Greater North Kent Workforce Skills Evidence Base

A report for *Greater North Kent*
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Executive Summary

This report provides an assessment of workforce skills in Greater North Kent (Dartford, Gravesham, Medway, Swale and Maidstone), building on the earlier *Kent and Medway Workforce Skills Evidence Base*[1], and taking a closer look at issues specific to Greater North Kent (GNK).

Demographic and Social Context

Greater North Kent has a rapidly growing population, with strong recent and projected growth in the working age population and an expanding supply of new entrants to the labour market.

Economic activity rates have risen over time. Currently, the area has a higher activity rate than the UK overall.

Unemployment (measured by the Claimant Count) rose at the start of the Covid-19 pandemic, but has not (to date) reached the levels initially feared. The pattern in Greater North Kent mirrors the national picture, and claimant count rates have recently fallen sharply. Unemployment in GNK as a whole is below the national average.

Despite this relatively positive performance, levels of deprivation across Greater North Kent remain significant, and skills and education outcomes are an important dimension of this.

Resident Skills

Workforce qualifications have risen steadily over time. But there are fewer people qualified to Level 3 and Level 4+ than in the UK as a whole. Within the sub-region, there are local differences in outcomes, with (generally) weaker workforce qualification rates in Gravesham and Swale.

At Key Stage 4, the great majority of students remain in education, with around 59% progressing to sixth forms and about 27% entering further education (3% progress into employment). Following 16-18 education, around 35% of students enter higher education, with about 29% entering sustained employment, 7% FE and 10% Apprenticeships.

Employer Skills Demand

An analysis of employment demand in Greater North Kent indicates that the area is both polycentric (with multiple employment centres focused on the main towns) and part of a larger labour market that reaches into surrounding areas, especially London (outer and central).

The business base is dominated by small firms. But over half of all jobs are in organisations employing over 50 people.

Greater North Kent gross value added is about £17bn. Average productivity (GVA per job filled) varies from £62,000 in Dartford (higher than the UK average of £57,000) to £48,000 in Gravesham. Resident pay is generally above the national average. But there is a gap between pay in locally-based workplaces and the higher wages that can be commanded by commuting outside Greater North Kent, most notably into London.

There are around 366,000 jobs in Greater North Kent. The employment base is generally diverse, although the strongest sectors in terms of jobs are: health; business administration and support services; and retail, three sectors which account for over a third of all employee jobs in the area. Manufacturing, construction, transport and logistics, accommodation and hospitality, and education are also strengths, accounting for a further third of employment.

The stock of jobs has expanded at a faster rate than the working age population, leading to a modest rise in the jobs density over time, with relatively high concentrations of jobs in transport and logistics, and construction activities when compared with the rest of the country. Employment

[1] https://kentemployerskillsplan.org/resources/workforce-skills-evidence-base-2021/

growth has also been strong in construction; professional, scientific and technical activities; and hospitality.

The Greater North Kent labour market is quite 'porous'. The most recent travel-to-work data from 2011 shows that 16% of GNK residents commute to London (half to central London, the rest to outer Boroughs); 10% go out to other parts of Kent; and only 1% go to Essex, Thurrock and Southend. There is also significant commuting within Greater North Kent, the largest flows being from Gravesham to Dartford, and from Medway to Maidstone.

Net annual labour demand in GNK is expected to be around 13,600 to 2027. This includes 'replacement' demand as workers retire, as well as expansion demand, as new jobs are created. Forecast occupational demand suggests that skills will be required at all levels, although the trend to increased qualification requirements is likely to be maintained.

The Local Context

Greater North Kent is distinctive in that it has a growing and relatively young workforce compared with Kent and Medway as a whole. Although employment and economic activity rates are high, there are also significant 'pockets' of deprivation and, in some rural areas, challenges in accessing work and learning.

GNK lags behind the rest of the country in terms of the proportions of the workforce with Level 3 and Level 4+ qualifications. The picture varies by local authority area, the deficit being greatest in Swale, Medway and Gravesham.

The economy is undergoing significant change as a result of long-term structural change associated with digitalisation and decarbonisation (some of which have been accelerated by the pandemic), and is also impacted by several major projects taking place in the area.

Local economic development and regeneration priorities highlight the polycentric and sectorally varied nature of the Greater North Kent economy. However, the following sectors emerge from the interviews as being important to all or several of the Greater North Kent councils:

Construction

Visitor / experience economy

Food and drink (growing and processing)

Manufacturing / engineering

Digital

Transport and logistics

Health and social care

Local authority stakeholders also confirmed the need at local level to address the trend towards greater digitalisation and decarbonisation of the economy identified as a national and sub-regional issue in the Kent and Medway Workforce Skills Evidence Base.

Industry Sectors, Decarbonisation and Digitalisation

The GNK industry sector skills dialogues found that many of the issues identified for Kent and Medway in the May 2021 report, still hold, but that **labour shortages had become more of a challenge** since then, including now for lower skilled roles. They also identified the following specific issues for Greater North Kent:

Development and Construction

It is now more important to engage young people and new talent pools in sector employment and skills opportunities through companies being more proactive in 'educate the educators' programmes and communicating more with young people directly about sector career opportunities and the nature of modern construction work. Existing mechanisms like the Enterprise Advisers Network and the Construction Youth Trust can play a key role in this, and a more coordinated the approach to engaging schools, colleges and young people is needed. Education and training providers need to know about what the pipeline of employment demand looks like, suggesting a need for a trusted and neutral gathering of company intelligence on upcoming recruitment requirements. While many companies could be reached through Tier 1 contractors, others operate independently of such supply chains and make up a significant part of the industry, and would need to be engaged through trade and small business bodies.

As workforce and associated training needs become clear through such a process, a degree of programme development support would be needed for providers to develop and enhance their offer in response, 'de-risking' upfront development costs. There is also likely to be a need for shorter or more flexible programmes focused on giving people specific skills needed to be able to work immediately, suggesting a need for more flexible revenue funding.

Land-based and Food

Labour shortages have worsened further, are more pressing in North Kent, and are driving a greater emphasis on technology and automation. This applies to low-skilled roles, as well as more highly skilled ones, and there is growing competition on wages. The situation is exacerbated by transport challenges between places where some potential workers live and where the work is.

There is a growing demand for people with specific technical skills relevant to digital technology, automation and low carbon operations. However, the industry needs to do more to get across how it actually operates in these ways to improve the sector's image to potential recruits. Young people have no idea of the opportunities available and how people with little in the way of qualifications can progress into a good career in food production.

Manufacturing and Engineering

The November 2021 sector dialogue found no significant changes to the picture from earlier on the year, with the exception of labour shortages in lower skilled roles now being more significant in sub-sectors like food processing. Otherwise, sector skills shortages overall do not seem to be any worse in GNK than elsewhere than in Kent and Medway.

Developing SME leadership and management may be more important now: the majority of sector SMEs do not have an up-to-date business plan, and companies may lack the knowledge and support required to respond to the decarbonisation and digitalisation agendas.

Engaging SMEs on their skills needs can also be challenging, and new ways of doing this would help providers to develop new offers that would meet better sector skills needs.

The **decarbonisation** skills agenda in GNK is similar to other parts of the South East, with company behaviour driven by, for example, emerging market opportunities and Government policy drivers, the latter most recently detailed in the *Net Zero Strategy – Build Back Greener* document. An analysis of the Strategy and Greater North Kent sector dialogues conducted for this report suggest that:

- The major driver of workforce skills requirements at scale will be domestic and workplace energy, with a shorter term need for energy conservation retrofit. This will increase the scale and nature of demand in skilled roles relating to, for example, heat pump and (possibly) hydrogen heating system installation, repair and maintenance, requiring re-skilling and up-skilling of existing tradespeople and more new entrants with the right skills.

- Electric and (possibly hydrogen) vehicles will be another large-scale generator of skills demand in automotive and vehicle maintenance and repair, as well as the development and management of the associated charging infrastructure.
- Companies are liable to want or need to explore a range of options to make their operations less carbon intensive and will often require support and advice to do so, and this is likely to create an opportunity for providers of low-carbon solutions, and generate associated skills needs. Companies, especially SMEs, will also need advice and support on how to choose and implement net zero approaches, which, in turn, will require a strategic approach to leadership and management.

Net zero approaches and technologies are growing in importance, but are still emerging and not fully understood - there are not many definite 'technologies of choice' at this stage, and Government policy will play an important role in deciding which technologies do come to the fore.

'Green skills' are growing in a wide range of existing job roles, which suggests the need for a 'greening' of existing education and training.

Embracing the decarbonisation agenda at the level of the firm is seen an aid in addressing workforce recruitment and retention problems: 'green jobs' will be more attractive to potential recruits.

Digitalisation is also being driven by a range of factors, such as the way that existing sectors are transforming, new activities being created by digital technology and sectoral boundaries are 'blurring' as technologies converge. The GNK dialogue discussions indicated that digital skills are growing in importance for people with an operational role who now need to be digitally literate and able to use common Apps, software and hardware, as 'all jobs become digital' to some extent.

There is also a growing need for specialist technical digital skills in, for example, digital design and BIM in construction; the use of data to inform management decision making in land-based and food, and applying and integrating digital and automation technologies in multiple contexts in manufacturing and engineering. Peer-to-peer learning, where company-based users learn from each other could be valuable in developing the technical specialist digital skills base, but there is also likely to be a growing need for higher technical education in engineering and technical subjects.

Major Projects

Greater North Kent has a substantial pipeline of major projects and house building in the coming years. Three projects in particular stand out, given their possible scale in terms of workforce demand:

- **Lower Thames Crossing** could start in 2023 at the earliest and will last 6 to 7 years. 22,000 people will work on LTC overall during the lifetime of the project. At the peak time around 10,000 people will be working on the construction programme, which has three parts: 1) the road north of the river, 2) the tunnel, and 3) the road south of the river.
- **Ebbsfleet** Development Corporation is working with a number of developers to bring forward housing and mixed-use sites at Ebbsfleet. No formal appraisal of the scale and nature of employment and skills needs has yet been possible, but early indications are that there could be skills shortages in respect of bricklayers, carpenters, roofers, dry liners, painters and decorators and labourers.
- **London Resort** hopes that, subject to planning approval, construction can begin in mid / late 2023 at the latest. 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.

In addition to these three major projects, north of the river **Thames Freeport** is a 34-kilometre corridor from Thames Enterprise Park to Barking and Dagenham, involving an investment of £4.5bn and expected to create around 25,000 direct new jobs. The project creates an economic zone connecting Ford's Dagenham engine plant to the ports at London Gateway and Tilbury, with an emphasis on introducing electric and autonomous vehicle technology along the A13 corridor into London. Businesses looking to expand or re-shore their operations can take advantage of the tax benefits of establishing within the Freeport and being part of a customs zone, which makes it easier and cheaper to move goods into and out of the country. The Freeport partnership's programme of work will create a development-ready platform which has the objectives of driving new investment, jobs, skills and the adoption of greener technology. Engaging disadvantaged people and SMEs in the opportunity are seen as key challenges. Local partners are looking to take a coordinated, integrated and aligned approach on skills and employment issues so as to maximise the local opportunity, which may be possible on a cross-river basis too.

The emerging findings from **research into recruitment demand arising from major projects** in the SELEP region suggests that, for 8 projects in Kent and Medway (most of which are in GNK) the total additional workforce requirement will be 51,300 between 2021 and 2024), 66,500 (2025 – 2028), 48,600 (2029 – 2038), and 17,300 from 2039 onwards. Across all the major projects the greatest skills shortages are anticipated to be for Engineers (civil, structural, M&E, highways, drainage, where there is already a skills shortage); many construction trades, which are already at full capacity (joiners, bricklayers, roofers, scaffolders, welders, carpenters, painters, decorators, kitchen and bathroom fitters, floor layers, pavers, plumbers and plant operators); project managers; architects; logistics; teachers and support staff; manufacturing; and health care workers (including GPs).

Key Issues and Priorities for Action

The analysis identifies five key workforce skills issues that need to be considered by the Greater North Kent Partnership and partners:

- A gap in educational attainment at Level 3 and Level 4+ between GKN and the UK as a whole.
- The importance of aligning the jobs market and workforce skills, in terms of:

  Sectors

  The analysis of quantitative data and stakeholder interviews in this report suggests a need for provision that is relevant to the following sectors:

  - **Those which account for the most employment**, i.e.: health (including care); business administration and support services; retail; manufacturing / engineering; construction; transport and logistics; and hospitality.
  - **Those with the highest levels of employment growth**, i.e.: construction; professional, scientific and technical activities; and hospitality.
  - **Those which are relative strengths**, i.e.: construction; and transport and logistics.
  - **Sector priorities identified by local stakeholders** (in this case, local councils), i.e.: construction; visitor / experience economy (including retail and hospitality, and creative and cultural); food and drink (growing and processing); manufacturing / engineering; digital; transport and logistics; and health and social care.

  Occupations

  Providers should help people to access **occupations with the highest numbers of new entrants required**, the three largest of which are teachers and education professionals, care and personal service staff, corporate managers and business and public service associate professionals.

Cross-cutting Skills Needs

There are also **cross-cutting skills needs** across the whole economy, which are employability skills (including essential skills); re-training for adults; entrepreneurship and business management; IT and digital skills; customer-related skills; and skills related to decarbonisation and digitalisation of the economy and community.

Skills Required by Major Projects

Local skills should respond to major projects, such as those in the pipeline, like Ebbsfleet, London Resort and Lower Thames Crossing, and those major employers and employment sites already in existence, such as Bluewater and major public service employers.

- A growing need for adult up-skilling, re-skilling and lifelong learning in response to changing labour market conditions and the educational attainment gap. This will also help with place making and deliver non-economic outcomes, such as health, wellbeing and social disadvantage.
- Some kind of single, coordinated and integrated mechanism is needed for identifying specific employment and skills needs of projects and employers; publicising these all together through one route to residents and young people; and setting up and securing funding for the education and skills provision needed for people to access the opportunities.
- More teaching expertise and capacity is needed to address priority skills needs, which may suggest a need for employers and Higher Education to support Further Education higher and technical education.
- More engagement of employers, including small companies, is needed in gathering on-the-ground intelligence on workforce and skills needs, and to work together in developing programmes which link people to local employment opportunities.

The analysis proposes for discussion in response to the issues identified the following potential priorities for action:

Issue	Potential Priorities for Action
1. Close the attainment gap at Level 3 and Level 4+	• Strengthen and expand intermediate and higher-level technical education alongside the academic route, with the aim of increasing participation in Further Education and work based learning at intermediate and higher levels. • Increase progression to Higher Education through enhanced outreach and progression pathways between school and university. • Campaign to engage more adult learners in the community and the workplace in intermediate and higher-level learning.
2. Alignment Between the Jobs Market and Workforce Skills	• Curriculum planning by colleges, schools and universities, with adjustments to increase the offer in relevant programmes. • Identifying capital and revenue monies to support and ‘de-risk’ the development of new programmes. • Securing flexibility on funding to offer what the labour market needs.

Issue	Potential Priorities for Action
	• More employer engagement (see 6 below).
3. Re-skilling, Up-skilling and Lifelong Learning	• Identifying capital and revenue monies to support and 'de-risk' the initial development of new adult learning and technical education programmes. • Campaign to engage more adult learners and employers in re-skilling, up-skilling and lifelong learning. • Making 'skills' or 'lifelong learning' a major theme for Greater North Kent in its future strategies.
4. Coordination, Collaboration and Integration	• Building on current collaboration to establish a single mechanism at an appropriate spatial level for supporting North Kent projects with workforce needs and to enable residents to access skills and employment opportunities, with a jobs and skills forecasting function to help providers plan and fund the right programmes. • Using the collaborative mechanism to promote the opportunities in North Kent to residents and local labour to employers, which will also assist with making North Kent more attractive to incoming residents and companies. • Major projects and partners are already discussing a 'construction skills academy' to offer a range of skills and employment programmes, and the Major Projects Group already brings together partners like the major projects, the Education People, KCC, DWP and local authorities to plan employment and skills work together.
5. Teaching Expertise and Capacity	• Extra support for providers to recruit new staff. • Development of existing staff so that they can deliver new and higher level curriculum. • Collaborations between FE and employers, and FE and HE to secure the expertise required for specialist and higher level teaching needs.
6. Employer Engagement	• Working with the local councils, Kent Invicta Chamber of Commerce and others, explore the options for establishing Greater North Kent employer sector advisory panels to discuss workforce and skills needs they face, and potential solutions. This should avoid unnecessary duplication and the 'reinvention of wheels'. • Start with sectors that are best placed or most motivated to engage (e.g. construction, care and food), given pressing labour needs.

GNKP and the local authorities can play an important role in helping to address these priorities for action, and this should be explored by the members of GNK early in 2022. Actions that GNK and the Councils could consider include:

- Supporting FE, HE and others to develop and improve the higher technical education offer.
- Leading a local campaign for adult re-skilling, upskilling and lifelong learning, even promoting and branding GNK as a 'learning place / region'.

- Supporting capital and revenue funding bids by colleges, universities and others to make the education and skills offer more relevant to the local economy, and supporting 'asks' for more flexibility on how revenue funding is used.
- Supporting or enabling local employer engagement groups where providers and industry work together to develop responses to specific skills shortages and gaps.
- Perhaps starting with construction, support the development of a neutral construction skills pipeline forecasting unit to help providers plan and fund the right programmes and promote the opportunities in North Kent to residents and local labour to employers.
- Support initiatives to attract people with specialist skills into teaching in FE and HE, whether full time or part time, or to engage more employers in the delivery of skills programmes.

This Evidence Base will also be fed into the call for evidence that forms part of the work led by Kent Invicta Chamber of Commerce to develop the trailblazer Local Skills Improvement Plan early in 2022.

1. Introduction

This report provides an assessment of workforce skills in Greater North Kent (Dartford, Gravesham, Medway, Swale and Maidstone), building on the earlier *Kent and Medway Workforce Skills Evidence Base*[2], and taking a closer look at issues specific to Greater North Kent (GNK).

The analysis considers both the 'supply' and 'demand' aspects of workforce skills, looking at the workforce and potential workforce of GNK residents and assessing what is distinctive about GNK and its economy and what this means for key local stakeholders.

The source material for the report is a wide range of existing quantitative datasets, which have been analysed from a GNK perspective, and a series of in-depth interviews with stakeholders offering a wide range of perspectives on skills in North Kent (a full list of those interviewed can be found in Annex 1). The analysis concludes with some key issues and priorities for action to be considered by local partners.

The structure of the report is as follows:

- Section 2 sets the demographic and social context of GNK;
- In section 3 we analyse resident skills, both now and in future, drawing on relevant population forecasts;
- Section 4 looks at the GNK economy in terms of its sector and occupational structure of employment, travel-to-work patterns, and future skills needs;
- In section 5 we explore the local context of GNK more qualitatively, considering what makes it distinctive, how it is changing and what local economic development and regeneration priorities are;
- Section 6 considers what skills needs arise from the decarbonisation and digitalisation agendas, as well the specific need of Development and Construction, Land-based and Food, and Manufacturing and Engineering.
- Section 7 looks more closely at the workforce and skills requirements of major projects in GNK and some of the issues they raise; and
- Section 8 reviews the foregoing sections to identify five key issues that require partners' attention and proposes for discussion some potential priorities for action that respond to these issues.

The Annexes provide an overview of GNK and each local council area, and a list of those interviewed or taking part in sector dialogue groups as part of the research.

[2] https://kentemployerskillsplan.org/resources/workforce-skills-evidence-base-2021/

2. Demographic and Social Context

Summary

Greater North Kent has a rapidly growing population, with strong recent and projected growth in the working age population and an expanding supply of new entrants to the labour market.

Economic activity rates have risen over time. Currently, the area has a higher activity rate than the UK overall.

Unemployment (measured by the Claimant Count) rose at the start of the Covid-19 pandemic, but has not (to date) reached the levels initially feared. The pattern in Greater North Kent mirrors the national picture, and claimant count rates have recently fallen sharply. Unemployment in GNK as a whole is below the national average.

Despite this relatively positive performance, levels of deprivation across Greater North Kent remain significant, and skills and education outcomes are an important dimension of this.

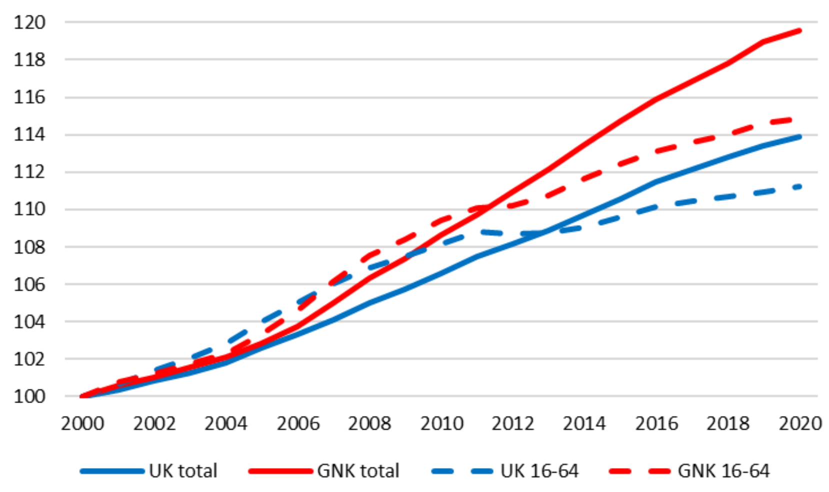
Greater North Kent is an important growth area, with a population that is increasing faster than the national average. This chapter describes the area's demographic context, looking at recent population growth and projections for the coming decade. It also outlines Greater North Kent's social profile, looking at population characteristics, overall economic activity and employment and evidence of social need at area-wide and local level.

2.1 Population and Workforce Growth

Greater North Kent's population has grown rapidly in recent years. In 2020, the area had a total population of 824,000 – an increase of 20% over twenty years, compared with national growth of 14%, with the strongest growth in Dartford and (to a lesser extent) Swale and Maidstone.

Despite the general ageing of the population as life expectancies rise, **Greater North Kent also saw relatively strong growth in the 'working age' population[3]**. The population aged 16-64 grew by about 15% across the area in 2000-20, compared with around 11% nationally (see Figure 2.1 below).

Figure 2.1: Index of population growth, 2000-20 (2000=100)



Source: ONS, Mid-Year Population Estimates, 2020

[3] We have used the term 'working age' population to refer to those aged 16-64. This is a commonly used definition in labour market analysis, although we note that working lives are changing and many people remain in the labour force beyond traditional retirement ages.

Population growth has been driven both by 'natural change' and by net migration. In 2019/20, natural change (births minus deaths) accounted for around 53% of the total increase in population, with the remainder accounted for by people moving into the area[4].

Overall, **North Kent has a younger population profile than the UK as a whole**. Older age groups are relatively 'under-represented' in the population (in contrast to Kent and Medway as a whole) and young people of school age are relatively 'over-represented' (see Figure 2.2 below)[5]. There is however a relative under-representation of younger working age people in their twenties, probably reflecting a net outflow to university cities (and perhaps to London, given its proximity).

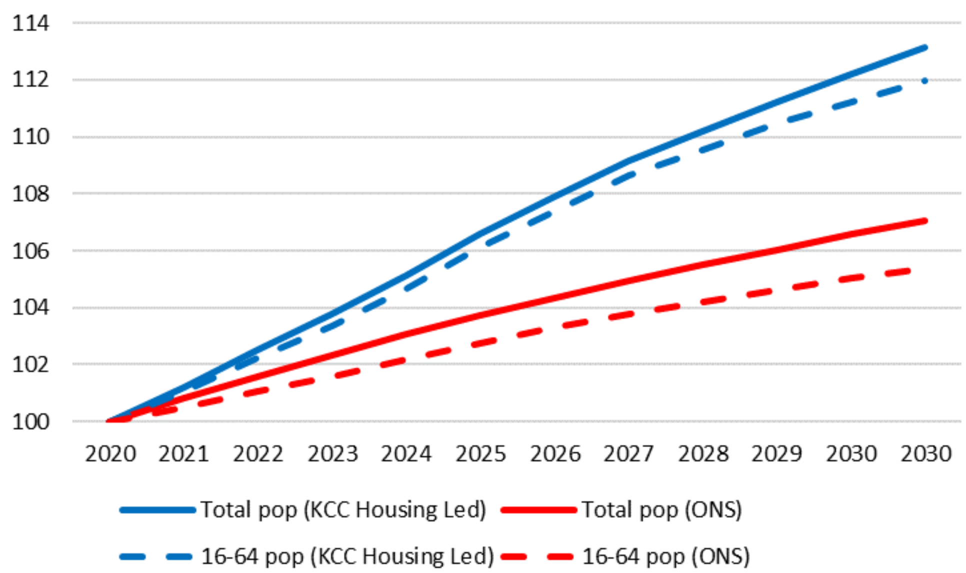
Figure 2.2: Greater North Kent age profile, benchmarked

Age	GNK total population	GNK relative to UK (UK=100)	Over/ under-representation
0-15 years	173,400	111	+17,100
15-19	45,500	101	+300
20-24	43,700	85	-7,400
25-29	51,700	94	-3,300
30-49	219,700	103	+6,900
50-64	158,000	99	-1,500
65+	142,200	93	-11,400

Source: ONS, Mid-Year Population Estimates (2018 base year)

Looking to the future, **Greater North Kent's population will continue to grow rapidly**. There are two forecasting measures commonly used: the national population projections published by the 2018 Office for National Statistics and a series of projections developed by Kent County Council, which take account of planned housing growth and its (generally additional) impact on population numbers[6].

Figure 2.3: Population projections, Greater North Kent 2020-30 (2020=100)



[4] There is however some variance at local level, with Medway and Gravesham both experiencing net out-migration, reflecting modest housing growth. Kent County Council (July 2021), What is Causing Kent's Population Growth? https://www.kent.gov.uk/__data/assets/pdf_file/0004/8149/Whats-causing-Kents-population-growth.pdf

[5] This is probably what we would expect from an extensively suburban area with out-commuting opportunities and attractions for younger families.

[6] Kent County Council, Housing-Led Forecasts interactive toolkit. This is based on housing trajectory information provided by each local planning authority.

Projections	KCC Housing Led forecast 2025	KCC Housing Led forecast 2030	ONS projections 2025	ONS projections 2030
Total Population	858,000	928,000	855,000	877,000
16-64 population	545,000	568,000	521,000	532,000

Source: Kent County Council; ONS

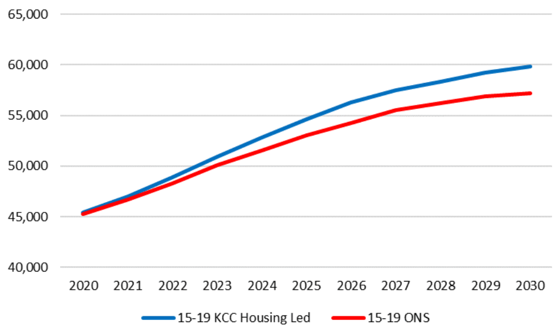
There is a significant difference between the projections based on the two datasets, as illustrated in Figure 2.3 (above). Overall, it is anticipated that Greater North Kent might see population growth of between around 50,000 and 98,000 between 2020 and 2030 (equivalent to between 6% and 12% growth on the 2020 baseline). On either measure, projected growth is faster than in England as a whole (4%), with growth fastest in Dartford, reflecting the recent trajectory.

The **working age population is also forecast to grow at a faster rate than nationally** – an increase of between 25,000 and 50,000 (between 5% and 10%) over the next decade. This is roughly in line with the projections for Kent and Medway overall, but compares with growth of around 2% in England, and contrasts with many parts of the country (especially in coastal, rural and some post-industrial areas), which are likely to see a net decrease in the working age population.

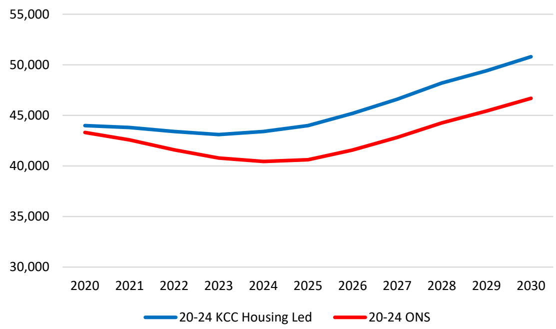
Looking more closely at those age groups that will be entering further and higher education or joining the jobs market (see Figure 2.4 below), the population of those aged 15-19 is expected to grow substantially, by between 12,000 and 14,000 over ten years (equivalent to 26% - 32% growth, with growth of over 50% anticipated in Dartford). The population aged between 20 and 24 is likely to remain static or fall slightly in the next couple of years, but with a stronger increase towards the end of the decade. **Overall, there is an expanding labour supply in Greater North Kent, including in those groups about to enter the labour market for the first time**.

Figure 2.4: Population projections 2020-30

a) Aged 15-19



b) Aged 20-24



Source: Kent County Council; ONS

2.2 Economic Activity and Employment

Economic activity rates are relatively high across Greater North Kent as a whole. In 2021, around 81% of people aged 16-64 were 'economically active' (i.e., they were either in employment or actively seeking work), compared with 78% across the UK. Economic activity rates have increased over time, reflecting the national picture[7]. Figure 2.5 (below) shows how the economically active population breaks down:

[7] There is substantial variance at district level, although this is partly due to large confidence intervals. See the District Profiles (Annex 1) for further detail.

Figure 2.5: Economic activity in Greater North Kent (of pop. aged 16-64), Jul 2020-Jun 2021

Category	GNK, number	GNK, %	UK, %
Economically active	414,200	80.9	78.2
Of whom…			
In employment (employees)	349,600	68.3	64.6
Self-employed	48,400	9.5	9.4
Unemployed	16,200	3.9	5.1

Source: ONS, Annual Population Survey

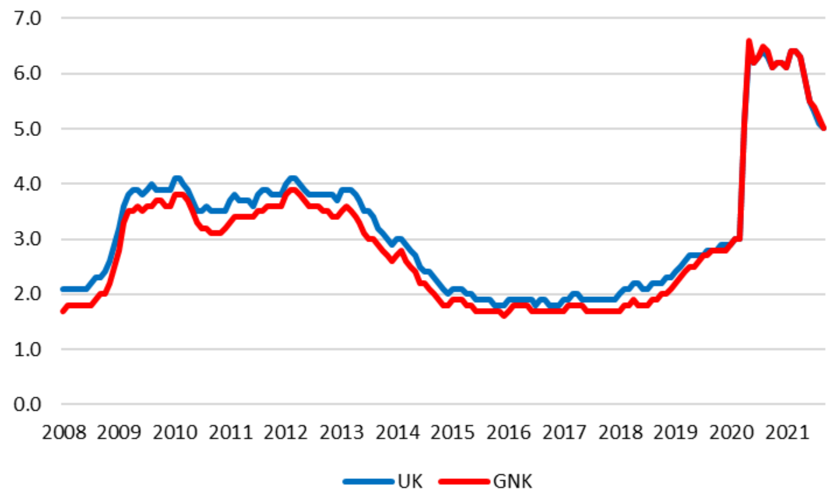
This left around 98,000 people in Greater North Kent who were 'economically inactive' in 2021. There are a variety of reasons for economic inactivity. These include barriers to accessing work (discussed further below), but the 'inactive' population will also include those in full-time study, as well as people who have retired early, are out of the labour market due to caring responsibilities, and so on. Only around 15,000 economically inactive people in Greater North Kent said that they would like a job, a somewhat lower proportion than the national average.

A Closer Look at the Claimant Count

The **Claimant Count** allows us to look in more detail at unemployment trends. Historically, the claimant count rate in Greater North Kent has tracked the national picture – generally slightly below the UK average. Following the start of the Covid-19 pandemic, claimant numbers rose rapidly, although plateaued in mid-2020 with the introduction of the Government's furlough scheme and a range of other mitigation measures. Claimant count numbers have fallen sharply in recent months, as public health restrictions have been removed, economic activity has returned and labour demand has risen. Current short-term unemployment forecasts are generally optimistic, although there is still some uncertainty given market disruption as demand returns, and the impact of the ending of the furlough scheme[8].

In September 2021, around 25,600 people in Greater North Kent were claiming Universal Credit and seeking work, around 5% of the working age population. Since the start of the pandemic, the local and national claimant count rates have been almost exactly the same:

Figure 2.6: Historic Claimant Count Rate (% of 16-64 population)



Source: ONS, DWP

Local Concentrations

[8] Resolution Foundation (September 2021), *Labour Market Outlook Q3 2021*

While the general Claimant Count pattern is reflected in all the GNK local authority areas, there is variance at local level (see Figure 2.7 below).

Overall, claimant count rates are highest in Gravesham and lowest in Dartford, although this masks some very high concentrations of unemployment in a number of neighbourhoods (with the highest rates in parts of the Isle of Sheppey, Chatham and Gravesend). While these have been exacerbated by the pandemic and the rates fluctuate in response to general economic conditions, the overall spatial pattern of unemployment tends to be 'sticky' and is largely constant over time.

Figure 2.7: Local unemployment (Claimant Count, September 2021)

Local authority	Claimant count	Claimant count, %	Local concentrations (Claimant Count rate over 6%, September 2021)
Dartford	2,990	4.1	Ebbsfleet; Town; Swanscombe; Darenth
Gravesham	3,770	5.8	Pelham; Riverside; Northfleet N, Westcourt; Coldharbour; Central; Singlewell
Maidstone	4,375	4.2	High Street; Shepway S
Medway	9,670	5.5	Chatham C, Luton & Wayfield; Gillingham S, Gillingham N; River; Rochester E
Swale	4,830	5.3	Sheerness; Sheppey E; Priory; Murston; Roman; Chalkwell, Milton Regis

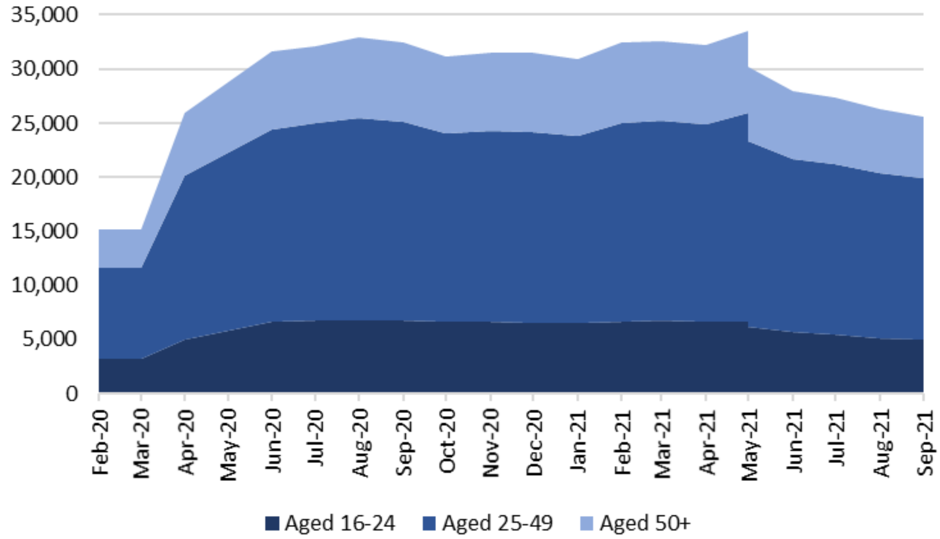
Source: ONS, DWP

Age and the Claimant Count

Younger people are somewhat over-represented among those claiming Universal Credit and seeking work. In September 2021, people aged under 24 accounted for around 19% of all claimants in North Kent (compared with an approximately 17% share of the total working age population).

During the pandemic, the Claimant Count rose rapidly among all age groups (see Figure 2.8 below), with particular concern that younger workers would be disproportionately impacted (especially due to their prevalence in customer-facing occupations vulnerable to lockdown restrictions). More recently, there is evidence that younger workers have been more easily hired as activity has returned, with a risk that some older workers may exit the labour market as the furlough scheme ends[9].

Figure 2.8: Claimant Count by age group, Greater North Kent (from start of C19 pandemic)



Source: ONS, DWP

[9] Daniel Tomlinson (July 2021), *The Beginning of the End* (Resolution Foundation)

2.3 Barriers to the Labour Market and Wider Social Need

A range of factors influence individuals' ability to access and progress in employment. Health conditions and multiple forms of disadvantage present barriers to participation in the labour market, and within the 'headline' measures of overall employment, some people will be working fewer hours than they want, or be in low skilled/ low paid work that may not meet their potential.

Disability

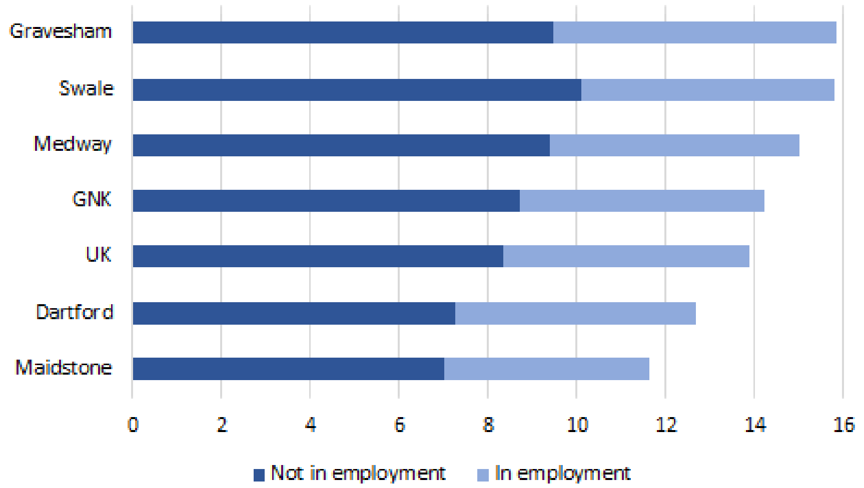
In 2020/21, around 105,000 working age people in North Kent had either a 'core disability' under the Equality Act (i.e., a physical or mental health disability which substantially limits their day-to-day activities) or a 'work-limiting disability' which affects the type or amount of work that they might do. This equates to around 21% of the working age population – slightly below the national average[10].

Benefits

In August 2021, around 72,400 people in North Kent were in receipt of Universal Credit (14.2% of the working age population. This is substantially higher than the unemployed 'claimant count' outlined above, and includes around 28,000 people who were in employment and claiming Universal Credit.

Universal Credit recipient rates are somewhat higher in Greater North Kent than they are nationally, with the highest rates in Gravesham and Swale (see Figure 2.9 below).

Figure 2.9: Universal Credit claimants (% of working age population), August 2021



Source: DWP via Stat-Xplore

Low Income Families

Relative low income is defined as less than 60% of median income before housing costs. Across Greater North Kent, around 17% of all children lived in 'relative low income' families' in 2019/20, below the England average of 19% (and with lower shares in Dartford and Maidstone and a higher share in Gravesham)[11]. It is worth noting however that the 'low income' measure is before housing costs, which have increased quite sharply in recent years; and that this group may face significant vulnerabilities over the coming year, given rising prices for energy and other essential goods.

[10] ONS, Annual Population Survey. Rates of disability appear to be somewhat lower in Dartford and Gravesham, but very high confidence intervals at local level make it hard to give a meaningful district-level comparison.
[11] DWP; Kent County Council Kent Analytics (September 2021), *Child Poverty*

Multiple Deprivation

Finally, the Government's Index of Multiple Deprivation maps disadvantage at local level across a series of domains, relating to income, employment, education and skills, health, crime, barriers to services and living conditions. The IMD measures these at neighbourhood ('Lower Super Output Area') level, and provides a rank order so that levels of deprivation can be measured relatively. The table below shows the results on the overall IMD and a selection of domains at local authority level (see Figure 2.10 below).

Figure 2.10: Index of Multiple Deprivation (rank of average score, out of 317 local authorities in England (1= most deprived; 317= least deprived); selected domains

Area	Overall IMD	Income	Employment	Education, skills & training	Health & disability
Dartford	154	198	210	152	174
Gravesham	123	127	130	79	160
Maidstone	185	199	206	163	213
Medway	93	103	98	68	119
Swale	56	74	64	28	94

Source: MHCLG, English Indices of Deprivation, 2019.

Key:	25% most deprived	50% most deprived	50% least deprived	None in 25% least deprived

The table highlights some significant challenges for Greater North Kent. None of the area's local authorities are in the least deprived quartile in any of the domains above. Swale is in the bottom quartile of all local authorities across England in terms of overall deprivation, and on the 'education, training and skills' domain, three of the five authorities are in the bottom quartile. Despite a relatively positive performance in terms of economic activity and employment and despite rapid recent and planned growth, disadvantage remains widespread – and skills and education are an important dimension of this[12]. The next chapter explores Greater North Kent's qualifications, attainment and progression profile in more detail.

[12] Note however that some of the underlying data within the IMD (especially within the education, skills and training domain) is now quite old. See English Indices of Deprivation for the methodology (File 8).

3. Resident Skills

Summary

Workforce qualifications have risen steadily over time. But there are fewer people qualified to Level 3 and Level 4+ than in the UK as a whole. Within the sub-region, there are local differences in outcomes, with (generally) weaker workforce qualification rates in Gravesham and Swale.

At Key Stage 4, the great majority of students remain in education, with around 59% progressing to sixth forms and about 27% entering further education.

Following 16-18 education, around 35% of students enter higher education, with about 29% entering sustained employment, 7% FE and 10% Apprenticeships.

Building on the demographic and social analysis in the previous chapter, this chapter looks more closely at Greater North Kent's workforce qualifications profile and its evolution over time. It also considers the progression routes of the future workforce, looking at the employment and further education destinations of students at Year 11, and progression after 16-18 education.

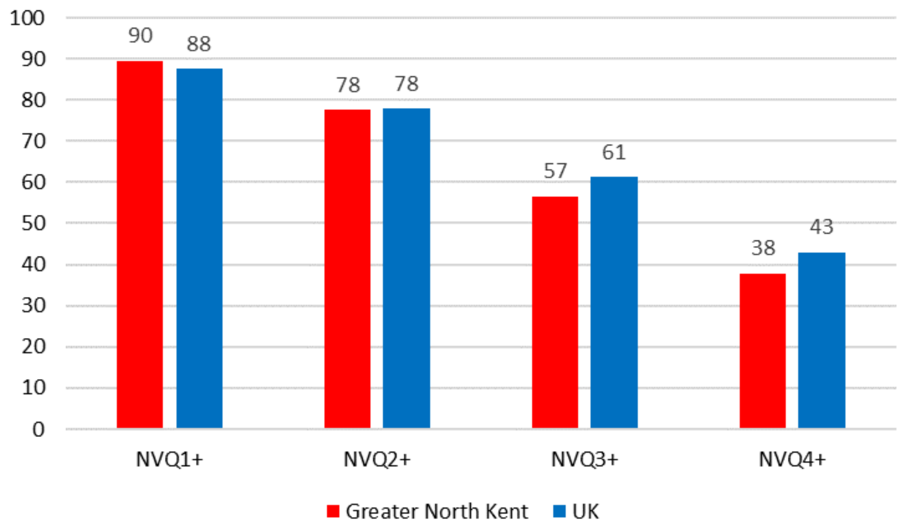
As was highlighted in the Kent and Medway Workforce Skills Evidence Base, formal certification cannot capture all of the knowledge and skills that people may possess, and many highly knowledgeable and skilled people may even have few or no qualifications. They do, however, provide the most measurable and comparable way of assessing local labour supply, and give valuable clues as to where action needs to be focused.

3.1 Workforce Qualifications

Current Workforce Qualifications

There are similar proportions of the working age population in Greater North Kent qualified to Levels 1 and 2 as the UK average. However, **at intermediate and higher qualification levels, there is some disparity, with a 4% and 5% difference between the proportion of the GNK workforce qualified to Level 3 and Level 4+ respectively, compared with the national average** (see Figure 3.1 below)**.** The workforce qualifications picture in Greater North Kent (and the gap with the rest of the UK) is broadly similar to that across Kent and Medway as a whole.

Figure 3.1: Percentage of working age population qualified to NVQ1-4+, 2020



Source: ONS, Annual Population Survey

Looking at the highest level of qualifications obtained by Greater North Kent residents, in 2020 there were around 29,000 people of working age with no formal qualifications (a somewhat smaller percentage share than in the UK overall), and a further 60,000 only qualified to Level 1 (see Figure 3.2 below). This data also shows that, relative to the UK as a whole, progression from Level 3 to Level 4+ is weak: while roughly the same percentages of people locally and nationally (around 18%) have Level 3 as their highest qualification, the percentage of those achieving at Level 4 and above is higher outside of GNK, by around 4%.

Figure 3.2: Highest qualifications obtained (2020)

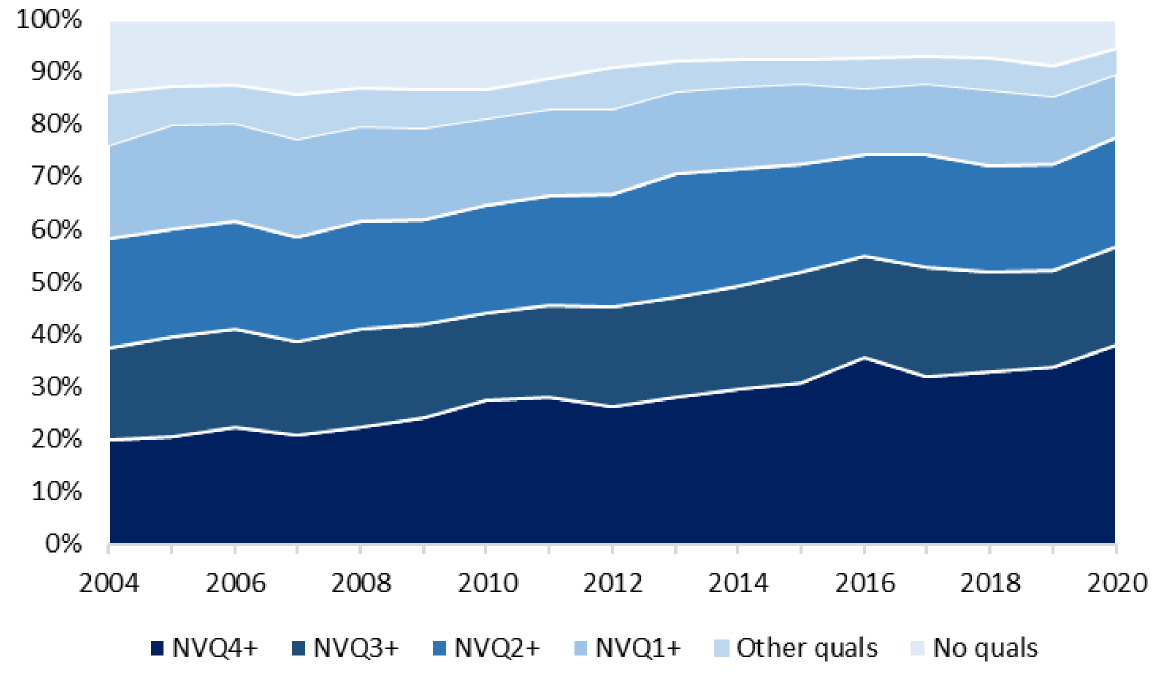
Qualification level	Greater North Kent	Greater North Kent %	UK %
NVQ4+	191,800	37.9	43.0
NVQ3+	94,200	18.6	18.2
NVQ2+	106,300	21.0	16.8
NVQ1+	60,200	11.9	9.6
No qualifications	28,500	5.6	6.6
Other qualifications	24,700	4.9	5.8

Source: ONS, Annual Population Survey

Change Over Time

Although Greater North Kent lags behind the rest of the UK in terms of workforce qualifications, there has been a steady improvement over time (see Figure 3.3 below). In 2004, around 14% of the working age population had no formal qualifications – a figure that had fallen to 5.6% by 2020. The share of the working age population qualified to NVQ4+ also almost doubled over the same period. This partly reflects the gradual transition of the workforce, as less qualified older workers retire and better-qualified new entrants join the market.

Figure 3.3: Highest qualification obtained in Greater North Kent, 2004-20

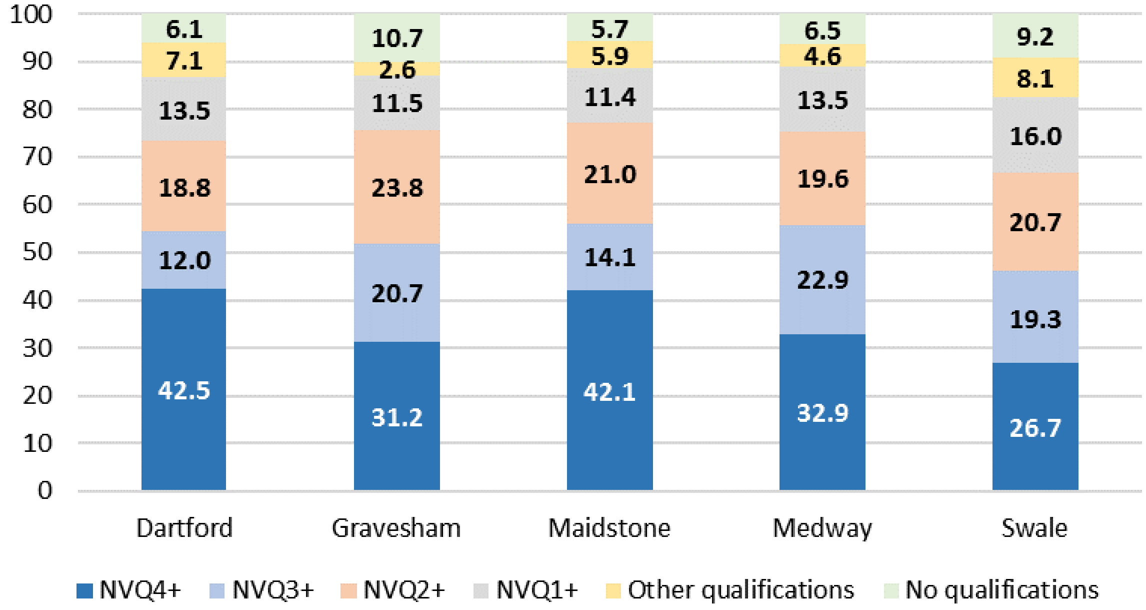


Source: ONS., Annual Population Survey

Local Variations

There is some variation in workforce qualification levels between Greater North Kent's local authorities. NVQ4+ qualification rates remain substantially below the UK average in Swale, Gravesham and Medway (see Figure 3.4 below).

Figure 3.4: Highest qualification obtained by local authority (three-year average, 2018-20)[13]



Source: ONS, Annual Population Survey

3.2 Future Workforce

The vast majority of students completing Key Stage 4 (i.e., concluding Year 11, aged 15-16) go on to some form of continuing education. In Greater North Kent, most (nearly 60%) progress to school sixth forms, with around 27% (about 2,400 students in 2018/19) entering further education. There is however some variation in the pattern of progression at local level, with further education accounting for a higher proportion of KS4 leavers in Gravesham, Medway and Swale, while Maidstone has the lowest proportion (see Figure 3.5 below). Further analysis would be needed to explore the reasons for this local variance, although it does reflect the prevailing resident qualifications profile.

Figure 3.5: Pupil destinations at Key Stage 4 (% of total cohort, 2018/19)

Area	Sixth Form	FE	Other education	Apprentice-ships	Employment	Unknown/ not sustained
Dartford	61.5	25.4	2.8	3.3	3.1	3.8
Gravesham	56.9	30.3	2.0	3.6	2.2	5.0
Maidstone	68.2	22.3	1.1	2.8	2.6	3.0
Medway	55.0	29.0	2.9	3.7	2.9	6.5
Swale	55.4	28.6	2.1	4.5	4.9	4.4

[13] Because of high confidence intervals, there is substantial data volatility at individual local authority level (especially in the smaller districts of Dartford and Gravesham). To make the local authority comparison more meaningful, we have smoothed the data by presenting three-year averages.

Area	Sixth Form	FE	Other education	Apprentice-ships	Employment	Unknown/ not sustained
GNK	**59.2**	**27.1**	**2.2**	**3.6**	**3.1**	**4.8**
K&M	57.9	27.5	2.7	3.3	3.3	5.2

Source: DfE

81% of those leaving 16-18 education enter either sustained employment or continuing education, with 35% of leavers in 2018/19 entering higher education – the same as the England average. There is some variance at local level, however – with over half of leavers in Maidstone (the highest) entering HE in 2018/19, compared with just 28% of those in Medway (the lowest, see Figure 3.6 below).

Figure 3.6: Student destinations after 16-18 study (%, 2018/19)

Area	Higher education	Further education	Apprenticeships	Employment	Unknown/ not sustained
Dartford	31	11	10	29	19
Gravesham	48	5	9	22	13
Maidstone	51	3	7	28	9
Medway	28	6	12	30	23
Swale	43	3	9	27	15
GNK	**35**	**7**	**10**	**29**	**19**
K&M	32	9	8	29	20
England	35	10	10	25	19

Source: DfE, Longitudinal Educational Outcomes Dataset

The picture for progression to FE overall is below that for Kent and Medway, and England, and especially low in Medway and Swale, while progression to Apprenticeships and employment is strongest in Maidstone and weakest in Medway, Swale and Gravesham.

4. Employer Skills Demand

Summary

An analysis of employment demand in Greater North Kent indicates that the area is both polycentric (with multiple employment centres focused on the main towns) and part of a larger labour market that reaches into surrounding areas, especially London (outer and central).

The business base is dominated by small firms. But over half of all jobs are in organisations employing over 50 people.

Greater North Kent gross value added is about £17bn. Average productivity varies from £62,000 in Dartford (higher than the UK average of £57,000) to £48,000 in Gravesham. Resident pay is generally above the national average. But there is a gap between pay in locally-based workplaces and the higher wages that can be commanded by commuting outside Greater North Kent.

There are around 366,000 jobs in Greater North Kent. The employment base is generally diverse, although the strongest sectors in terms of jobs are health; business administration and support services; and retail, three sectors which account for over a third of all employee jobs in the area. Manufacturing; construction; transport and logistics; accommodation and hospitality; and education are also strengths, accounting for a further third of employment.

The stock of jobs has expanded at a faster rate than the working age population, leading to a modest rise in the jobs density over time, with relatively high concentrations of jobs in transport and logistics, and construction activities when compared with the rest of the country. Employment growth has also been strong in construction; professional, scientific and technical activities; and hospitality.

The Greater North Kent labour market is quite 'porous'. The most recent travel-to-work data from 2011 shows that 16% of GNK residents commute to London (half to central London, the rest to outer Boroughs); 10% go out to other parts of Kent; and only 1% go to Essex, Thurrock and Southend. There is also significant commuting within Greater North Kent, the largest flows being from Gravesham to Dartford, and from Medway to Maidstone.

Net annual labour demand in GNK is expected to be around 13,600 to 2027. This includes 'replacement' demand as workers retire, as well as expansion demand, as new jobs are created.

Forecast occupational demand suggests that skills will be required at all levels, although the trend to increased qualification requirements is likely to be maintained.

This chapter considers the main drivers of employer demand for skills, starting with the nature of the local economy, and then exploring in detail the scope and scale of employment demand and the skills requirements that correspond to this.

4.1 The Business Base

In 2021, there were around **36,000 businesses** in Greater North Kent[14]. In 2020, this equated to an overall 'enterprise density' (the number of enterprises per 10,000 working age population) of around 700 (somewhat below the UK average of 767, and with a relatively higher enterprise density in Dartford and Maidstone than elsewhere in the area).

As elsewhere in the UK, **the Greater North Kent business stock is overwhelmingly composed of small businesses**. Some 86% of all businesses employ nine people or fewer (a marginally higher percentage than the UK average). However, large organisations still account for a very substantial

[14] UK Business Count; measured as 'local units', which include local autonomous units of larger groups.

share of employment: **around half of all employee jobs are in medium and large organisations employing over 50 staff**. While data on the total number of employees by business size is not published at local level, regional data indicates substantial variance by sector, with (for example) financial services and utilities being strongly dominated by large employers, while employment in construction (an important sector in Greater North Kent) is predominantly SME-based.

Figure 4.1: Employment by industry and business size band (%, South East, 2020)

Sector	9 or fewer	10-49	50-249	250+
Agriculture, forestry & fishing	48.4	15.0	11.7	16.7
Utilities, mining & quarrying	8.2	6.8	5.4	77.0
Manufacturing	18.3	16.2	19.6	46.2
Construction	59.7	11.9	6.9	21.8
Wholesale & retail	25.4	17.3	12.3	44.8
Transportation & storage	21.9	9.2	9.9	58.6
Accommodation & food service	22.3	23.9	11.5	41.7
Information & communications	35.5	12.9	12.6	39.2
Financial & insurance	19.6	6.5	10.3	61.7
Real estate	52.9	16.2	*	*
Professional, scientific & technical	49.2	14.8	12.4	23.5
Administrative & support services	29.4	11.9	15.2	43.6
Education	59.1	11.6	10.9	*
Health & social work	30.2	25.5	21.2	23.1
Arts, entertainment & recreation	48.2	10.8	8.6	30.9
Other services	67.5	14.6	*	*
All industries	35.0	15.1	12.6	37.5

Source: BEIS, Business Population Estimates. Note that for some small sectors, percentages do not total 100. Some data is suppressed (*). Note that this relates to private sector businesses only: most Health and Education employment is in the public sector.

Over the past five years, there has been healthy growth in Greater North Kent's business stock: a compound annual growth rate of 2.4% in 2016-21 (compared with 1.4% nationally). Unsurprisingly, this growth is focused principally on micro businesses.

In 2020, the start-up rate in Greater North Kent (the number of start-ups as a proportion of the overall business stock) was somewhat higher than the UK average (12.9% compared with 11.8%). Start-up rates by sector are not published at local level, but nationally, rates were higher in administrative and support services, some financial and professional services, the care industry and parts of the retail sector[15].

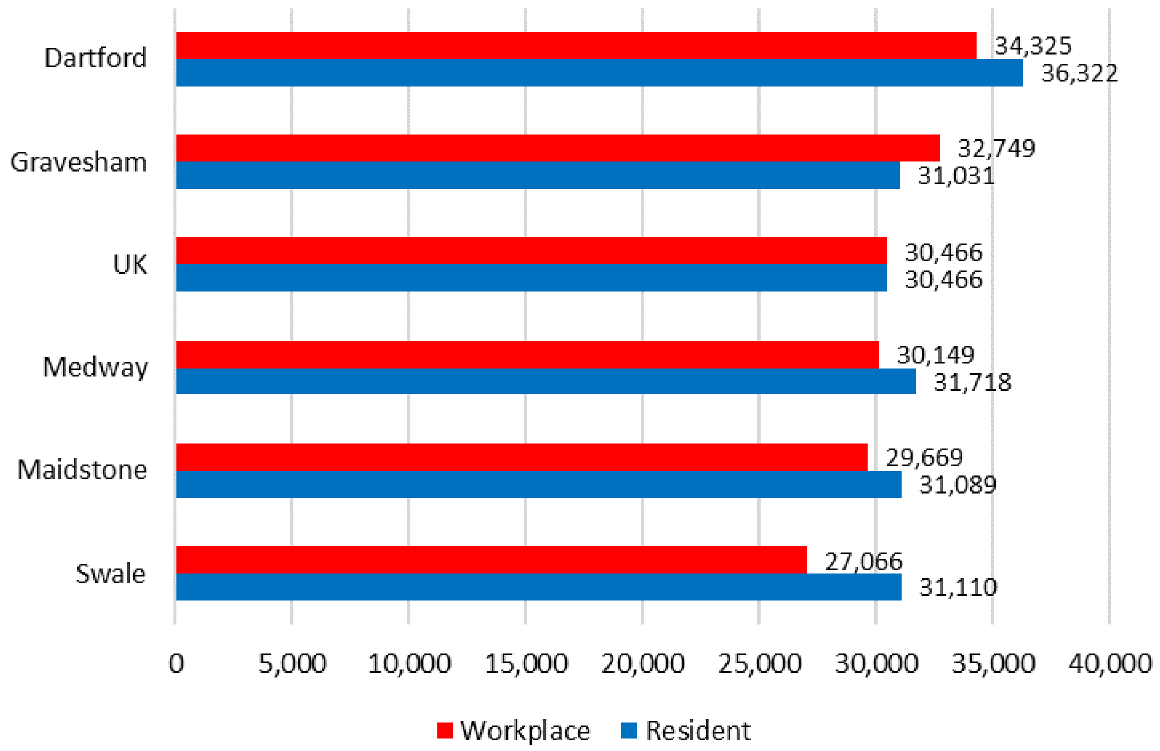
4.2 Output, Productivity and Pay

In 2018, **Greater North Kent generated gross added value of around £17.2 billion**. Average productivity (measured as GVA per filled job) varied across the area, from £62,000 in Dartford (higher than the UK average of £57,000) to £48,000 in Gravesham.

[15] Principally 'retail not in stores, stalls or markets', which presumably includes online-based retail.

Translating this into wage levels, the median annual pay of Greater North Kent residents is above the UK average (in Dartford, rates of pay are up to about 20% higher than in the UK as a whole). *Workplace* pay (i.e., the wages earned at places of employment within Greater North Kent) shows more of a mixed picture however: in Swale, Maidstone and (marginally) Medway, workplace pay is somewhat below average, and (with the exception of Gravesham), resident pay is higher than workplace pay (see Figure 4.1 below).

Figure 4.1: Resident and workplace pay, 2018-20



Source: ONS, Annual Survey of Hours and Earnings. Data shows three-year average for 2018-20 to smooth out volatility in annual statistics at district level.

This is what we would expect, given proximity to the large London labour market: the likelihood is that people travel to access jobs that command higher salaries than could be earned locally, with (generally) higher pay in places closer to London.

Within these average pay rates**, there are substantial differentials between sectors and between different population groups**. In keeping with the national average, female pay is lower than male pay (measured at the workplace and place of residence) – although the differential has narrowed over time[16]. Nationally, there is also a 2.3% pay gap between white and minority ethnic workers – which has fallen over time, but obscures significant variations between different groups[17]. Pay differentials by sector are not published at district level, although largely reflect differences in sector productivity, with (generally) higher pay in manufacturing and construction, and lower pay rates in retail and hospitality[18]. (See below regarding full-time and self-employment patterns.)

4.3 Employment

In 2019, there were around 366,000 jobs in Greater North Kent (see Figure 4.2 below)**.** The rate of net job creation has been positive over the past two decades: between 2000 and 2019, the area's

[16] Pay data at district level is subject to substantial confidence intervals, although the pattern is consistent. Nationally, female full-time pay as a percentage of male full-time pay has risen from 77% in 2002 to 86% in 2021.

[17] ONS, Ethnicity pay gaps 2019. Note that pay data relating to ethnicity is not published at local level.

[18] ONS, Average Weekly Earnings by industry dataset

overall stock of jobs expanded by 23% (compared with a 15% increase in the working age population over the same period). This reflects the UK's general success in growing the jobs, and partly correlates with the improvements in economic activity rates described earlier. Success in job creation has however been accompanied by slow productivity growth since the 2009 recession: this has led to widespread concerns about pay and job security, although the picture across Greater North Kent is quite complex

A consequence of increasing job numbers is a modest rise over time in the **jobs density** (the number of jobs to every person of working age in the area). However, Greater North Kent's jobs density remains lower than the UK average, reflecting the presence of commuter opportunities in London and elsewhere, which is discussed later in this chapter.

Figure 4.2: Jobs in Greater North Kent

Area	Total jobs, 2019	Growth 2000-19 (compound annual growth rates), %	Growth 2014-19 (compound annual growth rates), %	Jobs density, 2019
Dartford	68,000	2.0	0.6	0.95
Gravesham	37,000	0.9	2.9	0.56
Maidstone	91,000	0.7	0.7	0.87
Medway	107,000	0.7	1.6	0.61
Swale	63,000	1.6	3.5	0.70
GNK	**366,000**	**1.1**	**1.6**	**0.72**
Kent & Medway	880,000	1.3	2.0	0.78
UK	36,290,000	1.1	1.7	0.87

Source: ONS, Jobs Density dataset

Looking in more detail at local level, it is worth noting that concentrations of employment are quite widely distributed across the area, reflecting its 'polycentric' character: no one centre dominates. This is reflected in Medway's unusually low jobs density: large urban areas typically have relatively high jobs densities, since they tend to concentrate a range of service activities – but in Greater North Kent, the geography of employment (and the travel to work patterns described below) are more complex (and Medway is itself a polycentric conurbation).

Around 79% of people in employment in Greater North Kent worked full-time in 2020 – a marginally higher proportion than in the UK as a whole. Despite increasing flexibility in working practices, the share of the employed population working full-time has actually increased over time. This is mainly accounted for by a rise in female full-time working (which steadily increased from 55% of the employed female population in 2004 to 66% in 2020).

In 2020, around 10% of the working age population was self-employed in Greater North Kent – equating to about 52,000 people. This is broadly in line with the national average. Over time, there has been a modest increase in the number of self-employed people (a rise of 12% between 2010 and 2020, almost exactly in line with the UK overall), perhaps reflecting an increased propensity for 'independent' work in a wider range of sectors. Over time, the business stock has also expanded, from around 25,000 enterprises in 2009 to 34,000 a decade later. In the years leading up to the pandemic, business births outstripped deaths in all local authority areas, with an especially high ratio of births to deaths (1.66 in 2019) in Dartford.

4.4 Sectoral Profile of Employment

Overall Scale, Concentration and Growth

Greater North Kent has a sectorally diverse economy (see Figure 4.3 below):

- In terms of **absolute employment numbers**, the largest sectors are health; business administration and support services[19]; and retail. These three sectors alone account for over a third of all employee jobs in the area. Manufacturing; construction; transport and logistics; accommodation and hospitality; and education are also substantial sectors and account for around a further third.
- Of the larger sectors, the strongest **growth in employment** over the past four years has been in construction; professional, scientific and technical services; and accommodation and food services. A few sectors saw a contraction in employment over the period: of the larger sectors, this affected retail and public administration, although employment also fell in financial and insurance and real estate.
- While Greater North Kent has a mixed sectoral profile, there are **some sectors in which it has relative strengths** in employment terms. Of the major employment sectors, the area is relatively 'over represented' in construction and transport and logistics (with the sectors 40% and 20% larger in employment terms than they would be if GNK's sectoral profile matched that of the national economy).

Local Concentrations

The geographical distribution of sectors in Greater North Kent includes, on the one hand, some sectors, like construction and logistics, which are relative employment strengths in every local authority area. On the other hand, there are also sectors which are relative strengths in terms of employment numbers only in some local authority areas:

- **Dartford:** relatively high concentrations in construction, retail, transport and storage, business administration.
- **Gravesham:** relatively high concentrations in construction, transport and storage, public administration, education.
- **Maidstone:** relatively high concentrations in agriculture, construction, public administration.
- **Medway:** relatively high concentrations in agriculture, utilities, manufacturing, construction, motor trades, transport and storage.

Annex 1 gives more detail on the economic profile of each local authority area.

Figure 4.3: Greater North Kent sectoral employment profile

Sector	Employee jobs, 2019	Share of total employment, 2019 (%)	Employment growth (CAGR, 2015-19)	Location quotient, 2019[20]
Agriculture, forestry, fishing	6,000	1.9	0.0	2.6
Mining, quarrying & utilities	5,000	1.6	5.7	1.2
Manufacturing	23,000	7.2	1.1	0.9

[19] This is a diverse sector including a range of business services (such as employment agencies, rental & leasing, facilities management, call centres, packaging, office services, etc.).

[20] The 'location quotient' is a measure of relative concentration. A LQ greater than 1 means that the sector has a larger share of total employment in Greater North Kent than it does in the national economy; a LQ of less than 1 means it has a smaller share.

Sector	Employee jobs, 2019	Share of total employment, 2019 (%)	Employment growth (CAGR, 2015-19)	Location quotient, 2019[20]
Construction	24,000	7.6	3.4	1.6
Motor trades	7,000	2.2	3.9	1.2
Wholesale	12,000	3.8	0.0	1.0
Retail	33,000	10.4	-1.5	1.1
Transport & storage	21,000	6.6	1.2	1.4
Accommodation & food svc.	22,000	6.9	2.4	0.9
Information & communications	8,000	2.5	0.0	0.6
Financial & insurance	6,000	1.9	-3.8	0.5
Property	4,500	1.4	-2.6	0.8
Prof, scientific & technical	18,000	5.7	6.5	0.6
Business administration & support	32,000	10.1	1.6	1.1
Public administration & defence	14,000	4.4	-1.7	1.0
Education	29,000	9.1	0.9	1.1
Health	41,000	12.9	-0.6	1.0
Arts, entertainment etc.	12,000	3.8	0.0	0.8
Total	**317,500**	**100**	**0.8**	**-**

Source: ONS, Business Register and Employment Survey

The sectoral composition of the economy is helpful in indicating where market demand for employment will be generated. However, four broader considerations are worth bearing in mind:

- **Even where individual sectors appear to be 'declining' in net employment terms, there will still be (potentially high) demand for new staff as older workers retire.** This 'replacement demand' is an important part of the annual labour requirement, and we consider it further below in relation to future employment forecasts.
- **The range of occupations required in each sector is broad, and will include support activities which will be transferable across sectors** (most firms require finance and sales functions for example).
- **Technology convergence is blurring some sectoral boundaries** and changing the nature of activities within sectors. For example, the increasing importance of service activities within some manufacturing firms, or the transformational impact of digital technology on the nature of retailing. Some of these structural shifts are not obvious from the changing sectoral balance but are fundamentally important to the nature of much activity within industry.
- **The UK's exit from the European Union will have impacts on labour supply**, and this may increase demand for automation and changed working practices. The impact has principally been quoted in relation to labour-intensive, relatively low-skilled jobs in (for example) food

processing and construction (about 21% of low skilled factory and machine operator jobs were held by EU nationals in 2018)[21]. This is discussed further in Chapter 5.

4.5 Occupational Profile of Employment

Current and Historic Occupational Profile

Greater North Kent's occupational profile is broadly similar to that of the UK as a whole. However, there is a small under-representation in senior managerial, professional, and associate professional and technical roles (see Figure 4.4 below). At the same time, there is an over-representation in 'elementary occupations'. This may reflect (and influence) the workforce qualifications profile outlined earlier in this report and the likelihood that out-commuters to London will be in more highly paid roles out of the area.

Figure 4.4: Greater North Kent occupational profile, 2021

Occupation Category	GNK, total jobs	GNK, %	UK, %
Managers, directors and senior officials	43,100	10.4	11.3
Professional occupations	88,4000	21.3	22.6
Associate professional & technical occupations	57,600	13.9	15.5
Administrative & secretarial occupations	53,500	12.9	10.1
Skilled trades occupations	37,200	9.0	9.2
Caring, leisure & other service occupations	37,300	9.0	9.0
Sales & customer service occupations	20,500	5.0	7.0
Process, plant & machine operatives	22,900	5.5	5.7
Elementary occupations	53,500	12.9	9.4

Source: ONS, Annual Population Survey

Over time, the occupational profile has been largely stable. However, a comparison of compound annual growth rates between 2004 (when the time series began) and 2020 indicates growth in professional occupations and a contraction in process, plant and machine operatives, sales and customer service occupations and (to a lesser extent) skilled trades. This reflects the automation (see section 4.7 below) of some customer service and production jobs, and lower employment in manufacturing generally. However, as with the sectoral composition of the economy, even with a net contraction over time, there will still be high demand (potentially very high demand) to replace existing posts as workers move in and out of the market.

Advertised Vacancies

Analysis by EMSI on behalf of the South East LEP indicates that, as suggested by the occupational data above, the most commonly advertised occupations in Greater North Kent in the second quarter of 2021 were in professional and associate professional and technical occupations (although this may reflect the advertising propensity of jobs in some occupational types)[22].

Looking more closely at the skills that are required in jobs advertised (see Figure 4.5 below), the table below highlights those vacancy keywords reported by EMSI as most common in adverts in Greater North Kent[23]. Overall, the most common keywords relate to finance, health, sales and logistics related activities, with those in health and logistics-related activities somewhat more

[21] Kings College London, UK in a Changing Europe/ Migration Observatory 2020
[22] EMSI (Q2 2021), Economy Overview: GNK authorities for South East LEP
[23] EMSI refers to these descriptions as 'hard skills', although vacancy keywords is probably a clearer description

common in GNK as a percentage of all vacancy descriptions than the national average. However, this essentially provides a snapshot of short-term demand, rather than longer-term trends.

Figure 4.5: Vacancy keywords most common in Greater North Kent

More commonly cited than national average	Warehousing Nursing Mental Health Personal Protective Equipment
Less commonly cited than national average	Auditing Finance Accounting 'Key Performance Indicators' Business Development Selling Techniques

Source: EMSI

4.6 Travel to Work Patterns

Greater North Kent enjoys good transport links with London and has always had an important economic relationship with London, the rest of Kent and the wider Thames Estuary. According to the last (2011) census, some 171,000 people resident in Greater North Kent also worked in the area (in addition to 34,000 residents who were mostly worked from home). Combined, this means that about **58% of working residents both lived and worked in the area[24].**

Within Greater North Kent, there is no dominant commuter flow (see Figure 4.6 below), reflecting the area's polycentric nature. The largest intra-area flows are from Gravesham to Dartford and between Medway and Maidstone. Beyond Greater North Kent:

- **Around 16% of all GNK residents in work commuted to London.** Just over half of this was accounted for by Central London[25], with most of the remainder travelling to south-eastern boroughs such as Bexley, Bromley, Greenwich and Lewisham. This highlights the complexity of London as a commuter destination: although partly about 'traditional' city centre commuting patterns, local travel to work across the extended London urban area is very important (more people commute from Dartford to Bexley than from Dartford to the rest of GNK combined, for example). The relationship is also 'two way', with Dartford an important commuter destination for Bexley residents[26].
- **Around 10% commuted from GNK to other parts of Kent.** About half of this was accounted for by Tonbridge and Malling (linked with the large concentration of activity around Aylesford/ Medway Gap, which functionally is part of the Greater North Kent economy despite being outside its administrative boundary); with the rest mainly outbound flows from Dartford to Sevenoaks and Swale to Canterbury.
- **Only around 1% commuted to Essex, Thurrock and Southend**, despite its proximity and its similar economic and industrial profile. Even from Dartford, Essex only accounted for about 1.7% of all resident jobs – and numbers commuting to London boroughs north of the river (e.g., Redbridge, Havering) are also relatively modest. This clearly highlights the severance effects of the river, notoriously unreliable journey times via the Dartford Crossing and the impact of mainly linear east-west travel links.

It is worth noting that the 2011 census, from which this data is derived, is now very old. High Speed One had only been operational for two years at the time of the census. On the other hand,

[24] A further 36,000 had no fixed workplace, although many of these will have normally worked locally.
[25] City of London, Westminster, Camden, Islington, Kensington & Chelsea, Lambeth, Southwark, Tower Hamlets
[26] Slightly more Bexley residents commuted to Dartford in 2011 than the other way round.

propensity to work from home has increased substantially and has been massively accelerated during the pandemic and it is possible that remote working will have a profound impact on our understanding of 'travel to work' areas, especially in digitally-enabled service sectors. Looking to the future, infrastructure improvements such as the Lower Thames Crossing may also increase the potential to integrate the North Kent and South Essex labour markets, although this is likely to be gradual and over the longer term, and possibly more oriented to locations east of the Crossing, given its design.

Figure 4.6: Travel-to-work matrix, 2011

Place of residence (across) Workplace (down)	Dartford	Gravesham	Maidstone	Medway	Swale	GNK
Dartford	13,901	6,710	1,035	3,977	593	12,315
Gravesham	1,929	12,990	569	3,185	423	17,167
Maidstone	370	901	30,693	7,578	3,190	42,362
Medway	811	2,389	4,165	53,629	4,751	64,934
Swale	160	436	1,533	4,201	27,833	34,003
GNK	**17,171**	**23,426**	**37,995**	**72,570**	**36,790**	**170,781**
Rest of Kent	2,755	2,920	13,895	9,913	7,187	36,670
London	19,145	10,323	7,325	17,300	4,982	59,075
Essex	846	839	402	1,147	341	3,575
Rest of UK	1,594	1,754	2,345	3,850	1,589	11,132
Home working	3,851	3,964	9,267	9,994	6,524	33,600
No fixed workplace	4,831	5,099	7,312	12,755	5,756	35,753
Other	77	89	144	221	101	632
Total	**50,270**	**48,414**	**78,685**	**127,750**	**63,270**	**351,218**
% working in GNK or at home	**42%**	**57%**	**60%**	**65%**	**68%**	**58%**

Source: Census 2011

4.7. Impact of Automation

Economic growth is generated through productivity gain (i.e., extracting greater value for every hour worked), which in turn means greater efficiency in producing goods and providing services. This means continued pressure to automate processes where possible, and technology change has been a central driver of changes in the jobs market over time.

Over the coming decade, digital technology and the advance of artificial intelligence to enable increasingly autonomous processes, is expected to have a significant impact on the number and nature of jobs. By the mid-2030s, recent analysis by PwC estimates that around 30% of jobs that existed in the UK in 2018 could be automated[27].

In **sectoral** terms, no part of the economy will be unaffected. But it is anticipated that in the shorter term (during the 2020s) sectors such as financial services could be significantly impacted, as algorithms replace complex decision-making processes: there is evidence that this process has been

[27] PwC (2018), Will Robots Really Steal Our Jobs? Estimates of vulnerability to automation vary substantially however. See also House of Commons BEIS Committee (2019), Automation and the Future of Work

underway for some time. For sectors such as logistics, the greatest impact of automation may be somewhat later, as autonomous vehicles become viable. However, those sectors highly reliant on social skills and personal contact may be less affected: AI will be of transformational importance to health and care for example, but human intervention will likely remain essential, alongside the greater use of robots.

In **occupational** terms, vulnerability to automation varies significantly. Unsurprisingly, machine operators and assemblers, 'elementary occupations' and clerical jobs are most vulnerable. Professional and senior managerial occupations are likely to be the least vulnerable, reflecting their greater orientation to tasks requiring complex human interaction and social skills. Potentially however this raises an issue in how progression in employment is managed, as some 'entry-level' roles become automated.

In **qualification** terms, impacts are likely to be greatest on those jobs requiring lower and mid-level qualifications. PwC estimates that around 47% of jobs requiring lower level qualifications in 2018 are vulnerable to automation by the mid-2030s.

It should be noted however that automation is a continuous process, and leads to new opportunities, as well as threats. This may not be immediately obvious in job titles and classifications: despite technology creating new jobs, the PwC study estimated that only 6% of jobs that existed in 2013 were of a type that did not exist in 1990. But the *content* of employment will change substantially, as tasks and the means of delivering them require the use of new skills and technologies

4.8 Forecast Employment and Skills Needs

Turning some of these future projections into estimates at local level, the Department for Education has recently published a revised set of employment forecasts through its **Working Futures** forecasting model[28]. This forecasts employment by sector, occupation and qualification level for all Local Enterprise Partnership areas in England. These forecasts were used to make local estimates for Kent and Medway within the Workforce Skills Evidence Base, and, using the same methodology, we can make a similar set of estimates for Greater North Kent.

Overall, the Working Futures model estimates that employment in the South East LEP area will grow by around 2% between 2020 and 2027. This is a lower rate of growth than has been experienced in Greater North Kent in recent years (and which might perhaps be expected from GNK's rising population, especially on the upper level estimates quoted earlier). However GNK's general economic profile is not dissimilar to that of the South East LEP area overall, so the projections (adjusted to the local economic base) are plausible, in the absence of a bespoke area-based model[29].

Sector forecasts

Projections approximated from Working Futures anticipate around 6,500 additional employee jobs by 2027[30]. Figure 4.7 (below) shows the anticipated sectoral breakdown. This indicates:

- A **contraction in manufacturing employment.** This is consistent with the long-term trajectory of manufacturing employment in the UK (and Greater North Kent), although it is worth noting that over the past decade, manufacturing employment has been generally stable.

[28] Warwick University Institute for Employment Research/ Cambridge Econometrics for DfE, Working Futures 2027

[29] Note that while the Working Futures model takes account of estimated Brexit-related impacts, it was prepared before the Covid-19 pandemic. The projections should therefore be seen as a 'plausible scenario' for how the economy and labour market will evolve over the coming years, but should be used alongside other demand and supply evidence.

[30] Note that these estimates are based on employee jobs (using the Business Register and Employment Survey). This does not include self-employment, which has grown in recent years and forms part of the Jobs Density dataset quoted earlier in this chapter.

- **Growth in public service-related sectors**, principally education and health. This is consistent with rising population-led demand and the national impact of demographic change on the need for health and social care.
- **Growth in retail and hospitality**, responsive to some extent to locally-driven demand, although GNK does have existing and potential future assets that drive inbound investment (e.g., Bluewater and the planned London Resort).
- **Modest growth across most other sectors**, albeit with a contraction in financial services and agriculture, both of which are relatively small in terms of overall employment.

Figure 4.7: Employment forecasts by sector

Sector	Change 2020-27 (%)	Change in GNK
Agriculture, forestry & fishing	-3	-200
Mining, quarrying & utilities	3	100
Manufacturing	-10	-2,300
Construction	2	500
Wholesale & retail	2	1,100
Transportation & storage	-1	-200
Accommodation & food service	7	1,500
Information & communications	3	200
Financial & insurance activities	-6	-400
Real estate	6	300
Professional, scientific & technical	3	500
Administrative & support service	3	1,000
Public administration & defence	0	0
Education	4	1,200
Health and social work	7	2,900
Arts & entertainment	2	100
Other services	2	100
Total	2	6,500

Source: DfE, Working Futures 2017-27. Estimated using SELEP workbook and ONS BRES data 2019

Occupational Forecasts

Although the Working Futures model projects modest net employment growth, most demand relates to jobs that already exist in the economy, as new entrants replace those who are retiring. The annual replacement demand rate is anticipated to run at between 2% and 3.5% across all occupational groups. Figure 4.8 (below) sets out anticipated employment demand to 2027 in terms of ***expansion*** demand (i.e. net additional growth) and ***replacement*** demand (i.e. churn within the employee base).

Figure 4.8: Replacement and expansion demand by occupation

Occupation	Jobs (2021)	Estimated annual demand - Expansion	Estimated annual demand - Replacement	Net annual demand
Corporate managers	31,000	400	1,300	1,700
Other managers	7,600	100	500	600
Science, engineering & technical professions	30,000	200	500	700
Health professionals	14,000	200	500	600
Teaching & educational professions	20,900	300	800	1,100
Business, media & public professions	21,700	200	600	800
Science, engineering and technical associate professions	8,300	-	200	200
Health & care associate professions	8,800	100	200	300
Protective services occupations	7,200	<50	200	200
Culture, media & sports	6,200	<50	200	200
Business & public associate professions	25,900	300	800	1,100
Administrative occupations	40,700	-300	1,000	700
Secretarial etc.	13,800	-500	200	-200
Skilled agricultural etc.	1,400	-	200	200
Skilled metal, electrical & electronic	21,700	-300	500	200
Skilled construction	9,800	-	500	400
Textiles, print & other skilled	8,200	-100	300	100
Caring & personal service	35,000	600	1,200	1,800
Leisure, travel & personal service	7,900	-	200	200
Sales occupations	17,900	-200	800	600
Customer service	6,100	100	200	300
Process, plant & machine	11,500	-100	200	-
Transport & machine operatives	12,600	-	800	700
Elementary trade	6,600	-100	200	100
Elementary administrative	36,000	<50	1,000	1,00
Total	410,800	800	12,800	13,600

Source: DfE, Working Futures 2017-27. Estimated using Annual Population Survey data (using 2017 base data)

Overall, this suggests a net annual demand of around 13,600 workers, with the largest demand for:

- Teaching and education professionals (1,100 per year);
- Caring and personal service occupations (1,800);

- Corporate managers (1,700); and
- Business and public service associate professionals (1,100 per year).

Implications for Future Qualifications Demand

The Working Futures model estimates current qualification levels by occupational type. Assuming that these remain constant within each occupational group to 2027, the implication of the replacement and expansion demand set out above is that there is likely to be a need for skills and qualifications at all levels, albeit with higher level qualifications at Level 4+ likely to be required for around half of all vacancies coming onto the market.

Figure 4.9: Annual demand by qualification level

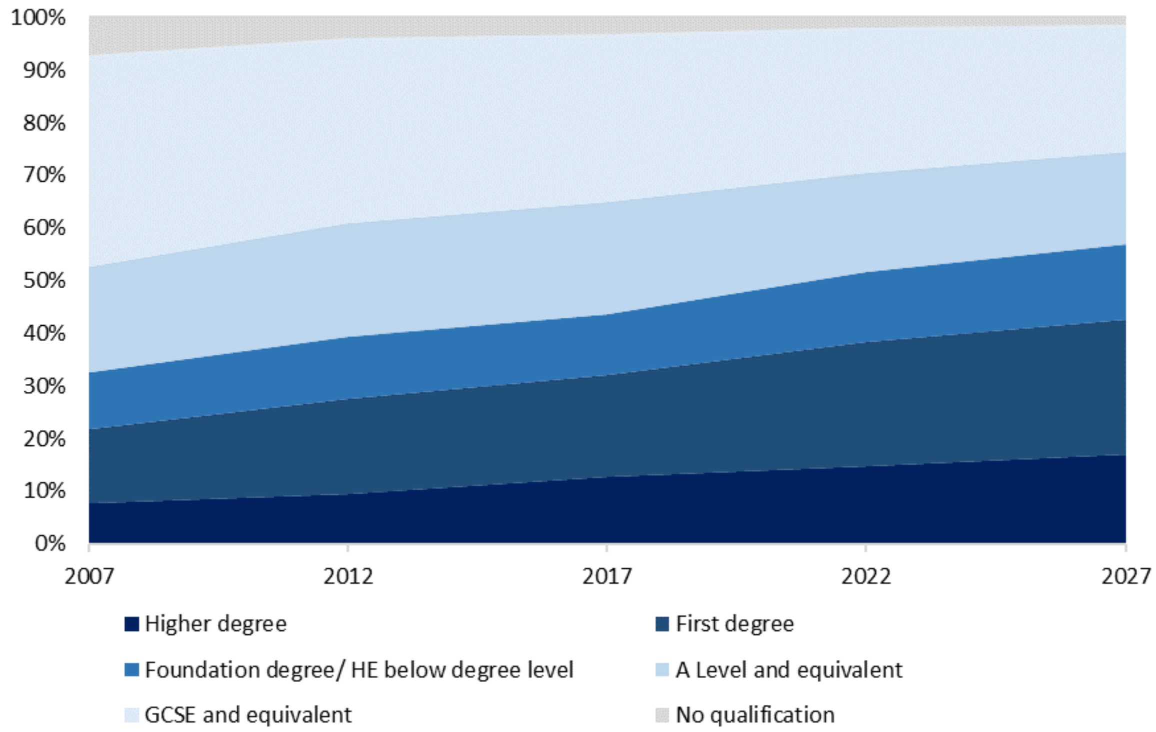
Occupational type	L4+	L3	L2	L1/ below
Corporate managers	900	300	200	200
Other managers	300	100	100	100
Science, engineering & technical professions	500	100	100	<50
Health professionals	500	100	<50	<50
Teaching & educational professions	1,000	<50	<50	<50
Business, media & public professions	600	100	100	<50
Science, engineering and technical associate professions	100	<50	<50	<50
Health & care associate professions	200	<50	<50	<50
Protective services occupations	100	<50	<50	<50
Culture, media & sports	100	<50	<50	<50
Business & public associate professions	600	200	200	100
Administrative occupations	300	100	200	100
Secretarial etc.	-100	-	-100	-100
Skilled agricultural etc.	100	<50	100	100
Skilled metal, electrical & electronic	<50	100	<50	<50
Skilled construction	<50	200	100	100
Textiles, print & other skilled	<50	<50	<50	<50
Caring & personal service	600	600	500	100
Leisure, travel & personal service	100	100	<50	<50
Sales occupations	100	200	200	100
Customer service	100	100	100	<50
Process, plant & machine	-	-	-	-
Transport & machine operatives	100	200	200	200
Elementary trade	<50	<50	<50	<50

Occupational type	L4+	L3	L2	L1/ below
Elementary administrative	200	200	200	300
Total	**6,600**	**2,800**	**2,500**	**1,700**
Total (%)	**49**	**21**	**18**	**13**

Source: DfE, Working Futures 2017-27. Note that the totals do not sum to the total in Table 3-7 due to rounding. All figures rounded to nearest 100.

Continuing the trajectory of steady improvements in workforce qualifications over the past couple of decades, the Working Futures model anticipates that the employment demand above will translate into higher qualification requirements over time (see Figure 4.10 below).

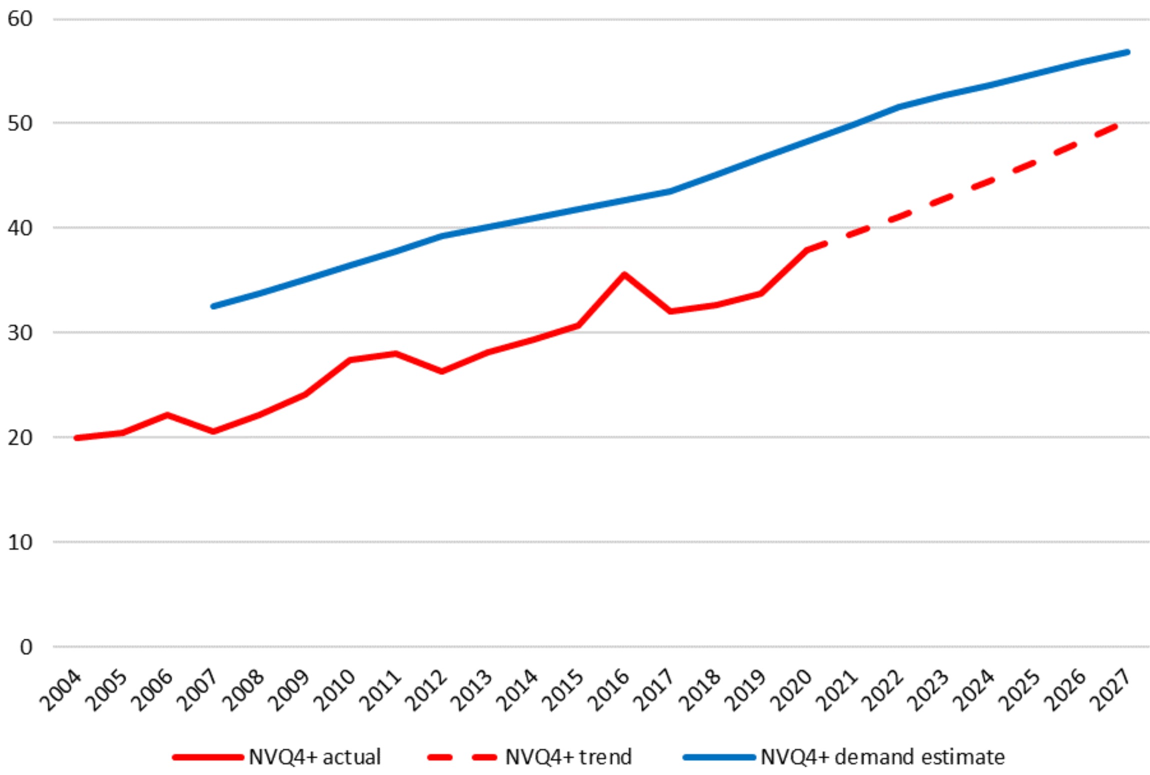
Figure 4.10: Forecast employment qualifications demand to 2027



Source: DfE, Working Futures 2017-27. Based on SELEP forecasts

Comparing this with the steady improvements in Greater North Kent's qualifications profile, there is an apparent imbalance between demand for higher qualifications and the 'supply' within the current workforce (although there will be some jobs that would require higher qualifications were the current experienced post holder to be replaced, reflecting changing employer expectations). However, projecting the historic workforce qualifications trend forward, the gap between supply and demand is anticipated to narrow over time – although maintaining the trend will require consistent effort and focus.

Figure 4.11: Comparing forecast and actual supply and demand



Gap in 2007: 13pp **Gap in 2017: 12pp** **Gap in 2027: 6pp**

Source: ONS, APS; Working Futures; SQW analysis

5. The Local Context

Summary

Greater North Kent is distinctive in that it has a growing and relatively young workforce compared with Kent and Medway as a whole. Although employment and economic activity rates are high, there are also areas significant 'pockets' deprivation and challenges of access in rural areas.

GNK lags behind the rest of the country in terms of the proportions of the workforce with Level 3 and Level 4+ qualifications. The picture would be much worse if the comparison were with the highest performing parts of the country and also varies by local authority area, the deficit being greatest in Swale, Medway and Gravesham.

The local economy is polycentric and quite varied in terms of industry sectors represented, and small businesses predominate. The labour market is also very 'porous' with people moving around within the area to work and also commuting out of the area (primarily to London).

The economy is undergoing significant change as a result of the pandemic, digitalisation, decarbonisation and major projects taking place in the area.

Local economic development and regeneration priorities highlight the polycentric and sectorally varied nature of the Greater North Kent economy. However, the following shared 'priority' sectors emerge from the interviews as being relevant to all or several of the Greater North Kent councils:

- Construction
- Visitor / experience economy
- Food and drink (growing and processing)
- Manufacturing / engineering
- Digital
- Transport and logistics
- Health and social care

Local authority stakeholders also confirmed the need at local level to address the trend towards greater digitalisation and decarbonisation of the economy identified as a national and sub-regional issue in the Kent and Medway Workforce Skills Evidence Base.

5.1 The Distinctiveness of Greater North Kent

The earlier quantitative data analysis and stakeholder interviews highlight the importance of the following key distinctive features of Greater North Kent's **communities**:

- **A Growing and Relatively Young Workforce**

  The Greater North Kent population has grown by 20% over the last 20 years and is expected to grow by between 6% and 12% by 2030 (50,000 to 98,000 extra people), both above the national and Kent and Medway averages. The working age population has also grown, by 11% between 2000 and 2020, and is forecast to grow by between 5% and 10% (25,000 – 50,000 people) by 2030. The age profile of the population is also 'younger' than the national and Kent and Medway averages.

- **Labour Market Inclusion Challenge**

  When compared with UK as a whole, economic activity rates are high and unemployment is low overall. This means that those not currently active in the labour market are likely to be especially 'hard to reach' and face multiple challenges in terms progressing into paid work and accessing activities that can be part of a pathway that helps people gain employment, such as work experience placements, traineeships and employability skills training. In addition, the pattern of economic inactivity, unemployment and deprivation is not undifferentiated across GNK, with significant 'pockets' of deprivation, especially in Swale and Medway. People in rural areas can also find it hard to access services and employment. As a result of these factors, additional efforts to improve labour market inclusion will face significant challenges.

- **Qualifications Gap**

  Qualifications do not capture all the knowledge and skills that people have, but they do provide a measurable way of comparing resident populations and workforces. While GNK is broadly similar to the UK as a whole in terms of the proportion of residents with qualifications up to Level 2, it lags behind the rest of the country for Level 3 and Level 4+. The picture would be much worse if the comparison were with the highest performing parts of the country and also varies by local authority area, the deficit being greatest in Swale, Medway and Gravesham. This has important implications if local stakeholders are seeking to encourage growth in 'high value added' sectors and activities, given that there is a relatively poor local talent pool in terms of higher and degree-level qualifications. More highly qualified labour is also more mobile and willing to travel longer distances, so, in practice, it will be the talent pool within an acceptable commute that matters, but local people will also commute out of the area for well-paid jobs, perhaps most notably in London and around the M25. If certain sectors are being prioritised, though, the Greater North Kent proposition to potential inward investors, start-ups and scale-ups will be more compelling the more highly qualified the local workforce and the greater the availability of any specialist skills that are required.

The data analysis and interviews also bring out the following key features of the Greater North Kent **economy**:

- **A Polycentric and Varied Economy**

  The local authority areas of Greater North Kent have a shared industrial heritage and shared characteristics shaped by the rivers and linear transport corridors, and are all impacted by their proximity to London, with opportunities in the capital readily accessible for workers and businesses. There is no one 'hub' of economic activity. Instead, the economy is more geographically distributed across a series of towns and main employment sites. The productivity data discussed earlier (section 4.2) in this report shows that GVA per head in some areas is higher than for Kent and Medway, suggesting a degree of dynamism and a workforce that is already quite productive. The area is also notable for its mix of economic activities, without especially dominant sectors, but with some sectors somewhat stronger in some areas (for example manufacturing and engineering in Medway and Swale, or construction in Gravesham, Swale and Maidstone). Greater North Kent also has significant rural areas and a burgeoning food and drink sector encompassing growing, processing and logistics, which is a genuine local strength.

- **A Small Business Economy**

  In common with the rest of Kent and Medway, and the UK as a whole, small businesses predominate in Greater North Kent. While this represents an opportunity if many can 'scale up', not all will wish to grow. Of those that have the potential for growth, some may struggle to respond to the challenges and opportunities that lie ahead, including the Net Zero agenda, digitalisation and automation. The challenge here is partly *technical* in terms of how, for example, companies can automate their activities, reduce their carbon footprint or make better use of digital technologies, and how they can secure the investment to do this in markets that are often very competitive. It is also partly a *leadership and management* challenge: many small businesses are likely to be principally focused on short-term challenges and opportunities, and may not have sufficient management capacity to plan strategically for the future. There is very little firm-level empirical evidence of the effects *regulation* has on SME growth, although it may be perceived as a barrier to growth by business owners[31].

The size structure of the economy also raises questions of how to engage small businesses in skills development, although this will be easier for the half of all workers employed in GNK who are in larger organisations employing 50 or more people.

- **A 'Porous' Labour Market**

  Travel-to-work data shows significant movement of workers within Greater North Kent (e.g. many Medway residents commute to Maidstone). There are also significant outflows from Greater North Kent as whole, primarily into London, both inner and outer Boroughs. Relatively few workers commute to South Essex at present (although this may change with LTC). The potential talent pool for Greater North Kent employers is huge if labour can be drawn in from surrounding areas. The geographical mobility of labour needs to be taken into account when addressing GNK's workforce skills needs: it makes sense to ensure that as many residents as possible can take advantage of current and future work opportunities, but employers themselves will cast their net beyond North Kent in order to secure the talent they need. There may be a countervailing pressure for more local employment in future in response to the need to reduce carbon footprints and air pollution (although this is potentially relatively easier to achieve in a dense regional labour market). Mobility varies by occupation, so lower paid workers will most likely have to be local, which has implications in terms of the need to train up local people in jobs in, for example, care, food, hospitality and retail. In addition, while there is a huge potential talent pool on North Kent's doorstep, North Kent businesses may be less competitive on wages than their peers in London or around the M25, which further underlines the importance of Greater North Kent developing talent at all levels.

5.2 A Changing Economy and Labour Market

Depth interviews with stakeholders highlighted that Greater North Kent is in a time of significant economic transformation, which will impact significantly on the labour market:

- The economy is emerging from Covid and the pandemic is widely believed to have accelerated underlying patterns of change in terms of the structure of employment and businesses during the pandemic. For example, traditional, shop-based retail has declined but online retail and its associated logistics operations have grown.
- The use of digital technologies and automation across a range of sectors have grown significantly and are expected to increase further.
- The policy and business response to climate change, given the ambitious Net Zero targets set nationally, will be very significant, although the detail of what is required in terms of skills is not yet fully understood, and will depend on, for example, policy decisions relating to the retrofit of buildings and which technologies are encouraged and adopted in households and businesses. Government's 2021 Net Zero Strategy[32], for example, is non-committal about whether heat pumps or hydrogen will predominate in domestic heating, and industry

[31] See, for example: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/712010/sme-growth-regulation.pdf
[32] https://www.gov.uk/government/publications/net-zero-strategy

discussions conducted for this research indicate that it is not yet clear whether hydrogen or electric will become the main technology in construction plant and heavy land-based sector machinery. Low carbon business operations could also have a significant impact on transport, energy and employment practices. How policy is communicated to individuals and businesses will also affect take up of Net Zero technologies and working practices. It is not yet clear which low-carbon environmental goods and services (LCEGS) offer particular opportunities for GNK, as the technologies that will dominate the market are yet to emerge.

- Major projects, if they go ahead, have the potential to be transformative in themselves, both in terms of their immediate employment impact and longer-term skills legacy. They will also significantly ramp up demand for labour in sectors like construction and the visitor / experience economy. There is also a high volume of development planned alongside the major projects, most notably in housing. Substantial housing growth will also lead to greater employment in local demand-driven activities, such as health, retail and public services.

This highlights a need for ongoing intelligence gathering and planning of services to employers and residents to meet the workforce skills needs of a transforming economy so as to assess:

- What developments and changes are needed to the existing curriculum to reflect changes to industry practice and household energy use, for example.
- What new specialist skills programmes are needed to address new requirements emerging from the changed landscape. The business strategy and management impacts of Net Zero might be one example of this.
- What programmes are becoming redundant and need to be withdrawn.
- Where the curriculum offer overall needs to be re-balanced more towards the priorities of employers and individuals (which can include skills to support self-employment and enterprise, as well as employment).

Workforce skills will play a key role in the future success of the North Kent economy. On the one hand, it will influence the ability of local residents to access opportunities, both within GNK itself and within its wider labour market area. On the other, the supply of skills will influence the attractiveness of the area as an investment location, alongside other factors such as access to employment land and premises and infrastructure.

5.3 The Local Economic Development and Regeneration Context

Interviews with stakeholders highlighted the following key features about local economic development and regeneration plans:

Dartford

The Borough is reviewing its key strategies and plans post-pandemic. Major new projects (like Ebbsfleet, which will create 15,000 new homes, and the proposed London Resort, if it proceeds, could employ up to 17,000 people when fully operational) are seen as a major opportunity to connect residents to employment and skills opportunities. The Borough also has very significant existing assets, such as Bluewater, which continues to be a major employment opportunity site and is seen as a ‘mega brand’ that attracts people into the area and makes it more attractive as a place to live. There are also major employment hubs around the M25, such as Crossways and The Bridge, and a number of major corporates, such as Laing O’Rourke. Alongside existing and planned key projects are a series of smaller growth nodes, including North Dartford, Darent Valley, Dartford Town Centre (which may eventually link to Crossrail) and smaller developments in rural areas.

Given the wide range of opportunities, the Council is keen to ensure that local residents benefit from the employment opportunities created and employers can find the workforce they need.

They are also keen to promote a strong place brand, based on the key assets of Dartford and for Greater North Kent as a whole, perhaps in the way that successful city brands have a strong overall identity with distinctive local features and strengths.

The 2021 Dartford Local Plan includes its Climate Change Strategy (Policy S3), which has provisions to ensure that development should contribute to minimising carbon emissions; encourage active and sustainable travel; protect and enhance green and blue infrastructure; manage flood risk; and make use of sustainable design and technology.

Gravesham

The Council's Corporate Plan[34] runs to 2023 and includes a focus on housing growth, development of Ebbsfleet and Gravesend town centre. Lower Thames Crossing and London Resort, if they are approved, will also have a major impact on the Borough and the Council and partners are working closely with both projects to ensure that the local employment impact and legacy is maximised.

The Council is also looking to support the growth of particular sectors. Food and drink is considered to have high growth potential, building on the presence of large employers like PrepWorld. The manufacturing / engineering base is also strong (key employers including Britannia Refined Metals, Kimberley Clark and Berkeley Modular), as are public services. There is still maritime sector activity and creative and digital could grow further if a strong local 'work-life proposition' makes it attractive to companies and professionals looking to move out of London. A key priority locally is to maximise the opportunities for local residents from the various developments, and to improve the digital skills and customer service skills of businesses.

Sustainability is a key concern, in terms of mitigating the negative impact the many construction activities taking place could have, but also in terms of the possibility of growing environmental businesses and the potential for the Council's 5,500 retained rental homes to be a priority for any future retrofitting initiative. The Council committed in 2019 to becoming carbon neutral by 2030 and published its first annual progress report in 2020[35].

Gravesham's arts and culture[36] offer is seen as an integral part of building the Borough's identity and reputation as an attractive place to live, learn, work and visit.

Maidstone

The Borough's new economic development strategy[37] focuses on enterprise; a greener, more productive economy; a thriving rural economy, including tourism, agriculture and viticulture; inclusive growth, which benefits everyone; and revitalising the centre of Kent's county town to increase its visitor / experience appeal, linked to the Maidstone cultural strategy.

The forthcoming Local Plan is expected to include high levels of house building, which is also likely to include initiatives to support skills development and local labour. Likely growth sectors are transport and logistics (including at Loc8, junction 8 of the M20), technology-led agriculture and food processing, digital and Medtech (linked to a new Innovation Centre at Kent Medical Campus).

From a social perspective, there are concerns to improve the qualifications profile of the resident population, especially intermediate and higher levels.

33 Updated.
34 Expired
35 https://www.gravesham.gov.uk/downloads/file/220/climate-change-report-2020-accessible-
36 Expired
37 https://maidstone.gov.uk/home/primary-services/council-and-democracy/primary-areas/information-and-data/tier-3-primary-areas/council-performance-reports/tier-3-primary-areas/strategies-and-plans/economic-development-strategy-documents/economic-development-strategy

The Council also has an ambitious Biodiversity and Climate Change Action Plan[38], which covers transport, buildings, energy generation, energy and waste reduction, climate change adaptation, enhancing and increasing biodiversity, and making the Council's estate carbon neutral.

Medway

As a unitary local authority, Medway is more active on workforce skills issues than the four Borough councils. It has, for example, a Skills and Employment Plan[39], officers dedicated to learning and skills, involvement with local schools, its Adult Education Service, and a range of skills-related projects.

Key local strategies are soon to be refreshed post-Covid, and there is likely to still be a focus on the current key sectors (manufacturing and engineering; digital; health and social care; creative and cultural; construction; and food and agritech).

Innovation Park Medway will play a key role in growing the Medway knowledge economy, with an anticipated 3,000 jobs expected to be created once the site is up and running. The Council is also fully committed to acting on climate change and has developed a local Climate Change Plan.

Swale

The Council's Economic Improvement Plan[40] was adopted in 2021 and places a high degree of emphasis on the growth of the visitor / experience economy and the creative and cultural sector. The area also has existing strengths in manufacturing / engineering and logistics. Food and drink (growing and processing) are small but significant too.

Supporting business start-up and growth is a priority in the Borough, as is promoting digitalisation and digital skills, including in rural areas.

There is a very strong political commitment to addressing the current climate emergency, and the Council has committed to being Net Zero by 2030 and introduced a grant scheme to help businesses looking to reduce their carbon footprint.

Swale has significant housing growth in its Local Plan, and issues with parts of the school system and a growing population mean that additional school and technical education options are likely to be required in future. The Council is especially keen to strengthen access to vocational routes.

The wide range of activity at local level highlights the importance of the five councils taking a coordinated approach to development, avoiding 'silos' that make life harder for employers and residents, reducing the risk of one area or major project 'cannibalising' another, and maximising the benefits of growth for Greater North Kent as a whole. A co-ordinated approach across local authority areas would help to mitigate such risks and enable the needs of businesses and residents to be better met.

Local economic development and regeneration priorities highlight the polycentric and sectorally varied nature of the Greater North Kent economy, already referred to in this report. However, the following sectors emerge from the interviews as being important to all or several of the Greater North Kent councils:

Construction, especially given the pipeline of housebuilding and major projects, as well as the potential for retrofit and modern methods of construction.

[38] https://maidstone.gov.uk/home/other-services/campaigns-and-projects/tier-2-primary-areas/biodiversity-and-climate-emergency/biodiversity-and-climate-change-action-plan

[39] https://www.medway.gov.uk/info/200341/medway_for_business/941/skills_and_employment

[40] Link expired

Visitor / experience economy, including retail and hospitality, and creative and cultural, including the role of this in place making and building a strong brand for Greater North Kent and its local areas.

Food and drink (growing and processing), which is small but a growing local specialism.

Manufacturing / engineering, including potential growth areas such as MedTech and green technologies.

Digital.

Transport and logistics.

Health and social care.

The local authority stakeholders also confirmed the need at local level to address the trend towards greater digitalisation and decarbonisation of the economy identified as a national and sub-regional issue in the Kent and Medway Workforce Skills Evidence Base.

The skills implications of digitalisation and decarbonisation are explored in the next section of this report, along with details of the needs of the development and construction, land-based and food, and manufacturing and engineering sectors.

There is a lot of skills-related activity taking place in GNK for all of the 'important' sectors listed above. In creative and cultural, for example, a recent report[41] from the Creative Industries Policy and Evidence Centre assessed the creative industries skills offer and how best to support the Thames Estuary Production Corridor vision across the Estuary region. Thames Estuary Growth Board is exploring follow up work to this research and has made a commitment to developing creative industry skills in the Estuary as a priority. Similarly, the Regen 2031 project (part of Creative Estuary[42]) has as an ambition to develop an approach to apprenticeships that works with the creative industry sector, acknowledging that the sector is largely formed of freelancers and microbusinesses, and North Kent College has secured funding for a new performance skills and digital arts space in Dartford.

41 https://pec.ac.uk/discussion_paper_/growth-through-skills-lessons-from-the-thames-estuary-production-corridor/

42 https://www.creativeestuary.com/

6. Industry Sectors, Decarbonisation and Digitalisation

Summary

The GNK industry sector skills dialogues suggest that many of the issues identified for Kent and Medway in the May 2021 report, still hold, but that labour shortages had become more of a challenge since then, including now for lower skilled roles. They also identified the following specific issues for Greater North Kent:

Development and Construction

It is now more important to engage young people and new talent pools in sector employment and skills opportunities through companies being more proactive in 'educate the educators' programmes and communicating more with young people directly about sector career opportunities and the nature of modern construction work. Existing mechanisms like the Enterprise Advisers Network and the Construction Youth Trust can play a key role in this, and a more coordinated the approach to engaging schools, colleges and young people is needed. Education and training providers need to know about the pipeline of employment demand looks like, suggesting a trusted and neutral gathering of company intelligence on upcoming recruitment requirements. While many companies could be reached through Tier 1 contractors, others operate independently of such supply chains and make up a significant part of the industry, and would need to be engaged through trade and small business bodies.

As workforce and associated training needs become clear through such a process, a degree of programme development support would be needed for providers to develop and enhance their offer in response, 'de-risking' upfront development costs. There is also likely to be a need for shorter or more flexible programmes focused on giving people specific skills needed to be able to work immediately, suggesting a need for more flexible revenue funding.

Land-based and Food

Labour shortages have worsened further, are more pressing in North Kent, and are driving a greater emphasis on technology and automation. This applies to low-skilled roles, as well as more highly skilled ones, and there is growing competition on wages. The situation is exacerbated by transport challenges between places where some potential workers live and where the work is.

There is a growing demand for people with specific technical skills relevant to digital technology, automation and low carbon operations. However, the industry needs to do more to get across how it actually operates in these ways to improve the sector's image to potential recruits. Young people have no idea of the opportunities available and how people with little in the way of qualifications can progress into a good career in food production.

Manufacturing and Engineering

The November 2021 sector dialogue found no significant changes to the picture from earlier on the year, with the exception of labour shortages in lower skilled roles now being more significant in sub-sectors like food processing. Otherwise, sector skills shortages overall do not seem to be any worse in GNK than elsewhere than in Kent and Medway.

Developing SME leadership and management may be more important now: the majority of sector SMEs do not have an up-to-date business plan, and companies may lack the knowledge and support required to respond to the decarbonisation and digitalisation agendas. Engaging SMEs on their skills needs can also be challenging, and new ways of doing this would help providers to develop new offers that would meet better sector skills needs.

The **decarbonisation** skills agenda in GNK is similar to other parts of the South East, with company behaviour driven by, for example, emerging market opportunities and Government policy drivers,

Summary

the latter most recently detail in the *Net Zero Strategy – Build Back Greener* document. An analysis of the Strategy and Greater North Kent sector dialogues conducted for this report suggest that:

- The major driver of workforce skills requirements at scale will be domestic and workplace energy, with a shorter term need for energy conservation retrofit. This will increase the scale and nature of demand in skilled roles relating to, for example, heat pump and (possibly) hydrogen heating system installation, repair and maintenance, requiring re-skilling and up-skilling of existing tradespeople and more new entrants with the right skills.
- Electric and (possibly hydrogen) vehicles will be another large-scale generator of skills demand in automotive and vehicle maintenance and repair, as well as the development and management of the associated charging infrastructure.
- Companies are liable to want or need to explore a range of options to make their operations less carbon intensive and will often require support and advice to do so, and this is likely to create an opportunity for providers of low-carbon solutions, and generate associated skills needs. Companies, especially SMEs, will also need advice and support on how to choose and implement net zero approaches, which, in turn, will require a strategic approach to leadership and management.

Net zero approaches and technologies are growing in importance, but are still emerging and not fully understood - there are not many definite 'technologies of choice' at this stage, and Government policy will play an important role in deciding which technologies do come to the fore. 'Green skills' are growing in a wide range of existing job roles, which suggests the need for a 'greening' of existing education and training. Embracing the decarbonisation agenda at the level of the firm is seen an aid in addressing workforce recruitment and retention problems: 'green jobs' will be more attractive to potential recruits.

Digitalisation is also being driven by a range of factors, such as the way that existing sectors are transforming, new activities being created by digital technology and sectoral boundaries are 'blurring' as technologies converge. The GNK dialogue discussions indicated that digital skills are growing in importance for people with an operational role in who now need to be digitally literate and able to use common Apps, software and hardware, as 'all jobs become digital' to some extent.

There is also a growing need for specialist technical digital skills in, for example, digital design and BIM in construction; the use of data to inform management decision making in land-based and food, and applying and integrating digital and automation technologies in multiple contexts in manufacturing and engineering. Peer-to-peer learning, where company-based users learn from each other could be valuable in developing the technical specialist digital skills base, but there is also likely to be a growing need for higher technical education in engineering and technical subjects.

This section builds on the analysis in the *Kent and Medway Workforce Skills Evidence Base* to look in more detail at Greater North Kent industry sectors, focusing on development and construction, land-based and food, and manufacturing and engineering, and to reflect on recent developments in the decarbonisation and digitalisation agendas in terms of their evolving impact on workforce skills needs. The assessment builds on the work done earlier in 2021; assesses any new policy and intelligence that has emerged in recent months; and presents new evidence from three 'sector dialogues' held in October / November 2021 with representatives of the three industry sectors.

6.1 Development and Construction

CITB trend-based estimates give an overall sense of demand for labour by occupation in construction for the South East region as a whole (see Figure 6.1 below[43]). For the period 2021 – 2025, annual overall recruitment demand for the region is forecast to be around 3,300 people, spread across a wide range of occupations. Given that GNK is a relatively small part of the whole South East region, this suggests that annual demand for new recruits would be measured in the tens or less for most occupations, possible exceptions, with a higher level of demand, being the occupational group of non-construction professional, technical, IT and other office-base staff.

Another approach to assessing likely demand for labour is to model the likely requirements of major projects being delivered in GNK. Section 7 considers this in greater detail with reference to Lower Thames Crossing, Ebbsfleet, London Resort and Thames Freeport, and some SELEP research currently taking place into likely workforce requirements and potential skills shortages. Detailed workforce forecasts for each major project are not yet available, but Lower Thames Crossing is expected to require 22,000 people over the lifetime of the project on both sides of the Thames, while London Resort, if it proceeds, would require around 8,000 people for the construction phase.

Figure 6.1: Forecast Construction Annual Recruitment Requirement 2021 – 2025

TOTAL WORKFORCE BY OCCUPATION - SOUTH EAST	Actual	Estimate	Forecast	
	2020	2021	2022	2025
Senior, executive and business process managers	29,400	29,800	29,800	30,300
Construction Project Managers	8,600	8,700	8,700	8,900
Other construction process managers	27,200	27,700	27,800	28,600
Non-construction professional, technical, IT and other office-based staff	60,500	62,200	62,900	64,200
Construction Trades Supervisors	5,100	5,300	5,400	5,700
Wood trades and interior fit-out	32,100	32,600	32,800	33,800
Bricklayers	8,000	8,500	8,600	9,100
Building envelope specialists	15,400	16,000	16,200	17,200
Painters and decorators	16,000	16,100	16,100	16,400
Plasterers	5,100	5,100	5,100	5,300
Roofers	8,300	8,300	8,300	8,200
Floorers	3,700	3,700	3,700	3,700
Glaziers	3,300	3,300	3,300	3,200
Specialist building operatives nec*	6,200	6,100	6,000	5,900
Scaffolders	2,600	2,500	2,500	2,400
Plant operatives	4,300	4,600	5,000	4,800
Plant mechanics/fitters	5,300	5,400	5,500	5,600
Steel erectors/structural fabrication	2,200	2,400	2,600	2,600
Labourers nec*	20,600	21,300	21,700	22,400
Electrical trades and installation	20,700	21,200	21,400	22,400
Plumbing and HVAC Trades	23,600	23,600	23,500	23,500
Logistics	3,500	3,600	3,600	3,700
Civil engineering operatives nec*	1,700	1,900	2,000	2,000
Non construction operatives	2,800	2,900	3,000	3,100
Total (SIC 41-43)	**316,000**	**322,600**	**325,300**	**333,000**
Civil engineers	6,300	6,800	7,400	7,300
Other construction professionals and technical staff	37,700	39,400	39,900	42,400
Architects	4,800	5,200	5,300	5,900
Surveyors	8,600	9,200	9,400	10,400
Total (SIC 41-43, 71.1, 74.9)	**373,400**	**383,100**	**387,200**	**398,900**

[43] Source: https://www.citb.co.uk/media/j35dzsre/south_east.pdf

The SELEP research's emerging findings (see section 7.5 later in this report) suggest that the main development and construction-related skills shortages are likely to be for:

- Engineers: civil, structural, M&E, highways, drainage, where there is already a skills shortage;
- Many construction trades, which are already at full capacity: joiners, bricklayers, roofers, scaffolders, welders, carpenters, painters, decorators, kitchen and bathroom fitters, floor layers, pavers, plumbers and plant operators;
- Project managers; and
- Architects.

The Development and Construction sector dialogue conducted for this report in November 2021 reviewed the key skills themes identified in the *Kent and Medway Workforce Skills Evidence Base* earlier in 2021. The spring 2021 research identified that high planned levels of house building, major infrastructure projects and individual key developments were expected to drive significant demand for construction skills in the coming years. Labour demand seemed likely to be sustained at high levels, despite the traditionally cyclical nature of the sector. Technology and standards were felt to be a key driver of sector skills needs.

The key skills-related priorities in the short and medium term were identified as being the following:

- **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.
- **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 offers 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.

It is not clear to what extent construction sector labour requirements forecasts cited earlier in this section reflect the anticipated growth of MMC. On the surface, the CITB and SELEP data seem to focus on more 'traditional' occupations, but such roles can be required in more 'low tech' approaches to offsite construction, and more 'traditional' roles may themselves become more technologically enabled. 'High-end' MMC, such as that undertaken by Berkeley Modular at its North Kent factory is a highly sophisticated, precision manufacturing process in the factory, with roles that are more reliant on 'traditional' skills on site, where building units are assembled and finalised.

From a Government policy perspective, newer Higher and Degree-level manufacturing engineering standards, promoted as part of Government's drive to encourage more Higher Technical Education, may be as relevant to MMC as they are to other manufacturing operations. At the same time, in the case of Berkeley Modular, the local Further Education provider (North Kent College) was able to develop a bespoke MMC-related apprenticeship programme using existing Level 3 Standards.

The November sector skills dialogue felt that these issues still hold and were also key issues for GNK, but, if anything, **the availability of skilled labour had worsened** since spring 2021, due to Brexit, the pandemic and people leaving the industry. This makes it now even more important to **engage young people and new talent pools** (including adult re-trainers and ex-forces personnel) in sector employment and skills opportunities, suggesting a need for companies in the sector to be more proactive in activities to 'educate the educators' and communicate with young people directly about career opportunities and the nature of modern construction work. Existing mechanisms like the Enterprise Advisers Network and the Construction Youth Trust can play a key role in this. It was also noted that **the more coordinated the approach to engaging schools, colleges and young people the better**: multiple approaches from companies are less easy to accommodate and a coordinated approach across companies also helps to strengthen perceptions of the employment and career opportunity in the sector overall.

An important challenge in ensuring that the education and training offer matches current and emerging job opportunities in GNK is for **providers to know what the pipeline of employment demand looks like** in terms of what jobs, with which employers, on which projects and when. This is especially important where the pipeline of construction activity is so large and labour and skills shortages could be a major limiting factor. This suggests the need for some kind of neutral (given the competitive nature of the industry), third party method of collating construction companies' and their supply chains' recruitment requirements as they become more specific over time. CITB or Construction Youth Trust are two known and trusted neutral bodies who may be able to take on this function, but other options would also be possible. While many companies could be reached through Tier 1 contractors, others operate independently of such supply chains and make up a significant part of the industry. They would need to be engaged through trade and small business bodies.

As workforce and associated training needs become clear through such a process, a degree of **programme development support** would be needed for providers to develop and enhance their offer in response, 'de-risking' upfront development costs. The kind of skills solutions required may require mainstream programmes, such as college 16-18 courses and apprenticeships, but there is also likely to be a need for shorter or more flexible programmes focused on giving people specific skills needed to be able to work immediately. This suggests that **more flexible revenue funding** not currently possible from mainstream programmes may be required in some cases for 'quick turnaround' courses which can help people get jobs in areas including dry lining, welding, plant and civils. There are also **new mainstream programmes** becoming available, which can be revenue funded through existing mechanisms. An example of this is the four new apprenticeship standards relating to construction plant operation and maintenance.

6.2 Land-based and Food

The ***National Food Strategy***[44] provides a useful guide to the future nature of skills in the Land-based and Food sector and is considered to set the direction of travel for Government policy, which plays such an important role in firms' behaviour in the sector. In terms of understanding emerging and future skills needs it is important to note that the Strategy:

- Considers the **wider context of food**, not just its role in the market economy, by highlighting the importance of food to community health and wellbeing; its role in the country's resilience to global shocks; the food sector's importance in terms of restoring nature and halting climate change; and the role of standards the public expect on health, environment and animal welfare.
- Identifies a new **'three compartments' model of land use** with some farmland repurposed or adapted for environmental projects, some farmed at lower yields using techniques such as agro-ecology to enable nature to thrive, and some becoming higher-yielding, low-carbon farms using new technologies, without high levels of pollution to increase productivity.

While the precise detail of what these (and Net Zero) commitments mean for employers are not yet fully understood, it seems that activities in the Land-based and Food sector will be driven to a large extent by this agenda. The relevance of National Food Strategy's inclusion of the resilience of the food supply within its focus is underlined by events in the autumn of 2021, when supply chain issues and HGV driver shortages led to shortages of certain groceries.

The May 2021 *Kent and Medway Workforce Skills Evidence Base* highlighted that demand for skills in the sector in coming years would be affected by an anticipated increase in levels of innovation and the adoption of new technologies, including digital technologies. Market demand was seen as something that would 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. The new, post-Brexit regulatory regime was also seen as being significant, perhaps placing greater emphasis on the delivery of public goods and environmental outcomes.

The main skills-related issues faced by the sector were identified as being:

- **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.
- **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.
- **Mismatch between the education and skills offer and industry needs**: despite there being a need for a range of land-based 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. There is already a lot of good work in this area. The spring 2021 sector

[44] https://www.gov.uk/government/publications/national-food-strategy-for-england

skills dialogue, highlighted, for example, the work of the sector in working with Medway schools and colleges, the scholarships offered by the Kent County Agricultural Society and sector representatives who are part of the Enterprise Adviser Network.

The November 2021 Land-based and Food sector skills dialogue identified that **labour shortages have worsened** further, and are driving a greater emphasis on **technology and automation**. On the skills mismatch issue, there is a growing demand for people with specific technical skills relevant to digital technology, automation and low carbon operations. Companies are trying to reduce the labour required in every part of the value chain (including picking, packing and processing): trellis systems, for example, can help increase pear yields, but take time to establish, and lend themselves more to robotics and other technologies. One GNK fruit company is using a conveyor belt system in its orchards, rather than picking buckets.

However, the industry itself does need to do more to get across how it actually operates in these ways to **improve the sector's image to potential recruits**. Young people have no idea of the opportunities available and how people with little in the way of qualifications can progress into a good career in food production. The sector itself has to work to improve its image. There is a shortage of people with the skills needed, but there is also no pipeline for people from the UK wanting to come into the sector. Some companies are offering much more flexible conditions to attract more part-time workers, for example, and engage new groups. To promote the sector companies need to get into schools and target the 13-16-year-olds, who are interested in technology and their potential careers, explain how interesting and technology-based the sector is, and set out the wider role that food plays in society, as is highlighted in the *National Food Strategy*.

Research published in June 2021 by the Institute of Food Science Technology into the technical needs of the land-based and food sector (see Figure 6.2 below[45]) found that there were technical skills shortages across the industry, especially in manufacturing and primary food processing. Reflecting the predominance of technical service providers, research organisations and manufacturers in the survey sample, commonly cited technical skills shortage areas were for science technical roles, food technologists, engineering, operations and packaging. The survey also found that candidates for jobs in the sector commonly lacked relevant non-specialist skills such as problem solving and IT (underlining the importance of digital skills). In the November 2021 GNK sector dialogue, which had a stronger land-based representation, the main skills shortages were felt to be driven more by labour shortages, especially in lower skilled roles, but these were also increasingly reliant on basic digital skills (see section 6.5 below). Once people are successfully recruited, they can be trained up on the job in non-specialist roles; the problem at present is to recruit them.

[45] https://ktn-uk.org/wp-content/uploads/2021/07/What-Technical-Skills-does-the-UK-Food-Drink-Sector-Need_-.pdf

Figure 6.2

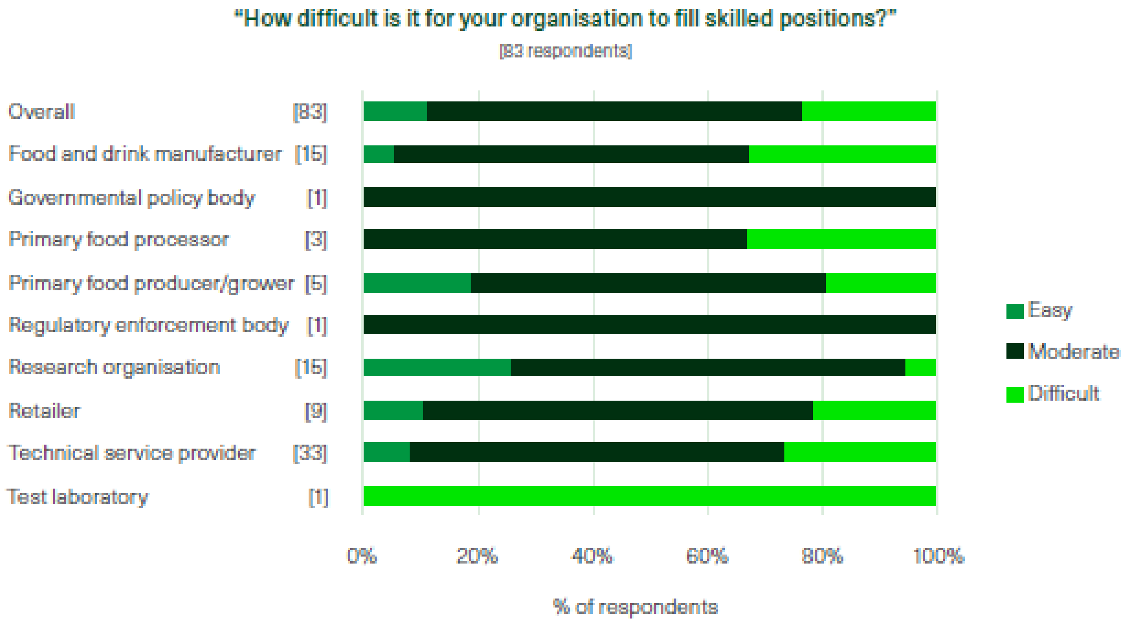


Figure 6. The current level of difficulty organisations have in filling skilled positions. The total number of responses per group is indicated within the respective square brackets.

Labour shortages are more pressing in North Kent. There are more competing and attractive employment options in North Kent than elsewhere. This applies to low-skilled roles, as well as more highly skilled ones, and there is growing competition on wages, which can sometimes become 'weaponised' as companies look to out-compete each other on pay. The situation is exacerbated by transport challenges between places where some potential workers live and where the work is. In rural Swale, for example, you cannot easily get workers, many of whom are low skilled or unemployed, from the isle of Sheppey to somewhere like Bobbing, near Sittingbourne. This raises the issue of whether transport initiatives could form part of the response to sector labour shortages, which are now a major challenge in rurally-based businesses and preparation, manufacturing and processing companies that may be in rural or more industrial locations.

As is discussed below in section 6.4 of this report, the dialogue meeting highlighted how the sector is also responding to the wider drivers of digitalisation and decarbonisation, but this needs to be considered alongside the requirements and standards imposed by downstream companies, especially the major food retailers, and the expectations and evolving preferences of the public.

6.3 Manufacturing and Engineering

The *Kent and Medway Workforce Skills Evidence Base* highlighted that demand for skills in manufacturing and engineering in the coming years will be driven by the adoption of new technologies, in areas such as digitalisation / 'Industry 4.0'[46], rapid changeability, Internet of Things, smart factories and supply chain security. De-carbonisation and sustainability were identified as further important drivers of change.

The spring sector skills dialogue conducted for the Kent and Medway report identified the following key skills-related issues to be addressed in the coming years:

- **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

[46] For more details on Industry 4.0, see, for example: https://www.epicor.com/en-uk/resource-center/articles/what-is-industry-4-0/

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 local 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.

On the issue of the ageing workforce and skills shortages, it is interesting to note that a March 2021 national survey of 1000 senior managers across 20 sectors found that engineering and manufacturing was the sector most affected by skills shortages, with 85% of companies reporting they were affected by a skills shortage (the lowest was 'sales' with 52%), with engineering skills those most in short supply, especially in food and drink manufacturing. Of those surveyed, 40 percent said that a simple lack of qualified candidates was the main contributing factor. A further third of managers cited a lack of willing apprentices as a major issue and 29 percent list an ageing workforce as a cause for concern. Most companies surveyed found that 'mid-level' roles (as opposed to entry-level and senior roles) were the hardest to fill.

The November 2021 sector dialogue found no significant changes to the picture from earlier on the year, with the exception of **labour shortages** in lower skilled roles now being more significant in sub-sectors like food processing. It also seems that the ageing workforce issue is driving a need for people with intermediate-level engineering skills. While the growth of digitalisation and automation is likely to fuel a growing need for technicians with higher-level skills and graduates. More generally, though, it is not clear that sector skills shortages overall are any worse in GNK than elsewhere than in Kent and Medway.

Developing **SME leadership and management** may be more important now: the majority of sector SMEs do not have an up-to-date business plan, and companies may lack the knowledge and support required to respond to the decarbonisation and digitalisation agendas (as discussed above in sections 6.1 and 6.2).

Engaging SMEs on their skills needs can also be challenging, and new ways of doing this would help providers to develop new offers that would meet better sector skills needs. The LSIP may be a mechanism which will help with this, as could the associated Skills Development Fund to create new programmes for manufacturing and engineering.

6.4 Decarbonisation

> *'There are no green jobs, no digital jobs – all jobs will become greener, will become more digital.'*
>
> *(Development and Construction Sector Dialogue participant)*

While there is an established body of practice and technologies that help to address the net zero agenda, the picture is also an evolving one. National policy decisions will play an important role in driving the adoption of new technologies and working practices which will, in turn, drive workforce skills requirements.

Decarbonisation involves a range of different responses at the level of the firm, and, as the sector dialogues highlighted (see later in this section), each company will need to set its own priorities and actions in respect of net zero based on their own particular requirements and circumstances. This means that company management teams may need support or skills development to adjust their strategies to the decarbonisation agenda, set priorities and then be able to implement actions. The range of actions taken could potentially be quite wide, ranging from, for example, behaviour change and new ways of working to the adoption of new technologies and processes. While recognising this multi-dimensional nature of decarbonisation, this section focuses primarily on the potential business opportunities and the skills requirements that may flow from them.

2021 research by McKinsey[47] identified three generic types of opportunities that companies might engage in in order to create value from the climate transition:

1. **Reducing costs by reducing the company's own emissions***.* This opportunity applies mainly to businesses in agriculture, oil and gas production, mining, energy and water utilities, many manufacturing sectors, and transport—but also to other sectors that are transport-intensive, such as retail and wholesale, construction, and waste collection.
2. **Producing goods and services to feed the 'green capital expenditure revolution'***.* This opportunity suggests major global growth opportunities for B2B companies—especially in sectors where the UK already has a leading position, such as professional, scientific, information, communication, and financial services. Due to the large size of the global market for capital goods, UK manufacturing and construction businesses can also benefit.
3. **Enabling others in the value chain—suppliers and customers—to reduce their emissions***.* This opportunity is likely to grow as greenhouse gas (GHG) prices and regulations mature and consumer attitudes shift. Sectors where green solutions could gain significant share include manufacturing—for example, of food, apparel, and other consumer goods—as well as retail and hospitality.

The *Kent and Medway Workforce Skills Evidence Base noted that the* UK's commitment to net zero carbon emissions by 2050 is a key driver of 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 identified as being 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

[47] https://www.mckinsey.com/business-functions/sustainability/our-insights/opportunities-for-uk-businesses-in-the-net-zero-transition

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[48]:

- **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 and advanced digital capabilities will be central to a successful low carbon transition.

In October 2021, to coincide with the COP26 international conference on the climate crisis, the UK Government published its *Net Zero Strategy: Build Back Greener*[49]. While this did provide greater clarity on the carbon reduction approaches and associated technologies that Government policy would be driving, it also highlighted that some key choices have yet to be made, and these choices have important implications for skills.

Figure 6.3 (below) provides an analysis of the potential workforce skills implications of the strategy's four key principles and the eight key themes. The key points that stand out from the analysis are as follows:

- The major driver of workforce skills requirements at scale will be domestic and workplace energy, along with energy conservation retrofit. How long this transition will take is hard to assess at the time of writing, but its scale involves millions of homes and businesses. This will increase the scale and nature of demand in skilled roles relating to, for example, heat pump and (possibly) hydrogen heating system installation, repair and maintenance, requiring re-skilling and up-skilling of existing tradespeople and more new entrants with the right skills. Social housing and housing for low-income and more vulnerable people will attract government support and could be well suited to associated employment and skills initiatives.

[48] Scottish Government (2020), *Climate Emergency Skills Action Plan 2020-25*

[49] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033990/net-zero-strategy-beis.pdf

- Electric and (possibly hydrogen) vehicles will be the other large-scale generator of skills demand in automotive and vehicle maintenance and repair, as well as the development and management of the associated charging infrastructure. This is likely to require re-training of the existing motor vehicle workforce and the updating of college motor vehicle programmes.
- Companies are liable to want or need to explore a range of options to make their operations less carbon intensive and will often require support and advice to do so, and this is likely to create an opportunity for providers of low-carbon solutions, which will have associated skills needs.

Existing companies in GNK or start-ups may also be able to take advantage of new business opportunities in supply chains they operate in and in the development and manufacture of new products and services, and this would also generate skills needs specific to those activities.

Figure 6.3a: UK Net Zero Strategy Principles, and Potential Implications for Workforce Skills

Strategy Principles	Approach	Potential Implications for Workforce Skills
1. Work with the grain of consumer choice.	No requirement for people to scrap domestic gas boilers or petrol cars.	Suggests roll out of domestic low-carbon technologies will be relatively gradual. Highlights that ‘technologies of choice’ have yet to emerge (e.g.: heat pumps – air source or ground source - or hydrogen for domestic heating), but existing trade skills like heating engineers and vehicle maintenance will need to include competence in whatever technology comes to predominate.
2. Ensure the biggest polluters pay the most for the transition.	Carbon pricing will be used to encourage companies to reduce their carbon footprint.	Provides an incentive for companies to reduce their GHG emissions, and hence to adopt technologies and processes that reduce their carbon footprint. This will create demand for skills related to these technologies and their adoption.
3. Ensure the most vulnerable are protected through Government support.	State investment in energy efficiency upgrades and energy bill discounts for the most in need.	Suggests that domestic retrofit opportunities might initially be greatest in low-income households and social housing, with scope for there to be associated upskilling / re-skilling initiatives.
4. Work with businesses to continue delivering deep cost reductions in low carbon tech.	State investment in the latest technology to bring down costs for consumers and deliver benefits for businesses.	Government policy will play an important role in which technologies are adopted, hydrogen fuel for domestic and transport uses being one example. Suggests an opportunity to build upskilling / re-skilling initiatives onto policy-led developments.

Figure 6.3b: UK Net Zero Strategy Themes, and Potential Implications for Workforce Skills

Strategy Themes	Approach	Potential Implications for Workforce Skills
1. Power	Commitment to switch the power system to renewables and nuclear, with additional energy storage, gas with CCS and hydrogen.	Will increase demand for skills relating to installation, operation, maintenance and repair in the chosen technologies, but the relative mix is not yet known. Growth in renewables, storage and hydrogen might have the greatest impact of skills demand in Greater North Kent.
2. Fuel supply and hydrogen	Commitment to deliver 5 GW of hydrogen production capacity by 2030.	Proximity to London and energy infrastructure on the Hoo Peninsula could make this an opportunity for North Kent, but workforce skills impact likely to be small in scale.
3. Industry	A drive to de-carbonise industry through greater resource and energy efficiency, cleaner fuels, low-carbon hydrogen and carbon pricing.	Major investments planned for 'industrial heartlands' in the North West, North East, North Wales and Scotland, but wider drive to de-carbonise industry and carbon pricing will most likely impact on companies in North Kent, especially the most carbon intensive (including land-based, manufacture, transport and construction).
4. Heat and buildings	Aims for all new heating appliances in homes and workplaces to be low carbon from 2035, with support for energy efficiency and a switch to electric heat pumps and hydrogen boilers, supported by grants, including specific support for social housing and a 'hydrogen village trial by 2026.	The theme that seems likely to have the biggest workforce skills impact, requiring re-skilling of heating and air conditioning technicians, and the engagement of new people in the industry. Not clear yet whether hydrogen is feasible or appropriate in most domestic and workplace settings.
5. Transport	A 'zero emission mandate' and investment in charging infrastructure will expand electric vehicle use, along with measures to encourage active travel and public transport, and decarbonise maritime.	Will require significant re-skilling in automotive, vehicle repair and maintenance, and a new workforce to create the supporting infrastructure. No mention of hydrogen technology for transport, but this may be more appropriate for some HGV and plant uses, for example.
6. Natural resources, waste and	Support for farmers to adopt low-carbon practices, including agroforestry. Increased	Government policy (and funding) towards the land-based sector has not yet clarified the detail of what low-carbon and sustainability requirements will be, but the sector is already

Strategy Themes	Approach	Potential Implications for Workforce Skills
fluorinated gases	tree planting to sequester carbon.	active in adopting the 'three compartments' approach (a mix of semi-natural land, low-yield farming and high-yield farming) described in the National Food Strategy (see section 6. 5 below). The eventual approaches adopted will determine the mix of skills needed.
7. Greenhouse gas removals (GGRs)	Development of technologies to balance residual emissions from the hardest to decarbonise sectors, such as aviation, agriculture and heavy industry.	Early-stage technology development focused on 'industrial heartlands', with a focus on stimulating investment. No obvious significant workforce skills impacts for Greater North Kent.
8. Supporting the transition with cross-cutting action	Initiatives relating to finance, corporate sustainability disclosure and skills system reform.	The Sustainability Disclosures Regime could be a key driver of company net zero strategies and plans, with an impact on skills demand. 'Reform of the skills system so that training providers, employers and learners are incentivised and equipped to play their part in delivering the transition to net zero' suggests that curriculum and service planning may need to demonstrate its impact on net zero.

Source: SMRC analysis of *Net Zero Strategy: Build Back Greener*, Dept. for Business, Energy and Industrial Strategy, October 2021 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033990/net-zero-strategy-beis.pdf)

The sector dialogues conducted for this report identified a number of key issues in terms of workforce skills and decarbonisation, summarised in Figure 6.4 below. The dialogue discussions highlighted that net zero approaches and technologies are growing in importance, but are still emerging and not fully understood; that there are not many definite 'technologies of choice' at this stage; and that Government policy will play an important role in deciding which technologies do come to the fore.

It is also striking that companies across the three sectors – especially SMEs – will need advice and support on how to choose and implement net zero approaches, which, in turn, will require a strategic approach to leadership and management.

There is also a theme of 'green skills' being embedded now in a wide range of existing roles, which suggests the need for a 'greening' of existing curricula.

Finally, the dialogues suggest that embracing the decarbonisation agenda at the level of the firm can be an aid in addressing workforce recruitment and retention problems: it is felt that 'green jobs' will be more attractive to potential recruits in a time of labour shortages and shifting societal values on environmental issues.

Figure 6.4: Key Messages on Decarbonisation and Skills from GNK Sector Dialogues, autumn 2021

Sector	Skills Issues Relating to Decarbonisation
Development and Construction	• The importance of sustainability and decarbonisation continues to grow in terms of the sector skills agenda. All jobs will become greener. There will be some specialist roles, but only a few will be experts in the 'green' field. • The whole environment area is one that resonates strongly with school leaders and young people and can be a 'bridge' between the sector and the future workforce, making construction more appealing. • Companies that are strongly engaged on the green agenda will find it easier to recruit and retain staff.
Land-based and Food	• Many growers are embracing the land sparing[50] and decarbonisation agendas, but methods of assessing carbon reduction options and calculating economic benefits are still in their infancy. More support is needed in this area and a clearer 'road map' in terms of approaches and technologies is needed from Government before the exact knowledge and skills requirements can be fully understood. • There are many local examples of how the sector is embracing the low-carbon agenda and innovating in more established areas like photovoltaics, but also more novel activities like heat extraction. • Hydrogen fuel systems (as being pioneered by JCB) may prove to be more appropriate than electric for land-based plant, with implications for agricultural engineering skills and motor vehicle in a land-based context.
Manufacturing and Engineering	• Manufacturers probably most need support and assistance to identify and adopt net zero practices that are relevant to them. This is a business support requirement, but also a learning need. • Addressing the low carbon agenda may not necessarily involve developing new in-house expertise in the relevant technologies. Cook Kitchen's roof-mounted photovoltaic array to generate electricity at its facility in Sittingbourne[51], for example, was set up and is managed by Orchard Community Energy and the energy sold back to the company at a discounted rate. • The use of net zero technologies also requires specific technical skills that relate to the technology being used, and apply at all levels: some will be specialist engineers; others will have more generic technician skills that are applied to a technology (e.g. heat pumps). • Some technologies will require more specialist skills than others: ground source heat pumps, for example, require more specialist knowledge than air source heat pumps, which can readily be installed and maintained by technicians with existing air conditioning skills after some additional training. This may suggest a new specialism for local providers that already offer air conditioning training.

[50] For a definition of 'land sparing', please see: https://ipbes.net/glossary/land-sparing. The approach is included in the National Food Strategy (see section 6.2 above).
[51] https://orchardcommunityenergy.org/news-blog/mxjm8nmomgxxe5nywtrvpkf8zto29v

6.5 Digitalisation

The *Kent and Medway Workforce Skills Evidence Base* explained how digitalisation and automation 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.

The Kent and Medway report also identified five major issues that need to be addressed in support of the digitalisation agenda:

- 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.
- Growing **diversity of skills supply**, especially given the volume of software and computing training available commercially and through semi-formal routes.

The sector dialogues conducted for this report identified a number of key issues in terms of workforce skills and digitalisation, summarised in Figure 6.5 below. Looking across the three sectors, the dialogues suggest that:

- Digital skills are growing in importance for people with an operational role who now need to be digitally literate and able to use common Apps, software and hardware, as 'all jobs become digital' to some extent.
- There is also a growing need for specialist technical digital skills in, for example, digital design and BIM in construction; the use of data to inform management decision making in land-based and food, and applying and integrating digital and automation technologies in multiple contexts in manufacturing and engineering.
- Peer-to-peer learning, where company-based users learn from each other could be valuable in developing the technical specialist digital skills base, but there is also likely to be a growing need for higher technical education in engineering and technical subjects.

Figure 6.5: Key Messages on Digitalisation and Skills from GNK Sector Dialogues, autumn 2021

Sector	Skills Issues Relating to Digitalisation
Development and Construction	• Digital design, using virtual reality and augmented reality, is now mainstream in the sector – virtual reality makes it possible to show clients in detail what is being built. Business Information Modelling (BIM)[52] also plays an important role. Digital technology will grow in importance for existing roles in design and drawing, but the major new change will be on site, including for smaller projects, give benefits such as greater certainty and reduced wastage. All jobs will become more digital. • Deployment of digital technology will be greatest in more complex projects involving multiple companies, as the technology addresses the challenges of coordination and communication by embedding supply chain companies into the model used. More complex operations, with different tiers of companies do require digital, because it addresses these challenges. Tier 1 contractors will drive the adoption of digital technology in their supply chains, but the picture is complicated by the fact that lower tier companies are in the supply chains of multiple Tier 1 companies which may operate differently. • Smaller general building companies, on the other hand, may need digital less because they are more self-contained and work with their own workforce. • The main digital systems used are: BIM, the design and drawing, and Offsite construction technologies. • General digital literacy and open-mindedness are also required by the workforce, ideally including some familiarity with Computer-Aided Design (CAD) and Apps commonly used in the sector.
Land-based and Food	• The digital agenda may be most advanced in arable. Even basic maintenance of a tractor now requires a laptop. The situation is similar in top fruit: bar code scanning now ensures control and traceability over every piece of fruit as it moves through the system. Pickers increasingly need to be able to use an iPad alongside the actual picking task. One farm cited in the sector dialogue also uses two picking machines for the harvesting of grapes over its hundreds of acres, reflecting a wider drive to 'de-labour' growing operations. There is a lot of automation and robotics these days, and it is growing. • Compliance reporting for schemes like Red Tractor, Sedex, LEAF, and Global Gap is another key driver of digital skills. • The main need overall is for digital user-level skills, not so much the specialist development of Apps and other software. Growers need competent front-end users who are digitally literate, and can pick up how to use the main packages employed in food operations, involving scanners, iPads and common applications like spreadsheets. • Making people aware of the sector's use of technology can also make it more attractive to potential recruits. It can help to reflect this in people's job titles, e.g.: 'production technician', rather than 'production operative' in food processing and packaging. • Big Data is growing as an issue for farm managers. Long, time-series data, for example can show how prices and costs have varied over time. As more

[52] For more details see, for example: https://www.thenbs.com/knowledge/what-is-building-information-modelling-bim

Sector	Skills Issues Relating to Digitalisation
	technology is adopted, data analysis can help companies find 'that skinny bit of profit' that they need to find, including from remote real time analysis of operations as they happen. As well as having more technological operations, it's increasingly important for farm managers and owners to analyse every element of what they do. One company in GNK is looking at creating a digital decision-making tool to that uses multiple data sources available on site to inform management decisions.
Manufacturing and Engineering	• The pace of automation and digitalisation has increased, increasing the need for specific technical skills, but what skills are needed exactly will depend on what technology has been used in areas like robotics. • Technical skills go beyond being able to use a digital or automated system for a single purpose: one GNK company, for example, is using cobots[53] in its manufacturing processes, and needs to ensure that a wide range of relevant technical product standards are met in the process. Integration of different systems (e.g. robots and ERP[54] systems) requires an ability to apply digital skills on the job, as does the need to adapt a given system to multiple manufacturing requirements. • Multi-company user groups where emerging practice in using new technology is shared, and people learn from each other have proved to be very effective in the past (as when MRP[55] systems were first introduced, for example) and may be something which help with skills development, especially in SMEs. Packing and preparing for packing have often been the first areas to be automated in companies, and there may be a lot of good practice that could be shared here. • Higher technical skills are important in unlocking the potential of new automation and digital technology. So progressing people on to Level 4, 5 and 6 programmes is likely to be strategically important in GNK. University of Greenwich (through its work with Ford) could be well placed to address this need, and CCCU is also developing its capabilities – getting HE and FE to work together on this is probably something that needs to be developed further – the practicalities of such joint working need to be worked through in areas like how the offer can be modular, who 'owns' the learner, etc.

[53] A computer-controlled robotic apparatus that assists a human worker, as on an assembly line, by guiding or redirecting motions initiated by the worker who provides the motive power.

[54] Enterprise resource planning (ERP) is the integrated management of main business processes, often in real time and mediated by software and technology.

[55] Material requirements planning (MRP) is a production planning, scheduling, and inventory control system used to manage manufacturing processes. Most MRP systems are software-based.

7. Major Projects

Summary

Greater North Kent has a substantial pipeline of major projects and house building in the coming years. Three projects in particular stand out, given their possible scale in terms of workforce demand:

- **Lower Thames Crossing** could start in 2023 at the earliest and will last 6 to 7 years. 22,000 people will work on LTC overall during the lifetime of the project. At the peak time around 10,000 people will be working on the construction programme, which has three parts: 1) the road north of the river, 2) the tunnel, and 3) the road south of the river.
- **Ebbsfleet** Development Corporation is working with a number of developers to bring forward housing and mixed-use sites at Ebbsfleet. No formal appraisal of the scale and nature of employment and skills needs has yet been possible, but early indications are that there could be skills shortages in respect of bricklayers, carpenters, roofers, dry liners, painters and decorators and labourers.
- **London Resort's promoters** hope that, subject to planning approval, construction can begin in mid / late 2023 at the latest. 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.

In addition to these three major projects, north of the river **Thames Freeport** is a 34-kilometre corridor from Thames Enterprise Park to Barking and Dagenham, involving an investment of £4.5bn and expected to create around 25,000 direct new jobs. Engaging disadvantaged people and SMEs in the opportunity are seen as key challenges. Local partners are looking to take a coordinated, integrated and aligned approach on skills and employment issues so as to maximise the local opportunity, which may be possible on a cross-river basis too.

The emerging findings from research into recruitment demand arising from major projects in the SELEP region suggests that, for 8 projects in Kent and Medway (most of which are in GNK) the total additional workforce requirement will be 51,300 between 2021 and 2024), 66,500 (2025 – 2028), 48,600 (2029 – 2038), and 17,300 from 2039 onwards. Across all the major projects the greatest skills shortages are anticipated to be for Engineers (civil, structural, M&E, highways, drainage, where there is already a skills shortage); many construction trades, which are already at full capacity (joiners, bricklayers, roofers, scaffolders, welders, carpenters, painters, decorators, kitchen and bathroom fitters, floor layers, pavers, plumbers and plant operators); project managers; architects; logistics; teachers and support staff; manufacturing; and health care workers (including GPs). The inclusion in the forthcoming SELEP analysis of education and health / care workforce highlights the importance of ensuring that future planning of education and skills addresses these needs, as well as the more immediate requirement arising from the developments themselves.

There is a number of major, large-scale, high-profile projects that will significantly impact demand for skills in North Kent significantly if they go ahead, namely Lower Thames Crossing, London Resort and Ebbsfleet. These are described in the sections that follow, along with all the details currently available in respect of workforce and skills needs. Thames Freeport has also been included in the analysis, given that, despite it being across the Thames Estuary from Greater North Kent, its scale may mean it has some impact on the GNK labour market, partly depending on travel-to-work accessibility. The analysis is based on in-depth interviews with commercial and local authority partners involved in the schemes. For the purpose of this report we are assuming that projects will proceed whilst recognising the consenting and investment hurdles some still need to clear and acknowledging that not all have political support across the piece.

It should be noted that there is also a significant pipeline of home building and other development activities planned across Greater North Kent, so the projects detailed here do not give the whole picture, but do highlight the most significant developments that may be taking place over the coming decade.

Research commissioned by SELEP will be available in early 2022 giving a forecast of the aggregate skills and employment requirements of all major projects across the SELEP region.

7.1 Lower Thames Crossing

The proposed Lower Thames Crossing (see Figure 7.1 below) will run from Southern Essex, under the Thames and then link to the M2 near Strood and the A2 southeast of Gravesend. Still subject to planning approval, construction work seems likely to start in 2023 at the earliest and will last 6 to 7 years.

22,000 people will work on LTC overall during the lifetime of the project. At the peak time around 10,000 people will be working on the construction programme, which has three parts: 1) the road north of the river, 2) the tunnel, and 3) the road south of the river.

Figure 7.1: Route of the Proposed Lower Thames Crossing

Source: https://highwaysengland.co.uk/our-work/lower-thames-crossing

The latest assessment is that roles that may be more challenging to recruit will be pipe welders, plant operatives, architects, archaeologists and tunnelling engineers.

LTC will be publishing its Skills, Education and Employment Strategy in November 2021. This will include measures to maximise employment and skills opportunities for local people, legacy impact and Social Value in the council areas most immediately impacted by the programme – Gravesham and Medway (as far as North Kent is concerned), as well as further afield. Specific activities are being planned to engage, among others, jobless people, work starts, career changers, NEETs, care leavers, ex-offenders and ex-military personnel.

Early priorities for action identified by LTC include:

- A six-week programme to provide access to LTC employment opportunities, including giving people a basic understanding of the industry, CSCS card, site-specific knowledge and skills, and progression to a work placement.
- Schools engagement programme to raise awareness of LTC and construction sector opportunities, including through use of a Minecraft games[56] launched in autumn 2021.
- Work experience (including virtual) and work placements, working with the Careers and Enterprise Company.

Workforce Planning Teams will be established for each of the three sub-projects and, once the lead contractors have been appointed, a more detailed picture of workforce and skills requirements will emerge.

LTC is involved in SELEP's Major Projects Group to share practice and collaborate with other major projects in South Essex and Kent & Medway. GNK, local authorities and other partners could have an important role to play in maximising the opportunities for local residents and businesses.

7.2 Ebbsfleet

Ebbsfleet Development Corporation is working with a number of developers to bring forward housing and mixed-use sites at Ebbsfleet (see Figure 7.2 below).

Figure 7.2: Ebbsfleet Development Area

Source: https://ebbsfleetdc.org.uk/

[56] Link no longer available

The programme overall will be using the Social Value Portal to record the outcomes and impact generated through the construction phase, and this will encourage companies involved to adopt and support policies that favour, for example, creating local employment opportunities, offering apprenticeships and giving disadvantaged people access to employment and skills opportunities.

No formal appraisal of the scale and nature of employment and skills needs has yet been possible, but feedback from developers indicates that the roles which are most likely to involve skills shortages include:

- Bricklayers
- Carpenters
- Roofers
- Dry liners
- Painters and decorators
- Labourers

There are currently no indications of shortages in respect of electrical workers, plumbing, gas and air conditioning. There are also concerns about labour shortages more generally post-Brexit and due to the pandemic.

EDC's employability programmes will initially focus on 16 deprived wards, 16–24-year-olds (Gravesham has the third highest level of NEETs in the South East), and unemployed women in Gravesham. Other groups who need support into employment in future might include ex-offenders and former military staff, for example.

EDC projects that will be going live later in 2021 include three-stage employability programme that builds on support provided by job centres, with 100 taking part by March 2022; a programme developed with the Prince's Trust to get people site ready and supported into work; and a new Garden City Apprenticeship Scheme, which starts with a three-day induction and eventually leads to an apprenticeship qualification, from Level 2 to Level 7 eventually.

A key priority is to collaborate with other projects and partners to take a 'joined up' approach to connecting people to skills and employment opportunities, and so ensure that the projects secure the labour they need in order to be successful. There could be a role for GNK and the local authorities such a 'joined up' approach, and this is explored further in section 8 of this report.

7.3 London Resort

London Resort (see Figure 7.3 below) is still in the planning process, but the developer hopes that construction can begin in mid / late 2023 at the latest, although no firm dates can yet be set. A new Employment and Skills Strategy is under development, building on an earlier Outline[57] that was submitted with the planning application.

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[58].

[57] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/BC080001/BC080001-000421-6.2.7.7%20ES%20Appendix%207.7%20Outline%20Employment%20and%20Skills%20Strategy.pdf
[58] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/BC080001/BC080001-000766-7.5%20Economic%20and%20Regeneration%20Statement.pdf

Figure 7.3: Simulated Aerial View of London Resort

Modelling based on the occupational structure of construction sector by London Resort (see Figure 7.4 below) suggests that at the peak of the first phase of construction ('Gate One') around 3,000 high skilled jobs will be required, and around 1,000 in phase two ('Gate Two').

Figure 7.4: Occupational Modelling of Construction Jobs for London Resort

	Proportion	Gate One (2023 peak)		Gate Two (2028 peak)	
		Low	High	Low	High
Managers, directors and senior officials	17%	560	840	190	290
Professional occupations	8%	260	400	90	140
Associate prof & tech occupations	10%	340	510	110	170
Skilled trades occupations	35%	1,170	1,770	390	600
Total high skilled	*70%*	*2,330*	*3,520*	*780*	*1,200*
Administrative and secretarial occupations	8%	260	390	90	130
Caring, leisure and other service occupations	<1%	-	-	-	-
Sales and customer service occupations	<1%	-	-	-	-
Process, plant and machine operatives	10%	330	510	110	170
Elementary occupations	9%	310	470	100	160
Total	**100%**	**3,300**	**5,000**	**1,100**	**1,700**

Source: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/BC080001/BC080001-000421-6.2.7.7%20ES%20Appendix%207.7%20Outline%20Employment%20and%20Skills%20Strategy.pdf
('Low' and 'high' refers to upper and lower estimates of anticipated jobs.)

London Resort's modelling of jobs for the operational phases of the project suggest that most of the 17,000 jobs will be in theme park operations (see Figure 7.5 below), and that around 27% would require specialist skills and qualifications, while the rest would be available to people with low or intermediate-level qualifications, who would require some on-the-job training. GNKP has indicated that it would welcome more granular detail on anticipated workforce requirements for the development, and this should become available if the project secures planning consent and operational plans become more detailed.

Figure 7.5: Job Forecasts for London Resort Operational Phase

	FT	PT	Seasonal	Total headcount	Total FTE
Corporate / shared services	250	30	-	280	265
Theme parks	2,710	2,420	6,760	11,890	6,625
Hotels	2,570	430	-	3,000	2,785
The Market (RDE)	835	745	165	1,745	1,275
Other	170	65	155	395	265
Total	**6,535**	**3,690**	**7,080**	**17,310**	**11,215**
Gross additional				**16,145**	**10,170**

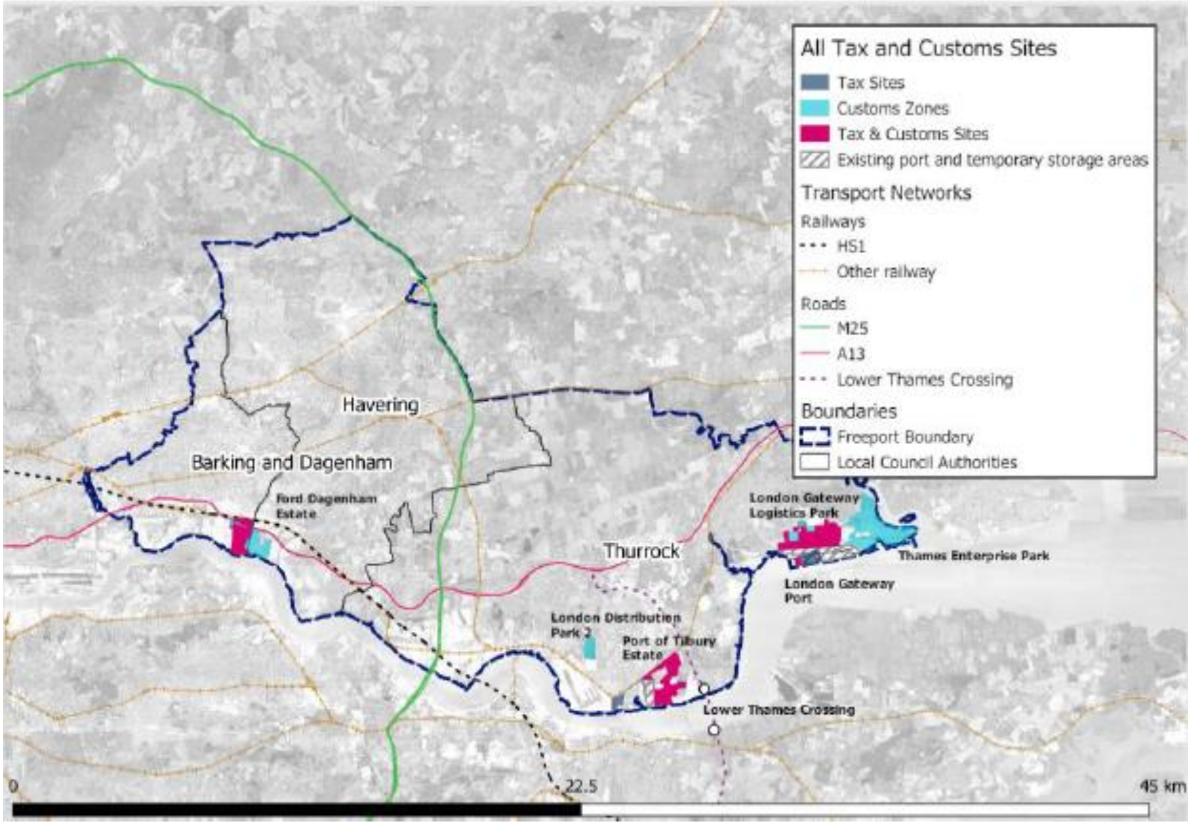
Source: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/BC080001/BC080001-000421-6.2.7.7%20ES%20Appendix%207.7%20Outline%20Employment%20and%20Skills%20Strategy.pdf

7.4 Thames Freeport

Thames Freeport (see Figure 7.6 below) is a 34-kilometre corridor from Thames Enterprise Park to Barking and Dagenham, involving an investment of £4.5bn and expected to create around 25,000 direct new jobs. Three sites within the corridor will have special tax and customs status, but the wider area is expected to be impacted in terms of business growth and job creation. Final approval of the programme is subject to Government approval of a detailed Business Case.

The project creates an economic zone connecting Ford's Dagenham engine plant to the ports at London Gateway and Tilbury, with an emphasis on introducing electric and autonomous vehicle technology along the A13 corridor into London. Businesses looking to expand or re-shore their operations can take advantage of the tax benefits of establishing within the Freeport and being part of a customs zone, which makes it easier and cheaper to move goods into and out of the country. The Freeport partnership's programme of work will create a development-ready platform which has the objectives of driving new investment, jobs, skills and the adoption of greener technology.

Figure 7.6: Map of Thames Freeport Area



Source:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/990321/Freeport_Location_Maps.pdf

Including the direct jobs created, the programme is expected to stimulate overall job creation of the order of 57,000 posts. Wider benefits will include the retention of Business Rates, which will provide extra resources for initiatives and services to improve health, active travel and wellbeing, as well as support with skills and to access employment.

An overall Skills Plan is under development involving the main private sector partners (London Gateway, Port of Tilbury and Ford), with growth plans focused on building on existing local strengths in logistics, manufacturing (including automotive) and a wider emphasis on Net Zero.

Engaging disadvantaged people and SMEs in the opportunity are seen as key challenges. There are already 'pathfinder' projects (one in each of Thurrock, Barking and Dagenham, and Havering) working on issues of skills and labour market inclusion among more deprived communities. There is also expected to be a technological 'ripple effect' in the local economy, which will lead to a need for re-skilling in SMEs.

Freeport partners are also concerned to identify the detail of workforce and skills needs so that providers can gear up their provision to offer relevant programmes, including those involving very specific technical skills that will lead to work. There are also concerns about how the scheme might impact the local economy: when Amazon moved into the area recently, for example, large numbers of people left the care sector to work for them, attracted by better pay and conditions.

The Association of South Essex Local Authorities (ASELA) are looking to take a coordinated, integrated and aligned approach on skills and employment issues so as to maximise the local opportunity. There may be scope for such collaboration by public sector partners on a cross-river basis too, building on work to date in respect of the Thames Estuary Production Corridor, for example.

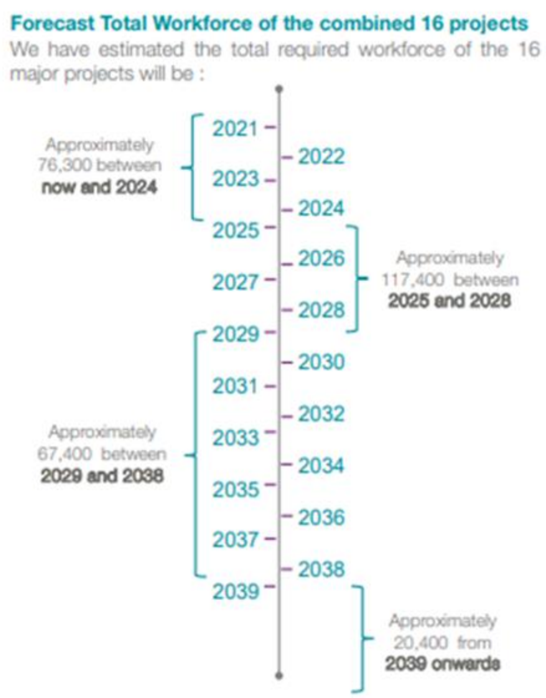
7.5 SELEP Major Projects Workforce Requirements Research

Research commissioned by SELEP (still in progress at the time of preparing this report) has looked at the broader pipeline of major projects and home building schemes that may go ahead in the SELEP region to 2039. The schemes considered were:

- The London Resort
- The Lower Thames Crossing
- Hoo Peninsula developments
- Ebbsfleet Garden City
- Bradwell B Nuclear Power Station
- Thames Freeport
- UK Health Security Agency (UKHSA) (previously known as Public Health England)
- Freeport East

The analysis also took into account Cleve Hill Solar Farm, Otterpool Park Garden Town, Chilmington Garden Village, Mountfield Park, Dunton Hills Garden Village, Gilston Park Estate, Purfleet on Thames Regeneration, Newhaven Enterprise Zone, East Sussex.

Figure 7.7: Total Forecast Workforce Requirement 2021 – 2039, SELEP Region Major Projects



Source: emerging findings information provided by SELEP, by email, 18/11/2021

The emerging and provisional findings of this research suggest that the **total additional workforce requirement** across all sectors generated by all 16 projects will be (see Figure 7.7, left):

- Just over 76,300 between 2021 and 2024;
- 117,400 from 2025 – 2028;
- 67,400 over the remaining 10 years to 2038; and
- 20,400 from 2039 onwards

For the 8 projects in Kent and Medway, the figures are:

- 51,300 (2021 – 2024);
- 66,500 (2025 – 2028);
- 48,600 (2029 – 2038); and
- 17,300 from 2039 onwards

The analysis also considers what types of occupations will be most in demand for each of the SELEP sub-regions (see Figure 7.8 below) categorised by ‘specialist skilled’, ‘skilled’ and ‘lower skilled’ (outer to inner ring).

Figure 7.8: High-demand Occupations by Sub-region in the Total Forecast Workforce Requirement 2021 – 2039, SELEP Region Major Projects[59]

Source: emerging findings information provided by SELEP, by email, 18/11/2021

The analysis for SELEP region as a whole concludes that the main skills shortages are likely to be for:

- Engineers (civil, structural, M&E, highways, drainage, where there is already a skills shortage);
- Many construction trades, which are already at full capacity (joiners, bricklayers, roofers, scaffolders, welders, carpenters, painters, decorators, kitchen and bathroom fitters, floor layers, pavers, plumbers and plant operators);
- Project managers;
- Architects;
- Logistics;
- Teachers and support staff;
- Manufacturing; and
- Health care workers (including GPs)

59 Link unavailable

The research also identifies ‘considerable opportunities’ for people in lower skilled jobs, such as ground workers, labourers, drivers, landscape gardeners, hospitality and shop workers, security and seasonal theme park staff (from 2025, if London Resort proceeds).

The SELEP research is still in progress, and so its findings need to be treated with a degree of caution, but the work does highlight the actual scale of projects in GNK relative to the rest of the SELEP region; that there is likely to be a period of especially strong demand for labour from 2021 to 2038; and especially high demand for workers in construction, manufacturing and engineering and technical specialisms and trades. The inclusion in the forthcoming SELEP analysis of education and health / care workforce highlights the importance of ensuring that future planning of education and skills addresses these needs, as well as the more immediate requirement arising from the developments themselves.

8. Key Issues and Priorities for Action

Summary

The analysis identifies six key workforce skills issues that need to be considered by the Greater North Kent Partnership and partners:

- A gap in educational attainment at Level 3 and Level 4+ between GKN and the UK as a whole.
- The importance of aligning the jobs market and workforce skills, in terms of sectors which are large in employment terms; are growing the most; are relative strengths; or local council priorities. Skills also need to align with occupations which have the highest levels of demand (such as care staff and managers); skills needed in a wide variety of sectors (such as employability skills, including essential skills (literacy, numeracy and ICT)); re-training for adults; entrepreneurship and business management; IT and digital skills; customer-related skills; and skills related to decarbonisation and digitalisation of the economy and community.
- A growing need for adult up-skilling, re-skilling and lifelong learning in response to changing labour market conditions and the educational attainment gap. This will also help with place making and deliver non-economic outcomes, such as health, wellbeing and social disadvantage.
- Some kind of single, coordinated and integrated mechanism is needed for identifying specific employment and skills needs of projects and employers; publicising these all together through one route to residents and young people; and setting up and securing funding for the education and skills provision needed for people to access the opportunities.
- More teaching expertise and capacity is needed to address priority skills needs, which may suggest a need for employers and Higher Education to shape and support delivery of Further Education higher and technical education.
- More engagement of employers, including small companies, is needed in gathering on-the-ground intelligence on workforce and skills needs, and to work together in developing programmes which link people to local employment opportunities. If done of on a sector basis, construction, care and food might be a good place to start.

A number of potential priorities for action are put forward for discussion as potential responses to the issues identified.

Building on the earlier sections of this report and further analysis of the stakeholder depth interviews, this chapter identifies some key workforce skills issues that need to be considered by Greater North Kent partners, and proposes some corresponding priorities for action.

8.1 Level 3 and Level 4+ Attainment Gap

Greater North Kent lags behind in terms of the qualification profile of its resident population, albeit with some local variations. Labour demand each year to replace jobs vacated or new jobs created though business growth will be predominantly for people with Level 4+ and Level 3 qualifications, although there will still be jobs for people with lower-level qualifications. Against this backdrop, Greater North Kent's attainment gap at Levels 3 and 4+ is a significant issue for both employers and residents.

8.2 Alignment between the Jobs Market and Workforce Skills

Much good work is already in progress to ensure that the local education and skills offer equips people with knowledge and skills that are relevant to the Greater North Kent economy, and it is essential that curriculum continues to evolve and become more relevant to what is required. The specific requirements of Greater North Kent can be interpreted in various ways and there is no 'magic formula' that will specify exactly what providers should be offering. Providers themselves will also be restricted in terms of, for example, what programmes government will fund, who is eligible, what form of learning is involved and whether individuals or employers will commit to and fund them. This report considers the issue of what the priorities are from a number of perspectives, all of which can inform the planning of services:

Sectors

The analysis of quantitative data and stakeholder interviews in this report suggests a need for provision that is relevant to the following sectors:

- **Those which account for the most employment**, i.e.: health (including care); business administration and support services; retail; manufacturing / engineering; construction; transport and logistics; and hospitality.
- **Those with the highest levels of employment growth**, i.e.: construction; professional, scientific and technical activities; and hospitality.
- **Those which are relative strengths**, i.e.: construction; and transport and logistics.
- **Sector priorities identified by local stakeholders** (in this case, local councils[60]), i.e.: construction; visitor / experience economy (including retail and hospitality, and creative and cultural); food and drink (growing and processing); manufacturing / engineering; digital; transport and logistics; and health and social care.

Occupations

Providers should help people to access **occupations with the highest numbers of new entrants required**, the three largest of which are teachers and education professionals, care and personal service staff, corporate managers and business and public service associate professionals.

Cross-cutting Skills Needs

There are also **cross-cutting skills needs** across the whole economy, which are employability skills (including essential skills); re-training for adults; entrepreneurship and business management; IT and digital skills; customer-related skills; and skills related to decarbonisation and digitalisation of the economy and community.

Skills Required by Major Projects

Local skills should respond to major projects, such as those in the pipeline, like Ebbsfleet, London Resort and Lower Thames Crossing, and those major employers and employment sites already in existence, such as Bluewater and major public service employers. As has already been noted (section 7.5), some of the major projects will also entail the development of additional public services in areas like education and health, and skills planning should also reflect these requirements.

As discussed in section 4.7 of this report, automation is likely to impact on jobs and skills needs across the economy, placing some jobs at risk because of automation; potentially providing a

[60] But note that some councils are in the process of reviewing key local plans and strategies and there is, at the time of writing, no defined set of overall sector priorities for Greater North Kent.

solution in roles where labour is in short supply or hard to recruit; and creating new job opportunities and associated skills requirements. From a sectoral perspective, sectors like financial services and logistics seem very likely to be affected, but sectors highly reliant on social skills and personal contact may be less affected. In occupational terms, machine operators and assemblers, 'elementary occupations' and clerical jobs may be the most vulnerable, and professional and senior managerial occupations less so.

8.3 Re-skilling, Up-skilling and Lifelong Learning

Multiple factors are converging to drive a major re-skilling need for the people and businesses of North Kent: jobs have been lost in the pandemic and labour supply chains disrupted; labour shortages are putting upward pressures on wages; the UK is likely to undergo a fundamental transformation in terms of Net Zero; and new digital and automating technologies and business processes are being adopted.

At the same time, a significant proportion of the Greater North Kent lags behind the wider region in terms of educational attainment, and many people face significant barriers to entering and progressing within the labour market.

Taken together, these factors point towards a pressing need for people to upskill and reskill, and to continue learning through life. Adult re-training and lifelong learning need to grow significantly in Greater North Kent, despite the collapse of part-time study and adult participation in learning that has characterised the last decade or so. There are also concerns among stakeholders that many employers (especially smaller businesses) and residents could be hard to engage in re-skilling, up-skilling and lifelong learning.

Stakeholders identified a wide range of challenges involved in re-engaging individuals and communities facing various forms of disadvantage in learning. A key issue, for example, is the difficulty in reaching people in the first place, then building their confidence, providing engaging activities and overcoming negative beliefs and feelings about education shaped by people's lived experience. Further challenges can include physical and mental health issues, or having spent a long time out of education or the labour market. Some people may have already written themselves off in terms of the academic route or assume that technical education is not for them. Others may come from families or areas where educational attainment has tended to be low, including households with people of several generations out of work, in low-paid employment or with low aspirations.

These challenges highlight that there may be no 'quick fix' to help disadvantaged groups to access the education and skills they need to get a job or progress to better paid work. There may also be benefits to stressing the non-utilitarian benefits of learning in respect of, for example, health and wellbeing, which ultimately also impact on the quality of life and the attractiveness of North Kent as a place to live, work and visit. There is a wealth of good practice built up in this area in recent decades, going back to the development of Bluewater. Many local partners are also already 'on the case', as evidenced by, for example, the new town centre FE facilities (such as that planned for Maidstone) focused on employability, set up by colleges in partnership with local authorities and the Department for Work and Pensions.

8.4 Coordination, Collaboration and Integration

Given the sheer scale and range of development happening in Greater North Kent, there is a risk that the various projects – large and small - compete with each other for skilled labour, undermining the overall success of Greater North Kent and confusing residents and key stakeholders. In addition, it also likely that major investments coming into the area in sectors like food and engineering, will require long-term workforce and skills solutions. Schools, colleges, training providers and universities will also need accurate intelligence on the skills and innovation needs of employers, if they are to plan their provision appropriately. Residents will need support in identifying opportunities that are of interest to them and then develop the knowledge and skills required to build successful careers.

Faced with these challenges, most stakeholders consulted felt that some kind of single, coordinated and integrated mechanism is needed for:

- Identifying specific employment and skills needs of projects and employers;
- Publicising these all together through one route to residents and young people (Essex Opportunities could be a relevant example of good practice in this respect); and
- Setting up and securing funding for the education and skills provision needed for people to access the opportunities and build successful careers, ranging for short programmes to get people into a first role to longer and higher-level programmes to develop more specialist skills for those already in work or looking to develop a career.

The detail of how such a partnership would work in practice needs to be scoped in greater detail, perhaps drawing on good practice from elsewhere or the approach taken to Bluewater in the 1990s. The spatial coverage of the mechanism also requires further thought: the 'porous' nature of the Greater North Kent labour market could suggest that initiatives could target a much wider area. There may even be a case for some kind of cross-river partnership approach, but the current (albeit somewhat dated) travel-to-work data suggest that such an approach may be more relevant in future, with better cross-river transport infrastructure.

Many organisations are already doing good work in this area, including, for example, the major projects themselves through their workforce planning and outreach work; coordinating mechanisms like the SELEP Major Projects Group; the Careers and Enterprise company through its work with schools; and colleges and universities who have partnered with employers to support major developments. What is missing is a single mechanism that coordinates all the different actors across all opportunities and best meets the needs of employers and residents. While new initiatives like the LSIP may help in making provision in sectors more relevant to the needs of employers, it seems unlikely to take a project by project or GNK-specific approach to formulating new skills offers.

8.5 Teaching Expertise and Capacity

There is already a shortage of teachers and tutors with the technical knowledge and skills required to deliver many of the specialist programmes that will need to be offered to meet North Kent's needs. The issue is especially acute in construction and engineering, and has been exacerbated in recent times by the wider challenge of labour shortages in some parts of the economy, which makes actually working in the sector much more attractive than teaching. In addition, specific technical knowledge and skills can be required to teach only elements of programmes (e.g.: digital design and Building Information Modelling in construction), which can mean that only part time tutors are needed.

This suggests a need for more people from industry to get involved in the teaching of technical knowledge and skills on a part time basis, for full-time roles to be created for people working with a number of providers. Higher Education also has relevant expertise that could be made available to Further Education through partnership working in the delivery of Higher Technical Education programmes. Development of existing teachers and tutors is another option for addressing this challenge, but knowledge and skills need to reflect how industry works now and how the use of technology is evolving.

8.6 Employer Engagement

Roughly half of employment in Greater North Kent is with small companies. This raises challenges for colleges and other partners when they seek to understand the needs of local companies and reflect that in their curriculum and careers advice activities: the credibility and viability of any new programmes or changes to existing ones needs a credible 'line of sight' through to jobs and careers. While the research evidence presented in this report gives a solid overall picture of demand for skills, the actual local offer needs employers to be fully engaged, with their opinions on skills translated into revealed preferences and on-the-ground intelligence and partnerships that help to link people to jobs through skills.

While there has been good early progress by major projects like Ebbsfleet, Lower Thames Crossing and London Resort in engaging with the local education and skills system and starting to articulate their anticipated workforce and skills requirements, the picture with small businesses is much patchier. This may suggest a role for some kind of local sector employer panels that can advise colleges and schools on their skills requirements and enable programmes to be linked to credible local employment opportunities.

This is an area fraught with difficulties, but the involvement of local councils and bodies like Kent Invicta Chamber of Commerce through the trailblazer LSIP may offer some practical solutions. It may also be possible to start with sectors that are most amenable to getting involved. Construction, given the influence of Tier 1 contractors, is one possibility. Food and drink, and care could be others, given current labour shortages.

The issue of labour shortages has especially come to the fore in the second half of 2021. Evidence from the *Kent and Medway Workforce Skills Evidence Base* and interviews and sector dialogues conducted for this report suggest that labour shortages are being driven by fewer overseas workers being in the labour market due to Brexit and the pandemic, people leaving a given sector or retiring early, or being put off by negative perceptions of a given sector or type of work. Equality, diversity and inclusion factors will also be at work, evidenced by, for example, the low proportion of female engineers or the unusually low proportion of some minority ethnic communities in certain professions.

8.7 Priorities for Action

Figure 8.1 (below) proposes for discussion some potential priorities for action that arise from the analysis to be considered by Greater North Kent Partnership and its stakeholders.

Figure 8.1: Key Workforce Skills Issues and Potential Priorities for Action

Issue	Potential Priorities for Action
1. Close the attainment gap at Level 3 and Level 4+	• Strengthen and expand intermediate and higher-level technical education alongside the academic route, with the aim of increasing participation in Further Education and work based learning at intermediate and higher levels. • Increase progression to Higher Education through enhanced outreach and progression pathways between school and university. • Campaign to engage more adult learners in the community and the workplace in intermediate and higher-level learning.
2. Alignment Between the Jobs Market and Workforce Skills	• Curriculum planning by colleges, schools and universities, with adjustments to increase the offer in relevant programmes. • Identifying capital and revenue monies to support and 'de-risk' the development of new programmes. • Securing flexibility on funding to offer what the labour market needs. • More employer engagement (see 6 below).

Issue	Potential Priorities for Action
3. Re-skilling, Up-skilling and Lifelong Learning	• Identifying capital and revenue monies to support and 'de-risk' the initial development of new adult learning and technical education programmes. • Campaign to engage more adult learners and employers in re-skilling, up-skilling and lifelong learning. • Making 'skills' or 'lifelong learning' a major theme for Greater North Kent in its future strategies.
4. Coordination, Collaboration and Integration	• Building on current collaboration to establish a single mechanism at an appropriate spatial level[61] for supporting North Kent projects with workforce needs and to enable residents to access skills and employment opportunities, with a jobs and skills forecasting function to help providers plan and fund the right programmes. • Using the collaborative mechanism to promote the opportunities in North Kent to residents and local labour to employers, which will also assist with making North Kent more attractive to incoming residents and companies. • Major projects and partners are already discussing a 'construction skills academy' to offer a range of skills and employment programmes, and the Major Projects Group already brings together partners like the major projects, the Education People, KCC, DWP and local authorities to plan employment and skills work together.
5. Teaching Expertise and Capacity	• Extra support for providers to recruit new staff. • Development of existing staff so that they can deliver new and higher level curriculum. • Collaborations between FE and employers, and FE and HE to secure the expertise required for specialist and higher level teaching needs.
6. Employer Engagement	• Working with the local councils, Kent Invicta Chamber of Commerce and others, explore the options for establishing Greater North Kent employer sector advisory panels to discuss workforce and skills needs they face, and potential solutions. This should avoid unnecessary duplication and the 'reinvention of wheels'. • Start with sectors that are best placed or most motivated to engage (e.g. construction, care and food), given pressing labour needs.

GNKP and the local authorities can play an important role in helping to address these priorities for action, and this should be explored by the members of GNK early in 2022. Actions that GNK and the Councils could consider include:

- Supporting FE, HE and others to develop and improve the higher technical education offer.
- Leading a local campaign for adult re-skilling, upskilling and lifelong learning, even promoting and branding GNK as a 'learning place / region'.

[61] The optimum spatial level requires further consideration and may vary by project, but GNK may be suitable for many projects, while others may require a much bigger area, including perhaps a cross-river partnership approach, as has been the case for the Thames Estuary Production Corridor initiative, for example.

- Supporting capital and revenue funding bids by colleges, universities and others to make the education and skills offer more relevant to the local economy, and supporting 'asks' for more flexibility on how revenue funding is used.
- Supporting or enabling local employer engagement groups where providers and industry work together to develop responses to specific skills shortages and gaps.
- Perhaps starting with construction, support the development of a neutral construction skills pipeline forecasting unit to help providers plan and fund the right programmes and promote the opportunities in North Kent to residents and local labour to employers.
- Support initiatives to attract people with specialist skills into teaching in FE and HE, whether full time or part time, or to engage more employers in the delivery of skills programmes.

As an upper tier authority, Medway has more scope to act in its localities than the four Boroughs, given its role in education, skills and adult and community learning.

Annex 1: Local Authority Profiles

Greater North Kent

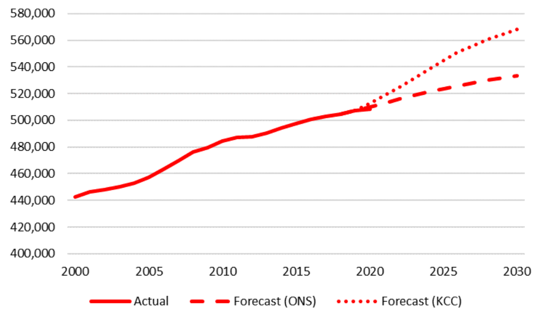
Population and workforce growth

Total population (2020): 824,200
Population aged 16-64 (2020): 508,500

Historic growth (2000-20)	GNK	UK
Total pop	20%	14%
Age 16-64	15%	11%

Forecast growth (2018-30, ONS estimates)	GNK	England
Total pop	6%	4%
Age 16-64	5%	2%

Working age population 2000-30



Source: ONS Mid-Year Population Estimates; ONS Population Projections (2018); KCC Housing Led Forecasts

Economic activity and unemployment

Economic activity rate	(average 2018-21)
GNK	81%
UK	79%

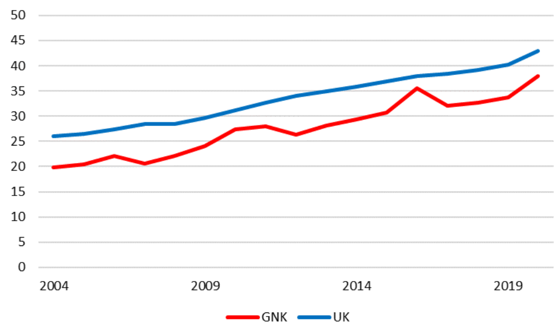
Claimant count (Sep 21)	No.	%
GNK	25,630	5.0%
UK	-	5.0%

Source: ONS, Annual Population Survey; ONS/ DWP, Claimant Count

Working age resident qualifications

% of 16-64 pop (average 2018-20)	GNK	UK
NVQ4+	38	41
NVQ3+	57	59
NVQ2+	78	76
NVQ1+	90	86
Other quals	5	6
No quals	6	8

% of 16-64 pop qualified to NVQ4+



Source: ONS, Annual Population Survey

Productivity and pay

Productivity	(GVA per filled job, 2019)
GNK	£53,400
UK	£56,700

Pay (median gross f/t earnings 2018-20)	Resident	Workplace
GNK	£32,000	£30,500
UK	£30,500	£30,500

Source: ONS, Subregional Productivity (2021); ONS, Annual Survey of Hours and Earnings. SQW estimates.

Jobs and job density (2019)

Total jobs	Jobs	CAGR, 2000-19
GNK	366,000	1.1%
UK	-	1.1%

Jobs density (jobs per working age resident)	Density	Change, 2000-19
GNK	0.72	+0.05
UK	0.87	+0.08

Source: ONS, Jobs Density

Sectoral profile (2019)

Sector	Employee jobs, 2019	% share of total	LQ
Agriculture, forestry & fishing	6,000	1.89	2.6
Mining, quarrying & utilities	5,000	1.57	1.2
Manufacturing	23,000	7.24	0.9
Construction	24,000	7.56	1.6
Motor trades	7,000	2.2	1.2
Wholesale	12,000	3.78	1.0
Retail	33,000	10.4	1.1
Transport & storage	21,000	6.61	1.4
Accommodation & food service	22,000	6.93	0.9
Information & communications	8,000	2.52	0.6
Financial & insurance	6,000	1.89	0.5
Property	4,500	1.42	0.8
Prof, scientific & technical	18,000	5.67	0.6
Business administration & support	32,000	10.1	1.1
Public administration & defence	14,000	4.41	1.0
Education	29,000	9.13	1.1
Health	41,000	12.9	1.0
Arts, entertainment & recreation	12,000	3.78	0.8

Source: ONS, Business Register and Employment Survey

Occupational profile (average 2018-21)

Occupational category	Residents in employment	% share of total	LQ
Managers, directors & senior officials	42,200	10.3	0.9
Professional occupations	80,500	19.6	0.9
Associate professional & technical	62,400	15.2	1.0
Administrative & secretarial	45,700	11.1	1.1
Skilled trades	40,600	9.9	1.0
Caring, leisure & other services	35,200	8.6	0.9
Sales & customer service	24,800	6.0	0.8
Process, plant & machine operatives	26,500	6.4	1.1
Elementary occupations	51,700	12.6	1.3

Source: ONS, Annual Population Survey

Dartford

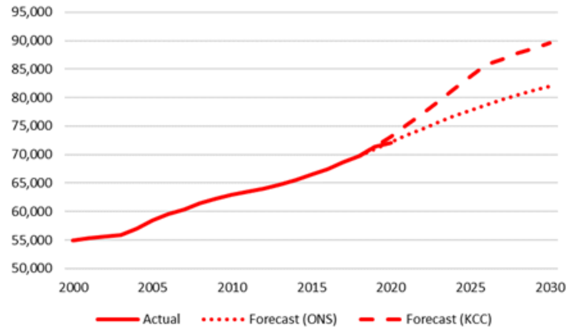
Population and workforce growth

Total population (2020): 114,000
Population aged 16-64 (2020): 72,100

Historic growth (2000-20)	Dartford	UK
Total pop	33%	14%
Age 16-64	31%	11%

Forecast growth (2018-30, ONS estimates)	Dartford	England
Total pop	13%	4%
Age 16-64	14%	2%

Working age population 2000-30



Source: ONS Mid-Year Population Estimates; ONS Population Projections (2018); KCC Housing Led Forecasts

Economic activity and unemployment

Economic activity rate	(average 2018-21)
Dartford	85%
UK	79%

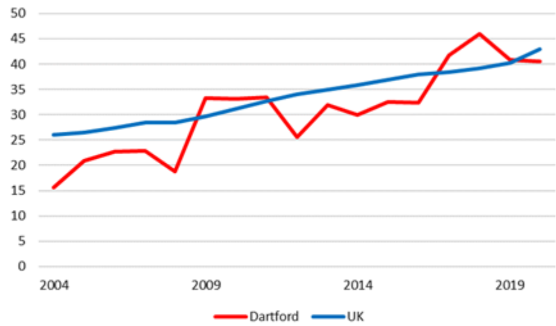
Claimant count (Sep 21)	No.	%
Dartford	2,990	4.1%
UK	-	5.0%

Source: ONS, Annual Population Survey; ONS/ DWP, Claimant Count

Working age resident qualifications

% of 16-64 pop (average 2018-20)	Dartford	UK
NVQ4+	43	41
NVQ3+	55	59
NVQ2+	73	76
NVQ1+	87	86
Other quals	7	6
No quals	6	8

% of 16-64 pop qualified to NVQ4+



Source: ONS, Annual Population Survey

Productivity and pay

Productivity	(GVA per filled job, 2019)
Dartford	£62,000
UK	£56,700

Pay (median gross f/t earnings 2018-20)	Resident	Workplace
Dartford	£36,300	£34,300
UK	£30,500	£30,500

Source: ONS, Subregional Productivity (2021); ONS, Annual Survey of Hours and Earnings. SQW estimates.

Jobs and job density (2019)

Total jobs	Jobs	CAGR, 2000-19
Dartford	68,000	2.0%
UK	-	1.1%

Jobs density (jobs per working age resident)	Density	Change, 2000-19
Dartford	0.95	+0.09
UK	0.87	+0.08

Source: ONS, Jobs Density

Sectoral profile (2019)

Sector	Employee jobs, 2019	% share of total	LQ
Agriculture, forestry & fishing	50	0.1	0.1
Mining, quarrying & utilities	700	1.1	0.9
Manufacturing	3,500	5.7	0.7
Construction	6,000	9.7	2.0
Motor trades	1,250	2.0	1.1
Wholesale	2,500	4.1	1.1
Retail	10,000	16.2	1.8
Transport & storage	5,000	8.1	1.7
Accommodation & food service	4,000	6.5	0.8
Information & communications	2,250	3.6	0.8
Financial & insurance	500	0.8	0.2
Property	700	1.1	0.7
Prof, scientific & technical	3,000	4.9	0.6
Business administration & support	9,000	14.6	1.7
Public administration & defence	450	0.7	0.2
Education	3,500	5.7	0.7
Health	8,000	13.0	1.0
Arts, entertainment & recreation	1,250	2.0	0.5

Source: ONS, Business Register and Employment Survey

Occupational profile (average 2018-21)

Occupational category	Residents in employment	% share of total	LQ
Managers, directors & senior officials	5,700	9.3	0.8
Professional occupations	15,300	25.3	1.2
Associate professional & technical	8,300	13.7	0.9
Administrative & secretarial	7,900	13.2	1.3
Skilled trades	6,300	10.6	1.1
Caring, leisure & other services	4,000	6.8	0.8
Sales & customer service	3,800	6.2	0.9
Process, plant & machine operatives	4,600	7.5	1.2
Elementary occupations	6,600	10.7	1.1

Source: ONS, Annual Population Survey

Gravesham

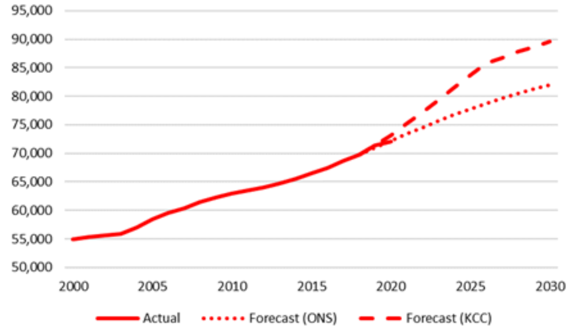
Population and workforce growth

Total population (2020): 107,000
Population aged 16-64 (2020): 65,300

Historic growth (2000-20)	Gravesham	UK
Total pop	12%	14%
Age 16-64	9%	11%

Forecast growth (2018-30, ONS estimates)	Gravesham	England
Total pop	2%	4%
Age 16-64	0%	2%

Working age population 2000-30



Source: ONS Mid-Year Population Estimates; ONS Population Projections (2018); KCC Housing Led Forecasts

Economic activity and unemployment

Economic activity rate	(average 2018-21)
Gravesham	86%
UK	79%

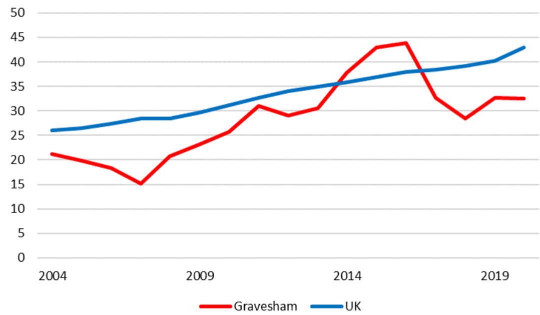
Claimant count (Sep 21)	No.	%
Gravesham	3,770	5.8%
UK	-	5.0%

Source: ONS, Annual Population Survey; ONS/ DWP, Claimant Count

Working age resident qualifications

% of 16-64 pop (average 2018-20)	Gravesham	UK
NVQ4+	31	41
NVQ3+	52	59
NVQ2+	77	76
NVQ1+	87	86
Other quals	3	6
No quals	11	8

% of 16-64 pop qualified to NVQ4+



Source: ONS, Annual Population Survey

Productivity and pay

Productivity	(GVA per filled job, 2019)
Gravesham	£48,400
UK	£56,700

Pay (median gross f/t earnings 2018-20)	Resident	Workplace
Gravesham	£31,000	£32,700
UK	£30,500	£30,500

Source: ONS, Subregional Productivity (2021); ONS, Annual Survey of Hours and Earnings. SQW estimates.

Jobs and job density (2019)

Total jobs	Jobs	CAGR, 2000-19
Gravesham	37,000	0.9%
UK	-	1.1%

Jobs density (jobs per working age resident)	Density	Change, 2000-19
Gravesham	0.56	+0.04
UK	0.87	+0.08

Source: ONS, Jobs Density

Sectoral profile (2019)

Sector	Employee jobs, 2019	% share of total	LQ
Agriculture, forestry & fishing	100	0.3	0.4
Mining, quarrying & utilities	250	0.8	0.6
Manufacturing	2,000	6.1	0.8
Construction	2,500	7.7	1.6
Motor trades	700	2.1	1.1
Wholesale	600	1.8	0.5
Retail	3,500	10.7	1.2
Transport & storage	2,500	7.7	1.6
Accommodation & food service	3,000	9.2	1.2
Information & communications	500	1.5	0.4
Financial & insurance	350	1.1	0.3
Property	350	1.1	0.6
Prof, scientific & technical	1,500	4.6	0.5
Business administration & support	4,500	13.8	1.6
Public administration & defence	1,750	5.4	1.2
Education	3,500	10.7	1.2
Health	3,500	10.7	0.8
Arts, entertainment & recreation	1,500	4.6	1.0

Source: ONS, Business Register and Employment Survey

Occupational profile (average 2018-21)

Occupational category	Residents in employment	% share of total	LQ
Managers, directors & senior officials	3,200	5.9	0.5
Professional occupations	8,000	14.5	0.7
Associate professional & technical	10,600	19.2	1.3
Administrative & secretarial	6,900	12.6	1.3
Skilled trades	5,500	10.1	1.0
Caring, leisure & other services	6,100	11.2	1.2
Sales & customer service	3,600	6.5	0.9
Process, plant & machine operatives	1,000	1.8	0.3
Elementary occupations	9,400	17.1	1.7

Source: ONS, Annual Population Survey

Maidstone

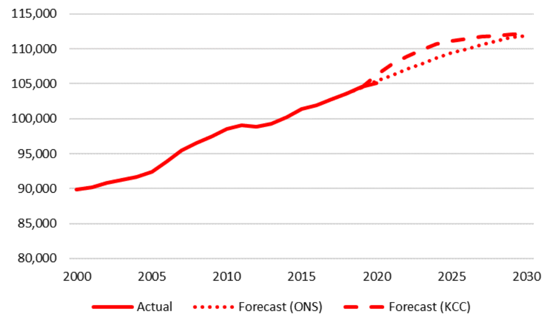
Population and workforce growth

Total population (2020): 173,100
Population aged 16-64 (2020): 105,000

Historic growth (2000-20)	Maidstone	UK
Total pop	25%	14%
Age 16-64	17%	11%

Forecast growth (2018-30, ONS estimates)	Maidstone	England
Total pop	9%	4%
Age 16-64	6%	2%

Working age population 2000-30



Source: ONS Mid-Year Population Estimates; ONS Population Projections (2018); KCC Housing Led Forecasts

Economic activity and unemployment

Economic activity rate	(average 2018-21)
Maidstone	84%
UK	79%

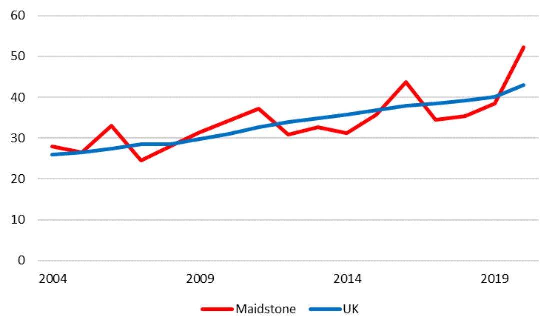
Claimant count (Sep 21)	No.	%
Maidstone	4,375	4.2%
UK	-	5.0%

Source: ONS, Annual Population Survey; ONS/ DWP, Claimant Count

Working age resident qualifications

% of 16-64 pop (average 2018-20)	Maidstone	UK
NVQ4+	42	41
NVQ3+	56	59
NVQ2+	77	76
NVQ1+	89	86
Other quals	6	6
No quals	6	8

% of 16-64 pop qualified to NVQ4+



Source: ONS, Annual Population Survey

Productivity and pay

Productivity	(GVA per filled job, 2019)
Maidstone	£49,900
UK	£56,700

Pay (median gross f/t earnings 2018-20)	Resident	Workplace
Maidstone	£31,100	£29,700
UK	£30,500	£30,500

Source: ONS, Subregional Productivity (2021); ONS, Annual Survey of Hours and Earnings. SQW estimates.

Jobs and job density (2019)

Total jobs	Jobs	CAGR, 2000-19
Maidstone	91,000	0.7%
UK	-	1.1%

Jobs density (jobs per working age resident)	Density	Change, 2000-19
Maidstone	0.87	-0.01
UK	0.87	+0.08

Source: ONS, Jobs Density

Sectoral profile (2019)

Sector	Employee jobs, 2019	% share of total	LQ
Agriculture, forestry & fishing	1,750	2.3	3.2
Mining, quarrying & utilities	1,000	1.3	1.0
Manufacturing	4,000	5.3	0.7
Construction	6,000	7.9	1.6
Motor trades	1,750	2.3	1.2
Wholesale	3,500	4.6	1.2
Retail	6,000	7.9	0.9
Transport & storage	3,000	3.9	0.8
Accommodation & food service	6,000	7.9	1.0
Information & communications	2,250	3.0	0.7
Financial & insurance	1,500	2.0	0.6
Property	1,250	1.6	1.0
Prof, scientific & technical	5,000	6.6	0.8
Business administration & support	8,000	10.5	1.2
Public administration & defence	6,000	7.9	1.8
Education	6,000	7.9	0.9
Health	10,000	13.2	1.0
Arts, entertainment & recreation	3,000	3.9	0.9

Source: ONS, Business Register and Employment Survey

Occupational profile (average 2018-21)

Occupational category	Residents in employment	% share of total	LQ
Managers, directors & senior officials	11,800	13.3	1.2
Professional occupations	20,000	22.6	1.0
Associate professional & technical	14,900	16.8	1.4
Administrative & secretarial	10,000	11.4	1.1
Skilled trades	6,300	7.1	0.7
Caring, leisure & other services	4,000	4.6	0.5
Sales & customer service	4,900	5.6	0.8
Process, plant & machine operatives	3,900	4.4	0.7
Elementary occupations	12,000	13.5	1.4

Source: ONS, Annual Population Survey

Medway

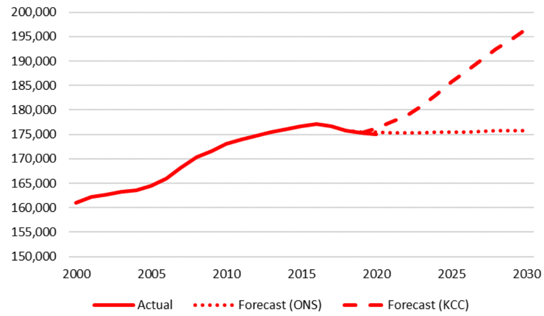
Population and workforce growth

Total population (2020): 279,100
Population aged 16-64 (2020): 175,100

Historic growth (2000-20)	Medway	UK
Total pop	12%	14%
Age 16-64	9%	11%

Forecast growth (2018-30, ONS estimates)	Medway	England
Total pop	2%	4%
Age 16-64	0%	2%

Working age population 2000-30



Source: ONS Mid-Year Population Estimates; ONS Population Projections (2018); KCC Housing Led Forecasts

Economic activity and unemployment

Economic activity rate	(average 2018-21)
Medway	80%
UK	79%

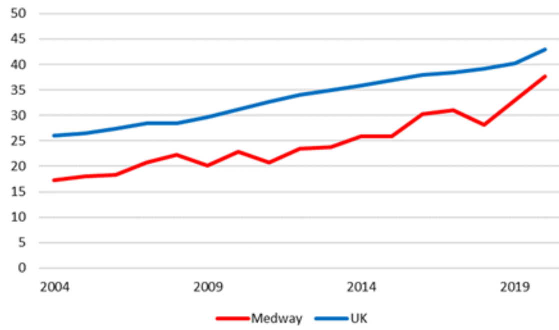
Claimant count (Sep 21)	No.	%
Medway	9,670	5.5%
UK	-	5.0%

Source: ONS, Annual Population Survey; ONS/ DWP, Claimant Count

Working age resident qualifications

% of 16-64 pop (average 2018-20)	Medway	UK
NVQ4+	33	41
NVQ3+	56	59
NVQ2+	75	76
NVQ1+	89	86
Other quals	5	6
No quals	7	8

% of 16-64 pop qualified to NVQ4+



Source: ONS, Annual Population Survey

Productivity and pay

Productivity	(GVA per filled job, 2019)
Medway	£55,100
UK	£56,700

Pay (median gross f/t earnings 2018-20)	Resident	Workplace
Medway	£31,700	£30,100
UK	£30,500	£30,500

Source: ONS, Subregional Productivity (2021); ONS, Annual Survey of Hours and Earnings. SQW estimates.

Jobs and job density (2019)

Total jobs	Jobs	CAGR, 2000-19
Medway	107,000	0.7%
UK	-	1.1%

Jobs density (jobs per working age resident)	Density	Change, 2000-19
Medway	0.61	+0.03
UK	0.87	+0.08

Source: ONS, Jobs Density

Sectoral profile (2019)

Sector	Employee jobs, 2019	% share of total	LQ
Agriculture, forestry & fishing	1,250	1.3	1.8
Mining, quarrying & utilities	1,750	1.8	1.4
Manufacturing	8,000	8.3	1.0
Construction	6,000	6.3	1.3
Motor trades	2,000	2.1	1.1
Wholesale	3,000	3.1	0.8
Retail	10,000	10.4	1.1
Transport & storage	5,000	5.2	1.1
Accommodation & food service	6,000	6.3	0.8
Information & communications	2,250	2.3	0.5
Financial & insurance	3,000	3.1	0.9
Property	1,250	1.3	0.8
Prof, scientific & technical	4,500	4.7	0.5
Business administration & support	8,000	8.3	0.9
Public administration & defence	4,000	4.2	1.0
Education	11,000	11.5	1.3
Health	15,000	15.6	1.2
Arts, entertainment & recreation	4,000	4.2	0.9

Source: ONS, Business Register and Employment Survey

Occupational profile (average 2018-21)

Occupational category	Residents in employment	% share of total	LQ
Managers, directors & senior officials	15,400	11.0	1.0
Professional occupations	26,900	19.1	0.9
Associate professional & technical	19,300	13.6	0.9
Administrative & secretarial	15,800	11.2	1.1
Skilled trades	14,400	10.2	1.0
Caring, leisure & other services	14,300	10.1	1.1
Sales & customer service	10,100	7.1	1.0
Process, plant & machine operatives	10,000	7.1	1.2
Elementary occupations	14,300	10.1	1.0

Source: ONS, Annual Population Survey

Swale

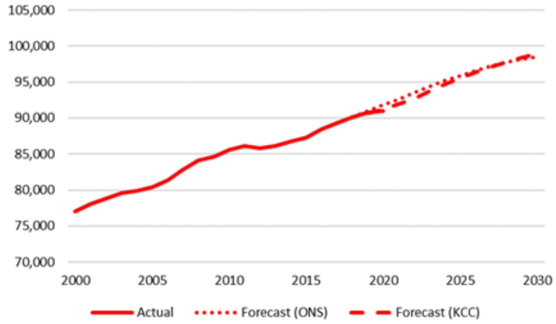
Population and workforce growth

Total population (2020): 151,000
Population aged 16-64 (2020): 91,000

Historic growth (2000-20)	Swale	UK
Total pop	24%	14%
Age 16-64	18%	11%

Forecast growth (2018-30, ONS estimates)	Swale	England
Total pop	9%	4%
Age 16-64	7%	2%

Working age population 2000-30



Source: ONS Mid-Year Population Estimates; ONS Population Projections (2018); KCC Housing Led Forecasts

Economic activity and unemployment

Economic activity rate	(average 2018-21)
Swale	78%
UK	79%

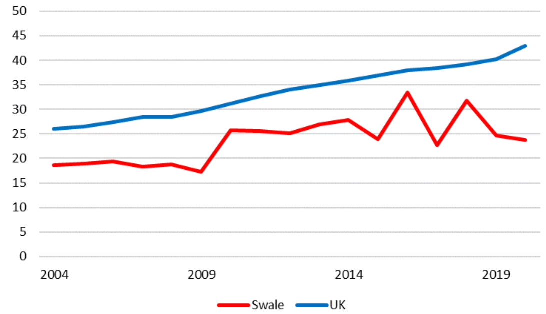
Claimant count (Sep 21)	No.	%
Swale	4,830	5.3%
UK	-	5.0%

Source: ONS, Annual Population Survey; ONS/ DWP, Claimant Count

Working age resident qualifications

% of 16-64 pop (average 2018-20)	Swale	UK
NVQ4+	27	41
NVQ3+	46	59
NVQ2+	67	76
NVQ1+	88	86
Other quals	8	6
No quals	9	8

% of 16-64 pop qualified to NVQ4+



Source: ONS, Annual Population Survey

Productivity and pay

Productivity	(GVA per filled job, 2019)
Swale	£49,100
UK	£56,700

Pay (median gross f/t earnings 2018-20)	Resident	Workplace
Swale	£31,100	£27,100
UK	£30,500	£30,500

Source: ONS, Subregional Productivity (2021); ONS, Annual Survey of Hours and Earnings. SQW estimates.

Jobs and job density (2019)

Total jobs	Jobs	CAGR, 2000-19
Swale	63,000	1.6%
UK	-	1.1%

Jobs density (jobs per working age resident)	Density	Change, 2000-19
Swale	0.70	+0.09
UK	0.87	+0.08

Source: ONS, Jobs Density

Sectoral profile (2019)

Sector	Employee jobs, 2019	% share of total	LQ
Agriculture, forestry & fishing	2,500	4.9	6.8
Mining, quarrying & utilities	1,000	2.0	1.5
Manufacturing	6,000	11.7	1.5
Construction	3,500	6.8	1.4
Motor trades	1,250	2.4	1.3
Wholesale	2,500	4.9	1.3
Retail	4,500	8.8	1.0
Transport & storage	4,500	8.8	1.8
Accommodation & food service	3,500	6.8	0.9
Information & communications	700	1.4	0.3
Financial & insurance	350	0.7	0.2
Property	800	1.6	0.9
Prof, scientific & technical	4,000	7.8	0.9
Business administration & support	3,000	5.9	0.7
Public administration & defence	2,000	3.9	0.9
Education	4,500	8.8	1.0
Health	4,500	8.8	0.7
Arts, entertainment & recreation	2,000	3.9	0.9

Source: ONS, Business Register and Employment Survey

Occupational profile (average 2018-21)

Occupational category	Residents in employment	% share of total	LQ
Managers, directors & senior officials	6,000	9.3	0.8
Professional occupations	11,600	17.6	0.8
Associate professional & technical	8,500	12.9	0.9
Administrative & secretarial	6,100	9.2	0.9
Skilled trades	9,300	14.4	1.5
Caring, leisure & other services	7,000	10.7	1.2
Sales & customer service	2,800	4.3	0.6
Process, plant & machine operatives	6,200	9.5	1.6
Elementary occupations	7,900	12.0	1.2

Source: ONS, Annual Population Survey

Annex 2: Stakeholders Consulted

The authors of this report wish to thank the following people, who kindly agreed to be interviewed as part of the research in September and October 2021:

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Chris Inwood, Maidstone Borough Council

Lewis Kirnon, Dartford Borough Council

Richard Longman, Greater North Kent

Kieren Mansfield, Swale Borough Council

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Land-based and Food

Morag Bailey: PrepWord, Carol Ford, specialist on fresh food and fresh produce, Berry Gardens and Fresh Food Group of the Kent and Medway Employment Taskforce, James Forknall, JPF Farms, Tim Malpas, GHD.

Manufacturing and Engineering

Paul Winter, Wire Belt Company Ltd and Dave Lowe, Caro Group of Companies.

Greater North Kent is the collective voice for an alliance of local authorities who have come together to promote greater prosperity, opportunity, and quality of life in North Kent.