

# **The Kent and Medway Workforce Skills Evidence Base 2021**

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Steve Matthews, Dr Jonathan Pratt and Ross Gill

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# Workforce Skills Evidence Base

## Labour Market Intelligence for Kent & Medway

### Executive Summary

This Workforce Skills Evidence Base provides an overview of current and future skills demand in Kent and Medway, alongside an assessment of community needs and the 'supply' of skills in terms of the resident population's qualifications. The document has been prepared to inform the strategies, plans and funding decisions of key local and regional stakeholders. The analysis is based on an assessment of a wide range of existing data sets and published reports, as well as interviews with key stakeholders and a series of sector workshops with employers.

While the analysis includes consideration of workforce qualifications, skills are not just about a contribution to economic output. Instead, the report starts from a more comprehensive idea of 'skills' in order to recognise the importance to the economy and society of work that might be considered 'low skilled'; to acknowledge that employer and individual skills requirements go beyond formal qualifications to also include a wide range of transferable 'soft skills', personal attributes, behaviours and attitudes; and to consider the wider importance of skills to the health and wellbeing of individuals and communities.

### Economy, Business and Employment

The Kent and Medway economy generated a total output (measured in gross value added, or GVA) of around £41 billion in 2018. Until the pandemic in 2020, total output had grown steadily for a decade, following a slow recovery from the 2009/10 recession.

Productivity (measured as GVA per filled job) was around £52,000 in 2018. This was around 93% of UK productivity levels. Over time, productivity growth has been relatively weak in Kent and Medway (as it has in the UK as a whole), averaging 1.9% per year between 2008-18, slightly below the UK growth rate. The result of this is that the differential between Kent and Medway and UK levels of productivity has been virtually unchanged for 20 years.

Within Kent and Medway, there is considerable diversity in productivity at local level, ranging from £66,000 in Sevenoaks to less than £40,000 in Thanet.

There are over 72,000 businesses employing 720,000 people in Kent and Medway, and a further 158,000 self-employed people. As elsewhere in the UK, most businesses (90%) employ 9 or fewer people, but almost half of all jobs are in medium-sized and large companies.

'Job density' data suggests that there are fewer jobs than might be expected: in Kent and Medway there are 0.77 jobs for every working-age person, while across Great Britain as a whole there are 0.87, perhaps suggesting a need to encourage new job creation through business start ups and scale ups. An analysis of out-commuting and job density shows that job density is lowest in East Kent, where the level of out-commuting is also the lowest. Significant numbers of residents do commute into London, especially from the northern part of the sub-region, and there is also significant commuting between the different parts of Kent and Medway.

Average *workplace* wages in Kent and Medway are slightly below the UK average. However, *resident* earnings are slightly higher than the UK average, suggesting that many commute out to earn better.

While construction and professional services account for the largest numbers of companies, the largest sectors in terms of employment are education, health and retail, which together account for 34% of all jobs. While these are also the leading employment sectors nationally, Kent and Medway differs from the national picture through relatively high employment shares in construction, motor trades, retail and (although a small sector in overall job numbers) agriculture.

Relative to national averages there are particular concentrations of certain sectors in individual localities, including Agriculture in Maidstone and more rural local authority areas, Manufacturing in Swale, Retail in Canterbury, Dartford and Thanet, Transport and Storage in localities with ports and motorway hubs, business services in Dartford, Gravesham and Folkestone & Hythe, and Education and Health in Canterbury, Medway and Thanet.

The occupational profile of the workforce is similar to the national average, albeit with slightly fewer people in professional occupations and slightly more in associate professional occupations. Nevertheless, professional occupations are the largest single occupational group in Kent and Medway with 187,000 people, followed by associate professional and technical occupations (145,000) and managers, directors and senior officials (105,000).

Employment in the sectors referenced by KMEP in its *Renewal and Resilience Plan* is highest in Financial, Professional and Business Services (20,190), Development and Construction (15,385) and Retail and Wholesale (9,390).

Employ jobs have grown by 2% in Kent and Medway in recent years (16,000 additional jobs) with most growth in Construction and Accommodation & Food. Overall employment both nationally and in the SELEP region is forecast to grow by a further 2% by 2027.

While new jobs will contribute to demand for skilled labour, most demand is to replace those already in work who leave an existing job. When this 'replacement demand' is considered alongside anticipated new jobs, it is possible to forecast overall labour demand for people needing to be recruited. Figure A (below) summarises net anticipated annual demand for a range of occupations.

The overall net annual demand for new recruits is over 28,000 people across Kent & Medway. This includes 4,700 care workers and 3,100 business associate professionals as well as 4,100 corporate managers and 1,500 science, engineering, and technology professionals. Given the wide range of roles that need to be filled, skills and qualifications at all levels will be needed. However, forecasts for the SELEP region suggest that, by 2027, the proportion of the workforce with a degree is expected to increase by 6%, whilst the proportion requiring qualifications at level 1 or below will fall from 13% to 8%.

**Figure A: Forecasts by Occupation**

Standard Occupations SOC 2010	Est jobs	Expansion demand	Repl Demand	Net Annual Demand
11 Corporate managers	78,400	2.2%	3.2%	4,300
12 Other managers	28,700	0.8%	3.6%	1,300
21 Science, eng. & tech profs	47,100	0.8%	2.4%	1,500
22 Health professionals	34,100	1.1%	3.4%	1,500
23 Teaching & ed profs	41,000	1.6%	3.3%	2,000
24 Busn, media & public profs	46,600	1.0%	3.1%	1,900
31 Sci, eng & tech assoc. profs	15,700	0.0%	2.5%	400
32 Health & care assoc profs	12,000	0.4%	3.6%	500
33 Protective service occs	11,300	0.0%	2.1%	200
34 Culture, media & sports	23,600	0.1%	2.9%	700
35 Busn & public assoc profs	67,800	1.6%	2.9%	3,100
41 Admin occupations	67,800	-1.7%	2.9%	800
42 Secretarial & related	17,400	-2.4%	2.3%	-
51 Skilled agric & related	7,900	0.1%	3.2%	300
52 Skilled metal, elec & electronic	28,400	-0.9%	2.2%	400
53 Skilled construction	32,200	-0.3%	2.6%	700
54 Textiles, print & othr skilled	18,200	-0.5%	2.4%	400
61 Caring personal service occs	68,900	3.3%	3.5%	4,700
62 Leisure, travel & personal service	22,200	0.0%	3.0%	700
71 Sales occupations	49,200	-0.9%	2.6%	800
72 Customer service occs	16,300	0.4%	2.9%	600
81 Process, plant & machine	14,200	-0.7%	2.0%	200
82 Transport & machine ops	32,000	0.0%	3.1%	1,000
91 Elementary trade occs	12,300	-0.3%	2.2%	200
92 Elementary admin occs	86,500	0.3%	2.9%	2,700
Total	880,000	0.3%	2.9%	28,400

Source: DfE Working Futures 2017-2027. SELEP workbook. Local figures estimated using Working Futures and ONS BRES 2019.

## The Wider Context: Emerging Challenges and Opportunities

In the short term, employment is likely to be set back by the economic shock of Covid-19, and be followed by a recovery, assuming that Covid-related impacts are reduced or mitigated. Nationally, the Office for Budget Responsibility anticipates a return to GDP growth of 4% in 2021 and 7.7% in 2022, with output returning to pre-crisis levels by the middle of 2022. The employment outlook in the medium term is uncertain, although in previous recessions, the economy has returned to output growth before unemployment has started to fall.

Sectoral employment dynamics and skills demand in the medium and long term will also be shaped by a series of major technological and social trends in the coming years:

- **Digitalisation** will change existing industries and create new ones, blurring the boundaries between some sectors too. Automation is believed to place around 30% of current jobs at risk, and less well-educated workers are expected to be most affected. Recent research also suggests that digitalisation will drive increased demand for higher-level technical skills; a need for more digital technology to be embedded across the curriculum in schools; a need to upskill the existing workforce in digital tech; a

requirement to improve diversity in digitally advanced occupations; and a need to expand the supply of digital skills training.

- **Decarbonisation** will drive a range of new activities in construction, retrofit, energy generation and supply, more resource efficient methods of production, low-carbon transport, natural carbon storage, creating a range of new green jobs and skills, changing existing jobs and expanding the numbers of relevant existing jobs.
- **Demographic change** is expected to increase demand for goods and services required by an ageing population; spur a productivity gain in response to a rising 'dependency ratio', and require longer working lives.
- **Working practices** are also changing, including more part-time working, increased self-employment, more (e-enabled) independent work (including AirB&B and E-bay), zero-hours contracts, and the 'gig economy'.

Skills demand and provision will also be affected by national and local policy. At a national level, the *Plan for Growth* (March 2021) set out new measures to improve productivity and to invest in low carbon technologies. The *Skills White Paper* (January 2021) proposed greater alignment between provision and employer needs, the production of local skills plans, college business centres to increase collaboration between colleges and employers, access to finance for re-training, and increasing the quality and uptake of higher-level skills.

At a Kent and Medway level, the *Economic Renewal and Resilience Plan* adopted by KMEP in August 2020 focused on three principles of 'greener futures' (linked with the decarbonisation agenda); 'productive and open', and 'better opportunities, fairer chances' (linked with 'fair work' and higher-pay, more productive employment). The Employment Task Force was established to drive economic recovery through specific, strategic actions.

### Skills Needs in Key Sectors

Figure B (below) summarises the key conclusions from the workshops held with industry representatives from the KMEP key sectors. While some of the priorities are particular to individual sectors, there are also a number of common or frequently mentioned priorities. These include a need to improve a given sector's image and perceptions; better alignment between curriculum and employer needs; better

engagement by companies in work to raise awareness and understanding of career opportunities; a need to manage talent pipelines collectively in some sectors; and newer skills needs that reflect wider economic trends like digitalisation and de-carbonisation, alongside longstanding shortage areas, such as chefs and some health and care roles.

**Figure B: Key Issues to be Addressed by Sector**

<p><b>Agriculture and horticulture</b></p> <ol style="list-style-type: none"> <li>1. Improve image and perceptions of the sector through better communication of the range of career options available.</li> <li>2. Address likely labour shortages arising from Brexit.</li> <li>3. Improve the match between the education and skills offer and employer requirements, including in new technology, and increase the take up of Apprenticeships.</li> <li>4. Improve engagement between the sector and education and skills to raise awareness of career opportunities, update the curriculum and make skills services easier for sector companies to access.</li> </ol>
<p><b>Manufacturing</b></p> <ol style="list-style-type: none"> <li>1. Address the ageing workforce issue through closer engagement with education and skills, use of Apprenticeships and T Levels, and adoption of new technology.</li> <li>2. Improve access by women to manufacturing and engineering careers.</li> <li>3. Improve the image and perceptions of the sector, communicating more clearly the attractiveness of STEM careers.</li> <li>4. Develop the local skills offer, making the business benefits clearer of programmes, making administration of Apprenticeships more company friendly and more trainee support. There is probably untapped potential for companies to engage with schools, FE and HE.</li> <li>5. Improve the local specialist and technical short course offer in subjects like computer-aided design, digital automation, Big Data, Internet of Things and digital skills.</li> </ol>
<p><b>Development and construction</b></p> <ol style="list-style-type: none"> <li>1. Undertake workforce and skills pipeline planning to ensure that major projects and house building activity can secure the workforce they need and to open up opportunity to a wide range of local people.</li> <li>2. Encourage more collaboration among sector companies and involvement in the education and skills system, through existing initiatives like the Enterprise Adviser network.</li> <li>3. Improve image and perceptions of the sector by emphasising the range of career options available and tailoring communications to target audiences (e.g., 'relatable role models').</li> </ol>

<ol style="list-style-type: none"> <li>4. Improve workforce diversity to access new talent pools and increase the inclusion of under-represented groups, such as women.</li> <li>5. Address specific skills shortages in areas like planning, quantity surveying and technology-related activities such as Modern Methods of Construction.</li> </ol>	<p>streamlined and more strategic (rather than transactional).</p>
<p><b>Retail and wholesale</b></p> <ol style="list-style-type: none"> <li>1. Ensure that potential new recruits have and are able to develop the necessary soft skills and attitudes required for the many entry-level jobs. This includes communication, customer focus, flexibility and a positive attitude.</li> <li>2. Make curriculum much more directly relevant to the sector by recruiting more tutors with an industry background and teaching subjects in a practical applied way (e.g. marketing applied to a retail context).</li> <li>3. More engagement between the sector and education and skills to help people make careers decisions, to make programmes more industry relevant, and to increase take up of opportunities such as Apprenticeships.</li> </ol>	
<p><b>Transport and logistics</b></p> <ol style="list-style-type: none"> <li>1. Improve workforce diversity and inclusion, building on existing good practice locally.</li> <li>2. Improve image and perceptions of the sector, emphasising the wide range of career options that are available (including STEM careers) and working through successful existing mechanisms like the Enterprise Adviser network and education-business partnerships.</li> <li>3. Address ongoing skills shortages (especially HGV drivers) and for vehicle maintenance technicians and engineers, reflecting the growth of low carbon engine technology. Scope for adult re-skilling.</li> <li>4. Encourage greater collaboration among companies in the sector in addressing skills and workforce issues, such as developing a shared talent pipeline and specialist training.</li> </ol>	<p><b>Finance, professional and business services</b></p> <ol style="list-style-type: none"> <li>1. Develop soft skills / ‘employability skills’ in the population, including personal resilience.</li> <li>2. Skills for digitalisation, including standard packages like Office 365, common applications like Microsoft EXCEL and PowerPoint.</li> <li>3. Improve recruitment and retention in response to the challenge of London salaries becoming accessible for more home-based Kent workers employed in London by, for example, re-training of the existing workforce, accessing new talent pools through improved equality, diversity and inclusion.</li> <li>4. Engage more closely with the education and skills system by building upon existing positive relationships with FE and HE, and through the Enterprise Adviser network, reaching more potential recruits through digital technology.</li> </ol>
<p><b>Visitor economy</b></p> <ol style="list-style-type: none"> <li>1. Improve image and perceptions of the sector, emphasising the growth of the ‘high end’ experience economy and communicating the full range of career opportunities. Develop aspiring talent through mentoring, engaging more in careers activities and collaborating as companies to create more career and learning progression opportunities.</li> <li>2. Help to address post-Covid unemployment: the sector is very good at diversity and inclusion and can provide re-skilling opportunities for people who have lost jobs in the pandemic.</li> <li>3. Address specific skills shortages for chefs, and ensure that new entrants have the necessary soft skills and attitudes needed in the sector.</li> <li>4. Improve engagement with the education and skills system, making engagement simpler, more</li> </ol>	<p><b>Health and social care</b></p> <ol style="list-style-type: none"> <li>1. Address growing recruitment and retention issues, made worse by Covid and underpinned by an ageing workforce. Shortage areas include nurses in social care, nurses generally and registered care managers.</li> <li>2. Address the skills and workforce aspects of the service integration agenda set out in the recent Health and Social Care White Paper. Collaborative work is needed with education and skills partners to take a ‘one workforce’ approach across Health and Social Care, defining care pathways and associated workforce planning, education and training for each of the 4 Kent and Medway Integrated Care Systems.</li> <li>3. Better promotion of sector careers, building on the 400 different roles available in the sector, and promoting social care more as a route in and to develop a career.</li> </ol>
	<p><b>Energy, utilities and environmental technologies</b></p> <ol style="list-style-type: none"> <li>1. Engaging a more diverse talent pool in sector careers, in particular women. This can build on existing links to education and skills partners and initiatives like the Enterprise Adviser network. There is also scope for more collaboration among sector companies themselves in addressing shared workforce challenges.</li> <li>2. Address new and emerging skills needs, especially those arising from the de-carbonisation agenda and digital technology.</li> <li>3. Ongoing work is needed to meet longstanding skills needs for fitters, engineers, trades and management / administration roles. Good hand skills are important to the sector in technician, fitter and engineering roles.</li> </ol>
	<p><b>Life sciences</b></p> <ol style="list-style-type: none"> <li>1. Address growing needs for digital skills, as desk-based digital work grows alongside an ongoing need for lab skills.</li> </ol>



<ol style="list-style-type: none"> <li>2. Ensure a good supply of people with STEM skills, including chemistry, chemical engineering and biology, including an emphasis on practical skills as well as academic knowledge.</li> <li>3. Increase links to the education and skills system building on good work already happening, including the potential to grow Apprenticeships.</li> </ol>
<p><b>Creative and cultural industries</b></p> <ol style="list-style-type: none"> <li>1. Consider a wider and more appropriate 'creative and digital' sector, given the convergence of digital with all things creative.</li> <li>2. Increase awareness of career opportunities in the sector, communicating effectively the range of good, well-paid and fulfilling employment that is available.</li> <li>3. Take a strategic and structural approach to the skills needs sector through major transformative projects, like Newtown Works, as this is needed to make the most of the growth potential available.</li> <li>4. Ensure that people are given ample opportunities to develop their real-world practice in the sector through commissions with a training element, industry-led short courses, and practice-based longer programmes led by industry.</li> </ol>
<p><b>Digital technology</b></p> <ol style="list-style-type: none"> <li>1. Increase awareness and understanding of career and enterprise opportunities through involvement in education and skills partner careers activities.</li> <li>2. Engage more widely with schools, FE and HE in respect of placements and Apprenticeships, and to influence curriculum to address industry skills shortages for coders, developers, animators, analytics specialists and data scientists, while also ensuring that relevant soft skills are also developed.</li> <li>3. Embrace, post-Covid, flexible working, which is now opening up scope to recruit or contract new staff from around the world.</li> <li>4. Increase re-skilling opportunities for people looking to change career and go into tech.</li> <li>5. Boost the sector through complementary actions besides skills. There is scope to attract more entrepreneurs into Kent and Medway if more innovation / incubation hub facilities can be provided which offer a 'landing space' and access to a local professional network.</li> </ol>

Source: sector skills workshops conducted sector companies, March 2021

### Skills Needs Arising from Major Projects

Seven major projects are identified which will have a major impact on the Kent and Medway labour market if they go ahead.

While most are still subject to final planning approval, the potential number of jobs is very significant. Innovation Park Medway, for example, could create around 3,000 high value-added jobs, Kent Medical Campus about 4,000 jobs, and Manston eventually over 8,000.

Other major projects are especially transformational in nature: London Resort would create 8,000 construction jobs and eventually 17,000 jobs associated with its ongoing operation, and Lower Thames Crossing is expected to require 22,000 people to work on its construction. Newtown Works would create around 700 film and media-related jobs and act as a major stimulus to the creative and digital economy.

Job volumes for Ebbsfleet Garden City are in the process of being forecast, but there will be extensive construction activity and new employment space, as well as the new HEiQ innovation quarter.

### Skills Supply / Community Needs

There are just over 1,129,000 working age (16-64) people resident in Kent and Medway. While the area has more retirement age people than the national average, there is also a higher proportion of young people (19 and under). The Office for National Statistics forecasts that the population will grow by 8% by 2030, above the national average of 6%. The population of 15-19-year-olds will grow by 20% over the same period.

About 9% of Kent and Medway residents are estimated to come from minority ethnic backgrounds, compared with 14% nationally. Around 20% of working age people report having a core disability in terms of the Equality Act or some other work limiting disability. The pattern varies significantly by locality, from just 8% in Ashford to 31% in Thanet.

67,000 people were unemployed in January 2021. A further 32,700 were economically inactive but looking for work. There was considerable variation by locality, with Thanet having the highest level of claimant count unemployment, for example, and Sevenoaks and Tonbridge and Malling the lowest. Unemployment increased significantly in spring 2020 coinciding with the first Covid-19 lockdown, has remained at roughly that higher level since and is currently mitigated by the Government's furlough scheme.

191,000 working age people in Kent and Medway are in receipt of some form of benefits, including 54,000 on Universal Credit. The proportion of children in relatively low income families varies considerably by locality, being higher than the national average in Dover, Folkestone & Hythe, and Thanet. There is also a similar pattern to deprivation, the Index of Multiple Deprivation placing Swale and Thanet in the bottom quartile of districts nationally for overall deprivation.

While a similar proportion of Kent and Medway residents have a Level 1 qualification when compared with the national average, they are less likely to have qualifications at Level 3 and above or Level 4 and above. Given the expected trend in workforce qualification needs already identified, this is worrying. Indeed, over 125,000 residents only have qualifications at Level 1 and 88,000 have no qualifications at all (see Figure C below).

**Fig C: Highest Qualification Obtained**

	Kent and Medway	%
Level 4	402,900	36%
Level 3	206,100	18%
Level 2	194,000	17%
Level 1	125,400	11%
Other	70,400	6%
None	88,100	8%
<i>Trade Apprenticeship</i>	<i>30,700</i>	<i>3%</i>
Total aged 16-64	1,117,600	100%

Source: ONS APS Jan19-Dec19

The proportion of adults with level 4 qualifications or above is particularly low in Swale and Thanet but above the national average in Sevenoaks and Tunbridge Wells.

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## 1. Introduction

### 1.1 This Report

This Kent & Medway Workforce Skills Evidence Base (WSEB) 2021 has been developed to:

- a) Provide an overview of current and future skills **demand** in Kent and Medway.
- b) Provide an overview of **social needs** and workforce skills **supply**.
- c) Identify areas in which there are, or are likely to be, **supply and demand imbalances** which could impact economic growth and employment and household income levels in Kent and Medway over the medium to long term.

It is anticipated that the WSEB will be useful to skills providers in planning for future provision and to local economic and social actors in identifying priorities for additional provision and initiatives.

The Evidence Base involves primarily an analysis of secondary data, but also draws on a series of employer workshops held with businesses in key Kent & Medway industry sectors in March 2021.

Sectors are defined in two ways: 1) using standard, mutually exclusive industry sector definitions that are commonly used in national statistics, and 2) using the bespoke sector definitions used by KMEP in the *Renewal and Resilience Plan*. The latter are considered by stakeholders to be more appropriate when engaging employers and so may be better suited to formulating and implementing policy responses to identified needs.

The structure of the report is as follows:

- Section 2 looks at the Kent and Medway economy and labour market, describing the sectoral and occupational structure of employment, and providing forecasts as to future skills needs.
- Section 3 sets out the wider context for the study, exploring some of the emerging challenges and

opportunities faced by the Kent and Medway economy and society.

- Section 4 presents industry stakeholder views on the key skills issues in KMEP priority sectors.
- Section 5 provides the latest available intelligence on potential skills needs arising from large infrastructure projects and other major developments in Kent and Medway.
- Section 6 considers resident qualifications and social needs of relevance to skills.

The Annexes provide a full list of sector workshop attendees (i); a summary of key local sector employment strengths (ii); a note on KMEP sector definitions (iii); and a detailed analysis for each of the KMEP priority sectors (iv).

### 1.2 What We Mean by 'Skills'

The term 'skills' is open to multiple interpretations. The Chartered Institute for Personnel and Development, for example, highlights the distinction between skills and qualifications<sup>1</sup>:

*'Although they are often treated interchangeably, skills are not the same as qualifications. Skills associated with the ability to write and understand reports and communicate with others, to perform numerical and analytical tasks, and use computers to help solve problems are at the heart of how organisations function in the digital age. Other attributes, such as the ability to work well with customers and clients, and being caring and creative, are also highly valued in some jobs, although these are harder to pin down as specific skills.'*

The research conducted for this report surfaced a number of interesting perspectives on what is meant by the term 'skills', and what knowledge, capabilities, attitudes, behaviours and attributes are most valued by employers and most needed by Kent and Medway residents.

The report was produced one year into the Covid-19 pandemic, which brought to light the idea of 'key workers', many of whom might not be especially highly qualified, but do undertake essential and

<sup>1</sup> [https://www.cipd.co.uk/Images/from-inadequate-to-outstanding\\_2017-making-the-UK-skills-system-world-class\\_tcm18-19933.pdf](https://www.cipd.co.uk/Images/from-inadequate-to-outstanding_2017-making-the-UK-skills-system-world-class_tcm18-19933.pdf)

sometimes low-paid work. This highlighted the limitations of using the level of a person's qualifications as a measure of how valuable they are to the economy and society.

It was pointed out in the sector workshops that so-called 'elementary occupations' and people with skilled trades play as essential a role in companies as professionals and graduates. In Development and Construction, for example, consultancy firms might be heavily dependent upon the skills of computer-assisted design technicians, while people with trade and craft skills are essential to successful building firms. Similarly, in Transport and Logistics stevedores qualified to Level 2 play a vital role and can develop varied and well-paid careers. 'Lower skilled' jobs also provide people with a valuable first step in work, before progressing on to other roles.

It was also stressed by employers that 'skills' should not be reduced to the achievement of qualifications alone. In particular, employers and individuals also need a range of 'soft skills' and personal attributes in areas like team working, communication, customer service, and problem solving, and being resilient, committed, enterprising and entrepreneurial. In the Finance, Professional and Business Services sector workshop it was proposed that employers and the education and skills sector should work together to specify an agreed definition of precisely what 'soft skills' and other attributes are needed. The STEM Top Ten Employability Skills<sup>2</sup> were proposed as a starting point for this work.

This wider set of 'transferable skills' is doubly important in a rapidly changing economy, when people can expect to have a number of jobs and career changes over the course of their life. The pandemic has brought this to the fore, with some people looking to re-train in response to more limited labour market opportunities in sectors like retail, but also to work in activities that are important to them as individuals or to make best use of their particular talents.

So, although this report makes frequent references to qualifications and educational attainment levels, it is important to consider the wider role that education and skills can play in meeting the broader needs of employers, individuals and society.

This can include the need for some people to make their own livelihoods, given the growth in self-employment and the importance of business start-up and scale-up to a region in which the business stock is dominated by SMEs. The scale of some of the social challenges faced in Kent and Medway also suggests an important role for people to create and grow organisations and careers in the social economy.

Finally, education and skills can play an important role in the health, wellbeing and resilience of Kent and Medway's communities, which have suffered during the pandemic and may face further pressure in the coming years. These 'social outcomes' also need to be factored into the planning and funding decisions that this report aims to inform.

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<sup>2</sup> <https://www.stem.org.uk/resources/elibrary/resource/418157/top-ten-employability-skills>

## 2. Economy, Businesses and Employment

Future demand for skills and qualifications across Kent and Medway will depend on local business and economic needs as well as those of the resident population. This chapter looks at:

- The overall **scale and productivity** of the Kent and Medway economy
- **Jobs**, by sector and occupation
- **Travel-to-work** and commuting patterns
- The profile of the county's **business stock**
- Forecast **employment and skills needs**

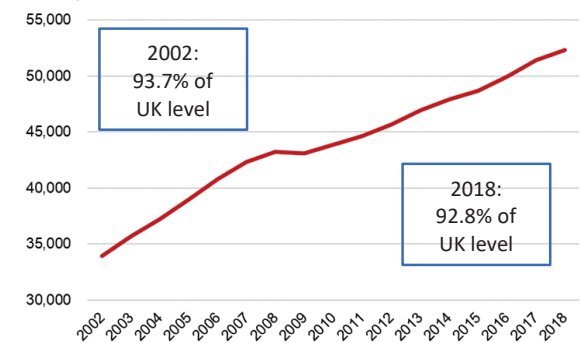
### 2.1. Scale and Productivity

The Kent and Medway economy generated total output (measured in gross value added, or GVA) of around £41 billion in 2018. Until the pandemic in 2020, total output had grown steadily for a decade, following a slow recovery from the 2009/10 recession.

**Productivity** (measured as GVA per filled job) was around £52,000 in 2018. This was around 93% of UK productivity levels. It should be noted however that UK productivity is skewed by a small number of highly productive regions (mainly in London, the Thames Valley and parts of Scotland). In this context, Kent and Medway's productivity is in the 'middle of the pack'.

Over time, **productivity growth has been relatively weak**. This reflects a national problem: since the financial crisis, productivity growth has been weaker in the UK than in most major economies, a challenge referred to by commentators as the 'productivity puzzle'. Productivity growth in Kent and Medway averaged 1.9% per year between 2008-18: this was slightly below the UK growth rate, with the result that the differential between Kent and Medway and UK levels of productivity has been virtually unchanged for 20 years:

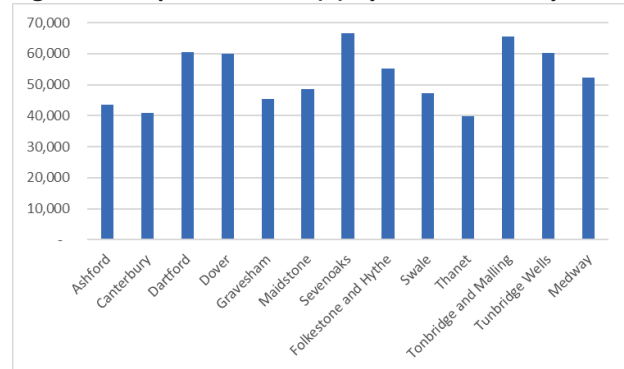
**Fig 2.1: Productivity in Kent & Medway (GVA £ per filled job)**



Source: ONS, Nominal (smoothed) GVA per filled job, NUTS2

Within Kent and Medway, **there is considerable diversity in productivity at local level**, ranging from £66,000 in Sevenoaks to less than £40,000 in Thanet.

**Fig 2.2: GVA per Filled Job (£) by Local Authority**



Source: ONS, Nominal (smoothed) GVA per filled job

Productivity differentials are partly driven by the sectoral balance (i.e., the mix between more or less productive sectors). Figure 2.3 shows output and employment by sector, highlighting high output relative to jobs in construction, utilities and related activities and manufacturing; and relatively low output relative to jobs in retail and accommodation and food service<sup>3</sup>.

However, overall productivity is also determined by the *types* of activities that take place within those sectors (i.e., higher or lower value jobs). Across both, raising workforce skill levels is recognised as a key factor in improving productivity performance over time.

<sup>3</sup> Note that property and real estate apparently generates very high output relative to jobs. However, this is largely a function of land values.

**Fig 2.3: GVA by Sector (£millions)**

Standard Industries	GVA	% GVA	% Emp	GVA/ Emp
1 : Agriculture, forestry & fishing (A)	383	1%	2%	0.4
2 : Mining, quarrying & utilities (B,D,E)	1,593	4%	1%	2.8
3 : Manufacturing (C)	3,359	8%	7%	1.2
4 : Construction (F)	4,236	10%	7%	1.5
5-7 : Wholesale & Retail	5,156	12%	17%	0.7
8 : Transport & storage (H)	2,326	5%	5%	1.0
9 : Accommodation & food (I)	1,060	2%	8%	0.3
10 : Information & communication (J)	1,438	3%	3%	1.3
11 : Financial & insurance (K)	1,725	4%	3%	1.6
12 : Property (L)	7,262	17%	1%	11.6
13 : Prof, sci. & tech (M)	2,318	5%	7%	0.8
14 : Business admin & support (N)	2,264	5%	8%	0.6
15 : Public administration & defence (O)	1,870	4%	4%	1.2
16 : Education (P)	2,796	7%	10%	0.7
17 : Health (Q)	3,030	7%	13%	0.5
18 : Arts etc (R,S,T, U)	1,601	4%	4%	0.9
Total	42,417	100%	100%	1.0

Source: ONS GVA 2018, KCC Strategic Commissioning – Analytics

Between 2013 and 2018, output grew by around 20%. Despite employment declines, the property, and professional, scientific & technical services sectors played a significant part in that growth (44%), alongside output growth in the wholesale & retail, and construction sectors.

**Fig 2.4 Change in GVA 2013-2018**

Standard Industries	Change in GVA 2013- 2018	% of Kent & Medway's growth
1,2 : Primary industries & Utilities (ABDE)	10%	3%
3 : Manufacturing (C)	9%	4%
4 : Construction (F)	26%	12%
5,6,7 : Wholesale & Retail	31%	17%
8 : Transport & storage (H)	15%	4%
9 : Accommodation & food (I)	17%	2%
10 : Information & communication (J)	22%	4%
11 : Financial & insurance (K)	-5%	-1%
12 : Property (L)	28%	22%
13 : Prof, sci. & tech (M)	28%	22%
14 : Business admin & support (N)	17%	5%
15 : Public administration & defence (O)	-2%	0%
16 : Education (P)	14%	5%
17 : Health (Q)	24%	8%
18 : Arts etc (R,S,T, U)	32%	2%
Average/Total	20%	100%

Source: ONS GVA 2013-18, KCC Strategic Commissioning – Analytics

## 2.2. Jobs

Although Kent & Medway is a sizable labour market, there are fewer local jobs than might be expected if the area reflected the national economy. Across Great Britain there are 0.87 jobs for every working age (16-64) person in the population. In Kent & Medway there are only 0.77.

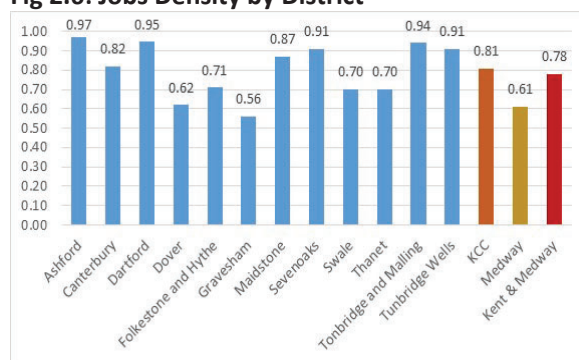
**Fig 2.5: Jobs Density (labour market stress/slack)**

	K&M K&M (jobs)	SELEP (density)	GB (density)
Jobs density	880,000	0.77	0.87

Source: ONS Jobs Density 2019

This is partly due to outward commuting (discussed further in section 2.3 below). But some of the lowest job densities are in East Kent where outward commuting is less common.

This suggests some level of 'labour market slack' in parts of Kent & Medway and a need to stimulate growth and employment, by helping businesses to start up and/or scale up:

**Fig 2.6: Jobs Density by District**

Source: ONS Jobs Density 2019

## 2.3. Employment by Sector

### Standard sectors

Figure 2.5 shows the current profile of Kent & Medway businesses and employment by standard industrial sector. Construction and the professional services sector are the largest sectors in terms of business enterprises, although this mostly highlights the importance of micro-businesses to these sectors. **The largest sectors in terms of employment are education, health, and retail**, together accounting for more than a third (34%) of employment in Kent and Medway.

**Fig 2.7: Employment by Sector**

Standard industries	Jobs	%
1 : Agriculture, forestry & fishing (A)	12,000	1.7
2 : Mining, quarrying & utilities (B,D and E)	10,000	1.4
3 : Manufacturing (C)	48,000	6.6
4 : Construction (F)	48,000	6.6
5 : Motor trades (Part G)	17,000	2.4
6 : Wholesale (Part G)	30,000	4.2
7 : Retail (Part G)	78,000	10.8
8 : Transport & storage (inc postal) (H)	39,000	5.4
9 : Accommodation & food services (I)	55,000	7.6
10 : Information & communication (J)	19,000	2.6
11 : Financial & insurance (K)	19,000	2.6
12 : Property (L)	10,000	1.4
13 : Professional, scientific & technical (M)	47,000	6.5
14 : Business administration & support (N)	62,000	8.6
15 : Public administration & defence (O)	27,000	3.7
16 : Education (P)	71,000	9.8
17 : Health (Q)	98,000	13.6
18 : Arts, entertainment, etc (R,S,T and U)	30,000	4.2
<b>Total</b>	<b>722,000</b>	<b>100.0</b>

Source: ONS UK Business Counts 2020, BRES 2019. SIC 2007.

Education, health, and retail are also the largest sectors in terms of employment nationally.

However, there are some important differences between the national and Kent and Medway sectoral employment profiles. Figure 2.6 shows that Kent & Medway has a 40% greater share of employment in construction, a 30% greater share in motor trades and a 20% greater share in retail than might be expected if the local economy reflected the industrial structure of Great Britain as a whole. Relative representation in agriculture is even higher (although absolute employment in agriculture is quite small).

These are also relative strengths for the wider SELEP area (which also includes Essex and East Sussex).

**Fig 2.8: Sector Employment (vs. GB)**

Standard Industries	K&M	SELEP
1 : Agriculture, forestry & fishing (A)	1.5	1.2
2 : Mining, quarrying & utilities (B,D,E)	1.1	0.9
3 : Manufacturing (C)	0.8	0.8
4 : Construction (F)	1.4	1.4
5 : Motor trades (Part G)	1.3	1.4
6 : Wholesale (Part G)	1.1	1.1
7 : Retail (Part G)	1.2	1.1
8 : Transport & storage (H)	1.1	1.1
9 : Accommodation & food (I)	1.0	1.0
10 : Information & communication (J)	0.6	0.7
11 : Financial & insurance (K)	0.7	0.7
12 : Property (L)	0.8	0.9
13 : Prof, sci. & tech (M)	0.8	0.8
14 : Business admin & support (N)	1.0	0.9
15 : Public administration & defence (O)	0.9	0.8
16 : Education (P)	1.1	1.1
17 : Health (Q)	1.0	1.1
18 : Arts etc (R,S,T, U)	0.9	1.0
<b>Total</b>	<b>1.0</b>	<b>1.0</b>

Source: ONS BRES 2019. Location Quotients.

Annex I summarises how relative employment strengths vary across Districts. It highlights a range of relative local concentrations of employment, including:

- Agriculture in Maidstone and rural Kent Districts
- Manufacturing in Swale
- Retail in Canterbury, Dartford (Bluewater) and Thanet
- Transport & storage in the Districts with ports and motorway hubs
- Business services in Dartford, Gravesham and Folkestone & Hythe
- Education and Health in Canterbury, Medway and Thanet.

### KMEP Sector Groups

Kent & Medway Economic Partnership's *Renewal & Resilience Plan*, developed in the light of the challenges of Brexit, Covid-19, and global economic uncertainty, groups several sectors for Kent and Medway into groups that are more readily recognisable to employers and other stakeholders.

Annex II outlines the detailed SIC code definitions of the KMEP sectors. Geographical concentrations of employment in the sectors are also discussed in the sector summaries in Annex III.

Employment in these sector groups is set out below. However, whilst KMEP key sectors cover most of the economy, they do not include it all and some businesses and employment are counted in more than one sector. When exploring patterns of change across the economy, it is preferable to use standard sector definitions.

**Fig 2.9: Employment in KMEP Key Sectors**

KMEP sectors	Jobs
Agriculture	17,500
Manufacturing	49,000
Development & construction	62,500
Retail & wholesale	129,000
Transport & logistics	40,000
Visitor economy	74,500
Financial & professional services	132,500
Health & social care	100,000
Energy, utilities & environmental tech	10,000
Life sciences	4,300
Creative & cultural	11,500
Digital tech	17,000

Source: ONS BRES 2019

## 2.3 Employment trends by sector

Over the last few years for which we have consistent and comparable employment data (2015-19), employee jobs across Kent & Medway grew by 2% (16,000 net additional jobs). Figure 2.23 highlights that, using standard definitions, the largest employment growth sectors were construction (+8,500 jobs) and accommodation & food sectors (+5,000 jobs). Both sectors have, however, have experienced a significant contraction in demand during the Covid-19 pandemic.

**Fig 2.10: Employment Change 2015-2019**

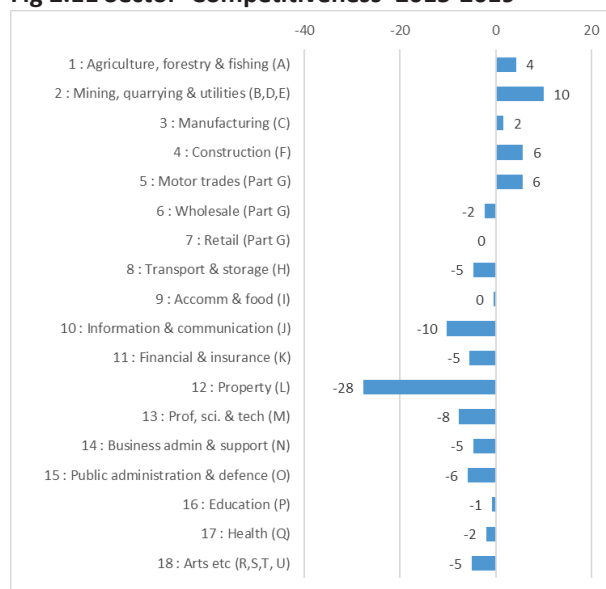
Standard Industries	K&M	K&M %	SELEP %
1 : Agriculture, forestry & fishing (A)	1,000	+6	+5
2 : Mining, quarrying & utilities (B,D,E)	1,500	+15	0
3 : Manufacturing (C)	1,500	+3	+4
4 : Construction (F)	8,500	+17	+12
5 : Motor trades (Part G)	2,500	+14	+9
6 : Wholesale (Part G)	-500	-2	-1
7 : Retail (Part G)	-2,000	-2	-6
8 : Transport & storage (H)	2,000	+5	+8
9 : Accommodation & food (I)	5,000	+9	+7
10 : Information & communication (J)	-500	-3	-5
11 : Financial & insurance (K)	-500	-3	0
12 : Property (L)	-2,000	-18	0
13 : Prof. sci. & tech (M)	0	0	+8
14 : Business admin & support (N)	-1,000	-2	+1
15 : Public administration & defence (O)	-500	-2	+4
16 : Education (P)	-1,000	-1	+2
17 : Health (Q)	1,000	+1	+1
18 : Arts etc (R,S,T, U)	-500	-2	-1
<b>Total</b>	<b>16,000</b>	<b>+2</b>	<b>+2</b>

Source: ONS BRES 2015-19

Figure 2.23 also highlights that employment in the property and retail sectors both declined by around 2,000 jobs over the 2015-2019 period.

Figure 2.11 looks at the sector employment change the Kent & Medway economy over that period using 'shift-share' analysis that takes out 'background' economic growth and sector dynamics at a national level. This highlights that, in terms of employment change, the agriculture, utilities and construction sectors have performed slightly better than expected, whilst the property, information & communication, and professional, scientific & technical services sectors performed worse.

**Fig 2.11 Sector 'Competitiveness' 2015-2019**



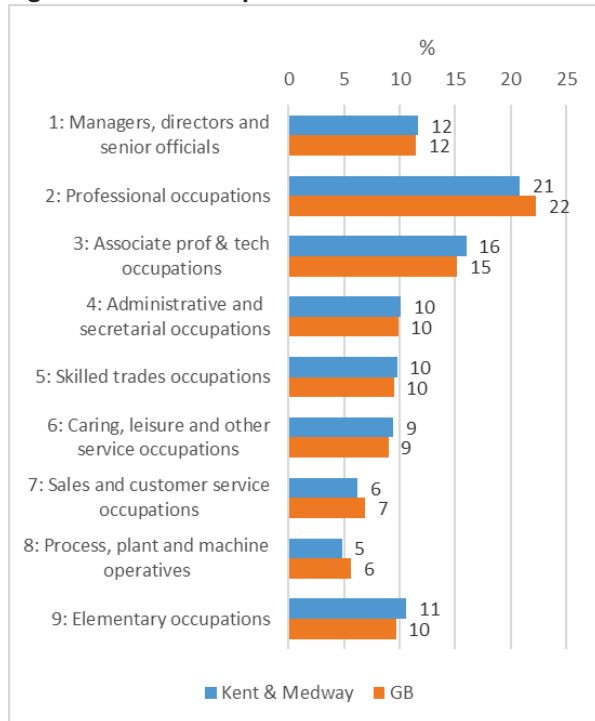
Source: Shift-share analysis based on BRES 2015-19

## 2.4. Employment by Occupation

The broad occupational profile of the Kent and Medway workforce (Fig 2.8) is quite similar to the national average, although there are slightly fewer people in professional occupations and slightly more in associate professional occupations.



**Fig 2.12: Broad Occupations Benchmarked**



Source: ONS APS Oct19-Sep20. SOC 2010. Jobs (employment and self-employment)

Nevertheless, with nearly 190,000 people in professional occupations across Kent & Medway this is the largest occupational category (Fig 2.18).

**Fig 2.13: Jobs by Broad Occupation**

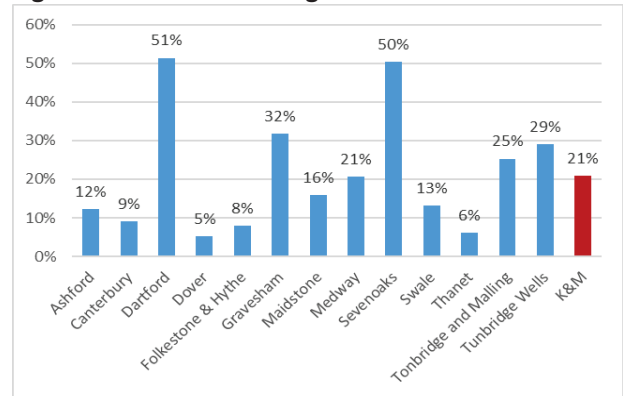
Standard Broad Occupations (SOC 2010)	Kent & Medway
1: Managers, directors and senior officials	105,600
2: Professional occupations	187,700
3: Associate prof & tech occupations	145,000
4: Administrative and secretarial occupations	91,500
5: Skilled trades occupations	88,900
6: Caring, leisure and other service occupations	84,700
7: Sales and customer service occupations	56,300
8: Process, plant and machine operatives	43,600
9: Elementary occupations	95,500

Source: ONS APS Oct19-Sep20. SOC 2010. Jobs (employment and self-employment).

## 2.5. Travel to Work Patterns

The last census (2011) highlighted that Kent & Medway residents in Dartford and Sevenoaks were the most likely to leave Kent & Medway to work (Fig 2.14).

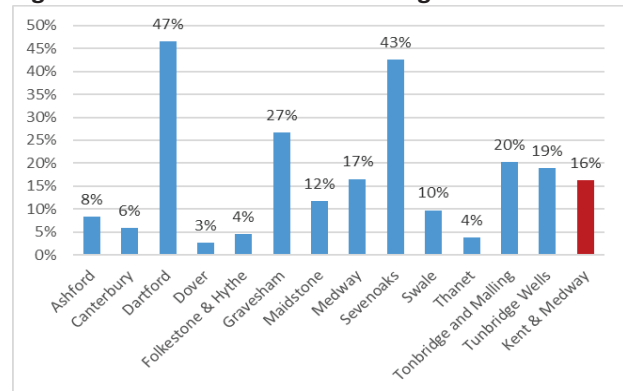
**Fig 2.14: Residents Leaving K&M to Work**



Source: Census 2011. Adults in work resident in Kent & Medway

The majority of outward commuters travel into Greater London, highlighting the impact of the capital on the Kent & Medway labour market (Figure 2.8).

**Fig 2.15: K&M Residents Commuting to London**



Source: Census 2011. Adults in work resident in Kent & Medway

It is important to note that these figures are now ten years old. The High Speed rail connections to Ashford, East Kent and North Kent started operation in 2009, two years before the 2011 Census but may have had an increasing impact on commuting over time. Remote and flexible working has also increased since the last census, and has been reinforced during the pandemic.

In the 2011 census the Office for National Statistics (ONS) calculated that there were 7 different Travel to Work Areas (TTWAs) across Kent & Medway, including the London TTWA which reaches into the west of Kent (Fig 2.16).

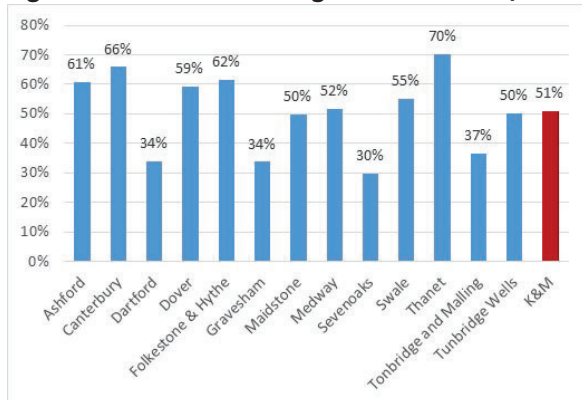
**Fig 2.16: Map of 2011 Travel to Work Areas**



Source: ONS 2016.

The methodology for developing Travel to Work Areas requires between 66% and 75% of people to live and work in the same area. Within Kent & Medway only Canterbury and Thanet would meet this threshold as Local Authority areas (Figure 2.10).

**Fig 2.17: Residents Working in Same District/UA**



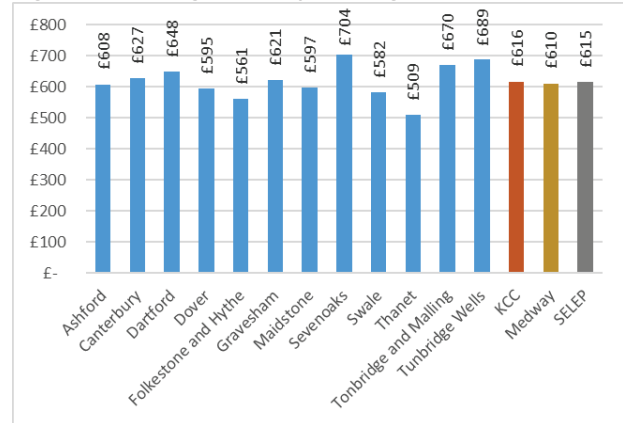
Source: Census 2011. Adults in work resident in Kent & Medway

This highlights that travel to work areas are often larger than Local or Unitary Authority Districts but also that Kent & Medway is far from a single labour market.

## 2.6. Earnings

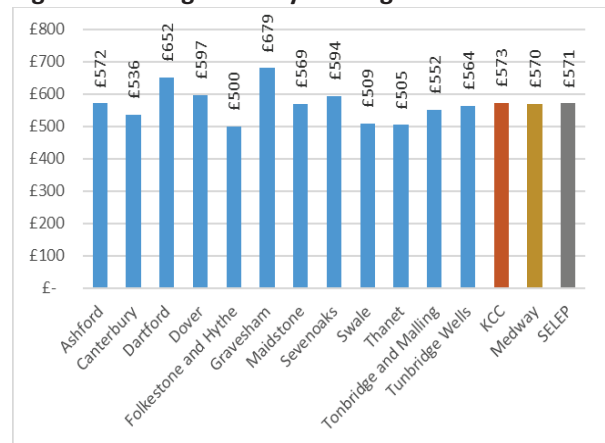
Figures 2.18 and 2.19 show that average earnings for Kent and Medway residents are higher than those for people that work in Kent & Medway.

**Fig 2.18: Average Weekly Earnings – Residents**



Source ASHE 2019. Median weekly pay – full-time workers

**Fig 2.19: Average Weekly Earnings – Workforce**



Source ASHE 2019. Median weekly pay – full-time workers

## 2.7. Business Stock

To a large extent future skills needs will be determined by the current profile of businesses and employment, as 'replacement' demand for staff retiring or leaving the labour market tends to outweigh both 'growth' demand and changes in industrial structure.

According to national statistics there are over 72,000 business enterprises in Kent & Medway and over 880,000 people in work (Fig 2.20).

**Fig 2.20: Businesses, Employees and Jobs**

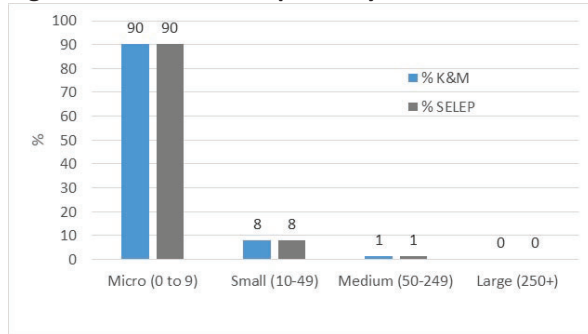
	K&M	% SELEP
Enterprises	72,900	41%
Employees	721,500	44%
Jobs (incl self-employment)	880,000	44%

Source: ONS UK Business Counts 2020, BRES & Jobs Density 2019

The difference between the employees and jobs totals highlights that there are around 158,000 self-employed people in Kent & Medway.

Most business enterprises are micro-businesses employing fewer than 10 people (see Fig 2.21).

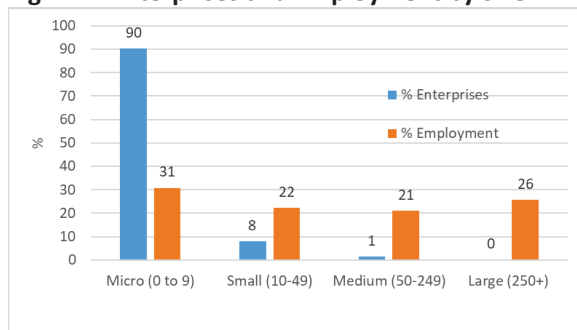
**Fig 2.21: Business Enterprises by Size**



Source: ONS UK Business Counts 2020

However, as large businesses and organisations employ more staff, employment is still spread quite evenly across different business size groups (Fig 2.2).

**Fig 2.22: Enterprises and Employment by Size**

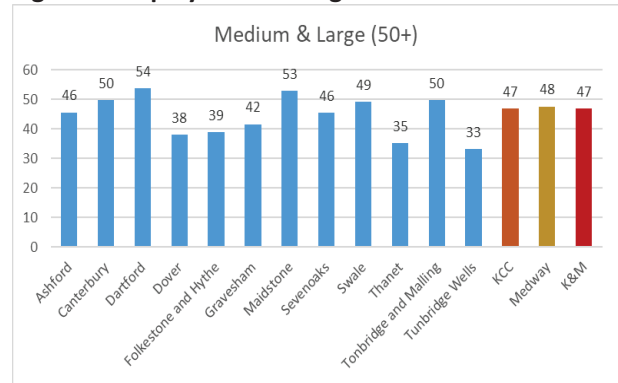


Source: Estimated from ONS UK Business Counts 2020 & BRES 2019

Workforce development initiatives therefore need to engage medium and large enterprises as well as small ones.

Figure 2.23 highlights that the proportion of the employed workforce employed in large businesses varies between districts. Large organisations account for more than half of the workforce in Dartford and Maidstone but only around a third in Tunbridge Wells and Thanet.

**Fig 2.23: Employment in Larger Businesses**



Source: Estimated from ONS UK Business Counts 2020, BRES 2019

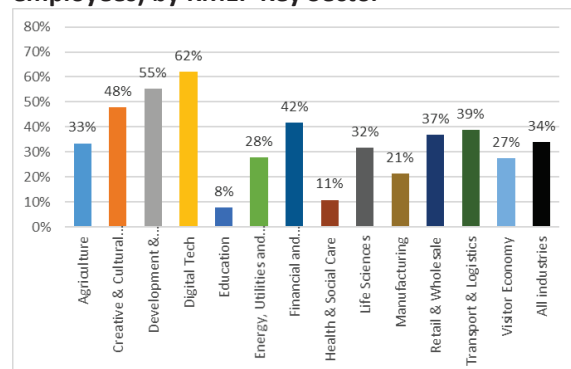
Kent & Medway is sometimes portrayed as a small business economy lacking 'anchor' businesses and it does have slightly fewer large employers than might be expected given national patterns (although across the UK, the great majority of businesses are small and micro). An estimated 0.3% of Kent & Medway's business enterprises employ 250 or more people compared with 0.4% for Great Britain.

The difference is quite marginal in terms of enterprises, but it translates to a difference of 4-5% in terms of the proportion of employment in larger enterprises. Around 30% of the employed workforce are in large enterprises (250+) nationally, compared with 26% in Kent & Medway. Nevertheless, medium and large enterprises remain important to the Kent & Medway economy and workforce.

### Business Size by Sector

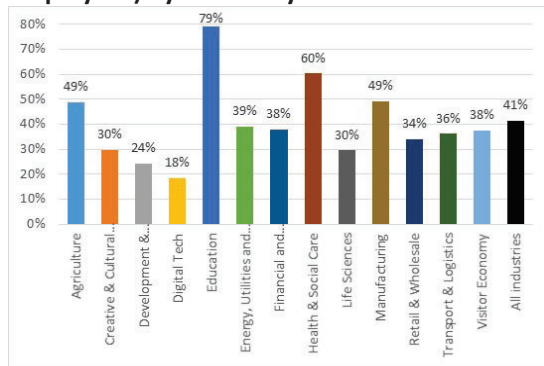
An estimated 62% of employment in the Digital tech sector is in micro-businesses, for example, whilst the Education, Health and Manufacturing KMEP sectors are especially focused on medium and large businesses and organisations.

**Fig 2.24: Employment in Microbusinesses (0-9 employees) by KMEP Key Sector**



Source: Estimated from ONS UK Business Counts 2020, BRES 2019

**Fig 2.25: Employment in Larger Businesses (50+ employees) by KMEP Key Sector**



Source: Estimated from ONS UK Business Counts 2020, BRES 2019

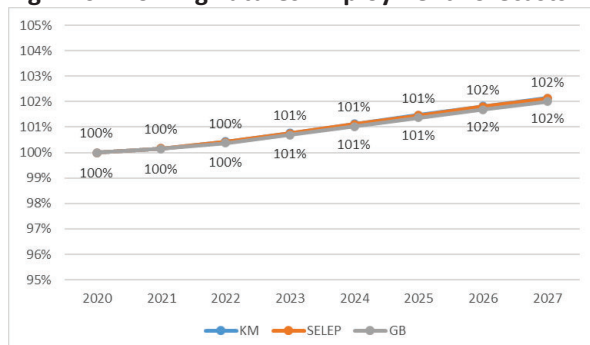
## 2.8 Forecast Employment and Skills Needs

The Department for Education's Working Futures employment forecasting model predicts that employment growth in the South East Local Enterprise Partnership area will be close to the national average (2% by 2027).

Looking at the DfE forecasts by sector and adjusting for Kent & Medway's sector/industrial profile, suggests there is no reason why employment in Kent & Medway should not also grow by 2% over the next few years (Fig 2.26).

These forecasts were published in 2020 and take some account of the economic outlook post-Brexit. However, the model was developed before the Covid-19 pandemic and can best be described as a backdrop on which we must overlay intelligence about the relative economic impact of the pandemic on the outlook for different business sectors, as it emerges.

**Fig 2.26: Working Futures Employment Forecasts**



Source: DfE Working Futures 2017-2027. SELEP workbook. K&M figures estimated using Working Futures and ONS BRES 2019.

The Office for Budget Responsibility is currently forecasting that GDP and employment rates may not return to 2019 (pre-COVID) levels until late 2022.<sup>4</sup>

Figure 2.27 shows that the SELEP forecasts suggest a further contraction in manufacturing employment by 2027 (net reduction of 4,800 jobs) but significant growth in health, accommodation & food, and education.

**Fig 2.27: Employment Forecasts by Sector**

Standard Industries (SIC 2007)	2020-2027	K&M est.
1 : Agriculture, forestry & fishing (A)	-3%	-600
2 : Mining, quarrying & utilities (B,D,E)	3%	+300
3 : Manufacturing (C)	-10%	-4,800
4 : Construction (F)	2%	+1,000
5-7 : Wholesale & Retail	2%	+2,600
8 : Transport & storage (H)	-1%	-500
9 : Accommodation & food (I)	7%	+4,200
10 : Information & communication (J)	3%	+500
11 : Financial & insurance (K)	-6%	-1,200
12 : Property (L)	6%	+600
13 : Prof, sci. & tech (M)	3%	+1,600
14 : Business admin & support (N)	3%	+2,100
15 : Public administration & defence (O)	0%	-100
16 : Education (P)	4%	+3,000
17 : Health (Q)	7%	+6,500
18 : Arts etc (R,S,T, U)	2%	+700
All industries	2%	+16,000

Source: DfE Working Futures 2017-2027. SELEP workbook. Local figures estimated using Working Futures and ONS BRES 2019.

Accommodation & food sector employment is expected, however, to take time to rebound following the pandemic.

In terms of KMEP key sectors, Figure 2.29 suggests that this equates to a significant employment growth in the visitor economy, some growth in the creative & cultural industries and digital tech sectors but low or no growth in the life sciences sector.

The forecast for low or no growth in life sciences employment is in part because the employment outlook for the manufacturing parts of the sector is less buoyant than that for research and development activities.

<sup>4</sup> Office for Budget Responsibility (OBR), March 2021. Economic and fiscal outlook.

**Fig 2.28: Employment Forecasts by KMEP Sector**

Key Sectors	% Change 2020-2027	K&M Equivalent
Agriculture	-3%	-600
Creative & Cultural Industries	2%	+200
Development & Construction	3%	+1,700
Digital Tech	3%	+600
Education	4%	+3,000
Energy, Utilities and Environmental Tech	4%	+400
Financial and Professional Services	2%	+2,500
Health & Social Care	7%	+6,500
Life Sciences	-1%	+0
Manufacturing	-10%	-4,700
Retail & Wholesale	2%	+2,600
Transport & Logistics	-1%	-500
Visitor Economy	6%	+4,800

Source: DfE Working Futures 2017-2027. SELEP workbook. Local figures estimated using Working Futures and ONS BRES 2019.

Most employment demand, though, relates to the replacement of people in jobs that already exist in the economy. Figure 2.29 shows that, despite the relatively low expectations of overall employment growth, the demand for new skills and qualifications will continue to be significant. In many occupations, the demand for new entrants to replace those retiring is about 3-4% of the workforce each year.

The overall net annual demand for new entrants, considering both replacement and expansion demand, is over 28,000 people across Kent & Medway. This includes 4,700 care workers and 3,100 business associate professionals as well as 4,100 corporate managers and 1,500 science, engineering, and technology professionals.

**Fig 2.29: Forecasts by Occupation (including replacement demand)**

Standard Occupations SOC 2010	Est jobs	Expansion demand	Repl Demand	Net Annual Demand
11 Corporate managers	78,400	2.2%	3.2%	4,300
12 Other managers	28,700	0.8%	3.6%	1,300
21 Science, eng. & tech profs	47,100	0.8%	2.4%	1,500
22 Health professionals	34,100	1.1%	3.4%	1,500
23 Teaching & ed profs	41,000	1.6%	3.3%	2,000
24 Busn, media & public profs	46,600	1.0%	3.1%	1,900
31 Sci, eng & tech assoc. profs	15,700	0.0%	2.5%	400
32 Health & care assoc profs	12,000	0.4%	3.6%	500
33 Protective service occs	11,300	0.0%	2.1%	200
34 Culture, media & sports	23,600	0.1%	2.9%	700
35 Busn & public assoc profs	67,800	1.6%	2.9%	3,100
41 Admin occupations	67,800	-1.7%	2.9%	800
42 Secretarial & related	17,400	-2.4%	2.3%	-
51 Skilled agric & related	7,900	0.1%	3.2%	300
52 Skilled metal, elec & electronic	28,400	-0.9%	2.2%	400
53 Skilled construction	32,200	-0.3%	2.6%	700
54 Textiles, print & othr skilled	18,200	-0.5%	2.4%	400
61 Caring personal service occs	68,900	3.3%	3.5%	4,700
62 Leisure, travel & personal service	22,200	0.0%	3.0%	700
71 Sales occupations	49,200	-0.9%	2.6%	800
72 Customer service occs	16,300	0.4%	2.9%	600
81 Process, plant & machine	14,200	-0.7%	2.0%	200
82 Transport & machine ops	32,000	0.0%	3.1%	1,000
91 Elementary trade occs	12,300	-0.3%	2.2%	200
92 Elementary admin occs	86,500	0.3%	2.9%	2,700
Total	880,000	0.3%	2.9%	28,400

Source: DfE Working Futures 2017-2027. SELEP workbook. Local figures estimated using Working Futures and ONS BRES 2019.

Figure 2.30 (below) shows the current qualification profile of people in these occupations. The shading highlights the highest qualifications that more than a quarter of those in an occupation have.

**Fig 2.30: Employment by Qual. level - SELEP**

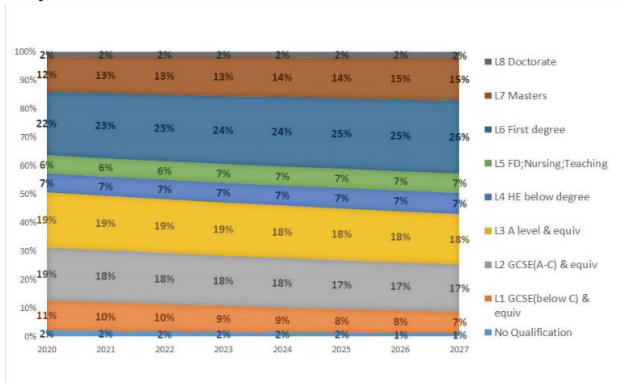
Standard Occupations SOC 2010	L4+	L3	L2	L1 or below
11 Corporate managers	56%	19%	14%	10%
12 Other managers	48%	19%	19%	14%
21 Science, eng. & tech profs	73%	13%	9%	6%
22 Health professionals	80%	10%	7%	4%
23 Teaching & ed profs	92%	3%	3%	2%
24 Busn, media & public profs	76%	12%	7%	5%
31 Sci, eng & tech assoc. profs	57%	19%	14%	11%
32 Health & care assoc profs	75%	11%	9%	5%
33 Protective service occs	45%	22%	21%	12%
34 Culture, media & sports	70%	16%	8%	7%
35 Busn & public assoc profs	57%	19%	15%	10%
41 Admin occupations	41%	21%	24%	14%
42 Secretarial & related	33%	20%	25%	22%
51 Skilled agric & related	31%	16%	24%	29%
52 Skilled metal, elec & electronic	19%	43%	24%	14%
53 Skilled construction	11%	38%	31%	20%
54 Textiles, print & othr skilled	20%	28%	25%	27%
61 Caring personal service occs	34%	34%	26%	6%
62 Leisure, travel & personal service	29%	28%	25%	18%
71 Sales occupations	24%	28%	27%	22%
72 Customer service occs	34%	25%	26%	15%
81 Process, plant & machine	12%	27%	31%	30%
82 Transport & machine ops	14%	23%	30%	33%
91 Elementary trade occs	12%	20%	27%	40%
Total	17%	20%	30%	33%

Source: DfE Working Futures 2017-2027. SELEP workbook.

It highlights that skills and qualifications at all levels will be needed to fulfil the replacement demand for staff.

The DfE Working Futures model also suggests that the trend towards increasing qualification requirements in many occupations will continue. Figure 2.31 shows that the proportion of the workforce with a degree is expected to increase by 6%, whilst the proportion requiring qualifications at level 1 or below will fall from 13% to 8%.

**Fig 2.31: Forecast trend in workforce qualification requirements - SELEP**



Source: DfE Working Futures 2017-2027. SELEP workbook.



### 3. The Wider Context: Emerging Challenges and Opportunities

A series of national and global technological and social trends will drive growth – and the demand for skills – over the next few years.

This section looks first at the medium-term outlook for employment and growth as the economy recovers from the Covid-19 pandemic. It then considers four longer-term ‘transformational’ factors – **digitalisation, decarbonisation, demographic change** and **changes in working practices** – that will be important for future skills demand and supply, and concludes with a brief review of the national and local policy context.

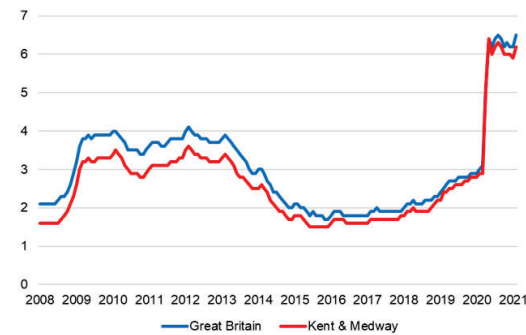
#### 3.1. The Medium-term Outlook

Over the next couple of years, future labour demand will be set in the context of recovery from the economic shock of Covid-19.

Restrictions imposed to manage the pandemic led to a sharp economic contraction in 2020: UK GDP fell by 9.9% in 2020, with those sectors most reliant on direct customer interaction (for example, in the hospitality and leisure industries) especially badly hit. With the vaccination programme currently being rolled out at pace, the Office for Budget Responsibility anticipates a return to growth of 4% in 2021 and 7.7% in 2022, with output returning to pre-crisis levels by the middle of 2022<sup>5</sup>.

Maintaining employment levels has been a key objective of Government policy during the pandemic. The Coronavirus Job Retention Scheme has been the key employment support tool, supported by a range of other active labour market policies, the highest profile of which is the Kickstart scheme to provide temporary jobs for young people at risk of unemployment. These, combined with measures to subsidise businesses that have had to close during the pandemic, have helped to contain the rise in unemployment. While the claimant count rose sharply between April and June to a much higher level than that seen in the last recession, it has since stabilised at around 6.2% of the working age population (just over 70,000 people in Kent and Medway):

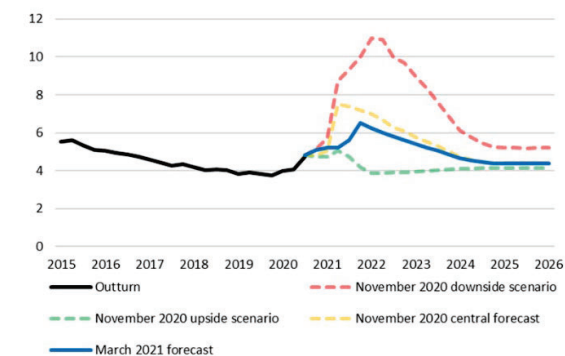
**Fig. 3-1: Claimant Count, 2008-21 (% of people aged 16 to 64)**



Source: DWP

The employment outlook over the medium term is uncertain, with an anticipated rise when the Government mitigation schemes are unwound later in 2021 and the labour market ‘unfreezes’. The OBR’s latest forecasts are more optimistic than those made in autumn 2020 (see Fig. 3-2), although consistent with previous recessions, unemployment is likely to be slow to fall once it has reached its peak, even as output grows:

**Fig. 3-2: UK Medium-term Unemployment, %**



Source: Office for Budget Responsibility (March 2021)

#### 3.2. Longer-term Drivers

While recovery from the pandemic is the primary focus of policymakers in the short-term, a series of longer-term drivers will be fundamental to economic growth in the longer term.

##### 3.2.1. Digitalisation

Digitalisation involves the use of digital enabling technologies to introduce new products and services and to make processes more efficient and productive. Generally, it is described as involving advances across a range of inter-related fields, which are creating new

<sup>5</sup> Office for Budget Responsibility (March 2021), *Economic and Fiscal Outlook*

opportunities in the increasingly sophisticated use of data.

These advances are leading to the development of a range of ‘general purpose’ technologies which impact the economy as whole (in a comparable way to the impact of steam technology or electricity in earlier industrial revolutions). This in turn is leading to:

- Changes within **existing industries**, through the development of new products (e.g., smart devices), the automation of increasingly sophisticated processes and transactions and the advanced use of data in product development.
- The development of entirely **new industries**, such as cybersecurity, gaming, robotics, and so on, many of which are not yet captured in sectoral descriptions and data
- The **blurring of sectoral definitions** as technologies converge. This is not a marginal phenomenon: Amazon, for example, is a software company, a retailer, a logistics operator, a market platform and a hardware manufacturer, all within an integrated technology-enabled model.

#### ***What does digitalisation mean for future employment?***

Most studies find that technological advances lead to an increase in the aggregate number of jobs over time<sup>6</sup>. But many jobs are likely to be at risk from automation, as it becomes easier for tasks to be replaced with an algorithm or specifically-designed machine. Over the short to medium term, it is anticipated that those jobs most vulnerable to automation are in ‘less skilled’ occupations (shelf fillers, bar and restaurant staff, general farm workers, etc.); and with a significant impact on jobs in ‘data driven’ sectors, such as financial services<sup>7</sup>. However, in the longer term (looking to 2030 onwards), around 30% of current jobs are estimated to be ‘at risk’ of automation, including those requiring complex problem-solving skills<sup>8</sup>.

There will be some personal service occupations that are relatively resistant to automation (for example in the care sector). But overall, the evidence is that *“less well- educated workers will generally bear more the costs of automation”* – with the implication that a

focus on continued vocational learning will be needed as technology advances, as well as a on STEM skills across the sectoral and occupational range<sup>9</sup>.

#### ***Current Gaps and Challenges***

The Government-sponsored *Made Smarter* review of industrial digital technologies found that the UK has major opportunities for growth, especially among firms at the ‘leading edge’ of technology – for example, the UK has the largest market for artificial intelligence and machine learning in Europe<sup>10</sup>. However, it also found significant barriers, especially associated with poor levels of digital technology adoption among SMEs. This is partly – although not exclusively – linked with widely-reported ‘advanced digital’ skills shortages<sup>11</sup>. It is likely, given the strong dominance of SMEs within the local economy and the relative absence of large private sector ‘anchor’ employers, that this will be a relevant issue in Kent.

In relation to future workforce skills, five major issues have been highlighted by recent research:

- The need to develop the supply of **higher-level technical skills**, especially through stronger university-industry links.
- Reform of the **school curriculum**, with digital technology embedded across subjects, (not just within the definition of ‘ICT’)
- The need to improve **digital skills within the existing workforce**, through opportunities for ongoing retraining and **adaptability** to rapidly-changing technologies
- **Inequalities in digitally advanced occupations**. Female under-representation is especially highlighted as placing an artificial cap on the labour market talent pool, as well as limiting individual opportunities<sup>12</sup>
- Growing **diversity of skills supply**, especially given the volume of software and computing training available commercially and through semi-formal routes<sup>13</sup>.

The Government’s Digital Strategy (published in 2017)<sup>14</sup> contains a strong focus on digital skills development. Following this, the Government designated a number of trailblazer **local digital skills**

<sup>6</sup> Deloitte (2015), *Technology and People: The great job creating machine*

<sup>7</sup> ONS (2019), *Which occupations are at highest risk of being automated?*

<sup>8</sup> PwC (2018), *Will robots really steal our jobs? An international analysis of the potential long-term impact of automation*

<sup>9</sup> Ibid, p.34

<sup>10</sup> Jurgen Maier (2017), *Made Smarter Review*, p.8

<sup>11</sup> Ibid, p.9

<sup>12</sup> European Commission (2018), *Study on Women in the Digital Age*

<sup>13</sup> CIPD (2021), *Digital learning in a post-Covid 19 economy*

<sup>14</sup> An updated Digital Strategy is anticipated in 2021

**partnerships**, one of which covers the South East LEP area, aggregating resources for businesses and educators and supporting a number of pilot initiatives. But increasingly, advanced digital skills will be central to firms' ability to adopt and exploit new technology and to maintain competitiveness.

### 3.2.2. Decarbonisation

The UK's commitment to net zero carbon emissions by 2050 is driving investment in low carbon technologies. While a 'low carbon and environmental goods and services' sector has often been defined for analytical purposes, industrial decarbonisation will impact *all* sectors of the economy: ultimately, all businesses will need to become low carbon businesses.

This will lead to new economic opportunities. Key examples relevant to Kent include:

- **Construction decarbonisation**, through requirements for higher environmental standards and the use of modern methods of construction.
- **Energy efficiency retrofit** within the existing building stock
- **Decarbonisation of the energy generation and supply system**, as the UK switches from gas-based heating systems to renewable energy, including that generated from local sources. In Kent and Medway, this includes offshore renewables, the development of district heating networks, opportunities for micro-generation and a proposed new hydrogen plant.
- **More resource efficient methods of production:** Kent and Medway's 'carbon intensity' is relatively low, reflecting the absence of large-scale, energy-intensive industry in the county. But as regulatory pressures rise and financial incentives change, there will be an increasing demand to increase the sustainability of production across the economy.
- **Transport decarbonisation**, through provision of infrastructure for electric vehicles and zero carbon/ active travel options
- Investment in **natural carbon storage**, through the management and protection of grasslands, saltmarshes and so on, which will make an important contribution to the county's decarbonisation targets.

### Green Jobs and Skills

In the light of these opportunities, research elsewhere has identified three categories of 'green jobs' which are likely to see growing demand. These are<sup>15</sup>:

- **New and emerging jobs** relating directly to the transition to net zero (e.g., hydrogen cell technicians, carbon monitoring technicians)
- **Jobs affected by the transition to net zero** that will need enhanced competencies and capabilities (e.g., architects, environmental consultants)
- **Existing jobs that will be needed in greater numbers** (e.g., insulation installers, energy assessors, etc.).

However, these are likely to be at the centre of a wide range of developing skills associated with the decarbonisation of every element of the economy. Importantly, the decarbonisation imperative is running in parallel with the rapid advances in digital technology described above – and advanced digital capabilities will be central to a successful low carbon transition.

### 3.2.3. Demographic Change

Between 2019 and 2039, Kent and Medway's population is set to increase by 19% to 2.22 million<sup>16</sup>. But the population aged between 16 and 64 (commonly referred to as the 'working age' population) will only increase by 15% - still a significant rate of growth, but highlighting the county's steadily ageing population.

Demographic change has three implications for future jobs and skills demand:

- First, there is likely to be **rising demand for goods and services to support the ageing population**. This includes rising demand for health and social care occupations, but it will also mean a focus on technologies to support personal independence, and the capabilities needed to implement these.
- Second, a **rising 'dependency ratio'** is likely to be a further spur to investment in technology to effect productivity gain. This is especially likely to be the case if international migrant labour becomes increasingly scarce over time (in the context of both Brexit and rising relative incomes in countries of origin). In this context,

<sup>15</sup> Scottish Government (2020), *Climate Emergency Skills Action Plan 2020-25*

<sup>16</sup> Kent County Council, Housing-led forecasts

demographic change is likely to reinforce the drive to digitalisation highlighted earlier.

- Third, **working lives will become longer**. Pension reform is already extending working life, and increasing numbers want to work past conventional retirement age. For many, this presents a great opportunity; for others (especially those in physically demanding jobs or jobs vulnerable to technology change) it presents a major challenge.

### 3.2.4. Working Practices

In the context of extended working lives, we can expect the *nature* of work to become more diverse and complex over the coming years. Key trends include<sup>17</sup>:

- Increased part-time working. Part-time work as a percentage of total hours worked increased sharply after the 2008/09 recession, and has remained at around 37% of total employment since.
- Increased self-employment. Around 13% of those in employment in Kent and Medway are self-employed (compared with 10% nationally)<sup>18</sup>. This includes freelance workers, who are often project-based and are especially common in parts of the creative and digital industries.
- ‘Independent’ work. Official estimates of people with second jobs (about 3.5% of all in employment) have been largely constant since the 1990s, but are unlikely to fully account for the rise in new technology-enabled forms of earning (ebay sales, Airbnb rentals, etc.).
- Zero hours contracts, common in sectors such as care, and often held by younger people also in education.
- ‘Gig economy’ work (Deliveroo, Uber, etc.) where work is accessed via apps to sell labour. It is estimated that most engaged in this type of work use it as a supplement to other paid work<sup>19</sup>.

This increase in ‘alternative’ forms of work contract is often seen as a negative phenomenon, eroding job security and driving down rates of pay, and in some cases, regulation has had to catch up. But for other workers (and firms), it can also provide greater

choice<sup>20</sup>, and in some sectors (e.g., digital media), project-based freelancing is very common.

Either way, increasing diversity of contract terms and working standards is a feature of the current labour market and, combined with the technology and demographic trends highlighted earlier, there is a growing recognition that workers are likely to change job and career more frequently. The skills system will need to adapt to this, supporting flexibility over time and providing opportunities for retraining and transferability.

## 3.3. Policy Context

Nationally, the Government has set out its medium-term economic strategy in the ***Plan for Growth***, published in March 2021. The *Plan* contains a focus on addressing the UK’s long-standing productivity deficit and the need to invest in a lower carbon future (all of which were also set out in the previous *UK Industrial Strategy*). In this context, it notes challenges in the supply of technical skills and “significant levels of mismatch between what the skills system provides and what employers need”<sup>21</sup>.

Linked with the economic strategy in the *Plan for Growth*, the Government published *Skills for Jobs*, the **Skills White Paper**, in January 2021. The White Paper seeks to ‘realign’ skills provision around the needs of employers, with a strong emphasis on the role of further education. Key measures include:

- A new role for business groups in working with the FE sector to prepare local skills plans
- Investment in College Business Centres to drive collaboration between skills providers and employers
- Increasing access to flexible student finance to enable people to train and retrain throughout their lives
- Increasing the quality and uptake of higher technical qualifications.

Locally, an ***Economic Renewal and Resilience Plan*** was adopted by Kent and Medway Economic Partnership in August 2020. This set out an 18-month strategy for recovery, focused on three principles of ‘greener futures’ (linked with the decarbonisation

<sup>17</sup> See RSA (2017), *Good Work: Report of the Taylor Review of Modern Working Practices*

<sup>18</sup> ONS, Annual Population Survey, 2020

<sup>19</sup> CIPD (2017), *To gig or not to gig?*

<sup>20</sup> NatCen (2018), *Characteristics of those working in the gig economy*

<sup>21</sup> HM Treasury (March 2021), *Build Back Better: Our Plan for Growth*

agenda); 'productive and open', and 'better opportunities, fairer chances' (linked with 'fair work' and higher-pay, more productive employment.

*Renewal and Resilience* also led to the establishment of a **Kent and Medway Employment Task Force** in autumn 2020 and an associated **Employment Plan**. The Task Force and Employment Plan are primarily focused on recovery in the context of potentially rising unemployment, although the Employment Plan also highlights the potential for strengthened skills planning in the longer term, with this Workforce Skills Evidence Base as a key source of intelligence.



## 4. Skills Needs in Key Sectors

### 4.1 Key Sectors – Introduction

This section presents key industry sector perspectives on Kent and Medway's skills needs, focusing on the sectors identified in the Kent and Medway *Renewal and Resilience Plan*. The findings are based on desk research into key drivers of skills needs, analysis of relevant quantitative data sets, and a series of specially commissioned sector focus groups for each of the twelve sectors.

Section 5.2 sets out the key priorities for each sector, while a much more detailed set of quantitative analysis of business and skills data, and a PESTLE analysis is provided for each sector in Annex 3.

### 4.2 Skills Issues in Key Sectors

#### Agriculture and Horticulture

The sector has an above-average proportion of micro-businesses and is relatively small in overall scale, accounting for 2% of the workforce, but employment has grown by 6% in recent years (2015-2019). Despite national trends suggesting a slight contraction in employment over the next few years, the sector is important in Kent and Medway, and the Employment Task Force has set up a dedicated 'Fresh Food Group' of key stakeholders to address key workforce challenges and opportunities.

The sector employs people at a range of levels, with skilled trades occupations making up the largest single group (41% of the workforce) and elementary occupations the next largest group (16%). Demand for skills in the coming years will be affected by an anticipated increase in levels of innovation and the adoption of new technologies, including digital technologies. Market demand will also frame skills demand in areas like supply chain integration, environmental performance, climate change, welfare standards and growing customer requirements in terms of artisanal / specialist production and ethical consumption. A new, post-Brexit regulatory regime will also affect the sector, perhaps placing greater emphasis on the delivery of public goods and environmental outcomes.

The main skills-related issues faced by the sector are:

- **Image and perceptions:** the sector needs to be 'sold' more effectively to potential new entrants, schools and careers advisers, especially school-age children. The sector needs to be presented as exciting, dynamic and resilient. The career and earnings opportunities - with established companies and for entrepreneurs - need to be communicated effectively, and the sector's importance to society and in terms of sustainability and the climate crisis should be emphasised. Local companies and young sector (or rural) champions could play an important role in changing perceptions. There could also be a role for local authorities in advocating for the sector.
- **Labour shortages:** as well as high-end careers, the sector offers a wide range of lower-skilled and seasonal work, and post-Brexit, the sector could face significant challenges in securing the workforce it needs. The issue may have been aggravated by Covid, with fears that as many as one million European workers will not return.
- **Mismatch between the education and skills offer and industry needs:** despite there being a need for a range of landbased and more generic business programmes, Apprenticeships are seen as a missed opportunity for the sector, given instability in the supplier base, administrative complexities, and a lack of appropriate provision. Degrees with a year in industry were very effective but are now less common. Technology is driving increasing demand for technical skills on farm and off farm, in subjects like coding, engineering and indoor farming, with people needing to be able to use new systems adaptively and meet new technical standards.
- **Engagement between the industry and the education and skills system:** this needs to improve to develop and implement practical solutions to the image / perception and mismatch issues. This suggests an important role for the industry itself in raising awareness of career opportunities and developing solutions to the identified skills gaps, but also a need for schools, colleges and universities to be more open to working with the sector,



update the education and skills offer and make it more accessible to sector companies. Recent initiatives like the Employment Task Force Fresh Food Group and the Growing Kent and Medway Workforce 2030 project could play an important enabling role in this respect.

## Manufacturing

Manufacturing is a significant sector in terms of employment, making up 7% of all jobs in Kent and Medway. While employment has grown in recent years, nationally employment is forecast to fall as technological change improves productivity further. The main concentrations of employment are in Medway, Swale and Ashford and, while there is a wide range of occupations in the sector, skilled trades roles are especially numerous.

An important driver of change in terms of skills needs is the adoption of new technologies, in areas such as digitalisation / Industry 4.0, rapid changeability, Internet of Things, smart factories and supply chain security. De-carbonisation and sustainability are further important drivers of change. Companies in the sector also tend to have high levels of productivity, reflecting the ongoing importance of skills in company operations.

The key skills-related issues to be addressed in the coming years are:

- **Ageing workforce:** many skilled staff are approaching retirement, and companies are looking at ways of recruiting and developing younger workers. This can help drive company engagement with the education and skills sector, and also increase interest in Apprenticeships and potentially newer programmes like T Levels. The impact of Brexit on the sector is not yet understood, but labour shortages could further drive the adoption of new technologies to increase productivity and reduce headcount.
- **Workforce diversity:** women, for example, are under-represented and are an untapped talent pool for the industry.
- **Image and perceptions of the sector:** manufacturing, engineering and STEM more widely would benefit from clearer and more positive communication of the career opportunities available in the sector, which

includes less physically demanding activities like food science and requires a high level of innovation and creativity. Many local companies already support such work. Schools, colleges and universities need the right teachers, facilities and equipment to engage young people and make programme delivery relevant to industry needs.

- **The local skills offer:** companies would like to understand better what provider specialisms are available. They want to be confident that what is on offer is relevant to their business needs and brings tangible benefits, but is also delivered in a way that works for them in areas like administration and pastoral care for Apprenticeships. Given, for example, recent changes in FE, new investments in HE and the availability of new Apprenticeship standards, there could be potential to increase engagement with industry.
- **Short courses:** there is likely to be unmet demand for short, specialist courses and workshops (including online) relating to new technology adoption and deployment, in subjects like computer-aided design, digital automation, Big Data, Internet of Things and digital skills more generally. Such courses can often require significant travel within the UK, which can be prohibitive for companies, and equipment / system vendor courses can be too limited in scope and expensive.

## Development and Construction

The sector is large, accounting for 8% of employment in Kent and Medway, and there is a high proportion of micro-businesses compared with the economy as a whole. The sector is also growing, with 7,000 jobs added between 2015 and 2019, and national trends suggesting further growth in the short and medium term. The highest volumes of jobs are in the northern part of Kent and Medway, reflecting in part the importance of London as a market for services. There are fewer people with degree level qualifications than in the economy as whole, and a much higher percentage of people in skilled trades.

High planned levels of house building, major infrastructure projects and individual key developments (in Kent and Medway and the Greater South East) are expected to drive significant demand for construction skills in the coming years. Labour demand seems likely to be sustained at high levels,

despite the traditionally cyclical nature of the sector. Technology and standards will also be a key driver of sector skills needs.

The key skills-related priorities in the short and medium term are as follows:

- **Skills pipeline planning:** the industry and stakeholders need to work closer with clients and developers to set out the short, medium and long term skills demand arising from all the planned house building, infrastructure and major projects planned in Kent and Medway. Demand is likely to be strong and sustained for a number of years, despite the often-cyclical nature of the industry.
- **Closer collaboration across companies:** this is needed on workforce, skills and work with schools and colleges, and this needs to include the industry's many small and micro-businesses. Making information on future workforce needs and actual vacancies more readily accessible is part of this, and so is work with schools and colleges to build interest in sector careers. There is already much good practice and many resources to build upon in work with education, including the Enterprise Advisers network, Construction 186<sup>22</sup>, Start<sup>23</sup>, Learn Live UK<sup>24</sup> and the Construction Youth Trust<sup>25</sup>.
- **Image and perceptions:** more needs to be done, building on existing good practice, to make the sector more appealing to young people and those looking to re-train post-Covid. Key messages to be communicated include that the sector offers a wide range of career opportunities (not just physical outdoor work), helps develop a range of transferable skills (as well as trade and professional skills), involves being a 'key worker', and good career and earnings potential. 'Relatable' role models (e.g., young people working in the sector), as well as more senior and accomplished staff, are well placed to communicate these messages to children and young people.
- **Workforce diversity:** further work is needed to build a more diverse workforce and reach

untapped talent pools. There are existing initiatives to build on, such as Women in Construction.

- **Skills shortages:** as well as the risk of skills shortages overall, given the high level of construction skills demand expected in coming years, there are also some specific and emerging challenges. Brexit has led to a loss of many staff in a range of roles. Specific professions, such as planners and quantity surveyors, remain in short supply. There is also expected to be a growing need in technology-related skills such as Modern Methods of Construction (low rise and high rise), automation and artificial intelligence, all of which are likely to be important in raising productivity in the sector. It is felt that Apprenticeships and the new T'Levels could play a role in addressing skills shortages.

## Retail and Wholesale

Retail and wholesale is a large sector, accounting for 17% of all employment in Kent and Medway, with the highest volumes of jobs in Medway, Dartford, Ashford, Canterbury and Maidstone. Micro-businesses account for 37% of employment, compared with 34% for the economy as a whole.

The workforce qualifications profile is skewed towards intermediate and lower-level qualifications, and the largest single occupational group is sales and customer service roles which make up 31% of employment, compared with just 8% for the economy overall.

The majority of the sector workforce is female and many young people are also employed, often in entry-level jobs that do not require high levels of formal qualifications. Employers especially value 'soft skills' such as communication and being able to engage with customers, and flexibility in terms of working patterns and being willing to take on a number of activities.

The pandemic seems likely to have accelerated industry trends that were evident before Covid hit: those that were already struggling have been worst affected and those that survive will benefit from an anticipated 'bounce back' in the coming years, but this may take time to build up, as consumer confidence

<sup>22</sup> <https://www.youtube.com/channel/UCsVaZeEYKB4VnKiDqDlJt-g>

<sup>23</sup> <https://www.startprofile.com/>

<sup>24</sup> <https://learnliveuk.com/partner/balfour-beatty-careers/>

<sup>25</sup> <https://www.constructionyouth.org.uk/our-programmes/contextualised-curriculum>

grows and inbound tourism resumes, for example. The recovery might also be very uneven, with some town centres recovering better than others, and some retailers – those who are less vulnerable to online competition and which are most open to a strengthened focus on the experience economy and town centre revitalisation may fare best. Successful retailers of the post-Covid future may also be ‘vision based’ with clearly defined values, with strong brands and high levels of customer loyalty.

While online retail and wholesale has grown in recent years, it can be especially challenging for small companies, who can struggle to be ‘found’ online or operate at profit margins which are too narrow to accommodate delivery costs. While digital skills are useful, they may not be essential within the business itself, as the most cost-effective way to undertake some digital activities may be simply to outsource them – although this still leads to an aggregate increase in skills demand.

The skills priorities for the coming years are as follows:

- **Companies want new entrants with the right soft skills and attitudes**, such as good communication, being customer focused, flexibility and a positive attitude. They will develop these transferable skills further in work and they will of value to them whether they stay in retail or not. Even if sector employment contracts, retail will still be a valuable source of entry-level jobs for many people.
- **Curriculum in schools, colleges and universities needs to be linked much more closely to actual business practice in the sector**, for example how marketing is done in retail companies, rather than in theory. Recruiting more staff with industry backgrounds is seen as one way of helping achieve this.
- **More engagement is needed between the sector and schools, colleges and universities** to help student decision making on careers and to make programmes more industry relevant. Many of the mechanisms to do this already exist, including the Enterprise Advisers, the Gatsby Benchmarks, education-business partnerships and work experience programmes. There may also be scope to

increase the take up of Apprenticeships and on-the-job training, which could also aid staff recruitment and retention.

### Transport and Logistics

Transport and Logistics accounts for 5% of Kent and Medway jobs. 92% of businesses are micro-businesses (90% all sectors). The highest volumes of jobs are in Dover, Swale and Dartford and around a third of all jobs involve driving. Employment grew by 5% from 2015 to 2019. National forecasts suggest employment may decline slightly to 2027, but the pattern locally may prove to be different, especially if major developments go ahead.

Technology will be a major driver of future skills demand in areas like digital, engineering, de-carbonisation and automation. Brexit may have an impact on the available local workforce and there are longstanding skills shortages in respect of HGV drivers. The workforce is also quite mature, with 67% aged 45 or older, and is heavily male dominated.

Skills-related priorities for the coming years are as follows:

- **Improve workforce diversity and inclusion:** there is much good practice locally to build on in terms of engaging women in sector employment, and this would be helped by better infrastructure and facilities being available within the local transport network. There is also potential to engage a range of people who might be considered challenged in labour market terms, including people from deprived communities, care leavers and people with special educational needs and disabilities.
- **Image and perceptions:** more need to be done to attract people into working in the sector generally and into STEM-related roles more specifically, and to overcome stereotypical ideas of what the sector is like and who works in it. In particular, there is a wide range of roles that people can go into and people can progress through on-the-job learning to earn well and do varied, interesting work quite quickly. There is much good practice that can be built on which sector employers are already engaged in, such as the Enterprise Adviser network, the work of education-business partnerships, and online

careers and jobs information and support services like Essex Opportunities<sup>26</sup>.

- **Skills shortages:** there is an ongoing shortage of HGV drivers. There is also a growing need for STEM skills more generally and HGV vehicle technicians more specifically, with an increased focus on digital technology (including data analytics) and innovations in engine technology (e.g., Euro 6 emissions-compliant equipment, and hybrid and electric vehicles). Newer engineering apprenticeship standards could be relevant in some of these areas, but up of apprenticeships has traditionally been poor in the sector. Employers also highlight the importance of new entrants having good soft skills, basic literacy and numeracy and employability skills. Skills shortages in the sector suggest there could be significant opportunities for adult re-skilling for adults.
- **Industry collaboration:** given that employers will be competing for labour with other growing sectors, there is potential for more joint working by companies and with the education and skills sector. Potential areas of collaboration include addressing the image and perceptions issue, working together to assess the talent pipeline that needs to be developed, and training (e.g., specialist training centres and in-house training capabilities).

### Visitor Economy

This sector refers to a range of activities, including accommodation, food and drink services, travel, attractions and leisure, which are often also taken to make up the 'experience economy' (reflecting that the activities are undertaken by residents of a given area, well as visitors).

The sector is large and accounts for 10% of employment<sup>27</sup>, with small businesses (10-49 employees) making up 42% of jobs (compared with 25% for the economy as a whole). Canterbury and Medway have the highest numbers of jobs by local authority area, while Folkestone and Hythe and Thanet have concentrations of employment that are above the GB average. Nearly half of all jobs are in

elementary occupations, making the sector a key employer in terms of entry-level employment. Employment was growing before the pandemic and a 'bounce back' is expected as Covid restrictions are lifted. Industry intelligence suggest that full recovery in terms of jobs may take as long as three years. As with many other sectors, there is increasing use of digital technology.

The recovery of the sector is expected to largely be driven by the 'staycation' market and local resident leisure activity, possibly augmented by increased flexible working (with people in Kent and Medway more of the time and potentially more people moving to the area from London). 'High end experience' is expected to grow within the wider sector mix, including cultural tourism (e.g., England's Creative Coast<sup>28</sup> and Art Homes<sup>29</sup>) and activities related to food and drink (e.g., 'Wine Garden of England').

The key issues to be addressed relating to skills for the sector are:

- **Image and perceptions:** the sector is not always seen as one with good career prospects. In practice, there are many routes to good careers and the growth of 'high end' also opens up opportunities for employees and entrepreneurs with specialist interests. More needs to be done to communicate the wider range of opportunities on offer, and the transferable skills (as well as craft skills) that can be developed. Structured mentoring schemes and paid internships to engage and develop aspiring talent are seen as potential ways to address this challenge and to include employment outcomes for those entering the sector. More engagement by the sector in careers activities in schools, colleges and universities is also required. There is also potential for sector employers to collaborate to create meaningful career progression pathways.
- **Inclusion and diversity:** the workforce is very inclusive and diverse, and there are many entry level ways in to working in the sector. This makes it very well suited to helping to address an anticipated growth in

<sup>26</sup> <https://www.essexopportunities.co.uk/>

<sup>27</sup> Impact studies by Visit Kent suggest the sector may have been slightly larger than 10% in 2019. Their research is being updated for 2020, and will be available shortly.

<sup>28</sup> <https://www.englandscreativecoast.com/>

<sup>29</sup> <https://theisleofthanetnews.com/2019/07/11/turner-contemporary-to-lead-englands-creative-coast-project-featuring-art-geo-caching-and-art-accommodation/>

unemployment post-Covid, including for those who may face the most challenges or require re-training.

- **Skills shortages:** there are ongoing shortages of chefs, with qualified staff being hard to retain when better-paid work is available by working outside Kent and Medway. So employers are keen to access new talent and to develop the existing workforce in this key area. A more general need is for people with employability skills, customer service skills and a positive and committed attitude, given the importance of customer experience to the sector. Many employers recruit for these soft skills and then train people in the specific skills needed for a given job. Digital skills are also growing in importance and seen as essential to engaging younger clients and delivering new, 'high end' experiences.
- **Engaging with Further and Higher Education:** businesses in the sector often find it hard to engage in a strategic (rather than transactional) way with the right parts of the education and skills system. They want a more streamlined way of engaging and then finding the support and services that are relevant to them.

### Finance, Professional and Business Services

A very large sector that accounts for 18% of employment in Kent and Medway (132,500 jobs), the highest job volumes being in Medway, Maidstone, Tonbridge and Malling, Tunbridge Wells and Dartford. Microbusinesses account for 40% of all employment in the sector (compared with 34% across the economy as a whole) and the workforce has a much more highly qualified workforce profile than average: 53% of all workers qualified to at least Level 4. More than half of the workforce are in managerial, professional or associate professional occupations. Employment has grown steadily in recent years and is expected to grow further to 2027. Technology plays a key role and is associated with the sector's higher-than-average levels of productivity.

It remains to be seen what the lasting legacy of Covid will be. While many anticipate a growth in flexible and remote working, the pandemic has also highlighted the importance of the workplace in building a shared

culture, values and ways of working, especially for new and junior members of staff. The pandemic has also reduced the availability of work experience and placements, and exposed fewer students to exams – exam skills are very important to gaining professional qualifications in subjects like accountancy.

Many companies have graduate recruitment schemes and there is growing use of Apprenticeships, including for professional and degree-level roles.

The key issues that need to be addressed in terms of skills are:

- **Soft skills:** also described by some as 'employability skills' and also involving personal attributes, attitudes and behaviours, such as team working, communication, customer focus, adaptability, flexibility and self-awareness. Post-Covid, the importance of personal resilience has become more prominent. While individual companies have their own definitions of such soft skills (HSBC, for example, has a 'core capabilities' matrix) the STEM Top Ten Employability Skills<sup>30</sup> might form the basis of a common definition that could be adopted across all sectors for use by education and skills providers.
- **Digitalisation:** companies are using ever-more-sophisticated systems which are specific to their business, but there is also a widespread adoption of packages like Office365. So digital skills, including the competent use of common IT applications like EXCEL and PowerPoint, are now essential. The growth of flexible working only makes this more important.
- **Recruitment and retention:** more flexible working post-Covid could pose a challenge by making London salaries available for home based (in Kent) roles. New talent pools might need to be tapped into, including people with transferable skills who may have lost their job due to the pandemic. Staff already employed in the sector may need to update their skills. So, re-training could be a significant opportunity for companies and individuals. Skills needs will continue to evolve quickly in the coming years<sup>31</sup> and companies will also be

<sup>30</sup> <https://www.stem.org.uk/resources/elibrary/resource/418157/top-ten-employability-skills>

<sup>31</sup> HSBC, for example, have identified that successful employees of the future will need to cope with an increasingly volatile, uncertain, complex



looking to attract in a diverse range of employees.

- **Engaging with the education and skills system:** closer and more extensive engagement is needed, and there is much good practice already in place that can be built upon, including existing positive relationships with FE and HE, the Enterprise Adviser network and education-business partnerships. Digitalisation also offers potential to expand the reach of engagement and make it easier for companies to get involved, recent developments including 'virtual work experience' and the use of Zoom or Teams for careers talks and activities.

### Health and Social Care

The sector is large, accounting for 13% of employment (100,000 jobs). Medium and large organisations account for 49% of all jobs (41% for the economy as a whole). The highest numbers of jobs are in Medway, Canterbury, Ashford, Maidstone and Tunbridge Wells.

The occupational structure has two main elements: highly qualified professionals (28% of the workforce) and people in personal service occupations (mainly with intermediate level qualifications). Employment has grown steadily in recent years and, based on national forecasts, a further 7,000 jobs are expected to be added by 2027.

Skills demand is shaped by a wide range of factors, including government policy (most notably the Health and Social Care White Paper published in February 2021), historical and persistent shortages of staff across a range of roles, and the ongoing adoption of new technologies (in care as well as health). The curriculum of Kent and Medway medical School aims to ensure that newly trained doctors (and patients) are making the best use of new technologies. More recently, Brexit and the Covid pandemic may have further exacerbated some of the challenges.

The skills-related priorities for action are:

- **Recruitment and retention:** Covid and an ageing workforce have aggravated longstanding pressures, including in terms of

nurses working in social care, nurses generally and registered care managers.

- **Service integration:** the new White Paper envisages new care pathways which are more integrated across health and social care. While the implementation of the concept is still being worked through, it is hoped that the idea of a more integrated 'one workforce' approach will emerge encompassing the NHS and the thousands of SMEs and large companies that make up the care sector, and addressing identified demand for services and workforce trends. This has potential for social care to become less of the 'poor relation' of health, raising the recognition of social care work. It is expected that an 'academy model' will emerge from the process in which four health and social care 'Integrated Care Systems' in different parts of Kent and Medway will work closely with schools, colleges and universities to plan education and skills activities together around newly defined care pathways. This has the potential to integrate more closely recruitment, training and progression across the whole sector, but success may depend on the status (and funding) of social care being raised closer to that of health.
- **Promotion of sector careers:** there are more than 400 different job roles across the health and social care sector. A 'whole sector' approach to promoting sector careers could be more beneficial than promoting specific roles. People interested in nursing, for example, might want to start in care work, or embark on a Nurse Associate programme in the NHS or social care. There are also support and management roles, and a wide range of potential career pathways.

### Energy, Utilities and Environmental Technologies

The sector is small in terms of employment, accounting for only 1% of jobs. Employment has grown modestly in recent years, and national forecasts suggest an upward trend in employment to 2027. The workforce has a spread of qualification levels, although there are slightly fewer people with

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and ambiguous world, and the three skills / attributes that are most likely to survive automation are curiosity, creativity and connectivity.



higher and degree-level qualifications than in the economy as a whole.

New technology and de-carbonisation are major drivers of skills demands in the coming years as the UK heads towards the target of being 'net zero' in terms of carbon emissions. The scale of house building and infrastructure planned in Kent and Medway only underlines the significance of these drivers.

Some employers are concerned that the workforce is ageing and recruitment is increasingly focused on improving workforce diversity, especially in terms of gender.

The following skills-related priorities for action were identified by sector stakeholders:

- **Engaging new entrants in sector careers:** this is in response to the issues of gender diversity (with women a typically untapped talent pool) and workforce demographics (ageing workforce). There is also a concern that the sector may have less appeal than others, such as construction and civil engineering. While it is recognised that many companies themselves should be more active in engaging with schools, colleges and universities to promote sector careers, and that there is also scope for companies to collaborate more in this area, there are also established and effective approaches they can engage with. There are many examples of successful apprenticeship schemes, for example. The Enterprise Adviser network is working well and has potential to involve more sector companies, both in the activities of this sector and STEM more widely. There are also specialist initiatives like the youth training scheme *Energy Smart Communities*<sup>32</sup>. There is potential to grow apprenticeships, including at Higher and Degree levels.
- **New skills needs:** the de-carbonisation agenda is likely to be a major driver of skills needs, with the scale of demand linked to how Government implements its net zero policy<sup>33</sup>. A major requirement will be training new entrants and re-skilling and multi-skilling existing tradespeople and technicians in areas

like air-source heat pumps, solar PV and thermal, smart metering, renewables (including local, distributed energy generation smart networks and green hydrogen), charging infrastructure for electric vehicles. As with other sectors, digitalisation is a further cross-sector need, the impact of which is not yet fully known. In a rapidly evolving market 'techno-commercial skills' will also be needed to respond to opportunities in an innovative and entrepreneurial way. It has also been proposed that a cadre of 'community energy champions' is needed to help local communities and rural villages adopt low carbon and renewable technologies.

- **Existing skills needs:** even without the rapid growth of low carbon and digital technologies, the sector would still face significant challenges in terms of recruitment and retention. There will be ongoing demand for fitters, engineers (especially electrical engineers), construction-related trades, and in more generic business skills like project management and procurement. Hand skills can be found to be lacking in apprentices.

## Life Sciences

There are complexities around defining the Life Sciences sector that mean that effective employment in the sector maybe under-estimated. The definition used in this report follows the definition used in the *Kent and Medway Renewal and Resilience Plan*, supplemented with the subsector 'Other research and experimental development on natural sciences and engineering' (SIC 72.19).

It was also noted that some companies use significant numbers of contractors, who may not be based locally but do work at Kent sites. Finally, there were concerns that technology is changing the sector footprint, particularly in respect of digital health.

### Defining the Life Sciences Sector

The Office for Life Sciences, the government body that 'champions research, innovation and the use of technology to transform health and care service', recognises that the classifying businesses and employment using the Standard Industrial Classification

<sup>32</sup> <https://www.communityenergysouth.org/energy-smart-communities>

<sup>33</sup> KCC is currently mapping the sector supply chain through its Clean Growth project <https://opergy.co.uk/projects/collaborative-projects/clean-growth-south-east/>

(SIC) system can underestimate the size of the life sciences sector.

The Office keep their own national list of companies compiled from commercially available business databases with longer descriptions of business activities and markets. This list includes businesses that would be coded in other sectors in the SIC system. Examples include digital businesses where prominent clients and projects are health related (hospital & GP records systems, medical records, health data analytics) and a variety of supply chain businesses that offer at least some specialisation for life sciences clients (patent & legal specialists, logistics, business consultants, training & recruitment specialists, investment companies etc.).

Using this database, the Office for Life Sciences suggest that the sector nationally is much larger than when you use a similar SIC code definition to the one used in this document.<sup>34</sup> If this were to hold true for Kent and Medway, then the sector might employ around 7,250 people in around 500 businesses rather than the 4,300 in 185 businesses suggested using standard SIC codes.

The 2019 statistics report by the Office for Life Sciences does highlight however that most employment growth in the sector between 2010 and 2019 was in London. Only 900 net additional jobs were created across the old South East region (which includes everything from Milton Keynes and Oxfordshire round through Berkshire, Hampshire, Surrey, and Sussex as well as Kent & Medway).

The Life Sciences sector definition used for this report suggests that the sector is small in scale (compared with the economy as a whole) but is seen as a strategic priority locally and nationally. Employment declined slightly between 2015 and 2019, mainly in manufacturing.

The sector has above-average proportions of people in professional and associate professional occupations, and fewer people in low skilled jobs than for the economy as a whole.

Life sciences is considered to have significant growth potential in Kent and Medway, building on major employment sites like Discovery Park and Kent Science Park, and the presence of several large companies, including Pfizer's development and manufacturing operation at Sandwich.

The major skills-related priorities identified by stakeholders were:

- **Digital skills:** technology is seen to be a key driver of change in terms of skills needs. In particular, digital skills are transforming how life sciences works: there is a growth in digital and desk-based activity alongside the more traditional lab-based work. Digital is also changing how the sector works in terms of regulatory issues, e-labelling, production science and modelling, data science and big data analytics. One major local company has put 20 of its staff on the new Digital Analyst Level 4 Apprenticeship and is working with Discovery Park to develop a new Digital Design Studio.
- **STEM skills:** lab skills are still very much in demand, as are chemistry, chemical engineering and biology. Practical, as well as academic skills are important, and work experience is highly valued.
- **Links to the education and skills system:** much good work is already in progress which can be built upon and extended further. For example, a lot of work takes place to engage school-age children and young people in STEM. There is a growing interest in and take up of Apprenticeships, including new Higher and Degree Apprenticeships. Further Education is working with the industry to identify how it can best meet the needs and large of employers and SMEs at Discovery Park.

Skills shortages may now be less of a challenge post-Covid, if flexible working makes staff in many more locations accessible to work for Kent-based companies, and more people leave the major urban areas where life sciences tend to be concentrated to take advantage of the lifestyle benefits of Kent and Medway.

### Creative and Cultural Industries

'Creative and Cultural Industries' can be hard to define, and there is an ever-closer integration and convergence between creative and digital activities: performances and productions are seldom without significant digital components, for example, while activities like marketing and advertising are

<sup>34</sup> Office for Life Sciences 2020, 'Bioscience and health technology sector statistics 2019'.

predominantly digital these days. For these reasons an alternative sector definition of a 'Creative and Digital Sector' is offered in the box below.

The original KMEP definition suggests that 'Creative and Cultural' accounts for 2% of employment in Kent and Medway, and micro-businesses predominate (95% of firms versus 90% for the economy as a whole). The highest employment volumes are in Sevenoaks, Maidstone and Tunbridge Wells. The most common types of occupations are professional and associate professional / technical roles, which account for a much higher proportion of employment than in the economy as a whole. As a result, there are higher proportions of people with qualifications at Level 4 and higher.

#### Creative and Digital Sector

The definition of the KMEP Creative and Cultural Industries key sector seeks to minimise overlap with the Digital tech sector (where KMEP use the 'Tech Nation' entrepreneurs network definition). However, the Department for Culture, Media and Sport have a slightly different definition of Creative industries that includes some digital tech activities such as computer games and software publishing, computer programming and computer consultancy activities.

Using the DCMS Creative Industries definition suggests that creative & cultural industry sector in Kent and Medway is almost twice the size of the KMEP sector in terms of employment (21,500 people compared with 11,500 currently) and more than twice the size in terms of business enterprises (6,565 enterprises compared with 2,920). The majority of the additional enterprises and employment would be related to computer consultancy activities.

Stakeholders identified the following key issues and priorities for action in terms of sector skills:

- **Engage people in sector careers:** children, young people, adults, careers advisers and parents need to be made more aware of the high-quality, wide range of work and career opportunities available in the sector. The choices available and pathways to these careers need to be communicated clearly.
- **Partnership with education and skills:** close links are needed between schools, FE, HE and other course providers and the sector, taking into account the predominance of small

companies. This will involve engaging geographical and sub-sector clusters of small companies and finding ways of meeting employers' and trainees' costs when offering work experience or internship opportunities, which should also help to address the longstanding issue of poor workforce diversity.

- **A strategic and structural approach,** with major transformative projects, is needed to developing the sector (as a key growth opportunity) and the locally available talent pool (upon which growth will be dependent). Proposals for a dedicated education and skills facility at Newtown Works and the strategic approach being taken by the Employment and Skills Task Force's Screen Skills Panel and the Thames Estuary Production Corridor<sup>35</sup> are examples of this kind of approach.
- **Real-world practice:** successful careers and sector growth both depend heavily on people being able to build up a portfolio of recognised practice in the industry. This suggests a greater role for commissions which include a training element or are relevant to early-career participants, industry-led short courses in specialist areas and practice-based industry programmes like Jasmine Vardimon's 'JV2'<sup>36</sup>. Arts and Humanities Research Council funding also offers the potential to develop projects that involve creative companies and freelancers, and create opportunities to develop and demonstrate skills. As well as helping people to develop and demonstrate practical skills, real-world practice-based approaches also enable individuals to build the professional network which is essential to career success.

#### Digital Technology

As has already been noted, there is significant cross-over between this KMEP defined sector and 'Creative and Cultural' (see above). Digital Tech covers a wide range of activities, including hardware manufacture, some publishing, software and activities related to data analytics, marketing, communications and content development. As the sector includes a wide range of emergent activities that are not adequately accounted for by standard industrial classifications, it

<sup>35</sup> <http://www.tgkp.org/thames-estuary-production-corridor>

<sup>36</sup> <http://jasminvardimon.com/education/jvc-diploma-jv2/>

is very hard to clearly define, especially as business activities in all sectors become increasingly 'digital'.

In employment terms, Digital Tech accounts for 2% of jobs in Kent and Medway, with the highest volumes of jobs in West Kent, Maidstone and Medway. The workforce tends to be highly qualified and significant employment growth is anticipated in the coming years.

Demand for digital skills is very strong across the whole economy, not just the Digital Tech sector *per se*. The sector is also very fast moving and many roles require constant updating of skills in response to the evolution of technology.

Stakeholders identified the following key priorities in terms of skills:

- **Engage people in sector careers:** many companies already support careers activities in schools, colleges and universities, but the sector suffers from an overall lack of understanding and awareness of career opportunities and pathways.
- **Engagement with the education and skills sector:** a key priority here is to update curriculum to reflect changing employer needs and ensure industry relevance. Many degree programmes are well regarded, and practical work placements are considered to be very valuable, including those with local and other universities. There is interest in Apprenticeships, but the experience so far appears to have been mixed. Often self-taught people, with a body of work and part of specialist networks, are the best source of skills shortage areas, which include developers, coders, animators, analytics specialists and data scientists, but it is felt that the mainstream education and skills system could also train more in these subject areas. Employers also value soft skills relating to, for example, attitude, commitment, communication, team working and personal resilience.
- **Flexible working:** the pandemic has accelerated an already-emerging trend towards more flexible working, especially for experienced and high-level staff. Kent and Medway-based companies now access a much bigger talent pool, from places as far away as New Zealand or mainland Europe, for example. Freelancing has expanded after the Covid-related wave of redundancies in the UK. Many companies have significantly reduced their office space to favour more flexible working. Flexible working also raises challenges in terms of 'onboarding' new staff and people's soft skills: junior staff in particular are felt to need a more traditional office environment to work in.
- **Re-skilling:** Covid has increased the pool of people who be looking to change career, and Digital Tech has many career opportunities of relevance to this group.
- **Boosting the sector:** given changes to how and where the sector now works, there is an opportunity to promote and grow Digital Tech in Kent and Medway. Stakeholders felt that the area's strengths could be promoted more strongly, perhaps as part of a wider Creative and Digital sector growth push, and reflecting the attractiveness of Kent and Medway as a place to live and work. While education and skills organisations and local authorities have a key role to play in this, in partnership with enterprise, there is also scope to increase the availability of innovation / incubation hub spaces and business support, offering entrepreneurs 'landing spaces' and local professional communities to engage with.

## 5. Skills Needs Arising from Major Projects

In addition to the wider economic and societal trends explored elsewhere in this report, Kent and Medway has a number of large, potentially ‘game changing’ major projects that could have a significant impact in terms of skills demand.

In this section, we present the latest intelligence on what the skills impact of these projects could be. It must be stressed that not all projects are yet confirmed, with planning and investment decisions still pending. However, it is important to bear these major projects in mind and work them into local plans as and when appropriate.

Projects were identified with key WSEB stakeholders in initial scoping interviews at the start of the process to develop the Evidence Base. The amount of workforce and skills forecasting data available varies considerably by project. Typically, projects will have a ‘build phase’ requirement for people, and then an ongoing labour demand relating to its ongoing operation.

In several of the sector workshops detailed in section 5 of this report the issue of ‘workforce pipeline planning’ emerged as one that needs to be revisited in coming years: it makes sense for project developers to share their workforce planning as and when this becomes available and for partners to work together to ensure that the right workforce is in place, such that projects can be delivered on time and Kent and Medway residents benefit from the work and career opportunities the projects can provide.

In addition to the projects detailed below, significant employment and skills demand may also be generated by Discovery Park (Sandwich) and Port of Dover (including Western Dock expansion). There are also early-stage proposals to replace the Kent and Canterbury Hospital with a major new facility in Canterbury. Beyond the county, Kent and Medway is also closely connected with London and the Greater South East, and major regional investments will also exert an influence on the local labour market.

It should also be noted that Local Plans, which are all at differing stages of development anticipate significant housebuilding activity, which further increase the pressure on the Kent and Medway labour market.

### Ebbsfleet Garden City

Ebbsfleet Garden City<sup>37</sup> is major development around Ebbsfleet International Station in North Kent. It includes housing, employment space and HEiQ<sup>38</sup> (Health, Education and Innovation Quarter). Ebbsfleet Development Corporation is beginning the process of estimating employment demand for build and subsequent use of the site.

### Innovation Park Medway

Innovation Park Medway<sup>39</sup> is a major development of 101,000 sq m of business space focused on high-value technology, advanced manufacturing, engineering and knowledge-intensive businesses at the Rochester Airport site.

The development is expected to create about 3,000 high-productivity jobs by 2032 across the two parts of the site (northern and southern).

### Kent Medical Campus

Kent Medical Campus<sup>40</sup> near Maidstone is a major business and health development offering a range of facilities for headquarters buildings, specialist residential and rehabilitation care, as well as Higher Education training facilities for the medical and health care professions.

The campus is expected to create more than 4,000 jobs and provide 98,000 m<sup>2</sup> (1,000,000 ft<sup>2</sup>) of flexible accommodation. Organisations already established at the site are KIMS hospital and Cygnet Healthcare.

### London Resort

London Resort is a major theme park and visitor attraction that has been proposed for the Swanscombe Peninsula in North Kent. The proposals

<sup>37</sup> <https://ebbsfleetdc.org.uk/>

<sup>38</sup> <https://www.swarch.co.uk/work/ebbsfleet-healthy-garden-city/>

<sup>39</sup>

[https://www.medway.gov.uk/info/200341/medway\\_for\\_business/979/fin\\_d\\_a\\_business\\_premises](https://www.medway.gov.uk/info/200341/medway_for_business/979/fin_d_a_business_premises)

<sup>40</sup> <https://www.kentmedicalcampus.com/>



are currently being considered by the Planning Inspectorate.

If approved, the project is expected to require around 8,000 onsite and offsite construction jobs at the peak of the construction activity, with jobs relating to operation of the site increasing from nearly 9,000 in 2025 upon opening to over 17,000 by 2038<sup>41</sup>.

Modelling by London Resort suggests that skills across a range of disciplines and levels will be required, from entry-level jobs to professional, managerial and technical specialist posts.

### Lower Thames Crossing

If approved, the Lower Thames Crossing will be one of the largest infrastructure projects in the country, creating an estimated 22,000 jobs during the construction phase<sup>42</sup>. Over 700 of the available opportunities have been earmarked for apprenticeships, trainees & graduates.

A final decision on whether the project will proceed is expected in 2022.

### Manston

The proposals to re-develop Manston as freight-focused airport are currently under review. If the project proceeds, it has been estimated by the developer that there will be over 8,500 jobs on site by year 10 of operation.

The jobs identified cover a wide range of activities, including those with the airport operator (710 jobs), 'new integrator' logistics activities (5,100), and food processing (1,200).

### Newtown Works

Newtown Works<sup>43</sup> will be a major international film and high-end TV studios development, including commercial space and a media village, near to Ashford International Station. In addition to jobs created during the construction phase, workforce modelling suggests that of the order of 700 new jobs will be created in film and media related activities, with requirements for people with a wide range of skills

and qualifications, including many at intermediate level. Research has identified that developing a strong local talent pool will be essential to success and the developer is exploring a major on-site education and training centre with Further and Higher Education partners.

The project is seen as transformational in the impact it will have on the Kent and Medway creative and digital sector, and on the development of Ashford as a cultural and business hub.

<sup>41</sup> <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/BC080001/BC080001-000766-7.5%20Economic%20and%20Regeneration%20Statement.pdf>

<sup>42</sup> <https://highwaysengland.co.uk/our-work/lower-thames-crossing/work-with-us/>

<sup>43</sup> <https://www.ashfordfor.com/index.php/newtown-works>



## 6. Skills Supply and Community Needs

The profile of the Kent & Medway resident community provides both some evidence of skills supply and areas of social and economic need where improving skills could have wider benefits.

### 6.1 Kent & Medway Community Profile

There are just over 1,129,000 working age (16-64) people resident in Kent & Medway (Fig 6.1).

**Fig 6.1 Kent & Medway Population**

	K&M	SELEP
All people	1,860,000	4,157,000
<i>Males</i>	<i>915,000</i>	<i>2,036,000</i>
<i>Females</i>	<i>945,000</i>	<i>2,121,000</i>
All people aged 16-64	1,129,000	2,502,000
<i>Males</i>	<i>560,000</i>	<i>1,237,000</i>
<i>Females</i>	<i>569,000</i>	<i>1,265,000</i>

Source: ONS Mid-year population estimates 2019.

Figure 6.2 highlights that, in common with many coastal areas, Kent and Medway has more retirement age people than the national average and fewer working age people. However, the proportion of young people (19 and under) is also estimated to be higher than the national average.

**Fig 6.2: Age Profile, Benchmarked**

	K&M	Relative to GB	More or less than expected?
0-15 years	366,700	104%	+14,700
15-19 years	104,300	103%	+2,800
20-24 years	103,400	89%	-11,000
25-29 years	112,900	90%	-11,600
30-64 years	808,556	99%	-10,000
Aged 65+	364,255	105%	+19,600

Source: ONS Mid-year population estimates 2019.

The Office for National Statistics forecasts that the population of Kent & Medway will increase by around 8% by 2030, slightly above the expected national average (6%).

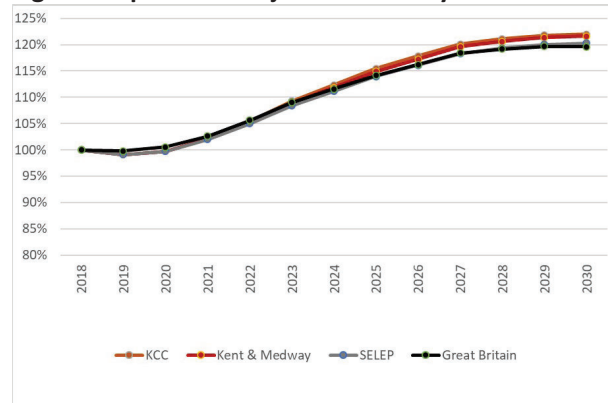
**Fig 6.3: Population Projections – All ages**



Source: ONS Population Projections 2018

The population of 15-19 year olds, representing the supply of young people into Further and Higher Education is expected to increase by more than 20% over the same period (Fig 6.4).

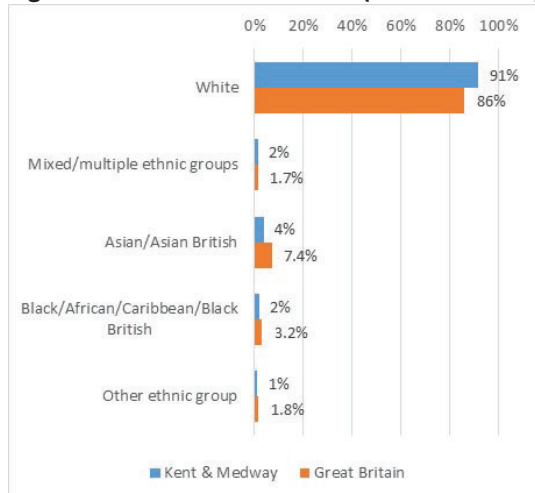
**Fig 6.4: Population Projections 15-19 year olds**



Source: ONS Population Projections 2018

Supporting equality of opportunity in the labour market is also a key component of the social and community need for skills and qualifications.

Around 9% of Kent and Medway residents are estimated to be from ethnic minority backgrounds, compared with 14% nationally (Fig 6.5).

**Fig 6.5: Resident Ethnic Profile (2016 estimate)**

Source: ONS Population estimates by characteristics report 2016.

In the Office for National Statistics (ONS) Annual Population Survey, 20% of working age people across Kent & Medway report that they have a core disability in terms of the Equality Act (EA) or some other work limiting disability (18% report that they have a core disability). Equality Act Core disabled includes those who have a physical or mental health long-term disability which substantially limits their day-to-day activities. Work-limiting disabled includes those who have a long-term disability which affects the kind or amount of work they might do.

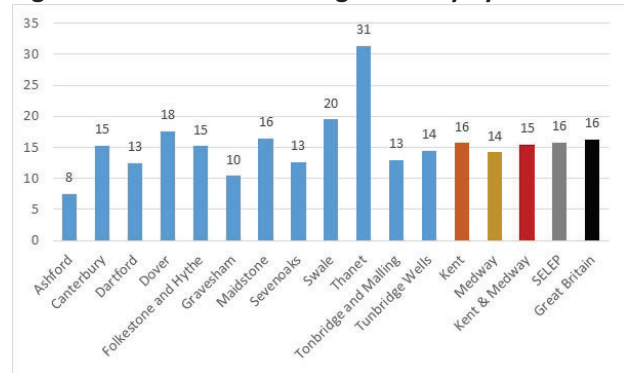
**Fig 6.6: Core or Work-limiting Disability**

	% 16-64	
	Estimate	year olds
Work-limited core disabled	173,300	15
EA core disabled	202,400	18
EA core or work-limiting disabled	227,600	20

Source: ONS APS Oct19-Sep20

Figure 6.6 highlights that there is considerable overlap between these two categories; and taken together they account for 20% of working age people.

The proportion of working age residents reporting a core or work-limiting disability varies significantly between districts, ranging from just 8% on Ashford to 31% in Thanet.

**Fig 6.7: Core or Work-limiting Disability by District**

Source: ONS APS Oct19-Sep20

## 6.2 Unemployment & Economic Inactivity

Unemployment and economic inactivity, where people would like to work, are potential signals of the need for reskilling in the community. Figure 6.8 highlights that there were nearly 67,000 people unemployed in January 2021.

**Fig 6.8: Unemployment and Economic Inactivity**

	Kent & Medway (numbers)	Kent & Medway (%)	SELEP (%)	Great Britain
Unemployment aged 16-64	66,950	5.9	5.9	6.2
Economically inactive	219,500	20	20	21
Of whom: want a job	32,700	15	21	22

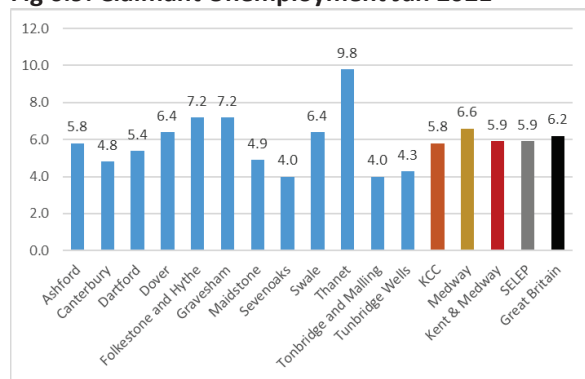
Source: ONS Claimant Count Jan21, APS Economic Inactivity Oct19-Sep20

A further 32,700 people were economically inactive and said they would like to work. As a proportion these figures are close to the national average.

This measure of claimant unemployment is a new experimental statistic from the Office for National Statistics, that counts the number of people claiming Jobseeker's Allowance plus those who claim Universal Credit and are required to seek work and be available for work.

Figure 6.9 highlights that claimant unemployment rates vary significantly between districts, with rates being above the national average in Gravesham, Folkestone & Hythe and Thanet but significantly below average in Canterbury, Maidstone and the west of Kent.

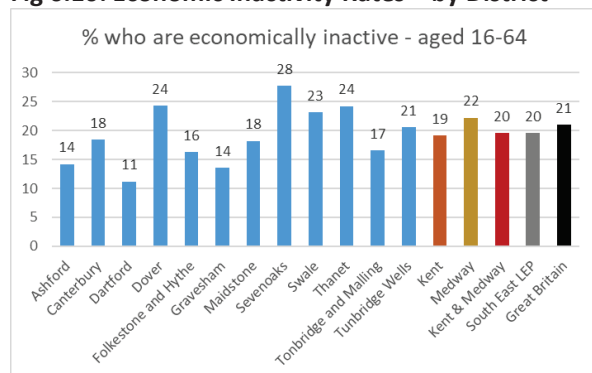
**Fig 6.9: Claimant Unemployment Jan 2021**



Source: ONS Claimant Count Jan21

Economic inactivity rates follow a slightly different pattern, with the lowest rates in Ashford, Dartford and Gravesham but comparatively high rates in Dover, Sevenoaks and Thanet (Fig 6.10).

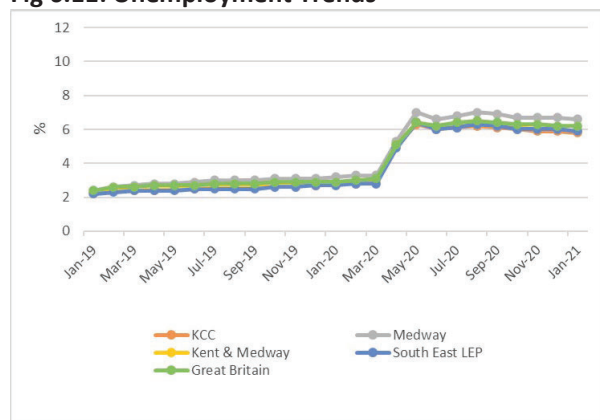
**Fig 6.10: Economic Inactivity Rates – by District**



Source: ONS APS Oct19-Sep20

Figure 6.11 shows that claimant unemployment rates increased sharply as the COVID-19 pandemic took hold between March and May 2020.

**Fig 6.11: Unemployment Trends**

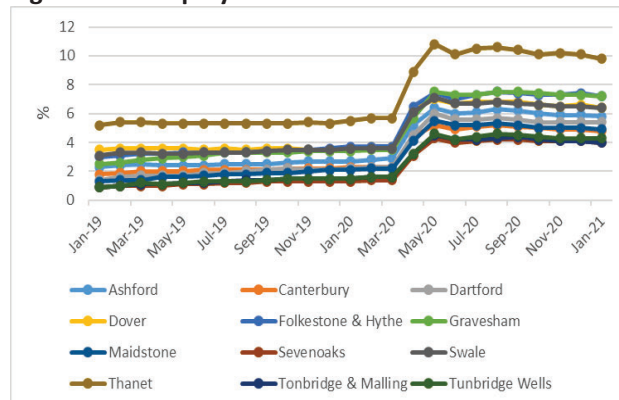


Source: ONS Claimant Count

Figure 6.12 highlights that all Kent districts experienced a sharp increase but that unemployment

levels range from around 4% in Tunbridge Wells to 10% in Thanet.

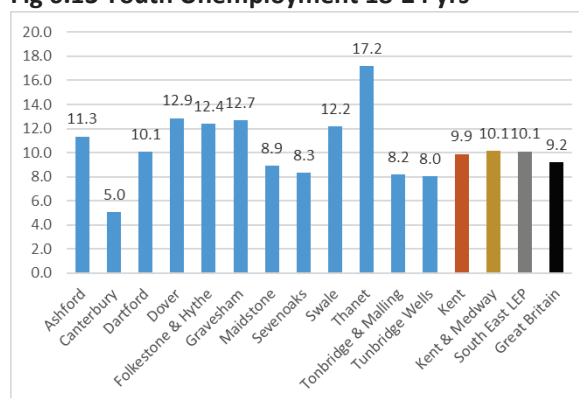
**Fig 6.12: Unemployment Trends – Kent Districts**



Source: ONS Claimant Count

Young people have perhaps been disproportionately affected by the increase in unemployment. Figure 6.13 (below) shows that across Kent and Medway around one in ten people aged 18-24 were unemployed in October 2020, rising to around one in six young people in Thanet (17%).

**Fig 6.13 Youth Unemployment 18-24 yrs**



Source: ONS Claimant count by age, Oct 2020 (KCC Strategic Commissioning - Analytics team).

## 6.3 Social Needs

Wider socio-economic deprivation in a community is also a potential indicator of the need for new skills and employment, as well as other potential social and economic interventions. It can also highlight under employment, residents who can't get as much work as they want and/or are in low skilled and low paid employment.

Figure 6.14 highlights that 191,000 working age people in Kent and Medway (17%) are in receipt of

some form of benefits, including 54,000 people on Universal Credit who are in work.

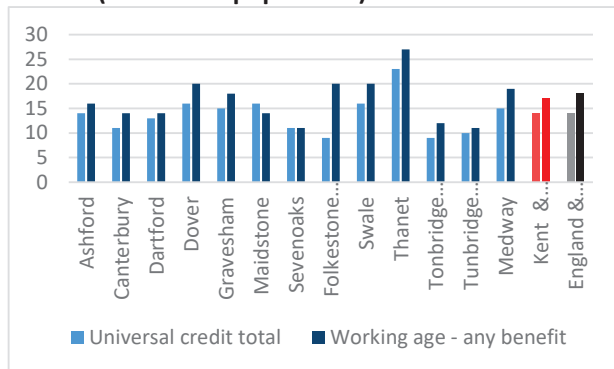
**Fig 6.14 Out of Work Benefits**

	Kent & Medway claimants	% of working age population
Universal credit total*	152,000	14%
Universal credit (in work)*	54,000	-
Universal credit (not in work)*	96,000	-
Income Support - (% 16-59 Population)	10,000	1%
Job Seekers Allowance	4,000	<1%
Employment & Support Allowance (ESA)	44,000	4%
Working age - any benefit	191,000	17%

Source: KCC Strategic Commissioning - Analytics, based on DWP data Feb 2020, or \*Aug 2020. Figures rounded to the nearest 1,000

The proportion of residents receiving benefits including Universal Credit varies between districts (Fig 6.15) and is higher than the national average in three East Kent districts (Dover, Folkestone & Hythe, and Thanet).

**Fig 6.15: Working Age Benefits and UC Claimants by District (% of 16-64 population)**



Source: KCC Strategic Commissioning - Analytics, based on DWP data Aug 2020

It is not clear why take up of Universal Credit is lower than average in Folkestone & Hythe. It is possible that this may be more related to the roll out of the benefit scheme than the level of local needs.

Figure 6.16 shows that there are over 50,000 children living in low income families across Kent and Medway.

**Fig 6.16 Children in Low Income families**

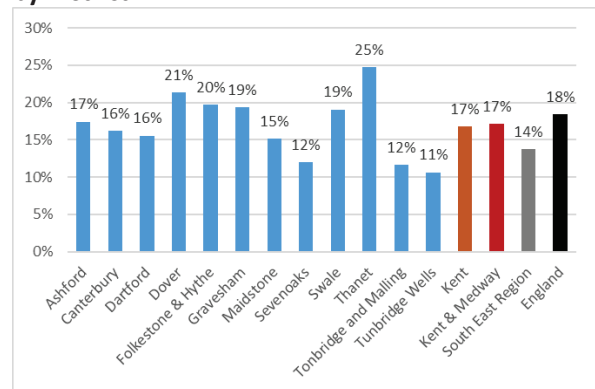
	K&M	K&M %	South East Region	England %
Children living in low income families (absolute)	54,181	15%	12%	15%
Children living in low income families (relative)	62,048	17%	14%	18%

Source: KCC Strategic Commissioning - Analytics, based on DWP data

Absolute low income is defined as a family in low income before housing costs in the reference year, in comparison with incomes in 2010/11. Relative low income is defined as a family in low income before housing costs in the reference year

Figure 6.17 highlights that the proportion of children in (relative) low income families is higher than the national average in the East Kent districts of Dover, Folkestone & Hythe and Thanet. It is also nearly double the proportion of the west Kent districts of Sevenoaks, Tonbridge & Malling and Tunbridge Wells.

**Fig 6.17: Children in (relative) Low Income Families by District**



Source: KCC Strategic Commissioning - Analytics, based on DWP data

More generally, the Index of Multiple Deprivation shows a similar geographical pattern (Fig 6.18). Swale and Thanet are in the bottom quartile of Districts nationally in terms of overall deprivation.

**Fig 6.18: Index of Multiple Deprivation 2019**

	IMD	Income	Employment	Education, Skills and
Ashford	48%	46%	54%	37%
Canterbury	58%	58%	62%	59%
Dartford	46%	62%	67%	43%
Dover	34%	29%	21%	35%
Gravesham	38%	39%	39%	20%
Maidstone	59%	63%	66%	56%
Sevenoaks	80%	80%	84%	79%
Folkestone and Hythe	26%	21%	15%	26%
Swale	22%	24%	22%	13%
Thanet	11%	8%	4%	12%
Tonbridge and Malling	74%	75%	75%	65%
Tunbridge Wells	86%	79%	81%	85%
Medway	46%	50%	41%	19%
Kent	63%	64%	63%	46%

Source: English Indices of Deprivation 2019: Ministry of Housing, Communities & Local Government (MHCLG). Quartile scores based on District/County rank of average Lower Super Output Area ranks.

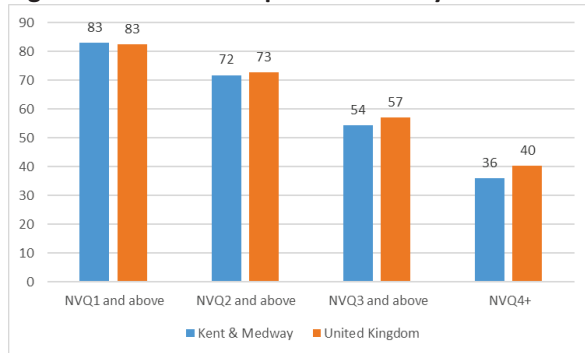
Dover and Folkestone & Hythe are also in the bottom quartile on the Employment measure, whilst Gravesham and Medway also score poorly on the Education, Skills and Training measure.

Each measure in the IMD summarises several statistical indicators for very small geographical areas with roughly equal populations. The Education, skills and training measure, for example, includes measures of the proportion of 16-year olds staying on in education, the proportion of young people entering Higher Education and an indicator of adult qualification levels and English language proficiency.

## 6.4 Current Qualifications

Figure 6.19 shows that whilst a similar proportion of Kent and Medway residents have level 1 qualifications to the national average, they are less likely to have qualifications at level 3 and above or level 4 and above.

**Fig. 6.19: Adults with qualifications by level**



Source: ONS APS Jan19-Dec19

Given the expected trend in workforce qualification needs at level 4 and above outlined in section 2.5, this is worrying. Indeed, over 125,000 residents only have qualifications at level 1 and 88,000 have no qualifications at all (Fig 6.20).

**Fig 6.20: Highest Qualification Obtained**

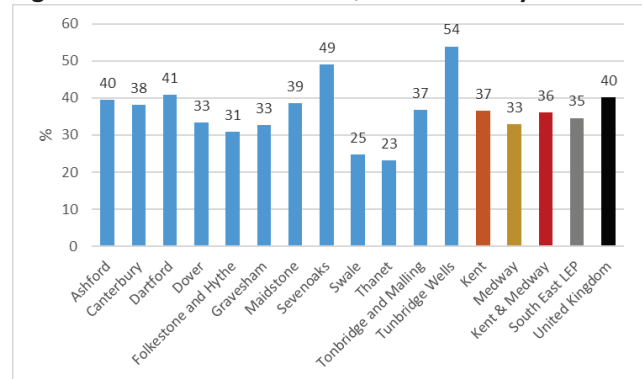
	Kent and Medway	%
Level 4	402,900	36%
Level 3	206,100	18%
Level 2	194,000	17%
Level 1	125,400	11%
Other	70,400	6%
None	88,100	8%
Trade Apprenticeship	30,700	3%
Total aged 16-64	1,117,600	100%

Source: ONS APS Jan19-Dec19

Figure 6.21 (below) highlights that the proportion of adults with level 4 qualifications or above is

particularly low in Swale and Thanet but above the national average in Sevenoaks and Tunbridge Wells.

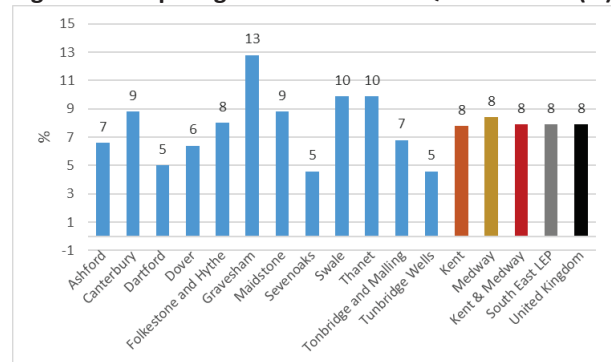
**Fig 6.21: Adults with Level 4 Qualifications by District**



Source: ONS APS Jan19-Dec19

The proportion of adults with no qualifications is highest in Gravesham, and above the national average in Swale and Thanet (Fig 6.22).

**Fig. 6.22: People Aged 16-64 with No Qualifications (%)**



Source: ONS APS Jan19-Dec19

## Annex (i): Workshop and Interview Participants

### Agriculture and Horticulture

Julian Barnes (Biddenden Vineyards), Carol Ford (Fresh Food Working Group of Employment and Skills Task Force), Samantha Desforges (Berry Gardens Growers Ltd) James Forknall (Agricultural Society and family farm), Richard Harnden (Berry Gardens Growers Ltd), George Jessel (Jessel Farms), Amelia Mclean (Hugh Lowe Farm), Tim Malpas (Blackbird Framing), James Simpson (Adrian Scrips Ltd), Shayne Tyler (Fresa Group),

### Manufacturing

Simon Cowell (Britannia Refined Metals Ltd), Julie Harris (Premier Foods Ltd), Hayley Kennett (Megger Instruments Ltd), Paul Winter (Wire Belt Ltd).

### Development and Construction

Ella Brocklebank (Jenner Contractors Ltd), Cheryl Causebrook (Kent Constructing Excellence), Roland Cooper (Considine Ltd), Nigel Earnshaw (Kent Institute of Directors), Nick Fenton (Kent Housing and Development Group), Stephen Gallagher (Gallagher Group), Liz Gibney (Lee Evans Partnership LLP), Kevin Hutchison (Balfour Beatty), Donna Jones (Construction Youth Trust), Lara Pool (Ebbsfleet Development Corporation), Susan Saunders (Countryside Properties PLC).

### Retail and Wholesale

Gian Chahal (McDonalds, Medway), Peter Corr (Designer Outlet Ashford), Stefano Cuomo (Macknade), Pave Dovedi (Little Temptations), John Waddy (The Kentish Soap Company).

### Transport and Logistics

Matthew Arnold (Stagecoach South East), Marisa Bussey (Port of Dover), Dr Sally Dixon (Azimuth Associates / River Oak Strategic Partners), Rob Gearing (Nicholls Transport), Peter Holt (Firmin Ltd), Rob Millatt (Scotline Ltd), Ashleigh Sinclair (Arriva PLC), David Statham (Southeastern Railway).

### Visitor Economy

Madylene Beardmore (Sandwich Guildhall Museum), Lex Cook (Fallow Fields Camping), Jon Iveson (Dover Museum), Neil McCollum (English Heritage), Louisa Mungall (Visit Kent), Menon Rajamenon (Leaf Hotels Group), Joanna Richardson (Shepherd Neame Ltd), Daniel Sanguiseppe (Castlewood Hotels), Moya Stirrup (Turner Contemporary).

### Finance, Professional and Business Services

Annette Bunn (Rift Accounting), Rupert Butler (Leverets Group), Suzie Elliott (Axa Health), Iain Hawthorn (HSBC), Susan Robinson (Kreston Reeves LLP), Meta Versluys (AZETS), Joanna Worby (Kreston Reeves LLP).

### Health and Social Care

Nadra Ahmed (National Care Association), Ally Bantock (Maidstone YMCA), Maria Doe (Inchwater Home Care), Elizabeth Elsdon (Department for Work and Pensions), Louise Falkner (Kent Independent Care Alliance), Penny Lawlor (Design and Learning Centre, KCC), Sharon Lee (Kent and Medway Clinical Commissioning Group), Menon Rajamenon (Abode Care Homes), Nathan Pascal-Smith (NHS Kent & Medway Clinical Commissioning Group), Pia Rathje-Burton (Skills for Care), Anne Taylor (Kent Integrated Care Alliance), Victoria Walker (Continuity of Care Services Ltd), Lisa Webb (Medway NHS Foundation Trust).

### Energy, Utilities and Environmental Technologies

Richard Barwick (West Kent Housing Association), David Chalcroft (independent), Audrey Edmunds (National Grid Ventures), Katherine Parker (South East Water), Ollie Pendered (Riding Sunbeams), Steven Read (UK Power Networks), Melanie Rogers (Vattenfall), Jash Rughani (Ryse Hydrogen), Jenna Wells (R J Power Group).



### **Life Sciences**

Chris Broom (Discovery Park), Tanya Curtis (Curtis Analytics), Melissa Hanna-Brown (Pfizer), Melanie Hill (Pfizer), Bill MacLeod (Torrin Asset Management), Jonathan Synett (NCL Technology Ventures Ltd), Mike Westby (Centauri Therapeutics).

### **Creative and Cultural Industries**

Tracy Brunt (Ideas Test), Joanna Crawley (1927 Studio), Shane Forster (Creative Estuary), Anthony Lilley (Creative District Improvement Company), Beatrice Prosser-Snelling (Arts Work), Ian Ross (Jasmin Vardimon).

### **Digital Technology**

Wesley Baker (Canterbury AI), Miranda Chapman (Pillory Barn), Tom Chown (Digitom), Mike Pedersen (Clear Angle Studios), Justine Ruffhead (Sleeping Giant Media), Mukesh Sharma (Chocolatey Software), Becky Simms (Reflect Digital), Paul Temple (3SIX5 Digital).

### **Interviews**

Louise Aitken (SELEP)  
Allan Baillee (Kent County Council)  
Simon Cook (MidKent College)  
David Gleed (North Kent College)  
Graham Razey (EKC Group)  
Daniel Ratcliffe (Medway Council)  
Mike Rayner and David Knox (The Education People)  
Simon Ryan (Locate in Kent)  
Mike Weed (Canterbury Christ Church University)  
Paul Winter (Kent and Medway Skills Commission)

Discussions were also held with the Economic Recovery Group and the Kent and Medway Local Authorities Chief Executives Group.

## Annex (ii): Local Sector Employment Strengths

**Fig A1 Relative sector employment strengths – Standard sectors by District**

	Ashford	Canterbury	Dartford	Dover	Folkestone and Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge and Malling	Tunbridge Wells	KCC	Medway	K&M	SELEP
1 : Agriculture, forestry & fishing (A)	2.4	1.7	0.2	1.9	1.0	0.4	1.9	1.1	3.6	0.4	1.6	1.9	1.6	0.9	1.5	1.2
2 : Mining, quarrying & utilities (B,D,E)	0.9	0.3	1.0	0.7	1.8	0.6	1.1	0.4	1.7	1.0	2.2	0.4	1.0	1.3	1.1	0.9
3 : Manufacturing (C)	1.2	0.4	0.7	1.1	0.6	0.7	0.7	0.8	1.6	0.9	0.7	0.6	0.8	1.0	0.8	0.8
4 : Construction (F)	1.2	0.9	1.9	1.0	0.9	1.6	1.5	2.4	1.3	1.1	1.5	0.8	1.4	1.3	1.4	1.4
5 : Motor trades (Part G)	1.4	1.2	1.2	1.4	1.0	1.2	1.2	1.2	1.3	0.9	2.0	1.4	1.3	1.1	1.3	1.4
6 : Wholesale (Part G)	2.0	1.0	1.1	0.4	0.6	0.5	1.2	0.8	1.2	0.5	1.4	1.6	1.1	0.8	1.1	1.1
7 : Retail (Part G)	1.2	1.3	1.7	1.0	1.1	1.1	0.9	1.0	1.0	1.6	1.1	1.4	1.2	1.1	1.2	1.1
8 : Transport & storage (inc postal) (H)	0.9	0.4	1.7	2.2	1.3	1.5	0.8	0.5	1.9	0.8	1.5	0.4	1.1	1.2	1.1	1.1
9 : Accommodation & food services (I)	0.9	1.2	0.9	1.2	1.3	1.1	1.0	0.9	0.9	1.3	0.8	1.0	1.0	0.8	1.0	1.0
10 : Information & communication (J)	0.6	0.6	0.9	0.4	0.5	0.3	0.7	1.1	0.3	0.5	0.8	0.9	0.6	0.5	0.6	0.7
11 : Financial & insurance (K)	0.2	0.9	0.3	0.4	1.0	0.3	0.6	0.8	0.2	0.5	1.2	1.9	0.7	1.0	0.7	0.7
12 : Property (L)	0.6	0.6	0.6	0.6	0.6	0.6	0.9	1.2	0.9	0.6	1.1	0.9	0.8	0.7	0.8	0.9
13 : Professional, scientific & technical (M)	0.7	0.7	0.5	0.9	0.7	0.6	0.8	1.4	0.9	0.5	0.8	1.0	0.8	0.6	0.8	0.8
14 : Business admin & support services (N)	0.9	0.7	1.6	0.6	1.4	1.5	1.2	0.9	0.7	0.4	1.1	0.7	1.0	0.9	1.0	0.9
15 : Public administration & defence (O)	0.7	0.7	0.2	1.3	1.5	1.2	1.8	0.4	0.8	0.7	0.7	0.2	0.8	1.0	0.9	0.8
16 : Education (P)	0.8	2.1	0.7	1.1	0.8	1.3	1.0	1.0	1.0	1.4	0.9	1.1	1.1	1.3	1.1	1.1
17 : Health (Q)	1.2	1.3	1.0	1.0	1.0	0.8	1.0	0.8	0.7	1.6	0.6	1.1	1.0	1.2	1.0	1.1
18 : Arts, entertainment, recr & other (R,S,T,U)	0.8	1.2	0.5	1.0	1.0	1.0	0.8	1.2	0.8	1.1	0.9	1.0	0.9	0.9	0.9	1.0
Column Total	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Source: ONS BRES 2019

**Fig A2 Relative sector employment strengths – KMEP Key sectors by District**

	Ashford	Canterbury	Dartford	Dover	Folkestone and Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge and Malling	Tunbridge Wells	KCC	Medway	K&M	SELEP
KMEP Key Sector																
Agriculture	2.4	1.7	0.2	1.9	1.0	0.4	1.9	1.1	3.6	0.4	1.6	1.9	1.6	0.9	1.5	1.2
Creative & Cultural Industries	0.6	0.7	0.4	0.7	0.7	0.4	0.8	1.4	0.4	0.6	0.8	1.1	0.7	0.5	0.7	0.8
Development & Construction	1.0	0.8	1.6	0.9	0.9	1.4	1.3	2.0	1.2	1.0	1.4	0.9	1.2	1.2	1.2	1.3
Digital Tech	0.7	0.6	0.9	0.4	0.5	0.4	0.7	1.2	0.4	0.5	0.9	0.9	0.7	0.5	0.7	0.7
Education	0.8	2.1	0.7	1.1	0.8	1.3	1.0	1.0	1.0	1.4	0.9	1.1	1.1	1.3	1.1	1.1
Energy, Utilities & Env Tech	0.9	0.3	1.0	0.7	1.8	0.6	1.1	0.4	1.7	1.0	2.2	0.4	1.0	1.3	1.1	0.9
Financial and Professional Services	0.7	0.7	0.9	0.6	1.1	0.9	0.9	1.1	0.7	0.5	1.0	1.1	0.9	0.8	0.8	0.9
Health & Social Care	1.2	1.3	1.0	1.0	1.0	0.8	1.0	0.8	0.7	1.6	0.6	1.1	1.0	1.2	1.0	1.1
Life Sciences	1.4	0.1	0.3	5.1	0.1	0.6	0.1	1.8	1.4	0.2	0.5	0.5	0.8	0.2	0.8	0.8
Manufacturing	1.2	0.4	0.7	1.1	0.6	0.7	0.7	0.8	1.6	0.9	0.7	0.6	0.8	1.0	0.8	0.8
Retail & Wholesale	1.4	1.2	1.5	0.9	0.9	1.0	1.0	0.9	1.1	1.2	1.3	1.4	1.2	1.0	1.2	1.2
Transport & Logistics	0.9	0.4	1.7	2.2	1.3	1.5	0.8	0.5	1.9	0.8	1.5	0.4	1.1	1.2	1.1	1.1
Visitor Economy	0.9	1.1	0.8	1.1	1.6	1.1	0.9	1.0	0.8	1.2	0.8	0.9	1.0	0.8	1.0	1.0

Source: ONS BRES 2019

## Annex (iii): KMEP Key Sector Definitions

**Fig A3: Key Sector - Standard Sectors Matrix (% of KMEP sector employment in each standard sector)**

Standard Sectors	KMEP sectors												
	Agriculture	Creative & Cultural Industries	Development & Construction	Digital Tech	Education	Energy, Utilities and Environmental Tech	Financial and Professional Services	Health & Social Care	Life Sciences	Manufacturing	Retail & Wholesale	Transport & Logistics	Visitor Economy
1 : Agriculture, forestry & fishing (A)	100%												
2 : Mining, quarrying & utilities (B,D and E)						100%							
3 : Manufacturing (C)		1%		1%					30%	100%			
4 : Construction (F)			82%										
5 : Motor trades (Part G)											14%		
6 : Wholesale (Part G)											23%		
7 : Retail (Part G)											62%		
8 : Transport & storage (inc postal) (H)												100%	
9 : Accommodation & food services (I)													77%
10 : Information & communication (J)		36%		95%									
11 : Financial & insurance (K)							14%						
12 : Property (L)			18%										
13 : Professional, scientific & technical (M)		37%					38%		70%				
14 : Business admin & support services (N)							47%						5%
15 : Public administration & defence (O)													
16 : Education (P)		2%			100%								
17 : Health (Q)								100%					
18 : Arts, entertainment, recreation & other services (R,S,T, U)		25%		4%									18%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

	Key
All of the standard sector is included in the key sector	
Only part of the standard sector is included in the key sector	

### KMEP sectors where only part of the standard sector is included

#### 1. Creative and Cultural Industries

**Manufacturing** – Manufacture of jewellery & related (32.12)

**Information & Communication** – Publishing except software (58.11-58.19), Motion picture, video, television & sound (59.11-59.20), Programming & broadcasting (60.10-60.20)

**Professional, Scientific & technical** – Architecture & related engineering (71.11), Advertising & market research (73.11-73.20), Specialised design (74.10), Photographic activities (74.20) Translation & interpretation services (74.30)

**Education** – Cultural education (85.52)

**Arts, Entertainment etc** – Creative arts & entertainment (90.01 – 90.04), Libraries & archives (91.01), Museum activities (91.02)

#### 2. Digital Tech (definition used by Tech Nation)

**Manufacturing** – Manufacture of computers & peripherals (26.20)

**Information & Communication** – Software publishing (58.21-58.29), Telecommunications (61.10-61.90), Computer programming, consultancy & related (62.01-62.09), Data processing, hosting & related activities, and web portals (63.11-63.12)

**Arts, Entertainment etc** – Repair of computers & peripherals (95.11)

### 3. Life sciences<sup>44</sup>

**Manufacturing** – Manufacture of basic pharmaceutical products & preparations (21.10-21.20), Manufacture of irradiation, electromedical and electrotherapeutic equipment (26.60), Manufacture of medical and dental instruments & supplies (32.50)

**Professional, scientific & technical** – Research and experimental development on natural sciences and engineering (72.11-72.19)

### 4. Visitor economy

**Accommodation & food services** – includes the whole category (pubs, clubs, restaurants, hotels, B&B's, takeaways etc

**Business admin & support services** – Travel agency, tour operator & other related activities (79.11-79.90)

**Arts, Entertainment etc** – Creative arts & entertainment (90.01 – 90.04), Libraries, archives, museums and other cultural activities (91.01-91.04), Sports activities and amusement & recreation activities (93.11-93.29)

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<sup>44</sup> We have extended the KMEP definition to include 'Other research and experimental development on natural sciences and engineering (72.19)' as many of the activities at Discovery Park in Sandwich in Kent were coded against this in the Office for National Statistics Business Register and Employment Survey (BRES).

## Annex (iv): Sector by Sector Summary Analysis

### Sector Skills Summary Analysis – Agriculture and Horticulture

#### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. The agriculture & horticulture sector in Kent & Medway is relatively small in employment terms accounting for 2% of the workforce.
2. Although employment has grown by 6% in recent years, forecasts suggest it may decline by 3% by 2027.
3. The proportion of microbusinesses in the sector is slightly higher than for the economy as a whole (92% v 90%), accounting for 32% of employment. 50% of employment is in medium and large companies.
4. Compared with GB as a whole, the greatest concentrations of employment are in Swale and Ashford. Kent as whole has a significantly higher proportion of sector employment than GB as a whole.
5. 41% of the workforce are in skilled trades occupations, with elementary occupations (16%) the next most sizeable group. The sector also employs staff in a wide range of occupations.
6. The qualification profile of the sector reflects its occupational profile and workers are less likely to have level 3 qualifications or above than in the economy as a whole. Nevertheless an estimated 82% of the workforce have a Level 2 qualification.

#### 2. Key messages from national and other reports (PESTLE analysis)

1. Skills will increasingly be required in relation to increased innovation, increased productivity and the adoption of new technologies, including digital technologies.
2. Market demand will also raise skills requirements in respect of improved greater supply chain integration, environmental performance, higher welfare standards, and newer customer requirements, including artisanal and specialist production, and a growth in ethical consumption.
3. The main challenges in terms of recruitment and retention are poor perceptions of opportunities in the sector and an ageing workforce. The impact of Brexit on workforce availability is not yet fully understood.
4. The detail of regulatory and policy changes is not yet known, but skills requirements may be affected by an increased focus on environmental outcomes and public goods.

**Figure 1: Key Statistics**

Agriculture			Sector			All Inds		
Enterprises 2019		2,345				Change in empl (2015-2019)		+1,000
Employment		17,500				% Change		+6%
Employment as a % of all inds		2%				Forecast change (2020-2027)		-600
						% Forecast Change		-3%
								+2%
% microbusinesses (0-9 empl)		92%			90%	% empl microbusinesses (estimate)		32%
% medium/large (50+)		2%			2%	% empl in medium/large (estimate)		50%
								41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

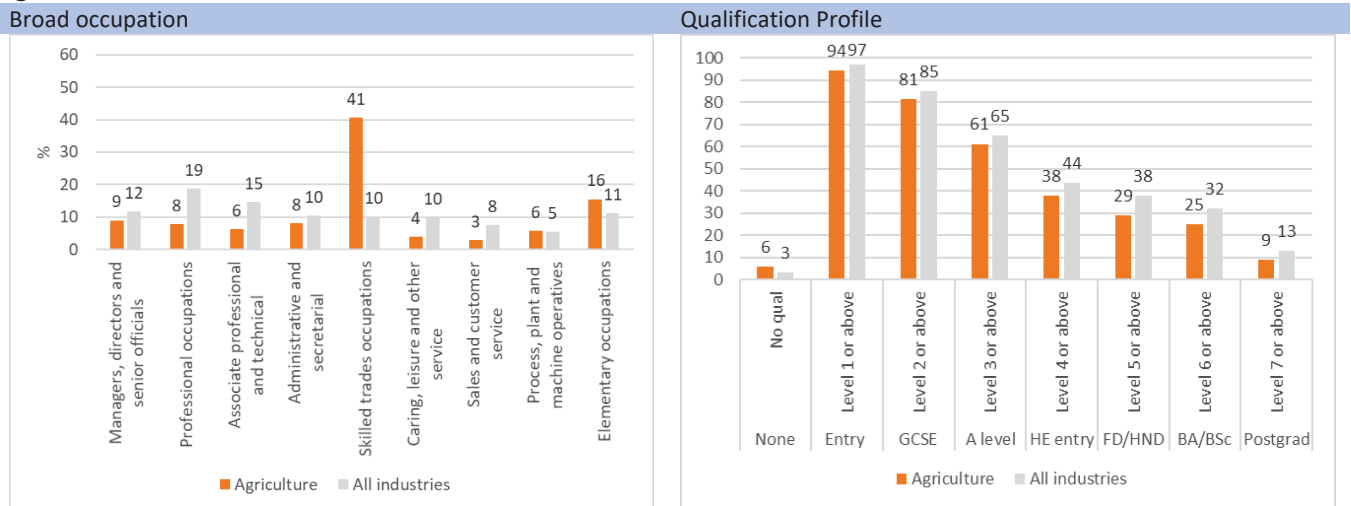
**Figure 2: Local Concentrations**

Agriculture																	Great Britain
Employment LQ (vs GB)	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	
Employment	2,300	1,900	200	1,100	700	200	2,400	1,000	3,000	300	1,600	1,600	16,000	1,400	17,500	31,500	486,000
Businesses	420	170	25	190	210	45	305	205	220	65	130	285	2,270	75	2,345	5,990	130,520

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**



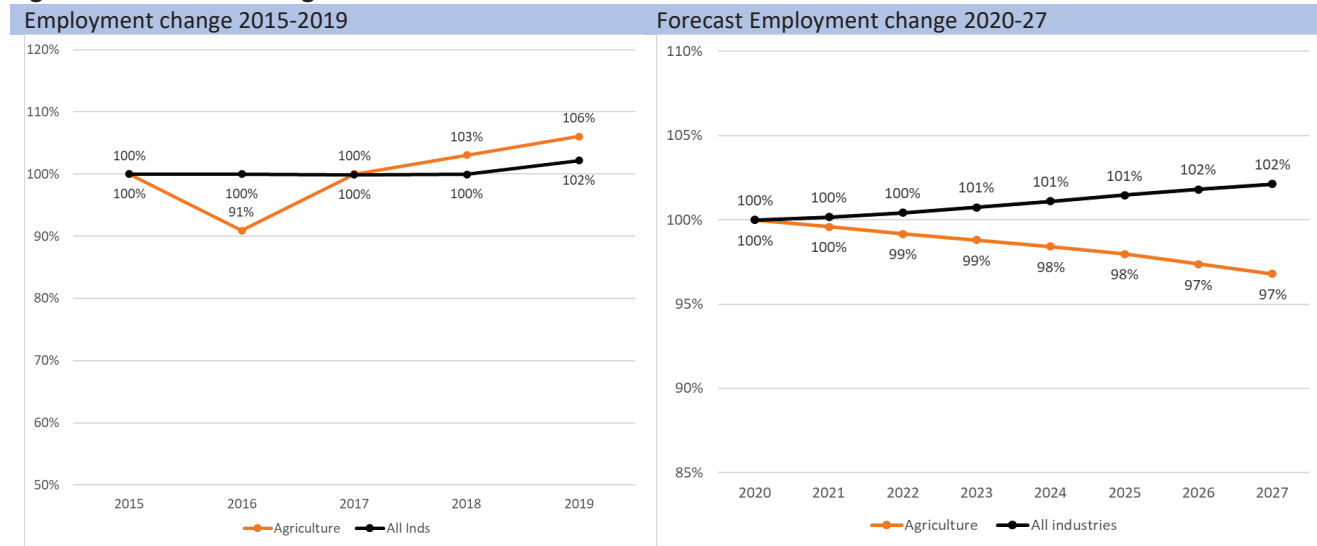
Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.



**Figure 4: Top 20 Occupations (SOC 2010)**

Agriculture	% of sector	Est. empl
5211 Farmers	33%	43,200
9211 Farm workers	16%	20,400
1221 Managers and Prprtrs in agriculture and horticulture	7%	8,700
5219 Agricultural and fishing trades n.e.c.	5%	6,200
9219 Fishing and other elementary agriculture occs n.e.c.	3%	3,600
5212 Horticultural trades	3%	1,100
6139 Animal care services occupations n.e.c.	2%	2,900
4159 Other administrative occupations n.e.c.	2%	2,800
9134 Packers, bottlers, canners and fillers	2%	2,100
8223 Agricultural machinery drivers	2%	2,100
8211 Food, drink and tobacco process operatives	1%	1,600
1213 Mngrs and Prprtrs in forestry, fishing and related sectors	1%	1,400
9212 Forestry workers	1%	1,300
9260 Elementary storage occupations	1%	1,200
8221 Large goods vehicle drivers	1%	1,100
2212 Biological scientists and biochemists	1%	1,100
5221 Smiths and forge workers	1%	1,000
4215 Personal assistants and other secretaries	1%	900
5319 Construction and building trades n.e.c.	1%	900
2131 Financial mngrs and directors	1%	900
<b>Sector employment in top 20 occupations (estimate)</b>	<b>83%</b>	<b>106,900</b>

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**


Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

Sector definition used in statistics (SIC2007)	
SIC 01 : Crop and animal production, hunting and related service activities	SIC 02 : Forestry and logging
	SIC 03 : Fishing and aquaculture

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.

<p><b>Policy and political</b></p> <p><b>Farming policy:</b> Following exit from the European Union, major changes are taking place. These include the introduction of the Environmental Land Management offer (linking farm payments with the production environmental and welfare 'public goods') and new measures to reward innovation and productivity. The transition to new payment arrangements is already underway. All direct payments will be reduced from 2021, with the system substantially rebalanced in favour of environmental/ welfare outcomes by 2024/25<sup>i</sup>.</p> <p><b>Trade policy and standards:</b> Part 1 of the National Food Strategy, setting out principles for food security and trade policy in the context of the need to uphold welfare and environmental standards was published in 2020; Part 2 is anticipated later this year<sup>ii</sup>.</p> <p><b>International labour:</b> Ending of free movement following EU exit, although continued iteration of Seasonal Agricultural Workers Scheme.</p>	<p><b>Technological</b></p> <p><b>Key drivers:</b> Demand for greater resource efficiency, predictability and sustainable intensification; competitive pressures and workforce challenges. Supply opportunities through growth of the agri-tech sector.</p> <p><b>Areas of technology focus:</b> tools and techniques to improve agrifood productivity; enabling technologies in engineering, robotics, ICT and data; primary production, food manufacture and logistics; and circular bioeconomy (linked with energy and environmental technologies)<sup>iii</sup>. Driving demand for the need to deploy existing digital technologies within land-based settings, as well as the identification of new applications.</p> <p><b>Local technology opportunities:</b> For example, through the Growing Kent and Medway initiative, which seeks to promote investment in horticulture, packaging, food and drink processing and supply chain development<sup>iv</sup>.</p>
<p><b>Economic</b></p> <p><b>Output:</b> Agriculture itself has a relatively small share of Kent and Medway's overall output and employment (although the sector is highly concentrated in the county, accounting for much of the UK's soft fruit industry).</p> <p><b>Markets:</b> Trade continuity with Europe in medium term, although potential for increased competition as future trade deals are reached with major agricultural producers<sup>v</sup>. Growing market for artisanal and specialist production, often linked with the local Kentish 'brand'.</p> <p><b>Supply chains:</b> Critical links with the wider food chain (production and distribution), which accounts for around 6% of UK GVA<sup>vi</sup>.</p>	<p><b>Legal and regulatory</b></p> <p><b>Changing regulatory structure:</b> The agricultural regulatory framework is changing following Brexit. A series of proposals for regulatory simplification were set out in a review in 2018, and the Government is expected to come forward with proposed legal changes shortly. These will be closely aligned with the Government's overall farming policy principles</p>
<p><b>Social</b></p> <p><b>Workforce profile:</b> Ageing workforce (over a third of farm managers are above typical retirement age, with generally older workforce profiles on smaller farms). Most managers have practical experience, rather than formal agricultural qualifications. 55% of farm workers are family members, with high levels of part-time working<sup>vii</sup>.</p> <p><b>Perceptions:</b> Poor perceptions of the opportunities in the sector (including from educational institutions) are seen as a barrier to recruitment (although Government ambition to increase entry from the domestic workforce)<sup>viii</sup>.</p>	<p><b>Environmental</b></p> <p><b>Environmental standards:</b> Rising requirements over time for improved environmental standards (in terms of resource efficiency, land management, waste treatment, etc.). Environmental standards and environmental 'goods' are likely to be increasingly important within the new regulatory/ payments framework.</p> <p><b>Welfare:</b> Pressure for higher welfare standards, both policy-driven and market driven.</p> <p><b>Ethical consumption:</b> Increased public demand for improved standards and demonstration of values (local production/ clarity of provenance; reduced inputs, etc.)</p>

## Sector Skills Summary Analysis – Manufacturing

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. Manufacturing is a significant employment sector in Kent & Medway accounting for 7% of employment. This has grown by 3% since 2015, but forecasts suggest a decline of 10% by 2027.
2. The sector is more focused on medium and large companies than many other sectors. 49% of staff in Kent and Medway are employed in companies with more than 50 employees (compared with 40% across the economy as a whole).
3. The highest concentrations of employment compared with GB as a whole are in Swale and Ashford. Medway has the highest volume of employment in the sector (7,500 people).
4. The sector has quite a diverse workforce in terms of occupations, although skilled trades occupations are more numerous than is generally the case (accounting for 20% of the workforce). The qualification profile of the workforce is similar to that for the workforce as a whole.

### 2. Key messages from national and other reports (PESTLE analysis)

1. Changes in sector skills requirements are being driven by the adoption of new technologies, encouraged and supported by Government, whose Industrial Strategy is due for a refresh in 2021. Digitalisation / Industry 4.0, rapid changeability, IoT, 'smart factories' and supply chain security are all growing and emerging areas.
2. As with all sectors, de-carbonisation and sustainability will also grow in importance and shape skills demand.
3. Competitive pressure means that the sector is highly productive relative to other sectors, suggesting a continuing requirement to upskill and re-skill (as well as to invest).
4. The age structure of the workforce is a challenge, with many experienced workers retiring.
5. There are concerns that perceptions of the industry make it unattractive to potential new entrants. Women, for example, have traditionally been under-represented, and are a potential talent pool that is not being tapped into.

**Figure 1: Key Statistics**

Manufacturing	Sector	All Inds		Sector	All Inds
Enterprises 2019	3,570		Change in empl (2015-2019)	+1,500	
Employment	49,000		% Change	+3%	+2%
Employment as a % of all inds	7%		Forecast change (2020-2027)	-4,700	
			% Forecast Change	-10%	+2%
% microbusinesses (0-9 empl)	82%	90%	% empl microbusinesses (estimate)	21%	34%
% medium/large (50+)	4%	2%	% empl in medium/large (estimate)	49%	41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

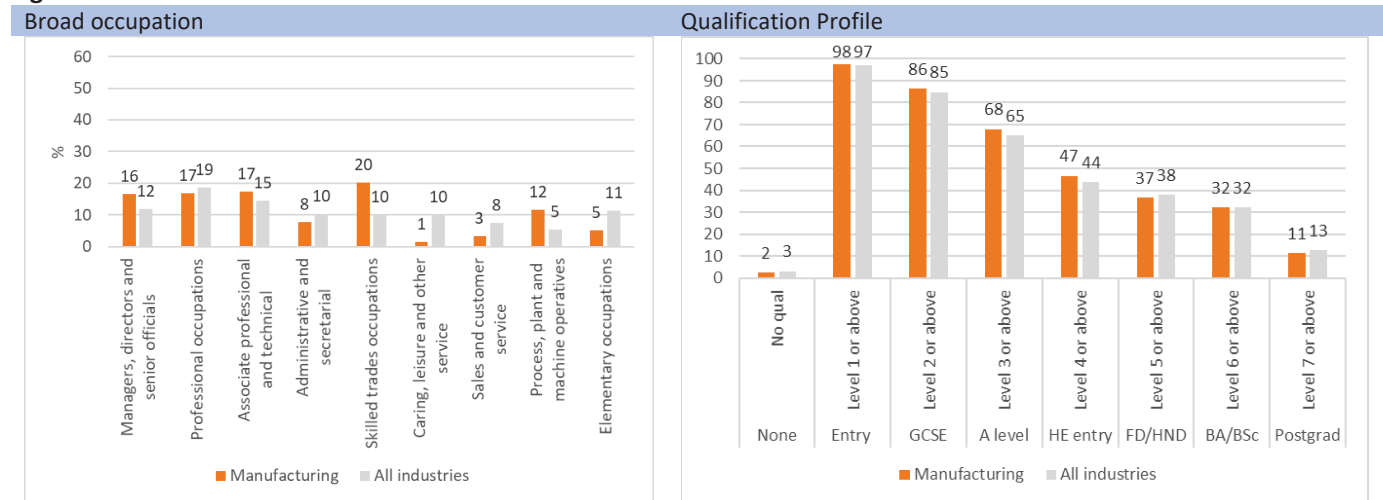
**Figure 2: Local Concentrations**

Manufacturing	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
Employment LQ (vs GB)	1.2	0.4	0.7	1.1	0.6	0.7	0.7	0.8	1.6	0.9	0.7	0.6	0.8	1.0	0.8	0.84	1.0
Employment	5,500	2,100	3,300	3,300	2,000	2,000	4,300	3,500	6,500	3,300	3,500	2,500	41,500	7,500	49,000	110,500	2,424,000
Businesses	330	250	205	190	175	195	370	305	350	235	285	230	3,120	450	3,570	9,050	133,225

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**

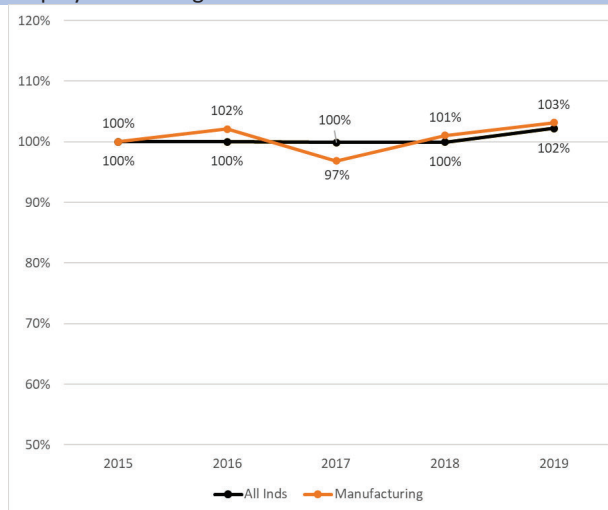
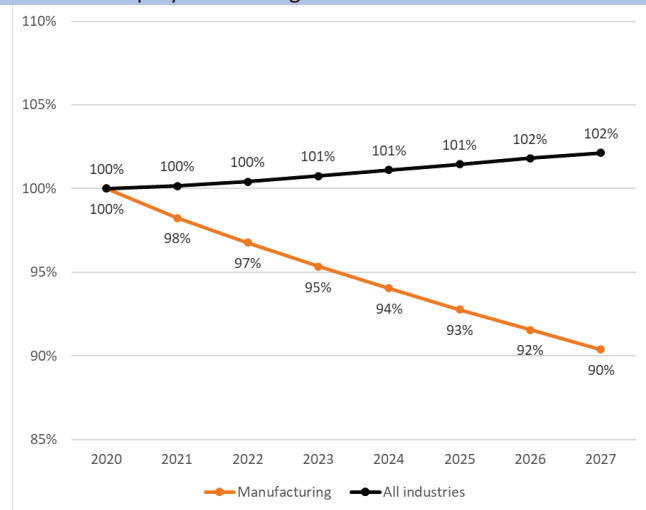


Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Figure 4: Top 20 Occupations (SOC 2010)**

Manufacturing	% of sector	Est. empl
2121 Production mngrs and directors in manufacturing	6%	2,800
5223 Metal working production and maintenance fitters	4%	1,900
3545 Sales accounts and business development mngrs	3%	1,600
9260 Elementary storage occupations	2%	1,100
4159 Other administrative occupations n.e.c.	2%	1,000
9139 Elementary process plant occupations n.e.c.	2%	900
3213 Engineering technicians	2%	900
2129 Engineering professionals n.e.c.	2%	900
8125 Metal working machine operatives	2%	800
5221 Metal machining setters and setteroperators	2%	800
5215 Welding trades	2%	800
8133 Routine inspectors and testers	2%	700
5241 Electricians and electrical fitters	2%	700
8132 Assemblers (vehicles and metal goods)	1%	700
4122 Bookkeepers, payroll mngrs and wages clerks	1%	700
8139 Assemblers and routine operatives n.e.c.	1%	600
2122 Mechanical engineers	1%	600
2126 Design and development engineers	1%	600
9134 Packers, bottlers, canners and fillers	1%	500
5315 Carpenters and joiners	1%	500
<b>Sector employment in top 20 occupations (estimate)</b>	<b>40%</b>	<b>19,400</b>

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**
**Employment change 2015-2019**

**Forecast Employment change 2020-27**


Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

### Sector definition used in statistics (SIC2007)

SIC Section C Manufacturing

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.



## Workforce Skills Evidence Base

Policy and political	Technological
<p><b>Industrial Strategy:</b> The Government published the Industrial Strategy White Paper in 2017. <sup>ix</sup>While not exclusively focused on manufacturing, much of the content of the Industrial Strategy is relevant, with a series of 'sector deals' (including with the aerospace and automotive sectors) subsequently progressed. The Industrial Strategy is likely to be refreshed in 2021.</p> <p><b>Government investment:</b> The Industrial Strategy led to the £4.7 billion Industrial Strategy Challenge Fund, a competitive fund to address the 'grand challenges' of AI, clean growth, future mobility and the ageing population. This is designed to address specific problems, such as future materials.</p> <p><b>Commercialisation:</b> Increasing the ability of firms to access equipment and support to commercialise innovation is a strong focus of Government policy. Key interventions include the High Value Manufacturing Catapult (although none of the Catapult Centres are based in Kent).</p> <p><b>Adoption:</b> The <i>Made Smarter</i> review identified rates of adoption of industrial digital technologies among SME manufacturers as the key factor in the UK's productivity deficit. This has helped to inform some skills related measures (e.g. T Levels and the National Retraining Scheme).</p>	<p>'<b>Industry 4.0</b>' is driven by the need for greater flexibility and product individualisation and enabled by the management of much greater volumes of data. In particular:</p> <p><b>Technology-enabled 'rapid changeability'</b> of manufacturing to meet customer needs. For example, 'additive manufacturing' (also referred to as 3D printing) enables the production of solid objects from a single data source. As well as changing the <i>products</i> that can be created, this greater flexibility has implications for the <i>distribution</i> of production: small volumes can be produced in decentralised facilities rather than conventional production plants, potentially reducing transport costs and moving production closer to R&amp;D.</p> <p>'<b>Internet of things</b>', and the increase in the amount of data that can be gathered from connected devices, opens up the potential for manufacturers to develop new business models focused on services enabled by data (e.g. 'condition-based maintenance', involving the ongoing, real-time monitoring of equipment to determine its servicing needs)</p> <p><b>Emergence of 'smart factories', driven by advances in robotics and artificial intelligence</b>, including machine learning and the development of visual analysis and context awareness enabling industrial robots to perform (and anticipate) more complex tasks.</p> <p><b>Supply chain disruption risks</b> as activity becomes globalised and inventory volumes are reduced, driving demand for security solutions</p>
Economic	Legal and regulatory
<p><b>Output and employment:</b> Manufacturing is a large and important sector, accounting for £3.375 bn in annual GVA in Kent and Medway (8% of output), and 47,000 jobs (7% of all jobs). Within the county, activity is quite concentrated (e.g. manufacturing accounts for 14% of jobs in Swale).</p> <p><b>Productivity:</b> The sector is more productive than the economy overall. It accounts for 42% of UK exports by value, and 65% of total R&amp;D expenditure. However, productivity growth has been lower in recent years, linked with reduced R&amp;D spend and investment (which has supported the case for the Government's Catapult investment, highlighted above).</p> <p><b>Diversity:</b> The sector is diverse, with food manufacturing and automotive the two largest sub-sectors nationally. In Kent and Medway, the sector is largely SME-based, with relatively few large 'anchor' businesses, and is sub-sectorally diverse (outside traditional areas of strength such as paper manufacturing and construction materials, which are quite concentrated locally).</p>	<p><b>EU exit:</b> In the short term, the focus on adaption to 'rules of origin' regulations and managing temporary disruption. Longer term challenges relate to integration in European supply chains; issues relating to overseas working (e.g. for servicing and maintenance); and UK manufacturers' influence over future EU standards.</p> <p><b>Regulatory reform</b> linked with the greater exploitation of data and its centrality to Industry 4.0. The Government has established an independent Regulatory Horizons Council to scan for technological innovations and trends and to identify areas of regulatory reform to enable new products to be introduced<sup>x</sup>.</p>
Social	Environmental
<p><b>Skills shortages:</b> According to the 2020 Annual Manufacturing Report, UK manufacturers are "facing the largest shortage of skilled workers since 1989", driven by<sup>xi</sup>:</p> <ul style="list-style-type: none"> <li>• Experienced workers retiring faster than new entrants....</li> <li>• ... partly as a result of outdated perceptions of the sector</li> <li>• The need for 'high-tech skills' in IoT, cloud and machine learning – <i>"there just aren't enough people with the required skills to meet demand"</i><sup>xii</sup></li> </ul>	<p>The <b>decarbonisation</b> agenda is centrally important, both as a driver for new product development, and for more efficient processes. Industrial emissions per capita in Kent are somewhat below the UK average, but adoption of more efficient processes and technologies will support the county's competitiveness.</p>

## Sector Skills Summary Analysis – Development & Construction

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. The sector is especially dominated by micro-businesses (with up to 9 employees) when compared with the business population as a whole.
2. Employment grew by 7,000 jobs between 2015 and 2019, and is expected to grow further by 2027, adding an extra 1,700 jobs. The construction workforce is more volatile than that of the economy as a whole: more jobs are lost in times of recession, but more jobs are added when growth returns.
3. The highest volumes of jobs are in Medway, Maidstone and Sevenoaks, while the highest concentrations of jobs (relative with GB as whole) are in Sevenoaks and Dartford. This is likely to reflect demand for services in London as well as Kent and Medway.
4. As regards occupations, skilled trades are easily the largest single category in the workforce, accounting for 43% of the workforce, more than four times the average in these roles compared with all industries.
5. The sector workforce skills profile shows that people employed in the sector are generally less well qualified than the overall workforce in terms of qualification levels. This is especially the case for Higher and Degree Level qualifications (Level 4+).

### 2. Key messages from national and other reports (PESTLE analysis)

1. A major driver of demand for skills in Kent and Medway will be the high level of planned house building and infrastructure projects that are envisaged in the coming years. The industry is quite cyclical, responding to more general economic conditions, so a post-Covid recovery, coupled with the delivery of planned infrastructure and house building could potentially lead to significant labour and skills shortages.
2. Construction has often lagged behind other sectors in terms of productivity growth. Improving skills could have a key role to play in delivering productivity improvements.
3. Specific technology-related drivers of new and emerging areas of skills demand include smart construction and digital design (including BIM), low carbon and sustainable construction techniques, and offsite construction. Tightening of standards post-Grenfell could also impact on the kind of skills and knowledge required.
4. It seems likely that Brexit will reduce the supply of migrant labour: a 2020 CITB survey found that 70% of construction firms felt that the ending of free movement would impact on their ability to maintain a skilled workforce.
5. Workforce diversity is a concern, and improving diversity (in terms of gender, for example) could also unlock new talent pools.

**Figure 1: Key Statistics**

Development & Construction	Sector	All Inds		Sector	All Inds
Enterprises 2019	15,375		Change in empl (2015-2019)	+7,000	
Employment	62,500		% Change	+13%	+2%
Employment as a % of all inds	8%		Forecast change (2020-2027)	+1,700	
			% Forecast Change	+3%	+2%
% microbusinesses (0-9 empl)	95%	90%	% empl microbusinesses (estimate)	61%	34%
% medium/large (50+)	0%	2%	% empl in medium/large (estimate)	16%	41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

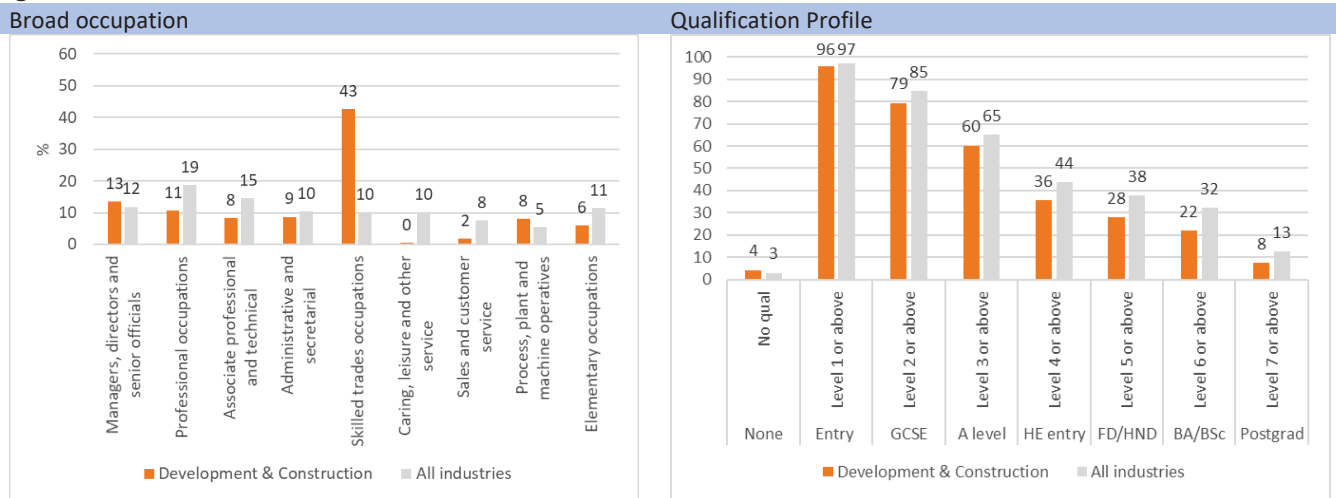
**Figure 2: Local Concentrations**

Development & Construction	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
Employment LQ (vs GB)	1.0	0.8	1.6	0.9	0.9	1.4	1.3	2.0	1.2	1.0	1.4	0.9	1.2	1.2	1.2	1.3	1.0
Employment	4,300	3,800	7,000	2,300	2,400	3,300	7,500	7,500	4,500	3,000	6,000	3,300	54,000	8,000	62,500	148,500	2,163,500
Businesses	1,215	1,000	1,180	705	705	990	1,705	1,360	1,145	845	1,235	995	13,075	2,300	15,375	38,265	440,660

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**

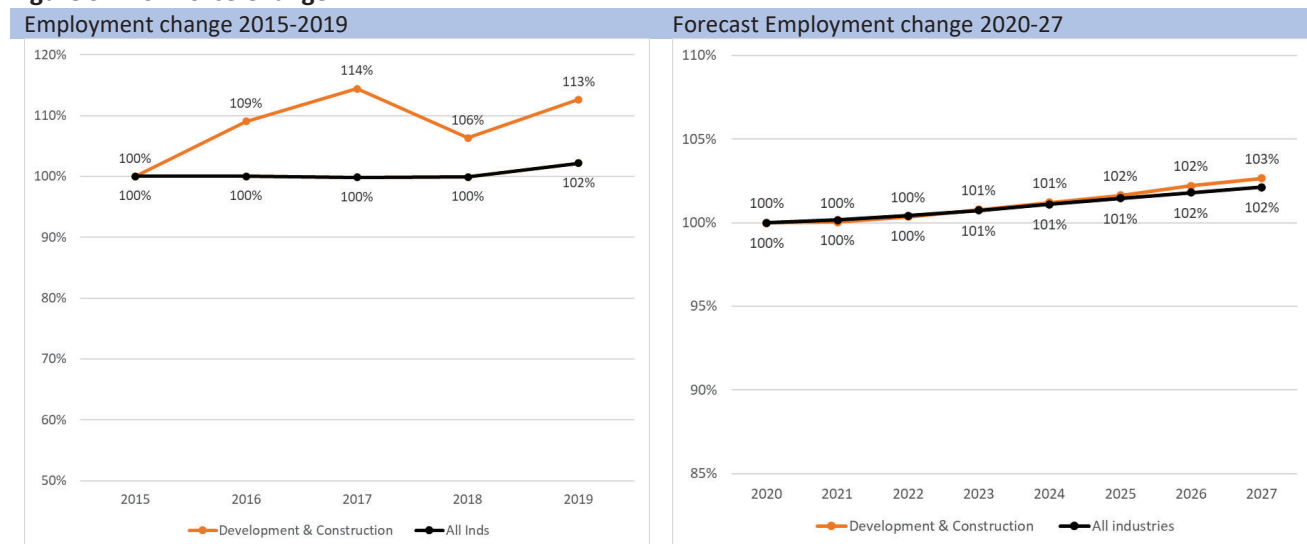


Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Figure 4: Top 20 Occupations (SOC 2010)**

Development & Construction	% of sector	Est. empl
5319 Construction and building trades n.e.c.	8%	4,900
5315 Carpenters and joiners	7%	4,300
2122 Production mngrs and directors in construction	6%	3,500
5314 Plumbers and heating and ventilating engineers	5%	3,400
9120 Elementary construction occupations	5%	3,300
5241 Electricians and electrical fitters	5%	2,900
1251 Property, housing and estate mngrs	4%	2,500
5323 Painters and decorators	3%	2,200
4159 Other administrative occupations n.e.c.	3%	2,000
5312 Bricklayers and masons	3%	1,600
5313 Roofers, roof tilers and slaters	2%	1,200
5321 Plasterers	2%	1,100
3544 Estate agents and auctioneers	2%	1,100
8149 Construction operatives n.e.c.	2%	1,100
5330 Construction and building trades supervisors	2%	1,100
2436 Construction project mngrs and related professionals	2%	1,000
4122 Bookkeepers, payroll mngrs and wages clerks	1%	900
2131 Financial mngrs and directors	1%	900
2121 Civil engineers	1%	800
3545 Sales accounts and business development mngrs	1%	700
<b>Sector employment in top 20 occupations (estimate)</b>	<b>65%</b>	<b>40,600</b>

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**


Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

#### Sector definition used in statistics (SIC2007)

SIC 41 Construction of Buildings  
 SIC 42 Civil Engineering  
 SIC 43 Specialised Construction  
 SIC 68 Real Estate activities

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.

Policy and political	Technological
<p>The construction industry is responsive to residential and commercial demand and is highly cyclical. Policy and political influences include:</p> <p><b>Major infrastructure investments:</b> The decision following the 2009 recession to cancel several publicly-funded capital schemes had a negative impact on the sector. In general, there is a Government commitment to maintain capital spend, and this has been part of the counter-recessionary intervention mix. There are several major schemes in Kent and Medway, including the Lower Thames Crossing, which will generate construction demand. The Government's Construction Playbook sets out a commitment to supporting the productivity and growth of the construction industry through the public procurement and commissioning process<sup>xiii</sup>.</p> <p><b>Planning policy,</b> in particular (in Kent) high levels of planned housing growth, and the existence of special purpose vehicles (e.g. Ebbsfleet Development Corporation) to help drive this forward.</p> <p><b>Incentives to support building:</b> These include measures such as the Government's Help to Buy scheme, designed to stimulate the housing market, tax incentives such as the current SDLT relief; and measures periodically proposed to assist smaller developers and/ or promote development on public land.</p>	<p>Research for the Construction Industry Training Board found that while construction is a 'less automated' sector, this means that there is substantial scope to gain from technology adoption<sup>xiv</sup>. Key trends and opportunities include:</p> <p><b>Smart construction and digital design,</b> adopting new technology to embed sensors and data monitoring within building design. This includes the adoption of Building Information Modelling (BIM), which enables the better use of data to reduce waste from the construction process.</p> <p><b>Low carbon and sustainable construction,</b> adopting new materials and techniques to reduce resource consumption, both in new build and in retrofitting existing premises</p> <p><b>Offsite construction</b> to simplify the house-building process and reduce costs. More widespread adoption of offsite construction could have significant workforce implications (rebalancing between site-based construction and manufacturing).</p>
Economic	Legal and regulatory
<p><b>Output and scale:</b> Kent and Medway has a large construction industry, accounting for around 45,000 jobs and £4.1bn in annual GVA. The industry is widely distributed: its share of employment is greater than the national average in all but two of Kent's districts (Canterbury and Tunbridge Wells), although with a relatively high concentration in Dartford.</p> <p><b>Productivity:</b> long-term productivity growth in construction lags behind that in services and manufacturing: greater digital adoption is seen as key to productivity growth, although has been limited in parts of the industry<sup>xv</sup>.</p> <p><b>Industry structure:</b> Sub-contracting is a common feature of the industry, supporting an extensive SME/ sole trader base.</p>	<p><b>Reduced migrant labour:</b> CITB industry surveys in 2020 found that over a quarter of firms directly employed workers from outside the UK in 2020. Over 70% anticipated that the ending of free movement would impact on the ability to maintain a skilled workforce<sup>xvi</sup>.</p> <p><b>Strong regulatory framework,</b> relating to building and environmental standards and planning. A new national construction products regulator is to be set up, in response to the Grenfell tragedy.</p>
Social	Environmental
<p><b>Perception challenges</b> associated with opportunities and diversity in the industry impacting recruitment.</p> <p><b>Cyclical nature of the industry</b> tends to have long-term workforce impacts, as temporary weak demand leads to the exit of older workers, fewer new entrants and reduced apprenticeship demand. This is a long-term challenge, especially in the context of a need for increased specialist skills (e.g. associated with lower carbon construction methods)<sup>xvii</sup>.</p>	<p>Consistent with other sectors, a strong regulatory push towards decarbonisation within the construction industry, both in the construction process and long-term building efficiency.</p>

## Draft Sector Skills Summary Analysis – Retail and Wholesale

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. The retail and wholesale sector is a large one, accounting for 17% of all employment. The highest numbers of retail and wholesale jobs are in Medway, Dartford, Ashford, Canterbury and Maidstone. The concentrations of employment are especially high relative to the national average in Dartford and Ashford.
2. A higher percentage of employment is in microbusinesses than for the economy as a whole (37% compared with 34%).
3. The largest single occupational group in the sector is sales and customer service roles, which make up 31% of staff, compared with only 8% for the whole economy.
4. Intermediate and lower-level qualifications predominate in the retail and wholesale workforce. 56% of the workforce have a qualification at Level 3 or higher, compared with 65% of the workforce in all industries.
5. Employment has grown in the sector in recent years, and is forecast to grow further to 2027, although the forecast used does not take account of the impact of Covid-19.

### 2. Key messages from national and other reports (PESTLE analysis)

1. The final impact of Covid-19 and any associated economic contraction could be very significant on sector employment, albeit with winners and losers. Fixed-location retail may be adversely affected, while warehouse-based and online retail could emerge larger and stronger. A post-Covid 'bounce back' may also affect workforce and skills demand.
2. Irrespective of Covid-19, the scale and nature of skills demand will also be driven by structural changes in fixed-location v online sales. A decline in fixed-location sales seems likely, but may be counteracted or mitigated to some extent by initiatives to stimulate town centre economies.
3. Investment in technology and greater automation could impact significantly on demand for lower skilled labour. Retail supply chain decarbonisation could also have an impact on skills demand.
4. The majority of the workforce is female and many young people in entry-level jobs are also employed, so the sector plays a key role in widening opportunity for people who may be considered disadvantaged in labour market terms.

**Figure 1: Key Statistics**

Retail & Wholesale	Sector	All Inds		Sector	All Inds
Enterprises 2019	9,385		Change in empl (2015-2019)	<100	
Employment	129,000		% Change	<1%	+2%
Employment as a % of all inds	17%		Forecast change (2020-2027)	+2,600	
			% Forecast Change	+2%	+2%
% microbusinesses (0-9 empl)	89%	90%	% empl microbusinesses (estimate)	37%	34%
% medium/large (50+)	1%	2%	% empl in medium/large (estimate)	34%	41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

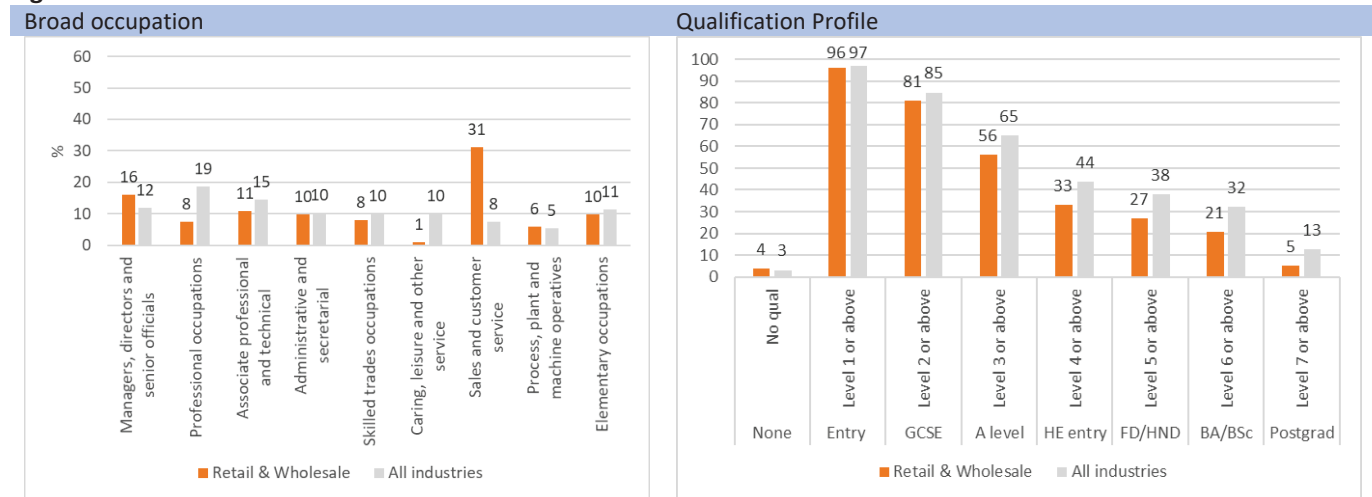


**Figure 2: Local Concentrations**

Retail & Wholesale	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
Employment LQ (vs GB)	1.4	1.2	1.5	0.9	0.9	1.0	1.0	0.9	1.1	1.2	1.3	1.4	1.2	1.0	1.2	1.2	1.0
Employment	13,000	12,500	13,500	5,000	5,500	5,000	12,000	7,500	8,500	8,000	12,000	11,500	114,000	15,000	129,000	289,500	4,638,500
Businesses	940	760	550	500	540	485	950	800	665	590	660	755	8,195	1,190	9,385	23,150	375,635

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

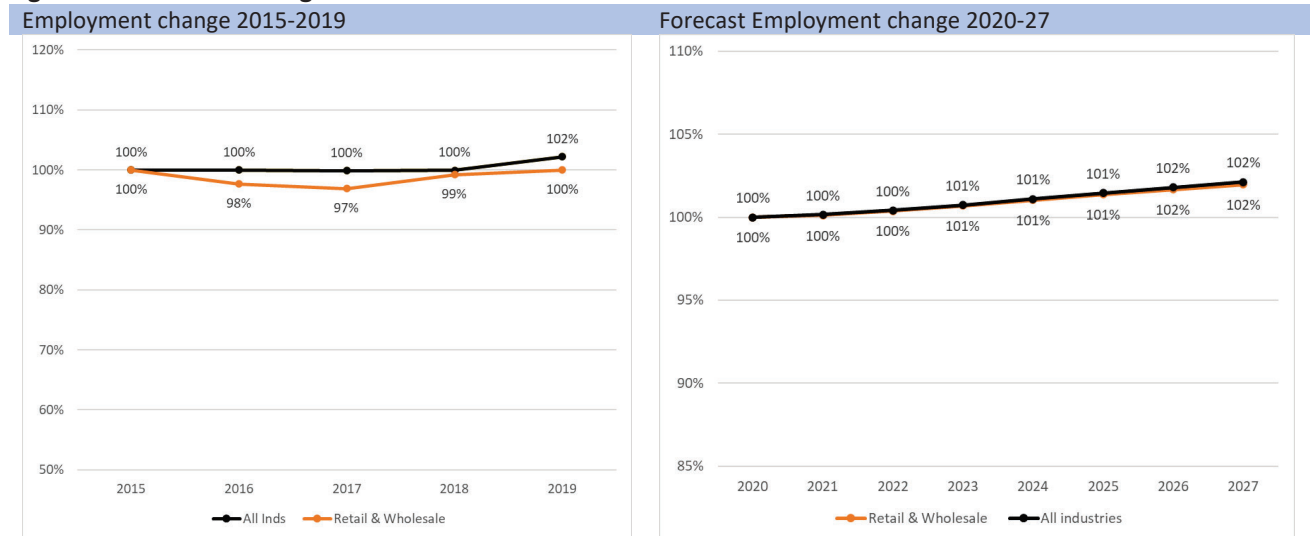
**Figure 3: Workforce Profile**


Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Figure 4: Top 20 Occupations (SOC 2010)**

Retail & Wholesale	% of sector	Est. empl
7211 Sales and retail assistants	23%	29,400
2190 Mngrs and directors in retail and wholesale	6%	7,700
9260 Elementary storage occupations	4%	5,500
7212 Retail cashiers and checkout operators	4%	5,000
7130 Sales supervisors	4%	4,700
5231 Vehicle technicians, mechanics and electricians	3%	3,800
1254 Shopkeepers and Prprtrs in wholesale and retail	3%	3,700
4159 Other administrative occupations n.e.c.	3%	3,300
9251 Shelf fillers	3%	3,200
3545 Sales accounts and business development mngrs	2%	3,000
8212 Van drivers	2%	2,800
7219 Customer service occupations n.e.c.	2%	2,600
7214 Pharmacy and other dispensing assistants	2%	2,300
8221 Large goods vehicle drivers	1%	1,600
9134 Packers, bottlers, canners and fillers	1%	1,500
3543 Marketing associate professionals	1%	1,400
4122 Bookkeepers, payroll mngrs and wages clerks	1%	1,400
2162 mngrs and directors in storage and warehousing	1%	1,400
3542 Business sales executives	1%	1,400
8211 Food, drink and tobacco process operatives	1%	1,300
<b>Sector employment in top 20 occupations (estimate)</b>	<b>67%</b>	<b>86,800</b>

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**


Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

#### Sector definition used in statistics (SIC2007)

SIC 45 Wholesale, sale & repair of motor vehicles  
 SIC 46 Wholesale trade  
 SIC 47 Retail trade

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.

Policy and political	Technological
<p>The retail and wholesale sector is strongly market-driven and is seen as subject to open competition. Historically, public sector intervention has been limited.</p> <p>There are broadly four areas in which government policy is relevant:</p> <ul style="list-style-type: none"> <li>In the short term, <b>measures put in place to counter Covid-19</b>, which have severely impacted retailers trading from physical premises, and which has accelerated technology-driven structural changes in the market. The Government has also put in place measures to mitigate these impacts during the crisis</li> <li>The <b>impact of taxation in the context of technology change in the sector</b>. Specifically, high business rates applying to 'brick' retail vs. the lower tax burden incurred by online retailers</li> <li><b>Planning policy</b>, including: retail allocations and the provision of warehousing and distribution space, which there is generally a lack of new supply nationally</li> <li>Measures to promote town and city centre activity (e.g., town centre management and regeneration investment; as well as recent national schemes such as the Future High Streets Fund</li> </ul>	<p>The adoption and exploitation of digital technology has already driven profound structural change within the sector, related to the development of entirely new business models through the growth of online retailing. This has led to:</p> <ul style="list-style-type: none"> <li><b>New market entrants</b>, enabled by online transactions. These include multinational 'big tech' firms at one end of the spectrum (e.g., Amazon), as well as smaller specialist firms able to offer direct-to-customer supply over a much wider geography (including through trading via platform services).</li> <li><b>Pressure on 'traditional' retail models</b> reliant on a physical presence. This is exacerbated by higher fixed costs faced by 'brick' retailers and has led to....</li> <li>... <b>changing retail use patterns</b> as demand changes and some firms exit the High Street (e.g., around 30% of UK consumers now shop online for food)<sup>45</sup>....</li> <li>.... <b>but reappraisal of the role of fixed-location retail</b> as a demonstration, collection and 'experience' point</li> <li><b>Rising logistics demand</b> associated with 'direct to customer' and final mile activity. Take-up of logistics space has surged in the past year with demand generated by changing patterns of retail activity<sup>46</sup>.</li> <li><b>High levels of competition drive technology investment</b> – possibly reflected in the extent to which the retail sector has been especially impacted by technology change.</li> </ul>
Economic	Legal and regulatory
<p><b>Output and employment:</b> The sector generates annual GVA of around £4.97 billion in Kent and Medway, and is a major employer, accounting for around 123,000 jobs. Productivity is lower than the all-industries average, reflecting relatively high numbers of lower-paid and entry-level jobs (for which the retail sector has long been an important source)</p> <p><b>Markets and enterprises:</b> Diverse, with the largest retail and wholesale employers in Kent being multiple operations based outside the county. However, there is also a substantial SME retail base. Barriers to market entry and exit are typically low (and perhaps lower, given increases in online retailing)</p> <p><b>Market sensitivity:</b> The sector is reliant on and responsive to changes in consumer demand, and so is sensitive to the economic cycle. Competition in most retailed goods is high and open, and is actively encouraged by public policy. Retail sales remained high in 2020, although with significant rebalancing between retail channels.</p>	<p><b>Regulatory framework:</b> Generally pro-consumer and pro-competition.</p> <p><b>Brexit and trade impacts:</b> Limited overall, although more significant (at least in short term) for retailers reliant on overseas sales or retailing specialist imported goods.</p>
Social	Environmental
<p><b>Workforce profile:</b> 58% of the retail workforce is female, and the sector has historically been a major employer of young people in entry-level jobs.</p> <p><b>Social changes driving retail patterns:</b> Greater home/ flexible working and increasing numbers of single-person households driving demand for more frequent food shopping, and increased volume of trade in smaller outlets.</p> <p>Growth of 'experience' market, also linked with technology and environmental trends.</p>	<p><b>Retail supply chain decarbonisation</b>, as regulatory and consumer pressure grows</p> <p><b>Potential for 'localisation'</b>, with increased interest/ demand for local services, partly on environmental grounds and partly linked in response to the pandemic. But this needs to be set against "pulls" in the other direction, as retail and distribution becomes increasingly globalised.</p> <p><b>Pressures/ opportunities related to the circular economy</b>, reducing waste and leading to a greater market in shared/ hired services. This is growing and likely to become more important in the future.</p>

<sup>45</sup> Deloitte (2021), Retail Trends 2021 (<https://www2.deloitte.com/uk/en/pages/consumer-business/articles/retail-trends.html>)

<sup>46</sup> CBRE (2021), UK Logistics 2020 Q4 ([http://cbre.vo.llnwd.net/grgservices/secure/CBRE%20-%20UK%20Logistics%20Market%20Summary%20Q4%202020\\_Q8Y8.pdf?e=1614267179&h=5646d2e74d9fce4b1b696142ddfc4ee2](http://cbre.vo.llnwd.net/grgservices/secure/CBRE%20-%20UK%20Logistics%20Market%20Summary%20Q4%202020_Q8Y8.pdf?e=1614267179&h=5646d2e74d9fce4b1b696142ddfc4ee2))

## Sector Skills Summary Analysis – Transport & Logistics

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. Transport and logistics is a significant employment sector in Kent & Medway accounting for 5% of the workforce (1 in 20 workers), 46% of whom work in medium and large companies. 92% of businesses are micro-businesses, compared with 90% for all industries.
2. Employment concentrations are above the GB average and especially high in absolute terms in Dover, Swale and Dartford. Around a third of the workforce are in driving-related occupations.
3. Employment has grown by 5% over the period 2015-2019, but is forecast to decline slightly by 2027.
4. The profile of the sector is more focused on low level qualifications than the all-industry average. Some 48% of logistics workers do not have a level 3 qualification (compared with 35% across all industries).

### 2. Key messages from national and other reports (PESTLE analysis)

1. Significant technological change may drive demand for new skills in the sector. Changes linked to new border controls, for example, will entail greater use of digital technology and innovation within the sector is making increasing use of automation, AI, robotics and secure systems.
2. As with the wider economy, de-carbonisation stands out as a major driver of change in terms of future skills: logistics accounts for around 11% of global carbon emissions.
3. Brexit may contribute to labour shortages, given that EU nationals accounted for 10% of the overall logistics workforce and 19% of elementary storage occupations. The number of EU nationals employed by the sector fell by over 20% in 2019/20.
4. There are also longstanding shortages of HGV drivers and the driver workforce is an ageing one, with 67% of people aged 45 and over.
5. Workforce diversity is also an issue. The overall workforce is heavily male dominated and the HGV segment especially so.

**Figure 1: Key Statistics**

Transport & Logistics	Sector	All Inds		Sector	All Inds
Enterprises 2019	3,605		Change in empl (2015-2019)	+2,000	
Employment	40,000		% Change	+5%	+2%
Employment as a % of all inds	5%		Forecast change (2020-2027)	-500	
			% Forecast Change	-1%	+2%
% microbusinesses (0-9 empl)	92%	90%	% empl microbusinesses (estimate)	33%	34%
% medium/large (50+)	2%	2%	% empl in medium/large (estimate)	46%	41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

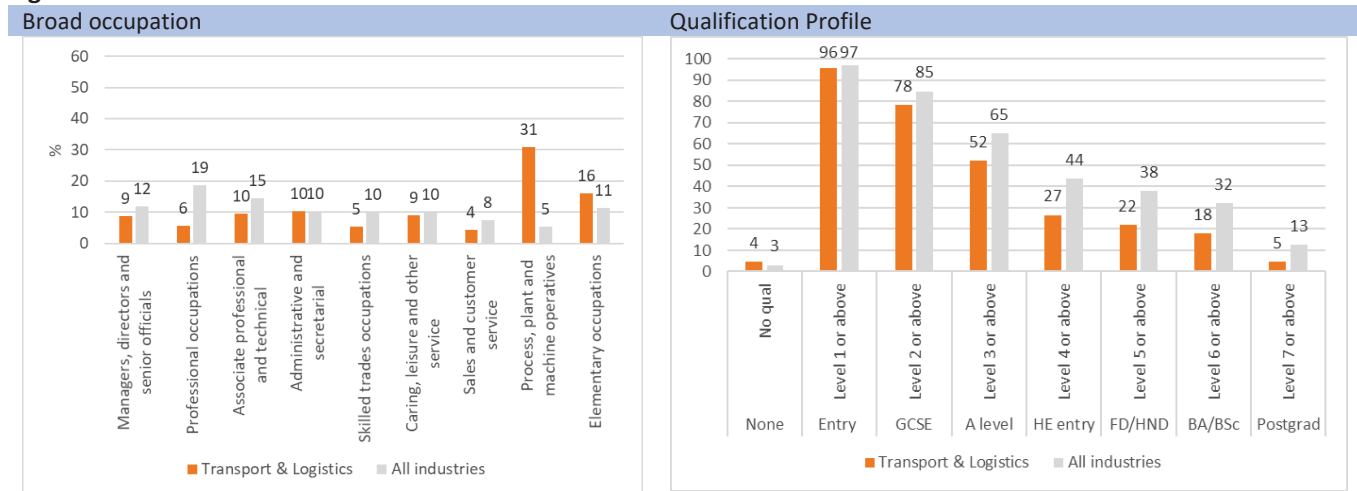
**Figure 2: Local Concentrations**

Transport & Logistics	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
Employment LQ (vs GB)	0.9	0.4	1.7	2.2	1.3	1.5	0.8	0.5	1.9	0.8	1.5	0.4	1.1	1.2	1.1	1.1	1.0
Employment	2,500	1,300	5,000	4,000	2,500	2,500	3,300	1,300	4,800	1,800	4,500	1,000	34,500	5,500	40,000	88,000	1,506,000
Businesses	190	150	395	155	135	385	560	135	310	135	205	120	2,880	725	3,605	8,605	120,315

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**



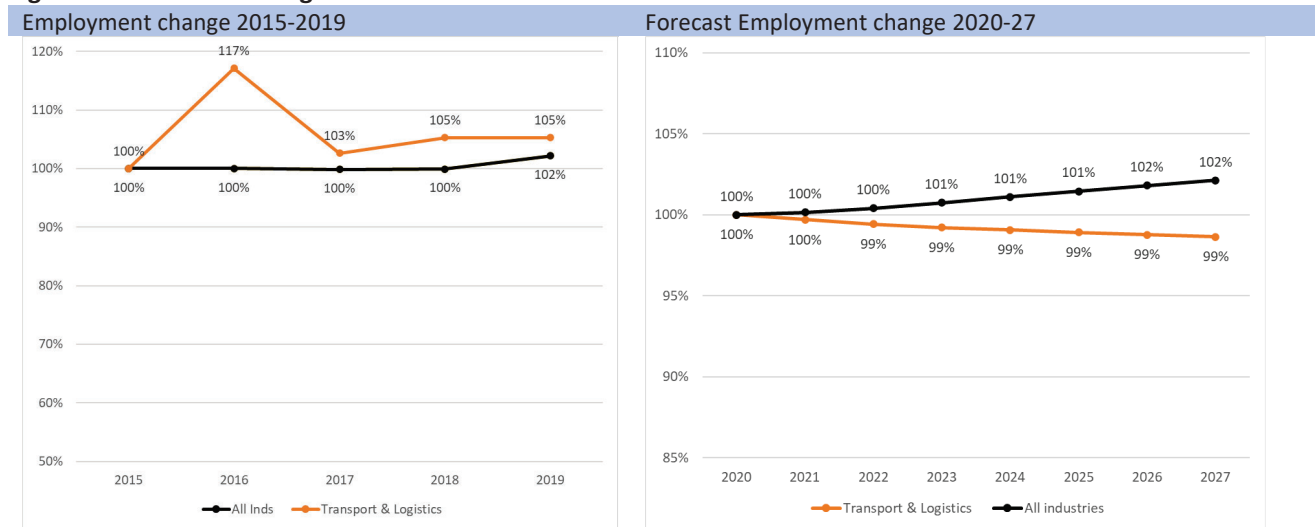
Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Figure 4: Top 20 Occupations (SOC 2010)**

Transport & Logistics	% of sector	Est. empl
8214 Taxi and cab drivers and chauffeurs	13%	5,100
8211 Large goods vehicle drivers	11%	4,400
9260 Elementary storage occupations	9%	3,400
9211 Postal workers, mail sorters, mssngrs and couriers	8%	3,100
8213 Bus and coach drivers	7%	2,600
8212 Van drivers	5%	2,200
1161 Mngrs and directors in transport and distribution	3%	1,100
6214 Air travel assistants*	2%	900
4159 Other administrative occupations n.e.c.	2%	800
4134 Transport and distribution clerks and assistants	2%	800
8231 Train and tram drivers	1%	600
1162 mngrs and directors in storage and warehousing	1%	500
6215 Rail travel assistants	1%	500
8222 Forklift truck drivers	1%	500
7219 Customer service occupations n.e.c.	1%	400
5231 Vehicle technicians, mechanics and electricians	1%	400
4122 Bookkeepers, payroll mngrs and wages clerks	1%	400
9134 Packers, bottlers, canners and fillers	1%	300
8233 Air transport operatives*	1%	300
9241 Security guards and related occupations	1%	300
<b>Sector employment in top 20 occupations (estimate)</b>	<b>72%</b>	<b>28,800</b>

\*Likely to be an overestimate for Kent and Medway

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**


Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

#### Sector definition used in statistics (SIC2007)

SIC 49 Land transport  
SIC 50 Water transport  
SIC 51 Air transport

SIC 52 Warehousing and support activities for transportation  
SIC 53 Postal and courier activities

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.



Policy and political	Technological
<p>In general, the logistics sector is responsive to market demand, rather than government policy choice. Passenger transport is however more highly regulated through price caps and franchising arrangements. Key policy issues include:</p> <p><b>Changed relationships with the EU</b>, both in terms of recruitment into the logistics industry (see below) and the impact of additional border controls and restrictions on the movement of goods. This is an immediate concern in early 2021, although is expected to settle over time. The 2025 Border Strategy seeks to increase border resilience through the use of technology, and is especially relevant to Kent given the importance of the Channel ports.</p> <p><b>Changes to transport policy linked with the decarbonisation agenda</b>, including greater regulation over time to reduce freight carbon emissions. The UK's climate change commitments is likely to see measures to reduce (or limit the growth in) air freight volumes and to encourage greater rail transportation; the National Infrastructure Commission recently highlighted the role of regulation in driving innovation in the freight industry<sup>xviii</sup>, The Government's recent <i>Freight Carbon Review</i> recommends further work to promote potential cost savings among SME operators and measures to shift freight from road to rail<sup>xix</sup>.</p> <p><b>Infrastructure investment</b>: Public investment in transport infrastructure is key to the industry and highly relevant to Kent, given its role as an international gateway. Potentially, public infrastructure decisions could have an impact on location/ expansion choices made by logistics firms.</p> <p><b>Spatial planning and land supply</b>: Demand for logistics space is growing strongly. However, employment demand may be constrained by supply.</p>	<p>In addition to now-established changes in the nature of distribution, key technology drivers for innovation include<sup>xx</sup>:</p> <p><b>3D printing</b>, as goods can be produced closer to the point of use</p> <p><b>'Autonomous logistics'</b>, including self-driving vehicles (already used within some warehousing operations) and drones. The benefits of moving towards autonomous technology include workforce savings (important giving the ageing freight workforce) and 24-hour utilisation. But the advent of autonomous vehicles is likely to bring new players into the freight and logistics market, so pressure on existing operators to adopt new technology is likely to be high<sup>xxi</sup>.</p> <p><b>Use of artificial intelligence in driving 'data-driven logistics'</b>, as all elements of the supply chain are internet connected, reducing waste and improving distribution tracking.</p> <p><b>Machine-human collaboration</b>, as robotic devices, already used in warehousing, are deployed in more sophisticated operations</p> <p><b>Automation of commercial processes</b> through blockchain and digitally-enabled 'smart contracts'</p> <p><b>Security concerns</b>, given the increasing length and complexity and precision of supply chains, increased reliance on data and reduced timescales, potentially increasing cyber security challenges.</p> <p><b>Decarbonisation</b>: Currently, transport accounts for around 23% of UK greenhouse gas emissions (not including international shipping and air transport); in the freight sector, the Department for Transport estimates that on current trends, reductions in CO2 emissions will be offset by rising freight miles<sup>xxii</sup>. Several larger logistics operators have already committed to significant carbon reduction.</p>
Economic	Legal and regulatory
<p><b>Output and employment</b>: The transport sector is substantial in Kent and Medway, accounting for around £2.225bn GVA and 40,000 jobs. It also has a distinctive sub-sectoral profile, given the port operations at Dover, Eurotunnel and Sheerness.</p> <p><b>Demand drivers for change</b>: Demand drivers are closely linked with the technology drivers: the logistics sector has been especially impacted by the rise of new retailing models (e.g. through the emergence of Amazon as a major logistics and distribution operation (as well as a retailer and 'marketplace' and increasing demand for direct-to-customer delivery). In terms of passenger transport, demand is linked with population growth and commuting patterns, and will be influenced by the trend to remote/ homeworking (intensified by the Covid-19 pandemic).</p> <p><b>Industry consolidation</b>: The road freight industry has become more consolidated in recent years, with an increasing focus on distribution 'super-hubs', especially in the Midlands.</p>	<p>Most legal/ regulatory factors are related to the policy considerations listed above, and include changing rules related to European workers and changing border regulations (and an increased requirement for customs agents), alongside long-term changes in environmental regulation.</p>

Social	Environmental
<p><b>Long-term shortages in HGV driver roles:</b> Logistics UK notes that the exit of HGV drivers following the 2009 recession was “never corrected”, with an ageing workforce profile (around 67% aged 45 and over)<sup>xxiii</sup>. There are very few workers in the market, and this is impacted by high training costs.</p> <p><b>Overall, logistics is strongly male-dominated</b>, especially in the HGV segment</p> <p><b>Reliance on EU nationals:</b> European employment has become more important over the past decade, with EU nationals accounting for 10% of the logistics workforce (and 19% of elementary storage occupations). The number of EU nationals employed fell by over 20% in 2019/20<sup>xxiv</sup>.</p>	<p>Supply chain decarbonisation is the key environmental driver facing the sector. Logistics activities account for around 11% of global CO2 emissions and are difficult to decarbonise because of their dependence on fossil fuels and the high industry growth rate, which is likely to offset marginal gains. Key measures being taken by the industry include improving vehicle utilisation (through the better use of data cited above), switching operations to renewable energy and transferring freight from road to rail (although this should be set against the recent growth in ‘final mile’ services<sup>xxv</sup>).</p>

## Sector Skills Summary Analysis – Visitor Economy

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. A significant sector that accounts for 10% of all employment. The sector has a higher proportion of small businesses with 10-49 staff than most other sectors accounting for 42% of employment (compared with 25% across the economy as a whole).
2. Canterbury and Medway have the highest numbers of people employed in the sector and the concentrations for employment in Folkestone and Hythe and Thanet are significantly above the national average.
3. Nearly half (48%) of the workforce in the sector are in elementary service occupations and the qualification profile of the workforce is significantly lower than the average for all industries.
4. Employment was growing before Covid-19 and trend-based forecasts suggest further, significant growth to 2027, but the impact of Covid-19 on employment in the sector is not yet fully understood.

### 2. Key messages from national and other reports (PESTLE analysis)

1. The Visitor Economy (and wider 'experience economy') is seen as a priority for Kent and Medway and is championed by Visit Kent, both in terms of visitors to the area and residents in terms of place making and quality of life. The sector also plays an important role in offering entry-level employment.
2. The impact of Covid-19 is not yet fully understood, although, if the pandemic is brought fully under control in 2021, a significant 'bounce back' in demand is expected. Any restrictions to overseas travel could further reinforce this.
3. The main technology-related driver of skills appear to be digitalisation (marketing and more widely in business activities, including the sharing economy).
4. Another driver of skills is a growing demand for higher-value experiences which are place specific and often linked to food and drink. Green tourism may also drive new skills requirements into the future.

**Figure 1: Key Statistics**

Visitor Economy	Sector	All Inds		Sector	All Inds
Enterprises 2019	5,940		Change in empl (2015-2019)	+5,500	
Employment	74,500		% Change	+8%	+2%
Employment as a % of all inds	10%		Forecast change (2020-2027)	+4,800	
			% Forecast Change	+6%	+2%
% microbusinesses (0-9 empl)	82%	90%	% empl microbusinesses (estimate)	30%	34%
% medium/large (50+)	2%	2%	% empl in medium/large (estimate)	33%	41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

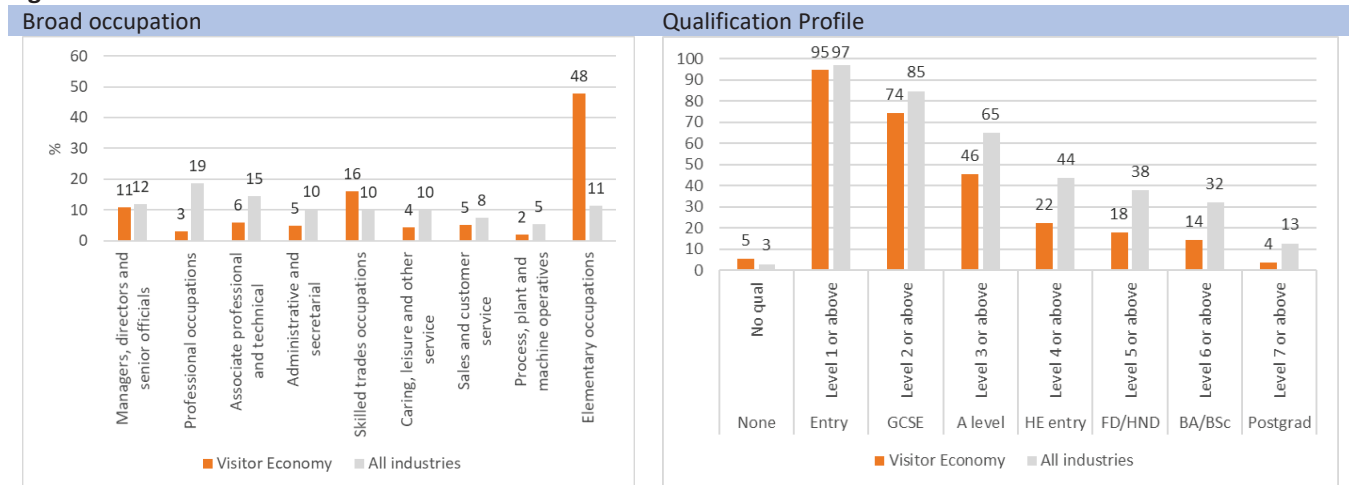
**Figure 2: Local Concentrations**

Visitor Economy	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
Employment LQ (vs GB)	0.9	1.1	0.8	1.1	1.6	1.1	0.9	1.0	0.8	1.2	0.8	0.9	1.0	0.8	1.0	1.0	1.0
Employment	5,500	8,000	5,000	4,300	6,500	3,800	7,500	5,500	4,500	5,500	5,000	5,000	66,500	8,000	74,500	170,000	3,152,000
Businesses	410	565	340	380	455	330	495	465	425	555	410	475	5,295	645	5,940	13,760	232,495

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**



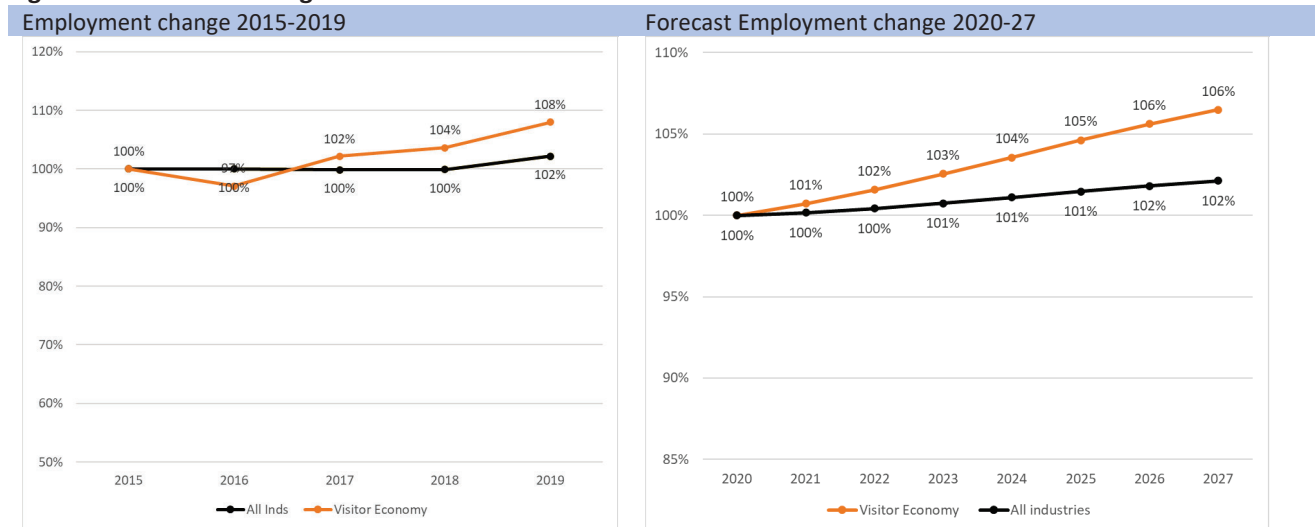
Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Figure 4: Top 20 Occupations (SOC 2010)**

Visitor Economy	% of sector	Est. empl
9272 Kitchen and catering assistants	13%	9,400
9273 Waiters and waitresses	9%	7,000
5434 Chefs	8%	5,700
9274 Bar staff	7%	5,000
1223 Restrn and catering establishment mngrs and prprtrs	4%	3,300
9233 Cleaners and domestics	3%	1,900
7111 Sales and retail assistants	2%	1,700
1221 Hotel and accommodation mngrs and prprtrs	2%	1,600
4159 Other administrative occupations n.e.c.	2%	1,600
5435 Cooks	2%	1,400
6211 Sports and leisure assistants	2%	1,400
3442 Sports coaches, instructors and officials	2%	1,400
5436 Catering and bar mngrs	2%	1,300
4216 Receptionists	2%	1,200
1225 Leisure and sports mngrs	2%	1,200
3411 Artists	1%	1,000
1224 Publicans and mngrs of licensed premises	1%	1,000
3415 Musicians	1%	900
3443 Fitness instructors	1%	900
6212 Travel agents	1%	900
<i>Sector employment in top 20 occupations (estimate)</i>	<i>67%</i>	<i>86,300</i>

\*Likely to be an overestimate for Kent and Medway

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**


Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

#### Sector definition used in statistics (SIC2007)

SIC 55 Accommodation	SIC 90 Creative arts & entertainment services
SIC 56 Food & Beverage Services	SIC 91 Libraries, archives, museums, and other cultural activities
SIC 79 Travel agencies, tour operators etc	SIC 93 Sports, amusement, and recreation activities

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.

Policy and political	Technological
<ul style="list-style-type: none"> <li>At UK Government level, the <b>Tourism Sector Deal</b> sets out a range of measures to support the industry, including investment in arts and heritage and the introduction of T-levels in tourism and hospitality<sup>47</sup>.</li> <li>Active support at local level, through <b>Visit Kent</b> and local tourism initiatives. Tourism is generally seen as a sector in which government support is seen as important, given the role of place marketing and the links with other initiatives to support the quality of the environment, cultural infrastructure, etc.</li> <li>In the short term, policy measures to counter the Covid-19 pandemic have had a major impact on the sector, with the restriction of most travel and events for much of the year (although these should be lifted in 2021).</li> <li>Policy issues related to Kent's role as a 'gateway' county are often relevant, both in terms of the impact of restrictions at the ports and the wider effect on visitor perceptions.</li> <li>More broadly, perceptions of the UK (and Kent) impact on overseas visitor demand.</li> </ul>	<ul style="list-style-type: none"> <li>Improved <b>demand management</b> is important in improving productivity – supporting the need for investment in technology and data analytical systems to maximise occupancy and visitor flows</li> <li>Increased use of digital marketing – systems for travel booking have been transformed in the past 20 years, but the transition to online sales has continued to accelerate.</li> <li>Emergence of new technology-enabled business models linked with the sharing economy (e.g., Airbnb)...</li> <li>... but these come with risks associated with lower visitor expenditure per head, and low-overhead/unregulated competition with commercial operators</li> <li>The tourism sector remains in the early stages in adopting robotics and artificial intelligence, but there are likely to be opportunities in the future in the automation of routine tasks (destination greeters, cleaners, etc.)</li> <li>Challenges associated with absorptive capacity for innovation, given low margins in many businesses</li> </ul>
Economic	Legal and regulatory
<ul style="list-style-type: none"> <li><b>Output and jobs:</b> The sector accounts for 51,000 jobs in Kent and Medway and GVA of £1.032 billion.</li> <li><b>Businesses:</b> There are around 5,400 businesses, in a strongly SME-oriented sector</li> <li><b>Productivity:</b> Sector productivity is relatively low, reflecting large numbers of relatively low-paid jobs. However, measuring productivity in the sector is very difficult – at firm level in the accommodation industry, variances in productivity are often substantially affected by occupancy levels<sup>48</sup></li> <li><b>Markets and demand:</b> Growth in demand for higher-value experiences, linked with 'quality of place', food and drink offer, etc. Severe short-term disruption (although potentially high domestic demand in 2021) and potential longer-term changes in demand for business travel. Changing working patterns increasing demand for short breaks.</li> </ul>	<ul style="list-style-type: none"> <li>The sector is competitive and market-driven, within a framework characterised by national health and safety and other standards and generally flexible labour markets</li> <li>Transitional Brexit impacts, associated with access to overseas labour.</li> </ul>
Social	Environmental
<ul style="list-style-type: none"> <li><b>Labour flexibility</b> is characteristic of the industry, which has had a strong record in increasing jobs in recent years</li> <li>Historically, tourism is an important employer in entry-level occupations. Despite the opportunities in automation noted under Technology factors, personal service likely to remain important</li> </ul>	<ul style="list-style-type: none"> <li>Transport decarbonisation, leading to rising costs, especially for air travel – potentially impacting overseas demand, but driving demand for domestic tourism</li> <li>Increasing interest in green tourism</li> <li>Natural environment a key asset for Kent, supporting quality of life and quality of place</li> </ul>

<sup>47</sup> BEIS (2019), Tourism Sector Deal (<https://www.visitbritain.org/sites/default/files/vb-corporate/Documents-Library/documents/tourism-sector-deal-28-june-2019.pdf>)

<sup>48</sup> Visit Britain (2019), The UK Tourism Productivity Gap



## Sector Skills Summary Analysis – Financial and Professional Services

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. A very large sector that accounts for 18% of employment in Kent and Medway (132,500 jobs), the highest job volumes being in Medway, Maidstone, Tonbridge and Malling, Tunbridge Wells and Dartford. (it should be noted that, as defined in this report, the sector includes a wide range of business support and administrative services, including some manual activities).
2. The sector has a large number of microbusinesses and these account for 40% of all employment in the sector (compared with 34% across the economy as a whole).
3. The Finance & Business Services workforce has a much more highly qualified workforce profile than the 'all industry' average, with 53% of all workers qualified to at least Level 4. More than half of the workforce are in managerial, professional or associate professional occupations.
4. Employment grew slightly from 2017, and is forecast to show further modest growth to 2027.

### 2. Key messages from national and other reports (PESTLE analysis)

1. Technology plays an important role in the sector, with high and growing levels of digitalisation and automation. This is likely to underpin the sector's relatively high levels of productivity and probably helped the sector be quite resilient during Covid-19, which may point to further flexible working and use of digital technologies in future, underlining the importance of digital skills of a generalist or specialist nature.
2. The sector is a large graduate employer, and so would benefit from higher levels of graduate retention within Kent, and could be fertile ground for higher and degree apprenticeships. There is evidence of this activity growing in some parts of the sector in recent years.
3. The anticipated growth of remote and flexible working could make the traditional Kent commuter workforce more connected to local professional and career opportunities. This may increase the potential talent pool available to local businesses, but also make more local people accessible to London based companies working more flexibly.

**Figure 1: Key Statistics**

Financial and Professional Services	Sector	All Inds		Sector	All Inds
Enterprises 2019	20,190		Change in empl (2015-2019)	-1,500	
Employment	132,500		% Change	-1%	+2%
Employment as a % of all inds	18%		Forecast change (2020-2027)	+2,500	
			% Forecast Change	+2%	+2%
% microbusinesses (0-9 empl)	94%	90%	% empl microbusinesses (estimate)	40%	34%
% medium/large (50+)	1%	2%	% empl in medium/large (estimate)	40%	41%

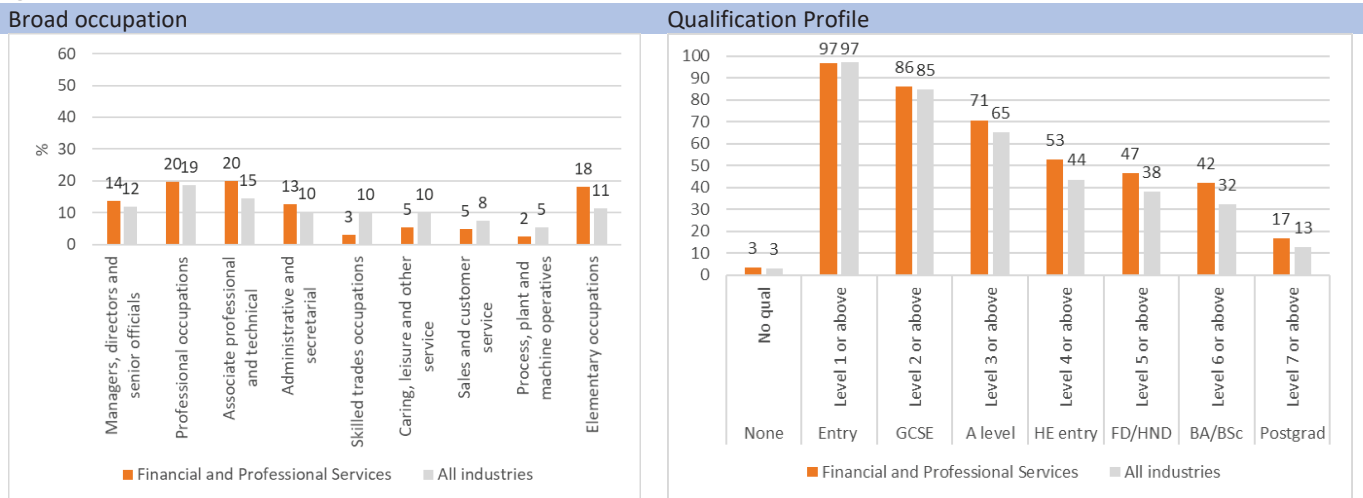
**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

**Figure 2: Local Concentrations**

Financial and Professional Services	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
Employment LQ (vs GB)	0.7	0.7	0.9	0.6	1.1	0.9	0.9	1.1	0.7	0.5	1.0	1.1	0.9	0.8	0.8	0.9	1.0
Employment	9,000	10,000	12,000	5,000	9,000	6,500	15,000	12,000	7,500	4,300	13,500	12,000	117,000	15,500	132,500	301,000	6,500,500
Businesses	2,050	1,480	1,225	855	930	970	2,045	2,225	1,140	930	2,030	2,250	18,120	2,070	20,190	47,555	755,300

Sources: Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

Notes: Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**


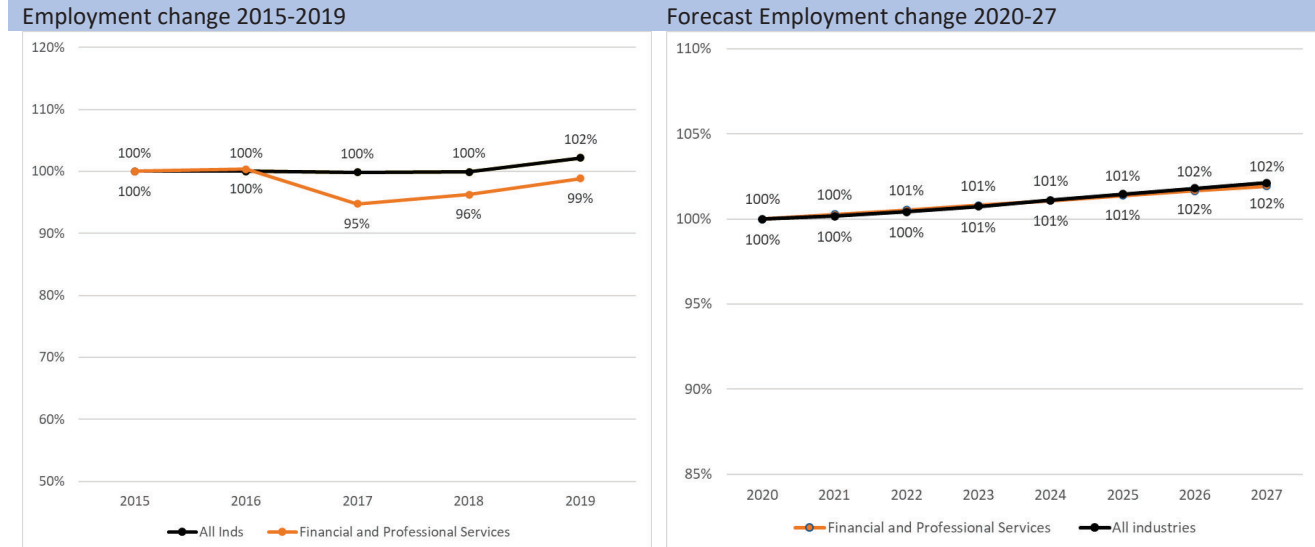
Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Figure 4: Top 20 Occupations (SOC 2010)**

Financial & Professional Services	% of sector	Est. empl
9233 Cleaners and domestics	6%	7,500
4122 Bookkeepers, payroll mngrs and wages clerks	4%	4,700
3534 Finance and investment analysts and advisers	3%	4,300
2131 Financial mngrs and directors	3%	3,600
4159 Other administrative occupations n.e.c.	3%	3,600
2423 Management consultants and business analysts	2%	3,200
9241 Security guards and related occupations	2%	2,900
5213 Gardeners and landscape gardeners	2%	2,900
3545 Sales accounts and business development mngrs	2%	2,600
2421 Chartered and certified accountants	2%	2,600
3538 Financial accounts mngrs	2%	2,300
2424 Business and financial project mngmnt professionals	2%	2,200
3562 Human resources and industrial relations officers	2%	2,100
2132 Marketing and sales directors	2%	2,100
2413 Solicitors	2%	2,100
4123 Bank and post office clerks	2%	2,100
2150 Financial institution mngrs and directors	1%	1,900
3543 Marketing associate professionals	1%	1,700
2135 Human resource mngrs and directors	1%	1,700
1259 mngrs and Prprtrs in other services n.e.c.	1%	1,600
<b>Sector employment in top 20 occupations (estimate)</b>	<b>44%</b>	<b>57,700</b>

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**



Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

Sector definition used in statistics (SIC2007)	
SIC 64 Financial service activities	SIC 75 Veterinary activities
SIC 65 Insurance & pensions	SIC 77 Rental & leasing
SIC 66 Auxiliary services to finance & insurance	SIC 78 Employment activities
SIC 69 Legal & accounting activities	SIC 79 Travel agents, tour operators etc
SIC 70 Head office activities and management consultancy	SIC 80 Security and investigation activities
SIC 71 Architectural and related engineering activities	SIC 81 Services to buildings and landscape activities
SIC 72 Scientific research & development	SIC 82 Office administration, office and business support activities

SIC 73 Advertising and market research  
SIC 74 Other professional, scientific & technical services

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.

Policy and political	Technological
<ul style="list-style-type: none"> <li>This sector covers a wide range of activities, including banking, financial and insurance services, law, accountancy, HR and recruitment services and consultancy, as well as general business admin and support</li> <li>It is often overlooked from a government sector policy point of view – although it contains several sectors (especially financial services and law) in which the UK has a comparative advantage - although note the current Government review of fintech (cited under Technological factors)</li> </ul>	<ul style="list-style-type: none"> <li>Technology change has already had a significant impact over the past 20 years (e.g., the growing provision of online banking, insurance and, increasingly, legal services) and the growth of 'digital only' businesses</li> <li>Accelerating deployment of machine learning. Two-thirds of UK financial services firms use machine learning, mainly in fraud detection and anti-money laundering, as well as in customer service and credit risk assessment<sup>49</sup>. But the use of machine learning for more sophisticated functions is likely to increase substantially. While the impact of automation has principally been greater in relation to 'blue collar' jobs to date, it is estimated that around 25% of business research professional jobs were 'vulnerable to automation' in 2017<sup>50</sup>.</li> <li>However, the UK has a large and growing fintech industry, which the UK Government's current fintech review seeks to encourage through regulatory and other support<sup>51</sup>.</li> </ul>
Economic	Legal and regulatory
<ul style="list-style-type: none"> <li><b>Output and jobs:</b> The sector accounts for 125,000 jobs in Kent and Medway, and generates output of around £6.1 billion, making it one of the largest sector groups in the county</li> <li><b>Businesses:</b> There are around 21,000 businesses, around 58% of which are in the professional scientific and technical sector. Banking and finance tends to be more consolidated and dominated by larger national firms.</li> <li><b>Productivity:</b> Financial and professional services offer generally higher than average productivity nationally. Relatively weak productivity growth has paralleled the UK's general productivity challenge, although greater use of automation is likely to strengthen this<sup>52</sup>.</li> <li><b>Markets and demand:</b> The sector has been generally resilient during the Covid-19 pandemic, adapting well to remote working and with limited exposure to cyclical consumer demand</li> </ul>	<ul style="list-style-type: none"> <li>The regulatory framework varies substantially within financial, professional and business services. Some parts of the sector are highly regulated by government and professional bodies (e.g., law, banking and accountancy); other business services activities are largely unrestricted and barriers to entry are lower.</li> <li>The UK professional and business services sector is generally regarded as highly competitive in international terms<sup>53</sup>.</li> <li>Regulation took place primarily at national, rather than EU level, so regulatory impacts of Brexit likely to be modest. However, changes in the ability of UK firms to offer services in Europe may impact over the medium term, perhaps especially for firms without an existing international structure.</li> </ul>

<sup>49</sup> Bank of England (2020), Machine learning in UK financial services (<https://www.bankofengland.co.uk/report/2019/machine-learning-in-uk-financial-services>)

<sup>50</sup> ONS, Which occupations are at highest risk of being automated?

(<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/whichoccupationsareathighestriskofbeingautomated/2019-03-25>)

<sup>51</sup> HM Treasury (2021), UK's global fintech role bolstered by new review (<https://www.gov.uk/government/news/uks-global-fintech-leadership-bolstered-by-new-review>)

<sup>52</sup> Law Society Gazette (2015), Professional services blamed for productivity failings (<https://www.lawgazette.co.uk/practice/professional-services-blamed-for-uk-productivity-failings/5048330.article>)

<sup>53</sup> Parliament, DExEU Committee (2018), Sector report: Professional and business services (<https://www.parliament.uk/globalassets/documents/commons-committees/Exiting-the-European-Union/17-19/Sectoral-Analyses/28-Professional-and-Business-Services-Report-.pdf>)

## Workforce Skills Evidence Base

Social	Environmental
<ul style="list-style-type: none"> <li>Typically, the sector is a large graduate employer (and has lost significant volumes of customer-facing and processing jobs)</li> <li>Trend towards greater remote working is likely to impact the sector substantially. This may be especially relevant for Kent, given the county's relatively high commuting numbers and the opportunity to 'retain' them in the county</li> <li>Extension of working lives likely to be important, especially for experienced/ more highly qualified professionals, for whom work may be enable through more remote working<sup>54</sup>.</li> </ul>	<ul style="list-style-type: none"> <li>Modest impacts in direct terms, other than general pressures to decarbonise through business travel, etc.</li> <li>Growing opportunities associated with green finance to support long-term net zero goals<sup>55</sup>.</li> </ul>

<sup>54</sup> Deloitte (2019), Tapping into the ageing workforce in financial services (<https://www2.deloitte.com/uk/en/insights/industry/financial-services/aging-workforces-baby-boomers-financial-services.html>)

<sup>55</sup> Green Finance Institute (<https://www.greenfinanceinstitute.co.uk/>)

## Sector Skills Summary Analysis – Health and Social Care

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. Health and social care is a large sector, accounting for 13% of employment (100,000 jobs). Small establishments are far less common than in the economy as a whole and nearly half of the workforce is employed in medium and large organisations (49% v 41% for the economy as a whole).
2. The highest numbers of jobs are in Medway, Canterbury, Thanet, Ashford, Maidstone and Tunbridge Wells.
3. Employment in the sector has a dual structure with a significant proportion of highly qualified professionals (28%) and a large number of people employed in personal service occupations (38%) with intermediate level qualifications.
4. Employment in the sector has grown steadily in recent years and is forecast to grow by around a further 7% by 2027, a requirement of 7,000 additional workers.

### 2. Key messages from national and other reports (PESTLE analysis)

1. Public policy is a major driver of change in health and care, so anticipated changes to the NHS and social care system need to be factored into future workforce and skills requirements. The workforce and skills implications of the February 2021 Health and Social Care White Paper are not yet understood.
2. In Kent and Medway there has historically been a shortage of medical professionals, now being addressed by the new Kent and Medway Medical School. Forecast employment growth in the sector may require the scale and range of KMMS activities to increase, along with those of existing HE and FE providers.
3. Brexit may impact on skills shortages: there is evidence of a fall in the numbers of health professionals from EU countries.
4. Technological change will affect how services are delivered and the skills required to deliver them. Likely growth areas include genomics, remote care, supported self-management, greater use of data and artificial intelligence.
5. Covid-19 has put pressure on the sector and may lead to changes in future, an expansion of public health being one possibility, for example.

**Figure 1: Key Statistics**

Health & Social Care	Sector	All Inds		Sector	All Inds
Enterprises 2019	2,745		Change in empl (2015-2019)	+1,000	
Employment	100,000		% Change	+1%	+2%
Employment as a % of all inds	13%		Forecast change (2020-2027)	+6,500	
			% Forecast Change	+7%	+2%
% microbusinesses (0-9 empl)	68%	90%	% empl microbusinesses (estimate)	14%	34%
% medium/large (50+)	6%	2%	% empl in medium/large (estimate)	49%	41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

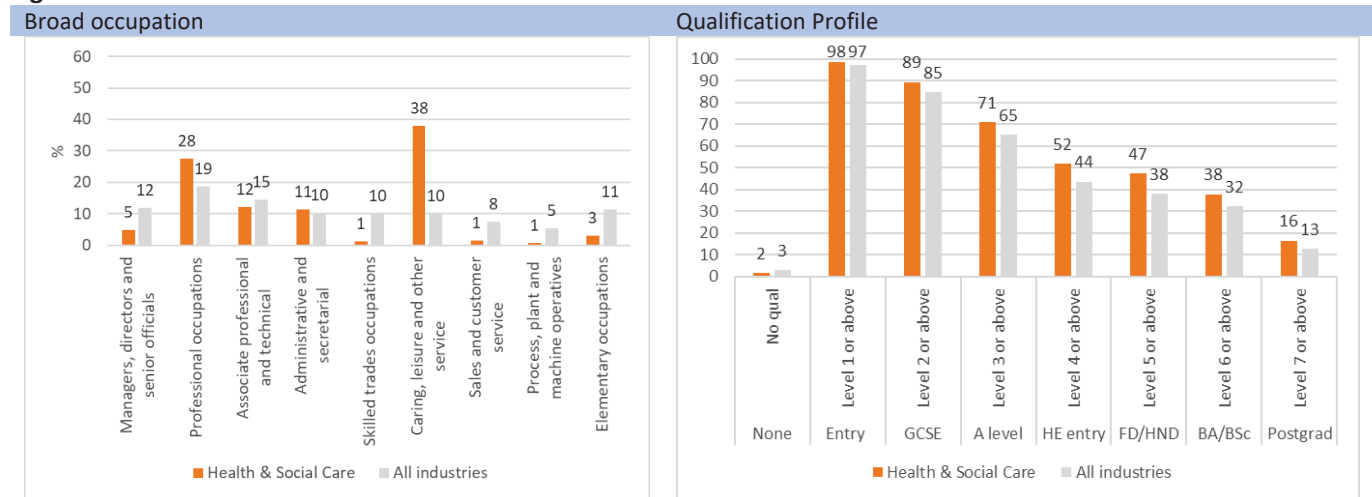


**Figure 2: Local Concentrations**

	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
<b>Health &amp; Social Care</b>																	
Employment LQ (vs GB)	1.2	1.3	1.0	1.0	1.0	0.8	1.0	0.8	0.7	1.6	0.6	1.1	1.0	1.2	1.0	1.1	1.0
Employment	9,500	11,500	8,000	4,800	5,000	3,500	10,500	5,500	4,500	9,000	5,000	8,000	85,000	15,000	100,000	229,500	3,971,000
Businesses	230	250	155	150	145	150	290	215	175	165	215	240	2,380	365	2,745	6,430	100,530

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**


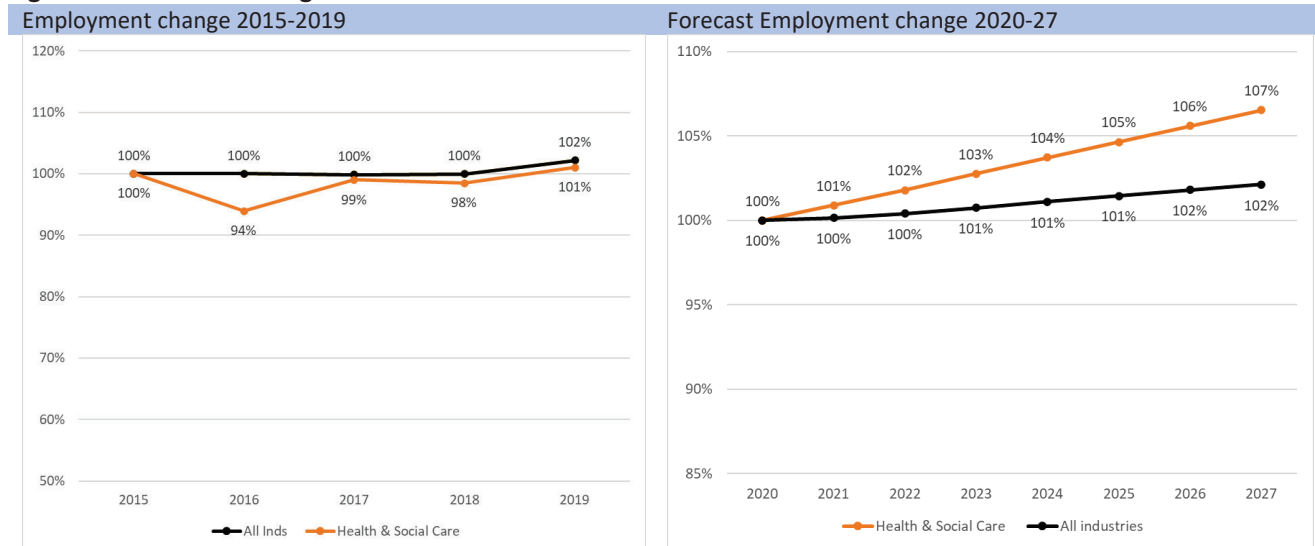
Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Figure 4: Top 20 Occupations (SOC 2010)**

Health & Social Care	% of sector	Est. empl
6145 Care workers and home carers	17%	17,300
2231 Nurses	14%	13,500
6141 Nursing auxiliaries and assistants	7%	6,700
2221 Medical practitioners	6%	5,600
4159 Other administrative occupations n.e.c.	3%	2,700
2442 Social workers	2%	2,200
6122 Childminders and related occupations	2%	2,200
6121 Nursery nurses and assistants	2%	2,000
4216 Receptionists	2%	2,000
6146 Snr care workers	2%	1,900
9233 Cleaners and domestics	2%	1,800
3239 Welfare and housing associate professionals n.e.c.	2%	1,600
4221 Medical secretaries	1%	1,300
6143 Dental nurses	1%	1,200
2221 Physiotherapists	1%	1,100
2215 Dental practitioners	1%	1,100
1242 Residential, day and domic care mngrs and prprtrs	1%	1,100
2229 Therapy professionals n.e.c.	1%	1,100
2219 Health professionals n.e.c.	1%	1,100
2232 Midwives	1%	1,000
<i>Sector employment in top 20 occupations (estimate)</i>	<i>69%</i>	<i>68,500</i>

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**



Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Sector definition used in statistics (SIC2007)**

SIC 86 Human health activities  
SIC 87 Residential care  
SIC 88 Social work

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.

Policy and political	Technological
<ul style="list-style-type: none"> <li>Health and social care is highly influenced by public policy, with the majority of employment either in the public sector (NHS organisations and local authorities) or in organisations operating in whole or part under contract to them. The workforce and skills implications of the February 2021 White Paper<sup>56</sup> need to be assessed.</li> <li>The NHS Long Term Plan seeks to boost out-of-hospital care and reduce the divide between primary and community health services; reduce pressure on emergency services; and support an expansion of digitally-enabled services<sup>57</sup>.</li> <li>In Kent and Medway, there has historically been a shortage of medical professionals, in the context of rapid population growth and higher wages/ better career opportunities offered in London. Policy seeks to address this gap through increased professional entry (e.g., through Kent and Medway Medical School)</li> <li>The sector is susceptible to large scale reorganisation and reform, driven by a strong policy lead and by its 'systemic' nature (i.e. change in one part of the system has public policy impacts on others).</li> </ul>	<ul style="list-style-type: none"> <li>Investment in new technology is central to achieving the ambitions of the NHS Long Term Plan. Key technology trends include<sup>58</sup>: <ul style="list-style-type: none"> <li>Genomics and precision medicine, targeting treatments at specific sub-groups of patients, potentially making them more effective (note the cross-sectoral links with the life sciences sector in which Kent has strengths)</li> <li>Remote care, improving public access to care services and potentially enabling people to remain at home for longer</li> <li>Technology supported self-management, increasing patients' ability to support their own care with confidence</li> <li>Greater use of data in the research process (as well as from an administrative and management perspective). Building public and patient confidence in the use of personal data is an important challenge and opportunity.</li> <li>Advances in artificial intelligence in providing new analytical capacity for diagnosing and treating patients</li> </ul> </li> </ul>
Economic	Legal and regulatory
<ul style="list-style-type: none"> <li><b>Output and jobs:</b> The health and care sector generates around £2.84 billion in annual GVA in Kent and Medway and employs around 95,000 people</li> <li><b>Businesses:</b> There are around 4,300 businesses, although much of the employment base is in public sector organisations</li> <li><b>Productivity:</b> The NHS Long Term Plan notes that the NHS has been successful in achieving productivity growth ahead of the national average over the past decade, partly due to organisational efficiencies and use of technology. The Long Term Plan seeks to achieve annual productivity growth of 1.1% over the five-year Plan period.</li> </ul>	<ul style="list-style-type: none"> <li>Health and care services are obviously highly regulated, within a system that is subject to extensive public oversight.</li> <li>The UK's exit from the European Union has important implications for future workforce recruitment: in 2019, there were around 33,000 nurses from other countries in the EEA in the UK, but numbers have fallen in recent years<sup>59</sup>.</li> <li>More broadly, international recruitment remains very important in the light of the UK's difficulty in recruiting its 'own' staff into the profession – the number of patients per GP continues to grow, and around 40% of the London social care workforce is from overseas.</li> </ul>
Social	Environmental
<ul style="list-style-type: none"> <li>Social change is central to future demand in the health and care sector, as the population ages. Although the demographic shift is less severe in Kent than in other parts of the UK (as the county continues to grow its working age population at above-average rates), the trajectory is clear and underpins the context for health and social care reform.</li> </ul>	<ul style="list-style-type: none"> <li>Environmental considerations are minor in terms of the demand side...</li> <li>... but there are extensive opportunities to decarbonise the health and social care estate and systems<sup>60</sup>.</li> </ul>

<sup>56</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/960548/integration-and-innovation-working-together-to-improve-health-and-social-care-for-all-web-version.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/960548/integration-and-innovation-working-together-to-improve-health-and-social-care-for-all-web-version.pdf)

<sup>57</sup> NHS (2019), NHS Long Term Plan (<https://www.longtermplan.nhs.uk/>)

<sup>58</sup> King's Fund (2018), NHS at 70: What will new technology mean for the NHS and its patients? ([https://www.kingsfund.org.uk/sites/default/files/2018-06/NHS\\_at\\_70\\_what\\_will\\_new\\_technology\\_mean\\_for\\_the\\_NHS\\_0.pdf](https://www.kingsfund.org.uk/sites/default/files/2018-06/NHS_at_70_what_will_new_technology_mean_for_the_NHS_0.pdf))

<sup>59</sup> Health Foundation (2019), Health and Social Care Workforce: Priorities for the next government (<https://www.health.org.uk/sites/default/files/2019-11/GE04-Health%20and%20social%20care%20workforce.pdf>)

<sup>60</sup> NHS (2020), Delivering a net zero NHS (<https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2020/10/delivering-a-net-zero-national-health-service.pdf>)

## Sector Skills Summary Analysis – Energy, Utilities and Environmental

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. The Energy & Utilities sector is a relatively small employment sector within Kent & Medway accounting for just 1% of jobs. Employment in the sector is relatively concentrated in medium and large employers (50+ employees), who employ 39% of the workforce (compared with 41% across all industries). Major employers include Dungeness power station, which typically has over 600 workers on site at any given time.
2. Sector employment has grown by 2% in recent years and is forecast to grow by a further 2% by 2027.
3. There are local concentrations of energy & utility sector employment in Tonbridge & Malling, Folkestone & Hythe and Swale.
4. The sector workforce is not especially skewed towards one particular occupational group and is broadly similar to the all-industry average. However, workers are slightly less likely to have higher and degree-level qualifications.

### 2. Key messages from national and other reports (PESTLE analysis)

1. A major driver of skills needs will be the deployment of new technologies in response to the drive for increased decarbonisation of the economy and improved environmental performance through, for example, the adoption of circular economy approaches.
2. Specific technologies that will affect skills demand include renewable generation, biofuels, energy efficiency, low-carbon heat networks and smart energy systems.
3. In Kent and Medway high levels of house building and infrastructure development will further drive demand for such skills, as will any major drive for household and commercial decarbonisation conversion.
4. Workforce diversity has traditionally been a challenge, especially in terms of gender. The age profile of the sector is also a concern, with many older workers needing to be replaced in the coming years.

**Figure 1: Key Statistics**

Energy, Utilities and Environmental Tech Sector		All Inds	Sector		All Inds
Enterprises 2019	370		Change in empl (2015-2019)	+1,500	
Employment	10,000		% Change	+18%	+2%
Employment as a % of all inds	1%		Forecast change (2020-2027)	+400	
			% Forecast Change	+4%	+2%
% microbusinesses (0-9 empl)	85%	90%	% empl microbusinesses (estimate)	28%	34%
% medium/large (50+)	3%	2%	% empl in medium/large (estimate)	39%	41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

**Figure 2: Local Concentrations**

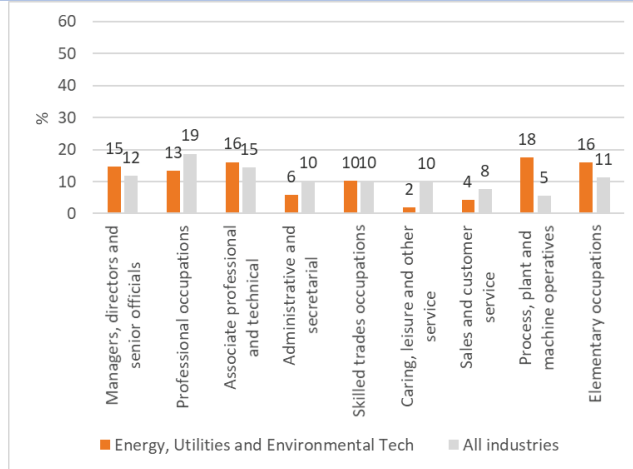
Energy, Utilities and Environmental Tech	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
Employment LQ (vs GB)	0.9	0.3	1.0	0.7	1.8	0.6	1.1	0.4	1.7	1.0	2.2	0.4	1.0	1.3	1.1	0.9	1.0
Employment	700	200	800	300	900	300	1,100	300	1,100	600	1,800	300	8,000	1,600	10,000	18,500	391,000
Businesses	40	25	20	25	15	20	45	30	45	20	40	15	335	35	370	890	14,140

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

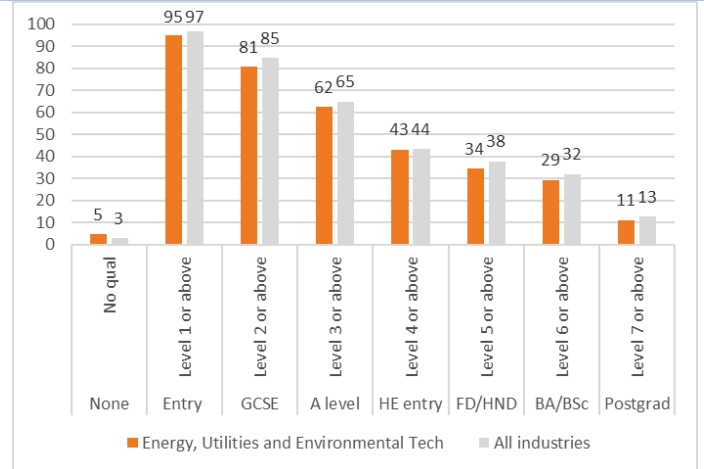
**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**

**Broad occupation**



**Qualification Profile**



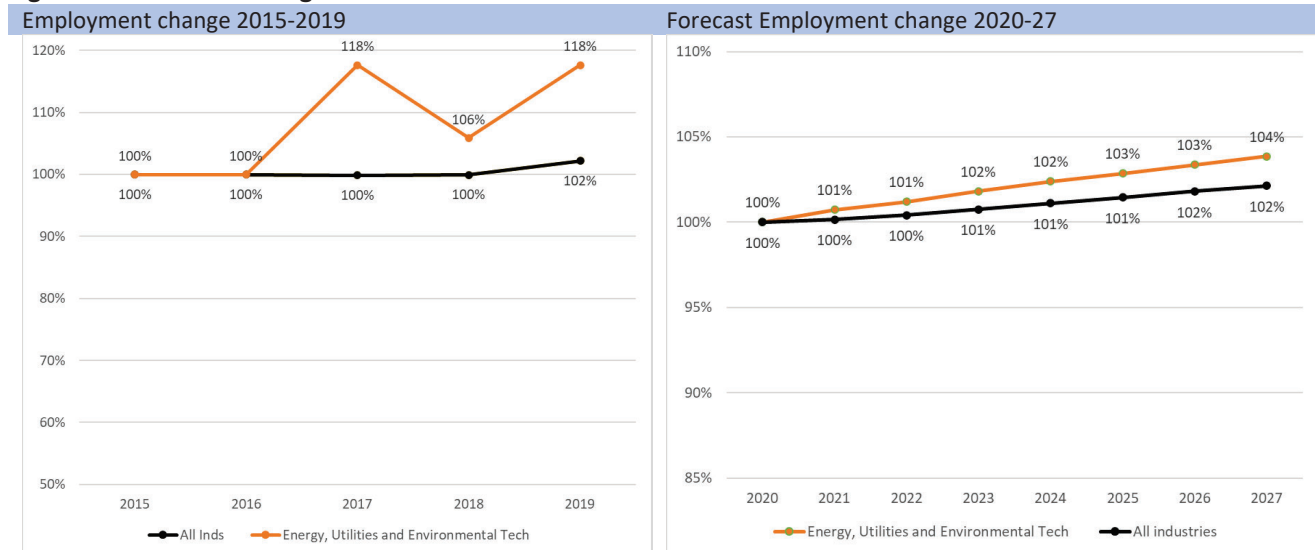
Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Figure 4: Top 20 Occupations (SOC 2010)**

Energy, Utilities & Environmental Tech	% of sector	Est. empl
9235 Refuse and salvage occupations	6%	600
8221 Large goods vehicle drivers	5%	500
5241 Electricians and electrical fitters	3%	300
4159 Other administrative occupations n.e.c.	2%	200
2129 Engineering professionals n.e.c.	2%	200
3545 Sales accounts and business development mngrs	2%	200
5314 Plumbers and heating and ventilating engineers	2%	200
5223 Metal working production and maintenance fitters	2%	200
2121 Production mngrs and directors in manufacturing	2%	200
2424 Business and financial project mngmnt professionals	2%	200
7219 Customer service occupations n.e.c.	2%	200
2121 Civil engineers	2%	200
2123 Electrical engineers	2%	200
2123 Production mngrs and directors in mining and energy	1%	100
8149 Construction operatives n.e.c.	1%	100
9260 Elementary storage occupations	1%	100
8126 Water and sewerage plant operatives	1%	100
7220 Customer service mngrs and supervisors	1%	100
2423 Management consultants and business analysts	1%	100
5249 Electrical and electronic trades n.e.c.	1%	100
<i>Sector employment in top 20 occupations (estimate)</i>	<i>43%</i>	<i>4,300</i>

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**



Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

#### Sector definition used in statistics (SIC2007)

SIC 05-09 Mining etc  
SIC 35 Electricity, Gas, Steam, and air conditioning supply  
SIC 36 Water collection, treatment, and supply  
SIC 37 Sewerage

SIC 38 Waste collection, treatment, and disposal activities; materials recovery  
SIC 39 Remediation activities and other waste management services.

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.



Policy and political	Technological
<p><b>Nature of the market:</b> The utilities market is complex and highly regulated and is shaped substantially by policy intervention. Pro-consumer regulation in utilities markets (favouring competition to drive down consumer prices), impacting on investment capacity – although Ofgem and Ofwat have recognised the need for workforce investment as factors in their most recent price reviews<sup>xxvi</sup>. Differential subsidy regimes can impact on the viability of different forms of renewable energy</p> <p><b>Decarbonisation:</b> The core policy goal is the need to meet the UK's 2050 net zero carbon targets. This will mean a major change through the decarbonisation of heating systems (currently about 85% of homes are heated by natural gas, and those that are not connected to the grid are likely to use higher-emission fuels, such as oil)<sup>xxvii</sup>. This is expected to drive demand for innovative solutions (see Technological factors) as well as substantial investment in household and commercial conversion.</p> <p><b>Circular economy:</b> Policy pressure (and the use of financial incentives) is driving demand to reduce waste volumes, increase recycling rates and support the productive re-use of materials.</p> <p><b>Development:</b> New development will drive demand for new utilities infrastructure (and opportunities for innovation). This is strongly influenced by planning policy.</p>	<p><b>Key drivers:</b> Decarbonisation and the need to increase the sustainability and diversity of energy supply.</p> <p><b>Key technologies:</b></p> <ul style="list-style-type: none"> <li>• Renewable energy generation. Kent already has a substantial presence in offshore wind; there is also potential to increase generation through solar power, potentially with increased local value capture through the use of public and community buildings<sup>xxviii</sup>.</li> <li>• Development of biofuels (linked with employment opportunities in the land-based sector)</li> <li>• Improved energy efficiency within the existing building stock through retrofit measures (linked with employment opportunities in the construction sector)</li> <li>• Low-carbon heat networks through the connection of combined heat and power plants. These are relatively under-used in the UK market, and there may be potential for further exploitation given the extent of new development in Kent and Medway</li> <li>• Smart energy systems to manage demand and reduce waste (both at 'system-wide' level and within households), linked with the use of digital enabling technologies.</li> </ul>
Economic	Legal and regulatory
<p><b>Output and employment:</b> The sector generates annual GVA of around £1.47 billion in Kent and Medway, although accounts for a modest number of jobs (c.8,800). Productivity is very high, at around £160k per filled job.</p> <p><b>Markets and enterprises:</b> There are relatively few employers (c.530 businesses in Kent and Medway) and the utilities market is quite strongly consolidated. As set out above, it is strongly influenced by the regulatory framework.</p> <p><b>Supply chains:</b> Utilities and environmental activities will drive additional employment in other sectors (e.g. linked with construction and allied trades and transport).</p>	<p><b>Regulatory framework:</b> Linked with the policy drivers, continued orientation towards greater energy efficiency and the decarbonisation of the energy system, with a key role for the regulators (Ofgem, Ofwat) in managing consumer prices.</p>
Social	Environmental
<p><b>Workforce profile:</b> Key challenges highlighted by the Energy and Utilities Skills Partnership include diversity in workforce recruitment (in the context of a historically male-dominated workforce) and inspiring and managing recurring vacancies in the context of a 'constricted labour market'<sup>xxix</sup>.</p>	<p>Essentially, the overarching policy driver is environmental (alongside security of supply). Beyond these industry-wide drivers, Kent and Medway has access to relevant environmental assets in the form of wind and solar power and opportunities to exploit biofuels.</p>

## Sector Skills Summary Analysis – Life Sciences

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. Lifesciences is a relatively small sector in terms of employment but is viewed as strategically important for the future both nationally and for Kent and Medway.
2. 30% of employment is in larger businesses (41% all industries) and 32% in microbusinesses (34% all industries).
3. Employment in the sector in Kent & Medway declined between 2015 and 2019, mostly within the manufacturing part of the sector.
4. Forecasts suggest that the workforce is likely to be relatively stable over the next few years, although as the sector is small and specialist in nature, general econometric style employment models may be less accurate.
5. The sector workforce has above-average proportions of people in professional and associate professional occupations, and lower proportions of lower skilled jobs than in the economy as a whole. Around half the workforce are graduates and one in five have postgraduate qualifications.

### 2. Key messages from national and other reports (PESTLE analysis)

1. The sector has growth potential in Kent and Medway. National policy is looking to stimulate increased NHS collaboration, research and the exploitation of data to greater effect, while locally major sites like Discovery Park can play a key role. Discovery Park has now been designated an Enterprise Zone and Life Sciences Opportunity Zone and is exploring an expansion of accelerated manufacturing through a new Strength in Places bid.
2. Post-Covid Government policy may further strengthen the sector, and drive demand for skilled labour, if there is increased emphasis on R&D and manufacturing in the UK.
3. The sector is generally a highly qualified one and new and emerging skills needs for this very sophisticated workforce seem likely to include those driven by technological change in areas like computing-driven research, digital technology more generally, the integration of patient and population health data, and connected medical devices.
4. As with the wider economy, decarbonisation will be a key theme in the coming years and may have an impact on skills, but life sciences has a relatively low carbon footprint compared to other industries.

**Figure 1: Key Statistics**

Life Sciences	Sector	All Inds		Sector	All Inds
Enterprises 2019	185		Change in empl (2015-2019)	-750	
Employment	4,300		% Change	-15%	+2%
Employment as a % of all inds	1%		Forecast change (2020-2027)	-100	
			% Forecast Change	-1%	+2%
% microbusinesses (0-9 empl)	86%	90%	% empl microbusinesses (estimate)	32%	34%
% medium/large (50+)	3%	2%	% empl in medium/large (estimate)	30%	41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

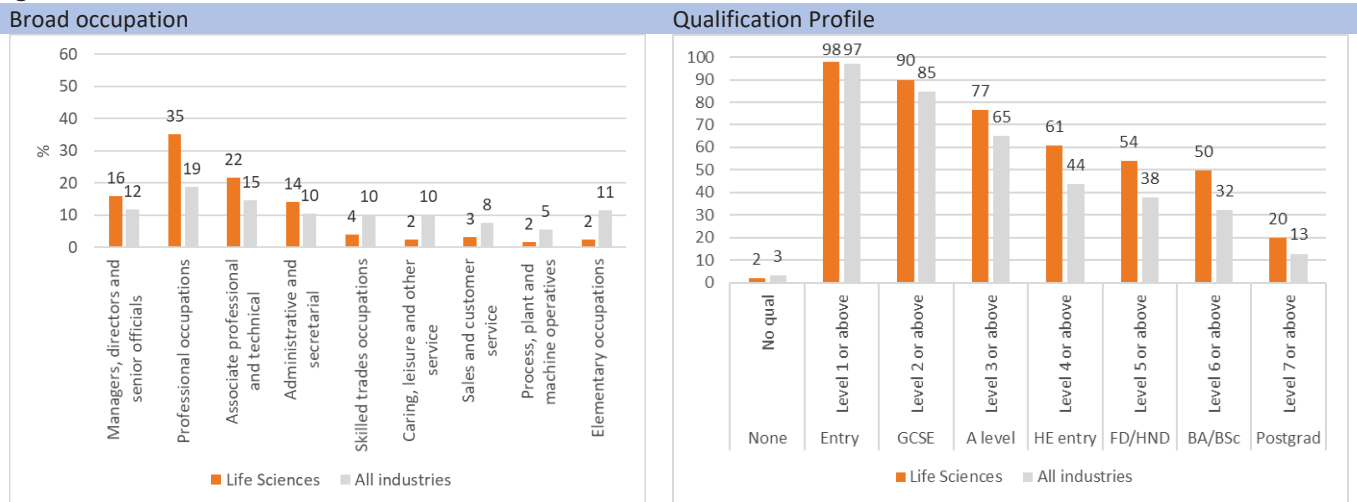
**Figure 2: Local Concentrations**

Life Sciences	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
Employment LQ (vs GB)	1.4	0.1	0.3	5.1	0.1	0.6	0.1	1.8	1.4	0.2	0.5	0.5	0.8	0.2	0.8	0.8	1.0
Employment	600	100	100	1,400	<50	200	100	700	600	100	300	200	4,000	100	4,300	9,500	226,000
Businesses	15	20	10	40	5	10	15	15	20	15	10	10	170	15	185	435	10

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**

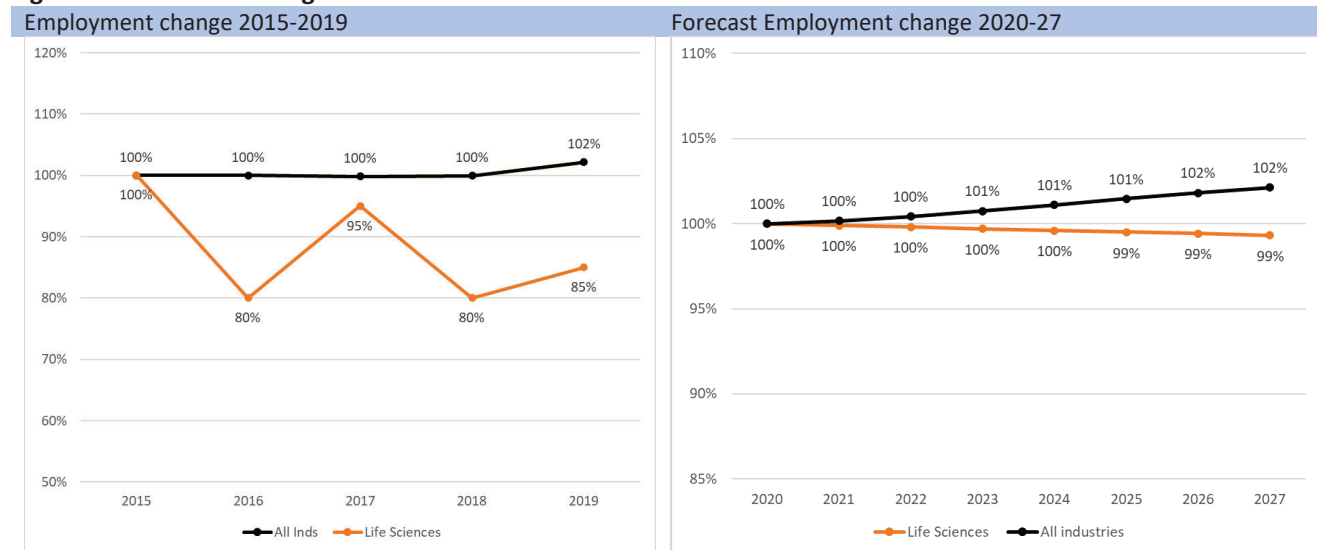


Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Figure 4: Top 20 Occupations (SOC 2010)**

Life Sciences	% of sector	Est. empl
2112 Biological scientists and biochemists	7%	300
3545 Sales accounts and business development mngrs	4%	200
2111 Chemical scientists	3%	100
2119 Natural and social science professionals n.e.c.	3%	100
3111 Laboratory technicians	3%	100
8114 Chemical and related process operatives	3%	100
1121 Production mngrs and directors in manufacturing	3%	100
2150 Research and development mngrs	2%	100
4159 Other administrative occupations n.e.c.	2%	100
2129 Engineering professionals n.e.c.	2%	100
2462 Quality assurance and regulatory professionals	2%	100
2113 Physical scientists	2%	100
3539 Business and related associate professionals n.e.c.	2%	100
9134 Packers, bottlers, canners and fillers	2%	100
2136 Programmers and software development professionals	2%	100
2424 Business and financial project mngmnt professionals	2%	100
1139 Functional mngrs and directors n.e.c.	1%	100
5449 Other skilled trades n.e.c.	1%	100
2133 IT specialist mngrs	1%	100
2426 Business and related research professionals	1%	100
<b>Sector employment in top 20 occupations (estimate)</b>	<b>50%</b>	<b>2,100</b>

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**

Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

#### Sector definition used in statistics (SIC2007)

SIC 21 Manufacturing of Pharmaceuticals  
 SIC 26 Manufacture of computers and technical equipment  
*(just code 2660 – irradiation, electromedical technical equipment)*  
 SIC 32 Other manufacturing  
*(just code 3250 - medical & dental instruments)*

SIC 72 Scientific Research  
*(just codes 7211 – R&D on biotechnology and 7219 Other RnD in natural sciences and engineering)*

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.

Policy and political	Technological
<p><b>Life Sciences Industrial Strategy:</b> The UK has a strong life sciences sector, and there is a supportive policy stance from Government. The Life Sciences Industrial Strategy was published in 2017 (ahead of the main Industrial Strategy) and was updated in 2020, with a focus on support for (inter alia)<sup>xxx</sup>:</p> <ul style="list-style-type: none"> <li>• <b>NHS collaboration</b>, to spread the rollout of innovations within the NHS and to increase joint working between the health system and life science research</li> <li>• <b>Business environment</b>, though the role of the regional Academic Health Science Networks and measures to support venture capital investment through tax incentives and the role of the British Business Bank</li> <li>• <b>The research base</b> and its interaction with clinical research</li> <li>• <b>Exploitation of data</b>, including overcoming regulatory barriers to the better use of population health data.</li> </ul> <p><b>Local/ regional initiatives:</b> Kent and Medway has benefited from several specific policy initiatives. These include the designation of Discovery Park as an Enterprise Zone and Life Science Opportunity Zone; financial incentives via Kent and Medway Business Fund; and (in the wider health sphere) Kent and Medway Medical School. A proposal has also been submitted to the Strength in Places Fund focused on accelerated manufacturing at Discovery Park.</p> <p><b>Potential post-Covid responses</b>, e.g. potential policy desire to increase domestic production capacity.</p>	<p><b>Computing ability driving down the cost, and increasing the effectiveness, of drug discovery</b>, as the potential to screen multiple samples and analyse complex data increases. This impacts on the <i>nature</i> of medical research (broadly speaking, increased data analysis and less biological or chemical experimentation) and opens up commercial opportunities for smaller research-driven businesses, freed from the high capital costs once borne by the big pharmaceutical firms.</p> <p><b>Acceleration of medicines design and development</b>, using digital technology to speed the process from discovery to manufacturing. This is the key technology opportunity behind the Accelerated Medicines Design and Development Strength in Places Fund proposition.</p> <p><b>Integration and use of patient and population health data</b> in the medicines development process (requiring regulatory confidence and public trust).</p> <p><b>Development of connected medical devices.</b> This includes 'smart assistive technology', devices helping people perform tasks made harder by their condition, and, when enabled with sensors, help the user, or medical professionals, monitor performance.</p>
Economic	Legal and regulatory
<p><b>Scale:</b> The life sciences sector is small in Kent and Medway in absolute terms (c. 6,000 jobs when related activities are taken into account). However, it is highly concentrated, especially at Discovery Park, and is generally higher value and research intensive.</p> <p><b>Focus:</b> The sector in Kent and Medway is dominated by biopharmaceuticals, with a smaller medtech segment.</p> <p><b>Productivity:</b> Nationally, the sector is highly productive. Sector productivity in 2016 was estimated at £104,000 per filled job (more than double the UK average)<sup>xxxi</sup>, reflected in high volumes of spend on R&amp;D.</p>	<p><b>Pace of change:</b> Increased data volumes and range of new applications require regulatory responses (and the regulatory response will be important to maintain public confidence and support the UK's competitiveness). The Government's Regulatory Horizons Council is charged with responding to this.</p> <p><b>EU exit:</b> Impacts are likely to be relatively modest. Potentially some recruitment impacts, although likely mostly covered by the Shortage Occupation List.</p>
Social	Environmental
<p><b>2030 Skills Strategy:</b> Published by the Science Industry Partnership in 2020. This anticipates a need for 133,000 staff through to 2030, mostly focused on specialised and highly-skilled roles<sup>xxxii</sup>.</p> <p>Recruitment takes places nationally and internationally for higher-paid roles (and this has been made easier with the increase in remote working). But there are challenges in competing with the Golden Triangle for graduate talent.</p>	<p>Same decarbonisation goals and ambitions apply as in other sectors. However, the life sciences carbon footprint is relatively modest and ought to be further mitigated through the greater application of digital technology.</p>

## Sector Skills Summary Analysis – Creative & Cultural Industries

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. A small sector, accounting for only 2% of employment. Micro-businesses predominate, making up 95% of companies (compared with only 90% for the economy as a whole). Employment has fluctuated in recent years, but based on trends-based forecasts, is expected to grow in line with employment overall in the coming years, adding around 200 jobs.
2. The highest volumes of employment are in Sevenoaks, Maidstone and Tunbridge Wells.
3. The most common types of jobs are professional and associate professional and technical occupations, both of which account for a much higher percentage of jobs than in the economy as a whole.
4. The sector workforce is better qualified than the overall workforce especially at level 4 and higher.

### 2. Key messages from national and other reports (PESTLE analysis)

1. A key structural factor in skills demand is the relatively high percentage of micro-businesses and freelancers, which means that 'market' for skills is much more about individuals than employers. This might also suggest that entrepreneurship and business management skills are an important need.
2. The pandemic has hit the sector especially hard, raising the question of whether there is a skills element associated with its recovery.
3. Technology is a major driver of skills demand. Sectoral boundaries are blurring, for example between entertainment, 'digital tech' and engineering.
4. Digitalisation, in particular, is impacting on skills demand: the expansion of film and TV streaming has increased demand for film and TV content, for example, and opening up new routes to market for a range of arts and creative practitioners.

**Figure 1: Key Statistics**

Creative & Cultural Industries	Sector	All Inds		Sector	All Inds
Enterprises 2019	2,920		Change in empl (2015-2019)	-500	
Employment	11,500		% Change	-4%	+2%
Employment as a % of all inds	2%		Forecast change (2020-2027)	+200	
			% Forecast Change	+2%	+2%
% microbusinesses (0-9 empl)	95%	90%	% empl microbusinesses (estimate)	51%	34%
% medium/large (50+)	1%	2%	% empl in medium/large (estimate)	25%	41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

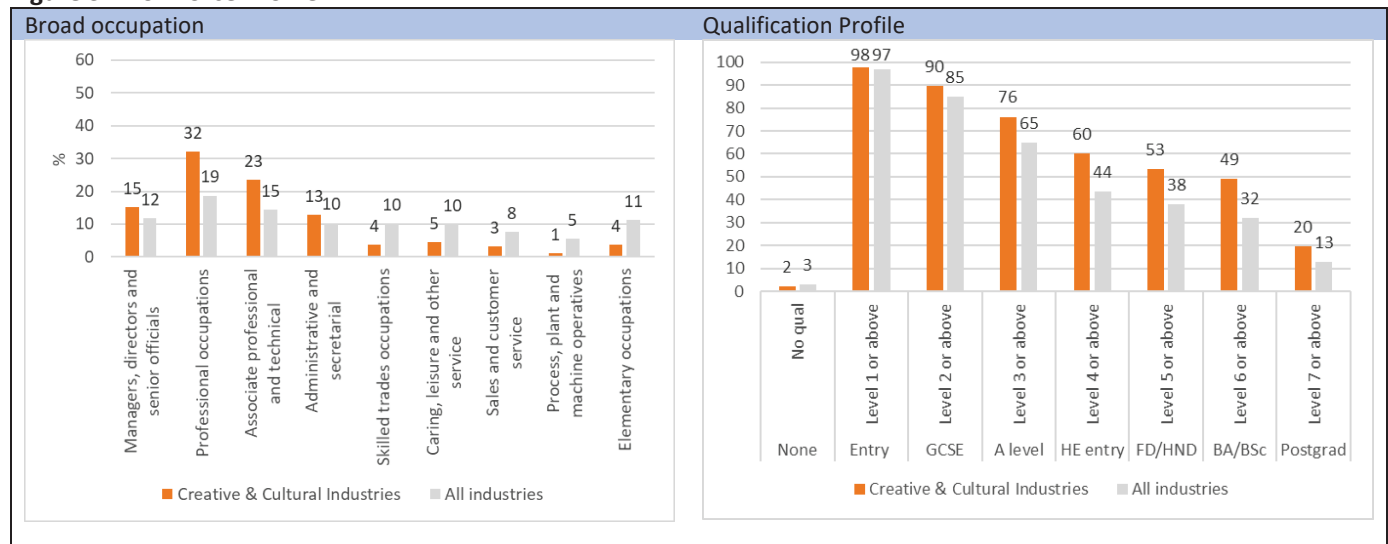
**Figure 2: Local Concentrations**

Creative & Cultural Industries	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
Employment LQ (vs GB)	0.6	0.7	0.4	0.7	0.7	0.4	0.8	1.4	0.4	0.6	0.8	1.1	0.7	0.5	0.7	0.8	1.0
Employment	800	1,100	500	600	700	300	1,500	1,600	500	600	1,100	1,400	10,500	1,100	11,500	29,500	688,000
Businesses	235	295	115	115	135	105	255	345	155	210	290	450	2,695	225	2,920	6,965	112,550

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**



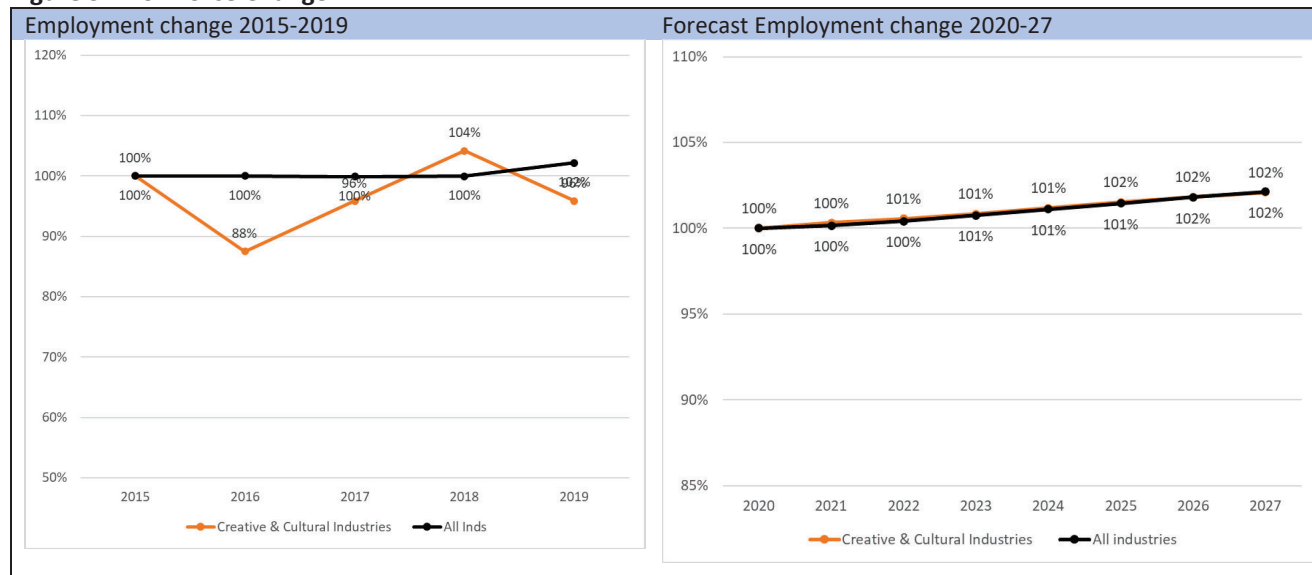
Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.



**Figure 4: Top 20 Occupations (SOC 2010)**

Creative and Cultural	% of sector	Est. empl
3416 Arts officers, producers and directors	8%	900
2471 Journalists, newspaper and periodical editors	6%	700
3412 Authors, writers and translators	5%	600
3421 Artists	5%	500
3417 Phtgrphrs, AV and broadcasting equipment oprtrs	4%	500
3543 Marketing associate professionals	4%	400
3421 Graphic designers	3%	400
3415 Musicians	3%	400
3545 Sales accounts and business development mngrs	3%	300
3413 Actors, entertainers and presenters	3%	300
2473 Advertising accounts mngrs and creative directors	2%	300
1259 Mngrs and Prprtrs in other services n.e.c.	2%	300
2132 Marketing and sales directors	2%	300
2136 Programmers and software development professionals	2%	200
4159 Other administrative occupations n.e.c.	2%	200
3422 Product, clothing and related designers	2%	200
2134 Advertising and public relations directors	1%	100
2131 Financial mngrs and directors	1%	100
5323 Painters and decorators	1%	100
4135 Library clerks and assistants	1%	100
<b>Sector employment in top 20 occupations (estimate)</b>	<b>60%</b>	<b>77,400</b>

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**


Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

Sector definition used in statistics (SIC2007)	
SIC 32 Other manufacturing (just code 3212)	SIC 73 Advertising etc (just codes 7311, 7312)
SIC 58 Publishing activities (just codes 5814, 5819)	SIC 74 Other professional services (just codes 7410, 7420, 7430)
SIC 59 Film & Music	SIC 85 Education (just code 8552)
SIC 60 Broadcasting	SIC 90 Arts & Entertainment
SIC 71 Architecture & related (just code 7111)	SIC 91 Libraries, Archives, Museums, and other cultural activities

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.

Policy and political	Technological
<p><b>Long term</b></p> <ul style="list-style-type: none"> <li>The creative industries operate within a 'mixed economy', within which public sector investment plays an important role<sup>61</sup>. This includes significant public funding alongside philanthropic and commercial resources; and investment in key cultural infrastructure (e.g., museums, theatres and galleries)</li> <li>The Culture White Paper sets out a commitment to public engagement in the arts and to a distribution of funds across England</li> <li>There is political and policy recognition of the importance of the creative industries at national level</li> <li>Locally, the sector is supported at County level via the Cultural Transformation Board; at District level, promotion of the arts and creative industries forms a key component of several local economic development strategies, with strong links to community development and town centre regeneration</li> <li>There are important educational institutions in the county (e.g., UCA and the arts offer within the other universities and FE colleges).</li> </ul> <p><b>Short term</b></p> <ul style="list-style-type: none"> <li>The creative industries have been hard hit by the Covid-19 pandemic. In response, the Government launched the Cultural Recovery Fund to support institutions through the crisis.</li> </ul>	<ul style="list-style-type: none"> <li>Development of technology as a tool for creative production...</li> <li>Technology is helping to blur sectoral boundaries – e.g., the connections between gaming as a creative entertainment industry, 'digital tech' and applications in engineering.</li> <li>Vastly increased opportunities to reach much wider audience .... although this can be difficult to monetise</li> <li>Use of technology to increase appreciation/ experience of art</li> </ul>
Economic	Legal and regulatory
<ul style="list-style-type: none"> <li>The sector generates annual GVA of around £553 million and employs around 12,000 people.</li> <li>The economic footprint of cultural and creative activity is much greater than its formal sector definition, given its relationship with the visitor economy, leisure activity and 'sense of place' that is important in driving some location and investment decisions. There is also an overlap with 'digital' (e.g., creative media, gaming, etc.), and with educational institutions</li> <li>Key challenges include the fragmentation and fragility of parts of the sector, given its reliance on micro businesses and freelancers.</li> </ul>	<ul style="list-style-type: none"> <li>The sector is not highly regulated, and tends to be diverse and made up of a large number of individual practitioners.</li> <li>Brexit will impact on some groups through the increased difficulties of working and trading in Europe.</li> </ul>
Social	Environmental
<ul style="list-style-type: none"> <li>Workforce vulnerability associated with flexible working practices and high numbers of freelancers - During the current crisis, it has been noted that <i>"Income breakdown and lack of access to credit can wipe away much of the productive fabric"</i><sup>62</sup></li> </ul>	<ul style="list-style-type: none"> <li>The sector has a relatively low carbon intensity. However, pressure to reduce carbon footprints across venues and activity<sup>63</sup>.</li> <li>Positive relationships with local environmental quality (e.g., creative uses in built environment, etc.)</li> </ul>

<sup>61</sup> DCMS (2016), Culture White Paper

([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/510798/DCMS\\_The\\_Culture\\_White\\_Paper\\_3\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/510798/DCMS_The_Culture_White_Paper_3_.pdf))

<sup>62</sup> OECD (2020), Coronavirus and the creative sectors (<http://www.oecd.org/coronavirus/policy-responses/culture-shock-covid-19-and-the-cultural-and-creative-sectors-08da9e0e/>)

<sup>63</sup> Arts Council England (2019), Sustaining Great Art and Culture ([https://www.artscouncil.org.uk/sites/default/files/download-file/14-01-20%20Arts%20Council%20Environmental%20Report%20201819%20FINAL\\_3.pdf](https://www.artscouncil.org.uk/sites/default/files/download-file/14-01-20%20Arts%20Council%20Environmental%20Report%20201819%20FINAL_3.pdf))

## Sector Skills Summary Analysis – Digital Tech

### 1. Key messages from the quantitative data analysis (Figs 1 to 5)

1. The sector employs 17,000 people in Kent and Medway and accounts for 2% of the total workforce. Microbusinesses (up to 9 staff) are more common than for all industry sectors: 96% of digital tech businesses are microbusinesses compared with 90% for the economy as a whole.
2. The largest numbers of people employed in the sector are found in West Kent, Maidstone and Medway, but only in Sevenoaks is the concentration of digital tech employment higher than for GB as a whole.
3. Employment in the sector is forecast to grow more quickly than for all industries in the period to 2027.
4. The sector workforce is more highly qualified than the Kent and Medway workforce overall and there are very few low-skilled jobs.
5. 60% of the sector workforce are qualified to Level 4 or higher, and 48% to first degree level (compared with 44% and 32% for the economy as a whole).

### 2. Key messages from national and other reports (PESTLE analysis)

1. Digital skills demand is strong from across the whole economy, not just the tech sector *per se*, as growing numbers of sectors digitalise their activities. The growth of flexible working and the growth of online business activities are more recent examples of key drivers of digital skills.
2. Growth business areas include the rapid adoption of new retailing, entertainment and communications platforms, and the expansion of technologies to improve environmental performance and enable low carbon operations.
3. Brexit could significantly reduce access to international talent.
4. Workers in the tech sector continually need to retrain and adapt their skills to match evolving technologies, making professional updating a priority for workers in the sector.
5. Workforce diversity is major challenge, gender being just one aspect of this, given that the workforce is predominantly male.

**Figure 1: Key Statistics**

Digital Tech	Sector	All Inds		Sector	All Inds
Enterprises 2019	4,465		Change in empl (2015-2019)	<100	
Employment	17,000		% Change	<1%	+2%
Employment as a % of all inds	2%		Forecast change (2020-2027)	+600	
			% Forecast Change	+4%	+2%
% microbusinesses (0-9 empl)	96%	90%	% empl microbusinesses (estimate)	66%	34%
% medium/large (50+)	0%	2%	% empl in medium/large (estimate)	14%	41%

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020 rounded to nearest 5. An Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy.

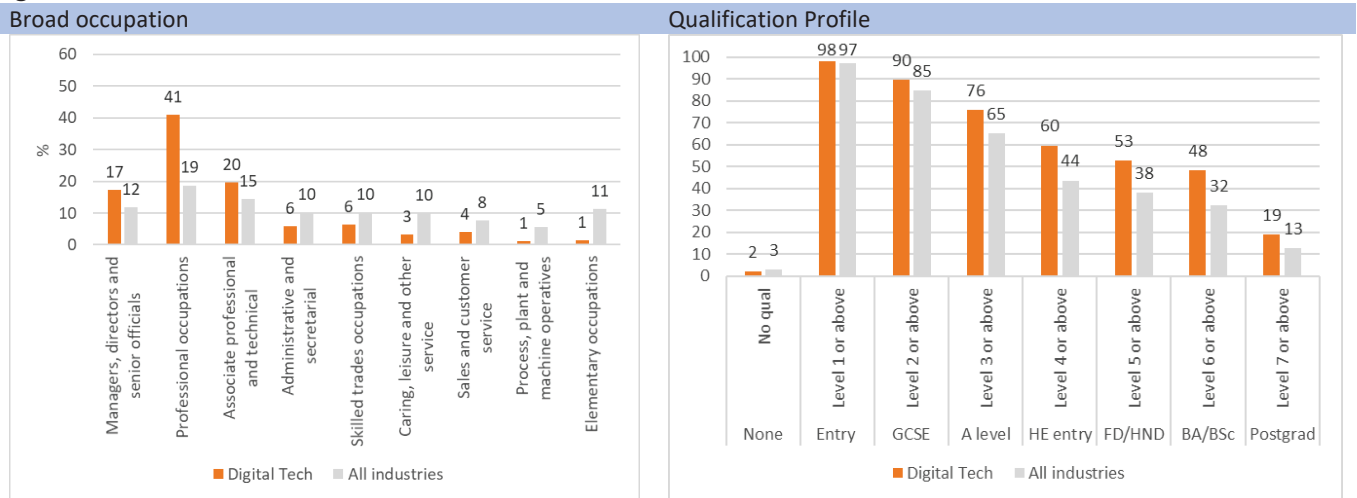
**Figure 2: Local Concentrations**

Digital Tech	Ashford	Canterbury	Dartford	Dover	Folkestone & Hythe	Gravesham	Maidstone	Sevenoaks	Swale	Thanet	Tonbridge & Malling	Tunbridge Wells	KCC area	Medway UA	Kent & Medway	SELEP	Great Britain
Employment LQ (vs GB)	0.7	0.6	0.9	0.4	0.5	0.4	0.7	1.2	0.4	0.5	0.9	0.9	0.7	0.5	0.7	0.7	1.0
Employment	1,400	1,500	1,900	500	700	500	1,900	2,100	700	700	1,900	1,600	15,000	1,800	17,000	38,000	1,054,500
Businesses	375	300	515	140	175	240	400	505	220	165	450	490	3,970	495	4,465	10,945	185,545

**Sources:** Employment - ONS BRES 2019. Rounded to nearest 100. Enterprise stats – ONS UK Business Counts 2020. Rounded to nearest 5.

**Notes:** Location Quotients are an Index of how much employment in a sector would be expected if the sector profile matched that of the UK. A value of 1.5 would indicate there is 50% more employment than expected. A value of 0.5 would indicate that there is half the employment expected.

**Figure 3: Workforce Profile**



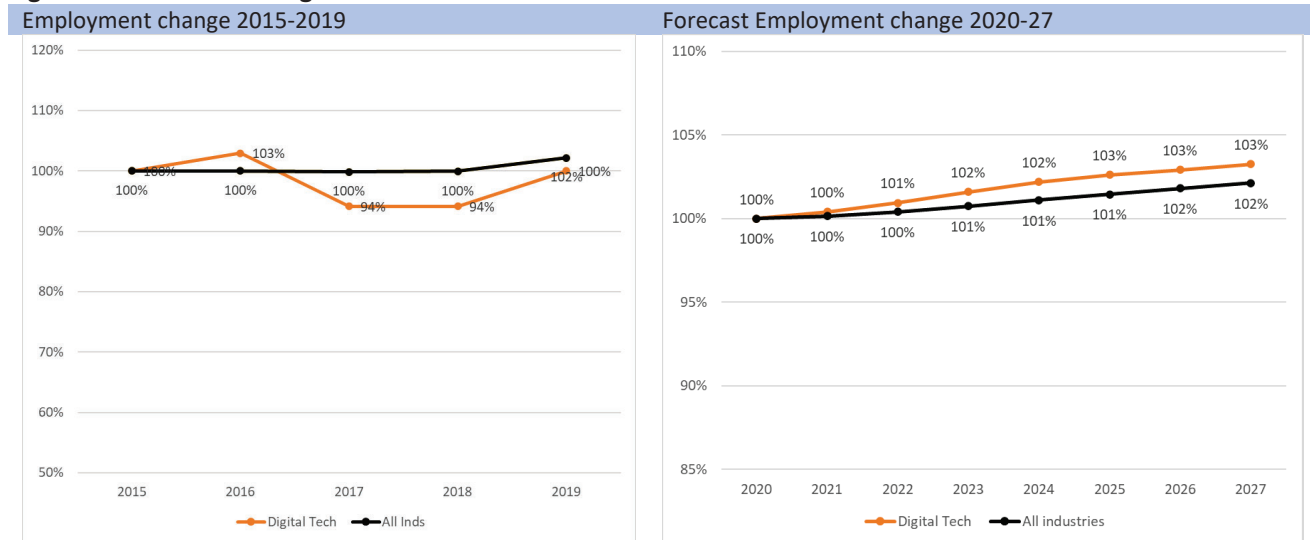
Source: Estimates derived from DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

**Figure 4: Top 20 Occupations (SOC 2010)**

Digital Tech	% of sector	Est. empl
2136 Programmers and software development professionals	15%	2,600
2139 IT and telecommunications professionals	21%	3,600
2133 IT specialist mngrs	6%	1,100
2136 IT and telecommunications directors	5%	900
2135 IT business analysts, archtcts and systms designers	4%	700
2137 Web design and development professionals	4%	600
2134 IT project and programme mngrs	3%	600
3545 Sales accounts and business development mngrs	3%	500
3131 IT operations technicians	3%	500
3132 IT user support technicians	3%	400
5242 Telecommunications engineers	2%	400
4159 Other administrative occupations n.e.c.	2%	400
2132 Marketing and sales directors	2%	300
5245 IT engineers	2%	300
2423 Management consultants and business analysts	1%	200
2424 Business and financial project mngmnt professionals	1%	200
2131 Financial mngrs and directors	1%	200
7219 Customer service occupations n.e.c.	1%	200
3542 Business sales executives	1%	200
3539 Business and related associate professionals n.e.c.	1%	200
<b>Sector employment in top 20 occupations (estimate)</b>	<b>83%</b>	<b>14,100</b>

Source: Estimates derived from ONS APS 2017 national industry and occupation matrix and ONS BRES 2019 local employment by sector.

**Figure 5: Workforce Change**



Source: Employment change - ONS BRES 2019. Forecasts – estimates based on DfE Working Futures 2017-2027 (SELEP tables), ONS BRES and ONS APS.

Sector definition used in statistics (SIC2007)	
SIC 26 Manufacture of Computers etc (just codes 2620)	SIC 63 Information services (codes 6311, 6312)
SIC 58 Publishing activities (just codes 5821, 5829)	SIC 95 Repair of goods (just code 9511)
SIC 61 Telecommunications	
SIC 62 Computer programming etc	

Note: Where datasets used less detailed industry classifications, a best fit approach was applied.

Policy and political	Technological
<ul style="list-style-type: none"> <li>The 'digital tech' sector is seen as a UK strength, and is recognised as such by UK Government within the Digital Strategy<sup>64</sup> and the Tech Nation business development platform</li> <li>There has been a strong policy emphasis on digital skills in recent years. This has cross-sectoral dimensions, and includes the creation of a national Digital Skills Partnership, focused on addressing the digital skills gap (highlighted in successive reviews) and addressing issues of tech sector diversity.</li> <li>Locally, the South East LEP is a 'trailblazer' area for a Local Digital Skills Partnership, focused especially on the supply of digital skills to SMEs<sup>65</sup>.</li> <li>Public policy also plays an important role through demand for communications technologies – e.g., through the shift of public service provision to online channels, helping to stimulate wider public demand</li> <li>Increasing superfast broadband rollout is a policy priority in Kent, with work continuing to connect those communities most distant from the market.</li> </ul>	<ul style="list-style-type: none"> <li>The sector is essentially defined by the advanced exploitation of digital technology – within the Tech Nation reports, innovative use of technology as the core of the business model is the defining feature of a firm's definition as a 'digital sector' business (e.g. Tech Nation often refers to fintech businesses as part of a 'digital sector', even though in SIC definitions they would be financial services)</li> <li>Over time, technology convergence becomes increasingly important in blurring sector boundaries, with advanced digital technologies becoming general purpose technologies for exploitation across sectors.</li> <li>Increasing range of possibilities for automation and new service provision through machine learning and the use of artificial intelligence</li> <li>Rapid adoption of new retailing, entertainment and communications platforms, enabled by and driving take-up of new technology.</li> </ul>
Economic	Legal and regulatory
<ul style="list-style-type: none"> <li>The sector generates annual GVA of around £1.4 billion and employs around 19,000 people (based on the DCMS definition), with about 5,500 businesses in the sector</li> <li>However, the 'digital tech' footprint will be much greater, given the cross sectoral impact of new technology</li> <li>UK strengths in the business start up and growth driven by the scale of venture capital market</li> </ul>	<ul style="list-style-type: none"> <li>The development of the regulatory framework is a significant factor in the evolution of new digitally-enabled products and services, as technology often moves ahead of regulation (c.f. recent decisions and controversies regarding 'big tech' firms such as Uber and Amazon)</li> <li>Use of, and confidence in the use of, data is critical and will be a key part of the regulatory framework development.</li> <li>Brexit presents significant challenges for the UK tech sector, especially in openness to international talent (although this may be offset by greater openness to non-European highly skilled technical skills).</li> </ul>
Social	Environmental
<ul style="list-style-type: none"> <li>Workforce diversity is widely recognised as a major challenge (employment in the sector is estimated at 70% male)<sup>66</sup></li> <li>Retraining and adaption important as digital skills become increasingly required at advanced level</li> <li>Digital literacy remains a barrier to universal digital public services.</li> </ul>	<ul style="list-style-type: none"> <li>Environmental efficiency likely to be a driver of new technology solutions (e.g., in devices to manage energy consumption and to facilitate remote working)</li> <li>Connectivity can be a significant energy drain, through the vast quantities of energy used by data centres – which has expanded greatly in recent years. Increasing efforts are being made to source data centre energy from renewables to meet net zero targets<sup>67</sup>.</li> </ul>

<sup>64</sup> Defra (2020), The Path to Sustainable Farming: An agricultural transition plan, 2021-24

([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/954283/agricultural-transition-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/954283/agricultural-transition-plan.pdf))

<sup>65</sup> Defra (2020), National Food Strategy Part One ([https://www.nationalfoodstrategy.org/wp-content/uploads/2020/08/1\\_NFS\\_Report\\_spv\\_ExecSummary-web.pdf](https://www.nationalfoodstrategy.org/wp-content/uploads/2020/08/1_NFS_Report_spv_ExecSummary-web.pdf))

<sup>66</sup> East of England Science and Innovation Audit (2017)

<sup>64</sup> UK Government (2017), Digital Strategy (<https://www.gov.uk/government/publications/uk-digital-strategy>)

<sup>65</sup> <https://www.southeastlep.com/our-delivery/skills/digital-skills-partnership/>

<sup>66</sup> DCMS (2020), DCMS Sectors Economic Estimates

<sup>67</sup> British Computer Society (2020), Carbon neutral data centres (<https://www.bcs.org/content-hub/carbon-zero-data-centres-how-the-industry-can-deliver-on-its-green-commitments/>)

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- <sup>iv</sup> Growing Kent and Medway
- <sup>v</sup> Agriculture and Horticulture Development Board (January 2021), Long-term policy outlook for UK agriculture (<https://ahdb.org.uk/news/long-term-economic-outlook>)
- <sup>vi</sup> Defra/ Welsh Government/ Scottish Government, NI Executive (2020), Agriculture in the UK ([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/950618/AUK-2019-07jan21.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/950618/AUK-2019-07jan21.pdf))
- <sup>vii</sup> Defra (2016), Agricultural labour in England and the UK: Farm structure survey 2016 ([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/771494/FSS2013-labour-statsnotice-17jan19.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/771494/FSS2013-labour-statsnotice-17jan19.pdf))
- <sup>viii</sup> Agriculture and Horticulture Development Board (2018), Agri-food industry workforce skills and development strategy (<https://media.ahdb.org.uk/media/Default/What%20we%20do/Skills%20and%20training/Skills%20Strategy%20Full.pdf>)
- <sup>ix</sup> UK Government (2017), Industrial Strategy ([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf))
- <sup>x</sup> UK Government, <https://www.gov.uk/government/groups/regulatory-horizons-council-rhc>
- <sup>xi</sup> PwC/ The Manufacturer (2020), Annual Manufacturing Report 2020 (<https://www.pwc.co.uk/industries/assets/2020-annual-manufacturing-report.pdf>)
- <sup>xii</sup> JIS Manufacturing (October 2020), <https://www.jismanufacturing.com/blog/uk-manufacturing-skills-gap>
- <sup>xiii</sup> HM Government (2020), The Construction Playbook ([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/941536/The\\_Construction\\_Playbook.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/941536/The_Construction_Playbook.pdf))
- <sup>xiv</sup> CITB (2019), Evolution or Revolution? (<https://www.citb.co.uk/about-citb/construction-industry-research-reports/search-our-construction-industry-research-reports/innovation-technology/evolution-or-revolution/>)
- <sup>xv</sup> Turner & Townsend (2019), UK Market Intelligence ([https://i.emfiles4.com/cmpdoc/5/1/7/8/7/files/639130\\_ukmi-q3-2019---single-pages.pdf?utm\\_source=Turner%20%26%20Townsend&utm\\_medium=email&utm\\_campaign=10942506\\_UKMI%20Q3%202019&dm\\_i=1OQJ,6IJA,4ZLPGF,PVGD2,1](https://i.emfiles4.com/cmpdoc/5/1/7/8/7/files/639130_ukmi-q3-2019---single-pages.pdf?utm_source=Turner%20%26%20Townsend&utm_medium=email&utm_campaign=10942506_UKMI%20Q3%202019&dm_i=1OQJ,6IJA,4ZLPGF,PVGD2,1))
- <sup>xvi</sup> CITB (2021), Migration in the UK construction and built environment sector ([https://www.citb.co.uk/documents/research/migration\\_uk\\_construction\\_2020\\_summary.pdf](https://www.citb.co.uk/documents/research/migration_uk_construction_2020_summary.pdf))
- <sup>xvii</sup> CITB (2021), Construction Skills Network: Industry Outlook 2021-25 ([https://www.citb.co.uk/documents/research/csn\\_outlook\\_2021\\_2025.pdf](https://www.citb.co.uk/documents/research/csn_outlook_2021_2025.pdf))
- <sup>xviii</sup> National Infrastructure Commission (2018), The Future of Freight: Interim Report (<https://nic.org.uk/app/uploads/Future-of-Freight-Interim-Report-2.pdf>)
- <sup>xix</sup> Department for Transport (2017), Freight Carbon Review 2017 ([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/590922/freight-carbon-review-2017.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/590922/freight-carbon-review-2017.pdf))
- <sup>xx</sup> The following paragraphs draw on DHL Trend Research (2020), Logistics Trend Radar (<https://www.dhl.com/content/dam/dhl/global/core/documents/pdf/glo-core-logistics-trend-radar-5thedition.pdf>)
- <sup>xxi</sup> Transport Systems Catapult (2017), *Autonomous Vehicles in Freight and Logistics*
- <sup>xxii</sup> Department for Transport (2017), Freight Carbon Review 2017, p.18
- <sup>xxiii</sup> Logistics UK (2020), Skills and Employment Report (<https://logistics.org.uk/CMSPages/GetFile.aspx?guid=86764e99-6b36-4517-a93d-f567ebfa0ada&lang=en-GB>)
- <sup>xxiv</sup> Logistics UK (2020), Skills and Employment Report (<https://logistics.org.uk/CMSPages/GetFile.aspx?guid=86764e99-6b36-4517-a93d-f567ebfa0ada&lang=en-GB>)
- <sup>xxv</sup> Kuhne Logistics University (2020), Measuring Industry's Temperature: An environmental progress report on European logistics (<https://www.the-klu.org/landingpages/sustainability-study/>)
- <sup>xxvi</sup> Energy and Utilities Skills Partnership (2020), Workforce Renewal and Skills Strategy 2020-25 Refresh (<https://www.euskills.co.uk/download/workforce-renewal-skills-strategy-2020-2025/>)
- <sup>xxvii</sup> Energy Systems Catapult (<https://es.catapult.org.uk/brochures/decarbonisation-heat/>)
- <sup>xxviii</sup> South2East Energy Strategy (2019) (<https://www.southeastleap.com/app/uploads/2019/03/Local-Energy-Strategy-FINAL.pdf>)
- <sup>xxix</sup> Energy and Utilities Skills Partnership (2020), Workforce Renewal and Skills Strategy 2020-25 Refresh (<https://www.euskills.co.uk/download/workforce-renewal-skills-strategy-2020-2025/>)
- <sup>xxx</sup> Office for Life Sciences (2020), Life Sciences Industrial Strategy 2020 Update ([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/857348/Life\\_sciences\\_industrial\\_strategy\\_update.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/857348/Life_sciences_industrial_strategy_update.pdf))
- <sup>xxxi</sup> PwC/ ABPI (2016), <https://www.bivda.org.uk/News-Events/BIVDA-Press-Releases/ArticleID/33/PwC-analysis-highlights-economic-footprint-of-UK-Life-Sciences>
- <sup>xxxii</sup> BIA (2020), Life Sciences 2030 Skills Strategy (<https://www.bioindustry.org/resource-listing/life-sciences-2030-skills-strategy.html>)