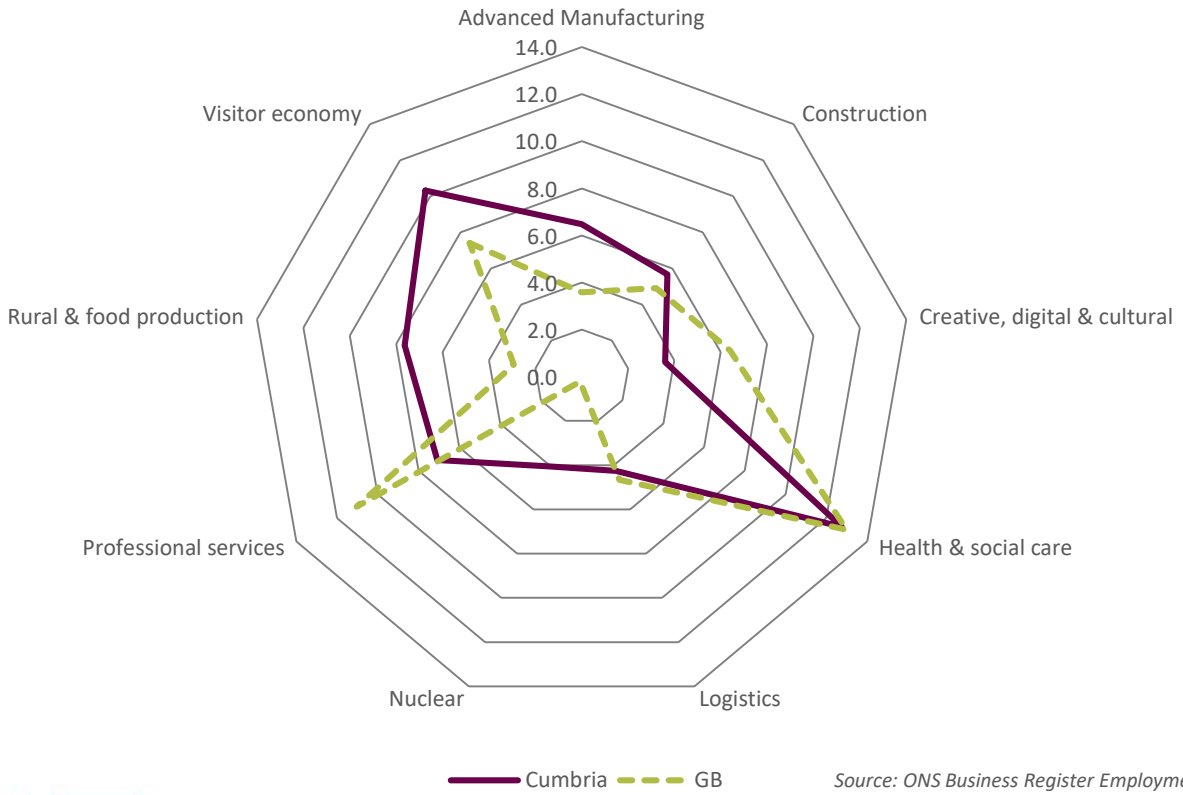
	Business units		Employment		GVA £m		Productivity (GVA per job)
	No	%	No	%	No	%	£
Advanced Manufacturing	360	1.3	16,000	6.5	1,342	13.1	£83,875
Construction	2,915	10.4	14,000	5.7	809	7.9	£57,786
Creative, digital & cultural	1,355	4.8	9,000	3.6	268	2.6	£29,778
Health & social care	1,280	4.6	31,500	12.8	798	7.8	£25,333
Logistics	895	3.2	10,500	4.3	533	5.2	£50,762
Nuclear	25	0.1	10,000	4.0	435	4.2	£43,500
Professional services	4,065	14.5	17,500	7.1	991	9.7	£56,629
Rural & food production	5,125	18.2	18,865	7.6	502	4.9	£26,610
Visitor economy	2,505	8.9	25,500	10.3	685	6.7	£26,863
All LEP sectors	18,525	65.9	152,865	61.8	6,363	62.0	£41,625
Other sectors	9,575	34.1	95,000	38.5	3,891	37.9	£40,958
All sectors	28,100	100.0	247,000	100.0	10,255	100.0	£41,518

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017 (excl households and imputed rent)

CLEP Sector shares of business, employment & GVA



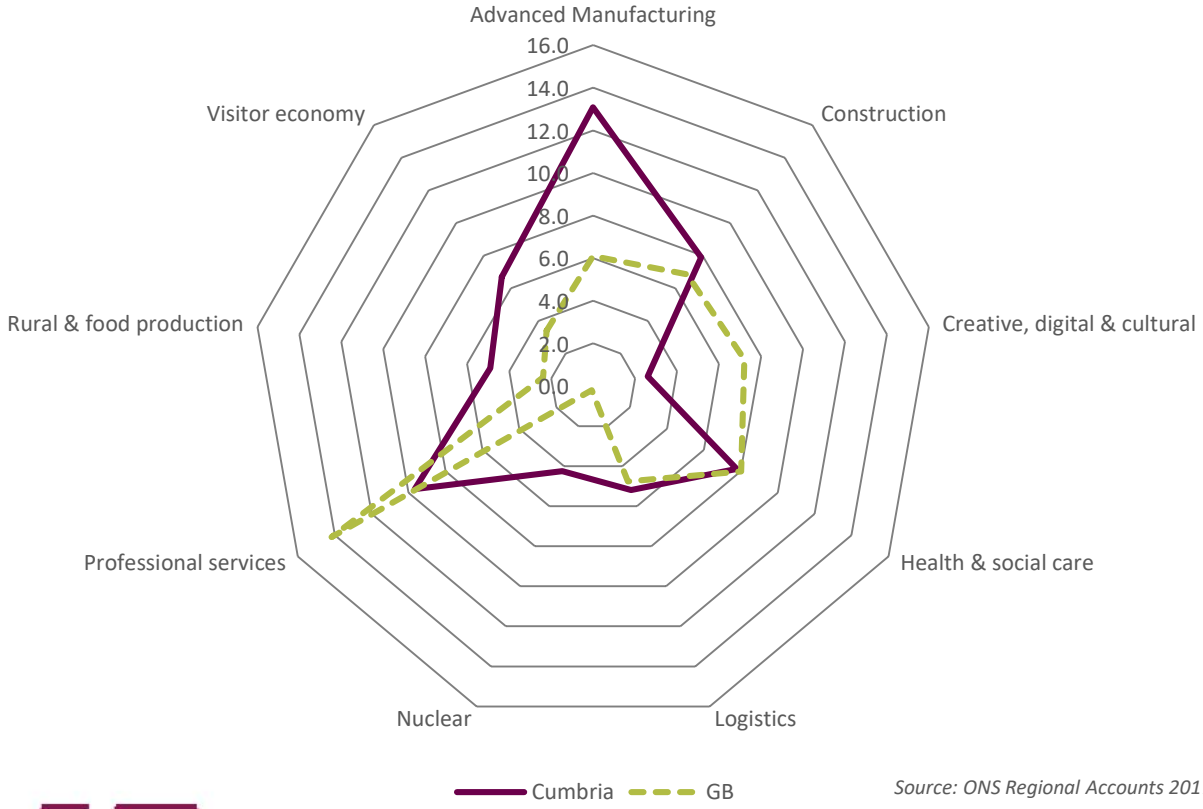
Cumbria LEP Sectors (2) – employment share



Source: ONS Business Register Employment Survey 2017

- Health & social care and visitor economy are the two largest CLEP sectors in employment terms, accounting for almost a quarter of all employment in Cumbria.
- Advanced manufacturing, visitor economy, rural & food production and nuclear all have employment shares significantly in excess of the national average.
- Construction, logistics and health & social care have similar shares to the national average.
- Professional services and creative, digital & cultural have lower employment shares than nationally.

Cumbria LEP Sectors (3) – GVA share



Source: ONS Regional Accounts 2017

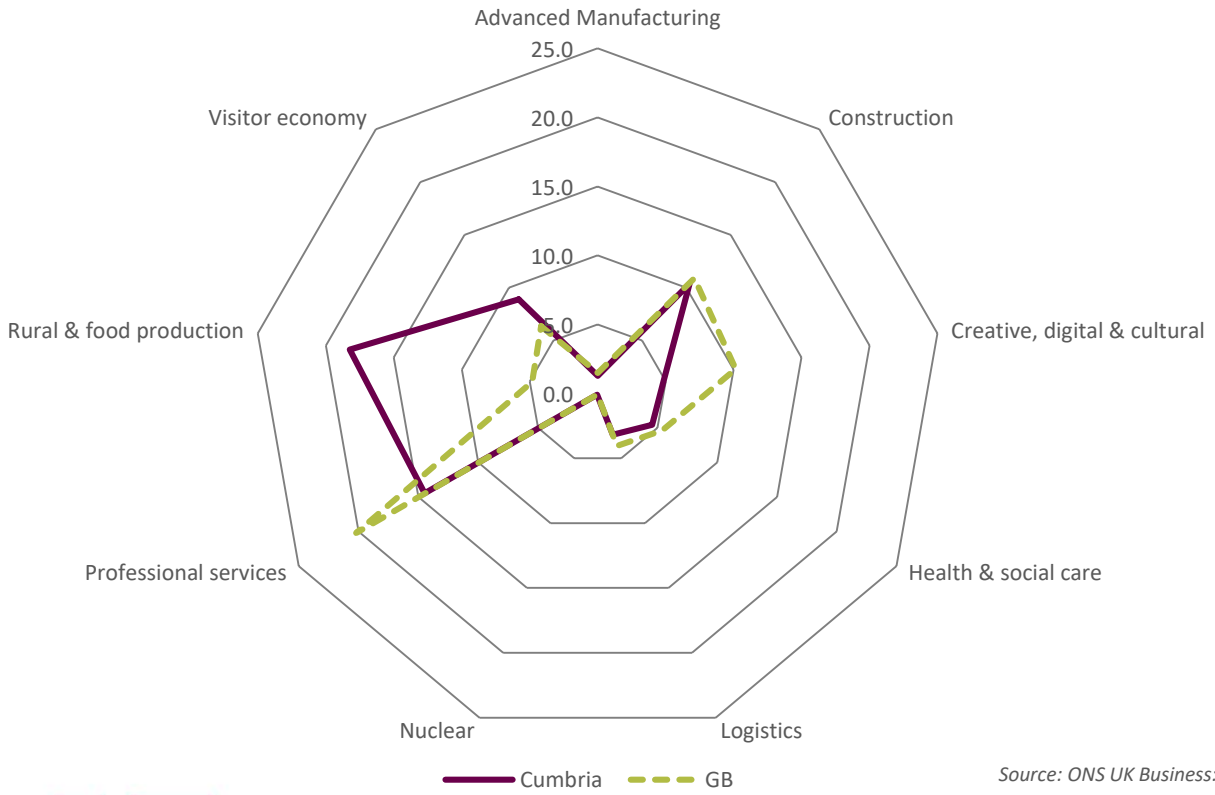
- Advanced manufacturing makes the biggest contribution to Cumbria's GVA of the CLEP sectors, more than double the national average.
- Professional services contributes the second highest share of GVA but the contribution is well below the national average.
- Nuclear, rural & food production, visitor economy and construction are all relatively more important to Cumbria's GVA than the national average.
- Health & social care and logistics produce a similar share of GVA to nationally.
- The contribution made by the creative, digital & cultural sector is the smallest of the CLEP sectors and is also well below the national average.

Cumbria LEP Sectors (4) - productivity

- Productivity (GVA per job) is similar or lower in all the CLEP sectors than nationally with the exception of the visitor economy where it is marginally higher.
- The largest productivity gaps are in the creative, digital & cultural and rural & food production sectors.
- Productivity is also lower in construction, health & social care, professional services and nuclear.
- Productivity is similar to the national average in logistics and in advanced manufacturing.

Source: ONS Business Register Employment Survey 2017 / Regional Accounts 2017 (Cumbria LEP calculations)

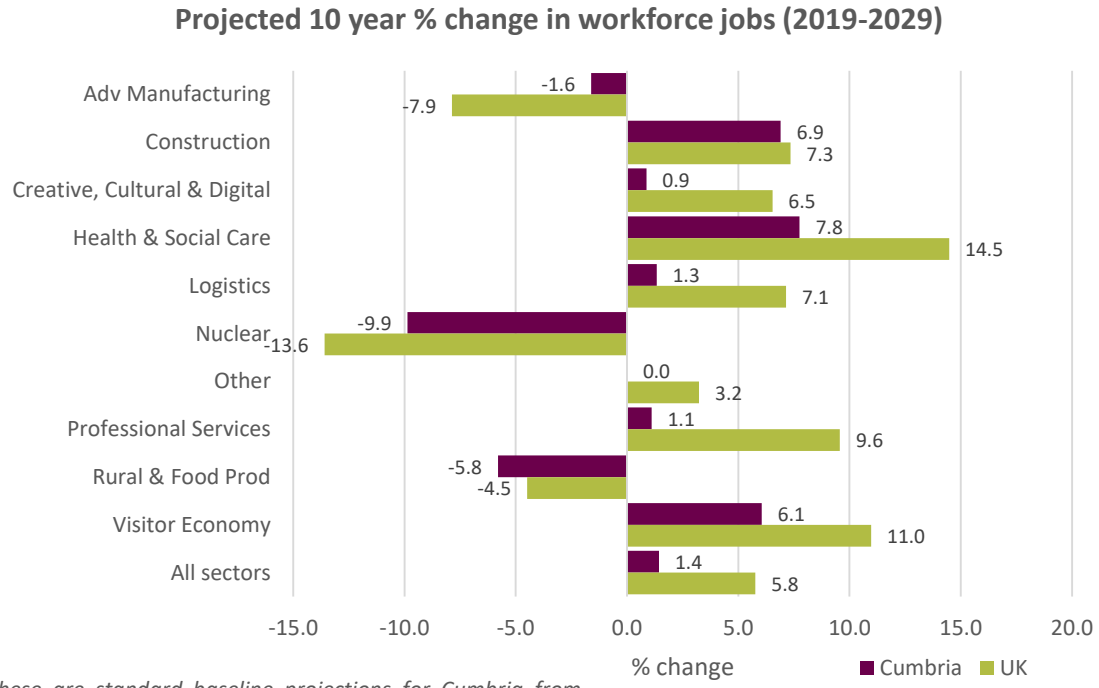
Cumbria LEP Sectors (5) – business share



- Professional services, construction, the visitor economy and rural & food production between them account for more than half of Cumbria's business units.
- Rural & food production and the visitor economy account for a significantly higher proportion of business units in Cumbria than average.
- Advanced manufacturing and nuclear only account for a small proportion of business units but a disproportionate amount of employment and gross value added.
- Creative, digital & cultural accounts for a smaller share of business units than nationally which may reflect the smaller nature of this type of business in Cumbria as the dataset only measures those registered for VAT and/or PAYE.

Source: ONS UK Business: Activity, Size and Location 2018

Cumbria LEP Sectors (6) – projected workforce jobs growth (%)

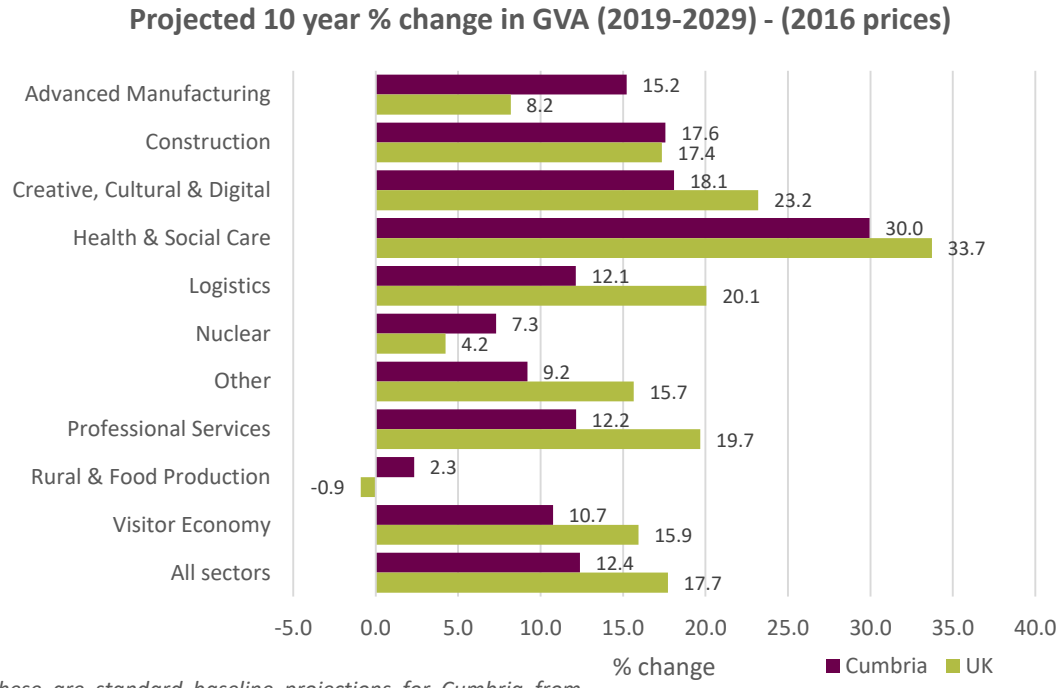


These are standard baseline projections for Cumbria from Experian's regional forecasting service to which no additional adjustments have been made. They incorporate Experian's view of prospects for the UK economy as at March 2019.

- Overall Cumbria's workforce jobs growth is projected to be lower than nationally over the next 10 years (1.4% v 5.8%) and this is reflected in most of the LEP sectors.
- Construction is the only sector projected to grow in line with the UK projection.
- Declines in workforce jobs are projected, both locally and nationally, in advanced manufacturing, nuclear and rural & food production. However, the declines in advanced manufacturing and nuclear are smaller than the national projection.
- **Note:** At the time of writing, there is still a great deal of uncertainty about Brexit - these projections have built into them the best assessment by Experian of the long term potential impact of Brexit on the UK economy, based on an "orderly" Brexit.

Source: Experian Regional Economic Forecasting Model, June 2019

Cumbria LEP Sectors (7) – projected GVA growth (%)



These are standard baseline projections for Cumbria from Experian's regional forecasting service to which no additional adjustments have been made. They incorporate Experian's view of prospects for the UK economy as at March 2019.

- Across all sectors, Cumbria's GVA is projected to grow by 12.4% compared to 17.7% nationally over the next 10 years.
- GVA growth in the advanced manufacturing and nuclear sectors in Cumbria is expected to outperform the UK and construction is projected to be similar.
- Rural & food production is projected to grow slightly in Cumbria again marginal decline nationally.
- The other LEP sectors are all projected to grow GVA more slowly than the UK.
- **Note:** At the time of writing, there is still a great deal of uncertainty about Brexit - these projections have built into them the best assessment by Experian of the long term potential impact of Brexit on the UK economy, based on an "orderly" Brexit.

Source: Experian Regional Economic Forecasting Model, June 2019

Advanced Manufacturing – key statistics

	Employment			GVA			GVA per job		Business Local Units		
Sub-sector	No	%	LQ (vGB)	£m	%	LQ (vGB)	£	GB Index (GB=100)	No	%	LQ (vGB)
Wood & paper products	2,525	1.0	2.55	246	2.4	4.63	£97,426	145.0	165	0.6	1.64
Petroleum, chemicals & pharmaceuticals	800	0.3	0.70	157	1.5	0.87	£196,250	99.9	20	0.1	0.53
Rubber & plastic products	3,000	1.2	2.12	187	1.8	3.50	£62,333	132.0	35	0.1	0.60
Computer, electronic & optical products	700	0.3	0.75	37	0.4	0.68	£52,857	72.0	45	0.2	0.76
Electrical equipment	1,000	0.4	1.47	76	0.7	2.02	£76,000	109.4	20	0.1	0.67
Machinery & equipment	600	0.2	0.41	42	0.4	0.58	£70,000	114.4	30	0.1	0.41
Motor vehicles	180	0.1	0.15	38	0.4	0.36	£211,111	199.8	25	0.1	0.79
Other transport equipment	7,000	2.8	6.99	559	5.5	7.95	£79,857	91.0	15	0.1	0.64
Advanced Manufacturing	**16,000**	**6.5**	**1.81**	**1,342**	**13.1**	**2.14**	**£83,875**	**95.0**	**360**	**1.3**	**0.87**

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017.
Note: % and location quotient are measuring share & relative concentration across all sectors

- Accounts for 16,000 jobs, 360 business units and generates £1,342m in GVA.
- The concentrations of jobs and GVA in wood & paper products, rubber & plastics and other transport equipment are particularly high in Cumbria compared to nationally.
- Productivity overall is just below the national average for the sector but this varies between sub-sectors.
- The other transport equipment sub-sector (principally BAE Systems in Barrow) is the largest sub-sector, followed by rubber & plastic products (companies such as Pirelli and Innovia) and wood & paper products (companies such as James Cropper, Kimberly-Clark and Iggesund).
- The CLEP sector group has identified skills shortages in technical R&D skills, people management, leadership & management, sales & marketing, IT & software engineering, design engineering, material, polymer & chemical science.

Construction – key statistics

	Employment			GVA			GVA per job		Business Local Units		
Sub-sector	No	%	LQ (vGB)	£m	%	LQ (vGB)	£	GB Index (GB=100)	No	%	LQ (vGB)
Construction of buildings	5,000	2.0	1.34	270	2.6	0.97	£54,000	58.0	790	2.8	0.87
Civil engineering	2,000	0.8	1.11	185	1.8	1.28	£92,500	92.2	255	0.9	1.10
Specialised construction	7,000	2.8	1.06	354	3.5	1.26	£50,571	95.4	1,865	6.6	0.97
Construction	**14,000**	**5.7**	**1.15**	**809**	**7.9**	**1.15**	**£57,786**	**79.9**	**2,915**	**10.4**	**0.95**

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017.
Note: % and location quotient are measuring share & relative concentration across all sectors

- Accounts for 14,000 jobs, 2,915 business units and generates £809m in gross value added.
- Specialised construction is the largest of the sub-sectors, providing employment for 7,000.
- Productivity is lower than the national average, due in the main to lower productivity in the less specialised buildings construction sub-sector.
- Productivity in civil engineering and specialised construction, much of which is related to the supply chains of the advanced manufacturing and nuclear sectors, is close to the national average.
- The CLEP sector group has identified skills gaps in logistics, civil engineering, plant mechanics, specialist building operatives and trades such as surveyors, plumbers, roofers, floorers and bricklayers.

Creative, Cultural & Digital – key statistics

Sub-sector	Employment			GVA			GVA per job		Business Local Units		
	No	%	LQ (vGB)	£m	%	LQ (vGB)	£	GB Index (GB=100)	No	%	LQ (vGB)
Printing & reproduction of recorded media	375	0.2	0.46	16	0.2	0.47	£42,667	82.59	55	0.2	0.50
Publishing	450	0.2	0.46	41	0.4	0.49	£91,111	85.08	60	0.2	0.53
Film & TV production, production & broadcasting	425	0.2	0.35	20	0.2	0.18	£47,059	40.37	65	0.2	0.24
Computer programming & consultancy	1,750	0.7	0.29	50	0.5	0.16	£28,571	44.90	460	1.6	0.30
Information services	35	0.0	0.06	5	0.0	0.13	£142,857	182.77	30	0.1	0.37
Creative, arts & entertainment	450	0.2	0.57	13	0.1	0.28	£28,889	38.88	125	0.4	0.45
Libraries, archives, museums & other cultural activities	1,375	0.6	1.75	27	0.3	1.13	£19,636	51.67	85	0.3	1.59
Gambling & betting activities	500	0.2	0.67	73	0.7	1.26	£146,000	150.33	95	0.3	0.93
Sports, amusement & recreation activities	3,750	1.5	0.95	23	0.2	0.60	£6,133	50.55	380	1.4	1.13
Creative, digital & cultural	**9,000**	**3.6**	**0.57**	**268**	**2.6**	**0.36**	**£29,778**	**51.06**	**1,355**	**4.8**	**0.67**

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017
Note 1: % and location quotient are measuring share & relative concentration across all sectors
Note 2: some elements of this sector group overlap with the visitor economy group but to avoid duplication have only been included here

- Accounts for 9,000 jobs, 1,355 business units and generates £268m in gross value added.
- Productivity overall in the sector is only around half the national average which reflects the nature of activities in Cumbria and higher than average incidence of part-time working.
- Sports, amusement & recreation activities, computer programming & consultancy and libraries, archives, museums & other cultural activities are the three largest sub-sectors in employment terms.

Health & Social Care – key statistics

Sub-sector	Employment			GVA			GVA per job		Business Local Units		
	No	%	LQ (vGB)	£m	%	LQ (vGB)	£	GB Index (GB=100)	No	%	LQ (vGB)
Human health	17,500	7.1	0.93	491	4.8	0.80	£28,057	68.7	575	2.0	0.82
Residential care	8,000	3.2	1.38	205	2.0	2.23	£25,625	129.0	285	1.0	1.03
Social work	6,000	2.4	0.80	102	1.0	0.89	£17,000	88.2	425	1.5	0.79
Health & social care	**31,500**	**12.8**	**0.98**	**798**	**7.8**	**0.97**	**£25,333**	**79.1**	**1,280**	**4.6**	**0.85**

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017.
Note: % and location quotient are measuring share & relative concentration across all sectors

- Accounts for 31,500 jobs, 1,280 business units and generates £798m in gross value added.
- The concentration of jobs and GVA is similar to nationally but GVA per job is lower, perhaps reflecting a higher incidence of part-time working in Cumbria.
- The above average concentration in residential care is reflective of the above average proportion of older residents and retirees living in Cumbria.
- The human health sub-sector accounts for half of all employment in the broader sector.
- The CLEP sector group has identified particular shortages in care staff, social workers, nurses and adult care workers.
- There are also challenges in recruiting and retaining GPs and hospital-based consultant staff.

Logistics – key statistics

Sub-sector	Employment			GVA			GVA per job		Business Local Units		
	No	%	LQ (vGB)	£m	%	LQ (vGB)	£	GB Index (GB=100)	No	%	LQ (vGB)
Land transport	6,500	2.6	1.45	308	3.0	1.55	£47,385	85.3	515	1.8	0.86
Water transport	330	0.1	0.45	106	1.0	1.20	£321,212	213.2	15	0.1	1.08
Warehousing & transport support activities	1,875	0.8	0.42	71	0.7	0.57	£37,867	107.5	165	0.6	0.56
Postal & courier activities	1,875	0.8	0.99	48	0.5	0.63	£25,600	50.8	200	0.7	0.92
Logistics	**10,500**	**4.3**	**0.91**	**533**	**5.2**	**1.09**	**£50,762**	**96.0**	**895**	**3.2**	**0.79**

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017.
Note: % and location quotient are measuring share & relative concentration across all sectors

- Accounts for 10,500 jobs, 895 business units and generates £533m in gross value added.
- The largest sub-sector is land transport (ie road haulage) with 6,500 jobs. The concentration of jobs and GVA in land transport is above the national average, reflecting the excellent road transport links (M6/A66) along the east of the county, especially around Carlisle and Penrith.
- Productivity is similar to the national average, although it varies between the sub-sectors.
- Carlisle Lake District Airport opened for commercial flights in July 2019 having had £15 million invested by the public and private sector to improve its facilities.
- The CLEP sector group has identified skills shortages in leadership & management, people management and IT and reports recruitment difficulties for drivers.

Nuclear – key statistics

Sub-sector	Employment			GVA			GVA per job		Business Local Units		
	No	%	LQ (vGB)	£m	%	LQ (vGB)	£	GB Index (GB=100)	No	%	LQ (vGB)
Manufacture of basic metals	10,000	4.0	18.77	435	4.2	20.02	£43,500	85.4	25	0.1	1.43
Nuclear	**10,000**	**4.0**	**18.77**	**435**	**4.2**	**20.02**	**£43,500**	**85.4**	**25**	**0.1**	**1.43**

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017.
Note: % and location quotient are measuring share & relative concentration across all sectors

- The nuclear sector is not well served by the way in which official statistics are compiled. Nuclear re-processing is classified as the manufacture of basic metals, which accounts for 10,000 jobs, 25 business units and contributed £435m in GVA. However, this does not capture the extensive supply chain and range of other activities which support the core activities.
- Data from the Nuclear Industries Association suggests there are around 24,000 nuclear sector related jobs located in Cumbria (in firms directly involved in the civil nuclear sector, but excluding defence nuclear), this is nearly 10% of Cumbria's workforce. Employment is highly concentrated in the west coast, especially Copeland where Sellafield is based.
- A study by Oxford Economics "*The Economic Impact of Sellafield, June 2017*" calculated that Sellafield had an overall supply chain spend of £1.3bn of which £660m was spent locally in Copeland. The same study estimated that overall activities at Sellafield contributed £1.3bn to the Cumbrian economy and supported 24,000 jobs.
- There is a cluster of skills, training, testing and research facilities in Cumbria and several Cumbrian engineering firms export their nuclear-related expertise overseas.
- The CLEP sector panel has identified skills needs in nuclear operations, programme & project management, scientific & technical and business functions and increasing demand for engineering and skilled trades.
- Within the supply chain, skills needs are reported in project management, civil engineering, control & protection system engineering, health & safety, environmental engineering and quality control.

Professional Services – key statistics

	Employment			GVA			GVA per job		Business Local Units		
Sub-sector	No	%	LQ (vGB)	£m	%	LQ (vGB)	£	GB Index (GB=100)	No	%	LQ (vGB)
Real estate	3,500	1.4	0.80	362	3.5	0.75	£103,429	75.8	710	2.5	0.72
Legal & accounting	3,500	1.4	0.60	103	1.0	0.34	£29,429	46.3	345	1.2	0.46
Head offices & management consultancy	2,125	0.9	0.33	52	0.5	0.35	£24,471	84.5	860	3.1	0.50
Architectural & engineering	4,750	1.9	1.16	268	2.6	1.51	£56,421	104.8	1,225	4.4	1.30
Scientific research & development	275	0.1	0.25	18	0.2	0.27	£65,455	85.6	25	0.1	0.46
Advertising & market research	275	0.1	0.20	13	0.1	0.14	£47,273	56.7	70	0.2	0.33
Other professional, scientific & technical	850	0.3	0.52	53	0.5	0.67	£62,353	102.9	505	1.8	0.70
Veterinary activities	550	0.2	1.06	26	0.3	1.14	£47,273	85.9	70	0.2	1.24
Activities of membership organisations	1,750	0.7	0.95	96	0.9	1.07	£54,857	90.2	250	0.9	1.07
Professional services	**17,500**	**7.1**	**0.64**	**991**	**9.7**	**0.68**	**£56,629**	**85.0**	**4,065**	**14.5**	**0.72**

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017.
Note: % and location quotient are measuring share & relative concentration across all sectors

- Accounts for 17,500 jobs, 4,065 business units and generated £991m in gross value added.
- The concentration of jobs, GVA and businesses in the sector is well below the national average, as is productivity.
- The largest sub-sector is architectural & engineering activities which is over-represented in Cumbria compared to nationally, largely as a result of the role in supporting Cumbria's large manufacturing sector.
- The CLEP sector group has identified skills needs in accountancy, sales, relationship management, IT and legal services.

Rural & Food Production – key statistics

	Employment			GVA			GVA per job		Business Local Units		
Sub-sector	No	%	LQ (vGB)	£m	%	LQ (vGB)	£	GB Index (GB=100)	No	%	LQ (vGB)
Agriculture	13,000	5.3	3.49	163	1.6	2.53	£12,538	58.1	4,830	17.2	4.13
Forestry & fishing	415	0.2	2.06	23	0.2	2.45	£55,422	95.4	135	0.5	1.75
Manufacture of food products	5,000	2.0	1.68	278	2.7	2.05	£55,600	97.5	125	0.4	1.49
Manufacture of beverages & tobacco	450	0.2	1.36	38	0.4	1.07	£84,444	63.2	35	0.1	1.54
Rural & food production	**18,865**	**7.6**	**2.61**	**502**	**4.9**	**2.05**	**£26,610**	**62.9**	**5,125**	**18.2**	**3.79**

Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017.
Note: % and location quotient are measuring share & relative concentration across all sectors

- Accounts for 18,865 jobs, 5,125 business units and generates £502m in gross value added.
- The concentration of jobs and GVA in all sub-sectors is higher than nationally, particularly in agriculture, forestry and in food production.
- Food manufacturing is particularly diverse in Cumbria with the main centre being Carlisle. There are major producers such as 2 Sisters (formerly Cavaghan & Gray), McVitie's, Kendal Nutricare and Nestle plus a host of smaller niche producers that supply the tourism sector and build on the Cumbria brand.
- Productivity overall is lower than average in the sector but varies by sub-sector, being close to average in forestry and in food manufacturing, but much lower than average in agriculture. The £160 million of GVA in the agriculture sector was supplemented by an estimated c. £100 million in farm/agri-environment support in 2017 (Source: NFU).
- The low productivity recorded in Cumbria's agriculture is a result of the composition of the sector with its concentration in dairying and meat production and, in the case of upland sheep production, a very significant level of farm subsidy (which does not feature in GVA) contributing to farm incomes.
- The CLEP sector group has identified skills-related issues in employability skills, technical farming skills and use of technology, service delivery, business support, professional development including leadership, management, project management and communication skills.

Visitor Economy – key statistics (1)

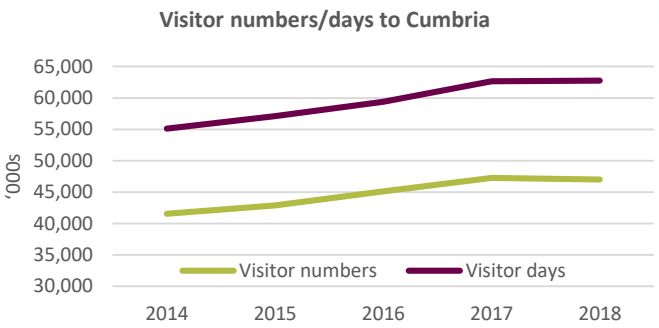
	Employment			GVA			GVA per job		Business Local Units		
Sub-sector	No	%	LQ (vGB)	£m	%	LQ (vGB)	£	GB Index (GB=100)	No	%	LQ (vGB)
Accommodation	11,000	4.5	2.96	405	3.9	4.25	£36,818	114.8	765	2.7	3.79
Food & beverage service activities	14,500	5.9	0.99	280	2.7	1.11	£19,310	89.4	1,745	6.2	1.10
Visitor economy	**25,500**	**10.3**	**1.39**	**685**	**6.7**	**1.97**	**£26,863**	**113.2**	**2,505**	**8.9**	**1.40**

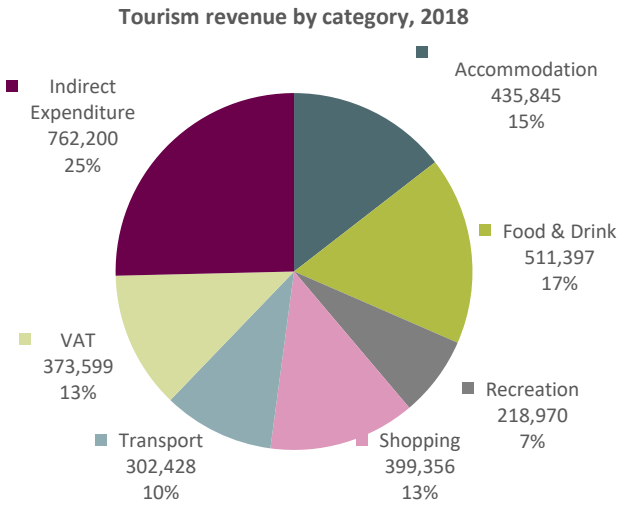
Sources: ONS Business Activity, Size & Location 2018, BRES 2017, Regional Accounts 2017
Note 1: % and location quotient are measuring share & relative concentration across all sectors
Note 2: some elements of the creative, cultural & digital sector group are also relevant to the visitor economy but to avoid duplication have not been included here

- The visitor economy is another sector which is not well served by official statistics as businesses across almost all sectors service the visitor market to varying degrees.
- Using the proxy of accommodation and food & beverage service activities, the sector accounts for 25,500 jobs, 2,505 business units and produces £685m in gross value added. Whilst not all of this activity will service the visitor market, the above average concentration of jobs in accommodation sub-sector in Cumbria is a clear reflection of the visitor economy in the county.
- Productivity overall in the sector appears above average but whilst this is true for the accommodation sub-sector, it is not the case for food & beverage service activity, where productivity is lower than average. The measure of productivity for accommodation is likely to be skewed by the role of campsite and B&B businesses which contribute to GVA but where there is limited employment.
- The CLEP sector group has identified skills and behavioural issues in employability, chefs, food & beverage skills, housekeeping, sports & fitness coaching, beauty therapy, customer care & sales, HR, finance & legal, marketing, IT leadership, management and project management.

Visitor Economy – key statistics (2)

- As previously noted, official statistics are often not appropriate for monitoring activity in the visitor economy as they are based on the primary sector of the business rather than the customer group they serve. To address this, Cumbria Tourism, with the support of partners, has commissioned monitoring data from the STEAM model for a number of years. This produces estimates of visitor numbers by type and duration, employment supported by tourism and the value added from the sector.
- There were 47.03 million tourism visits to Cumbria in 2018 – a 13.2% increase since 2014.
- 6.62 million visits were made by visitors staying in Cumbria as part of a holiday or short break generating 22.35 million nights in local accommodation.
- On average, visitors staying in Cumbria spend 3.4 nights in the area and spend £523 million on local accommodation.
- In total staying visitors generate a total economic impact of £1.435 billion.
- Cumbria's tourism economy supports nearly 38,000 full time equivalent jobs.





Source: Cumbria Tourism / STEAM Model 2018

Appendix B: Sources Used (1)

Author/Source	Title
Arts Council England	Grant recipients database
Bangor University and partners	The North West Nuclear Arc Science and Innovation Audit 2018
BankSearch Information Consultancy	Business Start-Up Monitoring Service for Cumbria LEP
BEIS	Renewable energy by local authority
BEIS	Sub-national energy estimates
Burning Glass Technologies	Labour Insight
Cambridge Econometrics	Local Economy Forecasting Model for Cumbria LEP 2019
Campaign to Protect Rural England	NighBlight dark skies maps
CBI	From Ostrich to Magpie: Increasing business take-up of proven ideas and technologies Nov 2017
Cumbria County Council	School performance data
Cumbria LEP	Skills Investment Plan 2016-2020
Cumbria LEP	Infrastructure Plan May 2016
Cumbria LEP	Brexit Analysis Dec 2018
Cumbria LEP	Cumbria Business Survey 2015/16
Cumbria Tourism	STEAM Model 2018
Defra	UK Ambient Air Quality Active Map
Defra	LEP Rural Analysis 2019
Defra	June Agricultural Survey
Defra	Rural Urban Classification
Department for Education	Employer Skills Survey 2017
Department for Education	LEP Datacube Apprenticeship starts, enrolments and outcomes

Appendix B: Sources Used (2)

Author/Source	Title
Department for Transport	Road Traffic Forecasts 2018
Department for Transport	Casualties Involved in Reported Road Accidents (RAS30)
Department for Transport	Journey Time Statistics 2016
Department for Work and Pensions	Alternative Claimant Count
Department for Work and Pensions	Out of Work Benefits and Benefit Combinations
Enterprise Research Centre, Warwick Business School	UK Local Growth Dashboard Jun 2018
Enterprise Research Centre, Warwick Business School	Benchmarking Local Innovation
Eurostat	European Productivity 2015/16
Experian	Regional Forecasting Service
Higher Education Statistics Agency	UK Student Statistics
HMRC	Regional Trade Statistics
Innovate UK	Companies in receipt of grants
Lancaster University and partners	North West Coastal Arc Clean Growth Partnership: Science & Innovation Audit 2018
Land Registry	House sales and prices
Met Office	UKCP18 Derived Projections of Future Climate Over the UK Nov 2018
MHCLG	Index of Deprivation 2015
MHCLG	Housing Live Tables
National Heritage	Listed building database
Nuclear Industries Association	Nuclear Sector 2017 Jobs Map
Ofcom	4G coverage
Office for National Statistics	Business Register Employment Survey (BRES) 2017

Appendix B: Sources Used (3)

Author/Source	Title
Office for National Statistics	Regional Accounts 2017
Office for National Statistics	Annual Survey of Hours and Earnings (ASHE)
Office for National Statistics	Annual Population Survey
Office for National Statistics	Mid Year Population Estimates 2018
Office for National Statistics	Subnational Population Estimates 2016-based
Office for National Statistics	Vital Statistics
Office for National Statistics	UK Business Activity, Size and Location
Office for National Statistics	Gross Disposable Household Income (GDHI)
Office for National Statistics	Census 2011
Office for Students	Participation of Local Areas (POLAR)
Office of Rail Regulation	Estimates of Station Usage
Oxford Economics	The Economic Impact of Sellafield Jun 2017
Oxford Economics	The Contribution of BAE Systems to the UK Economy Nov 2017
Professor Frank Peck and Dr Gail Mulvey, CRED	Business research and innovation activity in Cumbria (for Cognitive Cumbria)
Regeneris Consulting for Innovate UK	Planning for a step change: Informing where the NW should focus innovation to drive up productivity
Smart Specialisation Hub	Cumbria LEP Profile Nov 2018
Steer Economic Development for Innovate UK and 11 Northern LEPs	Innovation North - Progressing Innovation in the Northern Powerhouse Jul 2018
The Wind Power	Wind power database
Think Broadband	Broadband coverage
University of Manchester	Inclusive Growth Monitor 2017 LEPs
Your Housing Group	Northern Powerhouse Liveability Index Apr 2018