

Employer Demand for Labour and Skills in Cheshire and Warrington

DRAFT FINAL REPORT

BRENNAN WILSON LTD

Table of Contents

1. Introduction	6
2. Executive Summary	7
2.1 The Impact of Covid-19 on the Cheshire and Warrington Economy	7
2.2 The Cheshire and Warrington Economy and Employer Demand for Skills	8
3. The Labour Market Impact of Covid-19	12
3.1 Introduction	12
3.2 Economic Impact of Covid-19.....	12
3.3 Economic and Skills Policy Response.....	16
3.4 Covid-19 Impact - Labour Market Indicators.....	18
3.4.1 The Coronavirus Job Retention Scheme and Self Employment Income Support	18
3.4.2 Vacancies.....	21
3.4.3 Unemployment and the Claimant Count.....	23
3.4.4 Apprenticeship Starts	27
4. The Cheshire and Warrington Economy and Employer Demand for Skills	29
4.1 Population	29
4.2 Employment Levels and Business Stock	30
4.3 Industrial Structure	32
4.4 Occupational Structure and Workforce Skills Profile	34
4.5 Earnings and Income	40
4.6 Future Demand for Labour	44
5. Occupations in Cheshire and Warrington	52
5.1 Profile of the “Managers, Directors and Senior Officials” Sector in Cheshire and Warrington	52
5.1.1 Composition of the “Managers, Directors and Senior Officials” Occupational Sector	52
5.1.2 Industries that Employ “Managers, Directors and Senior Officials”	53
5.1.3 Recent and Current Employer Demand for “Managers, Directors and Senior Officials”	54
5.1.4 Hard to Fill Vacancies	55
5.1.5 Future Employer Demand for “Managers, Directors and Senior Officials”	55
5.2 “Professional Occupations” in Cheshire and Warrington	56
5.2.1 Composition of the “Professional Occupations” Sector	56
5.2.2 Industries that Employ “Professional Occupations”	58
5.2.3 Recent and Current Employer Demand for “Professional Occupations”	59
5.2.4 Hard to Fill Vacancies	60

5.2.5	Future Employer Demand for Professional Occupations.....	61
5.3	Profile of Associate Professional Occupations in Cheshire and Warrington.....	62
5.3.1	Composition of the “Associate Professionals” Sector	62
5.3.2	Industries that Employ “Associate Professionals”	63
5.3.3	Recent and Current Employer Demand for “Associate Professionals”	64
5.3.4	Hard to Fill Vacancies	65
5.3.5	Future Employer Demand for Associate Professionals.....	66
5.4	Profile of “Administrative and Secretarial Occupations” in Cheshire and Warrington	67
5.4.1	Composition of “The “Administrative and Secretarial Occupations” Sector	67
5.4.2	Industries that Employ “Administrative and Secretarial Occupations”	68
5.4.3	Recent and Current Employer Demand for “Administrative and Secretarial Occupations”	69
5.4.4	Hard to Fill Vacancies	70
5.4.5	Future Employer Demand for Administrative and Secretarial Occupations.....	70
5.5	Profile of “Skilled Trades Occupations” in Cheshire and Warrington	72
5.5.1	Composition of “Skilled Trades Occupations”	72
5.5.2	Industries that Employ “Skilled Trades Occupations”	73
5.5.3	Recent and Current Employer Demand for “Skilled Trades Occupations”.....	73
5.5.4	Hard to Fill Vacancies	74
5.5.5	Future Employer Demand for “Skilled Trades Occupations”	75
5.6	Profile of “Caring, Leisure and Other Service Occupations” in Cheshire and Warrington	76
5.6.1	Composition of the “Caring, Leisure and Other Service Occupations”	76
5.6.2	Industries Employing “Caring, Leisure and Other Service” Occupations	77
5.6.3	Recent and Current Employer Demand for “Caring, Leisure and Other Service” Occupations	78
5.6.4	Hard to Fill Vacancies	79
5.6.5	Future Employer Demand for Caring, Leisure and Other Service Occupations	79
5.7	Profile of Sales and Customer Service Occupations in Cheshire and Warrington	80
5.7.1	Composition of the “Sales and Customer Service Occupations” Sector	80
5.7.2	Industries that Employ “Sales and Customer Service Occupations”	81
5.7.3	Recent and Current Employer Demand for Sales and Customer Service Occupations	82
5.7.4	Hard to Fill Vacancies	83
5.7.5	Future Employer Demand for “Sales and Customer Service Occupations”	83
5.8	Profile of Process, Plant and Machine Operatives in Cheshire and Warrington	85
5.8.1	Composition of the “Process, Plant and Machine Operatives” Sector.....	85

5.8.2	Industries that Employ Process, Plant and Machine Operatives.....	85
5.8.3	Recent and Current Employer Demand for “Process, Plant and Machine Operatives”	86
5.8.4	Hard to Fill Vacancies	87
5.8.5	Future Employer Demand for “Process, Plant and Machine Operatives”	88
5.9	Profile of “Elementary Occupations” in Cheshire and Warrington	89
5.9.1	Composition of the “Elementary Occupations” Sector.....	89
5.9.2	Industries that Employ “Elementary Occupations”	89
5.9.3	Recent and Current Employer Demand for “Elementary Occupations”	90
5.9.4	Hard to Fill Vacancies	91
5.9.5	Future Employer Demand for “Elementary Occupations”	92
6.	Industries in Cheshire and Warrington.....	94
6.1	Manufacturing in Cheshire and Warrington	94
6.1.1	Manufacturing Job Change	94
6.1.2	Manufacturing Occupations.....	95
6.1.3	Manufacturing Subsectors	97
6.1.4	Manufacturing Jobs Locations	99
6.2	Construction in Cheshire and Warrington.....	99
6.2.1	Construction Job Change.....	99
6.2.2	Construction Occupations.....	100
6.2.3	Construction Subsectors	102
6.2.4	Construction Job Locations	103
6.3	The “Wholesale and Retail Trade; Repair of Motor Vehicles” Sector in Cheshire and Warrington	104
6.3.1	“Wholesale and Retail Trade; Repair of Motor Vehicles” Sector Job Change	104
6.3.2	“Wholesale and Retail Trade; Repair of Motor Vehicles” Occupations	104
6.3.3	“Wholesale and Retail Trade; Repair of Motor Vehicles” Subsectors.....	107
6.3.4	“Wholesale and Retail Trade; Repair of Motor Vehicles” Sector Job Locations	108
6.4	The “Transportation and Storage” Sector in Cheshire and Warrington.....	109
6.4.1	“Transportation and Storage” Sector Job Change	109
6.4.2	“Transportation and Storage” Sector Occupations.....	109
6.4.3	“Transportation and Storage” Subsectors.....	112
6.4.4	“Transportation and Storage” Sector Job Locations	113
6.5	The “Accommodation and Food” Sector in Cheshire and Warrington.....	114
6.5.1	“Accommodation and Food” Job Change	114
6.5.2	“Accommodation and Food” Occupations	114

6.5.3	The “Accommodation and Food” Subsectors.....	117
6.5.4	“Accommodation and Food” Jobs Locations.....	117
6.6	The Information and Communication Sector in Cheshire and Warrington	118
6.6.1	“Information and Communication” Sector Job Change.....	118
6.6.2	“Information and Communication” Sector Occupations	118
6.6.3	“Information and Communication” Subsectors	121
6.6.4	Information and Communication Sector Job Locations.....	122
6.7	The Financial and Insurance Activities Sector in Cheshire and Warrington.....	123
6.7.1	“Financial and Insurance Activities” Sector Job Change.....	123
6.7.2	“Financial and Insurance Activities” Sector Occupations	123
6.7.3	“Financial and Insurance Activities” Subsectors	126
6.7.4	The “Financial and Insurance Activities” Sector Job Locations.....	127
6.8	The “Professional, Scientific and Technical Activities” Sector in Cheshire and Warrington	128
6.8.1	“Professional, Scientific and Technical Activities” Sector Job Change	128
6.8.2	“Professional, Scientific and Technical Activities” Occupations.....	129
6.8.3	“Professional, Scientific and Technical Activities” Subsectors	131
6.8.4	The Professional, Scientific and Technical Services Sector Job Locations	132
6.9	“Administrative and Support Services Activities” in Cheshire and Warrington	133
6.9.1	“Administrative and Support Services Activities” Job Change	133
6.9.2	“Administrative and Support Services Activities” Occupations	134
6.9.3	“Administrative and Support Services Activities” Subsectors.....	135
6.9.4	“Administrative and Support Services Activities” Job Locations.....	137
6.10	The Public Administration and Defence Sector in Cheshire and Warrington	138
6.10.1	Public Administration and Defence Sector Job Change	138
6.10.2	The Public Administration and Defence Sector Occupations	139
6.10.3	The Public Administration and Defence Sector Jobs Locations.....	141
6.11	The Education Sector in Cheshire and Warrington	142
6.11.1	The Education Sector Job Change	142
6.11.2	The Education Sector Occupations	143
6.11.3	Education Job Locations	145
6.12	The Human Health and Social Work Activities Sector in Cheshire and Warrington.....	146
6.12.1	The Human Health and Social Work Activities Sector Job Change.....	146
6.12.2	Human Health and Social Work Activities Sector Occupations	147
6.12.3	Human Health and Social Work Activities Sector Subsectors.....	149
6.12.4	Human Health and Social Work Activities Sector Job Locations	150

6.13	Arts, Entertainment and Recreation in Cheshire and Warrington	151
6.13.1	Arts, Entertainment and Recreation Job Change	151
6.13.2	Arts, Entertainment and Recreation Occupations	151
6.13.3	Arts, Entertainment and Recreation Subsectors	154
6.13.4	Arts, Entertainment and Recreation Job Locations.....	155

1. Introduction

This report has been produced as one of several commissioned by Cheshire and Warrington Local Enterprise Partnership (LEP) in phase 2 of its Labour Market Intelligence programme. These reports cover the following themes:

- Employer Demand for Skills - a) the immediate impact of Covid-19; and b) the future demand for skills
- Young People
- Adults
- Digital Skills
- The supply of training and education
- The alignment of skills supply with employer demand

This report covers the first of the topics listed above and, amongst other issues, seeks to address the following questions:

- What has been the impact of Covid-19 on the Cheshire and Warrington labour market and how is this likely to develop in the coming months?
- What is the current profile of employer demand in the main industrial sectors?
- What does employer demand look like across occupations in Cheshire and Warrington?
- What are the forecasts for replacement demand across different occupations?
- For which occupations do employers find it most hard to fill vacancies?
- How is the demand for skills likely to change in the next few years?

The report also updates (where relevant), and provides further detail on, a number of areas reported on in the Cheshire and Warrington Labour and Learning Market Assessment produced in 2019 during phase 1 of this work. The two Sections on Occupations and Industries provide detailed profiles for individual sectors.

The report has 5 sections. The remaining sections are:

- Executive Summary
- The Impact of Covid-19 on the Cheshire and Warrington Economy
- The Cheshire and Warrington Economy and Employer Demand for Skills
- Occupations in Cheshire and Warrington
- Industries in Cheshire and Warrington

2. Executive Summary

2.1 The Impact of Covid-19 on the Cheshire and Warrington Economy

The Covid-19 crisis will have a significant impact on the labour market. There are many unknowns, including:

- How many waves of infection will there be, and will there be an effective vaccine?
- How effective will the different policy interventions (eg the Job Support Scheme) be in stemming job losses?
- How effective will the different policy interventions be in mitigating unemployment (eg the Kickstart programme)?
- How will a global pandemic affect global trade?

This makes forecasting what will happen in the economy (and so in the Labour Market) particularly challenging.

This has not stopped a range of different bodies and institutions both forecasting and developing scenarios for possible developments in the UK economy following the impact of Covid-19. In July, the Office for Budget Responsibility (OBR) published three scenarios for how Covid-19 might impact the UK economy. In the central scenario, 2020 GDP declines by 12.4% in 2020 and output recovers slowly, regaining its pre-virus peak by the end of 2022. The unemployment rate peaks at 12 per cent in the fourth quarter of 2020. Cumulative business investment is 6 per cent lower than in the March forecast over five years, while unemployment and business failures remain elevated. Real GDP is 3 per cent lower in the first quarter of 2025 than in the March OBR forecast.

In all the OBR scenarios, prospects for employment and unemployment will depend heavily on what happens to furloughed workers once the Coronavirus Job Retention Scheme (CJRS) is closed. The OBR make broad assumptions about the proportion that subsequently move into unemployment rather than back to work – of 10, 15 and 20 per cent in the upside, central and downside scenarios. It is possible to model the OBR central scenario for Cheshire and Warrington. This suggests that over 10% of total employment in the “Arts, entertainment and recreation” and the “Accommodation and food service” sectors in Cheshire and Warrington might be lost. This is because these are the sectors with the highest percentage of their workforce covered by furlough.

Applying the OBR Central Scenario, the highest number of job losses in sectors by December 2020 in Cheshire and Warrington could be as follows:

- More than 3,000 jobs lost
 - Wholesale and retail trade; repair of motor vehicles and motorcycles
 - Accommodation and food service activities
- More than 2,000 jobs lost
 - Professional, scientific and technical activities
 - Administrative and support service activities
- More than 1,000 jobs lost
 - Construction
 - Transportation and storage
 - Arts, entertainment and recreation

HM Treasury published averages from a range of forecasts at the start of September 2020 which were more optimistic than the OBR Central Scenario. The average of these forecasts was for a 10% decline in 2020 UK GDP and an unemployment rate of 8%. These averages were close to the OBR Upside Scenario. Both the early September forecasts and the OBR work predate the announcement of the Government's Winter Economy Plan (which is intended to mitigate flows from furlough to unemployment), and the tightening of restrictions and increasing numbers of local lockdowns following an accelerating Covid-19 'second wave' in the UK (which may result in higher levels of unemployment).

If the current recovery were V-shaped it might be expected that demand for labour this August would be at similar levels to demand for labour last August. Except for postings for Health Professionals and Health and Social Care Associated Professionals, unique job postings have declined for every occupational area in Cheshire and Warrington between August 2019 and August 2020. The overall decline in job postings over this time is 21%.

On September 24th, the Government published its "Winter Recovery Plan". The centre piece of this was the announcement of the "Job Support Scheme". This stipulates that *"Employees will need to work a minimum of 33% of their usual hours. For every hour not worked the employer and the government will each pay one third of the employee's usual pay, and the government contribution will be capped at £697.92 per month."* The objective of the Job Support Scheme as a successor to the Coronavirus Job Retention Scheme is to support employers to cut hours rather than jobs. It remains to be seen whether the scheme provides sufficient incentive for employers to do this.

At the end of July, there were about half as many employee's in the UK on furlough compared with the height of the scheme. It is possible to apply the national proportions on sectoral uptake of the furlough scheme to the industrial structure of Cheshire and Warrington. This allows for an estimate to be made of the number of employments furloughed by industry sector in Cheshire and Warrington. It is estimated that "Accommodation and food service activities", "Wholesale and retail trade; repair of motor vehicles" and "Professional, scientific and technical activities" all had more than 10,000 employments furloughed in Cheshire and Warrington on July 31st.

It is clear from Government statistics that younger workers are much more likely to be furloughed than their older counterparts and are therefore more vulnerable to job loss as the furlough scheme winds down. No data is available for the age profile of those on furlough locally, but it seems reasonable to assume that Cheshire and Warrington's age distribution for those on furlough will be like the UK's.

The Cheshire and Warrington 'All Age' claimant count was a whisker below 30,000 in August 2020, 136% higher than the August 2019 figure and was the highest this century. The 16-24 claimant count was also the highest this century and the 50+ claimant count was the highest on record.

For over half of JSA claimants in August 2020, their previous occupation was in 'Elementary Construction Occupations'. In August 2019, less than 0.5% of JSA claimants gave a usual occupation of 'Elementary Construction Occupations'. In August 2020, the equivalent figure was 58%.

2.2 The Cheshire and Warrington Economy and Employer Demand for Skills

In 2019 the total population of Cheshire and Warrington was 937,200. There was a 49%/51% male/female split. Between 2014 and 2019, Cheshire and Warrington's population increased by

2.0%, growing by 18,117. Population is expected to increase by a further 1.8% between 2019 and 2024, adding 16,319.

The proportion of Cheshire and Warrington's population that is of working age is lower than both the North West and Great Britain. This is because the population of Cheshire and Warrington has an older profile than is to be found for Great Britain. Cheshire and Warrington has 151,016 millennials (aged 25-39). This is 32,000 fewer than might be expected from the national average for an area this size. Conversely, there are 50,000 more people aged over 55 in Cheshire and Warrington than would be expected from the national age profile.

Between 2010 and 2017 there was a year on year increase in Jobs Density in Cheshire and Warrington, from 0.84 and peaking at 1.01 in 2017. 2018 saw a slight decline to a Jobs Density of 1. This figure is high and reflects the fact that Cheshire and Warrington is a net importer of labour. From 2014 to 2019, jobs increased by 8.7% in Cheshire and Warrington. This change slightly outpaced the national growth rate in this period of 8.4% and helps explain why an already high Job Density continued to increase.

In 2019, there were over 43,000 businesses in Cheshire and Warrington, employing 490,000 people. 45% of businesses were in Cheshire East, 33% in Cheshire West and Chester, and 22% in Warrington. 90% of businesses in Cheshire and Warrington employed fewer than 10 people. Only 0.4% of businesses employed more than 250 people.

There are five sectors that have more than 40,000 jobs in Cheshire and Warrington. They are:

- Manufacturing
- Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles
- Professional, Scientific and Technical Activities
- Administrative and Support Service Activities
- Human Health and Social Work Activities

The sectors which added the most jobs between 2014 and 2019 are "Wholesale and retail trade; repair of motor vehicles and motorcycles" with an increase of over 13,000 jobs and "Professional, scientific and technical activities" with an increase of almost 18,000 jobs. Six sectors grew by more than 15% in this period: "Wholesale and retail trade; repair of motor vehicles and motorcycles"; "Professional, scientific and technical activities"; "Construction"; "Information and Communication"; "Water supply; sewerage, waste management and remediation activities"; and "Mining and quarrying".

Sectoral strengths in the Cheshire and Warrington local economy (ie those sectors with the highest location quotients -LQs) include: "Wholesale and retail trade; repair of motor vehicles and motorcycles" (LQ of 1.18); "Professional, scientific and technical activities" (LQ of 1.51); "Financial and insurance activities" (LQ of 1.18); and "Water supply; sewerage, waste management and remediation activities" (LQ of 1.19).

The occupational profile for residents of Cheshire and Warrington and all three Local Authorities is skewed towards higher skilled, and generally higher paid, occupations. The proportion of LEP residents employed in SOC Major Groups 1-3 is 4.3% higher than for those same groups at Great Britain level. The proportion for these occupational groupings is higher in all three Local Authorities than for Great Britain.

The greatest increase in the number of jobs, by occupation type between 2014 and 2019 was for: "Book-keepers, payroll managers and wages clerks"; "Chartered and certified accountants"; and

“Sales and retail assistants”. Each of these occupational areas grew by more than 2,000 jobs in this period.

The demand for skills in Nursing and Warehousing and, to a lesser extent in Accounting and SQL are higher than might be expected if demand in Cheshire and Warrington were to mirror the national picture. Analysis of the types of vacancies which are hard to fill and relatively high volume suggests that the following occupational areas should be considered priorities for action by skills and employment partners:

- Managers and directors in storage and warehousing
- Programmers and software development professionals
- IT business analysts, architects and systems designers
- Web design and development professionals
- Quantity surveyors
- IT user support technicians
- Book-keepers, payroll managers and wages clerks
- Customer service occupations n.e.c.

The three occupations most ‘at risk’ of automation that employ more than 1,000 people in Cheshire and Warrington are: “Elementary construction occupations”; “Construction operatives n.e.c.”; and “Caretakers”. Least at risk of automation that employ more than 1,000 people in Cheshire and Warrington are: “Construction project managers and related professionals”; “Production managers and directors in construction”; “Legal associate professionals”; “Financial institution managers and directors”; and “Mechanical engineers”.

There are seventeen 2-digit SIC industry sectors that have grown by more than 10% between 2015 and 2020, and currently employ more than 3,000 people in Cheshire and Warrington. Fourteen of these seventeen sectors have an average wage higher than the Cheshire and Warrington average of £28,7000. This type of information can be used to inform discussions with young people about their career and learning choices. The high employment sectors with average wages above £40,000 are:

- Manufacture of chemicals and chemical products
- Scientific research and development
- Waste collection, treatment and disposal activities; materials recovery
- Activities auxiliary to financial services and insurance activities

For every 1-digit occupational area, replacement demand to 2027 will exceed 10,000 jobs in Cheshire and Warrington. Replacement demand will exceed 20,000 in the following occupations:

- Professional Occupations
- Caring, Leisure and Other Service Occupations
- Associate Professional and Technical Occupations
- Elementary Occupations
- Caring, Leisure and Other Service Occupations
- Administrative and Secretarial Occupations

Replacement demand to 2027 in Cheshire and Warrington is forecast to exceed 10,000 jobs in the following 2-digit occupational areas:

- Elementary administration and service occupations
- Sales occupations
- Caring personal service occupations
- Administrative occupations
- Corporate managers and directors

42.1% of LEP residents are qualified at or above NVQ Level 4 compared to 40.3% for Great Britain and 36.1% for the North West Region. All three constituent Local Authorities have a higher proportion of residents qualified at NVQ 4 and above than Great Britain and the North West. Similarly, the LEP and all three Local Authorities have a lower proportion qualified below level 2 than is the case in the region or for Great Britain.

Demand in Cheshire and Warrington for skills at Levels 4 to 8 (higher technical to doctorate) are forecast to significantly increase to 2027, demand for skills at Level 3 are forecast to be stable, and demand for skills below Level 3 are forecast to decline.

3. The Labour Market Impact of Covid-19

3.1 Introduction

The data that informs analysis of the labour market will always have been collected prior to the analysis taking place. Either labour market reporting provides a description of what has happened in the past, or it gives a description of a possible future based on what has happened in the past. At any time, it is important to understand this about labour market intelligence. This understanding is particularly pertinent at a time like this.

The shock that Covid-19 will bring to our economy is such that the only thing that can be said with any certainty is that every straight-line extrapolation of historic labour market data will be wrong. This section of the report summarises what is currently known about the economic and labour market impact of the Covid-19 pandemic. Brexit will also have a significant impact on the labour market in Cheshire and Warrington but at the time of writing the nature of the UK's future trading relationship with the EU had not been determined.

3.2 Economic Impact of Covid-19

In July, the Office for Budget Responsibility (OBR) published a Fiscal Sustainability Report¹ prior to the Chancellor's July statement. This included three scenarios for future economic performance. In the OBR's view, the UK is on track to record the largest decline in annual GDP for 300 years, with output falling by more than 10 per cent in 2020 in all three scenarios (and contracting by a quarter between February and April). In the central scenario, 2020 GDP declines by 12.4% and output recovers slowly, regaining its pre-virus peak by the end of 2022. Cumulative business investment is 6 per cent lower than in the March forecast over five years, while unemployment and business failures remain elevated. Real GDP is 3 per cent lower in the first quarter of 2025 than in the March OBR forecast.

In all the OBR scenarios, prospects for employment and unemployment will depend heavily on what happens to furloughed workers once the Coronavirus Job Retention Scheme (CJRS) is closed. The OBR make broad assumptions about the proportion that subsequently move into unemployment rather than back to work – of 10, 15 and 20 per cent in the upside, central and downside scenarios. This means that unemployment continues to rise and employment to fall beyond the second quarter, despite output recovering somewhat. The unemployment rate peaks at 10 per cent in the third quarter of 2020 in the upside scenario; at 12 per cent in the fourth quarter in the central scenario; and at 13 per cent in the first quarter of 2021 in the downside scenario.

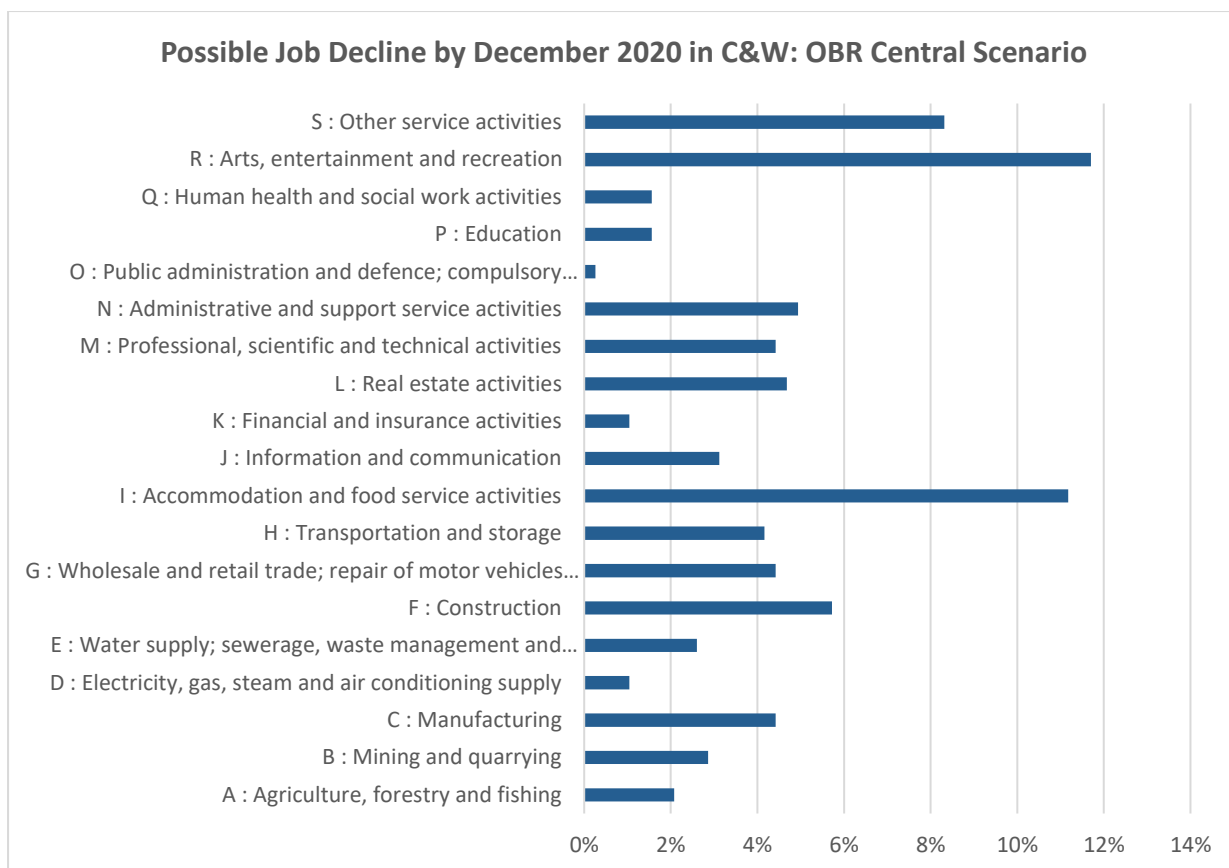
¹ https://cdn.obr.uk/OBR_FSR_July_2020.pdf

OBR Scenarios: Key Economic Variables

	Percentage change on a year earlier, unless otherwise stated					
	Scenario period					
	2019	2020	2021	2022	2023	2024
Central scenario						
Gross domestic product (GDP)	1.4	-12.4	8.7	4.5	2.1	1.9
CPI inflation	1.8	0.7	1.3	1.9	2.0	2.0
Employment (million)	32.8	31.3	30.9	32.2	32.6	33.0
Unemployment (million)	1.3	3.0	3.5	2.4	2.1	1.9
Unemployment rate (per cent)	3.8	8.8	10.1	6.9	5.9	5.3
Upside scenario						
Gross domestic product (GDP)	1.4	-10.6	14.5	1.9	1.3	1.4
CPI inflation	1.8	0.7	1.3	1.9	2.0	2.0
Employment (million)	32.8	31.6	32.5	33.2	33.3	33.4
Unemployment (million)	1.3	2.7	1.9	1.4	1.4	1.4
Unemployment rate (per cent)	3.8	7.9	5.6	4.0	4.0	4.1
Downside scenario						
Gross domestic product (GDP)	1.4	-14.3	4.6	5.4	3.3	2.5
CPI inflation	1.8	0.7	1.3	1.9	2.0	2.0
Employment (million)	32.8	31.2	30.4	31.7	32.3	32.6
Unemployment (million)	1.3	3.1	4.0	2.8	2.4	2.2
Unemployment rate (per cent)	3.8	9.1	11.6	8.1	6.9	6.3

Source: Office for Budget Responsibility, *Fiscal Sustainability Report, July 2020*

It is possible to apply the OBR assumptions that have been used in its central scenario about flows from furlough into unemployment to what is known about furlough take up in Cheshire and Warrington. The graph below looks to do this. It applies the implied volumes moving from furlough to unemployment in the OBR Central Scenario to what is known about furlough take up in Cheshire and Warrington. This suggests that over 10% of total employment in the “Arts, entertainment and recreation” and the “Accommodation and food service” sectors in Cheshire and Warrington might be lost. This is because these are the sectors with the highest percentage of their workforce covered by furlough. However, using this model, all sectors would see some level of reduction in the numbers they employ.



Source: Brennan Wilson Ltd analysis of OBR and ONS data

If this were to happen, the highest number of job losses in sectors by December in Cheshire and Warrington could be as follows:

- More than 3,000 jobs lost
 - Wholesale and retail trade; repair of motor vehicles and motorcycles
 - Accommodation and food service activities
- More than 2,000 jobs lost
 - Professional, scientific and technical activities
 - Administrative and support service activities
- More than 1,000 jobs lost
 - Construction
 - Transportation and storage
 - Arts, entertainment and recreation

Since the publication of the OBR report there has been many economic forecasts for the UK made by independent forecasters. This forecasting activity is monitored and reported on by the Macroeconomic Co-ordination and Strategy Team at HM Treasury². The most recent stocktake produced by this team was published in mid-September. "Forecasts for the UK economy: a

² <https://www.gov.uk/government/collections/data-forecasts>

comparison of independent forecasts” contains 18 new forecasts, all of which were received between September 2nd and September 10th, 2020. The tables below summarise the average and range of independent forecasts for 2020 and 2021 and show the average of September’s new forecasts.

Forecasts for 2020					
	Independent⁺				Average of new* forecasts
	Averages		September		
	September	August	Lowest	Highest	
GDP growth (per cent)	-10.1	-10.0	-13.4	-6.6	-10.0
Inflation rate (Q4: per cent)					
- CPI	0.6	0.5	-0.1	1.8	0.6
- RPI	1.2	1.1	0.1	2.3	1.2
LFS unemployment rate (Q4: %)	8.3	8.3	6.2	12.7	8.0
Current account (£bn)	-60.3	-76.8	-103.0	-22.1	-56.8
PSNB (2020-21: £bn)	326.6	322.2	239.1	385.0	323.6

Forecasts for 2021					
	Independent⁺				Average of new* forecasts
	Averages		September		
	September	August	Lowest	Highest	
GDP growth (per cent)	6.7	6.6	3.9	9.7	7.0
Inflation rate (Q4: per cent)					
- CPI	1.9	1.9	0.5	3.2	2.0
- RPI	2.8	2.7	1.0	4.9	2.8
LFS unemployment rate (Q4: %)	6.6	6.5	5.0	8.6	6.5
Current account (£bn)	-69.3	-76.2	-116.3	-3.5	-72.1
PSNB (2021-22: £bn)	164.8	164.4	93.1	269.9	160.7

It can be seen from this that the averages of the early September forecasts for 2020 were close to the OBR’s upside scenario for 2020 (OBR Upside - GDP (10.6%), LFS unemployment 7.9%; Average September forecast – GDP (10%), LFS unemployment 8%).

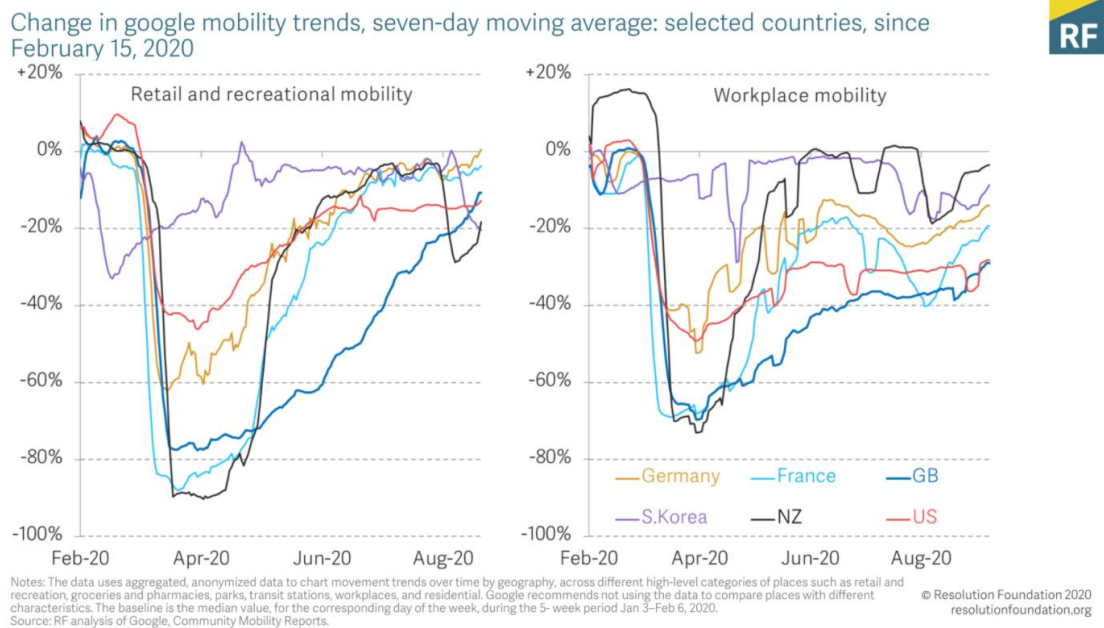
There have been important developments since both the OBR work and the more recent forecasts reported above. They both predate the announcement of the Government’s Winter Economy Plan announced on September 24th (discussed below) and the tightening of restrictions and increasing numbers of local lockdowns following the onset of the Covid-19 ‘second wave’ in the UK (announced by the Prime Minister on September 18th).

The Resolution Foundation has argued³ that despite fast rebounds of economic activity (output in July up nearly 20 per cent relative to its trough in April; overall retail sales recovering strongly; and

³ <https://www.resolutionfoundation.org/publications/the-winter-economy-plan-is-coming/>

the hospitality sector reportedly boosted by the Eat Out to Help Out), there will not be a “V shaped” recovery. In support of their argument, they cite recent Purchasing Manager Indices that show a slowing between September and August. They also argue that short-term activity indicators – such as the Google mobility data (graphs below) – suggests that activity levels have stalled well short of previous norms.

Figure 1 : Improvements in mobility had stalled even before social distancing restrictions were reintroduced



3.3 Economic and Skills Policy Response

On September 24th, the Government announced its “Winter Recovery Plan”⁴. This set out a range of interventions across the labour market and economy to mitigate the economic impacts of the pandemic. The Plan’s description of the Government’s approach to the labour market is succinct and is repeated, in full, below:

“Further support for employment

A number of the government’s interventions to support jobs and employment – including the Coronavirus Jobs Retention Scheme (CJRS) and the Self-employed Income Support Scheme (SEISS) are due to come to a close over the autumn, while other schemes – such as the Jobs Retention Bonus and employment support including Kickstart Scheme – begin to take effect.

The government’s aim through all of these schemes has been to prevent skills from fading, maintain strong employment relationships between workers and firms, and support the self-employed. The new schemes the government is introducing will reinforce that objective, while ensuring that businesses can adapt and evolve to the prolonged challenge of COVID-19. Further technical details of the schemes will be available on gov.uk.

⁴ <https://www.gov.uk/government/topical-events/winter-economic-plan>

Job Support Scheme – To support viable UK employers who face lower demand due to COVID-19, and to keep their employees attached to the workforce, the government will be introducing a new Job Support Scheme from 1 November 2020. Employees will need to work a minimum of 33% of their usual hours. For every hour not worked the employer and the government will each pay one third of the employee's usual pay, and the government contribution will be capped at £697.92 per month. Employees using the scheme will receive at least 77% of their pay, where the government contribution has not been capped. The employer will be reimbursed in arrears for the government contribution. The employee must not be on a redundancy notice. The scheme will run for six months from 1 November 2020 and is open to all employers with a UK bank account and a UK PAYE scheme. All Small and Medium-Sized Enterprises (SMEs) will be eligible; large businesses will be required to demonstrate that their business has been adversely affected by COVID-19, and the government expects that large employers will not be making capital distributions (such as dividends), while using the scheme.

SEISS Grant Extension – The government recognises the continued impact that COVID-19 has had on the self-employed and has taken action to provide support. The SEISS Grant Extension provides critical support to the self-employed. The grant will be limited to self-employed individuals who are currently eligible for the SEISS and are actively continuing to trade but are facing reduced demand due to COVID-19. The scheme will last for 6 months, from November 2020 to April 2021. The extension will be in the form of two taxable grants. The first grant will cover a three-month period from the start of November until the end of January. This initial grant will cover 20% of average monthly trading profits, paid out in a single instalment covering 3 months' worth of profits, and capped at £1,875 in total. The second grant will cover a three-month period from the start of February until the end of April. The government will review the level of the second grant and set this in due course."

The objective of the Job Support Scheme as a successor to the Coronavirus Job Retention Scheme is to support employers to cut hours rather than jobs. It remains to be seen whether the scheme provides sufficient incentive to employers to do so. Unlike similar schemes elsewhere in Europe there is a significant level of employer investment required to maintain an employee's income whilst they work reduced hours.

The initiatives announced in the Winter Recovery Plan add to the employment and skills interventions that were announced by the Government in July:

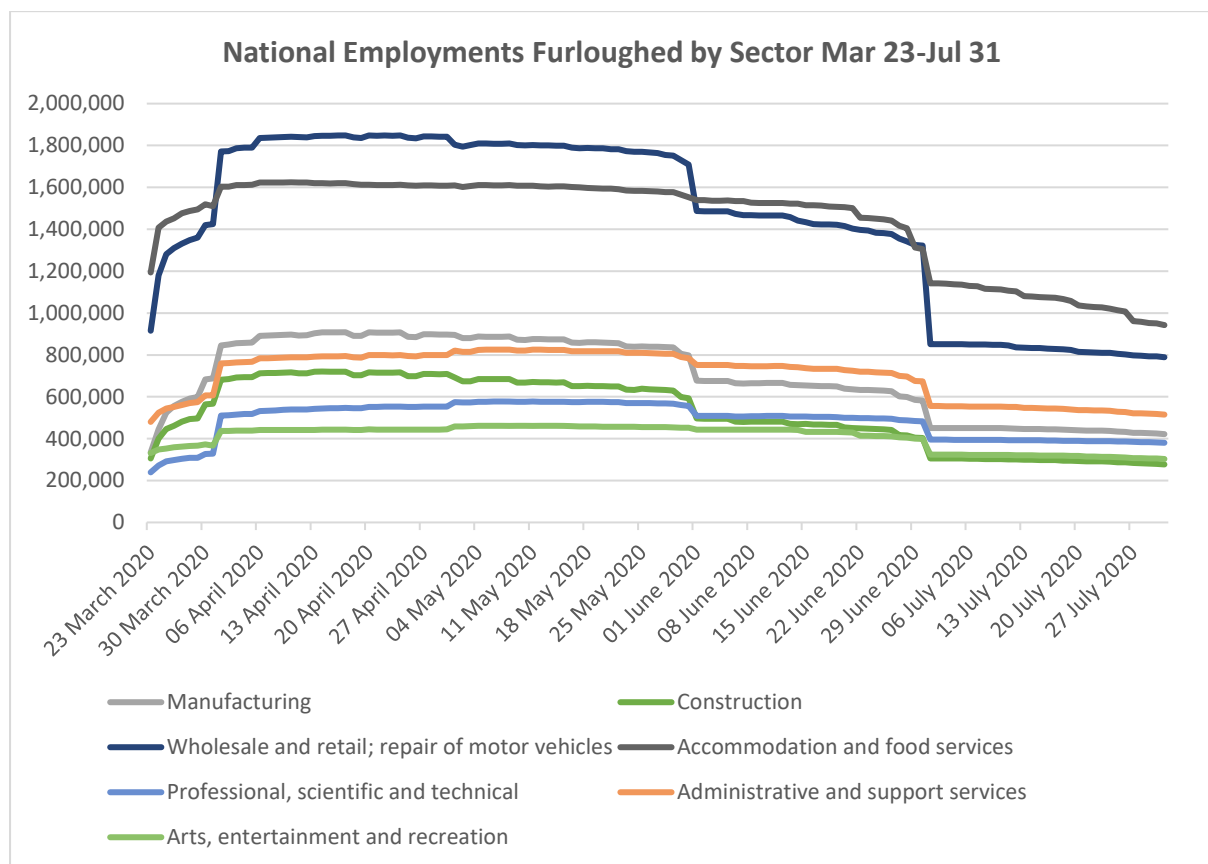
- Kickstart Scheme
- New funding for National Careers Service
- High quality traineeships for young people
- Payments for employers who hire new apprentices
- High value courses for school and college leavers
- Expanded Youth Offer
- Enhanced work search support
- Expansion of the Work and Health Programme
- Job finding support service
- Flexible Support Fund Increase
- New funding for sector-based work academies

After the announcement of the Winter Recovery Plan, the Government also announced that a series of reforms will be brought forward to the delivery of education and training for adults. Details will be set out in a White Paper to be published later in the autumn. The Prime Minister has indicated that this will include the partial reintroduction of the right to a free first full Level 3 for adults (all ages) which was abolished in 2013. This entitlement (and funding) will be linked to a list of qualifications that will be published in the Autumn.

3.4 Covid-19 Impact - Labour Market Indicators

3.4.1 The Coronavirus Job Retention Scheme and Self Employment Income Support

The Government publishes statistics on the Coronavirus Job Retention Scheme (CJRS) from time to time⁵. Overall take up figures are published at national, regional, local authority and parliamentary constituency level. Data disaggregated by industrial sector is available at national and regional level. The graph below shows the volume of employments furloughed by industrial sector at a national level between March and July 2020.



Source: HMRC CJRS Data

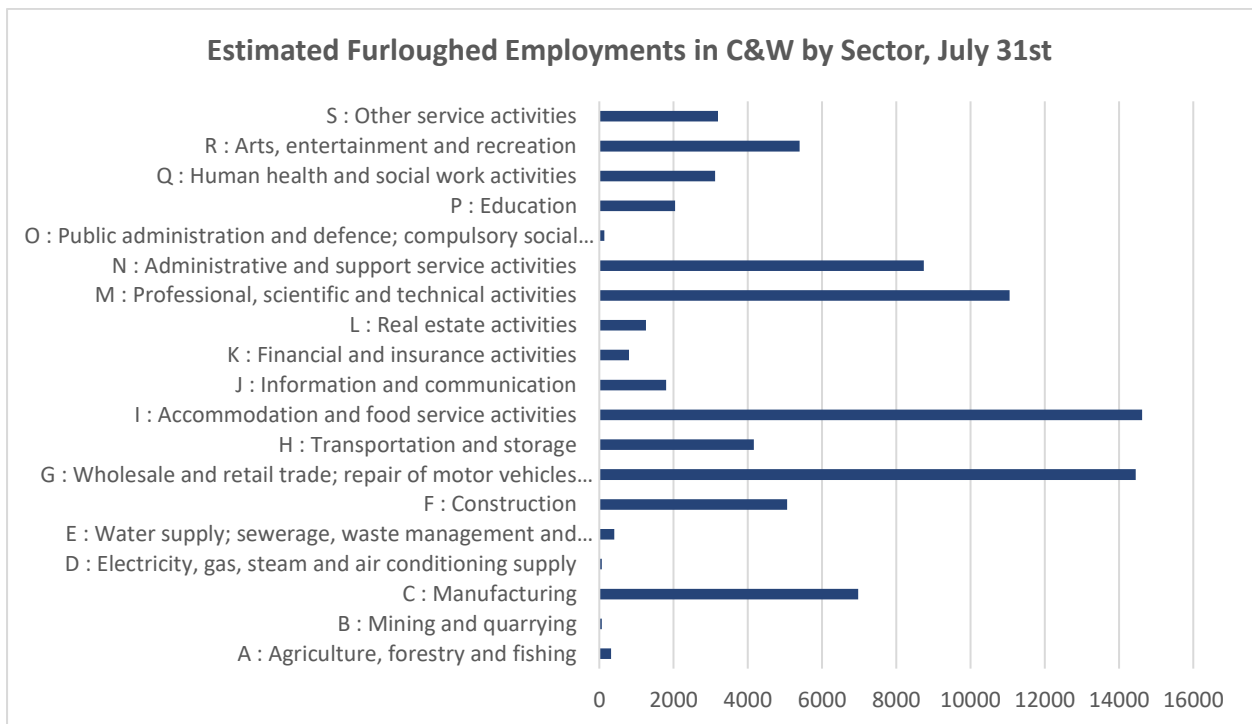
Key points from the most recently published CJRS national data are:

- an additional 228,000 employments have been claimed for under CJRS since the July CJRS statistics

⁵ <https://www.gov.uk/government/publications/coronavirus-job-retention-scheme-statistics-august-2020/coronavirus-job-retention-scheme-statistics-august-2020>

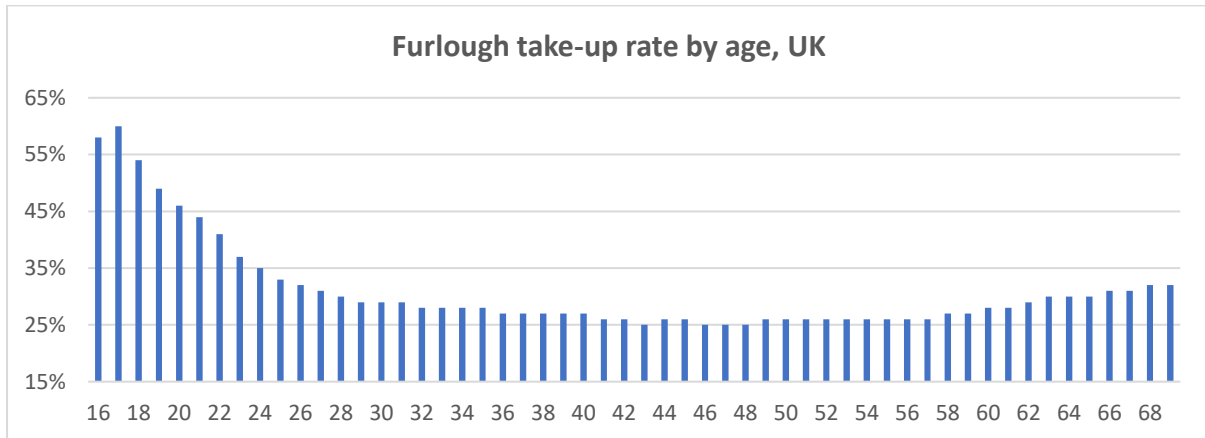
- in total, 9.6 million employments have been furloughed through CJRS (32% of eligible employments) for at least part of the period between March to June. These claims have been made by 1.16 million employers, with 61% of eligible employers claiming
- 73% of employers with more than 250 employments have made at least one claim, but have furloughed 21% of their employments
- the accommodation and food services sector has had the highest furlough rate of 77%
- the wholesale and retail sector furloughed the highest number of employments, at over 1.9 million
- there has been broad consistency in furlough rates across the nations of the UK
- men have been furloughed at a higher rate than women: 34% and 29% respectively
- the number of employments furloughed peaked at 8.9 million on 8 May, then reduced to 6.8 million by 30 June. This peak is lower than the 9.6 million mentioned above since furloughed staff have been furloughed for different periods (and not all at the same time)

It is possible to apply the national data on sectoral uptake of the furlough scheme to the composition of Cheshire and Warrington’s industrial structure. This allows for an estimate to be made of the number of employments furloughed by industry sector in Cheshire and Warrington. These estimates are presented in the graph below for employments furloughed as of July 31st 2020. It is estimated that “Accommodation and food service activities”, “Wholesale and retail trade; repair of motor vehicles” and “Professional, scientific and technical activities” all had more than 10,000 employments furloughed in Cheshire and Warrington.



Source: Brennan Wilson analysis of HMRC CJRS statistics and BRES

In July, HMRC published national data on the take-up rates of furlough by age. This is presented in the chart below. It can be seen from this that younger workers have a higher prevalence of being furloughed than the rest of the workforce.



Source: HMRC

Across Statistics for the Self-employment Income Support Scheme are also available from HMRC⁶. Key points from the latest published national data are:

- By 31 July 2.60 million (77%) of the potentially eligible population had claimed a SEISS grant with the value of these claims totalling £7.6 billion.
- The average value per claim was £2,500
- Around two-thirds of the potentially eligible population are male (2.3 million).
- A lower proportion of potentially eligible females have claimed a SEISS grant (71%) compared to males (79%).
- The average claim for females is also lower at £2,300 compared to the average claim for males of £3,200.
- Around 90% of claimants are aged between 25 and 64 and take-up of the grant in those age groups is at or above 76% - no one age group dominates and claims are evenly spread.
- The sector with the highest number of potentially eligible individuals and the highest proportion of claims is the construction industry. By 31 July, construction workers had made 884,000 claims for SEISS totalling £3.1 billion.

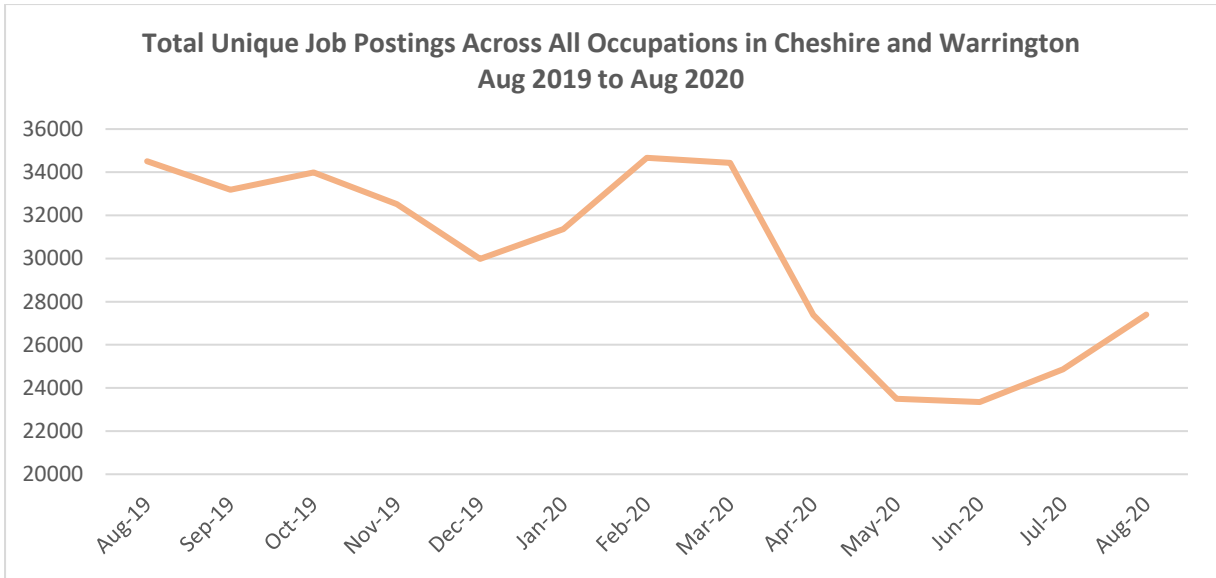
The most recent data on uptake of SEIS is presented in the table below by parliamentary constituency and local authority. The average value of claims made was slightly above the English figure in Cheshire East and slightly below it in Warrington and in Cheshire West and Chester. Take up rate was below the English average in 7 of the parliamentary constituencies in Cheshire and Warrington, and at, or below, the regional take up in all the parliamentary constituencies. Take up rate is 5% below the English average in Cheshire East.

⁶ <https://www.gov.uk/government/statistics/self-employment-income-support-scheme-statistics-august-2020>

Self-Employment Income Support Scheme Key Local Statistics to 31/8/2000				
	Total eligible population (000s)	Total no. of claims made	Average value of claims made to (£)	Take-Up Rate
England	2934000	1749000	2500	60%
North West	311000	193000	2300	62%
C&W Parliamentary Constituencies				
City of Chester	3700	2200	2400	59%
Congleton	4500	2500	2500	56%
Crewe and Nantwich	4000	2300	2400	56%
Eddisbury	4700	2500	2500	53%
Ellesmere Port and Neston	3300	2100	2300	62%
Macclesfield	4500	2400	2600	54%
Tatton	3900	2100	2600	54%
Warrington North	3800	2300	2400	61%
Warrington South	4300	2600	2300	60%
Weaver Vale	3500	2000	2400	56%
C&W Local Authorities				
Cheshire East	17,000	9,300	2,600	55%
Cheshire West And Chester	14,200	8,200	2,400	57%
Warrington	8,100	4,900	2,400	60%
Source: HMRC SEIS Statistics				

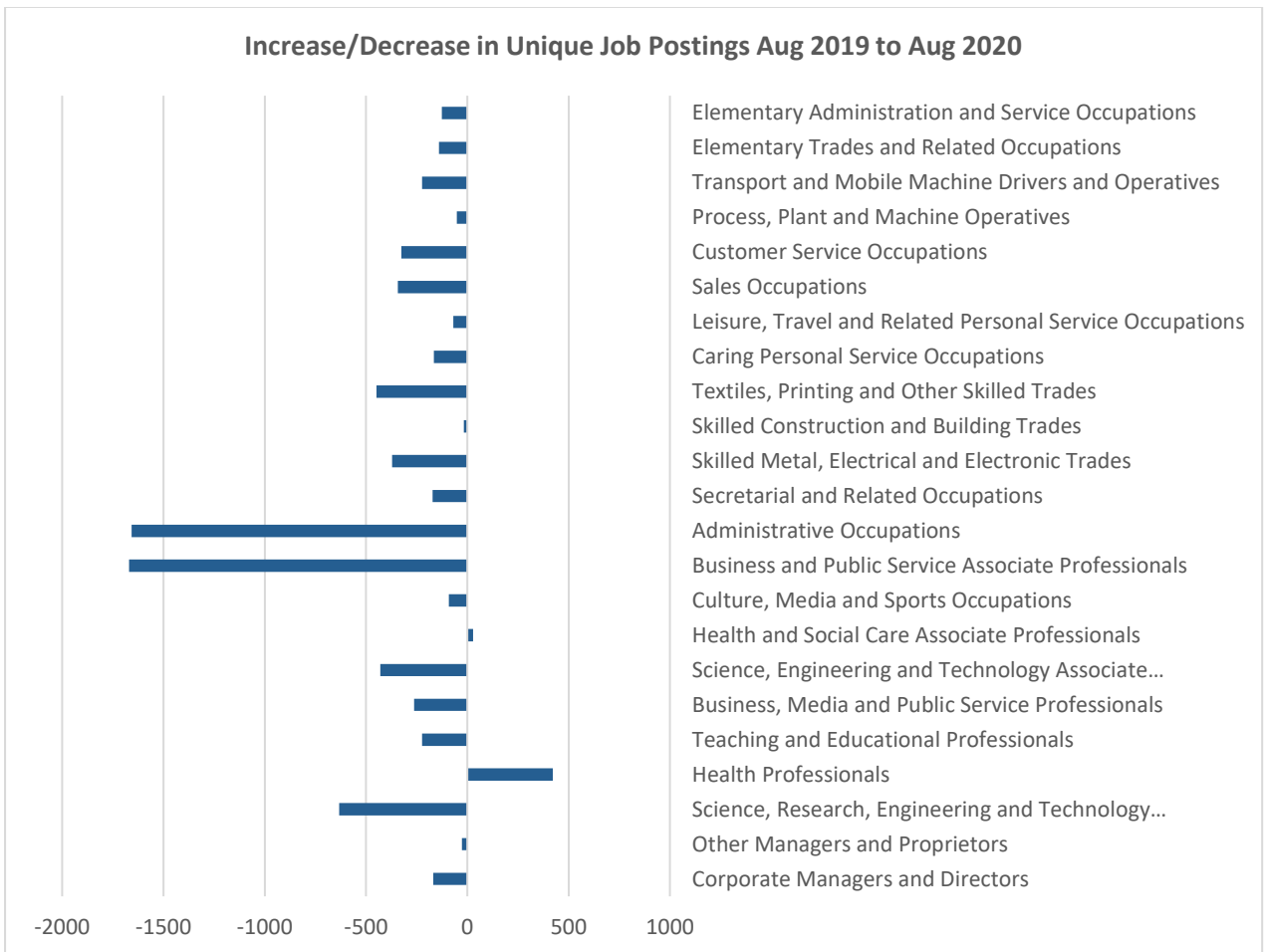
3.4.2 Vacancies

EMSI scrape job postings from sources on the internet. This enables an analysis of unique postings over time for different industries and occupation types. The graph below illustrates data from August 2019 to August 2020 for all unique job postings in Cheshire and Warrington. Unique job postings declined by 33% between February 2020 and June 2020. Unique job postings fell by 21% between August 2019 and August 2020.



Source: EMSI Analyst

When analysed at the 2-digit SOC level it is clear that, with the exception of postings for Health Professionals and Health and Social Care Associated Professionals, unique job postings have declined for every occupational area in Cheshire and Warrington between August 2019 and August 2020.



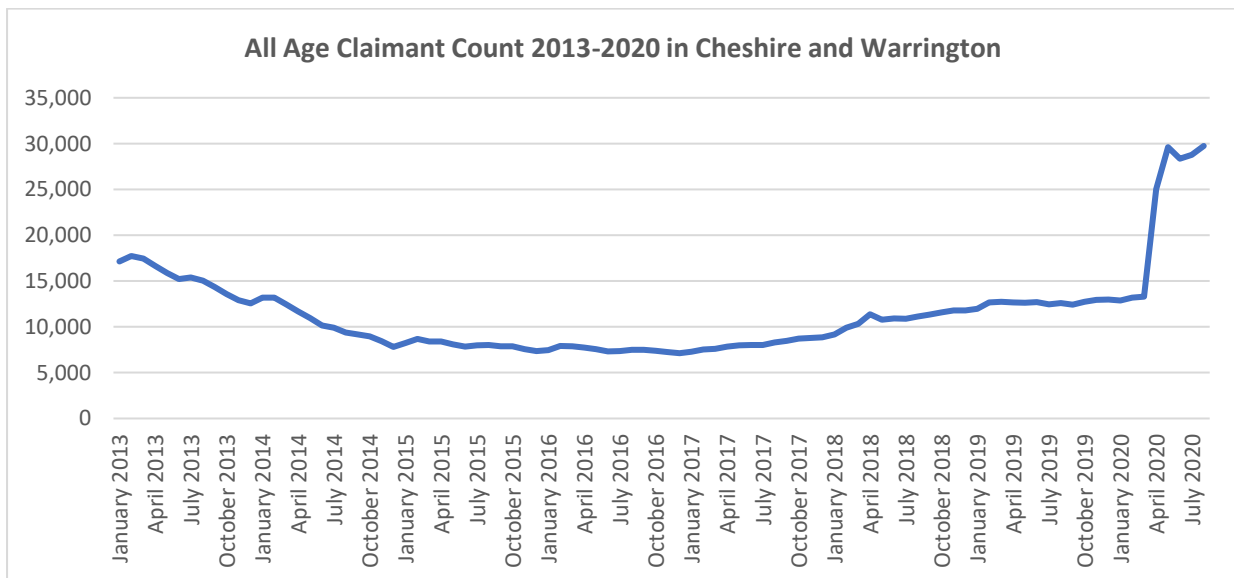
Source: EMSI Analyst

The 2-digit occupational areas in Cheshire and Warrington where unique job posting declined by more than 21% (the average decline between Aug 2019 and Aug 2020) are:

- Textiles, Printing and Other Skilled Trades
- Customer Service Occupations
- Administrative Occupations
- Sales Occupations
- Secretarial and Related Occupations
- Elementary Trades and Related Occupations
- Business and Public Service Associate Professionals
- Science, Engineering and Technology Associate Professionals
- Leisure, Travel and Related Personal Service Occupations
- Skilled Metal, Electrical and Electronic Trades

3.4.3 Unemployment and the Claimant Count

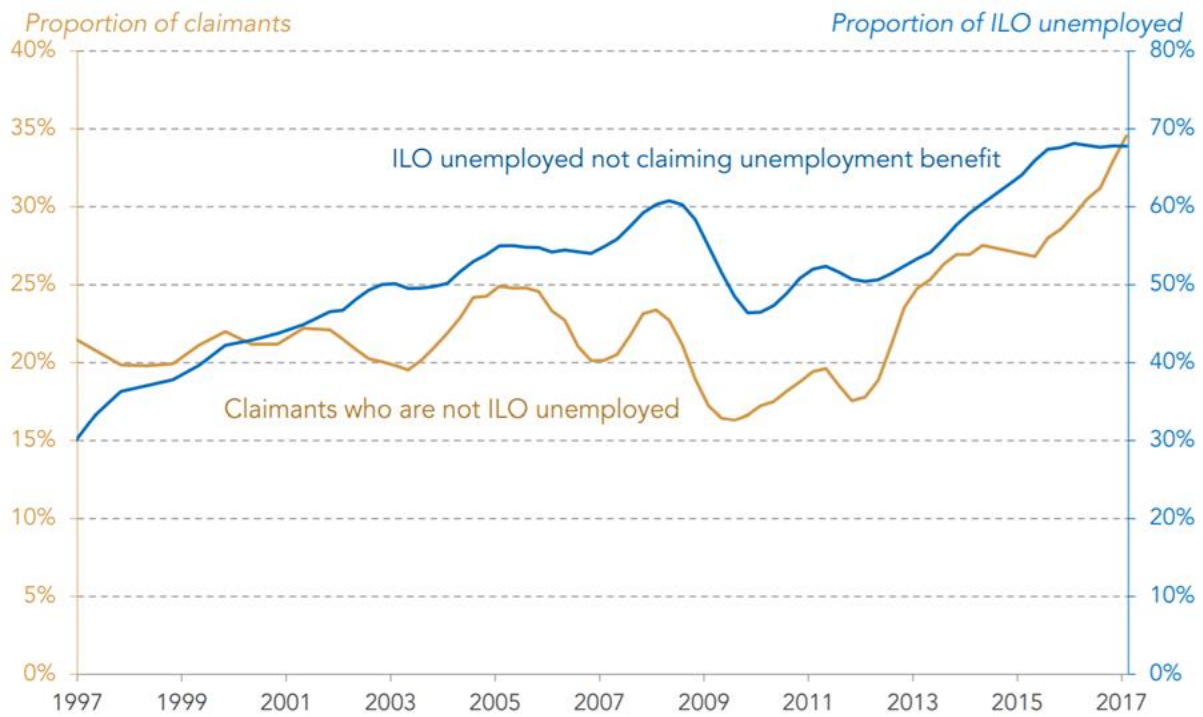
The graph below illustrates the changes to the Claimant Count between 2013 and August 2020 in Cheshire and Warrington. The August 2020 figure at 29,740 is the highest this century and represents an increase of 125% when compared with February 2020 and an increase of 136% when compared with August 2019.



Source: Claimant Count, NOMIS

It is worth noting that not everyone counted in the claimant count is unemployed as defined by the International Labour Organisation (ILO unemployed), and not everyone who is ILO unemployed is a claimant. The Resolution Foundation report that in 2017 just less than 70% of ILO unemployed were not claiming benefits and just less than 35% of claimants did not meet the definition of ILO unemployment (graph below).

Figure 6: Shifting composition of the ILO unemployed and reported claimant population

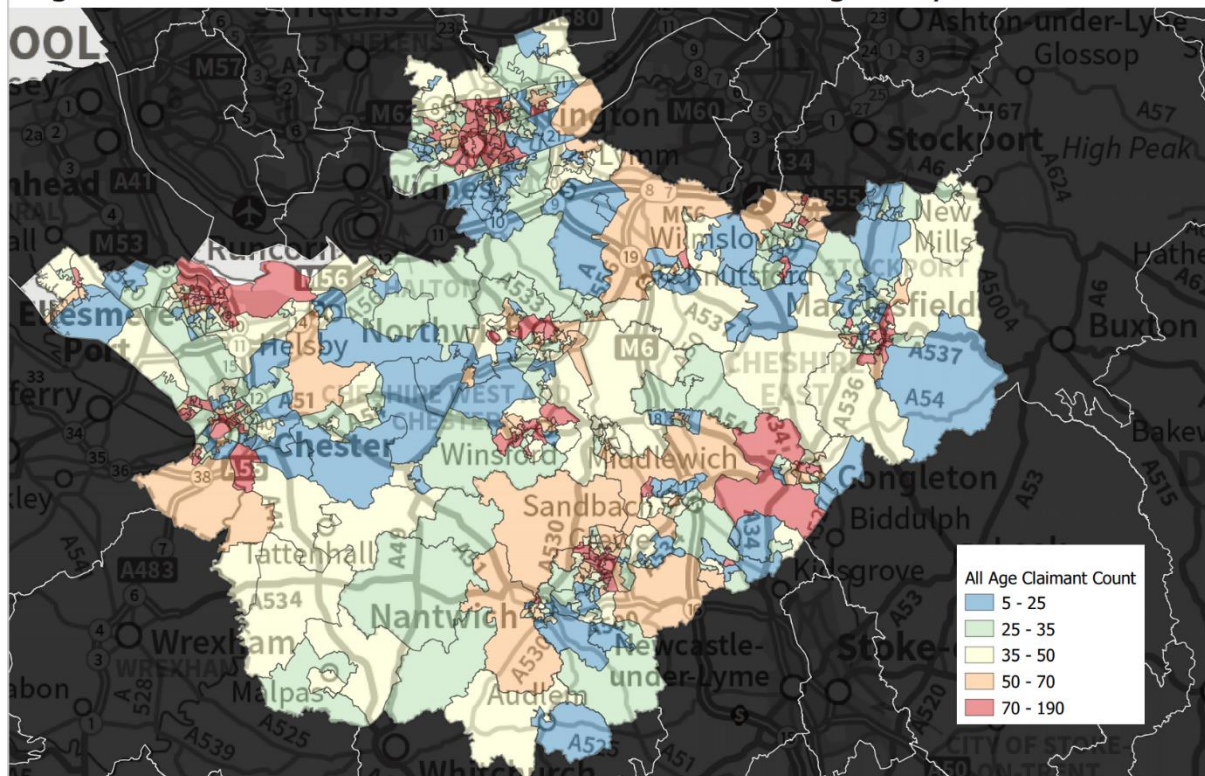


Notes: One-year rolling smoothed averages. This relies on the grossing up methodology described above. Simple interpolation is used to cover missing LFS data for part of 2014. Claimant and ILO status are both reported from the LFS

Source: Resolution Foundation analysis using ONS, Labour Force Survey

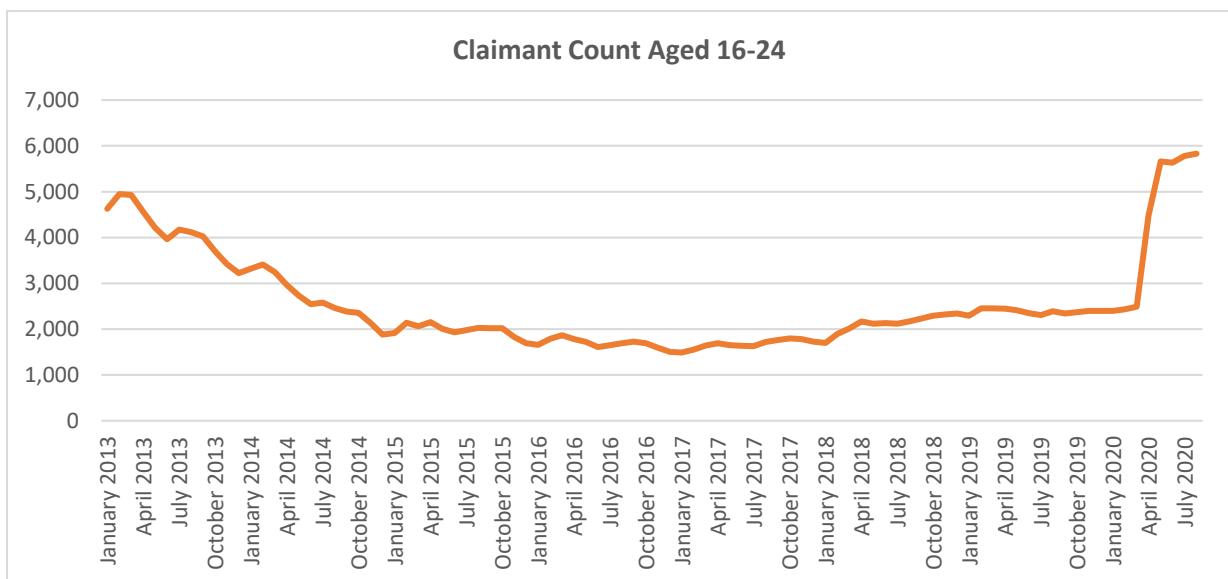
The map below shows the location of benefit claimants in August 2020 by Lower Super Output Area (LSOA). Each LSOA is a community with a population of approximately 1,500. The LSOAs with more than 70 people claiming benefit are in the top quintile for the number of benefit claimants in Cheshire and Warrington and are shaded red. These communities are relatively evenly distributed across the three local authorities with 46 in Cheshire East, 53 in Cheshire West and Chester, and 34 in Warrington. There are relatively high concentrations of benefit claimants in the larger conurbations.

August 2020 Claimant Count in Cheshire and Warrington by LSOA



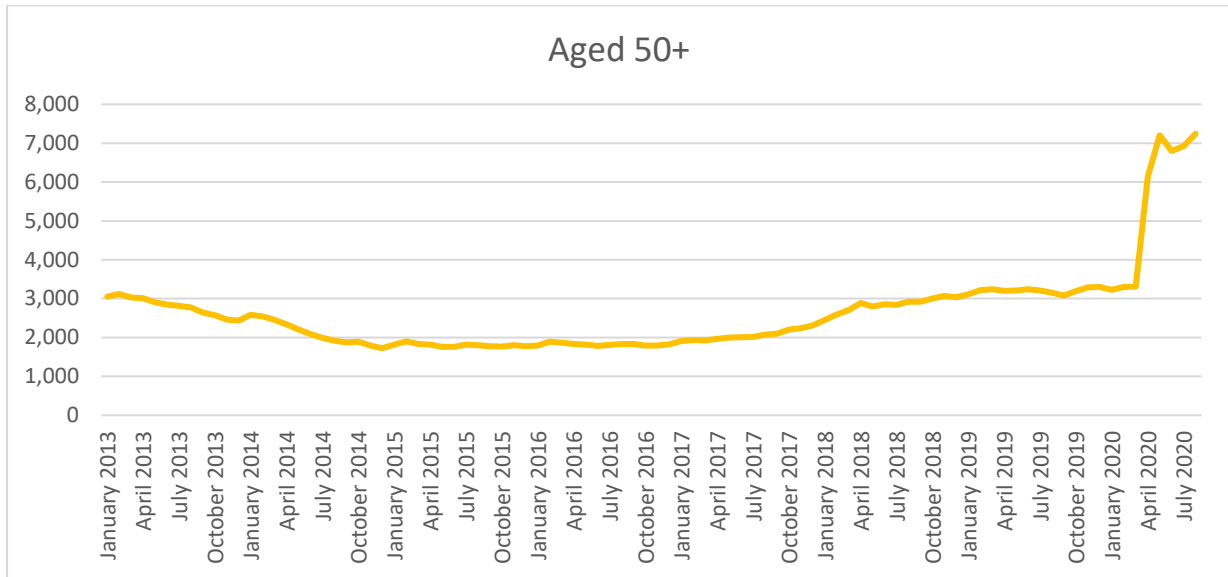
Map by Brennan Wilson Ltd in QGIS. Data from NOMIS and OS

The graph below illustrates the change to the 16-24 claimant count over time. At 5,830 this is the highest this century. There was an increase of 139% between February 2020 and August 2020, and an increase of 144% between August 2019 and August 2020.



Source: Claimant Count, NOMIS

The graph below illustrates the change to the 50+ claimant count over time. At 7,245 this is the highest on record. There was an increase of 120% between February 2020 and August 2020, and an increase of 130% between August 2019 and August 2020.



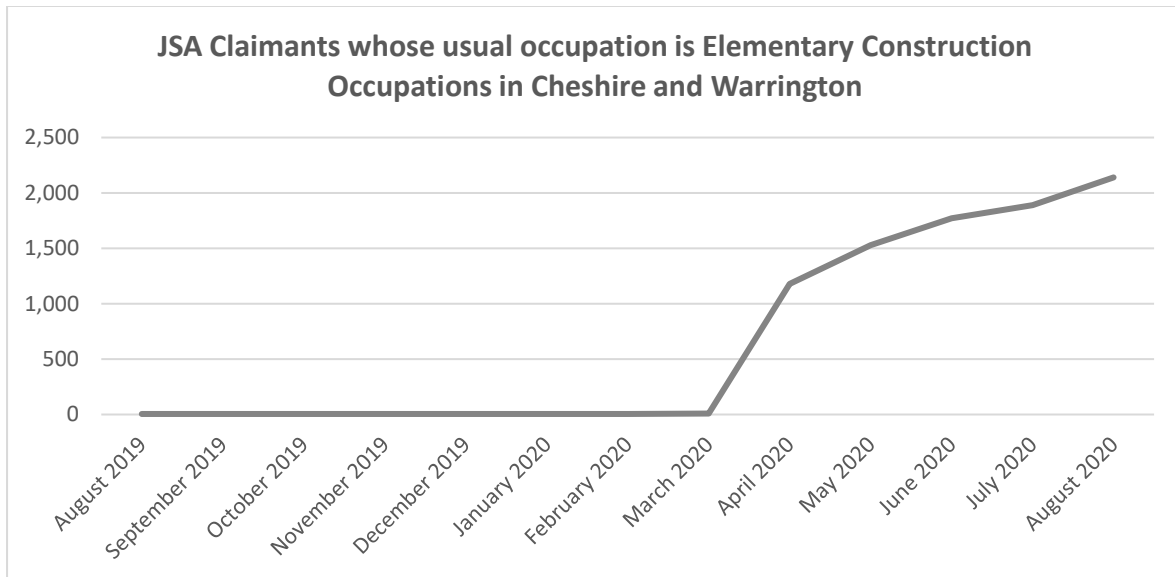
Source: Claimant Count, NOMIS

The Table below provides information on the occupations sought by Jobseeker Allowance (JSA) claimants in Cheshire and Warrington. This is a small subset of those claiming out of work benefits in the area, but it provides an indication as to the type of employment being sought by those that are out of work. There is information about just less than 4,000 people in this dataset for Cheshire and Warrington. Three of the five 2-digit occupations in which more than 50 job seekers have expressed an interest have also experienced an above average decline in vacancy job postings:

- Elementary Trades, Plant and Storage Related Occupations
- Sales Occupations
- Administrative Occupations

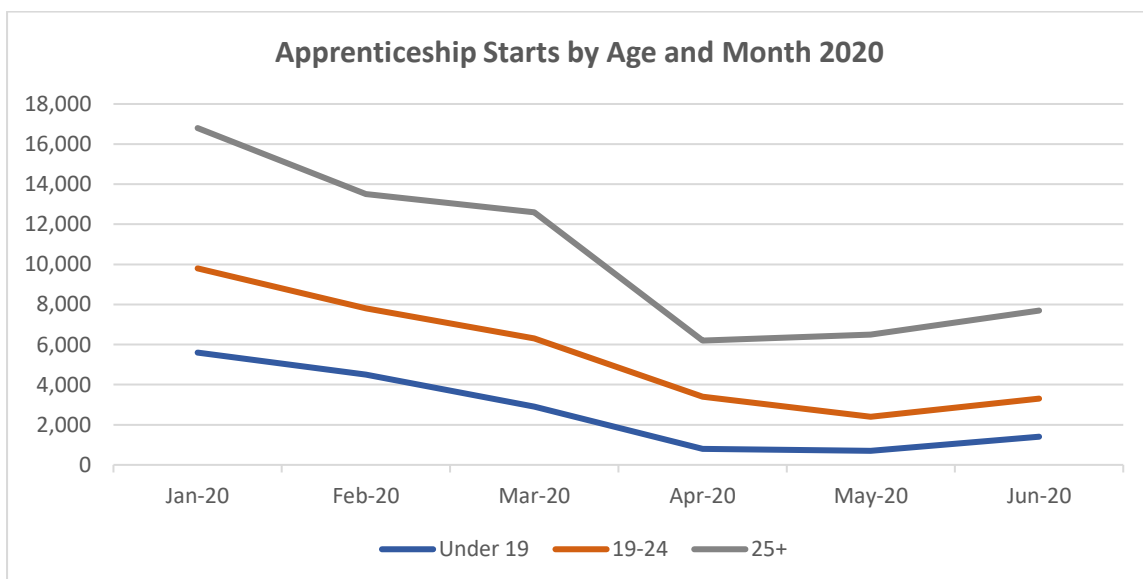
Occupations Sought by Jobseeker Allowance Claimants August 2020	
Elementary Trades, Plant and Storage Related Occupations	2,210
Sales Occupations	870
Corporate Managers	100
Administrative Occupations	70
Elementary Administration and Service Occupations	50
Source: NOMIS	

Some of the explanation for the above data on sought occupation by JSA claimants can be gleaned from examining the previous occupation of these claimants. For over half of JSA claimants in August 2020, their previous occupation was in 'Elementary Construction Occupations'. In August 2019, less than 0.5% of JSA claimants gave a usual occupation of 'Elementary Construction Occupations'. In August 2020, the equivalent figure was 58%. The graph below shows that the number in this category was at 5 or 10 every month until April 2020 when the number increased from 10 to 1,180. The April 2020 figure had almost doubled by August 2020 to 2,140.



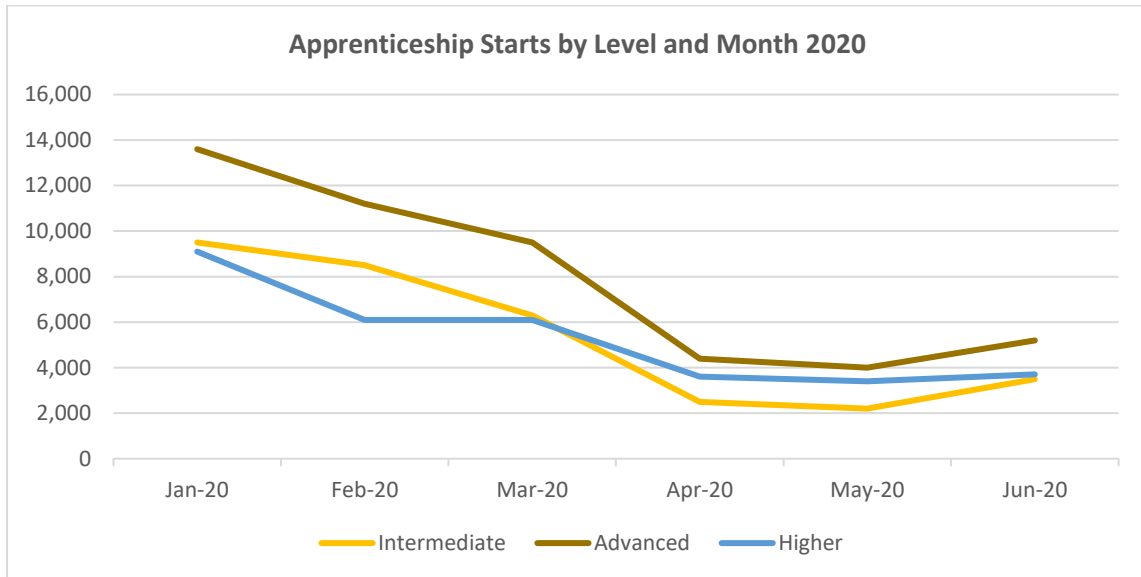
3.4.4 Apprenticeship Starts

The Department for Education has recently published national data on apprenticeship delivery in 2019/20. Monthly starts have declined for all ages with starts between January and May 2020 declining by 88% for 16-18 year olds, 76% for 19-24 year olds and 61% for 25+. All three age groups have seen modest increases to starts in June.



Source: Department for Education

Apprenticeships have seen decreases in starts at all levels between January and May 2020. Starts on Intermediate (Level2) Apprenticeships declined by 77% in this period; starts on Advanced (Level 3) Apprenticeships declined by 71%; and starts on Higher (Level 4+) Apprenticeships declined by 59%.



Source: Department for Education

4. The Cheshire and Warrington Economy and Employer Demand for Skills

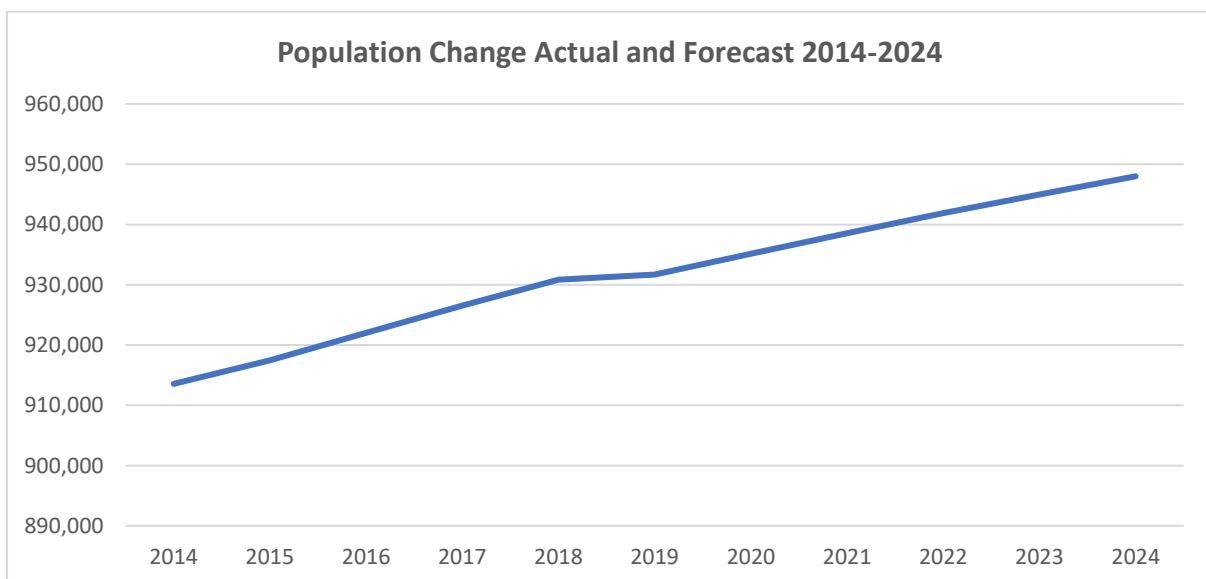
4.1 Population

In 2019 the total population of Cheshire and Warrington was 937,200. There was a 49%/51% male/female split. Cheshire and Warrington accounted for 1.4% of the population of Great Britain and 13% of the population of the North West Region.

Total Population 2019			
	Cheshire and Warrington	North West	Great Britain
All People	937,200	7,341,200	64,903,100
Males	459,700	3,625,700	32,045,500
Females	477,500	3,715,500	32,857,600

Source: NOMIS, ONS Population Estimates

The chart below illustrates population change in Cheshire and Warrington between 2014 and 2019 and forecast population change between 2014 and 2024. Between 2014 and 2019, Cheshire and Warrington's population increased by 2.0%, growing by 18,117. Population is expected to increase by a further 1.8% between 2019 and 2024, adding 16,319.



Source: EMSI Analyst

The proportion of Cheshire and Warrington's population that is of working age, at 60.3%, is lower than both the North West (62.1%) and Great Britain (62.5%). This is because the population of Cheshire and Warrington has an older profile than is to be found for Great Britain. The proportion of those aged between 19-39 (for every 5 year age band in this range) is lower than the national, whereas the proportion of those aged 45 and above (for every 5 year age band in this range) is

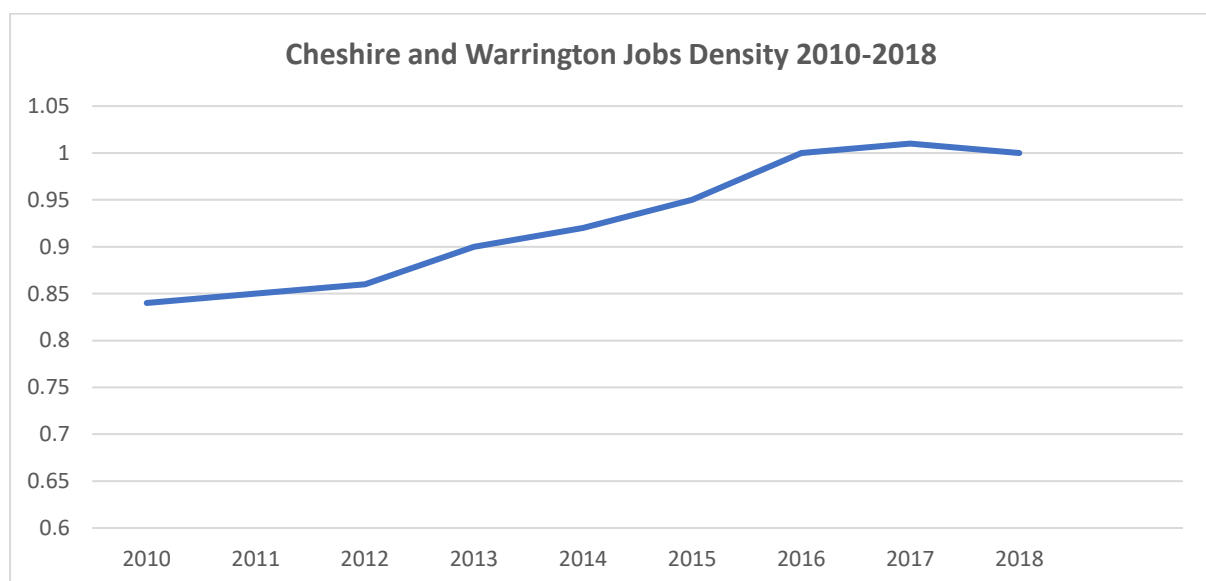
higher⁷. For example, Cheshire and Warrington has 151,016 millennials (aged 25-39). This is 32,000 fewer than might be expected from the national average for an area this size. Conversely, there are 50,000 more over 55s in Cheshire and Warrington than would be expected from the national age distribution profile.⁸.

Population aged 16-64, 2019				
	Cheshire And Warrington (Numbers)	Cheshire And Warrington (%)	North West (%)	Great Britain (%)
All People Aged 16-64	564,700	60.3	62.1	62.5
Males Aged 16-64	278,800	60.6	62.7	63.1
Females Aged 16-64	285,900	59.9	61.6	61.8

Source: NOMIS, ONS Population Estimates

4.2 Employment Levels and Business Stock

Jobs density is defined as the number of jobs in an area divided by the resident population aged 16-64 in that area. For example, a job density of 1.0 would mean that there is one job for every resident aged 16-64. The graph below illustrates that between 2010 and 2017 there was a year on year increase in Jobs Density in Cheshire and Warrington, from 0.84 and peaking at 1.01 in 2017. 2018 saw a slight decline to a Jobs Density of 1. This figure is high and reflects the fact that Cheshire and Warrington is a net importer of labour.



Source: NOMIS, ONS Jobs Density

In 2019, there were over 43,000 businesses in Cheshire and Warrington, employing 490,000 people. 45% of businesses were in Cheshire East, 33% in Cheshire West and Chester, and 22% in Warrington. 90% of businesses in Cheshire and Warrington employed fewer than 10 people. Only 0.4% of businesses employed more than 250 people.

⁷ The Adult Workforce and Skills Delivery in Cheshire and Warrington (p13), Brennan Wilson Ltd

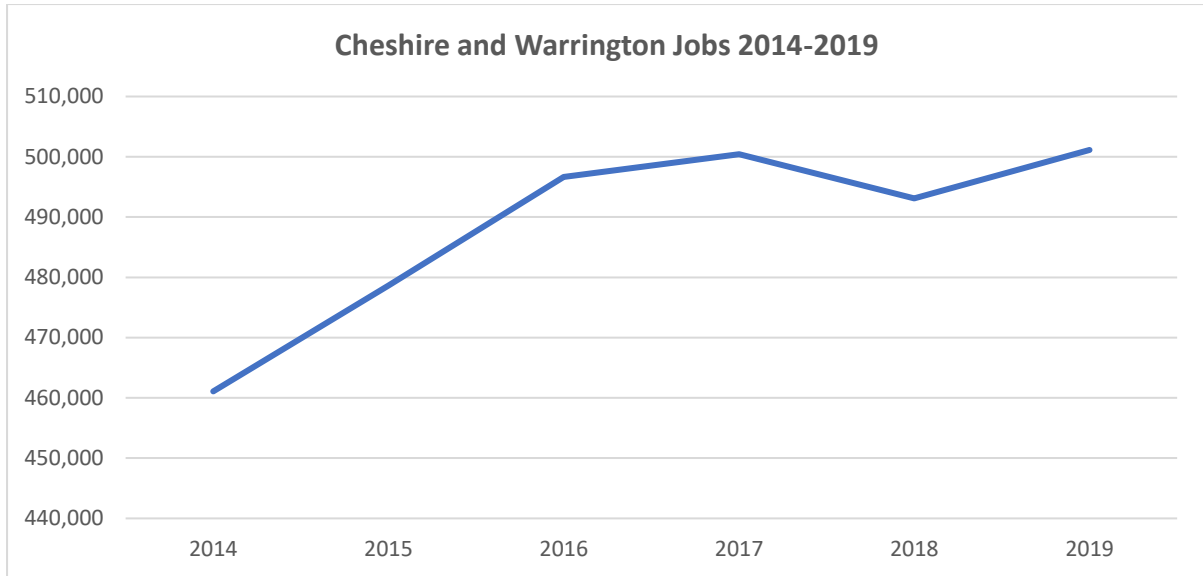
⁸ EMSI Analyst

Businesses by size in Cheshire and Warrington, Local Authority and GB, 2019					
	Cheshire and Warrington	Cheshire East	Cheshire West and Chester	Warrington	Great Britain
Total	43,325	19,575	14,275	9,475	2,643,875
Micro (0 to 9)	38,895	17,565	12,765	8,565	2,365,415
Small (10 to 49)	3,590	1,655	1,235	700	227,385
Medium-sized (50 to 249)	660	285	220	160	40,810
Large (250+)	175	70	55	50	10,265
Source: ONS, UK Business Counts 2019					

In 2018, there were 490,000 'employee jobs' in Cheshire and Warrington. This is not a count of people employed, as individuals can have more than one job. The proportion employed full-time in Cheshire and Warrington, at 68.6%, was slightly higher than for England or the North West.

Employee Jobs 2018				
	Cheshire And Warrington (Employee Jobs)	Cheshire And Warrington (%)	North West (%)	Great Britain (%)
Total Employee Jobs	490,000	-	-	-
Full-Time	336,000	68.6	67.9	67.6
Part-Time	154,000	31.4	32.1	32.4
Source: NOMIS, ONS Business Register and Employment Survey				

From 2014 to 2019, jobs increased by 8.7% in Cheshire and Warrington from 461,077 to 501,129. This change slightly outpaced the national growth rate in this period of 8.4% and helps explain why an already high Job Density continued to increase.



Source: EMSI Analyst

The change in the number of jobs between 2014 and 2019 in each local authority is set out in the Table below. Growth outpaced in England (8.4%) in both Warrington (11.6%) and Cheshire West and Chester (9.8%). Jobs grew at 5.8% in this period in Cheshire East.

Jobs Change in Cheshire and Warrington, and England 2014-2019				
	2014 Jobs	2019 Jobs	Change	% Change
Cheshire and Warrington	461,077	501,129	40,052	8.7%
Cheshire West and Chester	157,556	172,921	15,365	9.8%
Cheshire East	181,312	191,871	10,559	5.8%
Warrington	122,210	136,337	14,127	11.6%
England	24,296,192	26,338,115	2,041,923	8.4%

Source: EMSI Analyst

4.3 Industrial Structure

The Table below provides data on the number of jobs in Cheshire and Warrington by industrial sector. There are five sectors that have more than 40,000 jobs in Cheshire and Warrington. They are:

- Manufacturing
- Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles
- Professional, Scientific and Technical Activities
- Administrative and Support Service Activities
- Human Health and Social Work Activities

Employee Jobs by Industry 2018				
	Cheshire & Warrington	C&W (%)	North West (%)	Great Britain (%)
B : Mining And Quarrying	600	0.1	0.1	0.2
C : Manufacturing	41,000	8.4	9.6	8.1
D : Electricity, Gas, Steam And Air Conditioning Supply	1,750	0.4	0.5	0.5
E : Water Supply; Sewerage, Waste Management And Remediation Activities	4,000	0.8	0.6	0.7
F : Construction	23,000	4.7	4.7	4.7
G : Wholesale And Retail Trade; Repair Of Motor Vehicles And Motorcycles	85,000	17.3	16.9	15.2
H : Transportation And Storage	26,000	5.3	5.5	4.8
I : Accommodation And Food Service Activities	34,000	6.9	7.1	7.6
J : Information And Communication	15,000	3.1	2.7	4.2
K : Financial And Insurance Activities	20,000	4.1	2.7	3.5
L : Real Estate Activities	7,000	1.4	1.5	1.7
M : Professional, Scientific And Technical Activities	65,000	13.3	8.3	8.7
N : Administrative and Support Service Activities	46,000	9.4	9.0	9.1
O : Public Administration And Defence; Compulsory Social Security	14,000	2.9	4.5	4.3
P : Education	34,000	6.9	8.5	8.9
Q : Human Health And Social Work Activities	52,000	10.6	13.4	13.2
R : Arts, Entertainment And Recreation	12,000	2.4	2.4	2.5
S : Other Service Activities	10,000	2.0	1.9	2.0
Source: NOMIS, ONS Business Register and Employment Survey				

The Table below provides information on jobs change, by sector, between 2014 and 2019 and the 2019 Location Quotient for each sector. A 'Location Quotient' (LQ) measures the extent to which a sector is over or under-represented in an area. An LQ of 1 means that a sector has the same proportion employed locally as nationally, whereas an LQ of 2 means that the local area employs double the proportion of people in that sector compared to nationally.

The sectors which added the most jobs between 2014 and 2019 are "Wholesale and retail trade; repair of motor vehicles and motorcycles" with an increase of 13,286 jobs and "Professional, scientific and technical activities" with an increase of 17,864 jobs. Six sectors grew by more than 15% in this period: Wholesale and retail trade; repair of motor vehicles and motorcycles; Professional, scientific and technical activities; Construction; Information and Communication; Water supply; sewerage, waste management and remediation activities; and Mining and quarrying.

Sectoral strengths in the Cheshire and Warrington local economy (ie those sectors with the highest location quotients) include: "Wholesale and retail trade; repair of motor vehicles and motorcycles" (LQ of 1.18); "Professional, scientific and technical activities" (LQ of 1.51); "Financial and insurance activities" (LQ of 1.18); and "Water supply; sewerage, waste management and remediation activities" (LQ of 1.19).

2014-2019 Job Change in Cheshire and Warrington's Largest Industry Sectors

	Change in Jobs	% Change in Jobs	2019 LQ
Wholesale and retail trade; repair of motor vehicles and motorcycles	13,286	18%	1.18
Professional, scientific and technical activities	17,864	38%	1.51
Human health and social work activities	575	1%	0.83
Administrative and support service activities	2,039	5%	1.02
Manufacturing	1,905	5%	1.03
Education	965	3%	0.80
Accommodation and food service activities	(1,678)	(5%)	0.86
Transportation and storage	2,124	9%	1.03
Construction	3,641	19%	0.96
Financial and insurance activities	(2,079)	(9%)	1.18
Information and communication	2,637	18%	0.79
Public administration and defence; compulsory social security	69	0%	0.66
Arts, entertainment and recreation	92	1%	0.97
Other service activities	(640)	(6%)	0.95
Real estate activities	(356)	(6%)	0.75
Water supply; sewerage, waste management and remediation activities	915	25%	1.19
Agriculture, forestry and fishing	(1,421)	(28%)	1.08
Electricity, gas, steam and air conditioning supply	(82)	(5%)	0.73
Mining and quarrying	196	46%	0.74

Source: EMSI Analyst

4.4 Occupational Structure and Workforce Skills Profile

It is possible to establish from the Annual Population Survey the occupations held by residents in the Cheshire and Warrington LEP area and the three constituent Local Authorities. This data is presented in the Table below. It is important to note that this data is for all residents of Cheshire and Warrington, rather than for all those employed in Cheshire and Warrington.

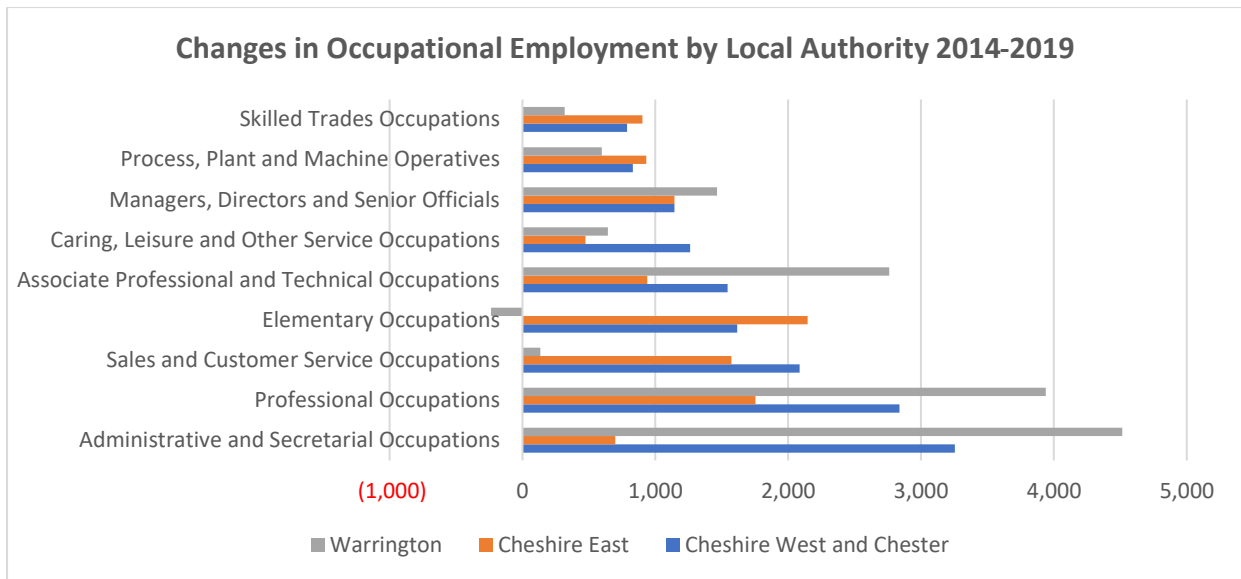
This data shows that the occupational profile for residents of Cheshire and Warrington and all three Local Authorities is skewed towards higher skilled, and generally higher paid, occupations. The proportion of LEP residents employed in SOC Major Groups 1-3 is 4.3% higher than for those same groups at Great Britain level. The proportion for these occupational groupings is higher in all three Local Authorities than for Great Britain.

The proportion employed as 'Managers, Directors and Senior Officials' is 16.3% of the workforce in Cheshire West and Chester compared to 11.4% for Great Britain and 10.3% in the North West. The proportion employed in Professional Occupations is 24.5% of the workforce in Warrington compared to 21.4% for Great Britain and 20.2% in the North West.

Employment by occupation (Jan 2019-Dec 2019)						
	Cheshire And Warrington (%)	Cheshire East (%)	Cheshire West And Chester (%)	Warrington (%)	North West (%)	Great Britain (%)
Soc 2010 Major Group 1-3	51.8	50.2	53.4	52.3	43.9	47.5
1 Managers, Directors and Senior Officials	13.8	12.4	16.3	12.7	10.3	11.4
2 Professional Occupations	22.8	23.0	21.4	24.5	20.2	21.4
3 Associate Professional & Technical	15.1	14.8	15.6	14.8	13.3	14.6
Soc 2010 Major Group 4-5	18.1	18.1	19.7	15.8	20.3	19.7
4 Administrative & Secretarial	9.5	9.4	11.3	7.0	10.2	9.6
5 Skilled Trades Occupations	8.6	8.7	8.3	8.7	10.0	10.1
Soc 2010 Major Group 6-7	14.7	15.1	14.2	14.6	18.0	16.3
6 Caring, Leisure And Other Service Occupations	8.3	8.2	8.6	7.9	9.7	9.1
7 Sales And Customer Service Occs	6.4	6.9	5.5	6.7	8.3	7.2
Soc 2010 Major Group 8-9	15.4	16.6	12.7	17.2	17.9	16.5
8 Process Plant & Machine Operatives	5.7	4.3	6.1	7.6	6.7	6.2
9 Elementary Occupations	9.6	12.3	6.5	9.5	11.1	10.3
Source: ONS annual population survey, Notes: Numbers and % are for those of 16+, % is a proportion of all persons in employment						

By contrast the proportion of the Cheshire and Warrington workforce employed in SOC Major groups 4-5 is 18.1% compared to 19.7% in Great Britain. Similarly, the proportions employed in SOC Groups 6-7 and 8-9 in Cheshire and Warrington LEP are lower than for Great Britain (CWLEP 14.7% vs GB 16.3% and CWLEP 15.4% vs GB 16.5% respectively).

The Table below illustrates the change in employment, by occupational area, in Cheshire and Warrington local authorities between 2014 and 2019. It is evident from this that, in this time, every 1-digit SOC occupational area has grown in every local authority area with the single exception of “Elementary Occupations” in Warrington, which declined by 237 jobs.



The greatest increase in the number of jobs, by job type, between 2014 and 2019 was for:

- Book-keepers, payroll managers and wages clerks
- Chartered and certified accountants
- Sales and retail assistants

Each of these occupational areas grew by more than 2,000 jobs in this period.

Change in Job Numbers 2014-2019 (4 digit SOC)				
	2014 Jobs	2019 Jobs	Change	% Change
Book-keepers, payroll managers and wages clerks	8,755	13,489	4,734	54%
Chartered and certified accountants	3,525	6,651	3,126	89%
Sales and retail assistants	20,601	22,700	2,099	10%
Cleaners and domestics	9,553	11,485	1,932	20%
Elementary storage occupations	10,003	11,630	1,627	16%
Other administrative occupations n.e.c.	11,108	12,250	1,142	10%
Sales accounts and business development managers	7,948	9,069	1,121	14%
Taxation experts	801	1,807	1,006	126%

Source: EMSI Analyst

As might be expected from the occupational profile of Cheshire and Warrington residents reported above, the skills profile is skewed to higher skills compared with Great Britain. 42.1% of LEP residents are qualified at or above NVQ Level 4 compared to 40.3% for Great Britain and 36.1% for the North West Region. All three constituent Local Authorities have a higher proportion of residents qualified at NVQ 4 and above than Great Britain and the North West. Similarly, the LEP (20.7%) and all three Local Authorities have a lower proportion qualified below level 2 than is the case in the region (25.5%) or for Great Britain (24.4%).

Qualifications (Jan 2019-Dec 2019)						
	Cheshire And Warrington (%)	Cheshire East (%)	Cheshire West And Chester (%)	Warrington (%)	North West (%)	Great Britain (%)
NVQ4 and Above	42.1	41.9	43.0	41.0	36.1	40.3
NVQ3 and Above	60.7	59.6	61.6	61.1	55.2	58.5
NVQ2 and Above	79.3	77.7	81.2	79.1	74.5	75.6
NVQ1 and Above	88.2	86.8	89.7	88.2	85.0	85.6
Other Qualifications	5.4	6.8	3.7	5.9	6.3	6.7
No Qualifications	6.4	6.4	6.6	5.9	8.7	7.7

Source: ONS annual population survey. Numbers and % are for those of aged 16-64, % is a proportion of resident population of area aged 16-64

The Table below sets out the top 'hard' skills sought by employers in job postings. The demand for skills in Nursing and Warehousing and, to a lesser extent in Accounting and SQL are higher than might be expected if demand in Cheshire and Warrington were to mirror the national picture.

Top 'Hard Skills' Sought by Cheshire and Warrington Employers		
Top Hard Skills	Unique Postings	National Average
Accounting	11,482	11,033
Auditing	11,105	11,498
Key Performance Indicators (KPIs)	10,055	8,696
Nursing	8,944	7,052
Warehousing	8,019	6,031
Business Development	6,996	8,215
Selling Techniques	6,611	6,447
Agile Software Development	6,601	8,130
SQL (Programming Language)	6,506	6,002
Forecasting	5,888	5,716

Source: EMSI Analyst

'Average posting Intensity' is a measure used by EMSI to establish how much effort employers need to make to fill a vacancy. An average posting intensity of 3: 1 for an occupation means that, on average, an employer will post a job vacancy three times. It is a reasonable inference that the higher the average posting intensity, the more difficulty employers have in filling that type of role. Between 2016 and 2020 the average posting intensity for all types of jobs in Cheshire and Warrington was 5:1.

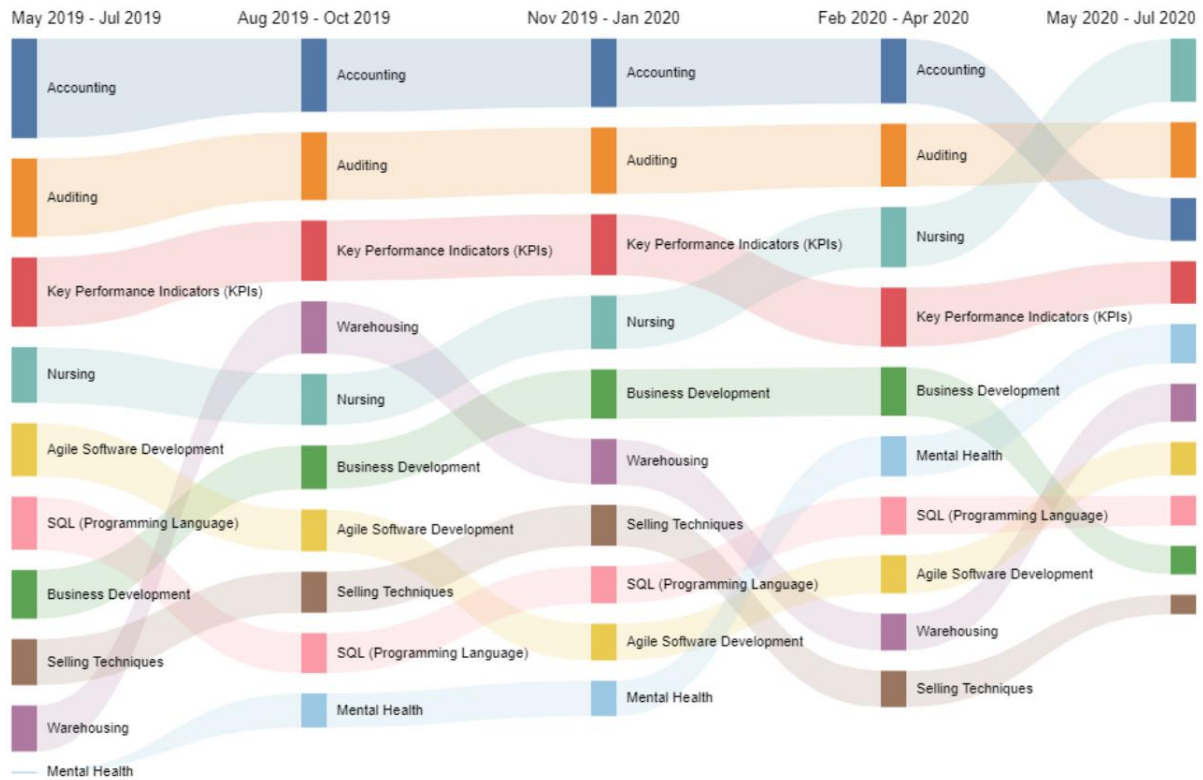
The table below sets out the 4-digit soc occupations which have had the highest 'average posting intensity' for vacancies between 2016 and 2020. For those roles with a high posting intensity and high current volumes, this suggests a market failure in the labour market that skills and employment partners should consider developing interventions to address. These interventions will vary from intensive vacancy-focussed support to individuals to longer-term high-level skills programmes. On this basis, the following occupational areas should be considered priorities for action by skills and employment partners:

- Managers and directors in storage and warehousing
- Programmers and software development professionals
- IT business analysts, architects and systems designers
- Web design and development professionals
- Quantity surveyors
- IT user support technicians
- Book-keepers, payroll managers and wages clerks
- Customer service occupations n.e.c.

Hard to fill Vacancies (4-digit SOC Occupations) in Cheshire and Warrington, 2016-2020				
Occupation	Avg. Posting Intensity (Jan 2016 - Aug 2020)	Latest 30 Days Unique Postings (Active)	Latest 30 Days Unique Postings % Change (Active)	Median Annual Wages
Caretakers	11 : 1	53	83%	20384
Managers and directors in storage and warehousing	10 : 1	278	13%	27747
Restaurant and catering establishment managers and proprietors	8 : 1	34	0%	23296
Programmers and software development professionals	8 : 1	898	10%	43555
Other skilled trades n.e.c.	8 : 1	10	-17%	23587
Travel agents	8 : 1	19	19%	19365
IT business analysts, architects and systems designers	7 : 1	167	-2%	44907
Web design and development professionals	7 : 1	364	9%	32406
Quantity surveyors	7 : 1	199	9%	45448
IT user support technicians	7 : 1	171	-1%	29120
Credit controllers	7 : 1	64	-25%	23816
Book-keepers, payroll managers and wages clerks	7 : 1	795	5%	25730
IT engineers	7 : 1	62	5%	31782
Customer service occupations n.e.c.	7 : 1	266	26%	20738
School midday and crossing patrol occupations	7 : 1	53	56%	18720
Source: EMSI Analyst (excludes occupations with fewer than 300 unique postings)				

The chart below illustrates the demand for skills by employers, over time, in Cheshire and Warrington as expressed in online job postings. The impact of the pandemic is clear both in the overall decline in the demand for labour when comparing May-July 2020 with May-July 2019; and also in the relative ranking of skills sought – for example the requirement for Nursing skills moving from fourth to first in this time period.

Top Skills Sought by Employers in Cheshire and Warrington, by Quarter



Source: EMSI Analyst

Automation will transform the world of work in the next few years. Automation will threaten some existing occupations, will create new occupations, will transform other occupations, and will leave some occupations largely untouched. To help get a better understanding on the possible impact of automation, EMSI have developed an ‘Automation Index’.

EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. Estimates of how much time is spent performing those tasks are constructed using the frequencies for different Work Activities in the US ONET database, and mapped across to UK SOC. The relationship between different 38 task categories and Frey and Osborne’s estimates of the “probability of computerisation” is used to classify each task category as high, middle, or low risk, depending on the significance and direction of that relationship. The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The table below provides information on the top 10 4-digit SOC occupation types that employ more than 1,000 people in Cheshire and Warrington that can be considered at greatest risk from automation. The three most 'at risk' occupations are "Elementary construction occupations", "Construction operatives n.e.c." and "Caretakers".

Main Occupations in Cheshire and Warrington at Risk of Automation		
	Automation Index	2019 Jobs
Elementary construction occupations	93%	1745
Construction operatives n.e.c.	85%	1434
Caretakers	80%	1397
Assemblers (vehicles and metal goods)	73%	1474
Carpenters and joiners	73%	1273
Taxation experts	72%	1807
Elementary process plant occupations n.e.c.	71%	1312
Pharmacy and other dispensing assistants	71%	1475
Farm workers	65%	1184
Construction and building trades n.e.c.	64%	1259
Source: EMSI Analyst		

By contrast, the table below provides information about those 4-digit SOC occupations that are at least risk of automation as measured by EMSI's Automation Index.

Main Occupations in Cheshire and Warrington Least at Risk from Automation		
	Automation Index	2019 Jobs
Construction project managers and related professionals	0%	1175
Production managers and directors in construction	0%	1988
Legal associate professionals	1%	1161
Financial institution managers and directors	1%	1547
Mechanical engineers	1%	1100
Design and development engineers	2%	1571
Quality assurance and regulatory professionals	2%	1326
Business and related associate professionals n.e.c.	2%	1912
Production and process engineers	2%	1653
Managers and directors in transport and distribution	2%	1240
Teaching and other educational professionals n.e.c.	2%	1525
IT user support technicians	2%	1429
Source: EMSI Analyst		

4.5 Earnings and Income

The two tables below provide information for Cheshire and Warrington LEP, and its three constituent Local Authorities, for earnings by place of residence and earnings by place of work.

The median Gross weekly pay for LEP residents was £615.7 which was higher than that for the Great Britain figure of £587. However, there was a clear gender disparity. Whilst male full-time workers

earned £55.5 a week more than their counterparts in Great Britain, female full-time workers resident in the LEP earned almost the same as those in Great Britain.

Indeed, when hourly rates are considered, whilst the hourly rates in Cheshire and Warrington were higher overall and for male full-time workers than in Great Britain, they were actually lower for female full-time workers (£13.90 for CWLEP compared to £13.99 for GB).

Earnings by place of residence (2019)						
	Cheshire And Warrington (Pounds)	Cheshire East (Pounds)	Cheshire West And Chester (Pounds)	Warrington (Pounds)	North West (Pounds)	Great Britain (Pounds)
Gross Weekly Pay						
Full-Time Workers	615.7	623.3	611.3	595.9	555.8	587.0
Male Full-Time Workers	685.5	691.2	692.8	669.3	598.0	632.0
Female Full-Time Workers	529.8	533.9	516.5	532.5	498.0	528.9
Hourly Pay - Excluding Overtime						
Full-Time Workers	15.59	16.02	15.55	15.34	13.95	14.88
Male Full-Time Workers	16.64	16.95	16.75	15.80	14.56	15.44
Female Full-Time Workers	13.90	14.38	13.68	14.00	13.16	13.99
<i>Source: ONS annual survey of hours and earnings - resident analysis, Notes: Median earnings in pounds for employees living in the area, figures for this table have been constructed on an Output Area basis</i>						

By contrast, when median earnings by place of work is considered, the overall levels for gross weekly earnings; the levels for male full-time weekly earnings; and, the levels for female weekly earnings were all lower for Cheshire and Warrington LEP than for Great Britain. The hourly rates for both male and female full-time workers were also below those for Great Britain. The official data is confirmed by EMSI analysis of publicly advertised job roles in Cheshire and Warrington. This reports that the average wage per job advertised in Cheshire and Warrington is £28,700 which was £1,600 below the national average wage of £30,300 per job.⁹

⁹ EMSI Analyst

Earnings by place of work (2019)						
	Cheshire And Warrington (Pounds)	Cheshire East (Pounds)	Cheshire West And Chester (Pounds)	Warrington (Pounds)	North West (Pounds)	Great Britain (Pounds)
Gross Weekly Pay						
Full-Time Workers	567.3	581.9	557.4	548.7	549.8	586.5
Male Full-Time Workers	608.6	613.8	620.7	581.7	588.2	631.7
Female Full-Time Workers	502.0	518.1	486.3	502.9	496.4	528.2
Hourly Pay - Excluding Overtime						
Full-Time Workers	14.17	14.78	13.88	13.60	13.84	14.87
Male Full-Time Workers	14.79	15.14	15.36	13.83	14.38	15.43
Female Full-Time Workers	13.25	13.74	12.92	13.23	13.14	13.98
<i>Source: ONS annual survey of hours and earnings - workplace analysis, Notes: Median earnings in pounds for employees working in the area. figures for this table have been constructed on an Output Area basis</i>						

The differences between the figures for residency and workplaces suggest that either residents commute for higher paid jobs outside of the LEP, or that non-residents commute to do lower paid jobs within the LEP, or a combination of the two. The job density in the LEP area is comparatively high, and work done by Metro Dynamics for Cheshire and Warrington LEP from census 2011 data has established that the LEP is a net importer of Labour. It therefore seems probable that both explanations will apply to some extent.

Earnings data for residents is also available at Parliamentary Constituency level. As can be seen from the table below there was significant variation between constituencies, with three at or below the national average of £587 and seven above it. The constituency with the lowest median gross weekly earnings was Crewe and Nantwich (£530) and the constituency with highest was Tatton (£700).

Median Gross Weekly Wage (Residents): Parliamentary Constituencies	
Constituency Name	Median Gross Weekly Wage (£)
City of Chester	600
Congleton	630
Crewe and Nantwich	530
Eddisbury	640
Ellesmere Port and Neston	600
Macclesfield	640
Tatton	700
Warrington North	550
Warrington South	640
Weaver Vale	590
<i>Source: ONS and NISRA, Annual Survey of Hours and Earnings, 2019 Provisional Results, as published by the House of Commons Library</i>	

The Table below provides information on the median hourly wage by occupation and local authority. This indicates that the median hourly wage tends to be very similar by occupation across the three local authorities although it tends to be slightly higher in Warrington than elsewhere (there was a higher hourly median wage in six occupational areas in Warrington).

Media Hourly Wages by Occupation and Local Authority			
	Cheshire West and Chester	Cheshire East	Warrington
Professional Occupations	£21.04	£20.82	£20.74
Managers, Directors and Senior Officials	£19.31	£19.84	£19.80
Associate Professional and Technical Occupations	£15.82	£15.76	£15.98
Skilled Trades Occupations	£11.98	£12.14	£12.81
Administrative and Secretarial Occupations	£11.25	£11.22	£11.43
Process, Plant and Machine Operatives	£11.19	£11.44	£11.18
Caring, Leisure and Other Service Occupations	£9.42	£9.45	£9.47
Sales and Customer Service Occupations	£9.34	£9.40	£9.46
Elementary Occupations	£8.95	£8.88	£9.13
Source: EMSI Analyst			

The table below presents information on those 2-digit SIC industry sectors that have grown more than 10% between 2015 and 2020 and currently employ more than 3,000 people in Cheshire and Warrington, ranked by the average wages per job. Fourteen of these seventeen sectors have an average wage higher than the Cheshire and Warrington average of £28,700

The high employment sectors with average wages above £40,000 are:

- Manufacture of chemicals and chemical products
- Scientific research and development
- Waste collection, treatment and disposal activities; materials recovery
- Activities auxiliary to financial services and insurance activities

This type of information can be used to inform discussions with young people about their career and learning choices.

High Employment Sectors (2-digit SIC) with recent Growth in Cheshire and Warrington			
	Avg. Wages Per Job (£)	2020 Jobs	2015 - 2020 % Change
Manufacture of chemicals and chemical products	47,160	4149	17%
Scientific research and development	45,213	4566	83%
Waste collection, treatment and disposal activities; materials recovery	45,180	3638	16%
Activities auxiliary to financial services and insurance activities	43,615	6006	27%
Architectural and engineering activities; technical testing and analysis	39,880	14804	33%
Activities of head offices; management consultancy activities	38,922	13679	30%
Financial service activities, except insurance and pension funding	36,652	12747	17%
Construction of buildings	34,981	7003	19%
Civil engineering	34,446	3983	16%
Wholesale trade, except of motor vehicles and motorcycles	30,964	22640	19%
Land transport and transport via pipelines	29,763	9736	24%
Legal and accounting activities	29,304	27698	95%
Specialised construction activities	29,187	11974	11%
Wholesale and retail trade and repair of motor vehicles and motorcycles	29,143	12339	45%
Manufacture of fabricated metal products, except machinery and equipment	28,438	5564	19%
Human health activities	28,390	33159	16%
Warehousing and support activities for transportation	27,801	11203	18%
Source: EMSI Analyst			

4.6 Future Demand for Labour

Working Futures 2017-2027 (a model commissioned by Government from the Institute of Employment Research at Warwick University) is a quantitative assessment of future employment prospects for UK and is the most comprehensive and detailed model of the UK labour market available. It projects the future size and shape of the labour market by considering employment prospects by industry, occupation, qualification level, gender and employment status. Its main focus has been to develop quantitative projections, concentrating on anticipating changing skill needs (as measured by occupation and formal qualifications), in the context of changes in general economic circumstances. These assessments are based on a well-established labour market model that provides consistent results across industry sectors and geographic areas, together with procedures to develop projections by skill, covering both demand and supply. The core purpose of Working Futures is to inform policy development and strategy around skills, careers and employment.

Working Futures considers demand for labour driven by two factors: growth demand and replacement demand. Growth demand is the demand for labour because of the overall volume

employed in an occupational sector growing (or declining). Replacement demand is the demand for labour arising from people leaving employment in the sector (eg through retirement). In general, an older age profile in an occupational sector will give rise to higher levels of replacement demand.

At the best of times, a ten-year labour market forecasting model will not consistently deliver accurate forecasts across its many dimensions. This is even more so of a model which was published a month before the declaration of a global pandemic by the World Health Organisation and in a Brexit transition year.

The full impact of Covid-19 on the Labour Market remains unknown. It is widely thought that there will be a very significant labour market downturn; that a number of previously observed trends are likely to be accelerated (eg automation or town centre decline); and that changes to working practices (eg working from home) may become embedded. The pandemic has almost certainly invalidated a central assumption of the Working Futures forecast – that there will be slow but steady GDP growth of 1.1% per annum between 2017 and 2027.

Working Futures also makes the following assumptions about Brexit:

- there is no “cliff-edge” moment, as the UK obtains a transitional deal with the EU;
- the UK agrees a bespoke deal with the EU;
- the UK secures an ability to reduce EU migration;
- the UK can remain in the single market for goods but not services (so there is no longer financial services passporting); and
- there are likely to be some continued payments for access to the EU from the UK

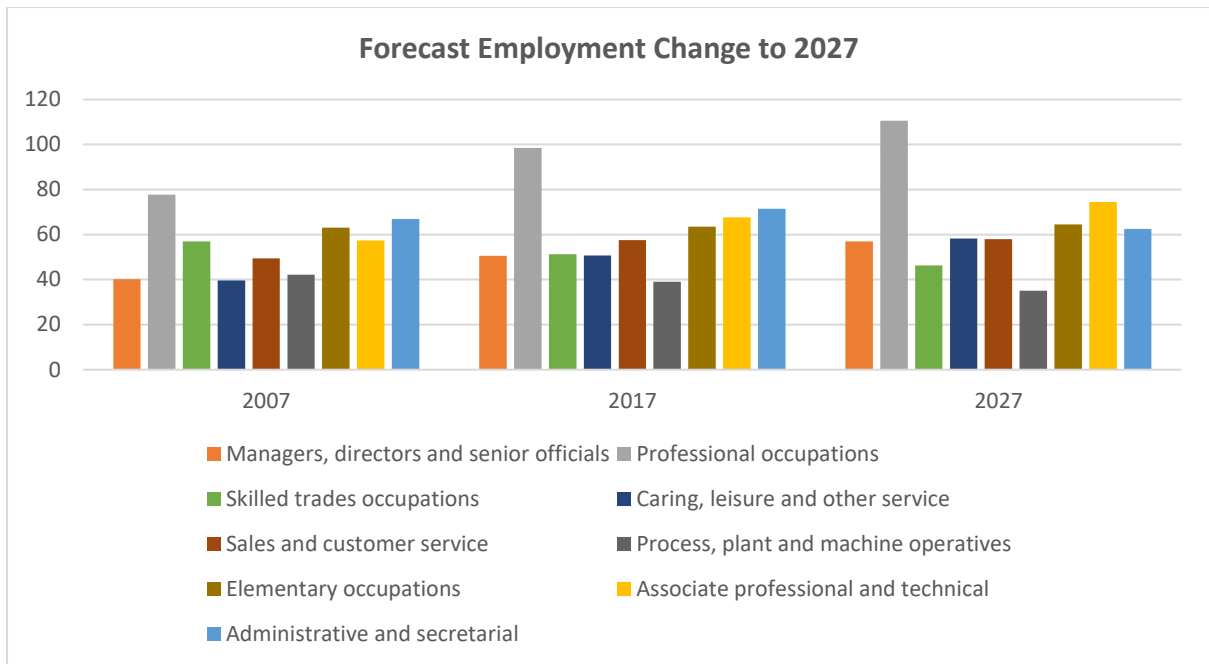
It remains to be seen which, if any, of these assumptions will hold.

However, Working Futures has not lost all its utility. Over time it may be useful as a statement of a pandemic-free counterfactual. What is also useful in the Working Futures model is its forecasting of levels of replacement demand. Even if some occupational areas decline, they will continue to generate replacement demand and the pandemic is likely to have a limited impact on the scale of replacement demand in an occupational sector. It is on this basis that Working Futures data is reported.

The Chart below illustrates the Working Futures forecast change to occupational employment (1 digit SOC) between 2017 and 2027 in Cheshire and Warrington. It can be seen from this that the forecast is for growth in the following occupational areas:

- Managers, Directors and Senior Officials
- Professional Occupations
- Caring, Leisure and Other Service Occupations
- Associate Professional and Technical Occupations

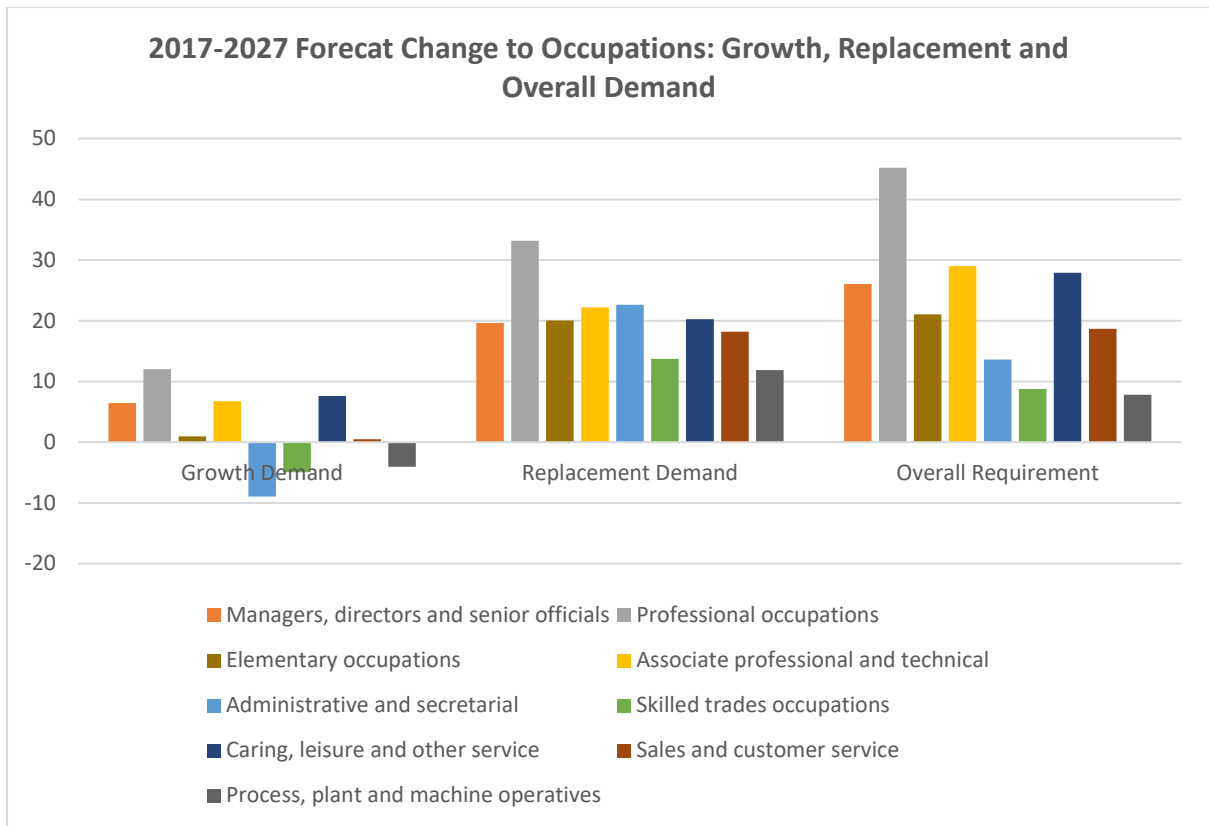
Decline in the overall numbers employed is forecast for Skilled Trades; Process, Plant and Machine Operatives; and Administrative and Secretarial Occupations.



As noted in the discussion above, Working Futures provides forecasts for both Growth (“expansion”) demand for labour and replacement demand for labour. The chart below illustrates these different components of the forecast demand for labour. Replacement demand is driven by the numbers that leave an occupation and need to be replaced (eg because of retirement). It can be seen from the chart below that in Cheshire and Warrington, replacement demand invariably drives demand for labour at a higher rate than the growth (or decline) of the overall number of jobs in an occupation.

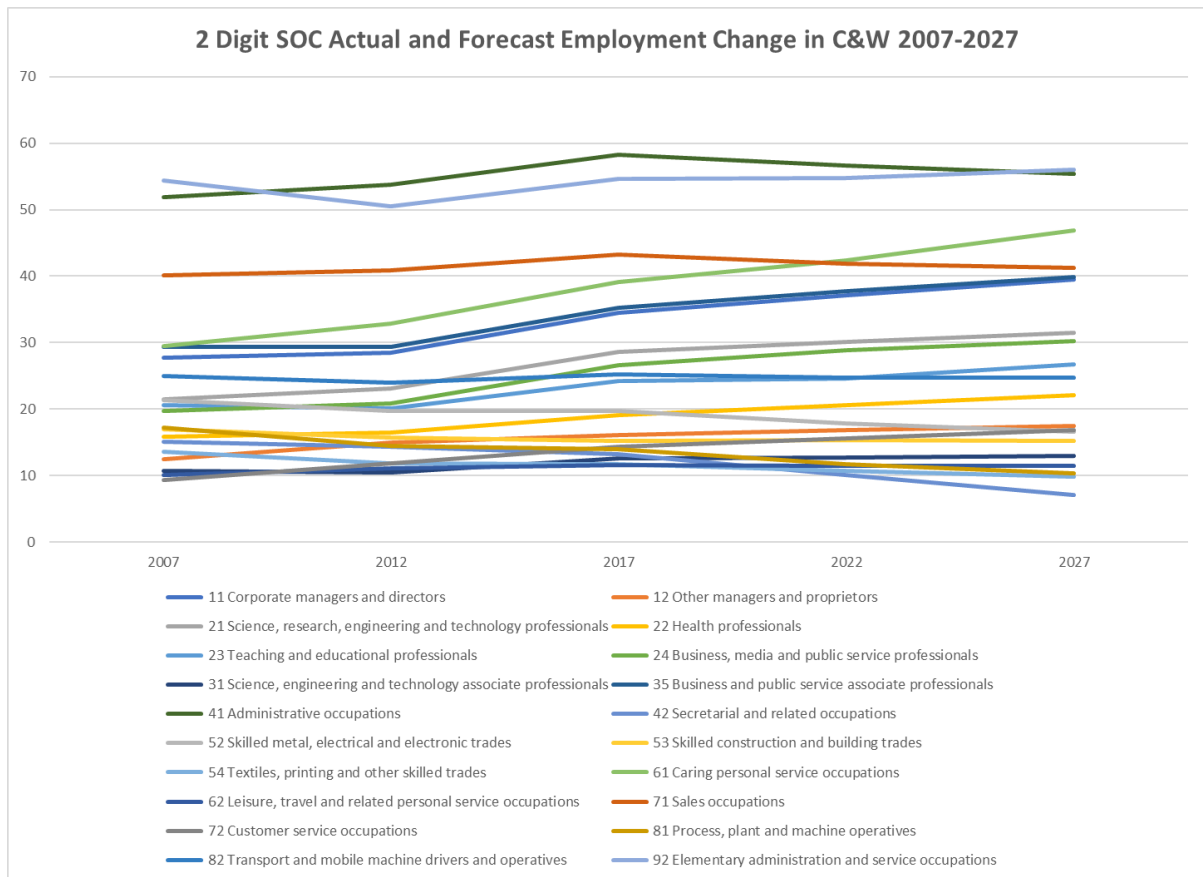
For every 1-digit occupational area, replacement demand to 2027 will exceed 10,000 jobs in Cheshire and Warrington. Replacement demand will exceed 20,000 in the following occupations:

- Professional Occupations
- Caring, Leisure and Other Service Occupations
- Associate Professional and Technical Occupations
- Elementary Occupations
- Caring, Leisure and Other Service Occupations
- Administrative and Secretarial Occupations



The chart below disaggregates the overall Working Futures forecast down to 2-digit SOC occupations in Cheshire and Warrington. It can be seen from this that the model forecasts significant increases for some occupational types including:

- Caring and Personal Service Occupations
- Business and Public Service Associate Professionals
- Corporate Managers and Directors
- Science, Engineering and Technology Associate Professionals
- Business, Media and Public Service Professionals
- Teaching and Education Professionals
- Health Professionals



The following occupations have been excluded as they employed fewer than 10,000 people in Cheshire and Warrington in 2017:

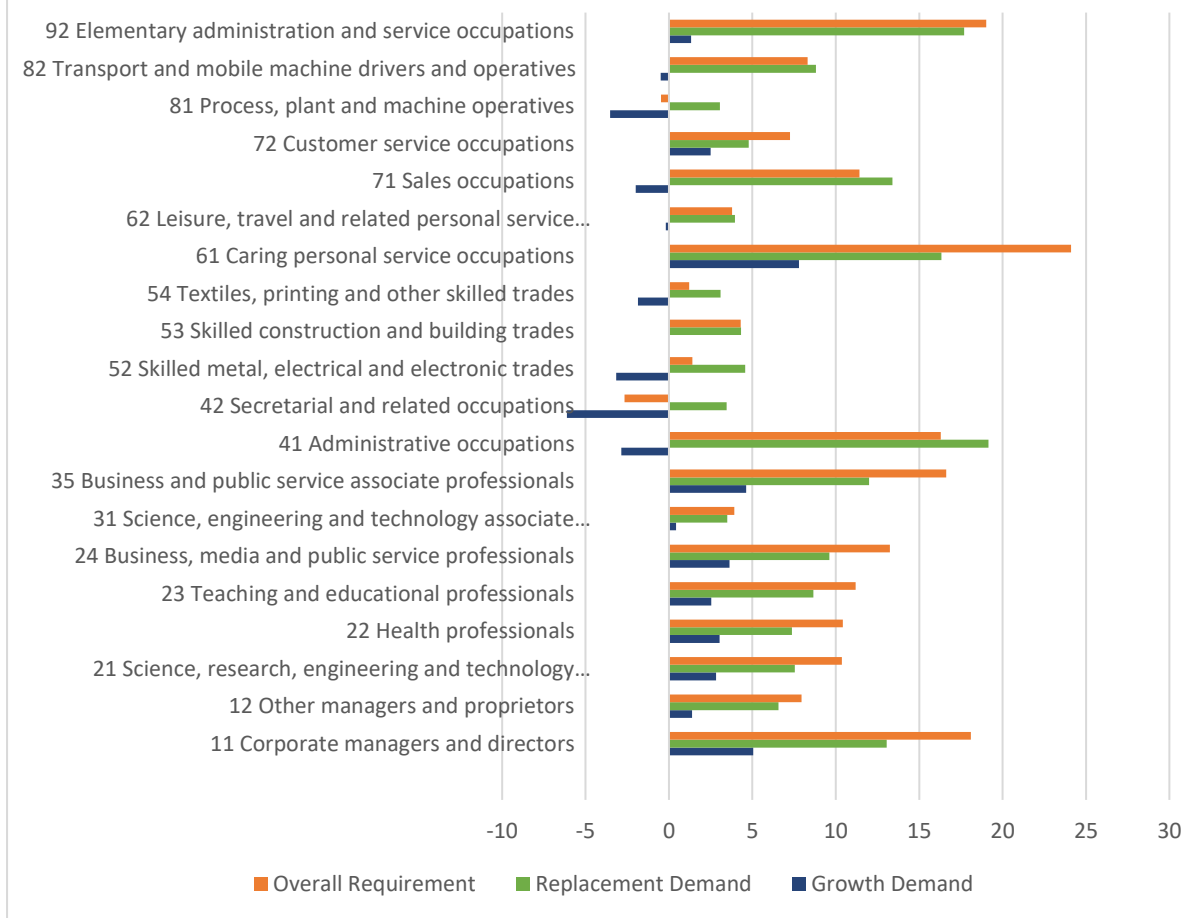
- 32 Health and social care associate professionals
- 33 Protective service occupations
- 34 Culture, media and sports occupations
- 91 Elementary trades and related occupations

As noted above, Brexit and Covid-19 has largely invalidated the Growth Demand elements of the Working Futures forecasts. However, the forecast for replacement demand to be experienced in the different occupational areas will be more reliable. The chart below provides information on the forecasts for replacement demand for the 2-digit SOC areas in Cheshire and Warrington (green bars).

Replacement demand to 2027 in Cheshire and Warrington is forecast to exceed 10,000 jobs in the following occupational areas:

- Elementary administration and service occupations
- Sales occupations
- Caring personal service occupations
- Administrative occupations
- Corporate managers and directors

2 Digit Soc Forecast Replacement Demand, Growth Demand and Overall Requirement 2017-2027 in C&W

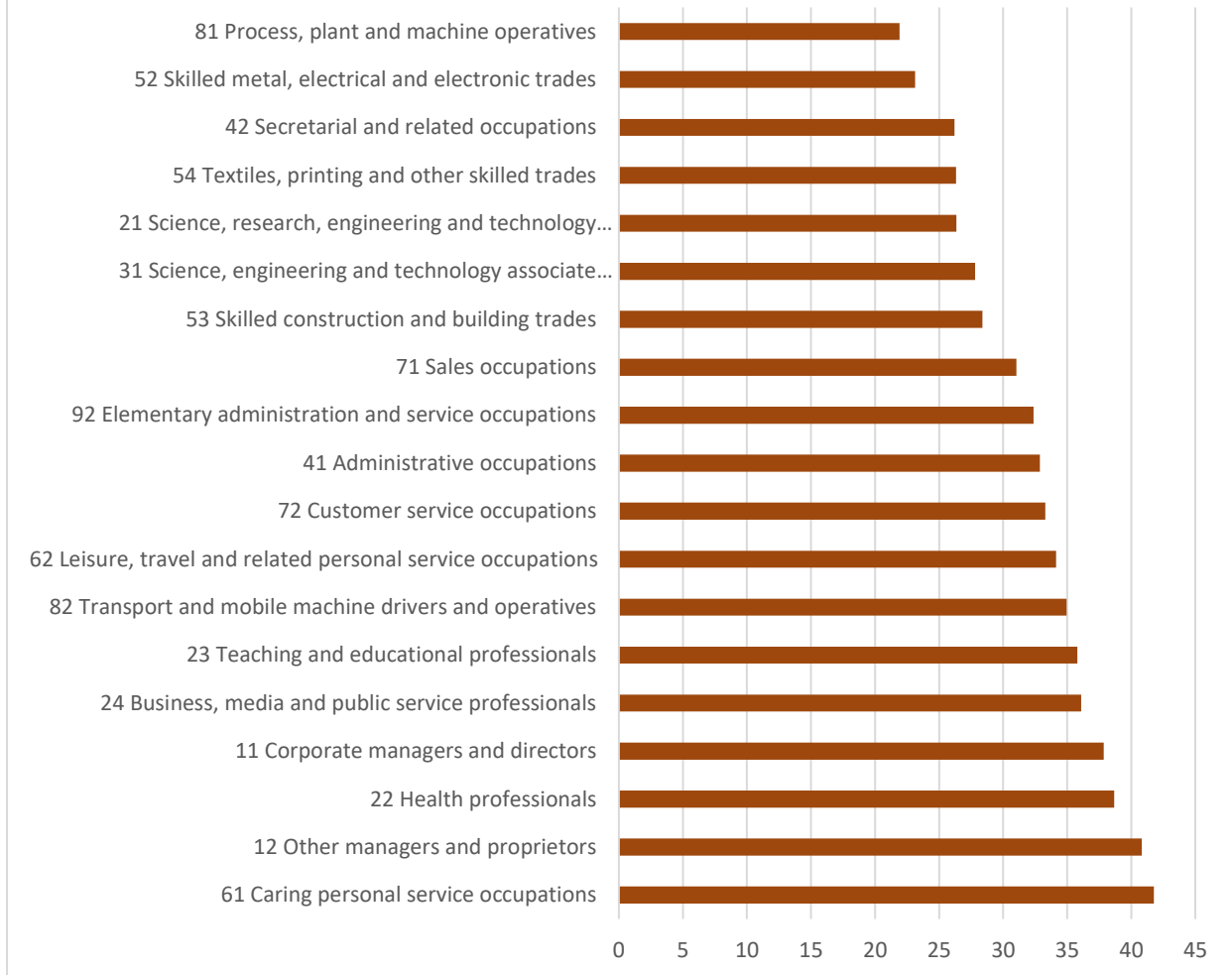


The chart below presents information on the percentage of the current workforce in each 2-digit occupation it is forecast will need to be replaced because of replacement demand in that occupation. Levels of replacement demand are expected to vary significantly for different occupations, ranging from 22% to 42%. Occupational areas that are expected to experience replacement demand more than 35% are:

- Caring personal service occupations
- Other managers and proprietors
- Health professionals
- Corporate managers and directors
- Business, media and public service professionals
- Teaching and educational professionals
- Transport and mobile machine drivers and operatives

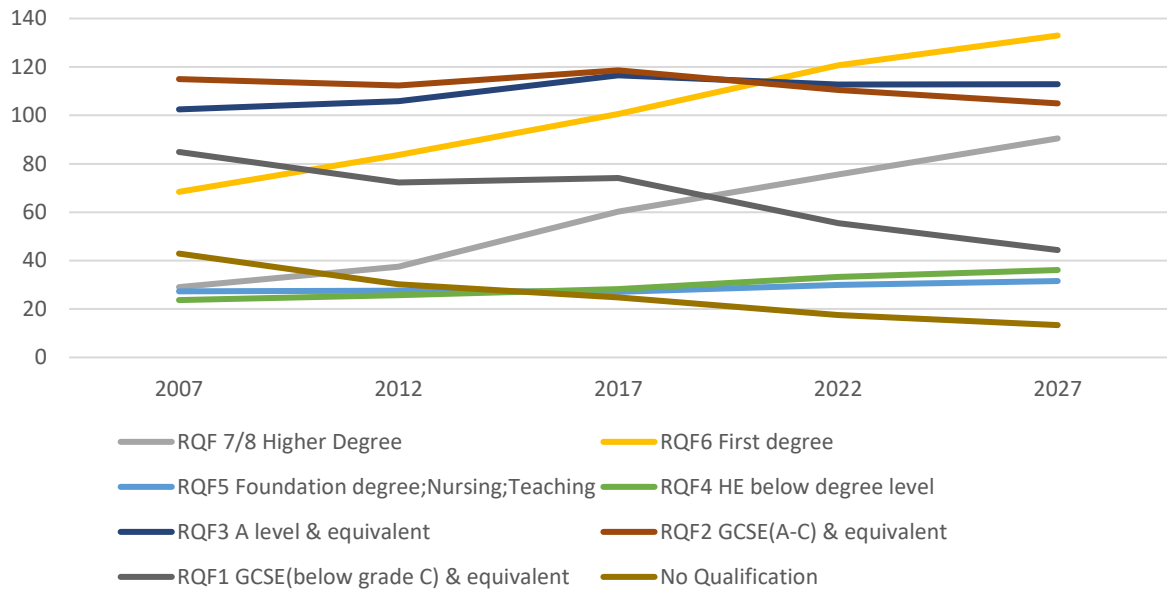
Only the last of these is exposed to high risk of automation.

2017-2027 % Replacement Demand in C&W by 2-digit SOC



Working Futures also provides a forecast for the overall demand for different skill levels in the Cheshire and Warrington labour market. The chart below provides the forecast for different skill level requirements to 2027. Demand for skills at Levels 4 to 8 (higher technical to doctorate) are forecast to significantly increase, demand for skills at Level 3 are forecast to be stable, and demand for skills below Level 3 are forecast to decline.

C&W Actual and Forecast Demand for Skill Levels 2007-2027



5. Occupations in Cheshire and Warrington

This section of the report considers in more detail the profile of the following individual occupational sectors in Cheshire and Warrington:

- Managers, Directors and Senior Officials
- Professional Occupations
- Associate Professional and Technical Occupations
- Administrative and Secretarial Occupations
- Skilled Trades Occupations
- Caring, Leisure and Other Service Occupations
- Sales and Customer Service Occupations
- Process, Plant and Machine Operatives
- Elementary Occupations

5.1 Profile of the “Managers, Directors and Senior Officials” Sector in Cheshire and Warrington

5.1.1 Composition of the “Managers, Directors and Senior Officials” Occupational Sector

The occupational category of “Managers, Directors and Senior Officials” is made up of the two subcategories:

- Corporate Managers and Directors
- Other Managers and Proprietors

In 2020, these occupations accounted for 47,050 jobs in Cheshire and Warrington. Compared with the national position, there were slightly fewer “Corporate Managers and Directors” and “Other Managers and Proprietors” in the Cheshire and Warrington labour market.

Between 2015 and 2020 there was an overall 6% growth of these type of jobs in Cheshire and Warrington, driven by an 8% growth in “Corporate managers and Directors” jobs in this period.

In 2020, there were 35,099 “Corporate Managers and Directors” jobs and 11,951 “Other Managers and Proprietors” jobs. Median wages for “Corporate Managers and Directors” were £45,116. By contrast, the median wages for “Other Managers and Proprietors” jobs were £28,495 which is comparable with the median wages for all jobs in Cheshire and Warrington of £28,700.

Both occupational areas have a relatively low exposure to the risk of automation, with “Other Managers and Proprietors” having the highest score of the two, with 14% on the EMSI Automation Index.

“Managers, Directors and Senior Officials” in Cheshire and Warrington Key Data					
	2020 Jobs	2015 - 2020 % Change	Automation Index	2020 Location Quotient	Median Wages
Corporate Managers and Directors	35099	8%	8%	0.98	45116
Other Managers and Proprietors	11951	-1%	14%	0.94	28495

Source: EMSI Analyst

5.1.2 Industries that Employ “Managers, Directors and Senior Officials”

The occupational category of “Managers, Directors and Senior Officials” is, by its nature, widely distributed across industrial sectors. This is demonstrated in the table below - 17 2-digit SIC sectors employed more than 1,000 people in this category.

Most of the industrial sectors in Cheshire and Warrington identified below saw a growth in the number employed in the occupational category of “Managers, Directors and Senior Officials” with the number employed in “Legal and accounting activities” more than doubling in this period. The largest decrease was seen in “Food and beverage service activities” which experienced a decrease of 16%.

Industries that Employ “Managers, Directors and Senior Officials”				
	Occupation Group Jobs in Industry (2020)	% Change (2015 - 2020)	% of Occupation Group in Industry (2019)	% of Total Jobs in Industry (2019)
Retail trade, except of motor vehicles and motorcycles	5,757	11%	12.2%	10.5%
Wholesale trade, except of motor vehicles and motorcycles	3,558	25%	7.5%	15.7%
Activities of head offices; management consultancy activities	2,912	31%	6.1%	21.3%
Food and beverage service activities	2,126	(16%)	4.6%	8.7%
Financial service activities, except insurance and pension funding	1,883	16%	4.0%	14.8%
Architectural and engineering activities; technical testing and analysis	1,636	29%	3.4%	11.1%
Legal and accounting activities	1,442	112%	3.0%	5.2%
Real estate activities	1,347	(5%)	2.9%	22.9%
Construction of buildings	1,313	13%	2.8%	18.8%
Computer programming, consultancy and related activities	1,238	(3%)	2.7%	10.3%
Human health activities	1,227	15%	2.6%	3.7%
Public administration and defence; compulsory social security	1,211	(2%)	2.6%	8.3%
Wholesale and retail trade and repair of motor vehicles and motorcycles	1,103	43%	2.3%	9.0%
Accommodation	1,063	(0%)	2.2%	13.3%
Employment activities	1,062	25%	2.2%	6.1%
Specialised construction activities	1,033	6%	2.2%	8.7%
Residential care activities	1,000	(6%)	2.1%	8.3%
Source: EMSI Analyst				

5.1.3 Recent and Current Employer Demand for “Managers, Directors and Senior Officials”

The Table below shows the ‘postings intensity’ for job postings in the “Managers, Directors and Senior Officials” category between Jan 2016 and Dec 2019. The “posting intensity” for all occupations in this period was 5:1, meaning that for every 5 postings there was 1 unique job posting. Where an occupational category has a high postings intensity, this indicates that employers are having more difficulty in filling vacancies in that type of job. It can be seen from the table below that vacancies for “Corporate Managers and Directors” were slightly harder to fill than average, and the difficulty in filling vacancies for “Other Managers and Proprietors” was average.

Average Posting Intensity (Jan 2016 - Dec 2019) for Managers, Directors and Senior Officials in C&W

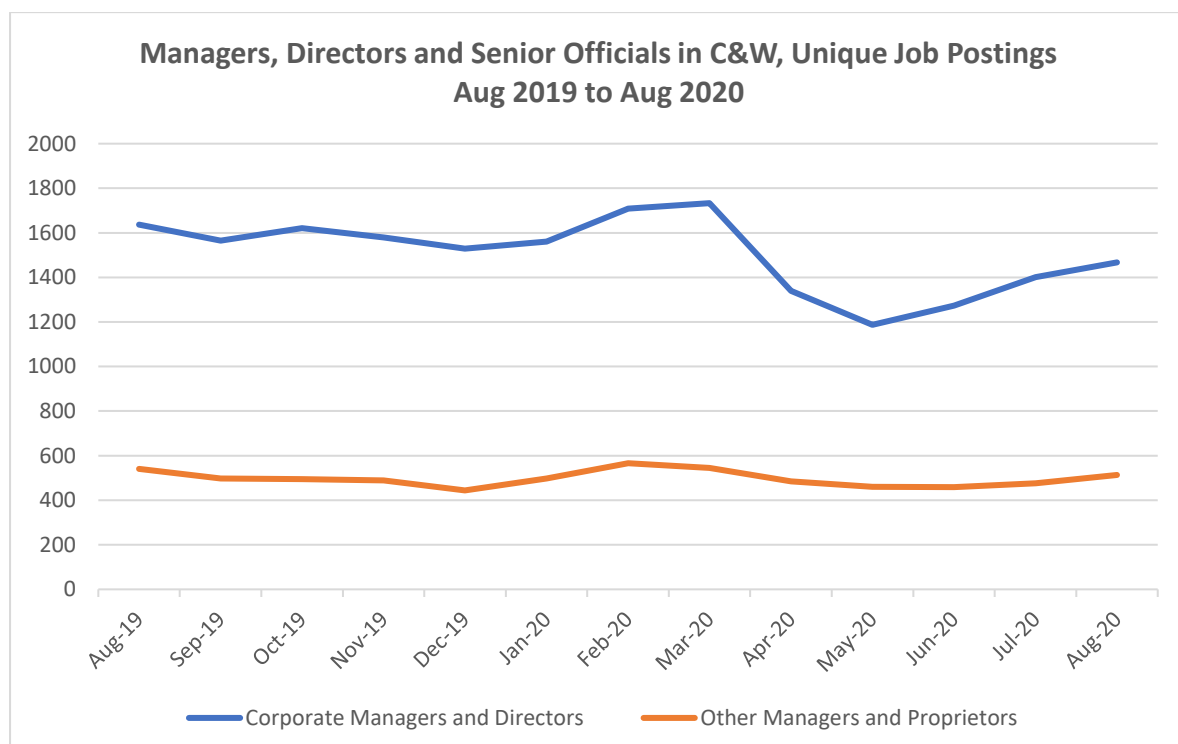
Corporate Managers and Directors	6 : 1
Other Managers and Proprietors	5 : 1
Total Across All Occupations	5 : 1

Source: EMSI Analyst

The chart below shows the volume of job postings captured by EMSI in Cheshire and Warrington between Aug 2019 and Aug 2020 for the two occupational subcategories that make up “Managers, Directors and Senior Officials”. The onset of the pandemic can be seen in the decline in Job Postings between February 2020 and June 2020. Unique postings across all occupations declined by 44% in this period. By comparison, postings for “Corporate Managers and Directors” declined by 25% and postings for “Other Managers and Proprietors” declined by 19%.

Following the easing of lockdown, volumes of job posting for both categories have started to rise.

August 2020 postings are down by 21% across all occupations compared to August 2019. By comparison, postings for “Corporate Managers and Directors” were down 10% over this time period, and postings for “Other Managers and Proprietors” were down 5%.



5.1.4 Hard to Fill Vacancies

The ease with which an employer can fill types of role can be measured by the ‘average posting intensity’ of job postings. The postings intensity is the number of times a vacancy is posted on the internet. It is a measure generated by EMSI. It is a reasonable inference that the more times a role is posted, the more difficult it is to fill. The average posting intensity for a role in Cheshire and Warrington between 2016 and 2020 was 5:1. An analysis of 4-digit SOC occupations in the “Managers, Directors and Senior Officials” category shows that six occupation types were harder to fill than average: Managers and directors in storage and warehousing; Restaurant and catering establishment managers and proprietors; Residential, day and domiciliary care managers and proprietors; Financial managers and directors; Purchasing managers and directors; and Publicans and managers of licensed premises. The “Managers and directors in storage and warehousing” had a high posting intensity of 10:1.

Managers, Directors and Senior Officials Hard to Fill Vacancies 2016-2020		
Occupation	Avg. Posting Intensity (Jan 2016 - Aug 2020)	Median Annual Wages (£)
Managers and directors in storage and warehousing	10 : 1	27747
Restaurant and catering establishment managers and proprietors	8 : 1	23296
Residential, day and domiciliary care managers and proprietors	6 : 1	34902
Financial managers and directors	6 : 1	55557
Purchasing managers and directors	6 : 1	54205
Publicans and managers of licensed premises	6 : 1	24939
Source: EMSI Analyst (excludes occupations with fewer than 300 unique postings)		

5.1.5 Future Employer Demand for “Managers, Directors and Senior Officials”

Working Futures 2017-2027 (a model commissioned by Government from the Institute of Employment Research at Warwick University) is a quantitative assessment of future employment prospects for UK and is the most comprehensive and detailed model of the UK labour market available. It projects the future size and shape of the labour market by considering employment prospects by industry, occupation, qualification level, gender and employment status. Its main focus has been to develop quantitative projections, concentrating on anticipating changing skill needs (as measured by occupation and formal qualifications), in the context of changes in general economic circumstances. These assessments are based on a well-established labour market model that provides consistent results across industry sectors and geographic areas, together with procedures to develop projections by skill, covering both demand and supply. The core purpose of Working Futures is to inform policy development and strategy around skills, careers and employment.

Working Futures considers demand for labour driven by two factors: growth demand and replacement demand. Growth demand is the demand for labour as a result of the overall volume employed in an occupational sector growing (or declining). Replacement demand is the demand for labour arising from people leaving employment in the sector (eg through retirement). In general, an older age profile in an occupational sector will give rise to higher levels of replacement demand.

At the best of times, a ten-year labour market forecasting model will not consistently deliver accurate forecasts across its many dimensions. This is even more so of a model which was published a month before the declaration of a global pandemic by the World Health Organisation. The full

impact of Covid-19 on the Labour Market remains to be seen. It is widely thought that there will be a very significant labour market downturn; that a number of previously observed trends are likely to be accelerated (eg automation or town centre decline); and that changes to working practices (eg working from home) may become embedded.

However, the Working Futures model has not lost all its utility. Over time it may be useful as a statement of a pandemic-free counterfactual. What is also useful in the Working Futures model is its forecasting of levels of replacement demand. Even if some occupational areas decline, they will continue to generate replacement demand and the pandemic is likely to have a limited impact on the scale of replacement demand in an occupational sector. It is on this basis that Working Futures data is reported.

The Table below reports the Working Futures forecasting to 2027 for Managers, Directors and Senior Officials in Cheshire and Warrington. Overall, the model outputs a forecast growth of over 12% in these occupations (an increase of 6,000 jobs). Most of the growth is forecast to be driven by an increase in Corporate Managers and Directors.

Actual and Forecast Employment Change for Managers, Directors and Senior Officials in C&W 2007 to 2027					
	2007	2012	2017	2022	2027
	Thousands				
Corporate Managers and Directors	28	28	34	37	40
Other Managers and Proprietors	13	15	16	17	17

Source: Working Futures 2017-2027, LEP Tables, IER

The Table below presents the Working Futures forecasts for growth and replacement demand to 2027 for Managers, Directors and Senior Officials in Cheshire and Warrington. For both occupational subcategories forecast replacement demand is significantly larger than forecast growth.

Replacement and Growth Demand in Managers, Directors and Senior Officials in C&W 2017-2027			
	Growth Demand	Replacement Demand	Overall
Corporate Managers and Directors	5	13	18
Other Managers and Proprietors	1	7	8

Source: Working Futures 2017-2027, LEP Tables, IER

5.2 “Professional Occupations” in Cheshire and Warrington

5.2.1 Composition of the “Professional Occupations” Sector

The “Professional Occupations” are made up of the following subcategories:

- Science, Research, Engineering and Technology Professionals
- Health Professionals
- Teaching and Educational Professionals
- Business, Media and Public Service Professionals

In 2020, these occupations accounted for 89,346 jobs in Cheshire and Warrington. Compared with the national position, “Science, Research, Engineering and Technology Professionals” and “Business, Media and Public Service Professionals” were slightly overrepresented in the Cheshire and

Warrington labour market, whereas “Health Professionals” and “Teaching and Educational Professionals” were slightly underrepresented.

Between 2015 and 2020 there was an overall 9% growth of these type of jobs in Cheshire and Warrington, with all subcategories growing apart from “Teaching and Education Professionals” which experienced a 1% decline in this period.

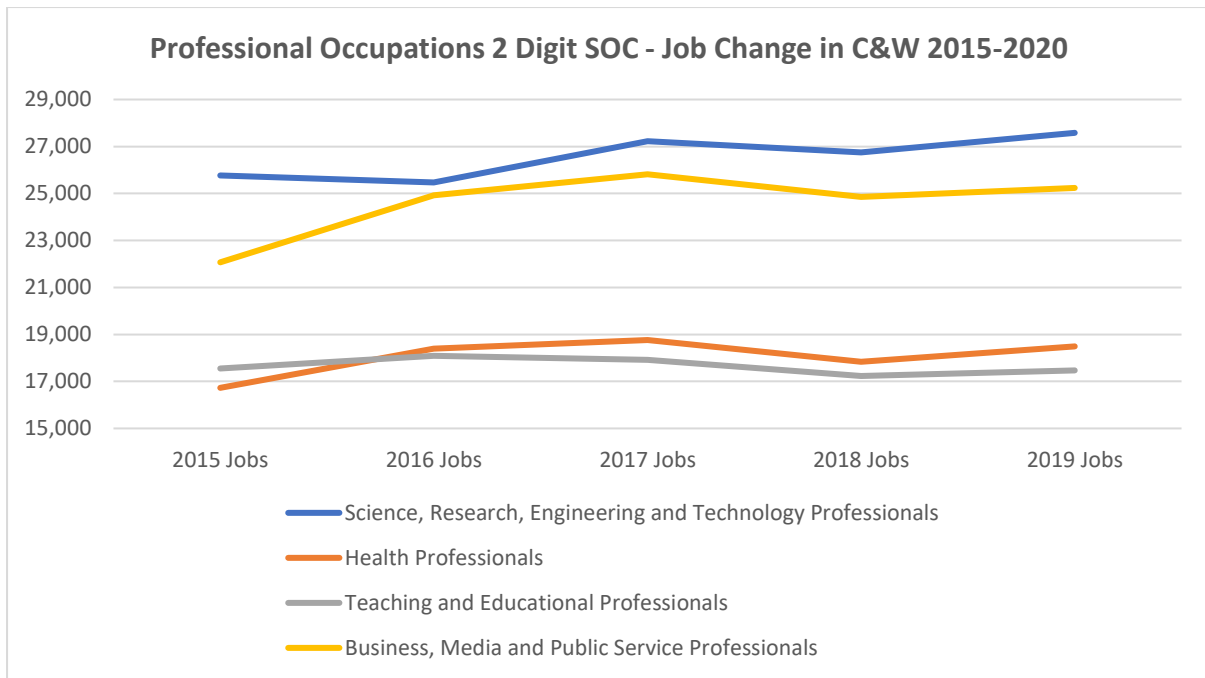
All subcategories of this occupational group employed over 17,000 people in 2020 in Cheshire and Warrington, with almost 28,000 employed as “Science, Research, Engineering and Technology Professionals”. All these occupational areas paid median wages above £40,000 with “Teaching and Educational Professionals” having the highest median wage of the group of £47,748.

All these occupational areas have a low exposure to the risk of automation, with “Business, Media and Public Service Professionals” having the highest score of 10% on the EMSI Automation Index.

Professional Occupations in C&W Key Data					
Description	2015 - 2020 % Change	Automation Index	2020 Location Quotient	2020 Jobs	Median Wages
Science, Research, Engineering and Technology Professionals	8%	2.5%	1.08	27,778	£43,348.16
Health Professionals	11%	8.2%	0.88	18,581	£42,672.28
Teaching and Educational Professionals	(1%)	5.7%	0.79	17,447	£47,748.03
Business, Media and Public Service Professionals	16%	10.0%	1.02	25,540	£41,024.36

Source: EMSI Analyst

The graph below shows the change in the number employed by year, between 2015 and 2020 in the subcategories of Professional Occupations. “Science, Research, Engineering and Technology Professionals” grew by 8% in this period, “Health Professionals” by 11%, and “Business, Media and Public Service Professionals” by 16%. “Teaching and Educational Professionals” declined slightly by 1%.



Source: EMSI Analyst

5.2.2 Industries that Employ “Professional Occupations”

In 2019, 62.3% of “Professional Occupations” in Cheshire and Warrington were employed in the ten industry categories in the table below. Professional Occupations accounted for more than half of all employment in the following industrial sectors:

- Hospital activities
- Computer programming, consultancy and related activities
- Secondary education
- Research and experimental development on natural sciences and engineering

Most of the industrial sectors in Cheshire and Warrington identified below saw a growth in the number employed in “Professional Occupations” with the number employed in “Accounting, bookkeeping and auditing activities; tax consultancy” more than doubling in this period and the number employed in “Research and experimental development on natural sciences and engineering” almost doubling.

Industries that Employ Professional Occupations in Cheshire and Warrington				
	Occupation Group Jobs in Industry (2020)	% Change (2015 - 2020)	% of Occupation Group in Industry (2019)	% of Total Jobs in Industry (2019)
Hospital activities	12,926	17%	14.4%	53.5%
Computer programming, consultancy and related activities	7,254	(2%)	8.2%	60.2%
Primary education	6,702	(6%)	7.6%	43.4%
Secondary education	6,553	(0%)	7.4%	54.5%
Accounting, bookkeeping and auditing activities; tax consultancy	6,330	117%	6.8%	26.4%
Architectural and engineering activities and related technical consultancy	5,825	31%	6.4%	45.4%
Management consultancy activities	3,250	40%	3.5%	30.6%
Research and experimental development on natural sciences and engineering	2,645	83%	2.9%	58.3%
Temporary employment agency activities	2,404	(13%)	2.8%	20.0%
Other human health activities	1,973	14%	2.2%	46.4%
Source: EMSI Analyst				

5.2.3 Recent and Current Employer Demand for “Professional Occupations”

The Table below shows the ‘postings intensity’ for job postings in “Professional Occupations” between Jan 2016 and Dec 2019. The “posting intensity” for all occupations in this period was 5:1, meaning that for every 5 postings there was 1 unique job posting. Where an occupational category has a high postings intensity, this indicates that employers are having more difficulty in filling vacancies in that type of job. It can be seen from the table below that vacancies for “Science, Research, Engineering and Technology Professionals” were slightly harder to fill than average; the difficulty in filling vacancies for “Health Professionals” and “Business, Media and Public Service Professionals” was average; and it was slightly easier than average to fill vacancies for “Teaching and Education Professionals”.

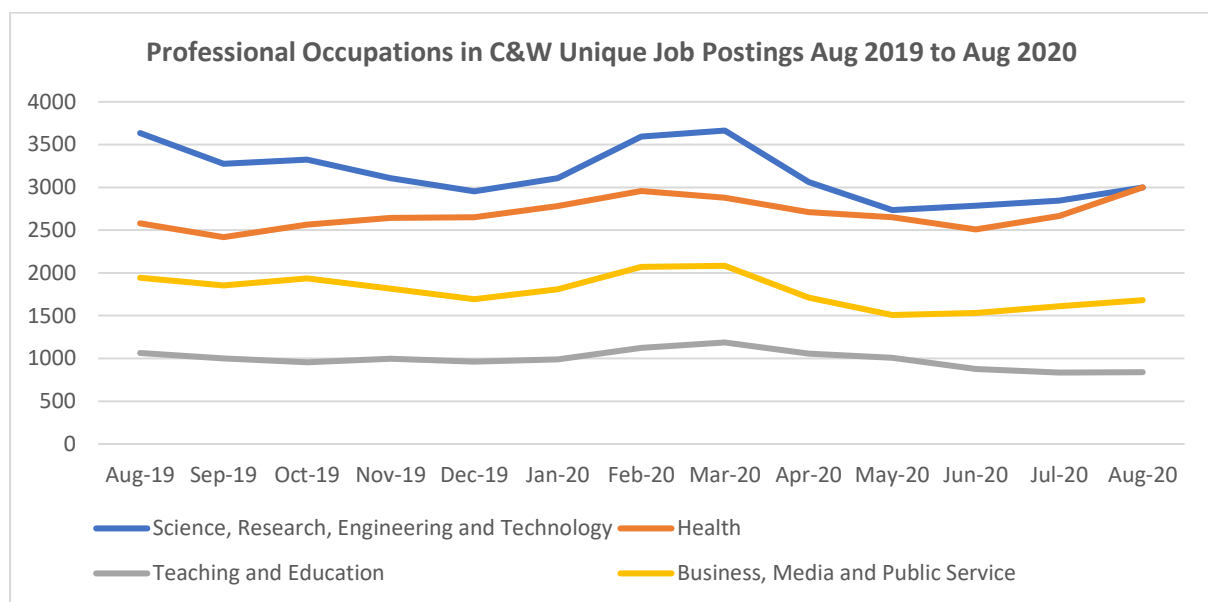
Average Posting Intensity (Jan 2016 - Dec 2019) for Professional Occupations in C&W	
Science, Research, Engineering and Technology Professionals	6 : 1
Health Professionals	5 : 1
Teaching and Educational Professionals	4 : 1
Business, Media and Public Service Professionals	5 : 1
Total Across All Occupations	5 : 1
Source: EMSI Analyst	

The chart below shows the volume of job postings captured by EMSI in Cheshire and Warrington between Aug 2019 and Aug 2020 for the occupational subcategories that make up “Professional

Occupations”. The onset of the pandemic can be seen in the decline in Job Postings between February 2020 and June 2020. Unique postings across all occupations declined by 44% in this period. By comparison, postings for “Science, Research, Engineering and Technology Professionals” declined by 22%; perhaps surprisingly, postings for “Health Professionals” declined by 15%; postings for “Teaching and Educational Professionals” declined by 22%; and postings for “Business, Media and Public Service Professionals” declined by 26%.

Following the easing of lockdown, volumes of job posting for “Professional Occupations” have mostly started to rise (although not for “Teaching and Educational Professionals”).

August 2020 postings are down by 21% across all occupations compared to August 2019. By comparison, postings for “Science, Research, Engineering and Technology Professionals” are down 17% over this time period; postings for “Teaching and Educational Professionals” are down 21%; and postings for “Business, Media and Public Service Professionals” are down 8%. However, postings for “Health Professionals” have increased by 16% comparing August 2020 to August 2019.



5.2.4 Hard to Fill Vacancies

The ease with which an employer can fill types of role can be measured by the ‘average posting intensity’ of job postings. The postings intensity is the number of times a vacancy is posted on the internet. It is a measure generated by EMSI. It is a reasonable inference that the more times a role is posted, the more difficult it is to fill. The average posting intensity for a role in Cheshire and Warrington between 2016 and 2020 was 5:1. An analysis of 4-digit SOC occupations in the “Professional Occupations” category shows that ten occupation types were harder to fill than average. Four occupations that had more than 1,000 unique postings had a posting of 7:1 or higher: Programmers and software development professionals; IT business analysts, architects and systems designers; Web design and development professionals; and Quantity surveyors. The hardest type of role to fill in this category was “Programmers and software development professionals” which had a 8:1 posting intensity.

Professional Occupations Hard to Fill Vacancies 2016-2020		
Occupation	Avg. Posting Intensity (Jan 2016 - Aug 2020)	Median Annual Wages
Programmers and software development professionals	8 : 1	43555
IT business analysts, architects and systems designers	7 : 1	44907
Web design and development professionals	7 : 1	32406
Quantity surveyors	7 : 1	45448
Design and development engineers	6 : 1	44886
Production and process engineers	6 : 1	45011
Information technology and telecommunications professionals n.e.c.	6 : 1	41746
Nurses	6 : 1	38563
Chartered and certified accountants	6 : 1	42494
Management consultants and business analysts	6 : 1	37190
Source: EMSI Analyst (excludes occupational areas with fewer than 1,000 postings)		

5.2.5 Future Employer Demand for Professional Occupations

Working Futures 2017-2027 (a model commissioned by Government from the Institute of Employment Research at Warwick University) is a quantitative assessment of future employment prospects for UK and is the most comprehensive and detailed model of the UK labour market available. It projects the future size and shape of the labour market by considering employment prospects by industry, occupation, qualification level, gender and employment status. Its main focus has been to develop quantitative projections, concentrating on anticipating changing skill needs (as measured by occupation and formal qualifications), in the context of changes in general economic circumstances. These assessments are based on a well-established labour market model that provides consistent results across industry sectors and geographic areas, together with procedures to develop projections by skill, covering both demand and supply. The core purpose of Working Futures is to inform policy development and strategy around skills, careers and employment.

Working Futures considers demand for labour driven by two factors: growth demand and replacement demand. Growth demand is the demand for labour as a result of the overall volume employed in an occupational sector growing (or declining). Replacement demand is the demand for labour arising from people leaving employment in the sector (eg through retirement). In general, an older age profile in an occupational sector will give rise to higher levels of replacement demand.

At the best of times, a ten-year labour market forecasting model will not consistently deliver accurate forecasts across its many dimensions. This is even more so of a model which was published a month before the declaration of a global pandemic by the World Health Organisation. The full

impact of Covid-19 on the Labour Market remains to be seen. It is widely thought that there will be a very significant labour market downturn; that a number of previously observed trends are likely to be accelerated (eg automation or town centre decline); and that changes to working practices (eg working from home) may become embedded.

However, Working Futures has not lost all of its utility. Over time it may be useful as a statement of a pandemic-free counterfactual. What is also useful in the Working Futures model is its forecasting of levels of replacement demand. Even if some occupational areas decline, they will continue to generate replacement demand and the pandemic is likely to have a limited impact on the scale of replacement demand in an occupational sector. It is on this basis that Working Futures data is reported.

The Table below reports the Working Futures forecasting to 2027 for the Professional Occupations in Cheshire and Warrington. Overall, the model outputs a forecast growth of over 12% in these occupations (an increase of 12,000 jobs). Each subsector is forecast to grow by 2 to 4 thousand jobs.

Actual and Forecast Employment Change for Professional Occupations in C&W 2007 to 2027					
	2007	2012	2017	2022	2027
	Thousands				
Science, research, engineering and technology professionals	21	23	29	30	31
Health professionals	16	16	19	21	22
Teaching and educational professionals	21	20	24	25	27
Business, media and public service professionals	20	21	27	29	30

Source: Working Futures 2017-2027, LEP Tables, IER

The Table below presents the Working Futures forecasts for growth and replacement demand to 2027 in Professional Occupations in Cheshire and Warrington. In all cases forecast replacement demand is two or three times larger than forecast growth. The highest levels of replacement demand are forecast to be for “Business, media and public service professionals” at 10,000.

Replacement and Growth Demand in Professional Occupations in C&W 2017-2027			
	Growth Demand	Replacement Demand	Overall
Science, research, engineering and technology professionals	3	8	10
Health professionals	3	7	10
Teaching and educational professionals	3	9	11
Business, media and public service professionals	4	10	13

Source: Working Futures 2017-2027, LEP Tables, IER

5.3 Profile of Associate Professional Occupations in Cheshire and Warrington

5.3.1 Composition of the “Associate Professionals” Sector

The “Associate Professional Occupations” sector is made up of the following subcategories:

- Science, Engineering and Technology Associate Professionals
- Health and Social Care Associate Professionals
- Protective Service Occupations

- Culture, Media and Sports Occupations
- Business and Public Service Associate Professionals

In 2020, these occupations accounted for 66,287 jobs in Cheshire and Warrington. Compared with the national position, “Business and Public Service Associate Professionals” are slightly overrepresented in the Cheshire and Warrington labour market, whereas all the other subcategories are slightly underrepresented.

Between 2015 and 2020 there was an overall 8% growth of these type of jobs in Cheshire and Warrington, with all sub-categories growing apart from “Health and Social Care Associate Professionals” which experienced a 2% decline in this period.

The “Business and Public Service Associate Professionals” category dominates the “Associate Professional Occupations” sector accounting for 65% of all employment therein. The next largest subcategory is “Science, Engineering and Technology Associate Professionals” which employs over 8,000 people – 13% of the sector. These occupational areas paid median wages between £26,000 and £36,000 with the highest paid subcategory being “Protective Service Occupations”.

All these occupational areas have a low to moderate exposure to the risk of automation, with “Protective Service Occupations” having the highest score of 22.5% on the EMSI Automation Index.

Associate Professional Occupations in C&W Key Data					
	2015 - 2020 % Change	Automation Index	2020 Location Quotient	2020 Jobs	Median Wages
Science, Engineering and Technology Associate Professionals	6%	17.3%	0.97	8,663	£29,466
Health and Social Care Associate Professionals	(2%)	18.0%	0.75	5,291	£26,074
Protective Service Occupations	8%	22.5%	0.89	3,788	£36,095
Culture, Media and Sports Occupations	3%	19.3%	0.87	5,622	£29,790
Business and Public Service Associate Professionals	11%	10.8%	1.05	42,923	£34,644
Source: EMSI Analyst					

5.3.2 Industries that Employ “Associate Professionals”

Whilst jobs in these occupations can be found in a wide range of industries, over half (50.6%) of the jobs in these occupations can be found in the nine industries in the table below. The 2-digit industry sector that has the highest number of jobs in these occupations is “Public administration and defence; compulsory social security” which accounts for 8.1% of all the jobs in these occupational groups.

Associate Professional Occupations account for over a fifth of all employment in the following industrial sectors:

- Public administration and defence; compulsory social security
- Activities of head offices; management consultancy activities
- Employment activities
- Financial service activities, except insurance and pension funding

Industries that Employ Associate Professional Occupations in Cheshire and Warrington				
	Occupation Group Jobs in Industry (2020)	% Change (2015 - 2020)	% of Occupation Group in Industry (2019)	% of Total Jobs in Industry (2019)
Public administration and defence; compulsory social security	5,353	3%	8.1%	36.6%
Legal and accounting activities	4,999	88%	7.3%	18.1%
Wholesale trade, except of motor vehicles and motorcycles	4,412	21%	6.6%	19.5%
Activities of head offices; management consultancy activities	3,865	31%	5.7%	28.2%
Retail trade, except of motor vehicles and motorcycles	3,548	19%	5.3%	6.4%
Employment activities	3,543	30%	5.3%	20.4%
Architectural and engineering activities; technical testing and analysis	2,869	35%	4.3%	19.3%
Financial service activities, except insurance and pension funding	2,667	14%	4.0%	21.0%
Education	2,618	2%	4.0%	7.5%

Source: EMSI Analyst

5.3.3 Recent and Current Employer Demand for “Associate Professionals”

The Table below shows the ‘postings intensity’ for job postings in “Associate Professional Occupations” between Jan 2016 and Dec 2019. The “posting intensity” for all occupations in this period was 5:1, meaning that for every 5 postings there was 1 unique job posting. Where an occupational category has a high postings intensity, this indicates that employers are having more difficulty in filling vacancies in that type of job. It can be seen from the table below that for most of these occupational categories the difficulty in filling vacancies was average; and it was easier than average to fill vacancies for “Health and Social Care Associate Professionals” and “Culture, Media and Sports Occupations”.

Average Posting Intensity (Jan 2016 - Dec 2019) for Associate Professional Occupations in C&W	
Science, Engineering and Technology Associate Professionals	5 : 1
Health and Social Care Associate Professionals	3 : 1
Protective Service Occupations	5 : 1
Culture, Media and Sports Occupations	4 : 1
Business and Public Service Associate Professionals	5 : 1
Total Across All Occupations	5 : 1

Source: EMSI Analyst

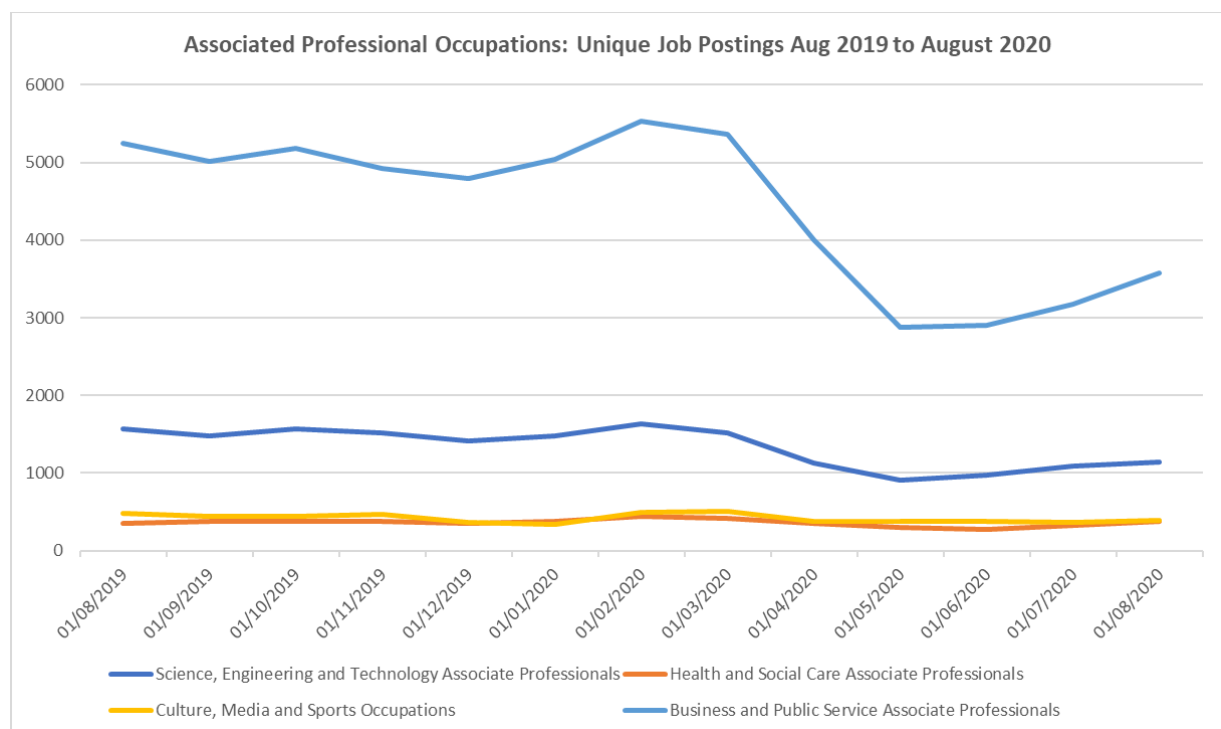
The chart below shows the volume of job postings captured by EMSI in Cheshire and Warrington between Aug 2019 and Aug 2020 for the occupational subcategories that make up “Associate

Professional Occupations”. Data for “Protective Service Occupations” has been omitted due to the low total volume of postings for such roles (only 298 unique postings between Jan 2016 and Dec 2019).

The onset of the pandemic can be seen in the sharp decline in Job Postings between February 2020 and June 2020. Posting across all occupations declined by 44% in this period. By comparison, postings for “Science, Engineering and Technology Associate Professionals” declined by 40%; “Health and Social Care Associate Professionals” declined by 39%; “Culture, Media and Sports Occupations” declined by 25%; and “Business and Public Service Associate Professionals” declined by 47%.

Following the easing of lockdown, volumes of job posting for all subcategories of “Associate Professional Occupations” have started to rise.

August 2020 postings are down by 21% across all occupations compared to August 2019. By comparison, postings for “Science, Engineering and Technology Associate Professionals” are down 27% over this period; “Culture, Media and Sports Occupations” are down by 19%; and “Business and Public Service Associate Professionals” are down by 32%. On the other hand, unique job postings for “Health and Social Care Associate Professionals” have increased by 8% between August 2019 and August 2020.



5.3.4 Hard to Fill Vacancies

The ease with which an employer can fill types of role can be measured by the ‘average posting intensity’ of job postings. The postings intensity is the number of times a vacancy is posted on the internet. It is a measure generated by EMSI. It is a reasonable inference that the more times a role is posted, the more difficult it is to fill. The average posting intensity for a role in Cheshire and Warrington between 2016 and 2020 was 5:1. An analysis of 4-digit SOC occupations in the “Associate Professionals” category shows that eight occupation types were harder to fill than

average. The hardest type of role to fill in this category was “IT user support technicians” which had a 7:1 posting intensity.

Associate Professional Occupations Hard to Fill Vacancies 2016-2020		
Occupation	Avg. Posting Intensity (Jan 2016 - Aug 2020)	Median Annual Wages
IT user support technicians	7 : 1	29120
Electrical and electronics technicians	6 : 1	34798.4
Science, engineering and production technicians n.e.c.	6 : 1	24814.4
Finance and investment analysts and advisers	6 : 1	35006.4
Taxation experts	6 : 1	43430.4
Financial accounts managers	6 : 1	36379.2
Health associate professionals n.e.c.	6 : 1	24689.6
Brokers	6 : 1	49441.6
Source: EMSI Analyst		

5.3.5 Future Employer Demand for Associate Professionals

Working Futures 2017-2027 (a model commissioned by Government from the Institute of Employment Research at Warwick University) is a quantitative assessment of future employment prospects for UK and is the most comprehensive and detailed model of the UK labour market available. It projects the future size and shape of the labour market by considering employment prospects by industry, occupation, qualification level, gender and employment status. Its main focus has been to develop quantitative projections, concentrating on anticipating changing skill needs (as measured by occupation and formal qualifications), in the context of changes in general economic circumstances. These assessments are based on a well-established labour market model that provides consistent results across industry sectors and geographic areas, together with procedures to develop projections by skill, covering both demand and supply. The core purpose of Working Futures is to inform policy development and strategy around skills, careers and employment.

Working Futures considers demand for labour driven by two factors: growth demand and replacement demand. Growth demand is the demand for labour as a result of the overall volume employed in an occupational sector growing (or declining). Replacement demand is the demand for labour arising from people leaving employment in the sector (eg through retirement). In general, an older age profile in an occupational sector will give rise to higher levels of replacement demand.

At the best of times, a ten-year labour market forecasting model will not consistently deliver accurate forecasts across its many dimensions. This is even more so of a model which was published a month before the declaration of a global pandemic by the World Health Organisation. The full impact of Covid-19 on the Labour Market remains to be seen. It is widely thought that there will be a very significant labour market downturn; that a number of previously observed trends are likely to be accelerated (eg automation or town centre decline); and that changes to working practices (eg working from home) may become embedded.

However, Working Futures has not lost all of its utility. Over time it may be useful as a statement of a pandemic-free counterfactual. What is also useful in the Working Futures model is its forecasting of levels of replacement demand. Even if some occupational areas decline, they will continue to generate replacement demand and the pandemic is likely to have a limited impact on the scale of

replacement demand in an occupational sector. It is on this basis that Working Futures data is reported.

The Table below reports the Working Futures forecasting to 2027 for Associate Professional Occupations in Cheshire and Warrington. Overall, the model outputs a forecast growth of over 8% in these occupations (an increase of 6,000 jobs between 2017 and 2027). Growth will predominantly be driven by growth in “Business and public service associate professionals”. In line with IER guidance, data for Health and Social Care/Protective Service/Culture, Media and Sport has been combined so that no published cell falls below 10,000 employees.

Actual and Forecast Employment Change for Associate Professional Occupations in C&W 2007 to 2027					
	2007	2012	2017	2022	2027
	Thousands				
Science, engineering, and technology associate professionals	11	10	13	13	13
Health and Social Care/Protective Service/Culture, Media and Sport	17	17	20	21	22
Business and public service associate professionals	29	29	35	38	40

Source: Working Futures 2017-2027, LEP Tables, IER

The Table below presents the Working Futures forecasts for growth and replacement demand to 2027 in Associate Professional Occupations in Cheshire and Warrington. In all cases forecast replacement demand is larger than forecast growth. The highest levels of replacement demand are forecast to be for “Business and public service associate professionals” at 12,000 by 1027.

Replacement and Growth Demand in Associate Professional Occupations in C&W 2017-2027			
	Growth Demand	Replacement Demand	Overall
Science, engineering and technology associate professionals	0	3	4
Health and Social Care/Protective Service/Culture, Media and Sport	2	7	8
Business and public service associate professionals	5	12	17

Source: Working Futures 2017-2027, LEP Tables, IER

5.4 Profile of “Administrative and Secretarial Occupations” in Cheshire and Warrington

5.4.1 Composition of “The “Administrative and Secretarial Occupations” Sector

The “Administrative and Secretarial Occupations” sector is made up of two subcategories:

- Administrative Occupations
- Secretarial and Related Occupations

In 2020, these occupations accounted for 69,364 jobs in Cheshire and Warrington. Compared with the national position, both categories are slightly overrepresented in the Cheshire and Warrington labour market.

Between 2015 and 2020 there was an overall 11% growth of these type of jobs in Cheshire and Warrington, with both categories growing at similar rates (12% and 11%).

In 2020, there were 54,394 jobs in Administrative Occupations and almost 15,000 jobs in Secretarial and Related Occupations. Both categories had median wages lower than the median for all jobs in Cheshire and Warrington of £28,700.

Both of these occupational areas have a moderate exposure to the risk of automation, with “Administrative Occupations” having the highest score of the two subsectors with 36.5% on the EMSI Automation Index.

Administrative and Secretarial Occupations in C&W Key Data					
	2015 - 2020 % Change	Automation Index	2020 Location Quotient	2020 Jobs	Median Wages
Administrative Occupations	11%	36.5%	1.12	54,394	£24,182.39
Secretarial and Related Occupations	12%	21.5%	1.03	14,969	£20,980.53

Source: EMSI Analyst

5.4.2 Industries that Employ “Administrative and Secretarial Occupations”

Administrative and Secretarial Occupations are employed across every industrial sector. Just over half (52%) of all such jobs were employed by the seven industrial sectors in the Table below. Administrative and Secretarial occupations accounted for over a quarter of all employment in the following industrial sectors:

- Legal and accounting activities
- Financial service activities, except insurance and pension funding
- Public administration and defence; compulsory social security

Almost half of the jobs (46.2%) were in these occupations in the “Legal and accounting activities” industrial sector. Most of the industrial sectors in Cheshire and Warrington identified below saw a growth in the number employed in “Administrative and Secretarial Occupations” with the number employed in “Legal and accounting activities” more than doubling in this period. By contrast there was a slight decline (4%) in the numbers employed in the “Public administration and defence; compulsory social security” sector.

Industries that Employ Administrative and Secretarial Occupations in C&W				
	Occupation Group Jobs in Industry (2020)	% Change (2015 - 2020)	% of Occupation Group in Industry (2019)	% of Total Jobs in Industry (2019)
Legal and accounting activities	12,822	101%	17.9%	46.2%
Human health activities	4,888	12%	7.1%	14.9%
Financial service activities, except insurance and pension funding	4,394	18%	6.3%	34.5%
Retail trade, except of motor vehicles and motorcycles	4,131	15%	5.9%	7.5%
Public administration and defence; compulsory social security	3,946	(4%)	5.7%	27.1%
Wholesale trade, except of motor vehicles and motorcycles	3,369	21%	4.8%	14.9%
Employment activities	2,946	11%	4.3%	17.2%
Source: EMSI Analyst				

5.4.3 Recent and Current Employer Demand for “Administrative and Secretarial Occupations”

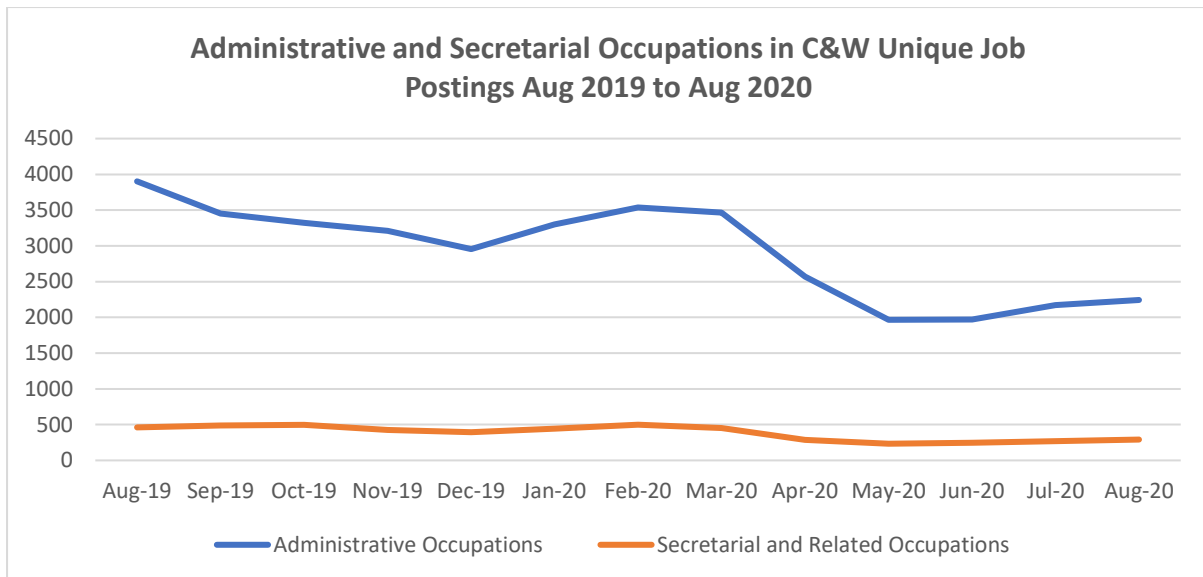
The Table below shows the ‘postings intensity’ for job postings in “Administrative and Secretarial Occupations” between Jan 2016 and Dec 2019. The “posting intensity” for all occupations in this period was 5:1, meaning that for every 5 postings there was 1 unique job posting. Where an occupational category has a high postings intensity, this indicates that employers are having more difficulty in filling vacancies in that type of job. It can be seen from the table below that for vacancies in “Administrative Occupations” the difficulty in filling them was average; whereas for vacancies in “Secretarial and Related Occupations” it was slightly easier than average to fill vacancies.

Average Posting Intensity (Jan 2016 - Dec 2019) for Administrative and Secretarial Occupations in C&W	
Administrative Occupations	5 : 1
Secretarial and Related Occupations	3 : 1
Total Across All Occupations	5 : 1
Source: EMSI Analyst	

The chart below shows the volume of job postings captured by EMSI in Cheshire and Warrington between Aug 2019 and Aug 2020 for the occupational subcategories that make up “Administrative and Secretarial Occupations”. The onset of the pandemic can be seen in the decline in Job Postings between February 2020 and June 2020. Unique postings across all occupations declined by 44% in this period. By comparison, postings for “Administrative Occupations” declined by 37% and for “Secretarial and Related Occupations” by 42%.

Following the easing of lockdown, volumes of job posting for “Administrative and Secretarial Occupations” have started to rise.

August 2020 postings are down by 21% across all occupations compared to August 2019. By comparison, postings for “Administrative Occupations” are down 42% over this time period and postings for “Secretarial and Related Occupations” are down 37%.



5.4.4 Hard to Fill Vacancies

The ease with which an employer can fill types of role can be measured by the ‘average posting intensity’ of job postings. The postings intensity is the number of times a vacancy is posted on the internet. It is a measure generated by EMSI. It is a reasonable inference that the more times a role is posted, the more difficult it is to fill. The average posting intensity for a role in Cheshire and Warrington between 2016 and 2020 was 5:1. An analysis of 4-digit SOC occupations in the “Administrative and Secretarial Occupations” category shows that four occupation types were harder to fill than average. The hardest type of roles to fill in this category were “Credit controllers” and “Book-keepers, payroll managers and wages clerks” which both had a 7:1 posting intensity.

Administrative and Secretarial Occupations Hard to Fill Vacancies 2016-2020		
Occupation	Avg. Posting Intensity (Jan 2016 - Aug 2020)	Median Annual Wages
Credit controllers	7 : 1	23816
Book-keepers, payroll managers and wages clerks	7 : 1	25730
Finance officers	6 : 1	27165
Stock control clerks and assistants	6 : 1	20155
<i>Source: EMSI Analyst (excludes occupations with fewer than 300 unique postings)</i>		

5.4.5 Future Employer Demand for Administrative and Secretarial Occupations

Working Futures 2017-2027 (a model commissioned by Government from the Institute of Employment Research at Warwick University) is a quantitative assessment of future employment prospects for UK and is the most comprehensive and detailed model of the UK labour market available. It projects the future size and shape of the labour market by considering employment prospects by industry, occupation, qualification level, gender and employment status. Its main focus has been to develop quantitative projections, concentrating on anticipating changing skill needs (as measured by occupation and formal qualifications), in the context of changes in general economic circumstances. These assessments are based on a well-established labour market model that provides consistent results across industry sectors and geographic areas, together with procedures

to develop projections by skill, covering both demand and supply. The core purpose of Working Futures is to inform policy development and strategy around skills, careers and employment.

Working Futures considers demand for labour driven by two factors: growth demand and replacement demand. Growth demand is the demand for labour as a result of the overall volume employed in an occupational sector growing (or declining). Replacement demand is the demand for labour arising from people leaving employment in the sector (eg through retirement). In general, an older age profile in an occupational sector will give rise to higher levels of replacement demand.

At the best of times, a ten-year labour market forecasting model will not consistently deliver accurate forecasts across its many dimensions. This is even more so of a model which was published a month before the declaration of a global pandemic by the World Health Organisation. The full impact of Covid-19 on the Labour Market remains to be seen. It is widely thought that there will be a very significant labour market downturn; that a number of previously observed trends are likely to be accelerated (eg automation or town centre decline); and that changes to working practices (eg working from home) may become embedded.

However, Working Futures has not lost all of its utility. Over time it may be useful as a statement of a pandemic-free counterfactual. What is also useful in the Working Futures model is its forecasting of levels of replacement demand. Even if some occupational areas decline, they will continue to generate replacement demand and the pandemic is likely to have a limited impact on the scale of replacement demand in an occupational sector. It is on this basis that Working Futures data is reported.

The Table below reports the Working Futures forecasting to 2027 for the Administrative and Secretarial Occupations in Cheshire and Warrington. Overall, the model outputs a forecast decline in these occupations, a decline of 2,000 in Administrative Occupations by 2027 and a reduction of almost half in the number of Secretarial and related roles (13,000 to 7,000).

Actual and Forecast Employment Change for Administrative and Secretarial Occupations in C&W 2007 to 2027					
	2007	2012	2017	2022	2027
	Thousands				
Administrative occupations	52	54	58	57	55
Secretarial and related occupations	15	14	13	10	7
Source: Working Futures 2017-2027, LEP Tables, IER					

The Table below presents the Working Futures forecasts for growth and replacement demand to 2027 in Administrative and Secretarial Occupations in Cheshire and Warrington. Both subsectors are forecast to decline in the overall numbers employed. This forecast may well understate what will now happen following the pandemic. For example, the changes to working practices that underpin the decline in “Secretarial and Related Occupations” may well accelerate because of increased working from home. Notwithstanding this decline there are high levels of replacement demand, particularly in Administrative Occupations, which may be largely unaffected by the pandemic, which means that the demand for labour in this subcategory will continue to be significant in coming years.

Replacement and Growth Demand in Administrative and Secretarial Occupations in C&W 2017-2027

	Growth Demand	Replacement Demand	Overall
Administrative occupations	-3	19	16
Secretarial and related occupations	-6	3	-3

Source: Working Futures 2017-2027, LEP Tables, IER

5.5 Profile of “Skilled Trades Occupations” in Cheshire and Warrington

5.5.1 Composition of “Skilled Trades Occupations”

The “Skilled Trades Occupations” are made up of the following subcategories:

- Skilled Agricultural and Related Trades
- Skilled Metal, Electrical and Electronic Trades
- Skilled Construction and Building Trades
- Textiles, Printing and Other Skilled Trades

In 2020, these occupations accounted for 38,290 jobs in Cheshire and Warrington. Compared with the national position, “Skilled Agricultural and Related Trades” and “Skilled Metal, Electrical and Electronic Trades” are slightly overrepresented in the Cheshire and Warrington labour market, whereas “Skilled Construction and Building Trades” and “Textiles, Printing and Other Skilled Trades” are slightly underrepresented.

Between 2015 and 2020 there was an overall 4% growth of these type of jobs in Cheshire and Warrington. “Skilled Agricultural and Related Trades” and “Textiles, Printing and Other Skilled Trades” both declined slightly (3% and 4%); whilst “Skilled Metal, Electrical and Electronic Trades” and “Skilled Construction and Building Trades” both grew (10% and 6% respectively).

Jobs in “Skilled Metal, Electrical and Electronic Trades” accounted for almost half (47%) of the jobs in this occupational sector, with jobs in “Textiles, Printing and Other Skilled Trades” accounting for a further 28%. All these occupational areas paid median wages between £20,000 and £30,000 with jobs in “Skilled Metal, Electrical and Electronic Trades” paying the highest median wages of £29,488.

All these occupational areas have a moderate to high exposure to the risk of automation, with “Skilled Construction and Building Trades” having the highest score of 64.8% on the EMSI Automation Index.

Skilled Trades Occupations in C&W Key Data

	2015 - 2020 % Change	Automation Index	2020 Location Quotient	2020 Jobs	Median Wages
Skilled Agricultural and Related Trades	(3%)	39.6%	1.15	2,930	£21,471.54
Skilled Metal, Electrical and Electronic Trades	10%	50.4%	1.07	17,821	£29,488.35
Skilled Construction and Building Trades	6%	64.8%	0.82	6,777	£25,739.97
Textiles, Printing and Other Skilled Trades	(4%)	33.3%	0.90	10,763	£19,938.36

Source: EMSI Analyst

5.5.2 Industries that Employ “Skilled Trades Occupations”

In 2020, 53.5% of “Skilled Trades Occupations” in Cheshire and Warrington were employed in the seven industry categories listed in the table below. Skilled Trades Occupations accounted for more than a quarter of all employment in the following industrial sectors:

- Specialised construction activities
- Wholesale and retail trade and repair of motor vehicles and motorcycles
- Manufacture of fabricated metal products, except machinery and equipment
- Construction of buildings

Most of the industrial sectors in Cheshire and Warrington identified below saw a growth in the number employed in “Skilled Trades Occupations” between 2015 and 2020 with the number employed in “Wholesale and retail trade and repair of motor vehicles and motorcycles” increasing by 53%. Only one of these sectors – “Food and beverage service activities” – saw a decline in the number of jobs in these types of occupations in this period (14%).

Industries that Employ Skilled Trades Occupations in Cheshire and Warrington				
	Occupation Group Jobs in Industry (2020)	% Change (2015 - 2020)	% of Occupation Group in Industry (2019)	% of Total Jobs in Industry (2019)
Specialised construction activities	5,663	14%	14.7%	47.3%
Food and beverage service activities	4,434	(14%)	11.6%	18.1%
Wholesale and retail trade and repair of motor vehicles and motorcycles	3,283	53%	8.5%	26.6%
Manufacture of fabricated metal products, except machinery and equipment	1,958	21%	5.0%	35.1%
Construction of buildings	1,829	25%	4.8%	26.0%
Retail trade, except of motor vehicles and motorcycles	1,814	17%	4.7%	3.3%
Manufacture of motor vehicles, trailers and semi-trailers	1,597	4%	4.2%	21.9%
Source: EMSI Analyst				

5.5.3 Recent and Current Employer Demand for “Skilled Trades Occupations”

The Table below shows the ‘postings intensity’ for job postings in “Skilled Trades Occupations” between Jan 2016 and Dec 2019. Data for “Skilled Agricultural and Related Trades” has been excluded because there are only 418 job postings in this occupation over three years in Cheshire and Warrington. The “posting intensity” for all occupations in this period was 5:1, meaning that for every 5 postings there was 1 unique job posting. Where an occupational category has a high postings intensity, this indicates that employers are having more difficulty in filling vacancies in that type of job. It can be seen from the table below that the difficulty for employers in filling vacancies for “Skilled Metal, Electrical and Electronic Trades” was average; and it was easier than average for employers to fill vacancies for “Skilled Construction and Building Trades” and for “Textiles, Printing and Other Skilled Trades”.

Average Posting Intensity (Jan 2016 - Dec 2019) for Skilled Trades Occupations in C&W

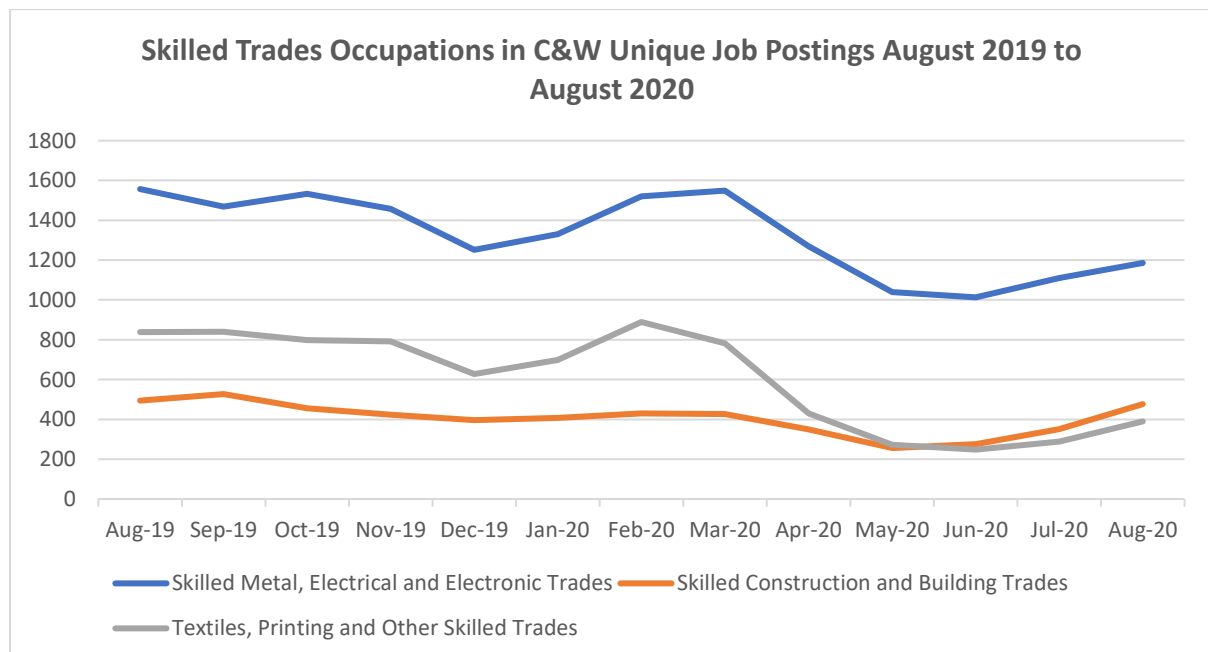
Skilled Metal, Electrical and Electronic Trades	5 : 1
Skilled Construction and Building Trades	3 : 1
Textiles, Printing and Other Skilled Trades	4 : 1
Total Across All Occupations	5 : 1

Source: EMSI Analyst

The chart below shows the volume of job postings captured by EMSI in Cheshire and Warrington between Aug 2019 and Aug 2020 for the occupational subcategories that make up “Skilled Trades Occupations”. The onset of the pandemic can be seen in the decline in Job Postings between February 2020 and June 2020. Unique postings across all occupations declined by 44% in this period. By comparison, postings for “Skilled Metal, Electrical and Electronic Trades” declined by 33%; postings for “Skilled Construction and Building Trades” declined by 36% and postings for “Textiles, Printing and Other Skilled Trades” declined by 72%.

Following the easing of lockdown, volumes of unique monthly job postings for “Skilled Trades Occupations” have started to rise.

August 2020 unique postings are down by 21% across all occupations compared to August 2019. By comparison, postings for “Skilled Metal, Electrical and Electronic Trades” are down by 24% and postings for “Textiles, Printing and Other Skilled Trades” are down by 54%. By contrast, postings for “Skilled Construction and Building Trades” were only down by 3% comparing August 2020 with August 2019.



5.5.4 Hard to Fill Vacancies

The ease with which an employer can fill types of role can be measured by the ‘average posting intensity’ of job postings. The postings intensity is the number of times a vacancy is posted on the

internet. It is a measure generated by EMSI. It is a reasonable inference that the more times a role is posted, the more difficult it is to fill. The average posting intensity for a role in Cheshire and Warrington between 2016 and 2020 was 5:1. An analysis of 4-digit SOC occupations in the “Skilled Trades Occupations” category shows that five occupation types were harder to fill than average. The hardest type of role to fill in this category was “Other skilled trades n.e.c” which had an 8:1 posting intensity.

Skilled Trades Occupations Hard to Fill Vacancies 2016-2020		
Occupation	Avg. Posting Intensity (Jan 2016 - Aug 2020)	Median Annual Wages
Other skilled trades n.e.c.	8 : 1	23587
IT engineers	7 : 1	31782
Metal working production and maintenance fitters	6 : 1	31658
Vehicle technicians, mechanics and electricians	6 : 1	26270
Vehicle body builders and repairers	6 : 1	22027
Source: EMSI Analyst (excludes occupations with fewer than 300 postings)		

5.5.5 Future Employer Demand for “Skilled Trades Occupations”

Working Futures 2017-2027 (a model commissioned by Government from the Institute of Employment Research at Warwick University) is a quantitative assessment of future employment prospects for UK and is the most comprehensive and detailed model of the UK labour market available. It projects the future size and shape of the labour market by considering employment prospects by industry, occupation, qualification level, gender and employment status. Its main focus has been to develop quantitative projections, concentrating on anticipating changing skill needs (as measured by occupation and formal qualifications), in the context of changes in general economic circumstances. These assessments are based on a well-established labour market model that provides consistent results across industry sectors and geographic areas, together with procedures to develop projections by skill, covering both demand and supply. The core purpose of Working Futures is to inform policy development and strategy around skills, careers and employment.

Working Futures considers demand for labour driven by two factors: growth demand and replacement demand. Growth demand is the demand for labour as a result of the overall volume employed in an occupational sector growing (or declining). Replacement demand is the demand for labour arising from people leaving employment in the sector (eg through retirement). In general, an older age profile in an occupational sector will give rise to higher levels of replacement demand.

At the best of times, a ten-year labour market forecasting model will not consistently deliver accurate forecasts across its many dimensions. This is even more so of a model which was published a month before the declaration of a global pandemic by the World Health Organisation. The full impact of Covid-19 on the Labour Market remains to be seen. It is widely thought that there will be a very significant labour market downturn; that a number of previously observed trends are likely to be accelerated (eg automation or town centre decline); and that changes to working practices (eg working from home) may become embedded.

However, Working Futures has not lost all of its utility. Over time it may be useful as a statement of a pandemic-free counterfactual. What is also useful in the Working Futures model is its forecasting of levels of replacement demand. Even if some occupational areas decline, they will continue to

generate replacement demand and the pandemic is likely to have a limited impact on the scale of replacement demand in an occupational sector. It is on this basis that Working Futures data is reported.

The Table below reports the Working Futures forecasting to 2027 for the Skilled Trades Occupations in Cheshire and Warrington. Data on “Skilled agricultural and related trades” has been excluded to comply with IER guidance on the disclosure of information relating to less than 10,000 employees. Overall, the IER model outputs a forecast decline of 10% in the number of jobs in these occupations (a decrease of 5,000 jobs). Employment in “Skilled construction and building trades” is forecast to remain stable but declines are forecast for both “Skilled metal, electrical and electronic trades” and “Textiles, printing and other skilled trades”.

Actual and Forecast Employment Change for Skilled Trades Occupations in C&W 2007 to 2027					
	2007	2012	2017	2022	2027
	Thousands				
Skilled metal, electrical and electronic trades	21	20	20	18	17
Skilled construction and building trades	17	16	15	15	15
Textiles, printing and other skilled trades	14	12	12	11	10

Source: Working Futures 2017-2027, LEP Tables, IER

The Table below presents the Working Futures forecasts for growth and replacement demand to 2027 in Skilled Trades Occupations in Cheshire and Warrington. In all cases forecast replacement demand is larger than forecast decline and generates a net additional requirement for labour.

Replacement and Growth Demand in Skilled Trades Occupations in C&W 2017-2027			
	Growth Demand	Replacement Demand	Overall
Skilled metal, electrical and electronic trades	-3	5	1
Skilled construction and building trades	0	4	4
Textiles, printing and other skilled trades	-2	3	1

Source: Working Futures 2017-2027, LEP Tables, IER

5.6 Profile of “Caring, Leisure and Other Service Occupations” in Cheshire and Warrington

5.6.1 Composition of the “Caring, Leisure and Other Service Occupations”

The “Caring, Leisure and Other Service Occupations” are made up of two subcategories:

- Caring Personal Service Occupations
- Leisure, Travel and Related Personal Service Occupations

In 2020, these occupations accounted for 44,547 jobs in Cheshire and Warrington. Both occupation subcategories employ the number that might be expected when compared with the national position. Between 2015 and 2020 there was a slight decline of these type of jobs in Cheshire and Warrington.

In 2020, 79% of this occupational sector was employed in the Caring Personal Service subsector. Both subsectors paid median wages slightly below £20,000 which compares with an overall median wages figure of £28,700.

Both of these occupational areas have a moderate exposure to the risk of automation, with “Leisure, Travel and Related Personal Service Occupations” having the highest score of 39% on the EMSI Automation Index.

Caring, Leisure and Other Service Occupations in C&W Key Data					
	2015 - 2020 % Change	Automation Index	2020 Location Quotient	2020 Jobs	Median Wages
Caring Personal Service Occupations	(0%)	26.6%	0.96	35,067	£19,727.65
Leisure, Travel and Related Personal Service Occupations	(2%)	39.0%	1.03	9,481	£19,349.05

Source: EMSI Analyst

5.6.2 Industries Employing “Caring, Leisure and Other Service” Occupations

In 2019, 67.5% of “Caring, Leisure and Other Service” in Cheshire and Warrington were employed in the eight industry categories in the table below. Professional Occupations accounted for more than 70% of all employment in the following industrial sectors:

- Other personal service activities
- Residential care activities for the elderly and disabled
- Social work activities without accommodation for the elderly and disabled
- Residential nursing care activities

Whilst the overall level of employment in these two occupational areas was relatively stable between 2015 and 2020, this disguises higher levels of volatility in the numbers in these occupations employed in different industries between 2015 and 2020. From the Table below, it can be seen that the numbers employed in these occupations grew in four industrial sectors and declined in four industrial sectors. The highest growth in this period was in “Hospital activities” (22%) and the steepest decline was in “Other social work activities without accommodation” (33%).

Industries that employ Caring, Leisure and Other Service Occupations in C&W				
	Occupation Group Jobs in Industry (2020)	% Change (2015 - 2020)	% of Occupation Group in Industry (2019)	% of Total Jobs in Industry (2019)
Primary education	5,495	(5%)	12.5%	35.6%
Other personal service activities	4,563	3%	10.0%	72.7%
Hospital activities	4,204	22%	9.3%	17.3%
Residential care activities for the elderly and disabled	3,782	9%	8.4%	72.9%
Social work activities without accommodation for the elderly and disabled	3,181	(13%)	7.1%	73.3%
Temporary employment agency activities	3,092	(7%)	7.1%	25.6%
Other social work activities without accommodation	2,941	(33%)	7.0%	49.8%
Residential nursing care activities	2,698	3%	6.0%	70.4%

Source: EMSI Analyst

5.6.3 Recent and Current Employer Demand for “Caring, Leisure and Other Service” Occupations

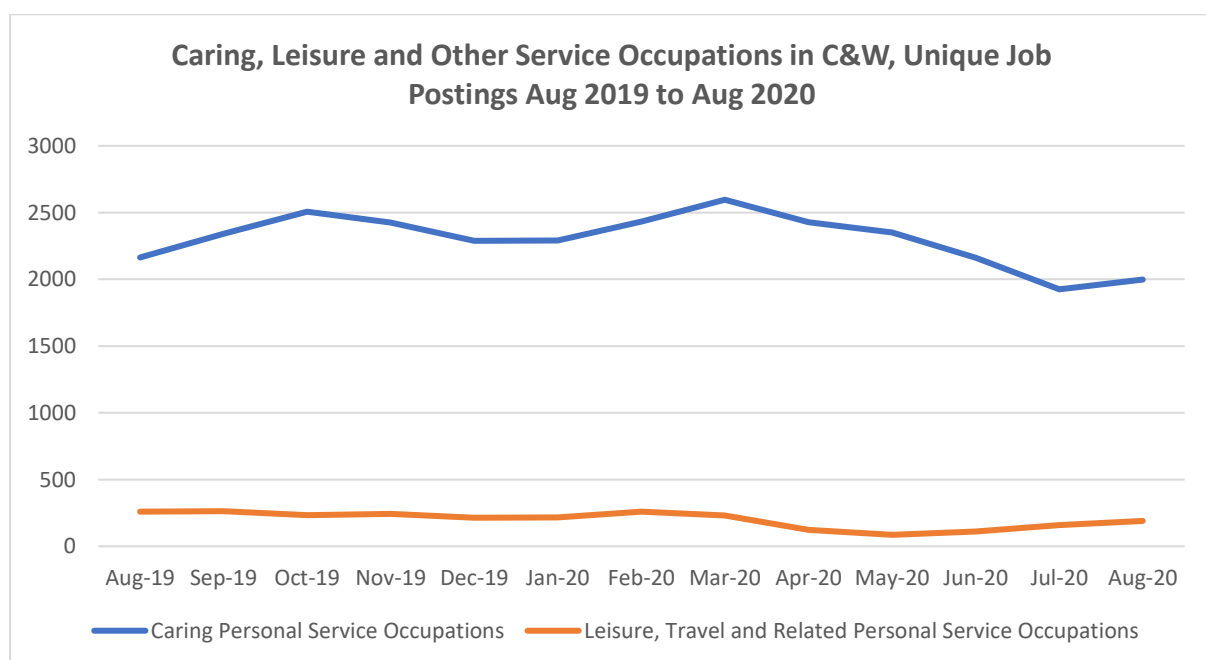
The Table below shows the ‘postings intensity’ for job postings in “Caring, Leisure and Other Service Occupations” between Jan 2016 and Dec 2019. The “posting intensity” for all occupations in this period was 5:1, meaning that for every 5 postings there was 1 unique job posting. Where an occupational category has a high postings intensity, this indicates that employers are having more difficulty in filling vacancies in that type of job. It can be seen from the Table below that vacancies for “Leisure, Travel and Related Personal Service Occupations” were slightly harder to fill than average, and the difficulty (or ease) in filling vacancies for “Caring Personal Service Occupations” was average.

Average Posting Intensity (Jan 2016 - Dec 2019) for Caring, Leisure and Other Service Occupations in C&W	
Caring Personal Service Occupations	5 : 1
Leisure, Travel and Related Personal Service Occupations	6 : 1
Total Across All Occupations	5 : 1
Source: EMSI Analyst	

The chart below shows the volume of job postings captured by EMSI in Cheshire and Warrington between Aug 2019 and Aug 2020 for the occupational subcategories that make up “Caring, Leisure and Other Service Occupations”. The onset of the pandemic can be seen in the decline in Job Postings between February 2020 and June 2020. Unique postings across all occupations declined by 44% in this period. By comparison, postings for “Caring Personal Service Occupations” declined by 11%, whilst postings for “Leisure, Travel and Related Personal Service Occupations” declined by 57%.

Following the easing of lockdown, volumes of job posting for “Caring, Leisure and Other Service Occupations” have started to rise.

August 2020 postings are down by 21% across all occupations compared to August 2019. By comparison, postings for “Caring Personal Service Occupations” are down 8% over this time period, whilst postings for “Leisure, Travel and Related Personal Service Occupations” are down 27%.



5.6.4 Hard to Fill Vacancies

The ease with which an employer can fill types of role can be measured by the ‘average posting intensity’ of job postings. The postings intensity is the number of times a vacancy is posted on the internet. It is a measure generated by EMSI. It is a reasonable inference that the more times a role is posted, the more difficult it is to fill. The average posting intensity for a role in Cheshire and Warrington between 2016 and 2020 was 5:1. An analysis of 4-digit SOC occupations in the “Caring, Leisure and Other Service Occupations” category shows that four occupation types were harder to fill than average. The hardest type of role to fill in this category was “Caretakers” which had an 11:1 posting intensity.

Caring, Leisure and Other Service Occupations Hard to Fill Vacancies 2016-2020		
Occupation	Avg. Posting Intensity (Jan 2016 - Aug 2020)	Median Annual Wages
Caretakers	11 : 1	20384
Travel agents	8 : 1	19365
Care workers and home carers	6 : 1	18949
Beauticians and related occupations	6 : 1	18283
Source: EMSI Analyst (excludes occupations with fewer than 300 postings)		

5.6.5 Future Employer Demand for Caring, Leisure and Other Service Occupations

Working Futures 2017-2027 (a model commissioned by Government from the Institute of Employment Research at Warwick University) is a quantitative assessment of future employment prospects for UK and is the most comprehensive and detailed model of the UK labour market available. It projects the future size and shape of the labour market by considering employment prospects by industry, occupation, qualification level, gender and employment status. Its main focus has been to develop quantitative projections, concentrating on anticipating changing skill needs (as measured by occupation and formal qualifications), in the context of changes in general economic circumstances. These assessments are based on a well-established labour market model that provides consistent results across industry sectors and geographic areas, together with procedures to develop projections by skill, covering both demand and supply. The core purpose of Working Futures is to inform policy development and strategy around skills, careers and employment.

Working Futures considers demand for labour driven by two factors: growth demand and replacement demand. Growth demand is the demand for labour as a result of the overall volume employed in an occupational sector growing (or declining). Replacement demand is the demand for labour arising from people leaving employment in the sector (eg through retirement). In general, an older age profile in an occupational sector will give rise to higher levels of replacement demand.

At the best of times, a ten-year labour market forecasting model will not consistently deliver accurate forecasts across its many dimensions. This is even more so of a model which was published a month before the declaration of a global pandemic by the World Health Organisation. The full impact of Covid-19 on the Labour Market remains to be seen. It is widely thought that there will be a very significant labour market downturn; that a number of previously observed trends are likely to be accelerated (eg automation or town centre decline); and that changes to working practices (eg working from home) may become embedded.

However, Working Futures has not lost all of its utility. Over time it may be useful as a statement of a pandemic-free counterfactual. What is also useful in the Working Futures model is its forecasting of

levels of replacement demand. Even if some occupational areas decline, they will continue to generate replacement demand and the pandemic is likely to have a limited impact on the scale of replacement demand in an occupational sector. It is on this basis that Working Futures data is reported.

The Table below reports the Working Futures forecasting to 2027 for the Caring, Leisure and Other Service Occupations in Cheshire and Warrington. Overall, the model outputs a forecast growth of 14% in these occupations (an increase of 7,000 jobs). All the growth is forecast to come from Caring personal service occupations, whilst the numbers employed in Leisure, travel and related personal service occupations are expected to remain stable.

Actual and Forecast Employment Change for Caring, Leisure and Other Service Occupations in C&W 2007 to 2027					
	2007	2012	2017	2022	2027
	Thousands				
Caring personal service occupations	30	33	39	42	47
Leisure, travel and related personal service occupations	10	11	12	11	11

Source: Working Futures 2017-2027, LEP Tables, IER

The Table below presents the Working Futures forecasts for growth and replacement demand to 2027 in Caring, Leisure and Other Service Occupations in Cheshire and Warrington. Forecast replacement demand is high at 20,000 jobs.

Replacement and Growth Demand in Caring, Leisure and Other Service Occupations in C&W 2017-2027			
	Growth Demand	Replacement Demand	Overall
Caring personal service occupations	8	16	24
Leisure, travel and related personal service occupations	0	4	4

Source: Working Futures 2017-2027, LEP Tables, IER

5.7 Profile of Sales and Customer Service Occupations in Cheshire and Warrington

5.7.1 Composition of the “Sales and Customer Service Occupations” Sector

The “Sales and Customer Service Occupations” are made up of:

- Sales Occupations
- Customer Service Occupations

In 2020, these occupations accounted for 48,320 jobs in Cheshire and Warrington. Compared with the national position, both “Sales Occupations” and “Customer Service Occupations” are slightly overrepresented in the Cheshire and Warrington labour market.

Between 2015 and 2020 there was an overall 2% growth of these type of jobs in Cheshire and Warrington, with a slight increase in “Sales Occupations” (3%) and a slight decrease in “Customer Service Occupations”(1%).

This occupational sector is dominated by Sales Occupations which in 2020 with 37,748 jobs had 78% of the sector’s employment. Both occupational areas have a moderate exposure to the risk of automation, with “Sales Occupations” having the highest score of 31.7% on the EMSI Automation Index.

Sales and Customer Service Occupations in C&W Key Data					
	2015 - 2020 % Change	Automation Index	2020 Location Quotient	2020 Jobs	Median Wages
Sales Occupations	3%	31.7%	1.11	37,748	£18,598.88
Customer Service Occupations	(1%)	25.6%	1.04	11,375	£22,629.96
Source: EMSI Analyst					

5.7.2 Industries that Employ “Sales and Customer Service Occupations”

In 2019, 69.3% of “Sales and Customer Service Occupations” in Cheshire and Warrington were employed in the ten industry categories in the table below. Sales and Customer Service Occupations accounted for more than half of all employment in the following industrial sectors:

- Retail sale of other goods in specialised stores
- Business support service activities n.e.c.
- Retail trade not in stores, stalls or markets
- Retail sale of cultural and recreation goods in specialised stores

Between 2015 and 2020, half of the industrial sectors in Cheshire and Warrington identified below saw a growth in the number employed in “Sales and Customer Service Occupations”, and half experienced a decline. These type of jobs in the “Retail sale of food, beverages and tobacco in specialised stores” industry grew by 47%, whilst “Business support service activities n.e.c.” declined by 39%.

Industries that Employ Sales and Customer Service Occupations in C&W				
	Occupation Group Jobs in Industry (2020)	% Change (2015 - 2020)	% of Occupation Group in Industry (2019)	% of Total Jobs in Industry (2019)
Retail sale of other goods in specialised stores	11,361	12%	22.9%	57.9%
Retail sale in non-specialised stores	10,898	(2%)	22.3%	60.0%
Retail sale of other household equipment in specialised stores	2,709	13%	5.4%	41.8%
Business support service activities n.e.c.	2,138	(39%)	4.4%	24.8%
Retail sale of food, beverages and tobacco in specialised stores	1,423	47%	2.8%	53.9%
Sale of motor vehicles	1,240	24%	2.5%	22.6%
Retail trade not in stores, stalls or markets	1,221	11%	2.4%	28.0%
Restaurants and mobile food service activities	1,151	(16%)	2.3%	8.7%
Retail sale of cultural and recreation goods in specialised stores	998	(25%)	2.1%	60.7%
Monetary intermediation	984	17%	2.0%	10.5%
Source: EMSI Analyst				

5.7.3 Recent and Current Employer Demand for Sales and Customer Service Occupations

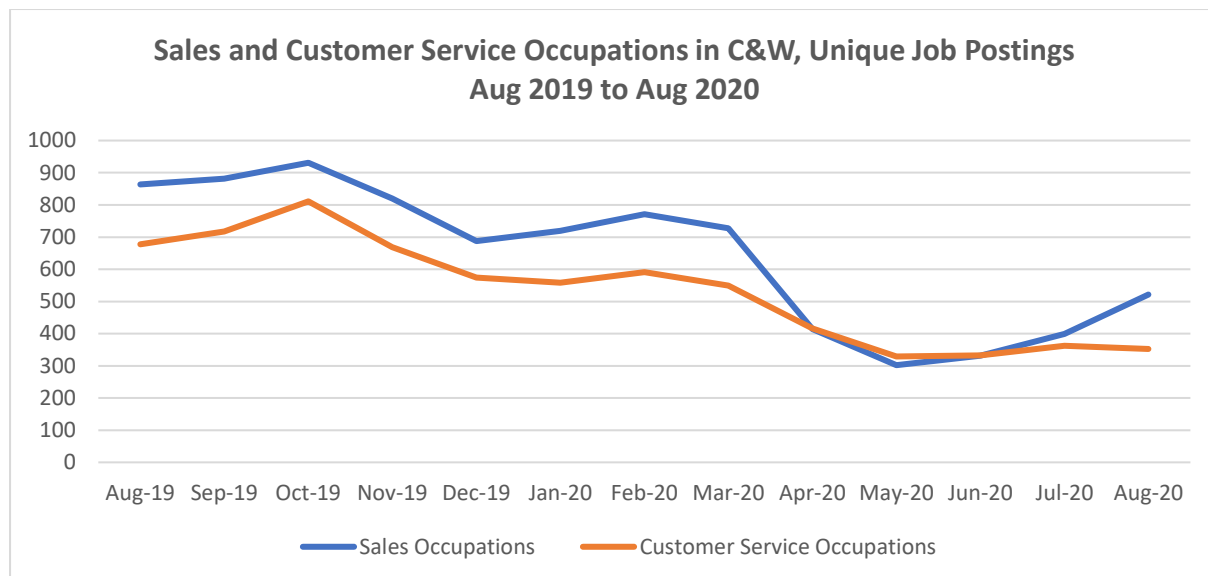
The Table below shows the ‘postings intensity’ for job postings in “Sales and Customer Service Occupations” between Jan 2016 and Dec 2019. The “posting intensity” for all occupations in this period was 5:1, meaning that for every 5 postings there was 1 unique job posting. Where an occupational category has a high postings intensity, this indicates that employers are having more difficulty in filling vacancies in that type of job. It can be seen from the table below that vacancies for “Customer Service Occupations” were slightly harder to fill than average, and the difficulty in filling vacancies for “Sales Occupations” was average.

Average Posting Intensity (Jan 2016 - Dec 2019) for Sales and Customer Service Occupations in C&W	
Sales Occupations	5 : 1
Customer Service Occupations	6 : 1
Total Across All Occupations	5 : 1
Source: EMSI Analyst	

The chart below shows the volume of job postings captured by EMSI in Cheshire and Warrington between Aug 2019 and Aug 2020 for the occupational subcategories that make up “Sales and Customer Service Occupations”. The onset of the pandemic can be seen in the decline in Job Postings between February 2020 and June 2020. Unique postings across all occupations declined by 44% in this period. By comparison, postings for “Sales Occupations” declined by 57%, and postings for “Customer Service Occupations” declined by 44% in this period.

Following the easing of lockdown, volumes of job postings have increased in both occupational areas – more so in “Sales Occupations”.

August 2020 postings are down by 21% across all occupations compared to August 2019. By comparison, postings for “Customer Service Occupation” are down 48% over this time period, and postings for “Sales Occupations” are down 40%.



5.7.4 Hard to Fill Vacancies

The ease with which an employer can fill types of role can be measured by the ‘average posting intensity’ of job postings. The postings intensity is the number of times a vacancy is posted on the internet. It is a measure generated by EMSI. It is a reasonable inference that the more times a role is posted, the more difficult it is to fill. The average posting intensity for a role in Cheshire and Warrington between 2016 and 2020 was 5:1. An analysis of 4-digit SOC occupations in the “Sales and Customer Service Occupations” category shows that four occupation types were harder to fill than average. The hardest type of role to fill in this category was “Customer service occupations n.e.c” which had a 7:1 posting intensity.

Sales and Customer Service Occupations Hard to Fill Vacancies 2016-2020		
Occupation	Avg. Posting Intensity (Jan 2016 - Aug 2020)	Median Annual Wages
Customer service occupations n.e.c.	7 : 1	20738
Vehicle and parts salespersons and advisers	6 : 1	23754
Debt, rent and other cash collectors	6 : 1	19885
Call and contact centre occupations	6 : 1	19822
<i>Source: EMSI Analyst (excludes occupations with fewer than 300 postings)</i>		

5.7.5 Future Employer Demand for “Sales and Customer Service Occupations”

Working Futures 2017-2027 (a model commissioned by Government from the Institute of Employment Research at Warwick University) is a quantitative assessment of future employment prospects for UK and is the most comprehensive and detailed model of the UK labour market

available. It projects the future size and shape of the labour market by considering employment prospects by industry, occupation, qualification level, gender and employment status. Its main focus has been to develop quantitative projections, concentrating on anticipating changing skill needs (as measured by occupation and formal qualifications), in the context of changes in general economic circumstances. These assessments are based on a well-established labour market model that provides consistent results across industry sectors and geographic areas, together with procedures to develop projections by skill, covering both demand and supply. The core purpose of Working Futures is to inform policy development and strategy around skills, careers and employment.

Working Futures considers demand for labour driven by two factors: growth demand and replacement demand. Growth demand is the demand for labour as a result of the overall volume employed in an occupational sector growing (or declining). Replacement demand is the demand for labour arising from people leaving employment in the sector (eg through retirement). In general, an older age profile in an occupational sector will give rise to higher levels of replacement demand.

At the best of times, a ten-year labour market forecasting model will not consistently deliver accurate forecasts across its many dimensions. This is even more so of a model which was published a month before the declaration of a global pandemic by the World Health Organisation. The full impact of Covid-19 on the Labour Market remains to be seen. It is widely thought that there will be a very significant labour market downturn; that a number of previously observed trends are likely to be accelerated (eg automation or town centre decline); and that changes to working practices (eg working from home) may become embedded.

However, Working Futures has not lost all of its utility. Over time it may be useful as a statement of a pandemic-free counterfactual. What is also useful in the Working Futures model is its forecasting of levels of replacement demand. Even if some occupational areas decline, they will continue to generate replacement demand and the pandemic is likely to have a limited impact on the scale of replacement demand in an occupational sector. It is on this basis that Working Futures data is reported.

The Table below reports the Working Futures forecasting to 2027 for Sales and Customer Service Occupations in Cheshire and Warrington. Overall, the model outputs a forecast for stable numbers in the occupational sector with the volume employed in 2027 similar to 2017. Clearly, this forecast was made prior to the global pandemic and it remains to be seen whether these types of occupations will have this type of resilience in the new labour market environment that has been created.

Actual and Forecast Employment Change for Sales and Customer Service Occupations in C&W 2007 to 2027					
	2007	2012	2017	2022	2027
	Thousands				
Sales occupations	40	41	43	42	41
Customer service occupations	9	12	14	16	17
<i>Source: Working Futures 2017-2027, LEP Tables, IER</i>					

Notwithstanding this, the Table below presents the Working Futures forecasts for growth and replacement demand to 2027 in Sales and Customer Service Occupations in Cheshire and Warrington. Replacement demand in these occupational areas is forecast to be quite high at 18,000.

Replacement and Growth Demand in Sales and Customer Service Occupations in C&W 2017-2027			
	Growth Demand	Replacement Demand	Overall
Sales occupations	-2	13	11
Customer service occupations	2	5	7
<i>Source: Working Futures 2017-2027, LEP Tables, IER</i>			

5.8 Profile of Process, Plant and Machine Operatives in Cheshire and Warrington

5.8.1 Composition of the “Process, Plant and Machine Operatives” Sector

The “Process, Plant and Machine Operatives” sector is made up of the two categories:

- Process, Plant and Machine Operatives
- Transport and Mobile Machine Drivers and Operatives

In 2020, these occupations accounted for 32,292 jobs in Cheshire and Warrington. Compared with the national position, both occupation types were slightly overrepresented in the Cheshire and Warrington labour market.

Between 2015 and 2020 there was an overall 6% growth of these type of jobs in Cheshire and Warrington, with similar rates of growth for both subcategories. In 2020, there were 14,755 “Process, Plant and Machine Operatives” jobs and 17,537 “Transport and Mobile Machine Drivers and Operatives”. Both occupational areas paid median wages £23,000-£24,000 which is below the median for all roles in Cheshire and Warrington of £28,700.

Both occupational areas have a high exposure to the risk of automation, with “Process, Plant and Machine Operatives” having the highest score of the two of 63% on the EMSI Automation Index.

Process, Plant and Machine Operatives in C&W Key Data					
	2015 - 2020 % Change	Automation Index	2020 Location Quotient	2020 Jobs	Median Wages
Process, Plant and Machine Operatives	5%	63.0%	1.13	14,755	£23,230.30
Transport and Mobile Machine Drivers and Operatives	8%	49.9%	1.02	17,537	£23,704.09
<i>Source: EMSI Analyst</i>					

5.8.2 Industries that Employ Process, Plant and Machine Operatives

In 2019, 62.2% of “Process, Plant and Machine Operatives” in Cheshire and Warrington were employed in the nine industry categories in the table below. Process, Plant and Machine Operatives accounted for more than 40% of all employment in the following industrial sectors:

- Land transport and transport via pipelines
- Manufacture of food products

Most of the industrial sectors in Cheshire and Warrington identified below saw a growth in the number employed in these occupations between 2015 and 2020, with the exception of “Specialised construction activities” which experienced a 5% decline in this period.

Industries that Employ Process, Plant and Machine Operatives in C&W				
	Occupation Group Jobs in Industry (2020)	% Change (2015 - 2020)	% of Occupation Group in Industry (2019)	% of Total Jobs in Industry (2019)
Land transport and transport via pipelines	5,726	24%	17.5%	58.8%
Wholesale trade, except of motor vehicles and motorcycles	2,890	10%	8.9%	12.8%
Warehousing and support activities for transportation	2,377	18%	7.3%	21.2%
Manufacture of food products	2,063	5%	6.5%	40.3%
Manufacture of motor vehicles, trailers and semi-trailers	2,012	4%	6.3%	27.7%
Retail trade, except of motor vehicles and motorcycles	1,500	2%	4.6%	2.8%
Wholesale and retail trade and repair of motor vehicles and motorcycles	1,341	39%	4.1%	11.0%
Specialised construction activities	1,214	(5%)	3.8%	10.3%
Waste collection, treatment and disposal activities; materials recovery	1,043	4%	3.2%	28.9%
Source: EMSI Analyst				

5.8.3 Recent and Current Employer Demand for “Process, Plant and Machine Operatives”

The Table below shows the ‘postings intensity’ for job postings in “Process, Plant and Machine Operatives” between Jan 2016 and Dec 2019. The “posting intensity” for all occupations in this period was 5:1, meaning that for every 5 postings there was 1 unique job posting. Where an occupational category has a high postings intensity, this indicates that employers are having more difficulty in filling vacancies in that type of job. It can be seen from the table below that vacancies for “Process, Plant and Machine Operatives” were slightly easier to fill than average and the difficulty in filling vacancies for “Transport and Mobile Machine Drivers and Operatives” was average.

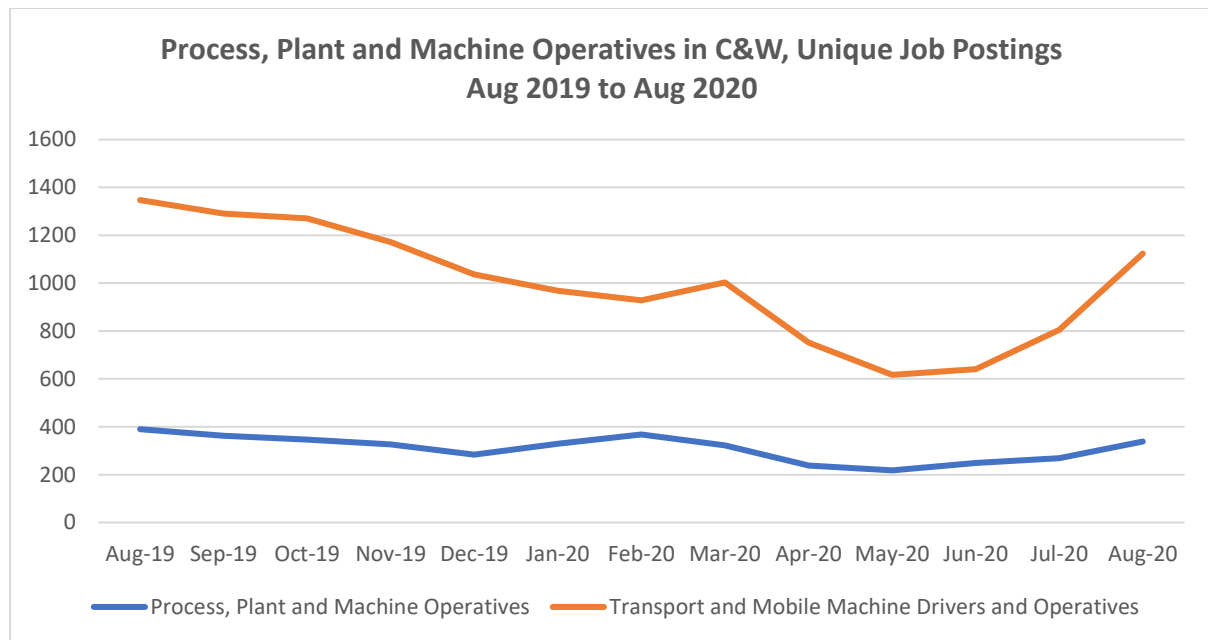
Average Posting Intensity (Jan 2016 - Dec 2019) for Process, Plant and Machine Operatives in C&W	
Process, Plant and Machine Operatives	4 : 1
Transport and Mobile Machine Drivers and Operatives	5 : 1
Total Across All Occupations	5 : 1
Source: EMSI Analyst	

The chart below shows the volume of job postings captured by EMSI in Cheshire and Warrington between Aug 2019 and Aug 2020 for the two occupational subcategories that make up “Process,

Plant and Machine Operatives”. The onset of the pandemic can be seen in the decline in Job Postings between February 2020 and June 2020. Unique postings across all occupations declined by 44% in this period. By comparison, postings for “Process, Plant and Machine Operatives” and “Transport and Mobile Machine Drivers and Operatives” declined by just over 30% (32% and 31% respectively).

Following the easing of lockdown, volumes of job posting for “Process, Plant and Machine Operatives” have started to rise.

August 2020 postings are down by 21% across all occupations compared to August 2019. By comparison, postings for “Process, Plant and Machine Operatives” and “Transport and Mobile Machine Drivers and Operatives” declined by just over 13% and 17% respectively.



5.8.4 Hard to Fill Vacancies

The ease with which an employer can fill types of role can be measured by the ‘average posting intensity’ of job postings. The postings intensity is the number of times a vacancy is posted on the internet. It is a measure generated by EMSI. It is a reasonable inference that the more times a role is posted, the more difficult it is to fill. The average posting intensity for a role in Cheshire and Warrington between 2016 and 2020 was 5:1. An analysis of 4-digit SOC occupations in the “Process, Plant and Machine Operatives” category shows that only one occupation type was harder to fill than average, this was “Food, drink and tobacco process operatives” which had a 6:1 posting intensity.

Process, Plant and Machine Operatives Hard to Fill Vacancies 2016-2020		
Occupation	Avg. Posting Intensity (Jan 2016 - Aug 2020)	Median Annual Wages
Food, drink and tobacco process operatives	6 : 1	20051

Source: EMSI Analyst (excludes occupations with fewer than 300 postings)

5.8.5 Future Employer Demand for “Process, Plant and Machine Operatives”

Working Futures 2017-2027 (a model commissioned by Government from the Institute of Employment Research at Warwick University) is a quantitative assessment of future employment prospects for UK and is the most comprehensive and detailed model of the UK labour market available. It projects the future size and shape of the labour market by considering employment prospects by industry, occupation, qualification level, gender and employment status. Its main focus has been to develop quantitative projections, concentrating on anticipating changing skill needs (as measured by occupation and formal qualifications), in the context of changes in general economic circumstances. These assessments are based on a well-established labour market model that provides consistent results across industry sectors and geographic areas, together with procedures to develop projections by skill, covering both demand and supply. The core purpose of Working Futures is to inform policy development and strategy around skills, careers and employment.

Working Futures considers demand for labour driven by two factors: growth demand and replacement demand. Growth demand is the demand for labour as a result of the overall volume employed in an occupational sector growing (or declining). Replacement demand is the demand for labour arising from people leaving employment in the sector (eg through retirement). In general, an older age profile in an occupational sector will give rise to higher levels of replacement demand.

At the best of times, a ten-year labour market forecasting model will not consistently deliver accurate forecasts across its many dimensions. This is even more so of a model which was published a month before the declaration of a global pandemic by the World Health Organisation. The full impact of Covid-19 on the Labour Market remains to be seen. It is widely thought that there will be a very significant labour market downturn; that a number of previously observed trends are likely to be accelerated (eg automation or town centre decline); and that changes to working practices (eg working from home) may become embedded.

However, Working Futures has not lost all of its utility. Over time it may be useful as a statement of a pandemic-free counterfactual. What is also useful in the Working Futures model is its forecasting of levels of replacement demand. Even if some occupational areas decline, they will continue to generate replacement demand and the pandemic is likely to have a limited impact on the scale of replacement demand in an occupational sector. It is on this basis that Working Futures data is reported.

The Table below reports the Working Futures forecasting to 2027 for “Process, Plant and Machine Operatives” in Cheshire and Warrington. Overall, the model outputs a forecast a decline of 10% in these occupations (a decrease of 4,000 jobs between 2017 and 2027). All the forecast job losses lie with “Process, plant and machine operatives”.

Actual and Forecast Employment Change for Process, Plant and Machine Operatives in C&W 2007 to 2027					
	2007	2012	2017	2022	2027
	Thousands				
Process, plant and machine operatives	17	14	14	12	10
Transport and mobile machine drivers and operatives	25	24	25	25	25
<i>Source: Working Futures 2017-2027, LEP Tables, IER</i>					

The Table below presents the Working Futures forecasts for growth and replacement demand to 2027 in “Process, Plant and Machine Operatives” in Cheshire and Warrington. Replacement demand is relatively high for “Transport and mobile machine drivers and operatives”.

Replacement and Growth Demand in Process, Plant and Machine Operatives in C&W 2017-2027			
	Growth Demand	Replacement Demand	Overall
Process, plant and machine operatives	-4	3	0
Transport and mobile machine drivers and operatives	0	9	8

Source: Working Futures 2017-2027, LEP Tables, IER

5.9 Profile of “Elementary Occupations” in Cheshire and Warrington

5.9.1 Composition of the “Elementary Occupations” Sector

The “Elementary Occupations” are made up of two categories:

- Elementary Trades and Related Occupations
- Elementary Administration and Service Occupations

In 2020, these occupations accounted for 67,568 jobs in Cheshire and Warrington. Compared with the national position, both “Elementary Trades and Related Occupations” and “Elementary Administration and Service Occupations” are slightly underrepresented in the Cheshire and Warrington labour market.

Between 2015 and 2020 there was an overall 1% decline of these type of jobs in Cheshire and Warrington.

The occupational sector is dominated by “Elementary Administration and Service Occupations”, with 58,765 jobs accounting for 87% of all the jobs in the sector. Both occupational areas have median wages between £18,000 and £20,000, both below the median wages for all jobs in Cheshire and Warrington which stand at £28,700.

Both occupational areas have a high exposure to the risk of automation, with “Elementary Trades and Related Occupations” having the highest score of the two with a score of 76.6% on the EMSI Automation Index.

Elementary Occupations in C&W Key Data					
	2020 Jobs	2015 - 2020 % Change	Automation Index	2020 Location Quotient	Median Wages
Elementary Trades and Related Occupations	8,803	1%	76.6%	0.96	£19,714.07
Elementary Administration and Service Occupations	58,765	(1%)	67.7%	0.96	£18,503.76

Source: EMSI Analyst

5.9.2 Industries that Employ “Elementary Occupations”

In 2019, 62.9% of “Elementary Occupations” in Cheshire and Warrington were employed in the seven industry categories in the table below. Elementary Occupations accounted for more than 40% of all employment in the following industrial sectors:

- Food and beverage service activities
- Services to buildings and landscape activities

- Warehousing and support activities for transportation
- Accommodation

Most of the industrial sectors in Cheshire and Warrington identified below saw a growth between 2015 and 2020 in the number employed in “Elementary Occupations”, but significantly, “Food and beverage service activities” (which accounted for over a fifth of all jobs in these occupational categories in Cheshire and Warrington) saw a decline of 15% in this period.

Industries that Employ Elementary Occupations in C&W				
	Occupation Group Jobs in Industry (2020)	% Change (2015 - 2020)	% of Occupation Group in Industry (2019)	% of Total Jobs in Industry (2019)
Food and beverage service activities	15,112	(15%)	22.6%	61.8%
Retail trade, except of motor vehicles and motorcycles	6,618	8%	9.7%	12.1%
Services to buildings and landscape activities	5,651	3%	8.3%	49.3%
Warehousing and support activities for transportation	5,308	25%	7.7%	47.3%
Accommodation	3,481	8%	5.0%	43.2%
Wholesale trade, except of motor vehicles and motorcycles	3,382	17%	4.9%	14.9%
Education	3,112	(6%)	4.7%	9.1%
Source: EMSI Analyst				

5.9.3 Recent and Current Employer Demand for “Elementary Occupations”

The Table below shows the ‘postings intensity’ for job postings in “Elementary Occupations” between Jan 2016 and Dec 2019. The “posting intensity” for all occupations in this period was 5:1, meaning that for every 5 postings there was 1 unique job posting. Where an occupational category has a high postings intensity, this indicates that employers are having more difficulty in filling vacancies in that type of job. It can be seen from the table below that it was slightly easier than average for employers to fill a vacancy in these occupational areas.

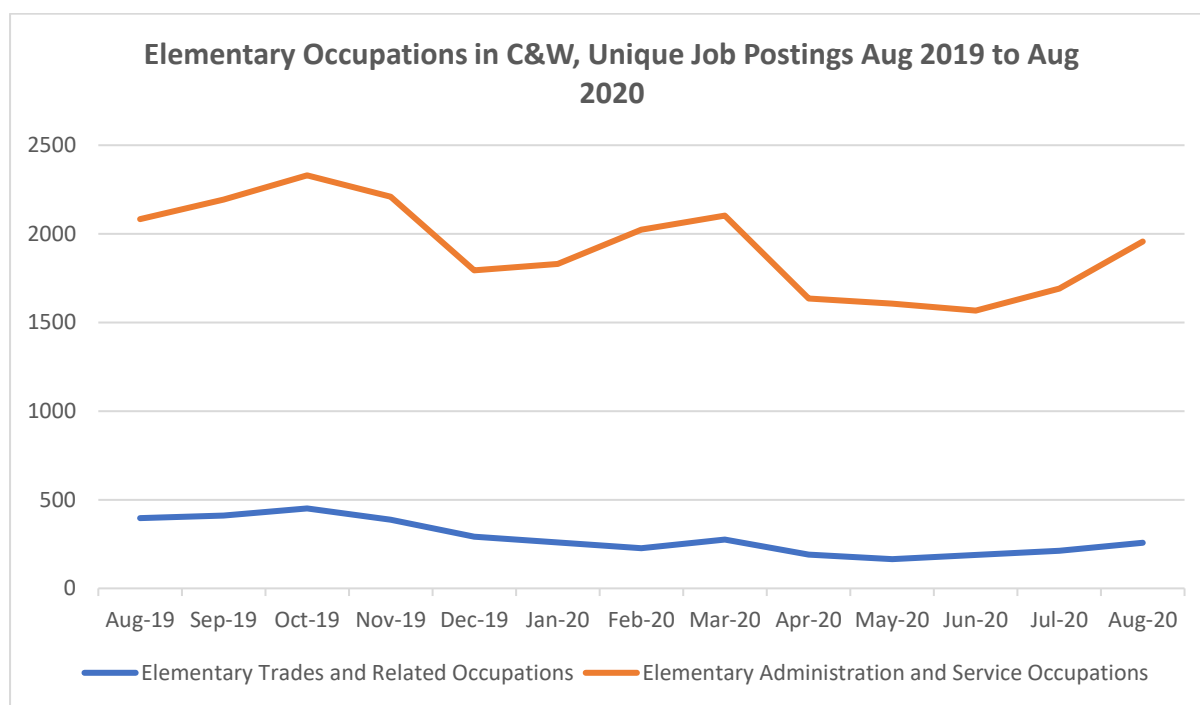
Average Posting Intensity (Jan 2016 - Dec 2019) for Elementary Occupations in C&W	
Elementary Trades and Related Occupations	4 : 1
Elementary Administration and Service Occupations	4 : 1
Total Across All Occupations	5 : 1
Source: EMSI Analyst	

The chart below shows the volume of job postings captured by EMSI in Cheshire and Warrington between Aug 2019 and Aug 2020 for the two occupational subcategories that make up “Elementary Occupations”. The onset of the pandemic can be seen in the decline in Job Postings between February 2020 and June 2020. Unique postings across all occupations declined by 44% in this period.

By comparison, postings for “Elementary Trades and Related Occupations” declined by 17% and postings for “Elementary Administration and Service Occupations” declined by 23%.

Following the easing of lockdown, volumes of job posting for both categories in “Elementary Occupations” have started to rise.

August 2020 postings are down by 21% across all occupations compared to August 2019. By comparison, postings for “Elementary Trades and Related Occupations” are down 35% over this time period and postings for “Elementary Administration and Service Occupations” are only down 6%.



5.9.4 Hard to Fill Vacancies

The ease with which an employer can fill types of role can be measured by the ‘average posting intensity’ of job postings. The postings intensity is the number of times a vacancy is posted on the internet. It is a measure generated by EMSI. It is a reasonable inference that the more times a role is posted, the more difficult it is to fill. The average posting intensity for a role in Cheshire and Warrington between 2016 and 2020 was 5:1. An analysis of 4-digit SOC occupations in the “Elementary Occupations” category shows that only two occupation types were harder to fill than average, these were “School midday and crossing patrol occupations” and “Postal workers, mail sorters, messengers and couriers” which had a 7:1 and a 6:1 posting intensity respectively

Elementary Occupations Hard to Fill Vacancies 2016-2020		
Occupation	Avg. Posting Intensity (Jan 2016 - Aug 2020)	Median Annual Wages
School midday and crossing patrol occupations	7 : 1	18720
Postal workers, mail sorters, messengers and couriers	6 : 1	25584

Source: EMSI Analyst (excludes occupations with fewer than 300 postings)

5.9.5 Future Employer Demand for “Elementary Occupations”

Working Futures 2017-2027 (a model commissioned by Government from the Institute of Employment Research at Warwick University) is a quantitative assessment of future employment prospects for UK and is the most comprehensive and detailed model of the UK labour market available. It projects the future size and shape of the labour market by considering employment prospects by industry, occupation, qualification level, gender and employment status. Its main focus has been to develop quantitative projections, concentrating on anticipating changing skill needs (as measured by occupation and formal qualifications), in the context of changes in general economic circumstances. These assessments are based on a well-established labour market model that provides consistent results across industry sectors and geographic areas, together with procedures to develop projections by skill, covering both demand and supply. The core purpose of Working Futures is to inform policy development and strategy around skills, careers and employment.

Working Futures considers demand for labour driven by two factors: growth demand and replacement demand. Growth demand is the demand for labour as a result of the overall volume employed in an occupational sector growing (or declining). Replacement demand is the demand for labour arising from people leaving employment in the sector (eg through retirement). In general, an older age profile in an occupational sector will give rise to higher levels of replacement demand.

At the best of times, a ten-year labour market forecasting model will not consistently deliver accurate forecasts across its many dimensions. This is even more so of a model which was published a month before the declaration of a global pandemic by the World Health Organisation. The full impact of Covid-19 on the Labour Market remains to be seen. It is widely thought that there will be a very significant labour market downturn; that a number of previously observed trends are likely to be accelerated (eg automation or town centre decline); and that changes to working practices (eg working from home) may become embedded.

However, Working Futures has not lost all of its utility. Over time it may be useful as a statement of a pandemic-free counterfactual. What is also useful in the Working Futures model is its forecasting of levels of replacement demand. Even if some occupational areas decline, they will continue to generate replacement demand and the pandemic is likely to have a limited impact on the scale of replacement demand in an occupational sector. It is on this basis that Working Futures data is reported.

IER guidance on publication of the forecasts is clear that where a cell involves fewer than 10,000 jobs, it should not be published. For this reason, the data for “Elementary trades and related occupations” is not discussed below.

The Table below reports the Working Futures forecasting to 2027 for “Elementary administration and service occupations” in Cheshire and Warrington. Overall, the model outputs a forecast growth of over 2% in these occupations (an increase of 1,000 jobs).

Actual and Forecast Employment Change for Elementary Occupations in C&W 2007 to 2027					
	2007	2012	2017	2022	2027
	Thousands				
Elementary administration and service occupations	54	50	55	55	56

Source: Working Futures 2017-2027, LEP Tables, IER

The Table below presents the Working Futures forecasts for growth and replacement demand to 2027 in Elementary Occupations in Cheshire and Warrington. Replacement demand in this period is forecast to be 18,000, 18 times higher than growth demand.

Replacement and Growth Demand in Elementary Occupations in C&W 2017-2027			
	Growth Demand	Replacement Demand	Overall
Elementary administration and service occupations	1	18	19
<i>Source: Working Futures 2017-2027, LEP Tables, IER</i>			

6. Industries in Cheshire and Warrington

This section of the report considers in more detail the profile of those industrial sectors in Cheshire and Warrington that employ more than 10,000 people:

- Manufacturing
- Construction
- Wholesale And Retail Trade; Repair Of Motor Vehicles And Motorcycles
- Transportation And Storage
- Accommodation And Food Service Activities
- Information And Communication
- Financial And Insurance Activities
- Professional, Scientific And Technical Activities
- Administrative And Support Service Activities
- Public Administration And Defence; Compulsory Social Security
- Education
- Human Health And Social Work Activities
- Arts, Entertainment And Recreation
- Other Service Activities

6.1 Manufacturing in Cheshire and Warrington

6.1.1 Manufacturing Job Change

In 2019, there were 41,898 jobs in the Manufacturing sector in Cheshire and Warrington which was 3% above the national average share of jobs for the sector.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. In this period the sector saw a 4.7% employment growth in Cheshire and Warrington compared to an English rate of 3.7%. Jobs growth was highest in Cheshire West and Chester which at 9.7% was almost three times the rate of growth in England. Jobs growth in Warrington was slightly above the English rate whereas the percentage growth rate in Cheshire East was over 2% lower than England.

Employment Change in Manufacturing 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	40,131	42,000	1,869	4.7%
Cheshire West and Chester	13,037	14,296	1,259	9.7%
Cheshire East	20,172	20,498	326	1.6%
Warrington	6,923	7,206	283	4.1%
England	2,029,955	2,105,357	75,402	3.7%

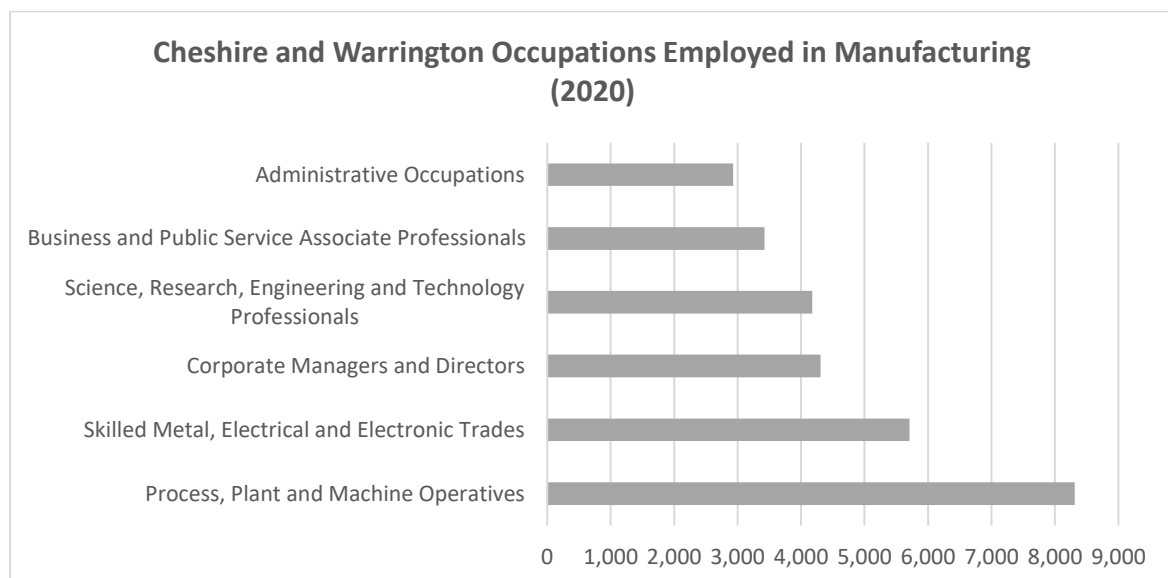
Source: EMSI Analyst

6.1.2 Manufacturing Occupations

The most common occupations in the Manufacturing Sector in Cheshire and Warrington in 2020, accounting for 69% of all jobs, were:

- Process, Plant and Machine Operatives
- Skilled Metal, Electrical and Electronic Trades
- Corporate Managers and Directors
- Science, Research, Engineering and Technology Professionals
- Business and Public Service Associate Professionals
- Administrative Occupations

As can be seen from the chart below, the most common occupation type in the sector was “Process, Plant and Machine Operatives”, with 8,311 jobs – almost 20% of all employment in the sector.



Source: EMSI Analyst

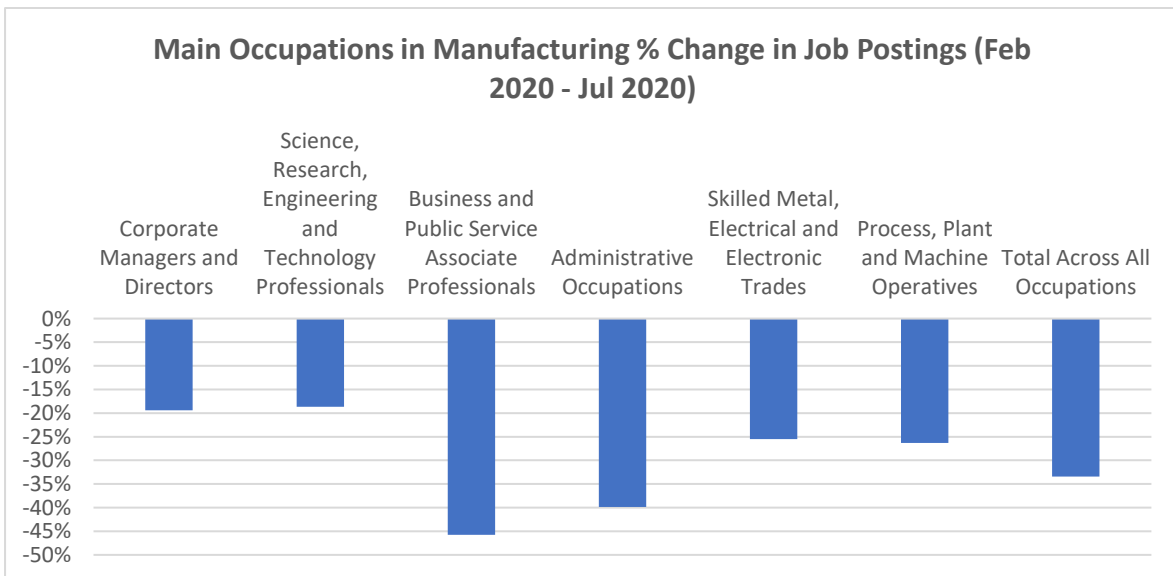
In 2019, the average wage per job in the sector was £34,771 in Cheshire and Warrington which compares a national average wage for the sector of £33,116. The best paid jobs in the sector were for “Science, Research, Engineering and Technology Professionals” and “Corporate Managers and Directors”, with median hourly pay of £20.84 and £21.69 respectively. At 9%, the fastest job growth amongst the main occupations in the sector between 2015 and 2020 was for “Administrative Occupations” whilst the number employed as “Science, Research, Engineering and Technology Professionals” saw a slight decline of 2% in the number employed over the same period.

Cheshire and Warrington Manufacturing Sector Main Occupations key data

	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Process, Plant and Machine Operatives	8,311	375	5%	19.8%	£11.17
Skilled Metal, Electrical and Electronic Trades	5,709	310	6%	13.6%	£14.18
Corporate Managers and Directors	4,304	311	8%	10.2%	£21.69
Science, Research, Engineering and Technology Professionals	4,175	(79)	(2%)	9.9%	£20.84
Business and Public Service Associate Professionals	3,423	132	4%	8.2%	£16.66
Administrative Occupations	2,929	251	9%	6.9%	£11.63

Source: EMSI Analyst

The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the Manufacturing Sector in Cheshire and Warrington. It shows the change in the volume of job postings for each occupation between February 2020 and July 2020. In this period job postings in these occupations reduced by a third (33%), with the largest reductions being in “Business and Public Service Associate Professionals” (46%) and “Administrative Occupations” (40%). The most recent job posting data shows an uptick in postings for jobs in the sector in the last 30 days (from mid-August to mid-September) of 16%.

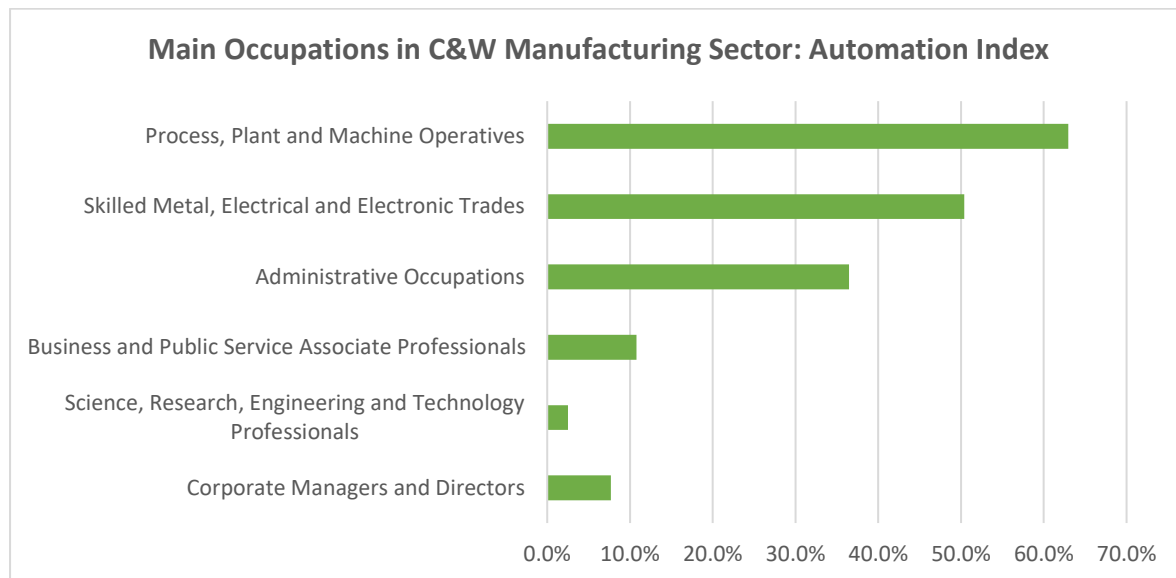


Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could

be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s Manufacturing Sector. Two occupational areas – “Process, Plant and Machine Operatives” and “Skilled Metal, Electrical and Electronic Trades” – have an Automation Index score of above 50% (63% and 50.4% respectively).



Source: EMSI Analyst

6.1.3 Manufacturing Subsectors

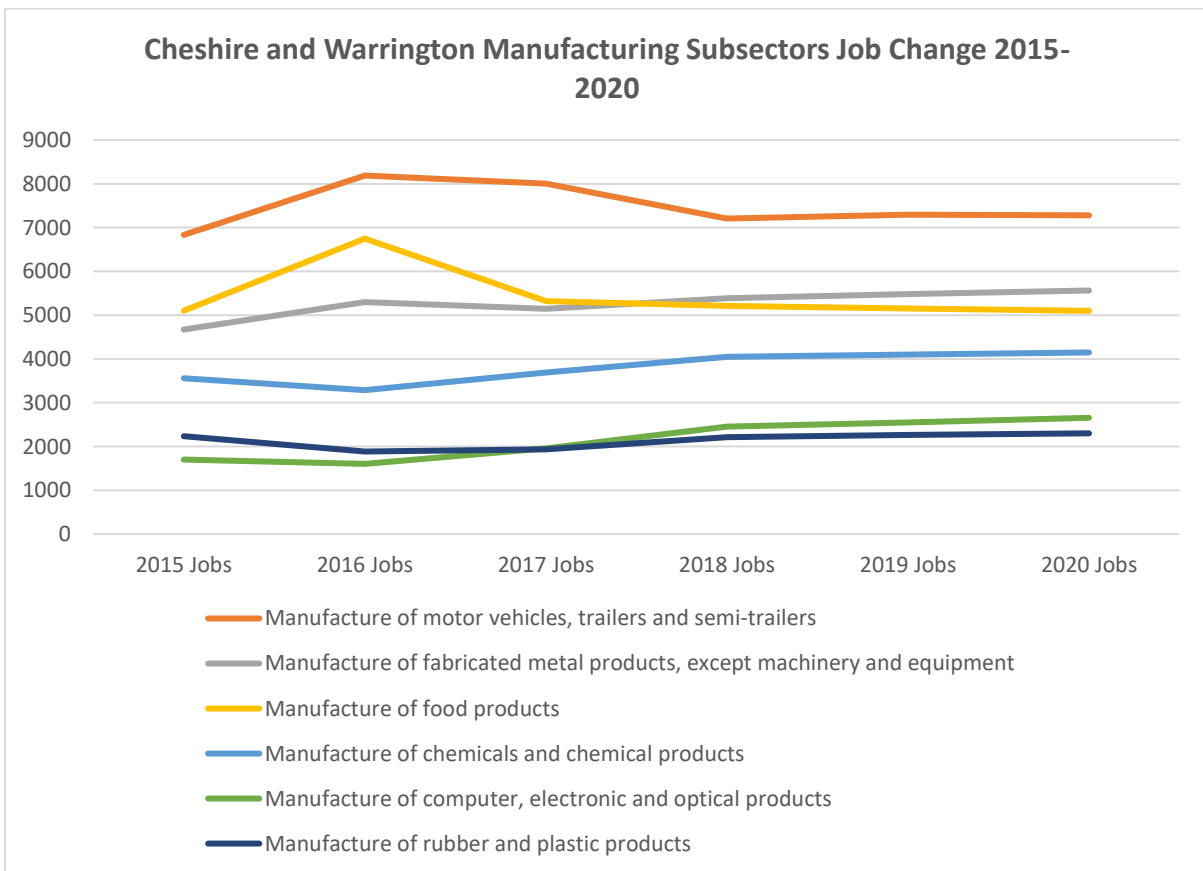
The table below sets out key data about the largest subsectors in the Manufacturing sector in Cheshire and Warrington. The subsectors of “Manufacture of motor vehicles, trailers and semi-trailers”; “Manufacture of fabricated metal products, except machinery and equipment”; and “Manufacture of food products” all employed more than 5,000 people in Cheshire and Warrington in 2020. The average company size was smallest in the “Manufacture of fabricated metal products, except machinery and equipment” subsector and largest in the “Manufacture of motor vehicles, trailers and semi-trailers” subsector. The best paid sub-sector was “Manufacture of chemicals and chemical products” where the average wage was £47,160.

Cheshire and Warrington Manufacturing Subsectors Key Data 2020

	Avg. Wages Per Job	Location Quotient	Establishments (2019)	Jobs
Manufacture of motor vehicles, trailers and semi-trailers	35082	2.57	76	7282
Manufacture of fabricated metal products, except machinery and equipment	28438	1.00	525	5564
Manufacture of food products	29034	0.81	115	5100
Manufacture of chemicals and chemical products	47160	2.41	82	4149
Manufacture of computer, electronic and optical products	36863	1.37	110	2656
Manufacture of rubber and plastic products	27871	0.87	78	2301

Source: EMSI Analyst

The graph below illustrates the job changes between 2015 and 2020 in the main subsectors of the Manufacturing sector. Almost every subsector grew, with the highest growth being in the “Manufacture of computer, electronic and optical products” sector which experienced growth of 56.4%. The “Manufacture of fabricated metal products, except machinery and equipment” subsector and the “Manufacture of chemicals and chemical products” subsector both grew at over 10% in this period (19.1% and 16.5% respectively).

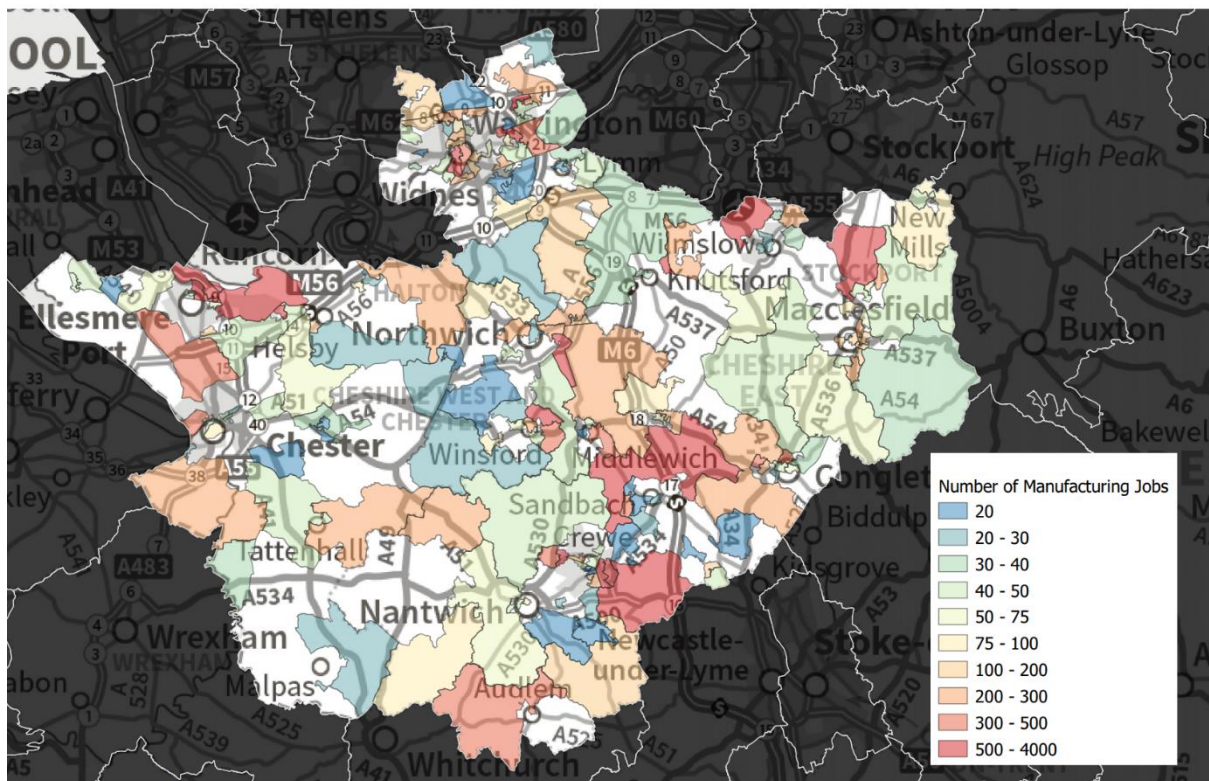


Source: EMSI Analyst

6.1.4 Manufacturing Jobs Locations

The map below illustrates the distribution of Manufacturing jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. There are concentrations of manufacturing jobs in parts of Ellesmere Port, Crewe, and Warrington.

LSOAs with more than 20 Manufacturing Jobs in Cheshire and Warrington



6.2 Construction in Cheshire and Warrington

6.2.1 Construction Job Change

In 2019, there were 22,858 jobs in the Construction sector in Cheshire and Warrington which was 4% below the national average share of jobs for the sector. There was 14.3% growth in employment between 2015 and 2020 in the sector in Cheshire and Warrington compared with national growth of 10.3% in the same period.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. Jobs growth was highest in Warrington which, at 39.5%, saw a rate of growth almost four times that of England (10.4%). Growth was also strong in Cheshire West and Chester at 19.8%. By contrast, Cheshire East saw an 8.2% decline in this period.

Employment Change in Construction 2015-2020				
Region	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	20,079	22,959	2,880	14.3%
Cheshire West and Chester	5,956	7,137	1,181	19.8%
Cheshire East	8,134	7,466	(668)	(8.2%)
Warrington	5,989	8,356	2,367	39.5%
England	1,123,952	1,240,703	116,751	10.4%

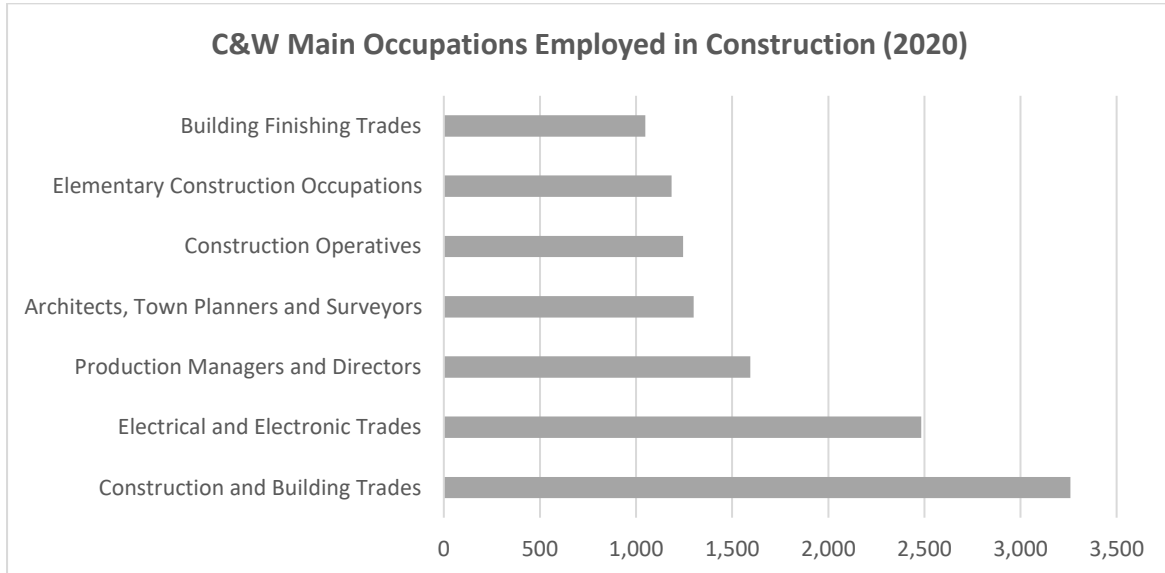
Source: EMSI Analyst

6.2.2 Construction Occupations

The most common occupations in the Construction Sector in Cheshire and Warrington in 2020, accounting for 53% of all jobs, were:

- Construction and Building Trades
- Electrical and Electronic Trades
- Production Managers and Directors
- Architects, Town Planners and Surveyors
- Construction Operatives
- Elementary Construction Occupations
- Building Finishing Trades

As can be seen from the chart below, the most common occupation type in the sector was “Construction and building trades”, with 3,259 jobs – 14% of all employment in the sector.



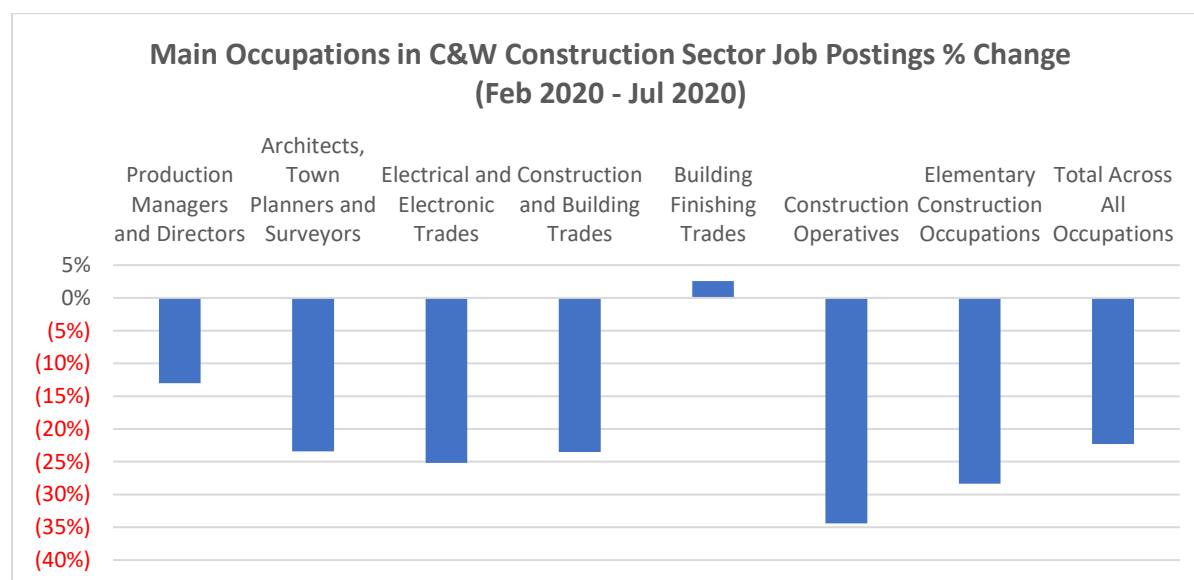
Source: EMSI Analyst

In 2019, the average wage per job in the sector was £31,882 in Cheshire and Warrington which compares a national average wage for the sector of £35,528. The best paid jobs in the sector were for “Production Managers and Directors” and “Architects, Town Planners and Surveyors”, with median hourly pay of £20.10 and £18.86 respectively. All of the main occupations in Cheshire’s Construction sector grew between 2015 and 2020. At 38%, the fastest job growth amongst the main occupations in the sector in this period was for “Electrical and Electronic Trades”

Main Occupations in Cheshire and Warrington's Construction Sector Key Data 2020					
Description	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Construction and Building Trades	3,259	192	6%	14.2%	£12.22
Electrical and Electronic Trades	2,483	681	38%	10.6%	£15.44
Production Managers and Directors	1,594	158	11%	7.0%	£20.10
Architects, Town Planners and Surveyors	1,300	134	11%	5.7%	£18.86
Construction Operatives	1,245	98	9%	5.5%	£11.91
Elementary Construction Occupations	1,184	90	8%	5.2%	£9.80
Building Finishing Trades	1,048	185	21%	4.5%	£11.50

Source: EMSI Analyst

The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the Manufacturing Sector in Cheshire and Warrington. It shows the change in the volume of job postings for each occupation between February 2020 and July 2020. In this period job postings in these occupations reduced by 22%, with the largest reductions being in “Construction Operatives” (34%) and “Elementary Construction Occupations” (28%). The most recent job posting data shows an uptick in postings for jobs in the sector in the last 30 days (from mid-August to mid-September) of 20%.

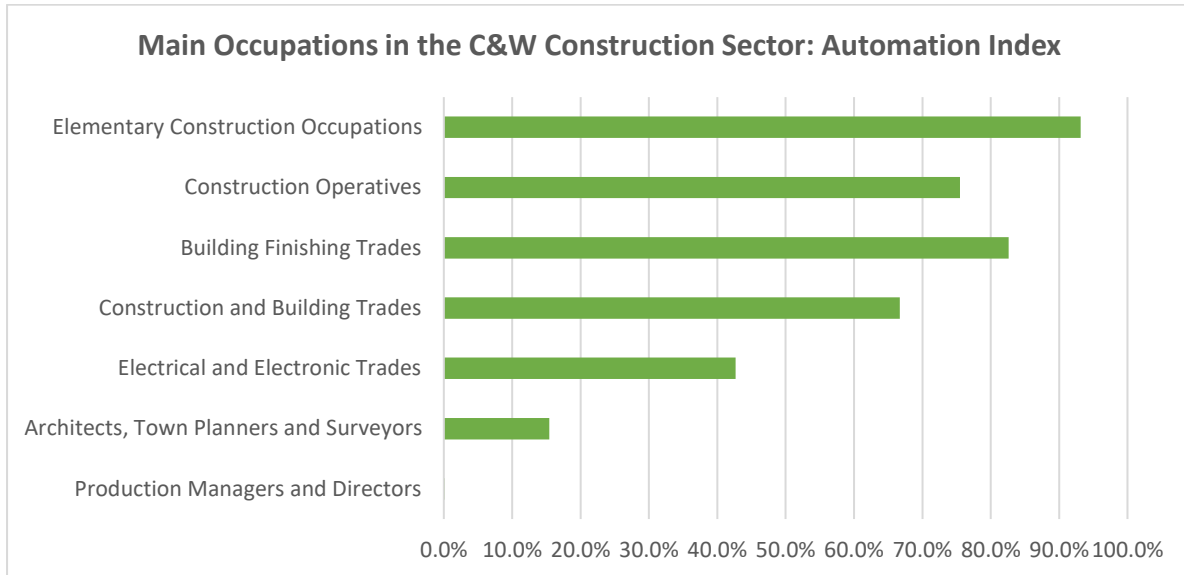


Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI's UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could

be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s Construction Sector. Four occupational areas – “Construction and Building Trades”, “Building Finishing Trades”, “Construction Operatives”, and “Elementary Construction Occupations – have an Automation Index score of above 60%..



Source: EMSI Analyst

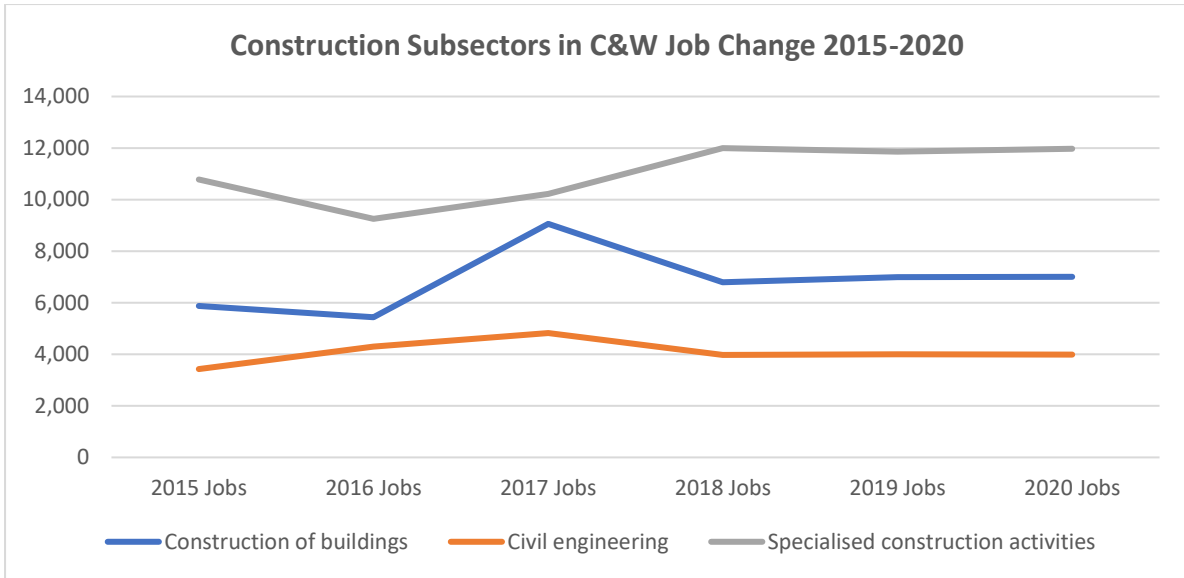
6.2.3 Construction Subsectors

The Table below sets out key data about the Construction subsectors in Cheshire and Warrington. The largest Construction subsector in Cheshire and Warrington is “Specialised construction activities” with 11,974 jobs. The average company size was smallest in the “Construction of Buildings” subsector and largest in the “Civil engineering” subsector. The best paid sub-sector was “Construction of buildings” where the average wage was £34,981.

Cheshire and Warrington Construction Subsectors Key data 2020				
Description	Avg. Wages Per Job	2020 Location Quotient	2019 Establishments	2020 Jobs
Construction of buildings	£34,981	0.91	1,717	7,003
Civil engineering	£34,446	1.12	392	3,983
Specialised construction activities	£29,187	0.95	2,546	11,974

Source: EMSI Analyst

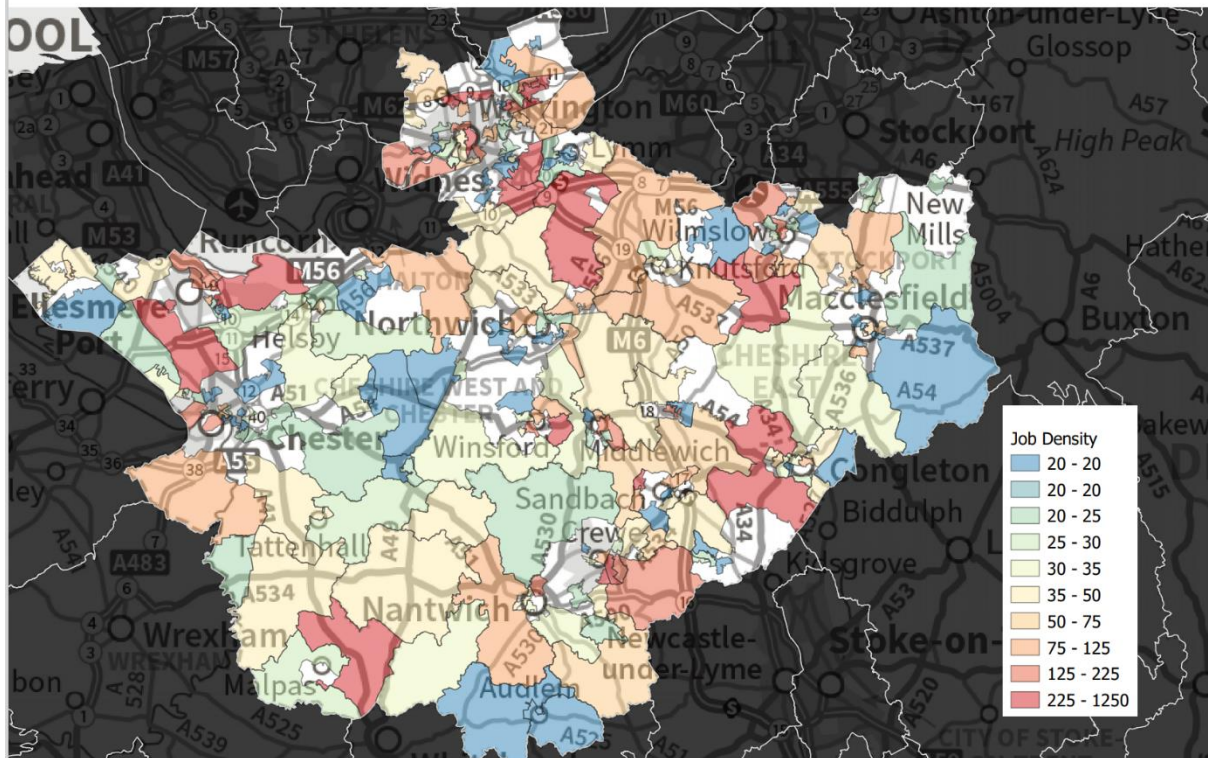
The graph below illustrates the job changes between 2015 and 2020 in the subsectors of the Construction sector. Every subsector grew, Construction of buildings by 19%, Civil engineering by 16%, and Specialised construction activities by 11%.



6.2.4 Construction Job Locations

The map below illustrates the distribution of Construction jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. There are concentrations of manufacturing jobs in parts of Ellesmere Port, Crewe, and Warrington.

LSOAs in Cheshire and Warrington with more than 20 Construction Jobs



Map by Brennan Wilson in QGIS. Data from NOMIS BRES (open access) and OS

6.3 The “Wholesale and Retail Trade; Repair of Motor Vehicles” Sector in Cheshire and Warrington

6.3.1 “Wholesale and Retail Trade; Repair of Motor Vehicles” Sector Job Change

In 2019, there were 88,512 jobs in the “Wholesale and Retail Trade; Repair of Motor Vehicles” Sector in Cheshire and Warrington which was 18% above the national average share of jobs for the sector.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. Employment in the sector grew by 15.2% in Cheshire and Warrington, more than seven times the English growth rate of 2.1%. Every local authority in Cheshire and Warrington saw employment in the sector grow by double digit percentage increases, with the largest growth being in Cheshire West and Chester at 19.5%.

Employment Change in the “Wholesale and Retail Trade; Repair of Motor Vehicles” Sector 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	77,892	89,700	11,808	15.2%
Cheshire West and Chester	28,847	34,484	5,637	19.5%
Cheshire East	28,814	32,020	3,206	11.1%
Warrington	20,231	23,196	2,965	14.7%
England	3,941,375	4,024,189	82,814	2.1%

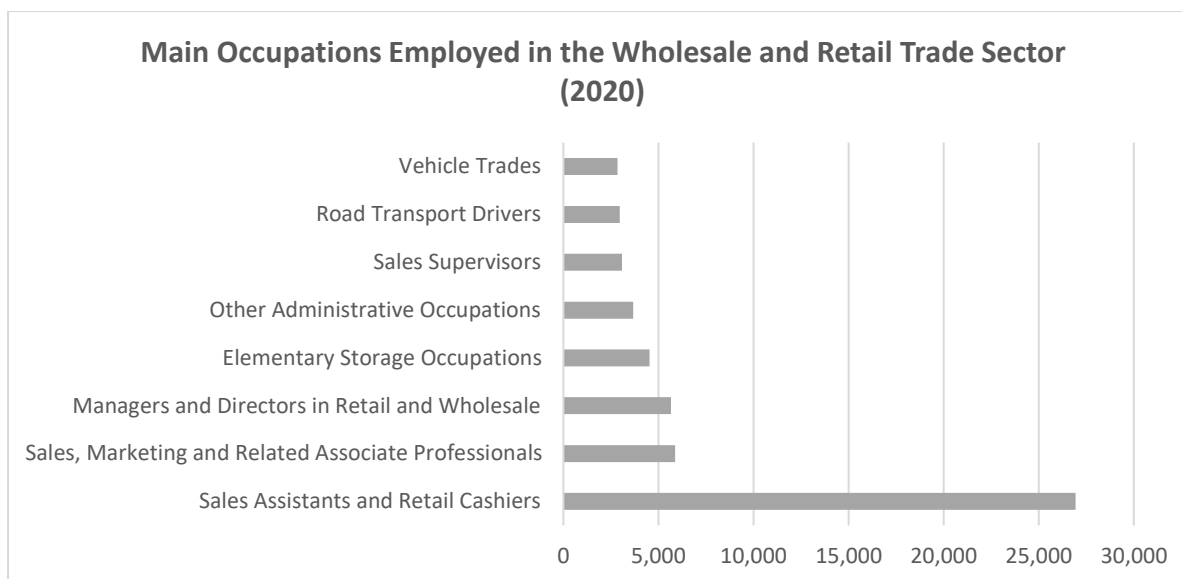
Source: EMSI Analyst

6.3.2 “Wholesale and Retail Trade; Repair of Motor Vehicles” Occupations

The most common occupations in the “Wholesale and Retail Trade; Repair of Motor Vehicles” Sector in Cheshire and Warrington in 2020, accounting for 62% of all jobs, were:

- Sales Assistants and Retail Cashiers
- Sales, Marketing and Related Associate Professionals
- Managers and Directors in Retail and Wholesale
- Elementary Storage Occupations
- Other Administrative Occupations
- Sales Supervisors
- Road Transport Drivers
- Vehicle Trades

As can be seen from the chart below, the most common occupation type in the sector was “Sales Assistants and Retail Cashiers”, with 26,930 jobs – over 30% of all employment in the sector.



Source: EMSI Analyst

In 2019, the average wage per job in the sector was £22,846 in Cheshire and Warrington which compares a national average wage for the sector of £24,040. The best paid main occupation in the sector was for “Sales, Marketing and Related Associate Professionals”. Three of the main occupations in the sector – “Sales Assistants and Retail Cashiers”, “Elementary Storage Occupations”, and “Sales Supervisors” – pay a median hourly wage of less than £10.

All the main occupations in the sector grew between 2015 and 2020. At 52%, the fastest job growth amongst the main occupations in the sector between 2015 and 2020 was for “Vehicle Trades”

C&W Main Occupations employed in the “Wholesale and Retail Trade; Repair of Motor Vehicles” Sector, Key Data					
	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Sales Assistants and Retail Cashiers	26,930	1,877	7%	30.2%	£8.70
Sales, Marketing and Related Associate Professionals	5,875	1,136	24%	6.5%	£16.99
Managers and Directors in Retail and Wholesale	5,659	741	15%	6.3%	£13.14
Elementary Storage Occupations	4,530	441	11%	5.0%	£9.50
Other Administrative Occupations	3,674	742	25%	4.1%	£10.63
Sales Supervisors	3,084	260	9%	3.5%	£9.80
Road Transport Drivers	2,964	338	13%	3.3%	£10.94
Vehicle Trades	2,856	973	52%	3.2%	£12.59

Source: EMSI Analyst

The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the “Wholesale and Retail Trade; Repair of Motor Vehicles” Sector in Cheshire and Warrington. It shows the change in the volume of job postings for each occupation between February 2020 and July 2020.

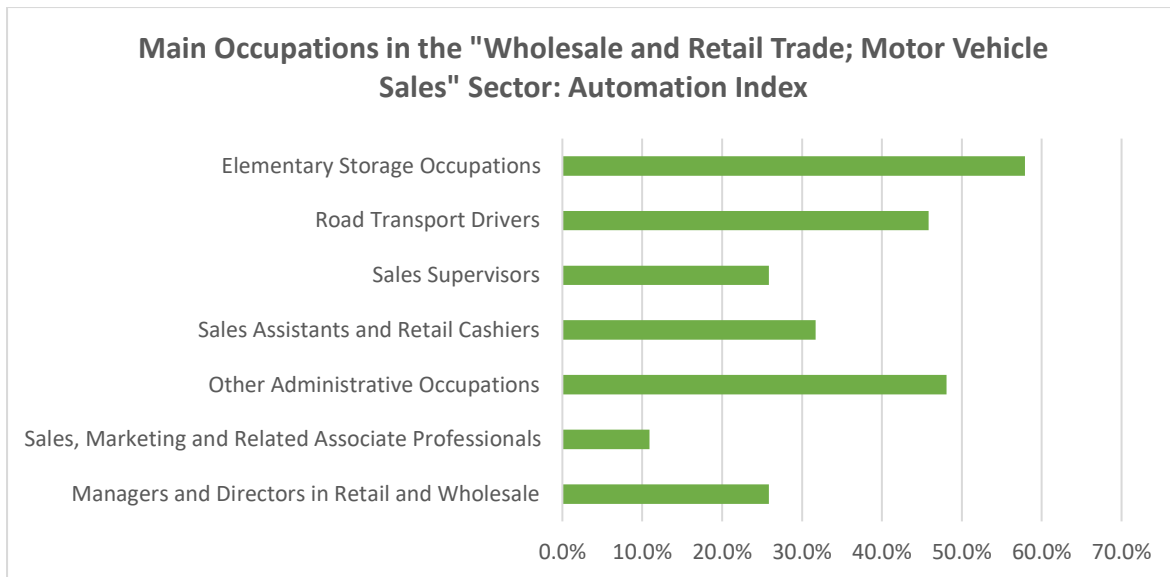
In this period job postings in these occupations reduced by 39%, with the largest reduction being a 72% reduction in postings for “Sales Supervisors”. The most recent job posting data shows an uptick in postings for jobs in the sector in the last 30 days of 28%.



Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s “Wholesale and Retail Trade; Repair of Motor Vehicles” Sector. Three occupational areas – “Elementary Storage”, “Road Transport Drivers” and “Other Administrative Occupations” - have an Automation Index score of above 40%.



Source: EMSI Analyst

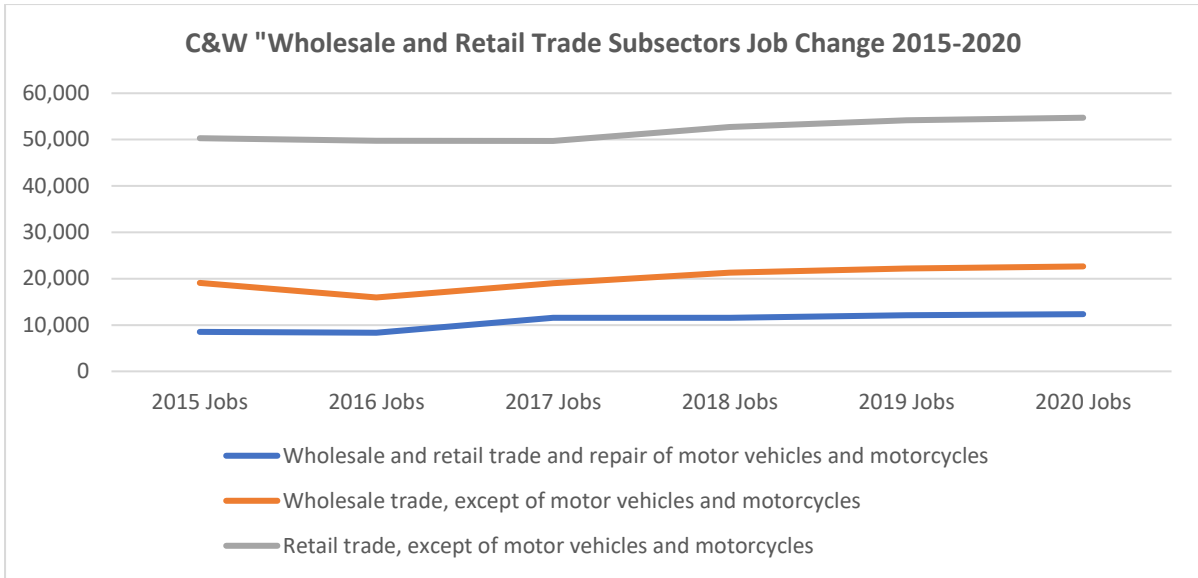
6.3.3 "Wholesale and Retail Trade; Repair of Motor Vehicles" Subsectors

The table below sets out key data about the subsectors in the "Wholesale and Retail Trade; Repair of Motor Vehicles" sector in Cheshire and Warrington. Every subsector employs over 10,000 people, with the retail trade employing over 50,000 people. The best paid sub-sector was "Wholesale trade, except of motor vehicles and motorcycles", where the average wage was £30,964.

C&W "Wholesale and Retail Trade; Repair of Motor Vehicles" Subsectors Key Data				
	Avg. Wages Per Job	2020 LQ	2019 Establishments	2020 Jobs
Wholesale and retail trade and repair of motor vehicles and motorcycles	£29,143	1.37	1,476	12,339
Wholesale trade, except of motor vehicles and motorcycles	£30,964	1.14	1,987	22,640
Retail trade, except of motor vehicles and motorcycles	£18,109	1.18	4,392	54,722

Source: EMSI Analyst

The graph below illustrates the job changes between 2015 and 2020 in the main subsectors of the "Wholesale and Retail Trade; Repair of Motor Vehicles" sector. Every subsector experienced growth with the sharpest growth being experienced in the trade and repair of motor vehicles, which saw a 45% growth in jobs in this period (8,538 jobs to 12,339).

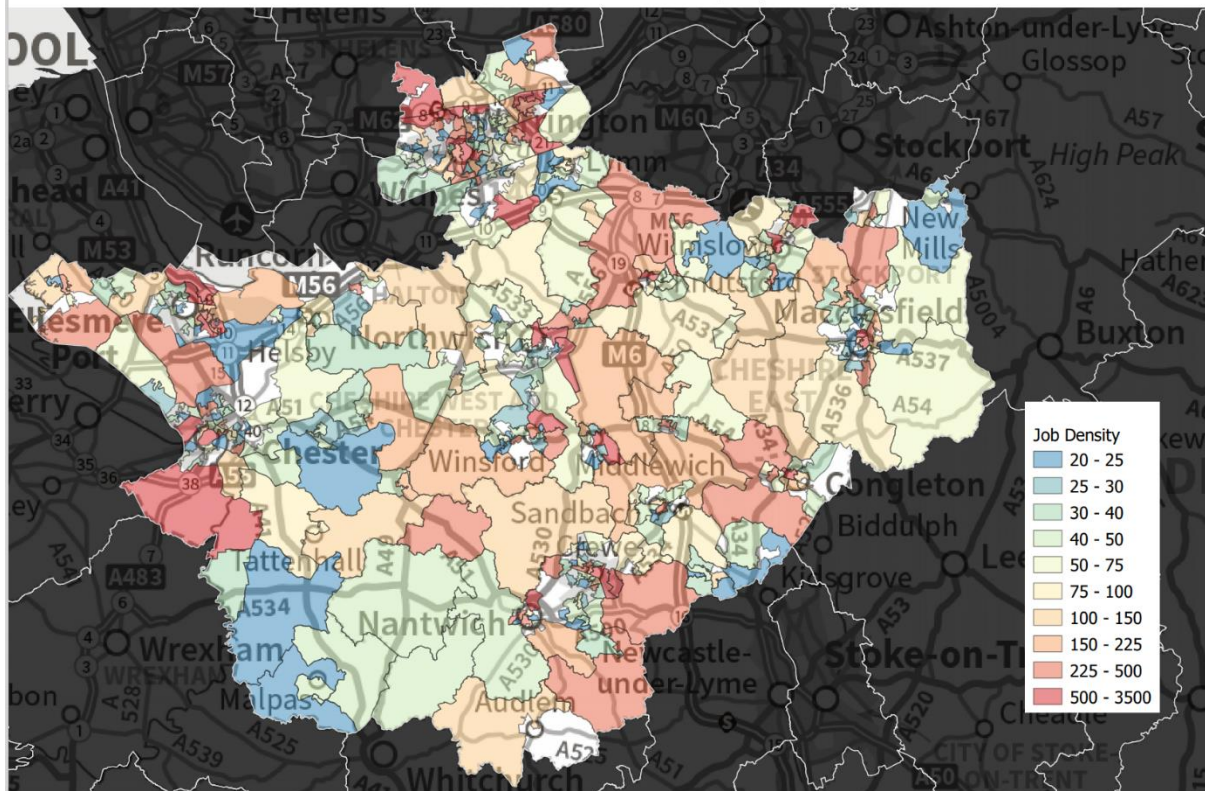


Source: EMSI Analyst

6.3.4 “Wholesale and Retail Trade; Repair of Motor Vehicles” Sector Job Locations

The map below illustrates the distribution of “Wholesale and Retail Trade; Repair of Motor Vehicles” jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. There are not many such areas. As expected, there are concentrations of employment in town centres and retail parks.

LSOAs with more than 20 Jobs in the "Wholesale and Retail Trade; Repair of Motorvehicles" Sector in C&W



Map by Brennan Wilson in QGIS. Data for NOMIS BRES (open access) and OS

6.4 The “Transportation and Storage” Sector in Cheshire and Warrington

6.4.1 “Transportation and Storage” Sector Job Change

In 2019, there were 24,865 jobs in the Transportation and Storage sector in Cheshire and Warrington which was 3% above the national average share of jobs for the sector.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. Jobs growth in this period in Cheshire and Warrington, at 11% was slightly below the English rate of 11.6%. Cheshire West and Chester and Cheshire East both grew faster than England (17.6% and 13.1% respectively). By contrast, growth in Warrington, at 4.6% was below England.

Employment Change in the Transportation and Storage Sector 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	22,683	25,188	2,505	11.0%
Cheshire West and Chester	5,925	6,967	1,042	17.6%
Cheshire East	8,107	9,170	1,063	13.1%
Warrington	8,651	9,051	400	4.6%
England	1,181,144	1,318,012	136,868	11.6%

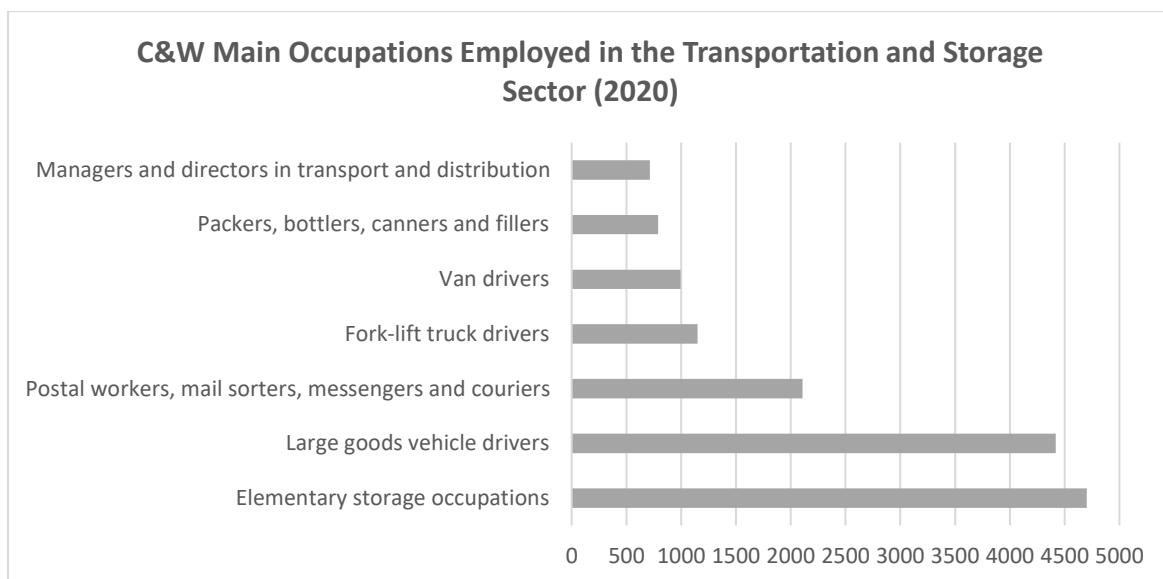
Source: EMSI Analyst

6.4.2 “Transportation and Storage” Sector Occupations

The most common occupations in the Transportation and Storage Sector in Cheshire and Warrington in 2020, accounting for 59% of all jobs, were:

- Elementary storage occupations
- Large goods vehicle drivers
- Postal workers, mail sorters, messengers and couriers
- Fork-lift truck drivers
- Van drivers
- Packers, bottlers, canners and fillers
- Managers and directors in transport and distribution

As can be seen from the chart below, the most common occupation types in the sector were “Elementary storage occupations” and “Large goods vehicle drivers”, with 4,703 (19% of jobs in the sector) and 4,411 jobs (17% of jobs in the sector) respectively.



Source: EMSI Analyst

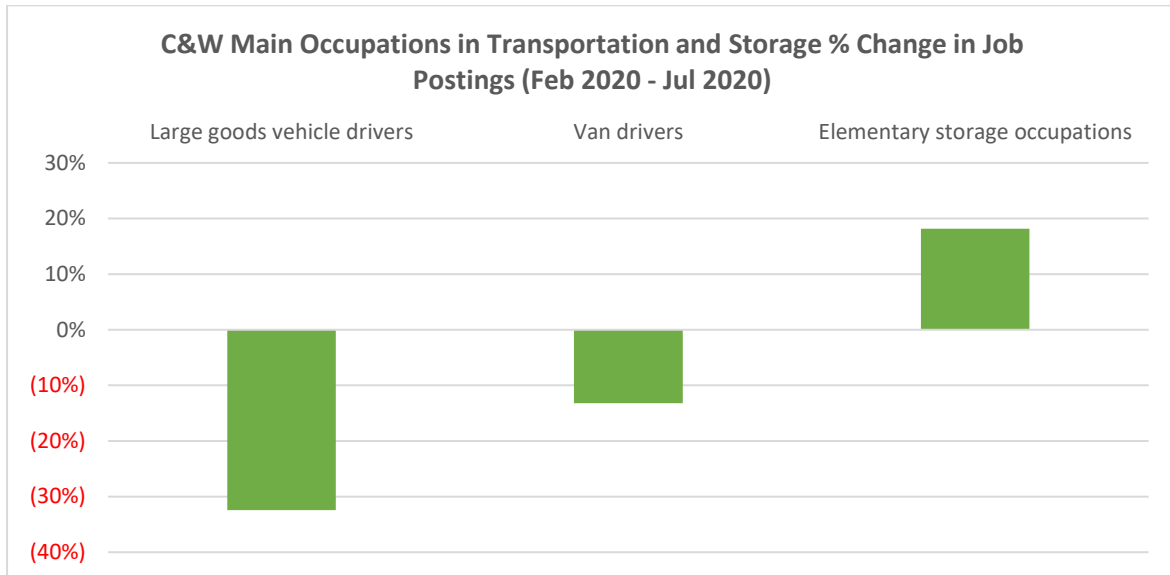
In 2019, the average wage per job in the sector was £28,571 in Cheshire and Warrington which compares a national average wage for the sector of £32,022. The best paid of the main jobs in the sector in Cheshire and Warrington were for “Managers and directors in transport and distribution”, with median hourly pay of £17.15. “Elementary storage occupations”, “Large goods vehicle drivers”, “Fork-lift truck drivers”, and “Packers, bottlers, canners and fillers” all saw growth in employment of over 20% in Cheshire and Warrington between 2015 and 2020. By contrast, there was a 16.8% decline in “Postal workers, mail sorters, messengers and couriers” in Cheshire and Warrington in this period.

C&W Main Occupations in the Transportation and Storage Sector Key Data					
	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Elementary storage occupations	4703	856	22.3%	19%	£9.50
Large goods vehicle drivers	4418	951	27.4%	17%	£12.06
Postal workers, mail sorters, messengers and couriers	2107	-426	-16.8%	9%	£12.30
Fork-lift truck drivers	1149	205	21.7%	5%	£10.37
Van drivers	993	9	0.9%	4%	£9.20
Packers, bottlers, canners and fillers	791	158	25.0%	3%	£9.15
Managers and directors in transport and distribution	713	68	10.5%	3%	£17.15

Source: EMSI Analyst

The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the Transportation and Storage Sector in Cheshire and Warrington. It shows the change in the volume of

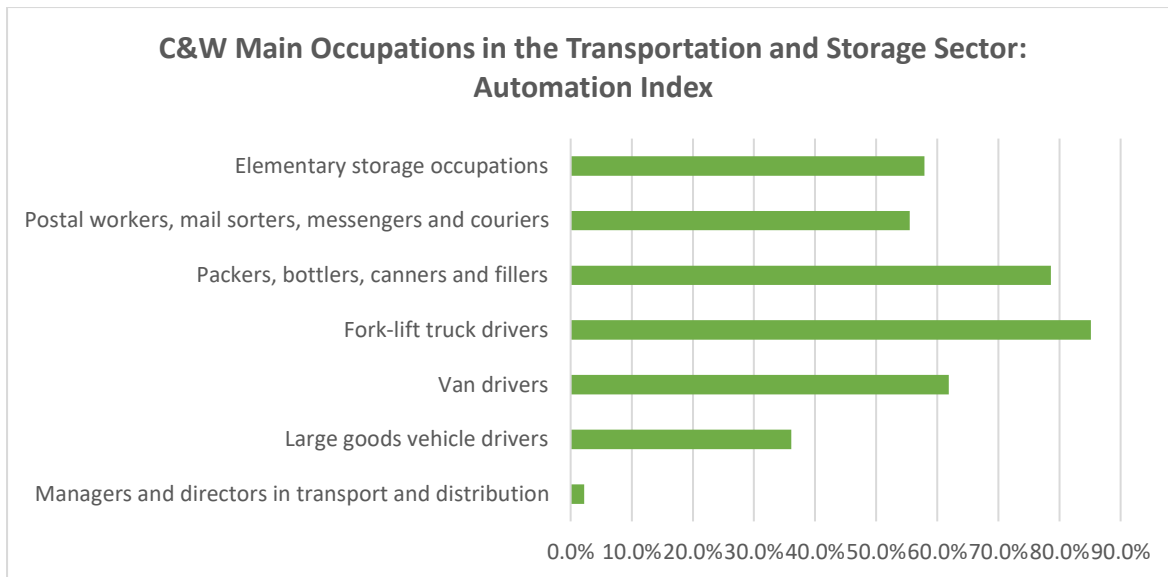
job postings for each main occupation in the sector between February 2020 and July 2020, where monthly postings exceeded 50. In this period job postings in the main occupations in the sector increased by 1%, with “Elementary Storage Occupations” showing an 18% increase in postings during lockdown. This almost certainly reflects the job impact on the sector created by a significant increase in online shopping. The most recent job posting data shows a further uptick in postings for jobs in the sector in the last 30 days (from mid-August to mid-September) of 34%.



Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s Transportation and Storage Sector. The main occupations in the sector have a high exposure to the risk of automation with five of the seven occupational areas scoring over 50% on EMSI’s Automation Index. In particular, “Forklift truck drivers” have an 85% exposure and “Packers, canners, bottlers and fillers” have a 79% exposure.



Source: EMSI Analyst

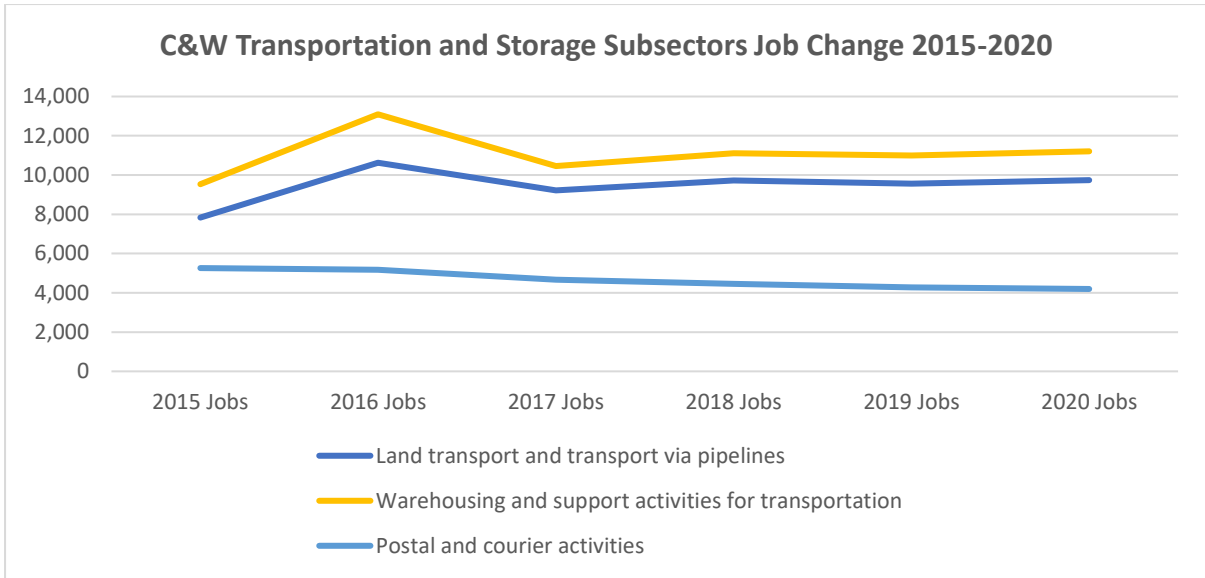
6.4.3 “Transportation and Storage” Subsectors

The table below sets out key data about the subsectors in the Transportation and Storage sector in Cheshire and Warrington. The largest subsectors in Cheshire and Warrington are “Land transport and transport via pipelines” and “Warehousing and support activities for transportation”.

C&W Transportation and Storage Subsectors Key Data 2020				
	Avg. Wages Per Job	2020 Location Quotient	2019 Establishments	2020 Jobs
Land transport and transport via pipelines	£29,763	1.04	1,049	9,736
Water transport	£29,699	0.17	7	39
Air transport	£38,904	0.01	9	14
Warehousing and support activities for transportation	£27,801	1.19	335	11,203
Postal and courier activities	£27,846	1.06	376	4,195

Source: EMSI Analyst

The graph below illustrates the job changes between 2015 and 2020 in the main subsectors of the Transportation and Storage subsectors. Two of these subsectors – “Land transport and transport via pipelines” and “Warehousing and support activities for transportation” – grew in this period by 24% and 18% respectively. By contrast, the number of jobs in “Postal and courier activities” over this period declined by 20%.

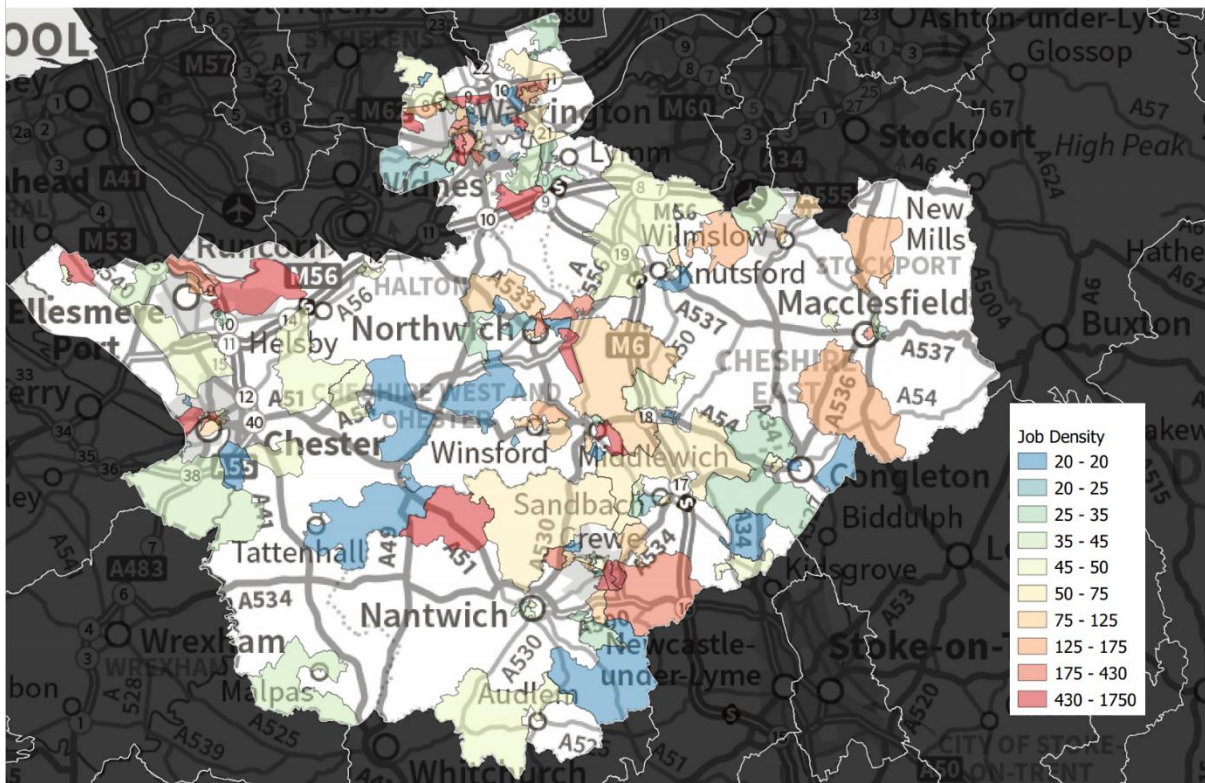


Source: EMSI Analyst

6.4.4 “Transportation and Storage” Sector Job Locations

The map below illustrates the distribution of Manufacturing jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. Many concentrations of employment in this sector can be found in LSOAs adjacent to, or spanning, major arterial roads.

LSOAs with more than 20 Jobs in the Transportation and Storage Sector in C&W



Map by Brennan Wilson Ltd in OGIS. Data from NOMIS BRES (open access) and OS

6.5 The “Accommodation and Food” Sector in Cheshire and Warrington

6.5.1 “Accommodation and Food” Job Change

In 2019, there were 32,498 jobs in the Accommodation and Food sector in Cheshire and Warrington which was 14% below the national average share of jobs for the sector. There was a 12.3% decrease in employment between 2015 and 2020 in the sector in Cheshire and Warrington compared with national growth of 11.9% in the same period.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. Employment declined significantly in Warrington with a 29.3% drop. It also declined less dramatically in Cheshire West and Chester (10.6%) and Cheshire East (4.8%).

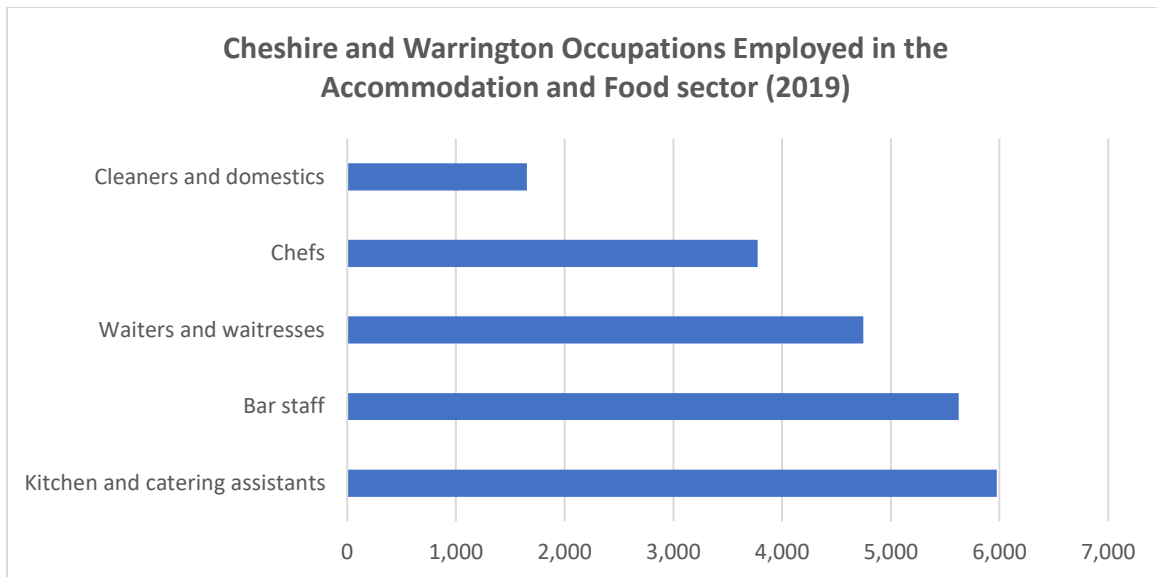
Employment Change in the Accommodation and Food Sector 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	37,083	32,517	(4,566)	(12.3%)
Cheshire West and Chester	13,863	12,397	(1,466)	(10.6%)
Cheshire East	15,113	14,389	(724)	(4.8%)
Warrington	8,106	5,730	(2,376)	(29.3%)
England	1,776,297	2,004,737	228,440	12.9%
<i>Source: EMSI Analyst</i>				

6.5.2 “Accommodation and Food” Occupations

The most common occupations in the Accommodation and Food Sector in Cheshire and Warrington in 2020, accounting for 67% of all jobs, were:-

- Kitchen and catering assistants
- Bar staff
- Waiters and waitresses
- Chefs
- Cleaners and domestics

As can be seen from the chart below, the most common occupation types in the sector were “Kitchen and catering assistants” and “Bar staff” with 18.4% and 17.3% of total employment in the sector, respectively.



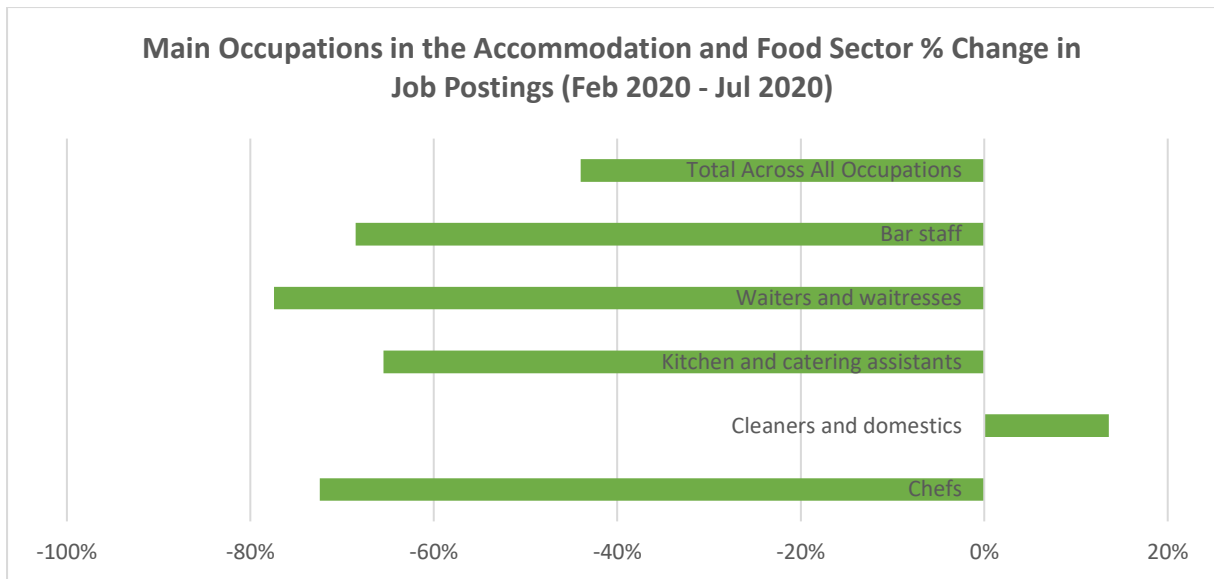
Source: EMSI Analyst

In 2019, the average wage per job in the sector was £15,287 in Cheshire and Warrington which compares to a national average wage for the sector of £16,564. The sector is low paid with median hourly wages in Cheshire and Warrington ranging from £8 to £9.16 across its five largest occupational groups. Consistent with the overall decline in jobs in the sector, all of its largest occupational groups saw a decline in numbers of around 10% between 2015 and 2020.

Cheshire and Warrington Accommodation and Food Sector Main Occupations key data					
Description	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Kitchen and catering assistants	5979	-811	-11.9%	18.4%	8.41
Bar staff	5588	-797	-12.5%	17.3%	8.21
Waiters and waitresses	4744	-561	-10.6%	14.6%	8
Chefs	3782	-414	-9.9%	11.6%	9.16
Cleaners and domestics	1668	-201	-10.8%	5.1%	8.5

Source: EMSI Analyst

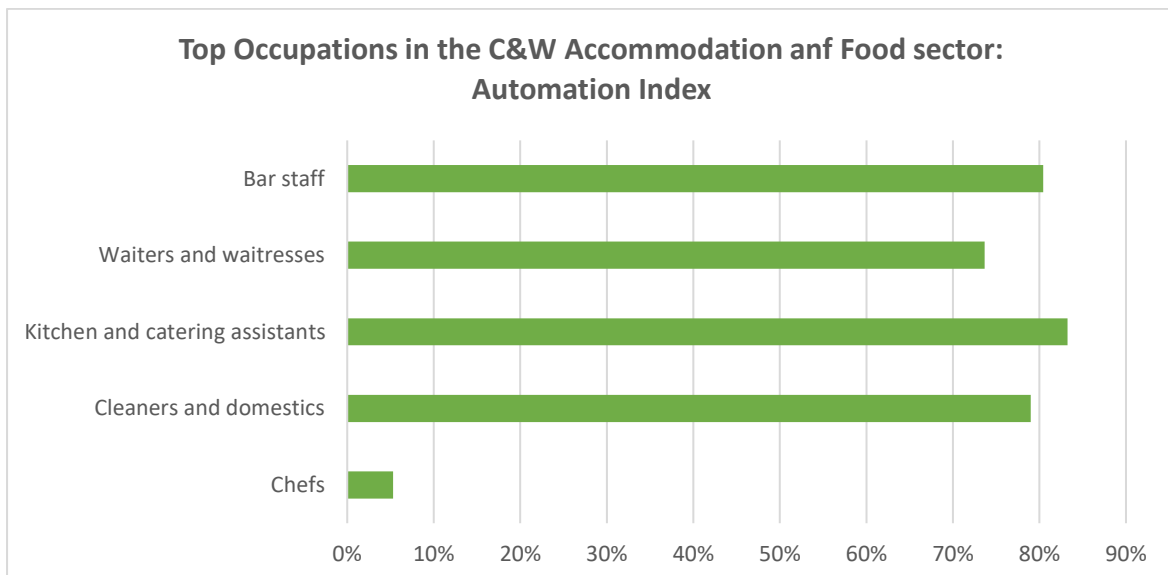
The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the Accommodation and Food sector in Cheshire and Warrington. It shows the change in the volume of job postings for each occupation between February 2020 and July 2020. Unsurprisingly, in this period job postings in these occupations reduced by 44%, with the largest reductions being in “Waiters and Waitresses” (77%) and “Chefs” (72%). The most recent job posting data shows an uptick in postings for jobs in the sector in the last 30 days (from mid-August to mid-September) of 25%. It remains to be seen whether this recovery in the demand for labour will be sustained following the ending of the ‘Eat Out to Help Out’ scheme.



Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s Accommodation and Food Sector. Four of the five occupational areas (chefs being the exception) have an Automation Index score of above 70%.



Source: EMSI Analyst

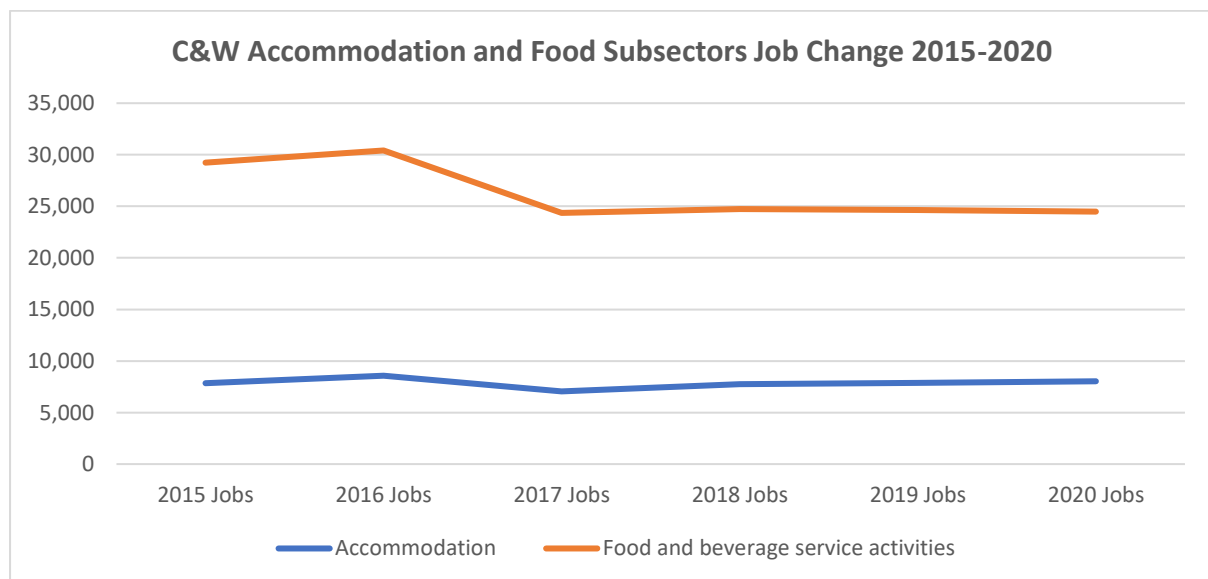
6.5.3 The “Accommodation and Food” Subsectors

The table below sets out key data about the largest subsectors in the Accommodation and Food sector in Cheshire and Warrington. There are two subsectors in the sector – “Accommodation” and “Food and beverage service activities”. The “Food and beverage” subsector is three times the size of the “Accommodation” sector. The average company size is just less than 10 in “Food and beverage” subsector and 30 in the “Accommodation” subsector. Both subsectors are low paid. Average pay is higher in the Accommodation subsector.

Cheshire and Warrington Accommodation and Food Subsectors key data 2020				
	2020 Jobs	Avg. Wages Per Job	2019 Establishments	2019 Location Quotient
Accommodation	8032	£18,553	267	1.04
Food and beverage service activities	24484	£14,244	2541	0.81

Source: EMSI Analyst

The graph below illustrates the job changes between 2015 and 2020 in the two subsectors of the Accommodation and Food sector. Employment in the “Accommodation” subsector has been stable in this period with a very slight increase. Employment in the “Food and beverage services” sub sector has seen a decline of 4,760 jobs (16%) in this period.

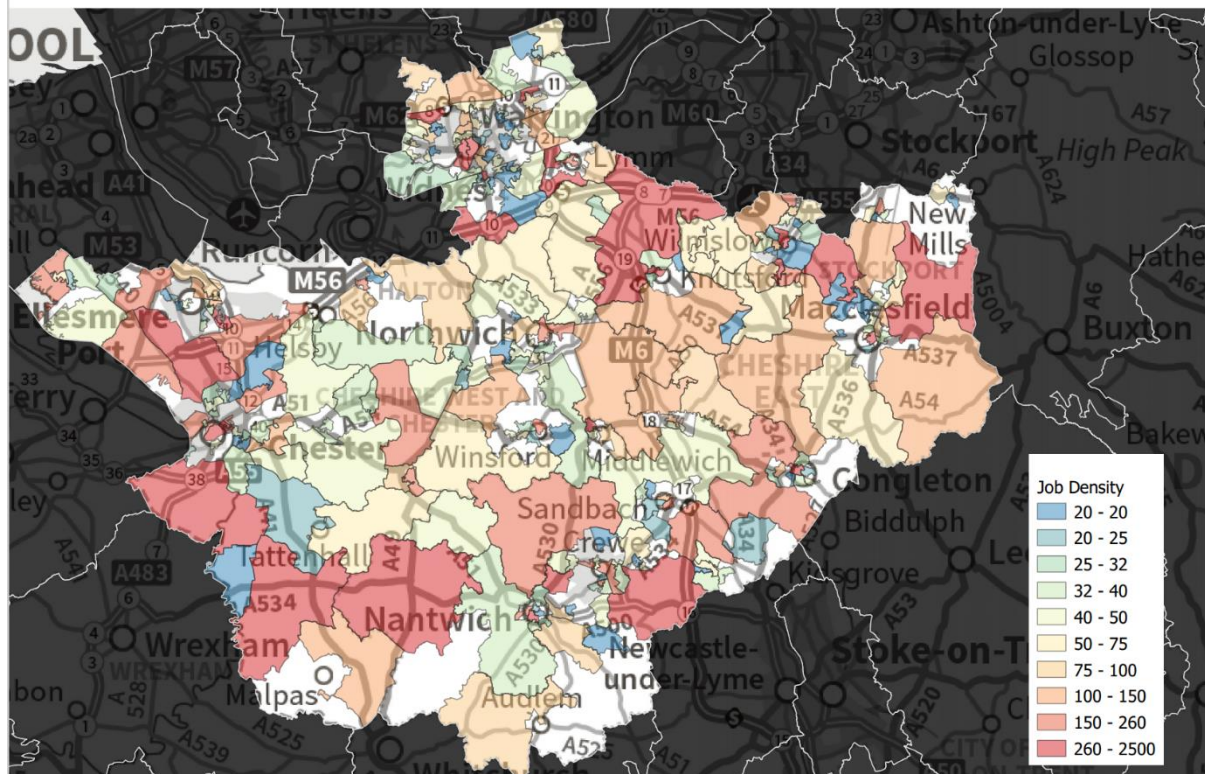


Source: EMSI Analyst

6.5.4 “Accommodation and Food” Jobs Locations

The map below illustrates the distribution of Accommodation and Food sector jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. The highest concentrations of jobs in the sector tend to be in LSOAs adjacent to, and spanning, major arterial routes and motorways.

LSOA's with more than 20 jobs in the Accommodation and Food sector in Cheshire and Warrington



Map by Brennan Wilson Ltd in QGIS. Data from NOMIS BRES (Open access) and OS

6.6 The Information and Communication Sector in Cheshire and Warrington

6.6.1 “Information and Communication” Sector Job Change

In 2019, there were 17,087 jobs in the ICT sector in Cheshire and Warrington which was 21% below the national average share of jobs for the sector.

The Table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. Employment in the sector has declined in this period in Cheshire and Warrington by 11.3% compared to a national growth of 9.4%. The decline in jobs has happened in all local authorities, most dramatically in Warrington which has seen a decline in excess of a quarter (27.2%) of all jobs in the sector over this period.

Employment Change in the ICT Sector 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	19,106	16,939	(2,167)	(11.3%)
Cheshire West and Chester	4,935	4,612	(323)	(6.5%)
Cheshire East	8,161	7,950	(211)	(2.6%)
Warrington	6,010	4,377	(1,633)	(27.2%)
England	1,107,012	1,211,446	104,434	9.4%

Source: EMSI Abnalyst

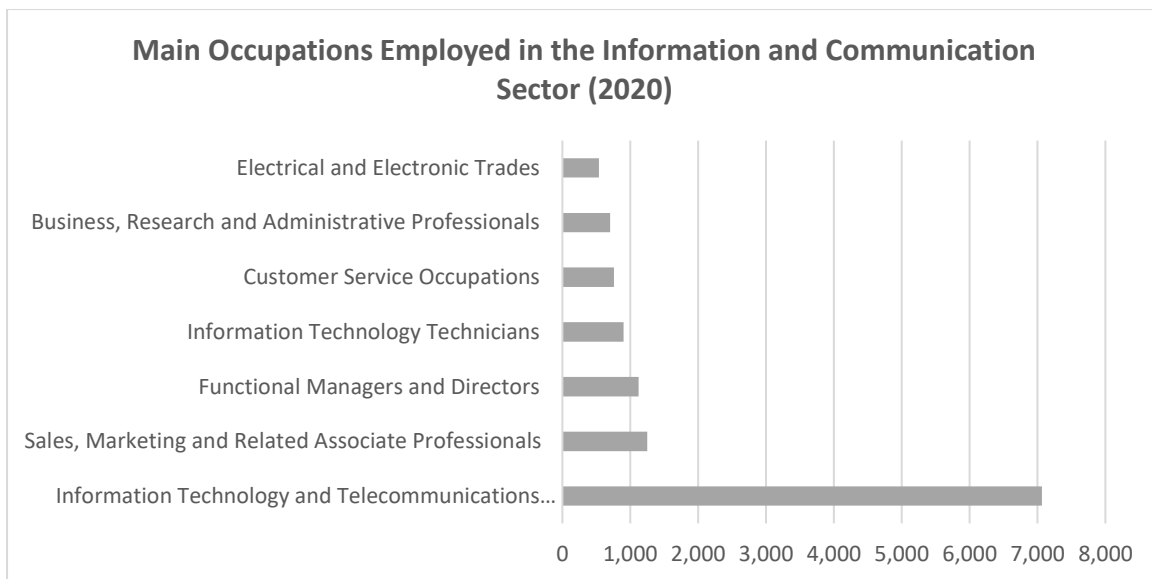
6.6.2 “Information and Communication” Sector Occupations

The most common occupations in the Information and Communication Sector in Cheshire and Warrington in 2020, accounting for 73% of all jobs, were:-

- Information Technology and Telecommunications Professionals

- Sales, Marketing and Related Associate Professionals
- Functional Managers and Directors
- Information Technology Technicians
- Customer Service Occupations
- Business, Research and Administrative Professionals
- Electrical and Electronic Trades

As can be seen from the chart below, the most common occupation type in the sector was “Information Technology and Telecommunications Professionals”, with 7,067 jobs – over 40% of all employment in the sector.



Source: EMSI Analyst

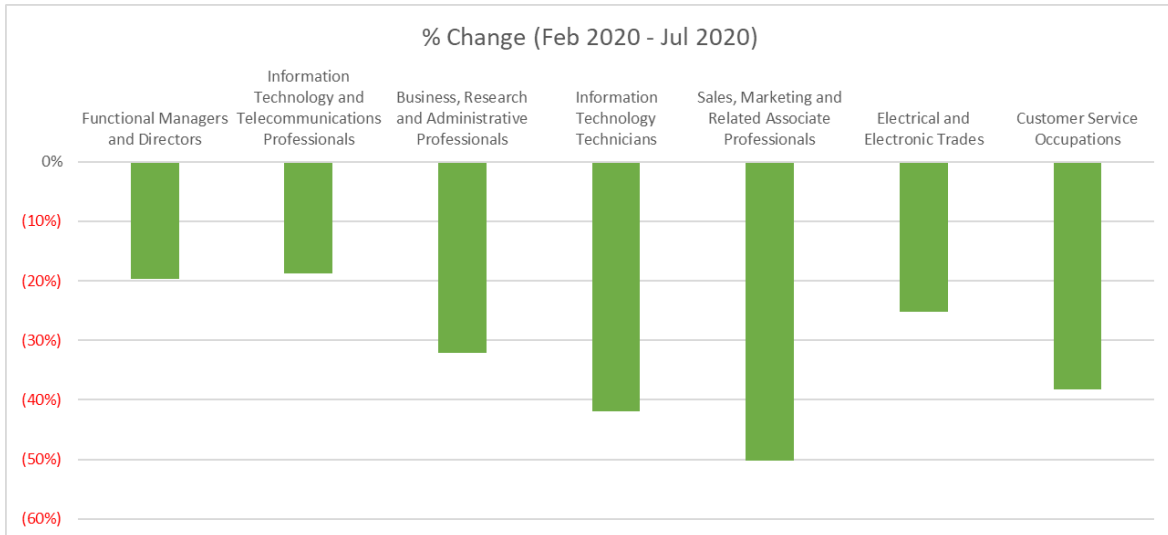
In 2019, the average wage per job in the sector was £37,371 in Cheshire and Warrington which compares a national average wage for the sector of £45,655. Three occupational types paid median hourly wages above £20, they were “Information Technology and Telecommunications Professionals”; “Functional Managers and Directors”; and “Business, Research and Administrative Professionals”. All of the main occupational types in the sector saw reductions in the numbers employed over this period with the decline the steepest in “Sales, Marketing and Related Associate Professionals” (19%); “Customer Service Occupations” (21%); and Electrical and Electronic Trades (29%).

C&W Main Occupations in the Information and Communication Sector – Key Data

	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Information Technology and Telecommunications Professionals	7,067	(365)	(5%)	41.6%	£21.16
Sales, Marketing and Related Associate Professionals	1,249	(294)	(19%)	7.4%	£16.99
Functional Managers and Directors	1,124	(80)	(7%)	6.6%	£27.23
Information Technology Technicians	899	(102)	(10%)	5.3%	£14.76
Customer Service Occupations	758	(205)	(21%)	4.5%	£10.11
Business, Research and Administrative Professionals	705	(115)	(14%)	4.2%	£20.53
Electrical and Electronic Trades	538	(217)	(29%)	3.2%	£15.44

Source: EMSI Analyst

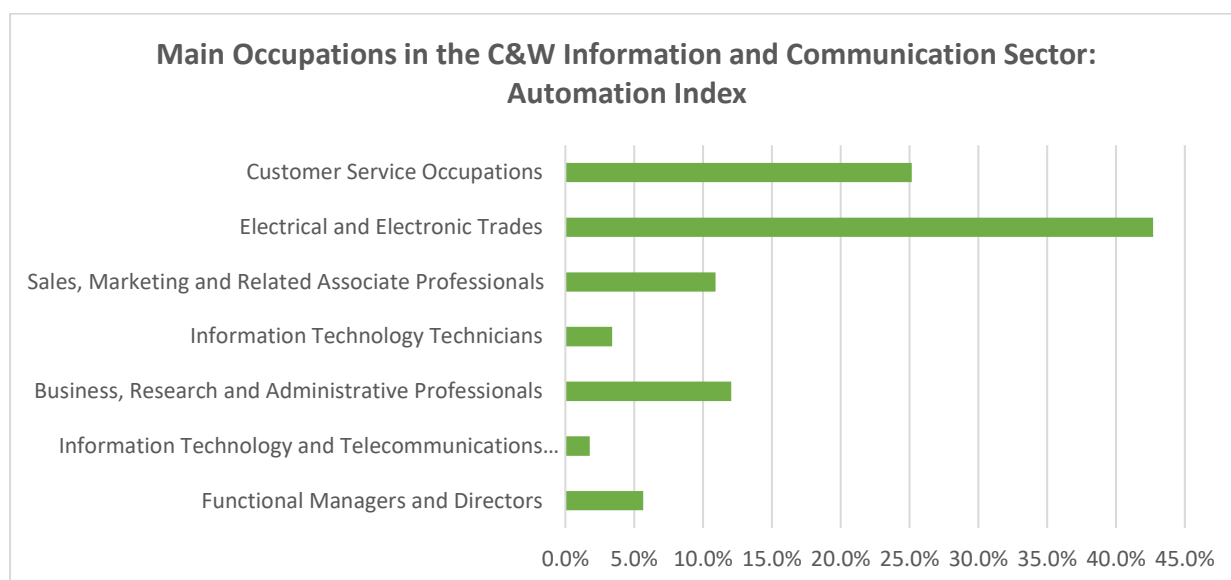
The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the Information and Communication Sector in Cheshire and Warrington. It shows the change in the volume of job postings for each occupation between February 2020 and July 2020. In this period job postings in these occupations reduced by a third (33%), with the largest reductions being in “Information Technology Technicians” (42%) and “Sales, Marketing and Related Associate Professionals” (50%). The most recent job posting data shows an uptick in postings for jobs in the sector in the last 30 days (from mid-August to mid-September) of 21%.



Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s Information and Communication Sector. Two occupational areas – “Customer Service Occupations” and “Electrical and Electronic Trades” have the highest risk of automation with Automation Index scores of 25% and 43% respectively. The largest occupational group in the sector “Information Technology and Telecommunications Professionals” has a low score of 2%.



Source: EMSI Analyst

6.6.3 “Information and Communication” Subsectors

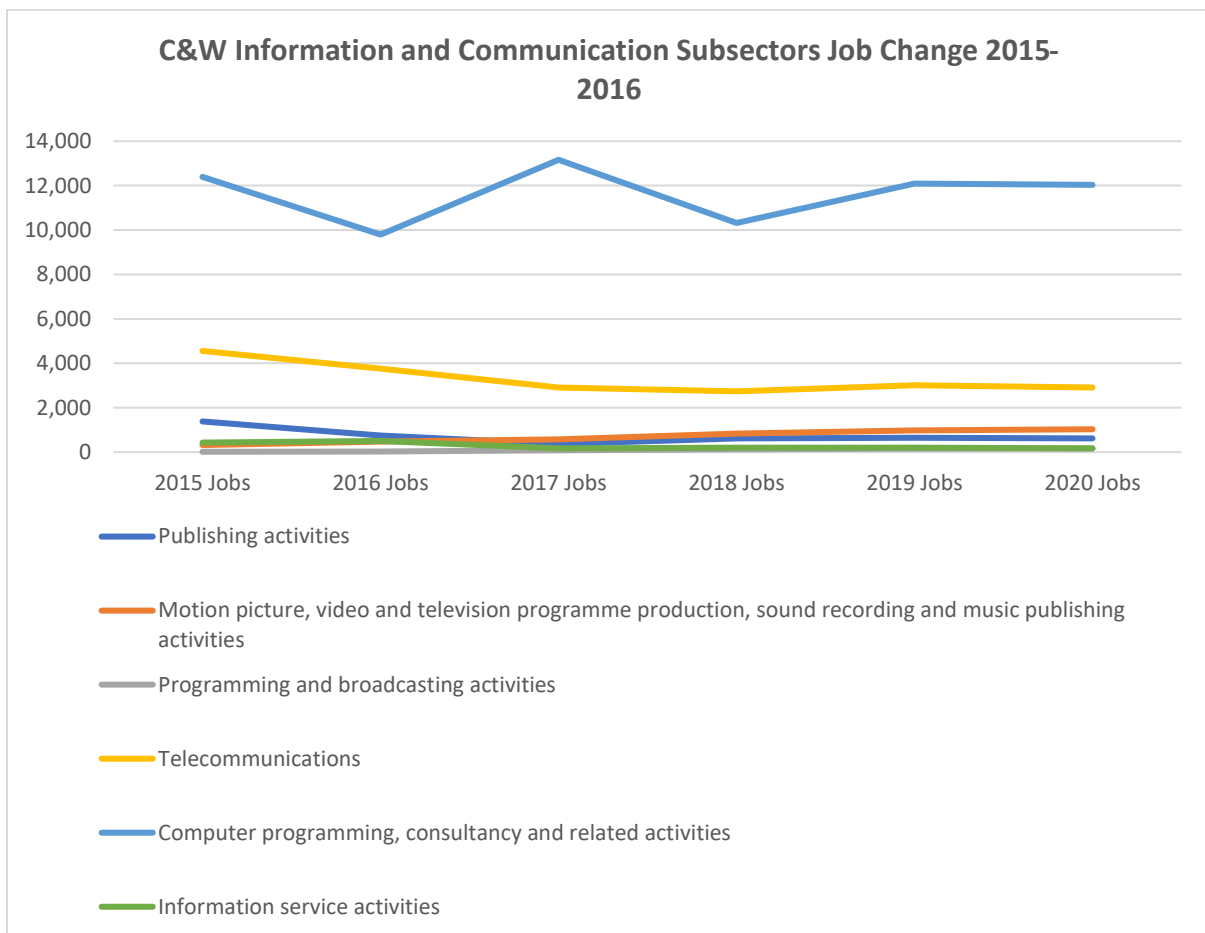
The Table below sets out key data about the subsectors in the Information and Communication sector in Cheshire and Warrington. By far the largest subsector in Cheshire and Warrington is “Computer programming, consultancy and related activities” which employs 70% of the overall sector’s employees. Location Quotients are particularly low for “Information service activities” (0.13) and “Programming and broadcasting activities” (0.24).

The best paid subsector was “Computer programming, consultancy and related activities” where the average wage was £39,054.

C&W Information and Communication Subsectors Key Data				
	Avg. Wages Per Job	2020 LQ	2019 Establishments	2020 Jobs
Publishing activities	£33,182	0.32	141	623
Motion picture, video and television programme production, sound recording and music publishing activities	£26,120	0.55	176	1,032
Programming and broadcasting activities	£25,013	0.24	23	165
Telecommunications	£36,367	0.88	191	2,911
Computer programming, consultancy and related activities	£39,054	0.94	2,746	12,031
Information service activities	£29,174	0.13	128	177

Source: EMSI Analyst

The graph below illustrates the job changes between 2015 and 2020 in the subsectors of the Information and Communications sector. Overall job numbers in the sector declined by 11%. The main subsector – “Computer programming, consultancy and related activities” - declined by 3%. However, there were two subsectors which lost more than half their jobs in this time – “Publishing activities” and “Information service activities”. Two other subsectors – “Motion picture, video and television programme production, sound recording and music publishing activities” and “Programming and broadcasting activities” – experienced rapid growth in this time (712% and 147% respectively) but from a very low base.

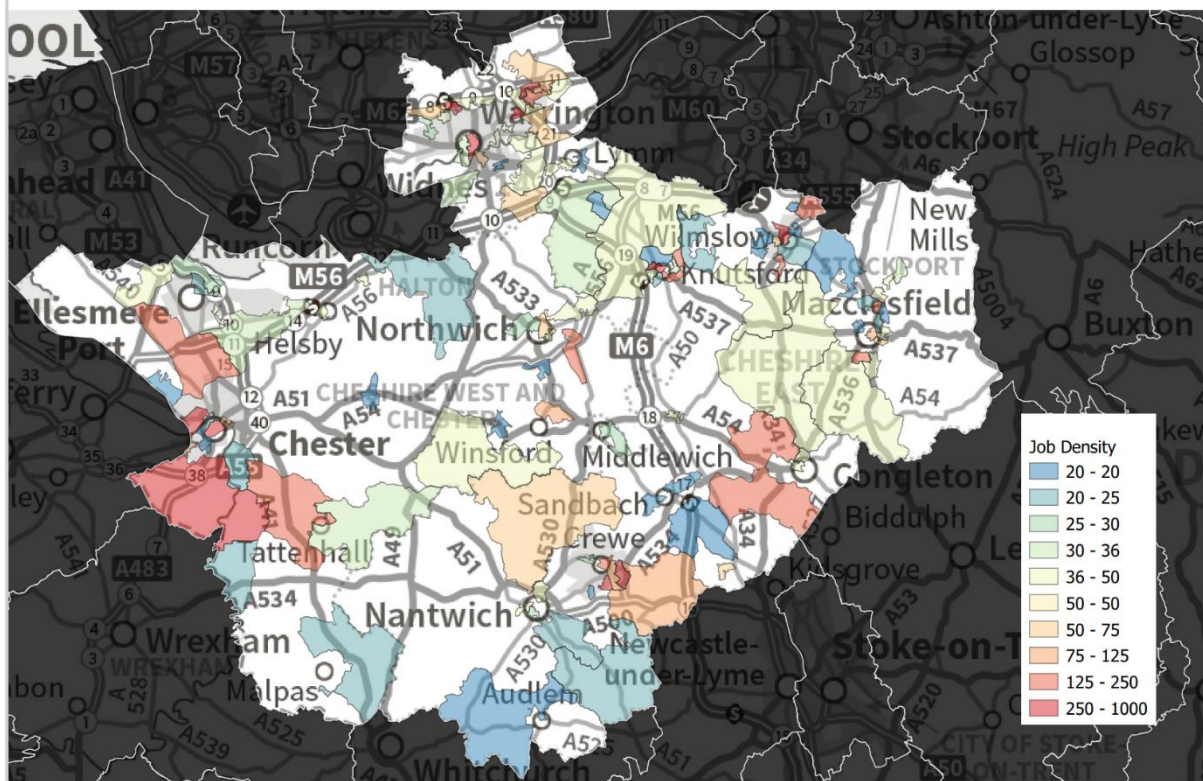


Source: EMSI Analyst

6.6.4 Information and Communication Sector Job Locations

The map below illustrates the distribution of Information and Communication sector jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. The sector is mostly concentrated in Chester with other concentrations in Warrington, Wilmslow and Crewe.

LSOAs with more than 20 Jobs in the Information and Communication Sector in C&W



Map by Brennan Wilson Ltd in QGIS. Data from NOMIS BRES (open access) and OS

6.7 The Financial and Insurance Activities Sector in Cheshire and Warrington

6.7.1 “Financial and Insurance Activities” Sector Job Change

In 2019, there were 19,871 jobs in the “Financial and Insurance Activities” Sector in Cheshire and Warrington which was 18% above the national average share of jobs for the sector.

There was 16.3% growth in employment between 2015 and 2020 in the sector in Cheshire and Warrington, significantly higher than the national growth of 0.2% in the same period. The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. All three local authorities saw significant growth in the sector. Jobs growth was highest in Cheshire West and Chester at 24.3%.

Employment Change in the Financial and Insurance Activities Sector 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	17,223	20,023	2,800	16.3%
Cheshire West and Chester	7,768	9,653	1,885	24.3%
Cheshire East	7,984	8,638	654	8.2%
Warrington	1,471	1,732	261	17.7%
England	898,044	899,748	1,704	0.2%

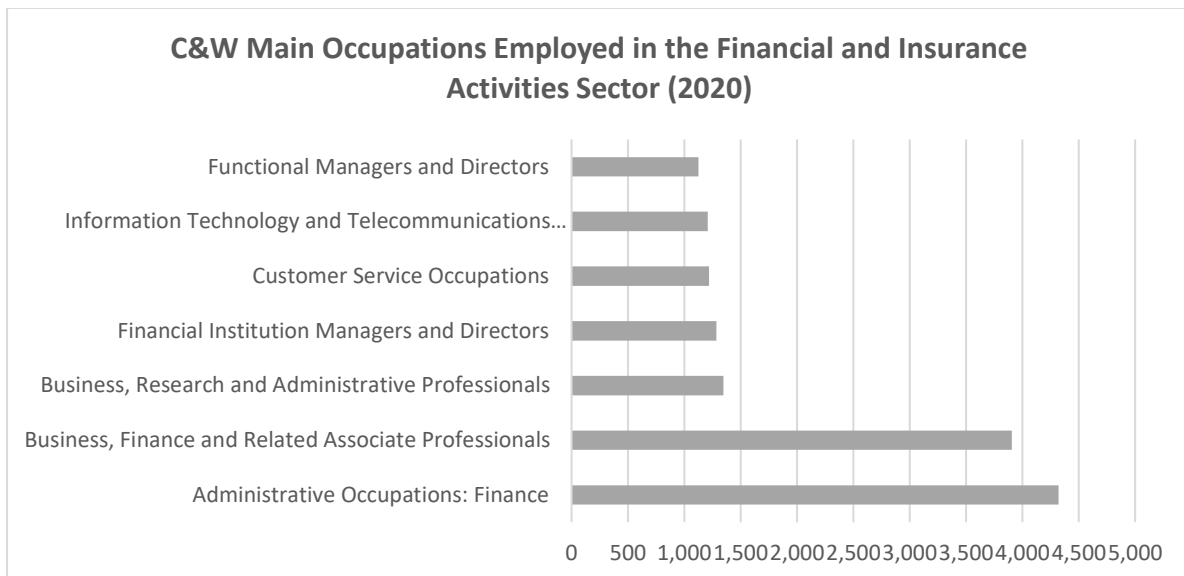
Source: EMSI Analyst

6.7.2 “Financial and Insurance Activities” Sector Occupations

The most common occupations in the Financial and Insurance Activities Sector in Cheshire and Warrington in 2020, accounting for 69% of all jobs, were:

- Administrative Occupations: Finance
- Business, Finance and Related Associate Professionals
- Business, Research and Administrative Professionals
- Financial Institution Managers and Directors
- Customer Service Occupations
- Information Technology and Telecommunications Professionals
- Functional Managers and Directors

As can be seen from the chart below, the most common occupation type in the sector was “Administrative Occupations: Finance”, with 4,320 jobs – over a fifth (21.5%) of all employment in the sector. A further fifth (19.5%) were employed in the “Business, Finance and Related Associate Professionals” category.



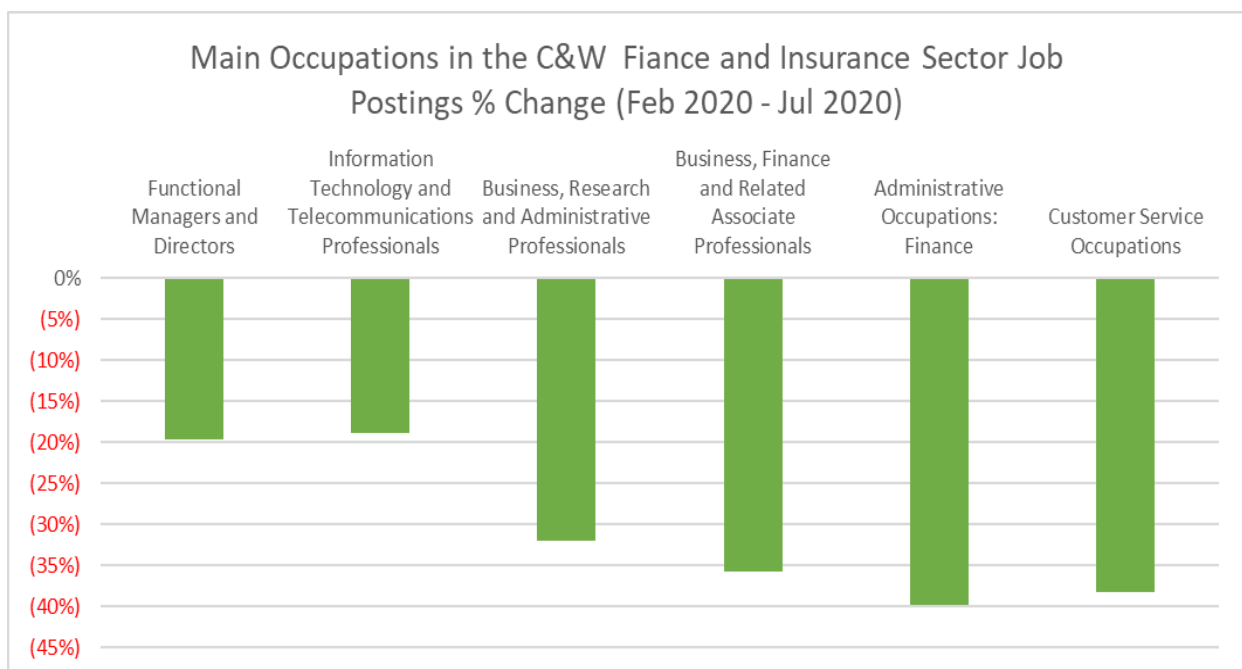
Source: EMSI Analyst

In 2019, the average wage per job in the sector was £38,568 in Cheshire and Warrington which compares to a national average wage for the sector of £61,772. The best paid jobs from the main occupations in the sector in Cheshire and Warrington were “Functional Managers and Directors” and “Information Technology and Telecommunications Professionals”, with median hourly pay of £27.23 and £21.16 respectively. Between 2015 and 2020, all the main occupations in the sector grew by between 14% and 20%.

C&W Main Occupations in the Financial & Insurance Activities Sector Key Data					
	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Administrative Occupations: Finance	4,320	705	20%	21.5%	£11.81
Business, Finance and Related Associate Professionals	3,906	513	15%	19.5%	£17.40
Business, Research and Administrative Professionals	1,347	183	16%	6.7%	£20.53
Financial Institution Managers and Directors	1,285	191	17%	6.4%	£19.45
Customer Service Occupations	1,219	171	16%	6.1%	£10.11
Information Technology and Telecommunications Professionals	1,210	190	19%	6.0%	£21.16
Functional Managers and Directors	1,127	140	14%	5.6%	£27.23

Source: EMSI Analyst

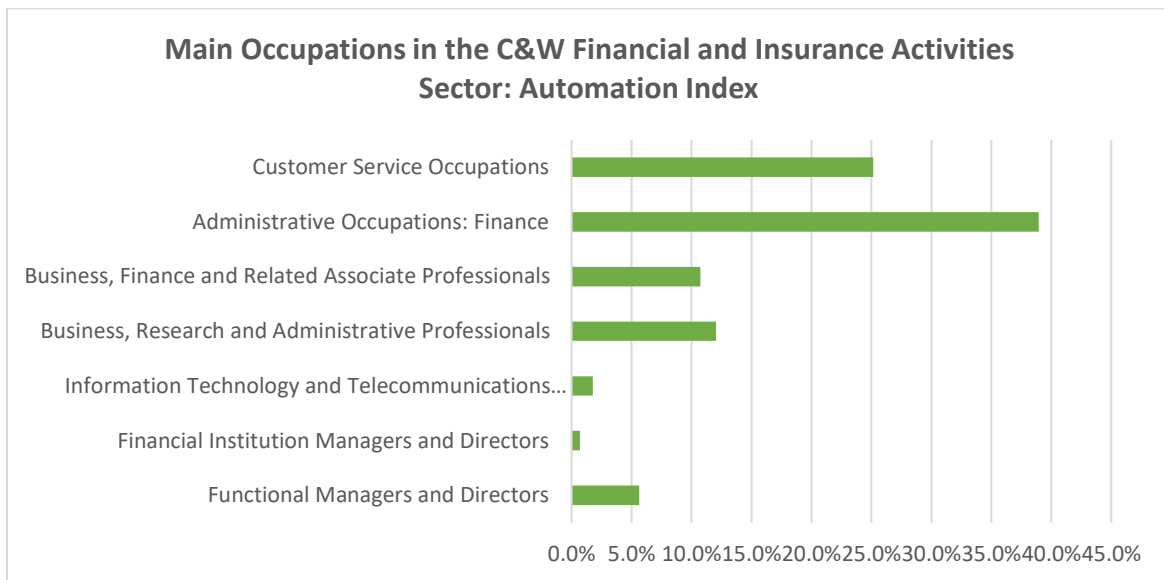
The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the “Finance and Insurance” Sector in Cheshire and Warrington (Financial Institution Managers and Directors data excluded because of low volumes). It shows the change in the volume of job postings for each main occupation between February 2020 and July 2020. In this period job postings in these occupations reduced by 30%, with the largest reductions being in “Administrative Occupations: Finance” (40%) and “Customer Service Occupations” (38%). The most recent job posting data shows an uptick in postings for jobs in the sector in the last 30 days (from mid-August to mid-September) of 16%.



Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s “Financial and Insurance Activities” Sector. The most exposed occupational areas are “Administrative Occupations: Finance” (39%) and “Customer Service Occupations” (25%).



Source: EMSI Analyst

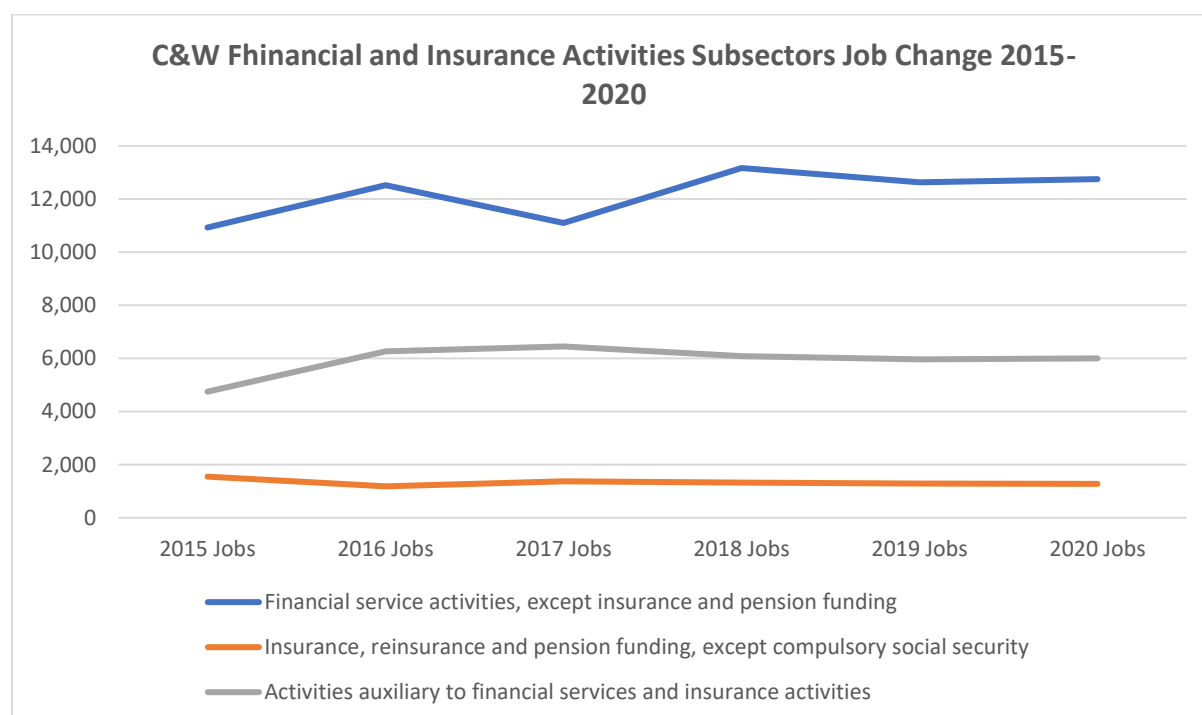
6.7.3 “Financial and Insurance Activities” Subsectors

The table below sets out key data about the subsectors of the Financial and Insurance Activities sector in Cheshire and Warrington. By far the largest subsector is “Financial service activities, except insurance and pension funding” which employed almost two thirds (64%) of employees in the sector. This subsector also had, in 2020, a location quotient of 1.58 reflecting its local strength. The average company size was smallest in the “Activities auxiliary to financial services and insurance activities” subsector and largest in the “Insurance, reinsurance and pension funding, except compulsory social security” subsector. The best paid sub-sector was “Activities auxiliary to financial services and insurance activities” where the average wage was £43,615.

Cheshire and Warrington Financial and Insurance Activities Subsectors Key Data 2020				
	Avg. Wages Per Job	2020 Location Quotient	2019 Establishments	2020 Jobs
Financial service activities, except insurance and pension funding	£36,652	1.58	490	12,747
Insurance, reinsurance and pension funding, except compulsory social security	£33,999	0.68	22	1,271
Activities auxiliary to financial services and insurance activities	£43,615	0.86	632	6,006

Source: EMSI Analyst

The graph below illustrates the job changes between 2015 and 2020 in the subsectors of the Financial and Insurance Activities Sector. In this period, “Financial service activities, except insurance and pension funding” grew by 17%; “Insurance, reinsurance and pension funding, except compulsory social security” declined by 18%; and “Activities auxiliary to financial services and insurance activities” grew by 27%; with the sector as a whole growing by 16%.

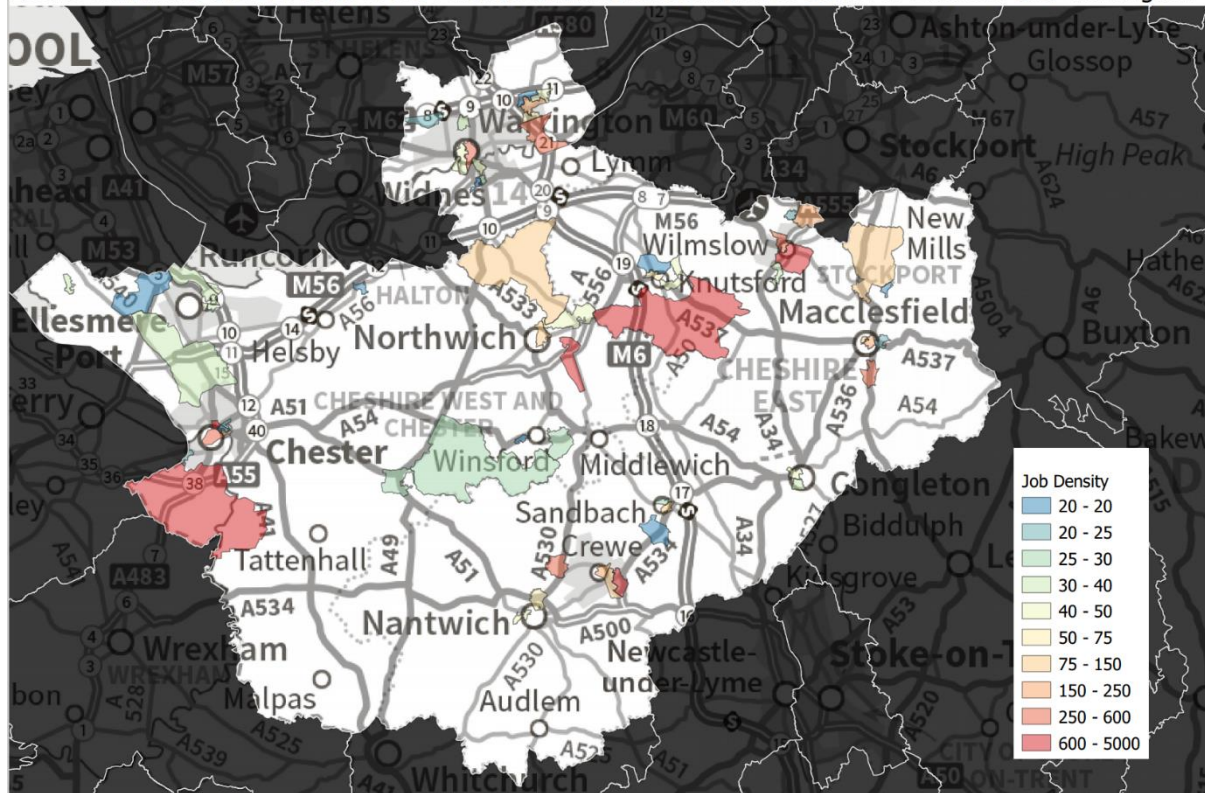


Source: EMSI Analyst

6.7.4 The “Financial and Insurance Activities” Sector Job Locations

The map below illustrates the distribution of Financial and Insurance Activities Sector jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. Many parts of Cheshire and Warrington have no or very few jobs in the sector and employment is highly concentrated in a few areas, notably Wilmslow, parts of Warrington, Crewe and Chester and just south of Knutsford.

LSOAs with more than 20 Jobs in the Finance and Insurance Activities Sector in Cheshire and Warrington



6.8 The “Professional, Scientific and Technical Activities” Sector in Cheshire and Warrington

6.8.1 “Professional, Scientific and Technical Activities” Sector Job Change

In 2019, there were 65,278 jobs in the “Professional, Scientific and Technical Activities” sector in Cheshire and Warrington which was 51% above the national average share of jobs for the sector. The sector is therefore one of the major strengths of the Cheshire and Warrington Economy.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. There was almost 50% (48.9%) jobs growth in the sector in Cheshire and Warrington between 2015 and 2020. This compares with a national growth in this period of 11.5%. The sector saw growth in all three local authorities above the English rate. Employment more than doubled in Warrington (106% growth) and saw growth of 62% in Cheshire West and Chester.

Employment Change in the Professional, Scientific and Technical Services Sector 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	44,932	66,919	21,987	48.9%
Cheshire West and Chester	10,803	17,473	6,670	61.7%
Cheshire East	22,275	24,976	2,701	12.1%
Warrington	11,854	24,470	12,616	106.4%
England	2,177,214	2,427,479	250,265	11.5%

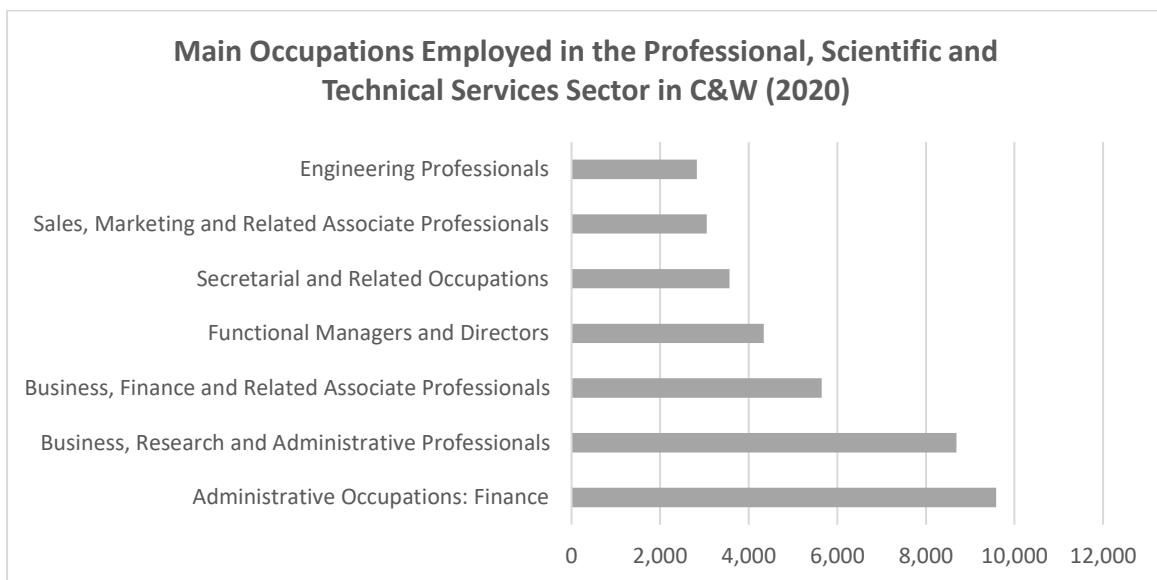
Source: EMSI Analyst

6.8.2 “Professional, Scientific and Technical Activities” Occupations

The most common occupations in the Professional, Scientific and Technical Services Sector in Cheshire and Warrington in 2020, accounting for 56% of all jobs, were:

- Administrative Occupations: Finance
- Business, Research and Administrative Professionals
- Business, Finance and Related Associate Professionals
- Functional Managers and Directors
- Secretarial and Related Occupations
- Sales, Marketing and Related Associate Professionals
- Engineering Professionals

As can be seen from the chart below, the most common occupation type in the sector was “Administrative Occupations: Finance”, with 9,589 jobs – 14% of all employment in the sector.



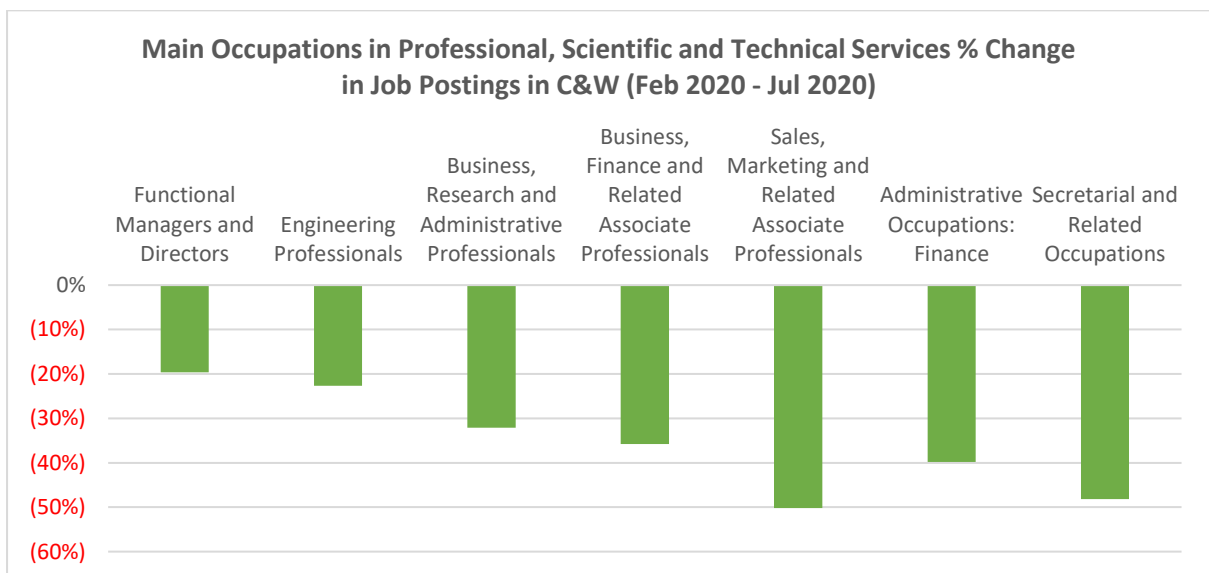
Source: EMSI Analyst

In 2019, the average wage per job in the sector was £34,658 in Cheshire and Warrington which compares a national average wage for the sector of £42,316. The best paid main occupations in the sector were “Business, Research and Administrative Professionals”, “Functional Managers and Directors”, and “Engineering Professionals” all of which paid median hourly wage above £20. Numbers employed grew for all the main occupations in the sector between 2015 and 2020. The main occupations with the fastest growth in this period were “Administrative Occupations: Finance”, “Business, Research and Administrative Professionals”, and “Business, Finance and Related Associate Professionals”.

C&W Professional, Scientific and Technical Services Sector Main Occupations Key Data					
	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Administrative Occupations: Finance	9,589	4,605	92%	14.2%	£11.81
Business, Research and Administrative Professionals	8,688	3,840	79%	12.8%	£20.53
Business, Finance and Related Associate Professionals	5,645	2,417	75%	8.4%	£17.40
Functional Managers and Directors	4,340	1,166	37%	6.5%	£27.23
Secretarial and Related Occupations	3,564	1,288	57%	5.3%	£10.09
Sales, Marketing and Related Associate Professionals	3,051	458	18%	4.6%	£16.99
Engineering Professionals	2,831	627	28%	4.3%	£20.95

Source: EMSI Analyst

The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the “Professional, Scientific and Technical Services” Sector in Cheshire and Warrington. It shows the change in the volume of job postings for each occupation between February 2020 and July 2020. In this period job postings in these occupations reduced by 39%, with the largest reductions being in “Sales, marketing and related associate professionals” and “Secretarial and Related occupations”. The most recent job posting data shows an uptick in postings for the main occupations in the sector in the last 30 days (from mid-August to mid-September) of 18%.

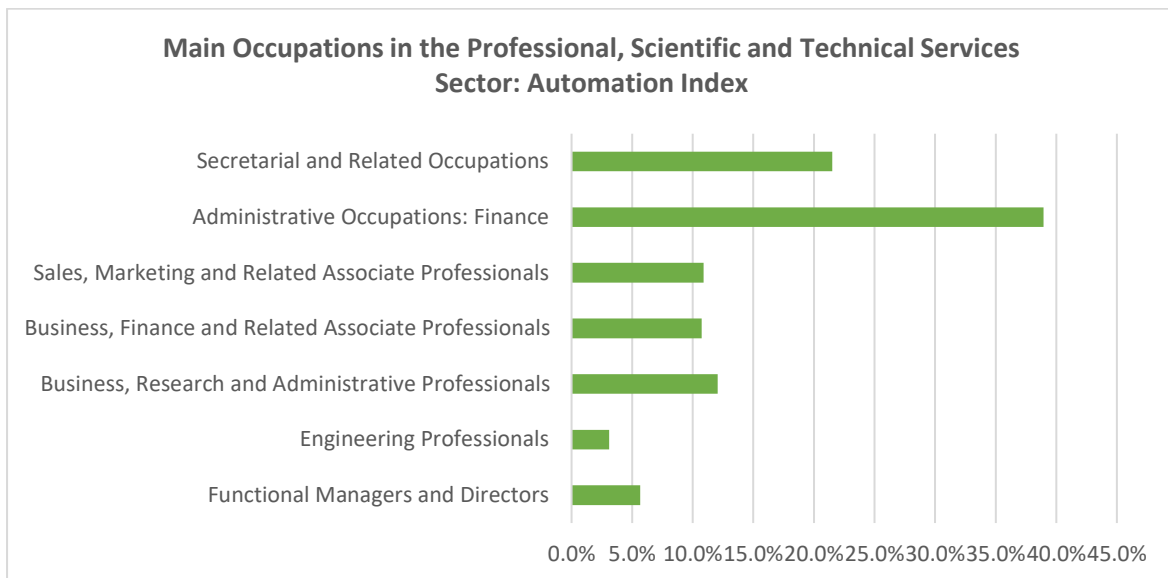


Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could

be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s Professional, Scientific and Technical Services Sector. Most of the main occupations in the sector score relatively low risk on the Automation Index. “Administrative Occupations: Finance” is at greatest risk (39%).



Source: EMSI Analyst

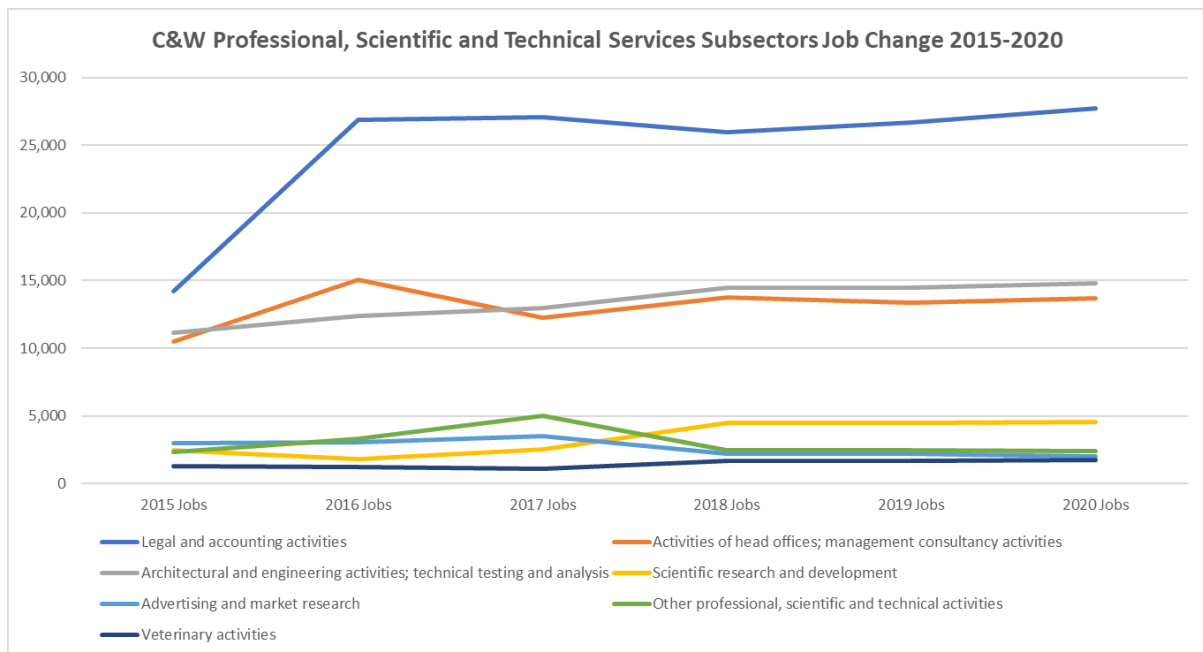
6.8.3 “Professional, Scientific and Technical Activities” Subsectors

The table below sets out key data about the subsectors in the Professional, Scientific and Technical Services sector in Cheshire and Warrington. The subsectors of “Legal and accounting activities”, “Activities of head offices; management consultancy activities”, and “Architectural and engineering activities; technical testing and analysis” all employed more than 10,000 people in Cheshire and Warrington in 2020. Three subsectors – “Legal and accounting activities”, “Architectural and engineering activities; technical testing and analysis”, and “Scientific research and development” – all had location quotients above 1.5. The best paid subsector was “Scientific research and development” where the average wage was £45,213.

C&W Professional, Scientific and Technical Services Subsectors Key Data				
	Avg. Wages Per Job	2020 Location Quotient	2019 Establishments	2020 Jobs
Legal and accounting activities	£29,304	2.36	1,197	27,698
Activities of head offices; management consultancy activities	£38,922	1.02	3,968	13,679
Architectural and engineering activities; technical testing and analysis	£39,880	1.65	3,091	14,804
Scientific research and development	£45,213	1.93	123	4,566
Advertising and market research	£30,240	0.77	416	2,039
Other professional, scientific and technical activities	£32,924	0.68	1,322	2,401
Veterinary activities	£20,875	1.49	161	1,732

Source: EMSI Analyst

The graph below illustrates the job changes between 2015 and 2020 in the subsectors of the “Professional, Scientific and Technical Services” sector. The only subsector that did not grow in this period was “Advertising and market research”, which declined by 31%. Every other subsector grew. In particular, the “Legal and accounting activities” subsector grew by 95% and the “Scientific research and development” subsector grew by 83% in this period.



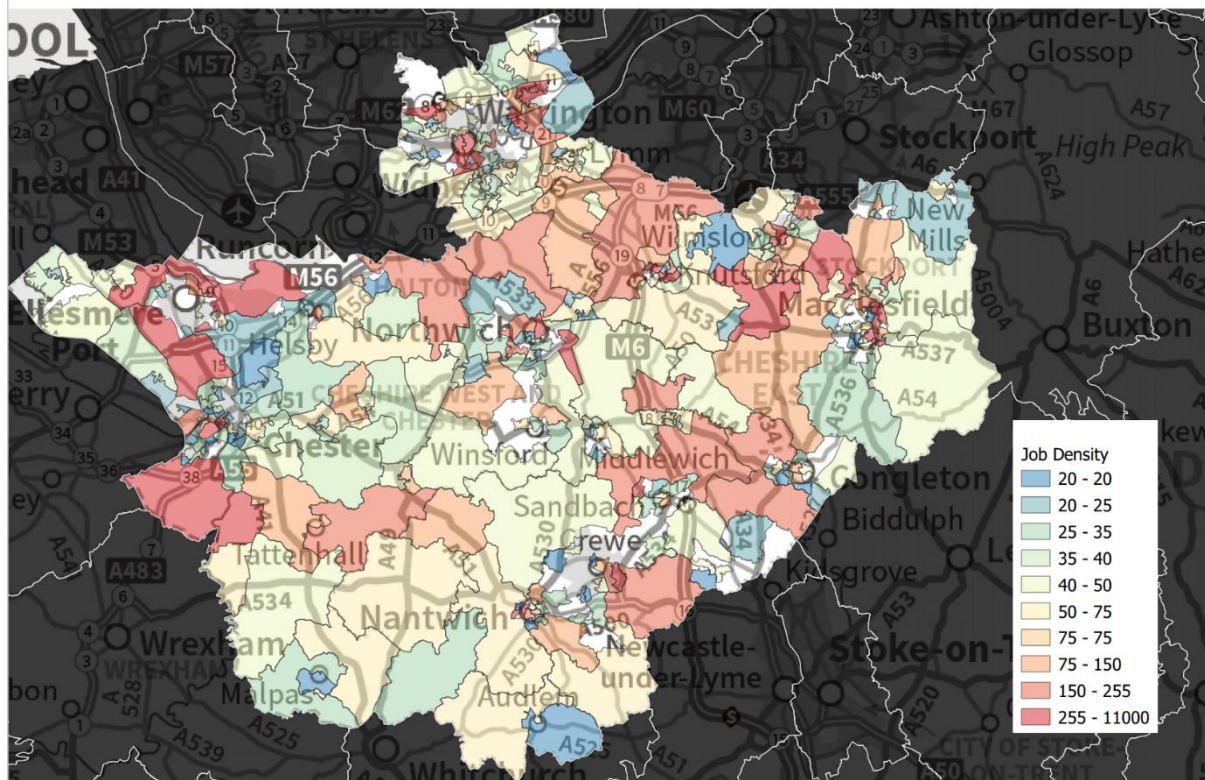
Source: EMSI Analyst

6.8.4 The Professional, Scientific and Technical Services Sector Job Locations

The map below illustrates the distribution of Professional, Scientific and Technical Services jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. Jobs in the sector are

relatively evenly distributed across most parts of C&W with concentrations in Chester, Ellesmere Port, Knutsford and Warrington.

LSOAs with more than 20 Professional, Scientific and Technical Services Jobs in C&W



Map by Brennan Wilson in QGIS. Data from NOMIS BRES (open access) and OS

6.9 “Administrative and Support Services Activities” in Cheshire and Warrington

6.9.1 “Administrative and Support Services Activities” Job Change

In 2019, there were 45,076 jobs in the “Administrative and Support Services Activities” sector in Cheshire and Warrington which was 2% above the national average share of jobs for the sector. There was 16.9% decline in employment between 2015 and 2020 in the sector in Cheshire and Warrington compared with national growth of 5.2% in the same period.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. Jobs decline was highest in Cheshire West and Chester at 37.7%. There was also a decline in jobs in Cheshire East and Warrington at 4.8% and 1.4% respectively.

Employment Change in “Administrative and Support Services Activities” 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	53,823	44,713	(9,110)	(16.9%)
Cheshire West and Chester	21,746	13,537	(8,209)	(37.7%)
Cheshire East	13,196	12,561	(635)	(4.8%)
Warrington	18,881	18,615	(266)	(1.4%)
England	2,290,127	2,397,158	107,031	4.7%

Source: EMSI Analyst

6.9.2 “Administrative and Support Services Activities” Occupations

The most common occupations in the “Administrative and Support Services Activities” Sector in Cheshire and Warrington in 2020, accounting for 67% of all jobs, were:

- Elementary Administration and Service Occupations (20.4%)
- Administrative Occupations (13.3%)
- Business and Public Service Associate Professionals (12.4%)
- Caring Personal Service Occupations (7.1%)
- Corporate Managers and Directors (5.1%)
- Leisure, Travel and Related Personal Service Occupations (4.6%)
- Customer Service Occupations (4.3%)

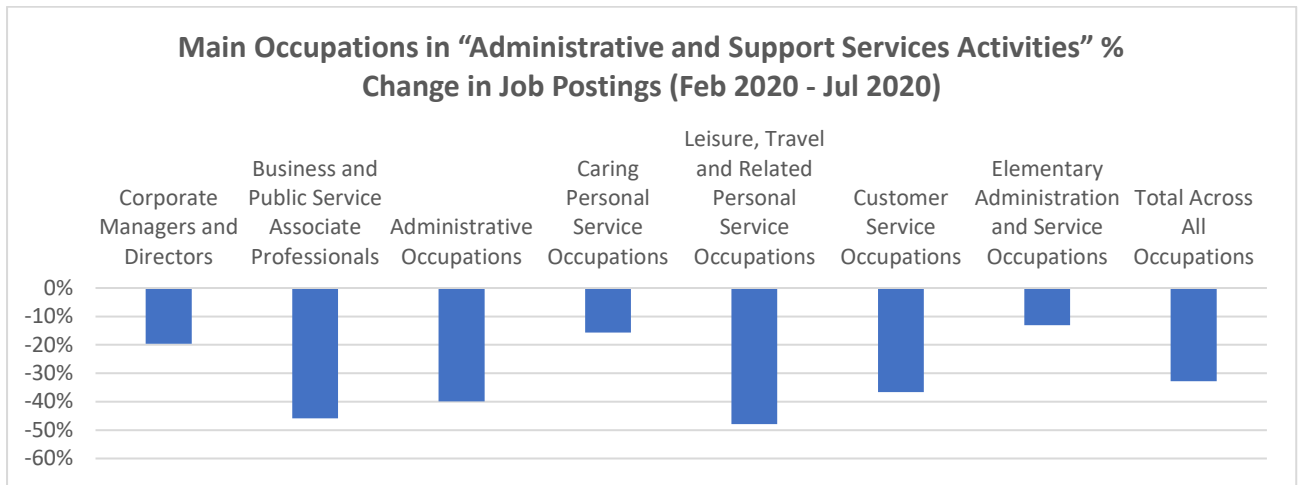
In 2019, the average wage per job in the sector was £25,709 in Cheshire and Warrington which compares a national average wage for the sector of £25,243. The best paid jobs in the sector were for “Corporate Managers and Directors” and “Business and Public Service Associate Professionals”, with median hourly pay of £21.69 and £16.66, respectively. The numbers of people employed in Administrative Occupations, Corporate Managers and Directors, Customer Service Occupations all declined by more than 20% between 2015 and 2020.

Cheshire and Warrington “Administrative and Support Services Activities” Sector Main Occupations Key Data					
	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Elementary Administration and Service Occupations	9180	-669	-6.8%	20.4%	£8.90
Administrative Occupations	5950	-1707	-22.3%	13.3%	£11.63
Business and Public Service Associate Professionals	5634	-553	-8.9%	12.4%	£16.66
Caring Personal Service Occupations	3173	-199	-5.9%	7.1%	£9.48
Corporate Managers and Directors	2277	-619	-21.4%	5.1%	£21.69
Leisure, Travel and Related Personal Service Occupations	2063	-363	-15.0%	4.6%	£9.30
Customer Service Occupations	1918	-655	-25.5%	4.3%	£10.88

Source: EMSI Analyst

The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the “Administrative and Support Services Activities” Sector in Cheshire and Warrington. It shows the change in the volume of job postings for each occupation between February 2020 and July 2020. In this period job postings in reduced by a third (33%), with the largest reductions for the main occupations in the “Administrative and Support Services Activities” sector being in “Business and Public Service Associate Professionals” (46%) and “Administrative Occupations” (40%). The most

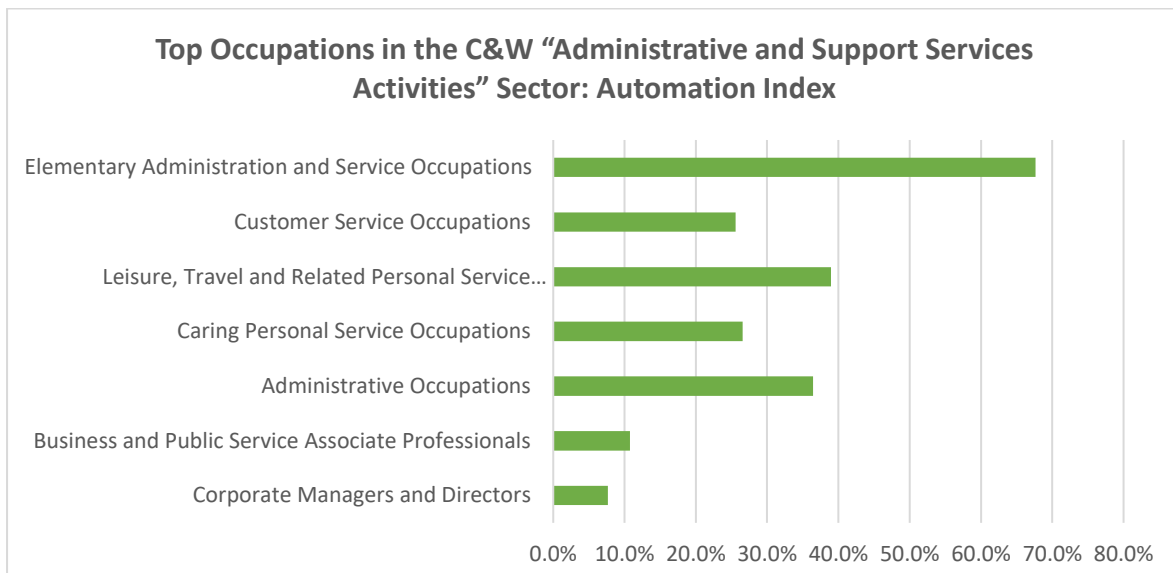
recent job posting data shows an uptick in postings for the main occupations in the sector in the last 30 days (from mid-August to mid-September) of 19%.



Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s “Administrative and Support Services Activities” Sector. The “Elementary Administrative and Service Occupations” have an Automation Index score of 67.7%.



Source: EMSI Analyst

6.9.3 “Administrative and Support Services Activities” Subsectors

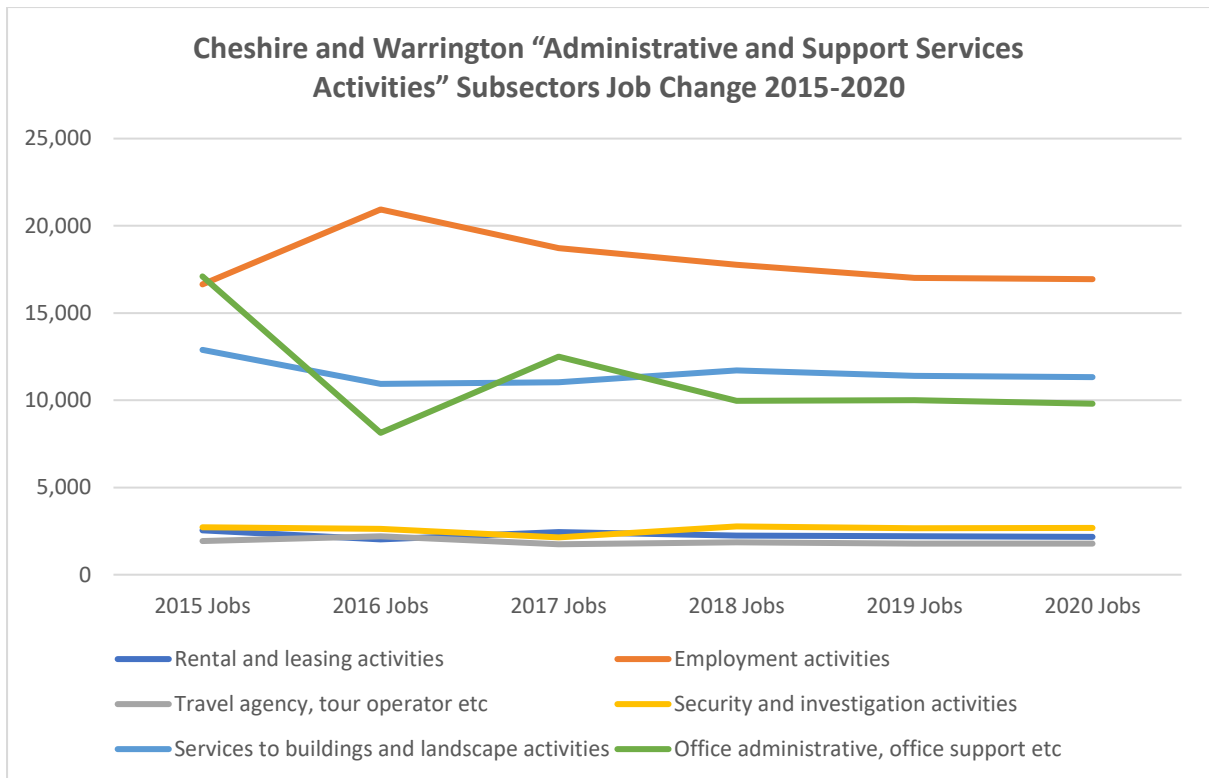
The table below sets out key data about the subsectors in the “Administrative and Support Services Activities” sector in Cheshire and Warrington. The largest subsector was “Employment activities”,

employing almost 17,000 people in 2020. The average company size was smallest in the “Office administrative, office support and other business support activities” subsector and largest in the “Security and investigation activities” subsector. The best paid sub-sector was “Rental and leasing activities” where the average wage was £34,165.

Cheshire and Warrington “Administrative and Support Services Activities” Subsectors Key Data 2020				
	Avg. Wages Per Job	2020 Location Quotient	2019 Establishments	2020 Jobs
Rental and leasing activities	£34,165	0.76	368	2,169
Employment activities	£26,976	1.03	890	16,948
Travel agency, tour operator and other reservation service and related activities	£29,091	1.18	179	1,779
Security and investigation activities	£17,085	0.74	122	2,681
Services to buildings and landscape activities	£24,173	0.97	1,035	11,333
Office administrative, office support and other business support activities	£25,122	1.18	2,177	9,803
Source: EMSI Analyst				

The graph below illustrates the job changes between 2015 and 2020 in the subsectors of the “Administrative and Support Services Activities” sector. The Employment Activities subsector grew slightly by 2% in this period, every other subsector shed jobs with the largest reduction being 43% in the “Office administrative, office support and other business support activities” subsector:

- Rental and leasing activities (-15%)
- Employment activities (2%)
- Travel agency, tour operator and other reservation service and related activities (-8%)
- Security and investigation activities (-2%)
- Services to buildings and landscape activities (-12%)
- Office administrative, office support and other business support activities (-43%)

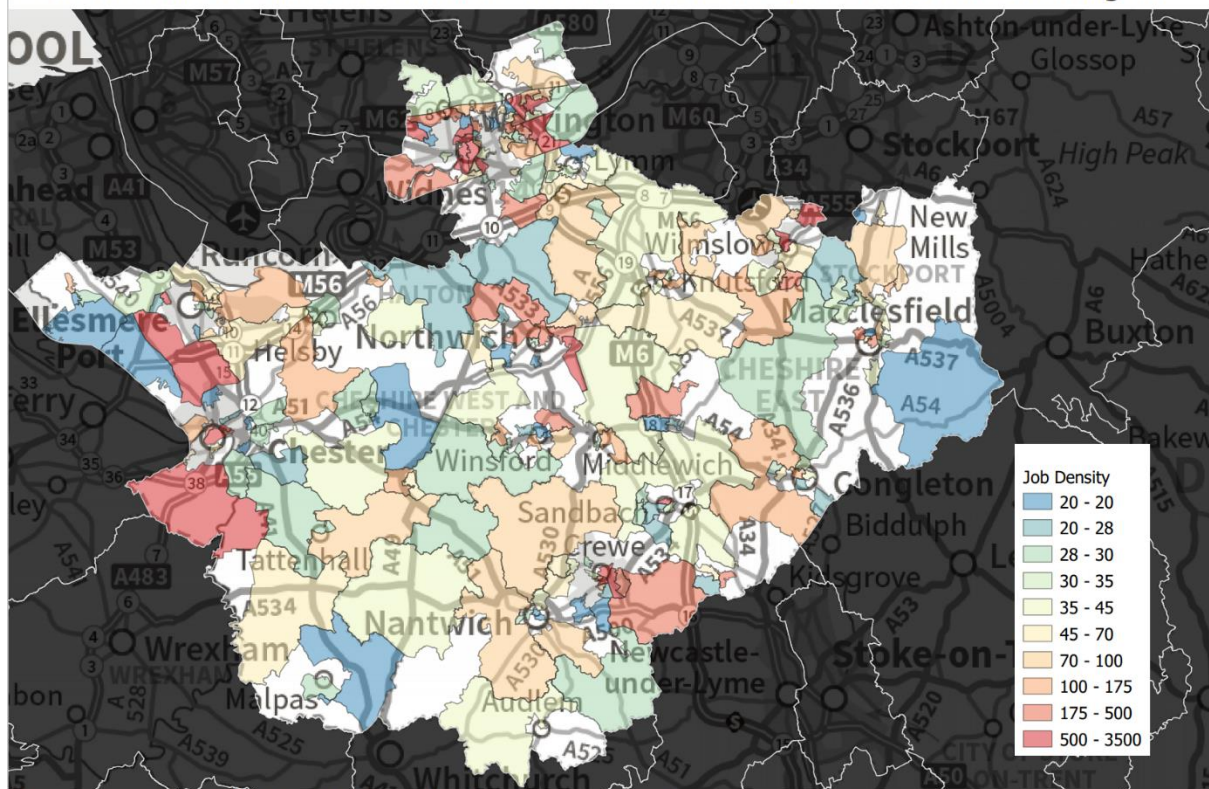


Source: EMSI Analyst

6.9.4 “Administrative and Support Services Activities” Job Locations

The map below illustrates the distribution of “Administrative and Support Services Activities” jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. As might be expected the concentrations of jobs in this sector are largely to be found in conurbations including parts of Crewe, Warrington, Northwich and Chester.

LSOAs with more than 20 Administrative Activities Jobs in Cheshire and Warrington



Map by Brennan Wilson Ltd in QGIS. Data from NOMIS BRES (open access) and OS

6.10 The Public Administration and Defence Sector in Cheshire and Warrington

6.10.1 Public Administration and Defence Sector Job Change

In 2019, there were 14,558 jobs in the Public Administration and Defence sector in Cheshire and Warrington which was 34% below the national average share of jobs for the sector.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. There was a 0.7% growth in jobs in this period in Cheshire and Warrington, which compares with a 2.1% growth nationally. Two local authorities - Cheshire West and Chester and Warrington – grew faster than the English rate with employment growth of 6.9% and 5.9% respectively. However, Cheshire East saw a significant contraction of 16.7% in this period.

Employment Change in the Public Administration and Defence Sector 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	14,499	14,597	98	0.7%
Cheshire West and Chester	5,949	6,299	350	5.9%
Cheshire East	3,564	2,970	(594)	(16.7%)
Warrington	4,986	5,328	342	6.9%
England	1,028,988	1,050,692	21,704	2.1%

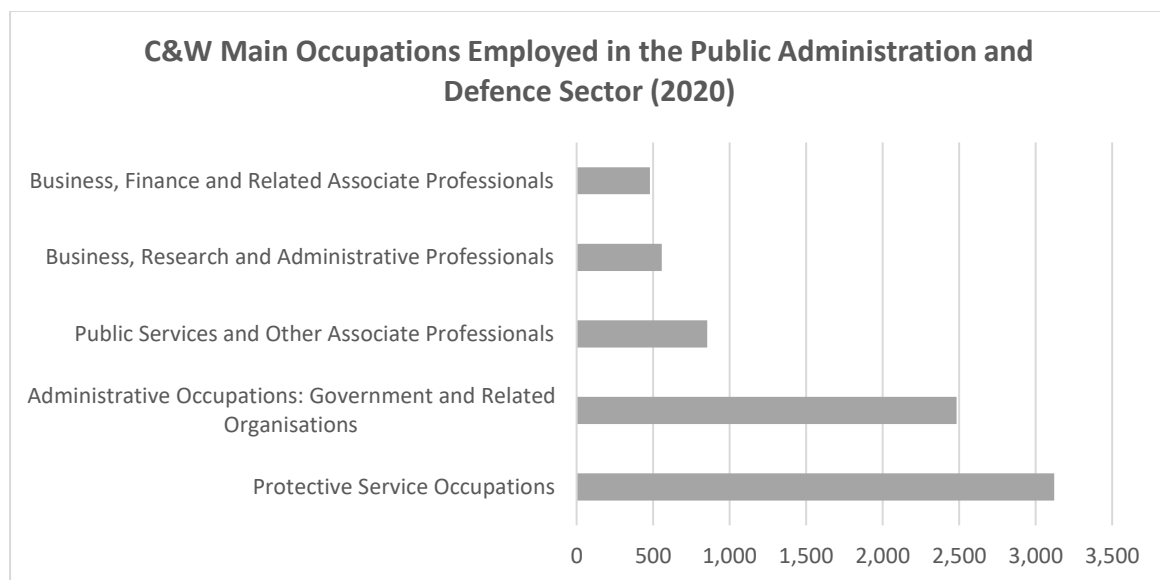
Source: EMSI Analyst

6.10.2 The Public Administration and Defence Sector Occupations

The most common occupations in the Public Administration and Defence Sector in Cheshire and Warrington in 2020, accounting for 51% of all jobs, were:

- Protective Service Occupations
- Administrative Occupations: Government and Related Organisations
- Public Services and Other Associate Professionals
- Business, Research and Administrative Professionals
- Business, Finance and Related Associate Professionals

As can be seen from the chart below, the most common occupation type in the sector was “Protective Service Occupations”, with 3,121 jobs, 21% of all employment in the sector. A further 17% of employment in the sector (2,483 jobs) was in “Administrative Occupations: Government and Related Organisations”.

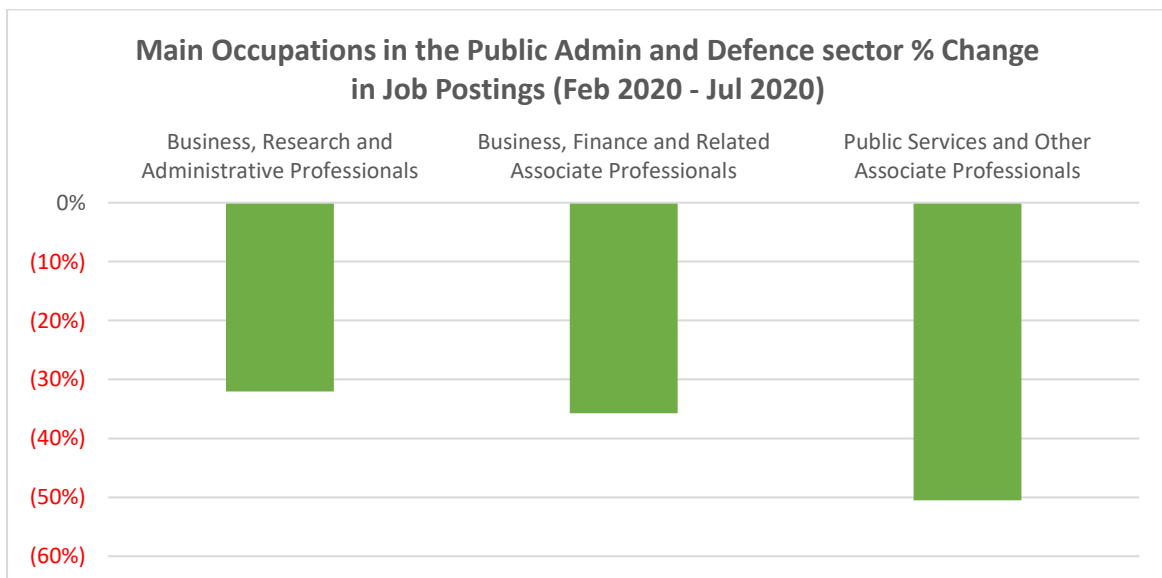


In 2019, the average wage per job in the sector was £32,122 in Cheshire and Warrington which compares a national average wage for the sector of £31,535. The best paid jobs in the sector were for “Business, Research and Administrative Professionals”, “Business, Finance and Related Associate Professionals” and “Protective Service Occupations”, with median hourly pay of £20.53, £17.40 and £17.35 respectively. “Protective Service Occupations” experienced a job growth of 10% between 2015 and 2020, the other main occupations in the sector experienced a decline in numbers employed of between 5% and 11%.

Cheshire and Warrington Public Administration and Defence Main Occupations Key Data					
	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Protective Service Occupations	3,121	281	10%	21.3%	£17.35
Administrative Occupations: Government and Related Organisations	2,483	(191)	(7%)	17.0%	£12.40
Public Services and Other Associate Professionals	854	(68)	(7%)	5.9%	£15.37
Business, Research and Administrative Professionals	556	(32)	(5%)	3.8%	£20.53
Business, Finance and Related Associate Professionals	479	(61)	(11%)	3.3%	£17.40

Source: EMSI Analyst

The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the Public Administration and Defence Sector in Cheshire and Warrington. It shows the change in the volume of job postings for each occupation between February 2020 and July 2020. Data for “Protective Service Occupations” and “Administrative Occupations: Government and Related Organisations” is not displayed since monthly postings were low (below 40 and 10 respectively). In this period job postings in these occupations reduced by 39%, with a 50% reduction in “Public Services and Other Associate Professionals”. The most recent job posting data shows an uptick in postings for jobs in the sector in the last 30 days (from mid-August to mid-September) of 18%.

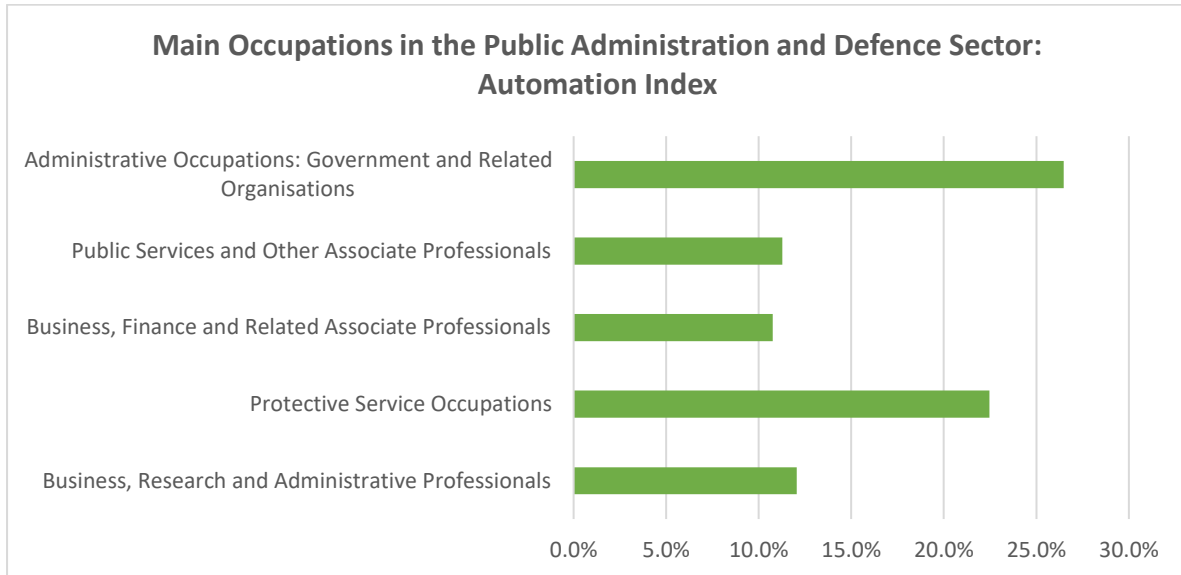


Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could

be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s Public Administration and Defence Sector. The exposure of the main occupations is quite low, with the main automation risk being with “Administrative Occupations: Government and Related Organisations” (26.5%) and “Protective Service Organisations” (22.5%)

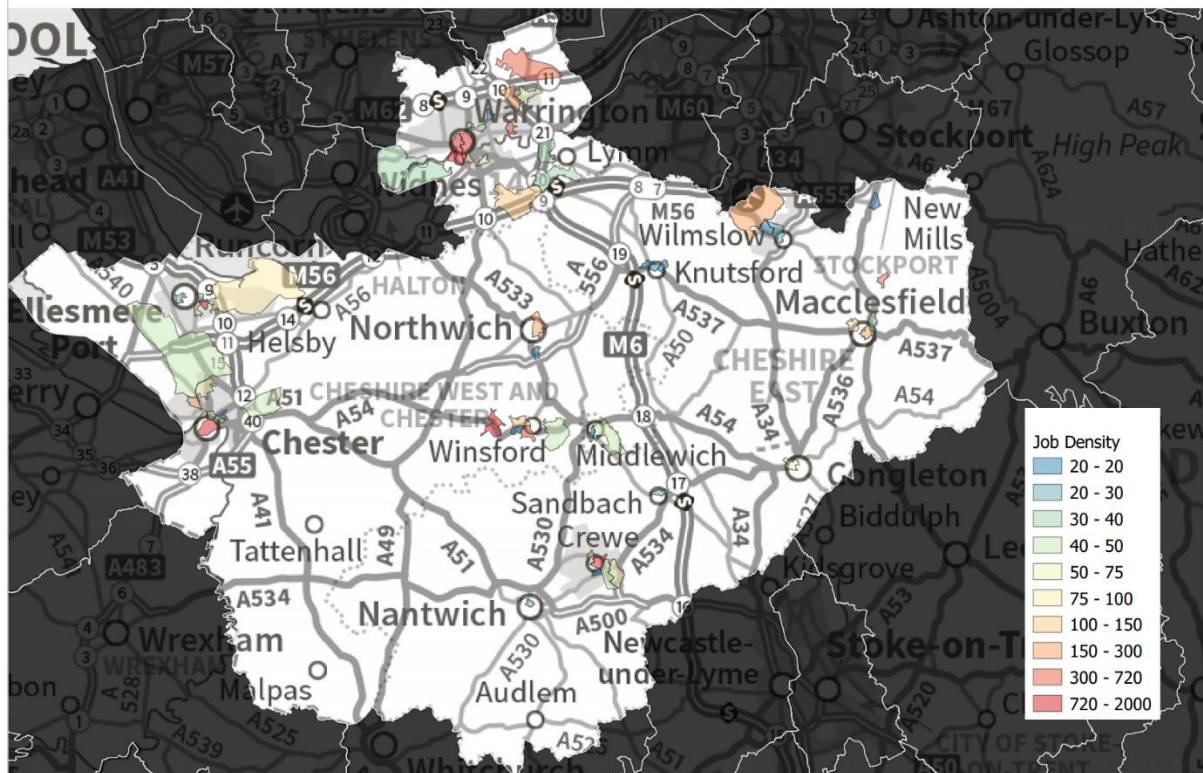


Source: EMSI Analyst

6.10.3 The Public Administration and Defence Sector Jobs Locations

The map below illustrates the distribution of Public Administration and Defence jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. Employment is concentrated in parts of Chester, Crewe, Winsford and Warrington. The areas with the highest concentrations likely play host to local government and police HQs.

LSOAs with more than 20 Public Administration and Defence Jobs in C&W



Map by Brennan Wilson Ltd in QGIS. Data from NOMIS BRES (open access) and OS

6.11 The Education Sector in Cheshire and Warrington

6.11.1 The Education Sector Job Change

In 2019, there were 34,773 jobs in the Education sector in Cheshire and Warrington which was 20% below the national average share of jobs for the sector. This apparent shortfall will be because Cheshire and Warrington has a high jobs density and is a net importer of labour, whereas the Education sector will largely service the indigenous population so its size will be driven by population size and age demography rather than other economic factors. Because Cheshire and Warrington's economy is larger than might be expected for its population size, the education sector employs a smaller proportion of people than would otherwise be the case.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. Jobs declined by 4.4% in Cheshire West and Chester. This was offset by a growth of 4.4% in Warrington and of 0.6% in Cheshire East. Overall, Cheshire and Warrington saw an 0.8% decline in jobs compared to a growth of 0.6% in England.

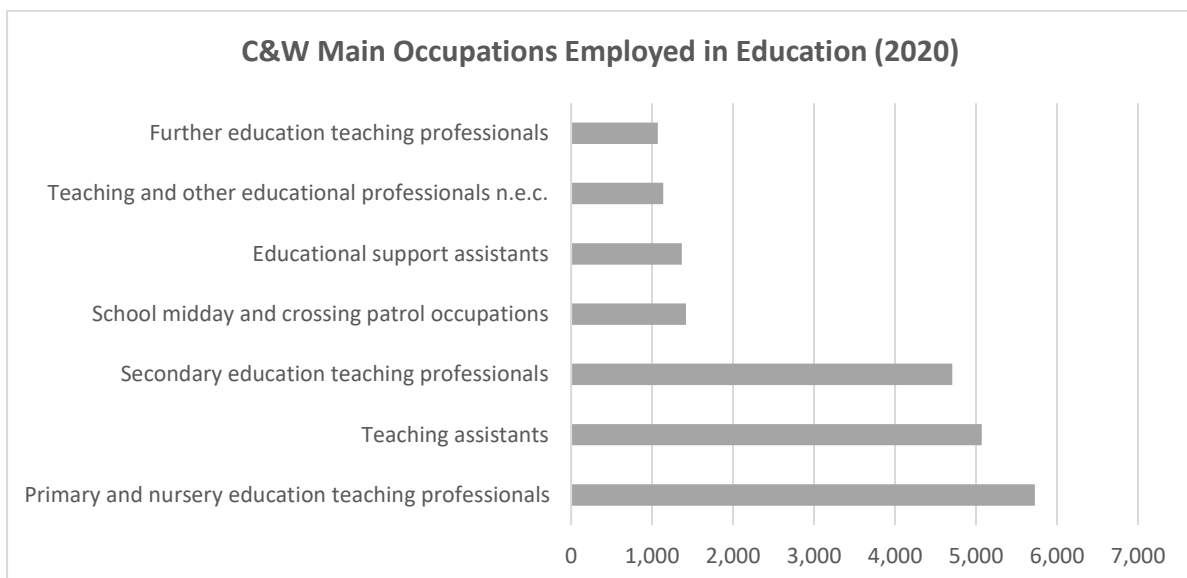
Employment Change in Education 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	34,964	34,691	(273)	(0.8%)
Cheshire West and Chester	14,908	14,246	(662)	(4.4%)
Cheshire East	13,132	13,215	83	0.6%
Warrington	6,923	7,230	307	4.4%
England	2,292,881	2,324,678	31,797	1.4%

6.11.2 The Education Sector Occupations

The most common occupations in the Education Sector in Cheshire and Warrington in 2020, accounting for 59% of all jobs, were:

- Primary and nursery education teaching professionals
- Teaching assistants
- Secondary education teaching professionals
- School midday and crossing patrol occupations
- Educational support assistants
- Teaching and other educational professionals n.e.c.
- Further education teaching professionals

As can be seen from the chart below, the most common occupation type in the sector was “Primary and nursery education teaching professionals”, with 5,728 jobs – 17% of all employment in the sector.



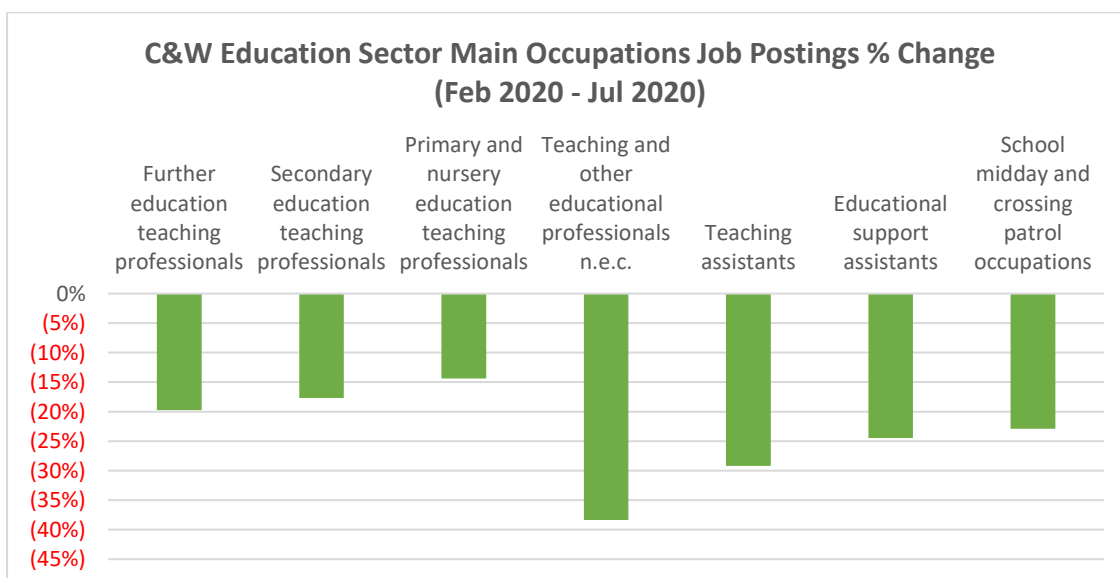
Source: EMSI Analyst

In 2019, the average wage per job in the sector was £24,837 in Cheshire and Warrington which compares a national average wage for the sector of £26,810. The best paid main jobs in the sector were for “Secondary education teaching professionals” and “Primary and nursery education teaching professionals”, with median hourly pay of £24.67 and £22.56 respectively. At 14%, the fastest job growth amongst the main occupations in the sector between 2015 and 2020 was for “Teaching and other educational professionals n.e.c.” whilst the number employed in “School midday and crossing patrol occupations” saw a decline in the number employed of 6% over the same period.

C&W Education Sector Main Occupations Key Data					
	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Primary and nursery education teaching professionals	5,728	(198)	(3%)	16.6%	£22.56
Teaching assistants	5,071	(77)	(1%)	14.7%	£9.69
Secondary education teaching professionals	4,706	79	2%	13.4%	£24.67
School midday and crossing patrol occupations	1,417	(88)	(6%)	4.1%	£9.00
Educational support assistants	1,368	4	0%	3.9%	£9.65
Teaching and other educational professionals n.e.c.	1,137	141	14%	3.2%	£14.53
Further education teaching professionals	1,070	(5)	(0%)	3.1%	£18.67

Source: EMSI Analyst

The graph below illustrates the immediate impact of the Covid-19 pandemic on the main occupations in the Education Sector in Cheshire and Warrington. It shows the change in the volume of job postings for each occupation between February 2020 and July 2020. In this period job postings in these occupations reduced by a fifth (21%), with the largest reductions being in “Teaching and other educational professionals n.e.c.” (38%) and “Teaching assistants” (29%). The most recent job posting data shows an uptick in postings for the main occupations in the sector in the last 30 days (from mid-August to mid-September) of 19%. The pandemic may have significant impacts on the education sector in the longer-term with, for example, the utilisation of on-line learning possibly becoming further embedded in day-to-day practice.

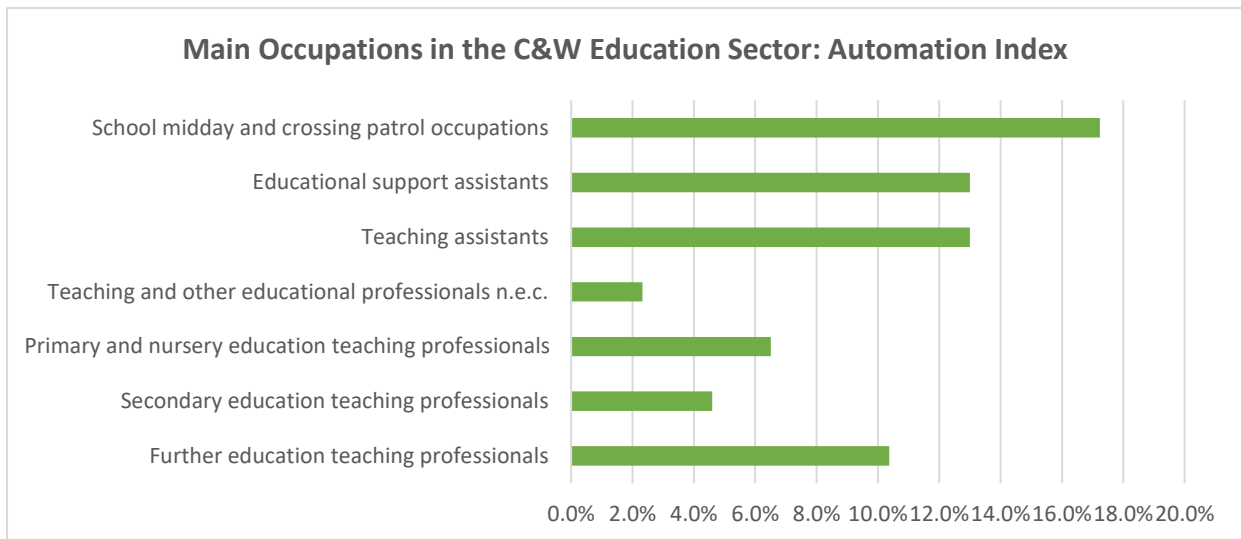


Source: EMSI Analyst

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are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s Education sector. Unlike many other sectors, the education sector has a relatively limited exposure to the risk of automation with the most at risk – “School midday and crossing patrol occupations” – scoring 17%.

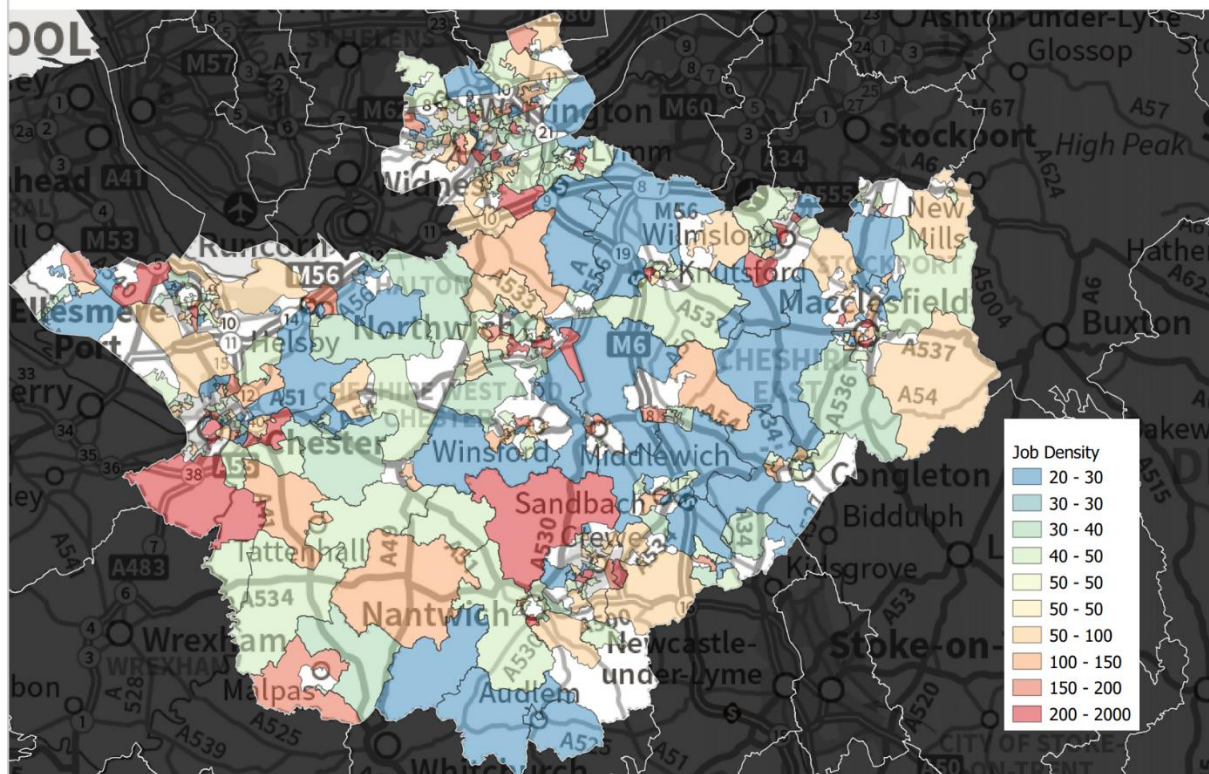


Source: EMSI Analyst

6.11.3 Education Job Locations

The map below illustrates the distribution of Education jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. Because of the nature of the sector, there is a relatively even distribution of Education jobs across Cheshire and Warrington. The areas with higher concentrations of education employment will have college or university sites or host large secondary schools.

LSOAs with more than 20 Education Sector Jobs in Cheshire and Warrington



Map by Brennan Wilson Ltd in QGIS. Data from NOMIS BRES (open access) and OS

6.12 The Human Health and Social Work Activities Sector in Cheshire and Warrington

6.12.1 The Human Health and Social Work Activities Sector Job Change

In 2019, there were 55,554 jobs in the Human Health and Social Work Activities Sector in Cheshire and Warrington which was 17% below the national average share of jobs for the sector. This apparent shortfall will be because Cheshire and Warrington has a high jobs density and is a net importer of labour, whereas the Human Health and Social Work Activities Sector will largely service the indigenous population so its size will be driven by population size rather than other economic factors. Because Cheshire and Warrington's economy is larger than might be expected for its population size, the Human Health and Social Work Activities Sector employs a smaller proportion of people than would otherwise be the case.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. There was a 2% employment growth in the sector in Cheshire and Warrington compared with a national growth of 7.3%. Jobs declined in Cheshire West and Chester by 3.6%. By contrast jobs grew in both Cheshire East and Warrington at 3.1% and 8% respectively.

Employment Change in the Human Health and Social Work Activities Sector 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	54,439	55,506	1,067	2.0%
Cheshire West and Chester	18,784	18,110	(674)	(3.6%)
Cheshire East	22,709	23,415	706	3.1%
Warrington	12,945	13,981	1,036	8.0%
England	3,186,240	3,419,073	232,833	7.3%

Source: EMSI Analyst

6.12.2 Human Health and Social Work Activities Sector Occupations

The most common occupations in the Human Health and Social Work Activities Sector in Cheshire and Warrington in 2020, accounting for 70% of all jobs, were:

- Caring Personal Services
- Nursing and Midwifery Professionals
- Health Professionals
- Secretarial and Related Occupations
- Childcare and Related Personal Services
- Welfare and Housing Associate Professionals

As can be seen from the chart below, the most common occupation type in the sector was “Caring Personal Services”, with 17,557 jobs – 31.5% of all employment in the sector.

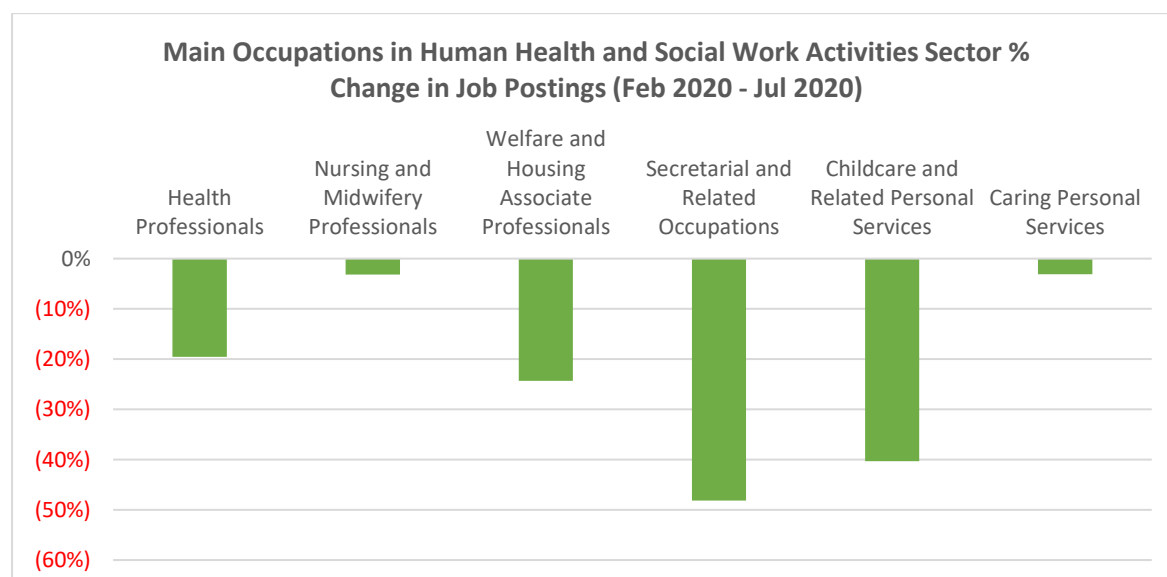


In 2019, the average wage per job in the sector was £23,906 in Cheshire and Warrington which compares a national average wage for the sector of £24,769. The best paid main occupations in the sector were for “Nursing and Midwifery Professionals” and “Health Professionals”, with median hourly pay of £18.60 and £24.36 respectively. At 14%, the fastest job growth amongst the main occupations in the sector between 2015 and 2020 was for “Health Professionals” whilst the number employed as “Childcare and related personal services” saw a significant decline in the number employed of 31% over the same period.

C&W Human Health and Social Work Activities Sector Main Occupations Key Data					
	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Caring Personal Services	17,557	310	2%	31.5%	£9.66
Nursing and Midwifery Professionals	9,312	1,069	13%	16.7%	£18.60
Health Professionals	4,825	605	14%	8.6%	£24.36
Secretarial and Related Occupations	3,062	278	10%	5.5%	£10.09
Childcare and Related Personal Services	2,156	(961)	(31%)	4.1%	£9.25
Welfare and Housing Associate Professionals	1,764	(226)	(11%)	3.2%	£12.21

Source: EMSI Analyst

The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the Human Health and Social Work Activities Sector in Cheshire and Warrington. It shows the change in the volume of job postings for each occupation between February 2020 and July 2020. In this period job postings in these occupations reduced by 15%. However, some occupations – Nursing and Midwifery, Caring Personal Services – continued to recruit at pre-pandemic levels (a 3% decline in job postings). By contrast those occupations that are not specialist to the health and care sector saw larger reductions in job postings with the “Secretarial and Related Occupations” grouping experiencing a 48% decline. The most recent job posting data shows an uptick in postings for jobs in the sector in the last 30 days (from mid-August to mid-September) of 17%, with the sharpest rise in demand being for “Health Professionals” (26% increase).

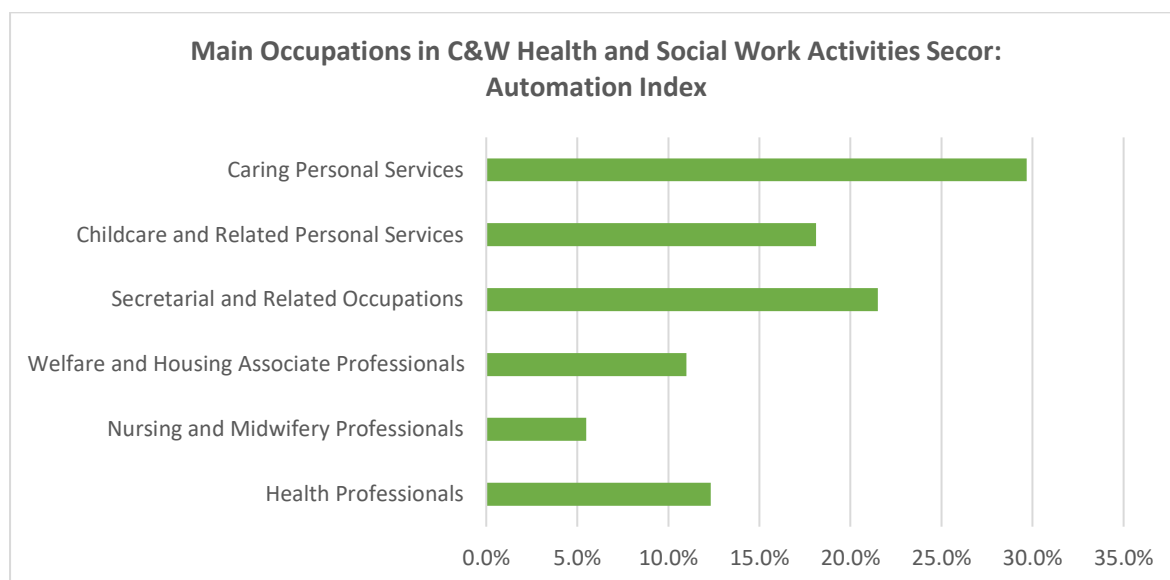


Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which

are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s Human Health and Social Work Activities Sector. Generally exposure to automation is quite low with the most at risk occupational group being “Caring Personal Services” (29.7%).



Source: EMSI Analyst

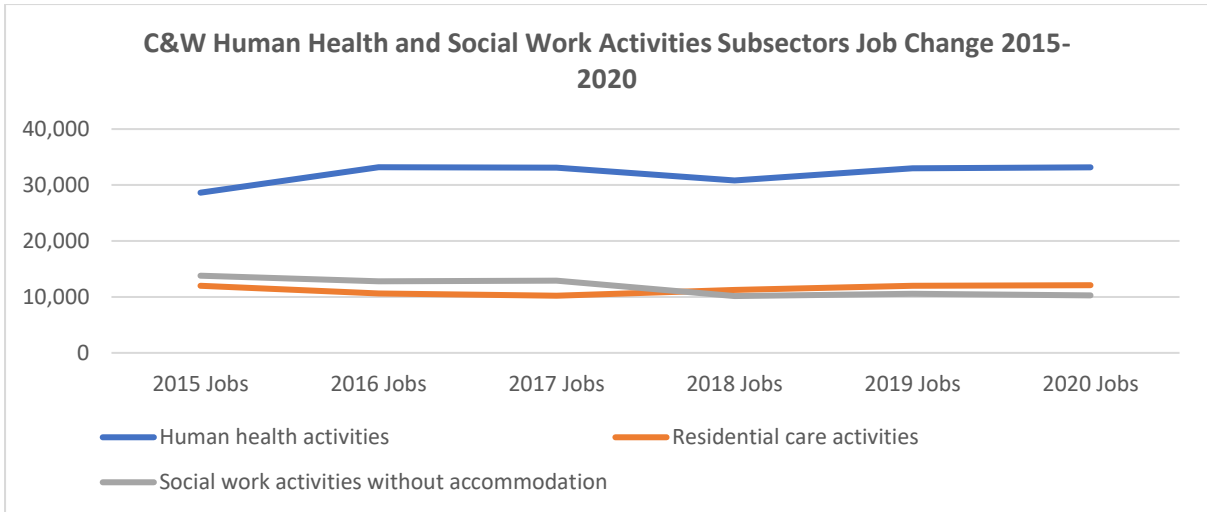
6.12.3 Human Health and Social Work Activities Sector Subsectors

The table below sets out key data about the subsectors in the Human Health and Social Work Activities Sector in Cheshire and Warrington. All three subsectors employ over 10,000 people, with the largest – “Human Health Activities” – employing more than 33,000. All three subsectors have Location Quotients below 1, for the reasons explained above. The best paid sub-sector was “Human Health Activities” where the average wage was £28,390.

C&W Human Health and Social Work Activities Subsectors Key Data				
Description	Avg. Wages Per Job	2020 Location Quotient	2019 Establishments	2020 Jobs
Human health activities	£28,390	0.85	1,210	33,159
Residential care activities	£17,437	0.94	414	12,095
Social work activities without accommodation	£17,265	0.67	782	10,252

Source: EMSI Analyst

The graph below illustrates the job changes between 2015 and 2020 in the subsectors of the “Human Health and Social Work Activities” sector. Overall, there was a 2% growth in jobs in the sector in this period. However, this small movement masks some significant changes in the numbers employed in the different subsectors. The numbers employed in “Social work activities without accommodation” declined by more than a quarter (26%) in this period. On the other hand, the “Human health activities” subsector grew by 16%.

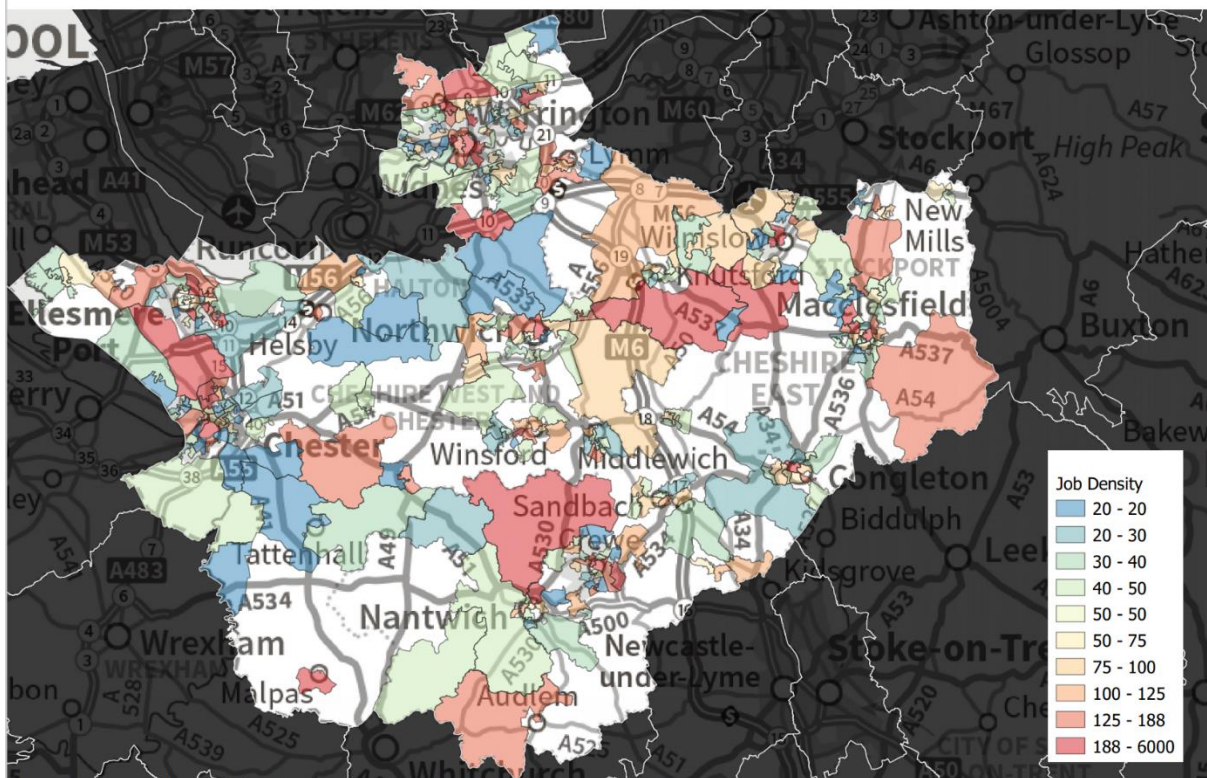


Source: EMSI Analyst

6.12.4 Human Health and Social Work Activities Sector Job Locations

The map below illustrates the distribution of Human Health and Social Work Activities Sector jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. As expected, there are concentrations of jobs in most conurbations. The highest concentrations will reflect the location of Hospitals.

LSOAs with more than 20 Jobs in the Human Health and Social Work Activities Sector in C&W



6.13 Arts, Entertainment and Recreation in Cheshire and Warrington

6.13.1 Arts, Entertainment and Recreation Job Change

In 2019, there were 11,955 jobs in the Arts, Entertainment and Recreation sector in Cheshire and Warrington which was 3% below the national average share of jobs for the sector. There was 7.7% decline in employment between 2015 and 2020 in the sector in Cheshire and Warrington compared with national growth of 6.8% in the same period.

The table below sets out information about employment change in the sector between 2015 and 2020 in Cheshire and Warrington, the 3 Local Authorities and England. There was jobs growth in the sector in Cheshire East of 3.6% but Cheshire West and Chester and Warrington saw declines of 12.3% and 17.1%, respectively.

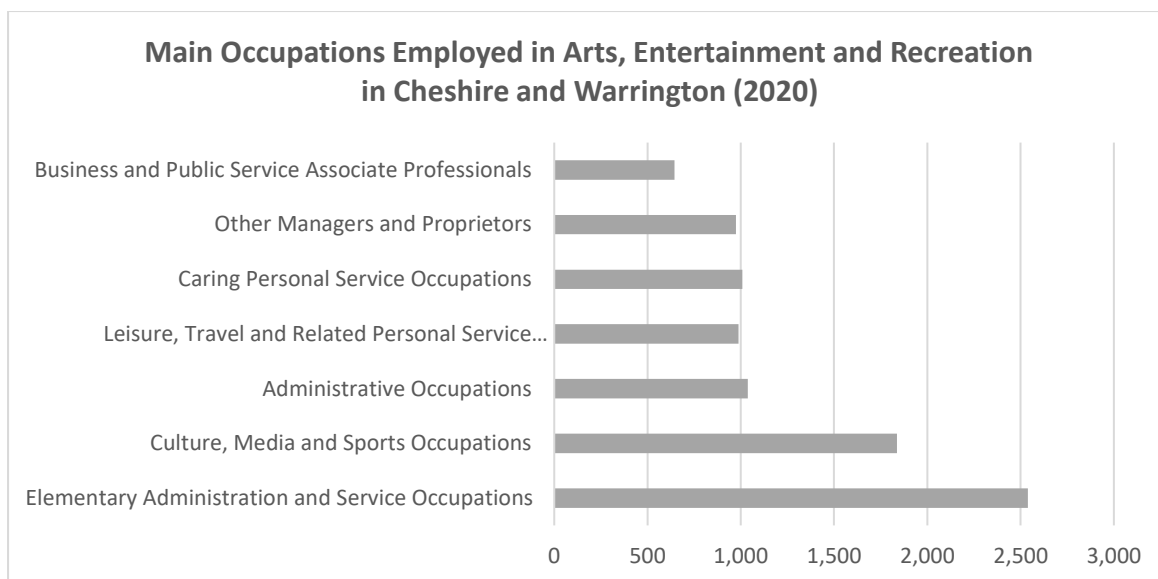
Employment Change in Arts, Entertainment and Recreation 2015-2020				
	2015 Jobs	2020 Jobs	Change	% Change
Cheshire and Warrington	12,971	11,971	(1,000)	(7.7%)
Cheshire West and Chester	6,010	5,273	(737)	(12.3%)
Cheshire East	4,476	4,637	161	3.6%
Warrington	2,486	2,062	(424)	(17.1%)
England	597,984	641,747	43,763	7.3%
<i>Source: EMSI Analyst</i>				

6.13.2 Arts, Entertainment and Recreation Occupations

The most common occupations in the Arts, Entertainment and Recreation Sector in Cheshire and Warrington in 2020, accounting for 75% of all jobs, were:

- Elementary Administration and Service Occupations
- Culture, Media and Sports Occupations
- Administrative Occupations
- Leisure, Travel and Related Personal Service Occupations
- Caring Personal Service Occupations
- Other Managers and Proprietors
- Business and Public Service Associate Professionals

As can be seen from the chart below, the most common occupation type in the sector was “Elementary Administration and Service Occupations”, with 2,538 jobs – over 20% of all employment in the sector.



Source: EMSI Analyst

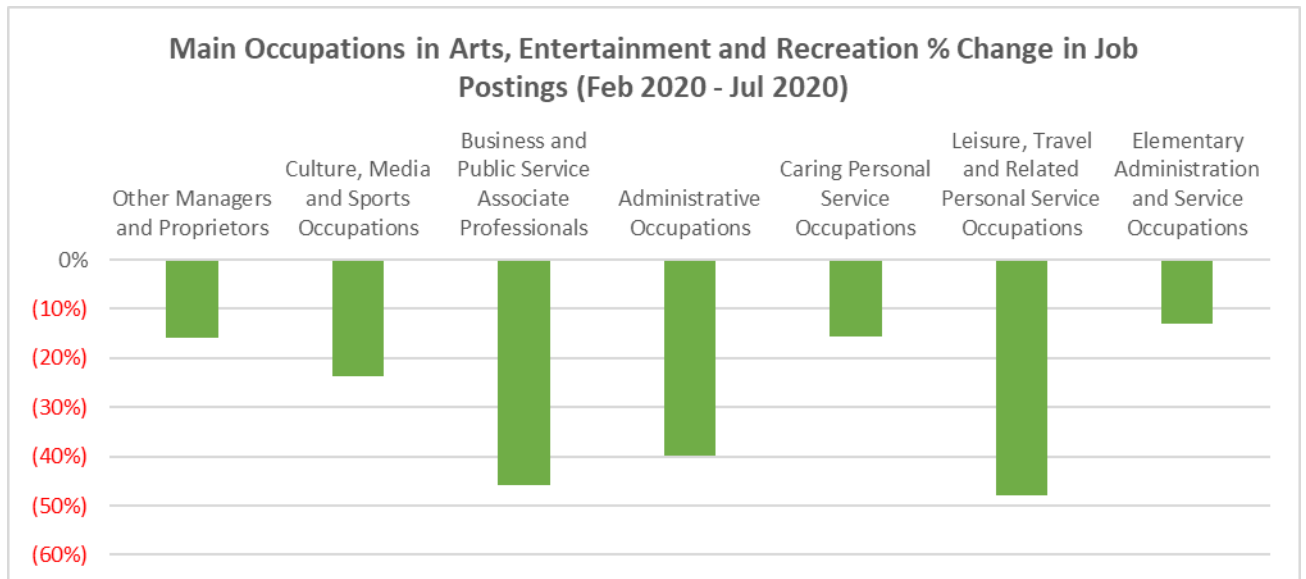
In 2019, the average wage per job in the sector was £21,922 in Cheshire and Warrington which compares a national average wage for the sector of £23,669. The best paid jobs in the sector were for “Business and Public Service Associate Professionals” and “Culture, Media and Sports Occupations”, with median hourly pay of £16.66 and £14.32, respectively. At 24%, the fastest job growth amongst the main occupations in the sector between 2015 and 2020 was for “Caring Personal Service Occupations” whilst the number employed in “Administrative Occupations” saw a slight decline in the number employed by 31% over the same period.

Cheshire and Warrington Arts, Entertainment and Recreation Sector Main Occupations Key Data					
	Employed in Industry (2020)	Change (2015 - 2020)	% Change (2015 - 2020)	% of Total Jobs in Industry (2019)	Median Hourly Wages
Elementary Administration and Service Occupations	2,538	156	7%	21.1%	£8.90
Culture, Media and Sports Occupations	1,837	(122)	(6%)	15.2%	£14.32
Administrative Occupations	1,037	(476)	(31%)	8.9%	£11.63
Leisure, Travel and Related Personal Service Occupations	987	(169)	(15%)	8.2%	£9.30
Caring Personal Service Occupations	1,008	195	24%	8.2%	£9.48
Other Managers and Proprietors	975	(156)	(14%)	8.2%	£13.70
Business and Public Service Associate Professionals	644	(36)	(5%)	5.4%	£16.66

Source: EMSI Analyst

The graph below illustrates the impact of the Covid-19 pandemic on the main occupations in the Arts, Entertainment and Recreation Sector in Cheshire and Warrington. It shows the change in the

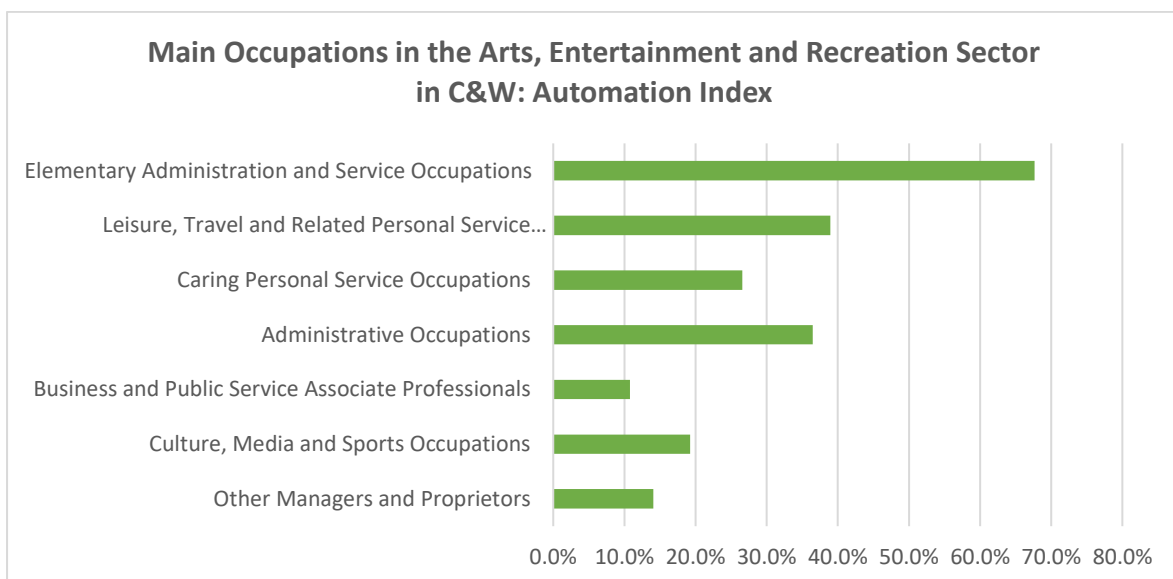
volume of job postings for each occupation between February 2020 and July 2020. In this period the largest reduction in postings was in in “Leisure, Travel and Related Personal Service Occupations” (48%). The most recent job posting data shows an uptick in postings for these types of jobs in the last 30 days (from mid-August to mid-September) of 19%.



Source: EMSI Analyst

Digitisation and the automation of work is accelerating and, if anything, the pandemic will further bring forward changes to the way we work. EMSI’s UK Automation Index uses data from different sources to assess the proportion of working time spent in each occupation performing tasks which are at “high risk” of disruption through automation and other technological change anticipated over the next 20 to 30 years. The index is directly applicable as the amount of working time which could be disrupted by technological change; it ranges between 0% (no working time spent performing tasks at high risk) to 100% (all working time spent performing tasks at high risk).

The graph below illustrates the exposure of the largest occupations in Cheshire and Warrington’s Arts, Recreation and Entertainment Sector. “Elementary Administrative and Service Occupations” has an Automation Index score of 68%.



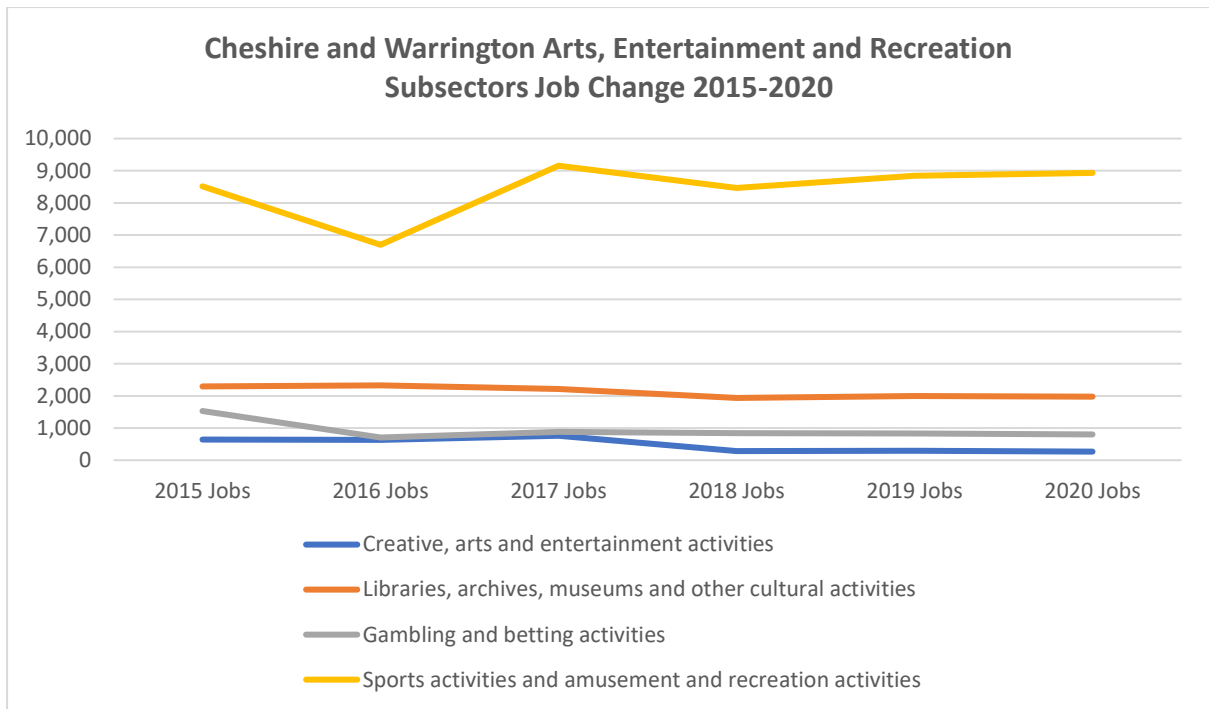
Source: EMSI Analyst

6.13.3 Arts, Entertainment and Recreation Subsectors

The table below sets out key data about the largest subsectors in the Arts, Entertainment and Recreation sector in Cheshire and Warrington. The largest subsector was the “Sports activities and amusement and recreation activities” subsector, which employed 8,929 people. With a Location Quotient of only 0.17, the subsector of “Creative, arts and entertainment activities” is significantly underrepresented in the Cheshire and Warrington economy compared to the national position and with an average employee to company size of slightly over 1, is completely dominated by the self-employed. The subsector with the largest average company size was the “Libraries, archives, museums and other cultural activities” subsector. The best paid sub-sector was “Creative, arts and entertainment activities” where the average wage was £29,620.

Cheshire and Warrington Arts, Entertainment and Recreation Subsectors Key Data 2020				
	Avg. Wages Per Job	2020 Location Quotient	2019 Establishments	2020 Jobs
Creative, arts and entertainment activities	£29,620	0.17	255	266
Libraries, archives, museums and other cultural activities	£22,834	1.17	93	1,978
Gambling and betting activities	£17,154	0.53	123	798
Sports activities and amusement and recreation activities	£21,913	1.18	658	8,929
Source: EMSI Analyst				

The graph below illustrates the job changes between 2015 and 2020 in the main subsectors of the Arts, Entertainment and Recreation sector. Three of the four subsectors declined with employment in the two smallest (“Creative, arts and entertainment activities” and “Gambling and betting activities”) halved in in this period (a 58% and 48% decline, respectively). The largest subsector – “Sports activities and amusement and recreation activities” saw a 5% growth in this period.

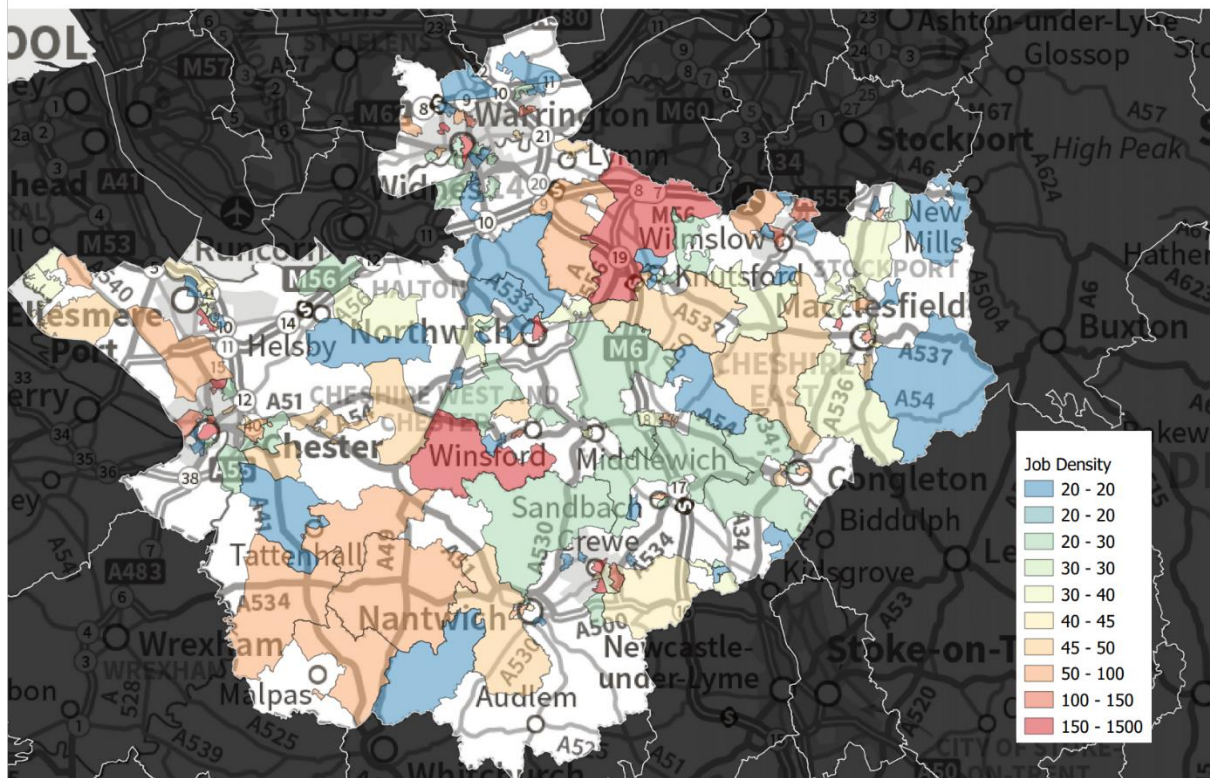


Source: EMSI Analyst

6.13.4 Arts, Entertainment and Recreation Job Locations

The map below illustrates the distribution of Manufacturing jobs across Cheshire and Warrington. Unshaded parts of the map represent Lower Super Output Areas where the number of the jobs in the sector is recorded as being below 20. It is apparent that there are a number of areas of Cheshire and Warrington where the number of jobs in this sector is low. There are concentrations of over 150 Arts, Entertainment and Recreation jobs in parts of Warrington, Crewe and Chester.

LSOAs with more than 20 Arts, Entertainment and Recreation Jobs in Cheshire and Warrington



Map by Brennan Wilson Ltd in QGIS. Data from NOMIS BRES (open access) and OS