

CITB ANALYSIS

Construction skills gap analysis for the Greater Cambridge & Greater Peterborough (GCGP) area



An analysis of the opportunities presented by the construction landscape in the Greater Cambridge & Greater Peterborough area

June 2018



EXECUTIVE SUMMARY

The purpose of this report is to present evidence to Greater Cambridge and Greater Peterborough Combined Authority on the skills provision and needs required in the construction industry over the next five years within the GCGP area. Its aim is to help inform decision makers target resources to employment and skills opportunities, which in turn will enable economic growth.

Construction is one of the key drivers of the UK economy, contributing around 6% of the UK GDP. According to recent estimates there are currently 2.3 million people working in the construction industry; circa 6.5% of the UK labour market. Employment is projected to grow for the fourth consecutive year at 0.5% a year on average to 2022 according to the latest Construction Skills Network (CSN) report. This would take employment to 2.77 million, only 3% below the 2008 peak. Despite monthly fluctuations the industry output remains above its pre-crisis peak. Private housing is one of the sub-sectors contributing positively to construction output; growing at 8.5% year on year in the most recent data for April 2018. This is highly relevant to GCGP, due to the high levels of housing that are scheduled to take place over the next five years in the area. High levels of new build private housing nationally mean greater competition for resources.

The construction sector acts as a key enabler to other sectors in both the public and private divisions. Its scope is large, ranging from the building of hospitals to the development of new office space; it is essentially a key initiator of the process. As repair and maintenance is a significant part of construction, construction is not only an initiator but also a link between the old and new.

In order to focus on skill shortages within the construction sector, this report provides three types of analyses: demand, supply and gap analyses. It begins with the demand analysis, where demand refers to the amount of labour required to fulfil planned infrastructure projects over the forecast horizon. The second section focuses on supply. Supply refers to the number of qualified workers that are expected to be available over the same five year period. The difference between the two is referred to as the gap analysis, which is presented in detail in the final section.

In this report, demand forecasts are compared against employment, training and workforce mobility to give an indication of possible gaps and/or occupational pinch points. Overall, the report represents the concluded research, seeking to identify issues so that a practical approach can be taken to realising the opportunities that activity in the construction sector can generate in developing skills, creating jobs and enhancing the local economy, built environment and opportunities.

The GCGP area is unique in that it crosses two regions; the East Midlands and the East of England. This presents both challenges and opportunities for the area. Challenges for the area arise from the possibility of a strong pull of highly qualified workers towards major conurbations located within the regions but outside the GCGP area. On the contrary, opportunities lie within the larger pool of qualified individuals to choose from both regions.

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1. INTRODUCTION

1.1. SCOPE

1.1.1. The commission

This work was commissioned by Greater Cambridge and Greater Peterborough combined authority. Its purpose is to inform stakeholders of where skills shortages are likely to be present over the next five years within the construction industry in the Greater Cambridge and Greater Peterborough area.

1.1.2. Area covered

Figure 1 shows the area covered by the Greater Cambridge & Greater Peterborough area, and Table 1 shows the local authorities involved.

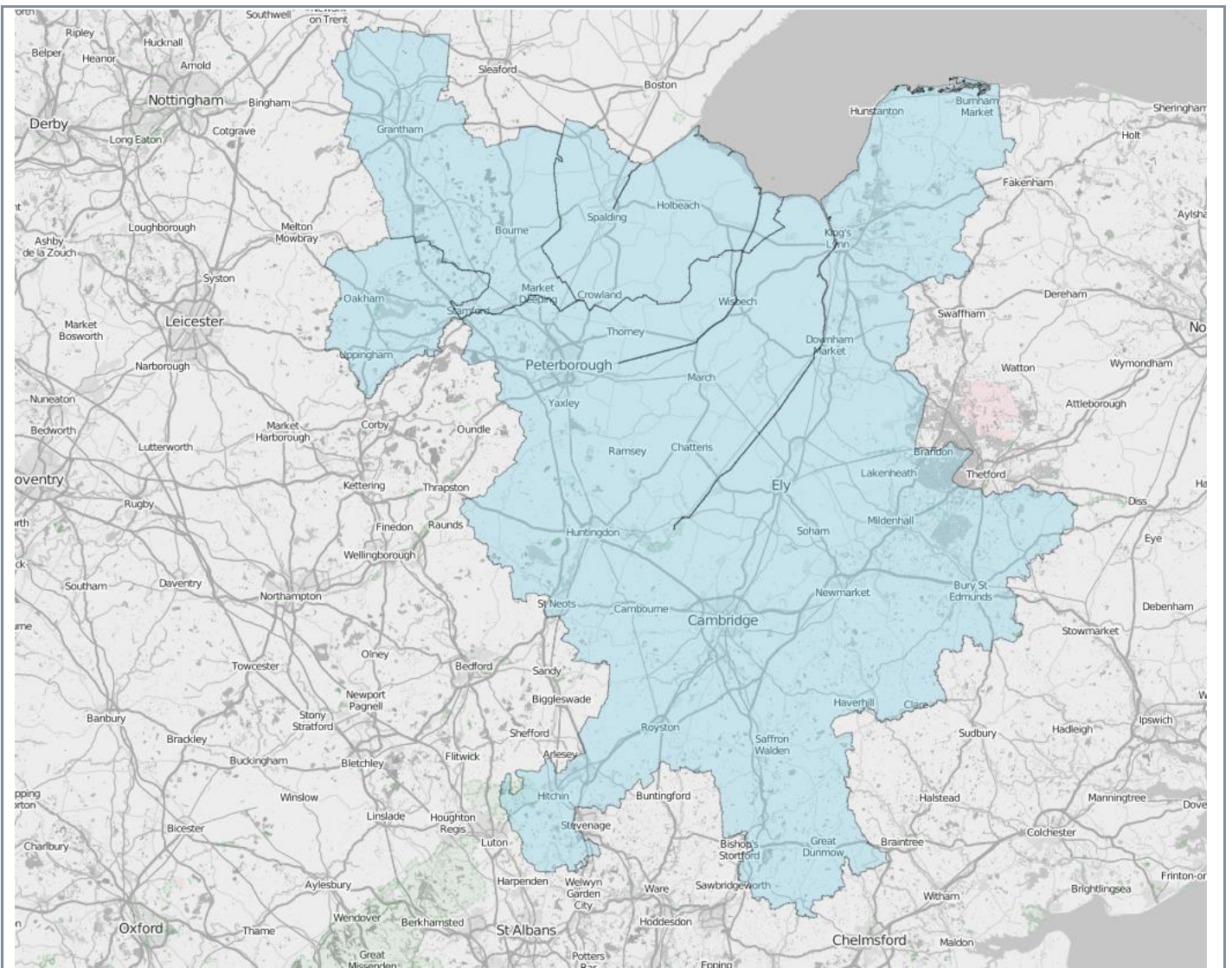


Figure 1: Greater Cambridge & Greater Peterborough and surrounding areas

Table 1: Analysed local authorities

Greater Cambridge & Greater Peterborough
Cambridge
East Cambridgeshire
Fenland
Forest Heath
Huntingdonshire
King's Lynn and West Norfolk
North Hertfordshire
Peterborough
Rutland
South Cambridgeshire
South Holland
South Kesteven
St Edmundsbury
Uttlesford

2. LABOUR DEMAND IN GREATER CAMBRIDGE & GREATER PETERBOROUGH

The following sections provide an estimate of the labour demand predicted by our Labour Forecasting Tool that construction investment will create across the Greater Cambridge & Greater Peterborough area over the period 2018-2022. The tool and method of analysis are described in Appendix A.

2.1. SUMMARY OF DEMAND

- Our estimate of the labour demand in the Greater Cambridge & Greater Peterborough is around 108,820 people in 2018. The projected growth between 2018 and 2022 suggest that the labour demand in 2022 will be around 108,500 people.
- Around 61% of the workforce is employed in skilled trades & operatives, the other 39% are in managerial, professional & office based staff.
- During 2019 the most labour-intensive occupation group is “non-construction professional, technical, IT, and other office-based staff (excl. managers)” with an annual demand of 14,540 people.
- The skilled trade & operative occupations in greatest demand are:
 - Wood trades and interior fit-out with a requirement for 11,700 people;
 - Electrical trades and installation follow with 8,610 people.
 - Plumbing and heating, ventilation, and air conditioning trades rank third, with a demand of 7,360 people

2.2. PIPELINE OF KNOWN PROJECTS

2.2.1. Glenigan pipeline analysis

We have considered projects in the Glenigan database¹ and the National Infrastructure and Construction Pipeline (NICP)². These comprise of what are referred to as the known projects.

An initial review of the Glenigan database identified 1,044 projects in the Greater Cambridge & Greater Peterborough area. Of the Glenigan projects 105 were removed due to missing dates. Also excluded were five projects which were clearly identified as consultancy project and one project which was identified to be a duplicate. 11 projects were removed due to them being included in the NICP, so already in the dataset. A full set of the projects which were omitted from the analysis is provided in Appendix C. The spend in projects which were removed because of missing dates is around 1.9% of the total pipeline value. It is possible that this work will take place at some point in the future but as dates are unknown it is most likely that this will be later in the forecast period. Since dates are not known it is not possible to pinpoint when the labour will be required. However, an assessment of the labour demand from potential additional projects is included in the estimates of other work as outlined in Appendix A.

The Mean Value Theorem was applied to the remainder of the pipeline to identify the significant projects. The process identified 174 significant projects accounting for 85% of the total construction spend in the area. This allowed a detailed analysis of a large proportion of all the projects and a comprehensive consideration of the project types to which they were assigned.

Appendix D provides a full breakdown of the Glenigan significant projects and their construction values. The peak year for the Glenigan spend profile is 2019. The location of the significant projects within the Greater Cambridge & Greater Peterborough can be seen in Figure 2. The values of the projects are proportional to the sizes of the coloured dots.

¹ The Glenigan database allows contractors to identify leads and to carry out construction market analysis. It is updated every quarter to provide details of planning applications from local authorities supplemented with additional project-specific data. For the purposes of this analysis, this will have used the 2018/Q1 cut of data.

² The Infrastructure and Projects Authority (formerly Infrastructure UK and Major Projects Authority) compile annually a pipeline of UK infrastructure and construction projects and the associated annual public and private investment. For this report we have used the 2017 NICP which includes details of around 700 projects valued at some £463bn.

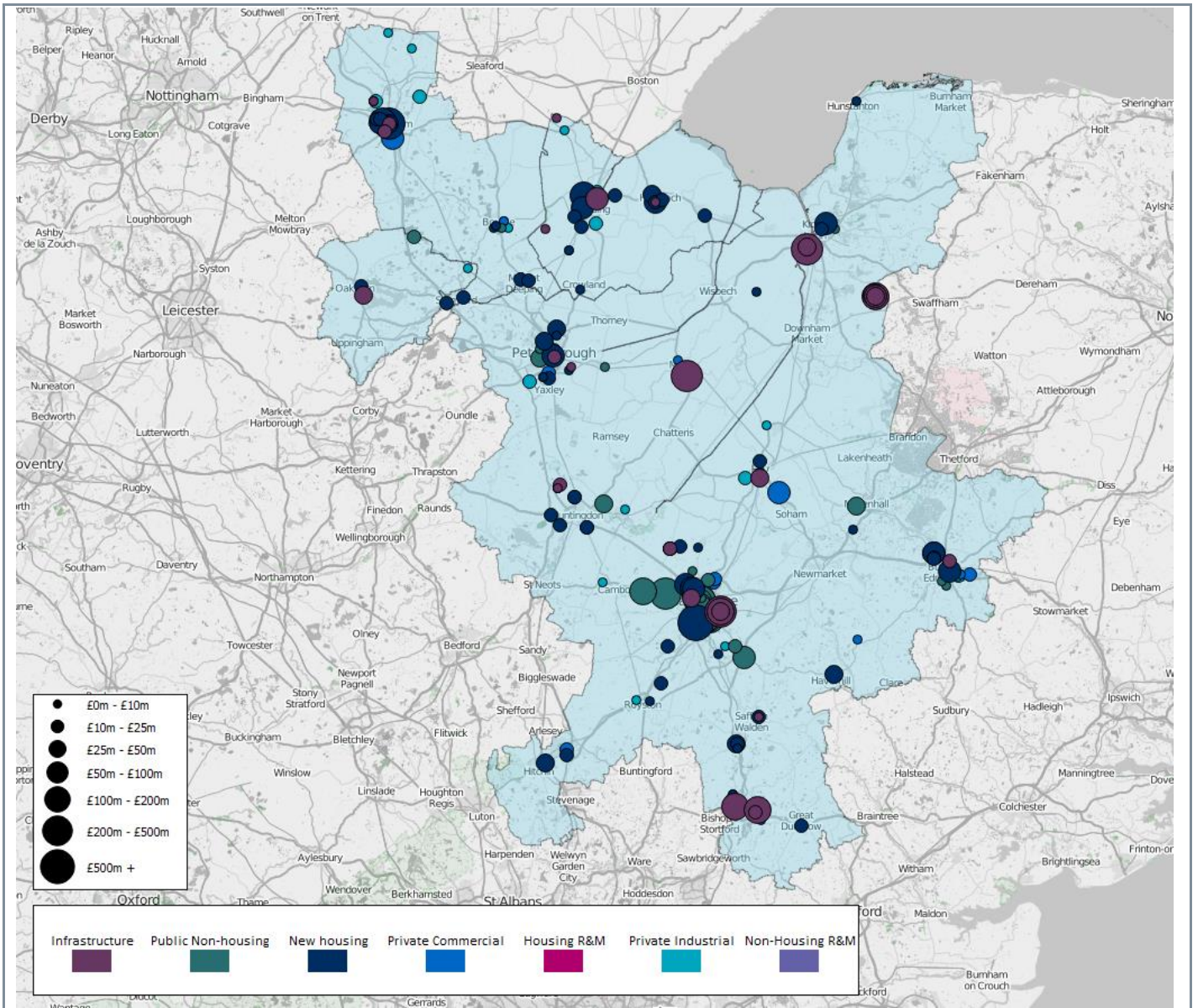


Figure 2: Location of significant Glenigan projects included in the analysis

2.2.2. Glenigan & NICP spend analysis

Implementing the methodology outlined in Appendix A leads to the following findings for the peak year for known projects of 2019. The peak year is used because the tail off in the known projects is more likely to be due to a lack of future planning rather than an actual tail off in workload.

Table 2 shows the distribution by project type of new build spend for the total pipeline of known projects.

Table 2: New-build construction spend by project type in 2019 (total known projects)

Project type	Construction spend in 2019 (2018 values - £m)	% of total
New housing	1,252	42%
Infrastructure	970	32%
Private commercial	387	13%
Private industrial	212	7%
Public non-housing	191	6%
Total	3,012	100%

Table 3 shows the infrastructure construction spend from the known projects in 2019 by infrastructure sub-type. Appendix E provides a full breakdown of the NICP and Greater Cambridge and Greater Peterborough projects and their construction values

Table 3: Construction spend per infrastructure sub-type in 2019 (total known projects)

Project type	Construction spend in 2019 (2018 values - £m)	% of total
Transport	764	79%
Water	119	12%
Energy	60	6%
General Infrastructure	17	2%
Flooding	10	1%
Total	970	100%

2.3. ESTIMATE OF FUTURE TOTAL LABOUR DEMAND

The known project pipeline may not include smaller projects or repair and maintenance work. Figure 3 shows the outcomes of the analysis of future labour demand with the forecast regional employment growth rate applied. The solid purple area shows the labour demand arising from the new build Glenigan and NICP projects. This is projected forward from the peak as shown in green. The R&M (including any in Glenigan or the NICP) is also shown along with the likely total labour demand arising from estimates of other work. The method for calculating these is provided in Appendix A. The total construction labour demand is around 108,820 people in 2018. The projected growth between 2018-2022 suggests that the labour demand in 2022 will be around 108,500.

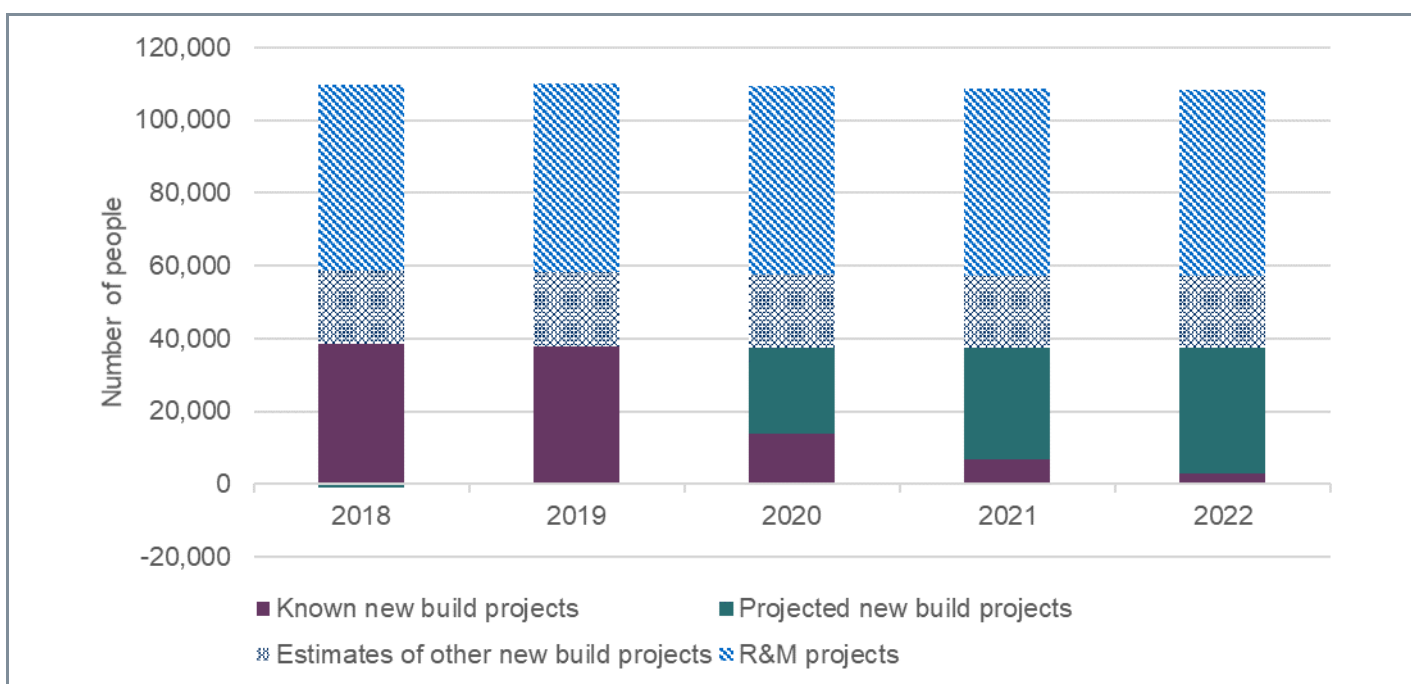


Figure 3: Total construction labour demand including estimates for both R&M and estimates of other work

2.3.1. Breakdown of labour demand by occupation

Figure 4 presents the breakdown of labour for skilled trades & operatives and managerial, professional & office based staff. Around 61% of the workforce are in skilled trades & operative occupations.

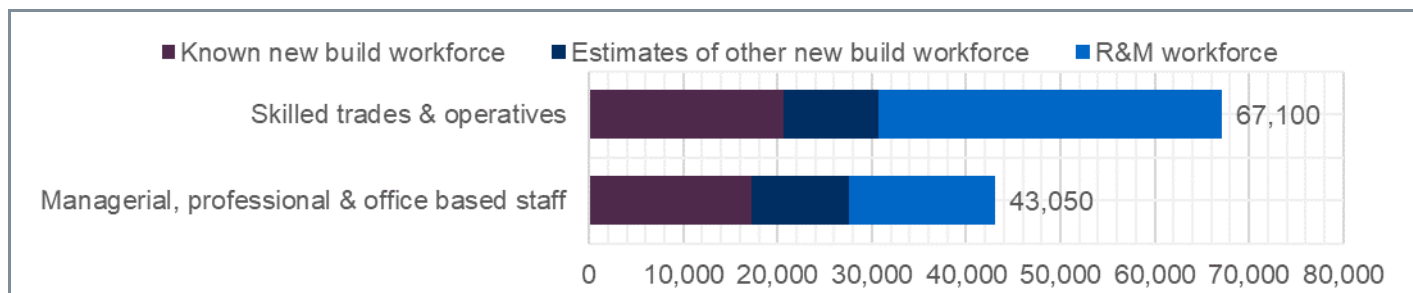


Figure 4: Total construction labour demand for 2019 by broad occupational group

For the peak year in Glenigan of 2019, Figure 5 shows the detailed breakdown for the 20 skilled trade & operative occupational groups for the pipeline of known projects, the estimates of other new-build work and the R&M work. These occupations will be predominately based at or near the location of the work.

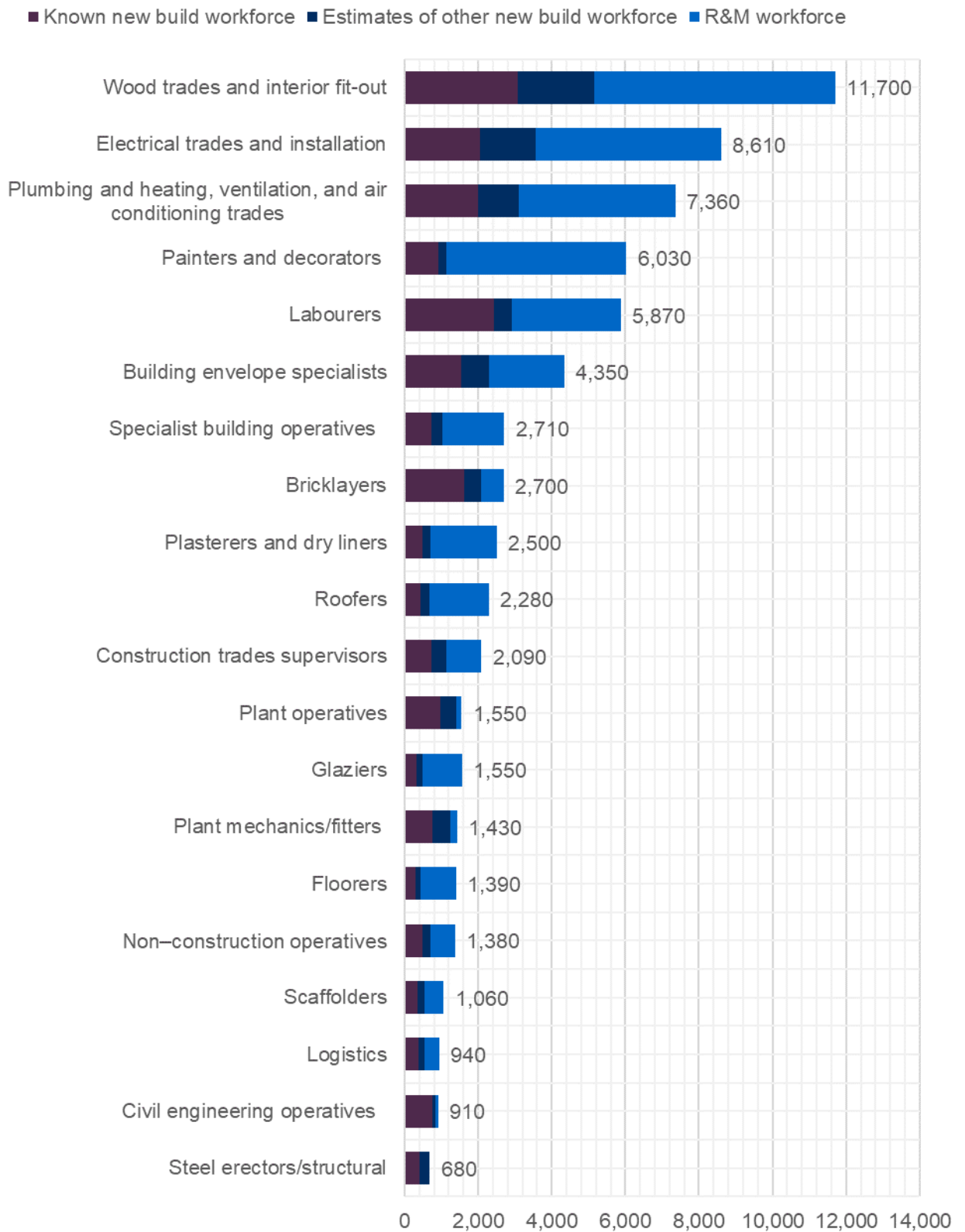


Figure 5: Construction labour demand for skilled trades & operative occupations in the peak year

Figure 6 shows a breakdown of the managerial, professional & office based occupations. Since it is possible for many of these people to work remotely from the site, they will not necessarily generate a local demand.

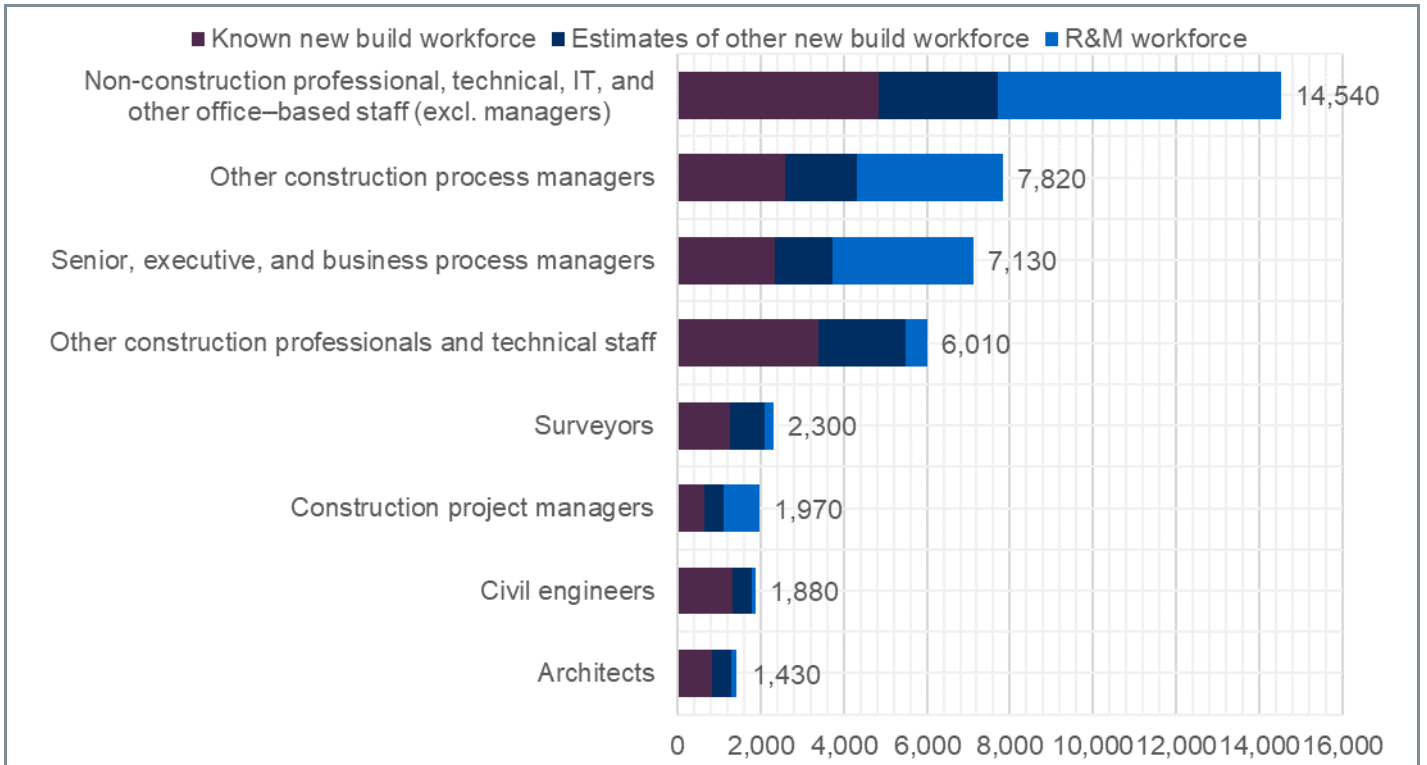


Figure 6: Construction labour demand managerial, professional & office based occupations in the peak year

2.3.2. Breakdown of labour demand by project type

Table 4 shows the labour demand generated by the known projects and the estimates of other work in 2019 broken down by project type.

Table 4: Labour demand by project type in 2019

Project type	Known pipeline labour demand in 2019 (people)	Estimates of other work labour demand in 2019 (people)	Total labour demand in 2019 (people)	% of total in 2019
Non-housing R&M		31,880	31,880	29%
Private commercial	6,890	16,910	23,800	22%
Housing R&M	220	19,890	20,110	18%
New housing	15,050		15,050	14%
Infrastructure	8,960	730	9,690	9%
Private industrial	3,830	2,630	6,460	6%
Public non-housing	3,160		3,160	3%
Total	38,110	72,040	110,150	100%

3. LABOUR SUPPLY

When looking at the supply of workers there are two main elements to consider: the size of the current workforce and the existing amount of training.

The first element of this section takes a view on the current employment levels in the Greater Cambridge and Greater Peterborough area and how this relates to overall employment across the wider East region and the UK as a whole. Data from CITB's Construction Skills Network (CSN) is used along with official Government sources.

For the second section, although training occurs at Further Education (FE) and Higher Education (HE) levels, the focus of this report is on the FE that takes place. This is because FE tends to be sourced and delivered in a closer proximity to the home and workplace, whereas the length of study time and specialisms for Universities for HE typically give much greater degrees of mobility. The much longer period of time taken to acquire qualifications and experience mean most HE qualified occupations are outside the period that this report can consider.

That does not mean that Greater Cambridge & Greater Peterborough Combined Authority should not have ambitions to move workers through to higher level training and education. There may also be opportunities for more leadership and management, as well as specialist, training and development.

Finally, the demand forecasts are then compared against employment, training and workforce mobility to give an indication of possible gaps and/or occupational pinch points.

3.1. MAIN POINTS

- Three districts constitute around 39% of the total construction employment within the GCGP area: Cambridge (16%), South Kesteven (12.4%) and Huntingdonshire (10.8%);
- Current construction workforce within the GCGP area is estimated at 69,350 workers;
- The GCGP area accounts for 28% of the East region's total current construction workforce and 23% of its construction firms;
- Recent construction employment trends show more pronounced variation in the GCGP area than in the East region as a whole;
- Recent growth in numbers of construction businesses has been somewhat slower in the area than in the East region as a whole;
- 100 training providers have delivered construction-relevant FE courses within the GCGP area over the last four years, with ten main providers delivering 83% of provision.

3.2. EXISTING WORKFORCE

Analysis of the Annual Population Survey shows that the GCGP area accounts for around 28% of construction employment in the East.

Figure 7 below shows comparative changes in year-on-year construction employment. It is noteworthy that changes within the GCGP area are more pronounced than those at either regional or national level. However, the GCGP area and the East region are broadly similar in direction for most of the period. Looking back to 2010, total construction employment peaked in GCGP area in 2011, and in 2016 for the wider East region.

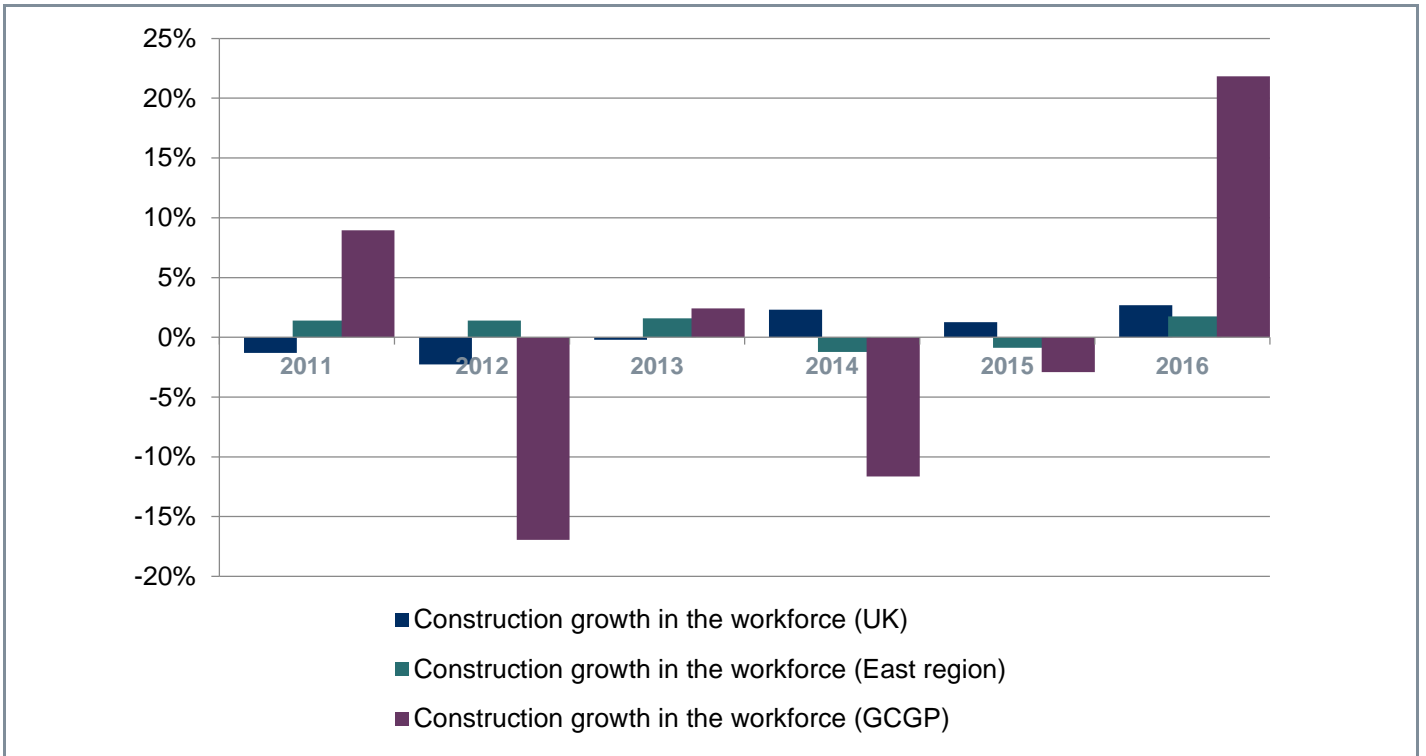


Figure 7: Growth in the construction workforce (Sources: CSN / NOMIS)

Figure 8 below shows year-on-year comparative changes in numbers of construction businesses. Again, oscillation in numbers is generally greater in the GCGP area than in the East region, but less marked than changes in employment. The number of construction firms within the GCGP area increased by 17% between 2013 and 2017, to just over 9,000 businesses. Much of this increase (1,335 businesses) was due to growth in the number of micro firms that employ fewer than nine people. This is a slower rate of growth compared to the East region as a whole which saw a 23% increase overall, with a similarly proportional increase in micro sized firms during the same period. The GCGP area accounts for around 23% of construction firms based in the East. For reference the number of construction firms in the UK has increased by 14% between 2013 and 2017.

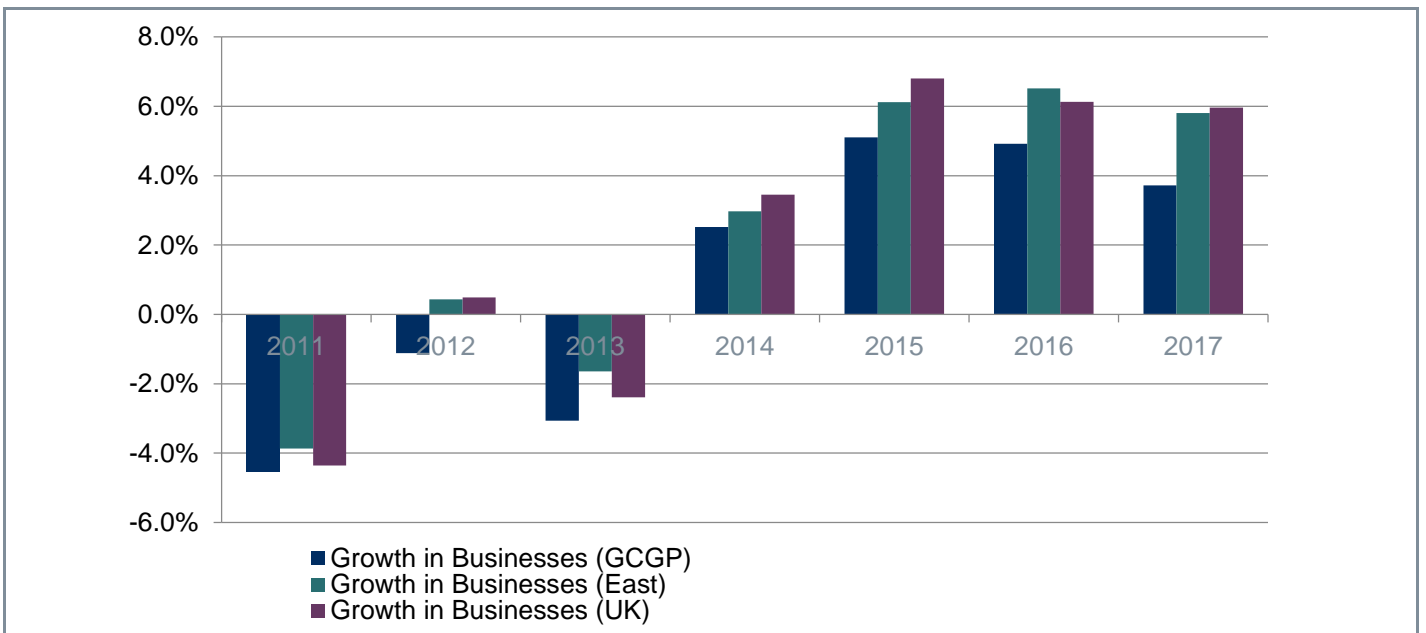


Figure 8: Year on year change in Construction Businesses (UK Business Count, NOMIS 2017)

Within the GCGP area, the average number of employees per construction firm peaked at 7.4 in 2011, then fell back to 5.2 in 2015. However, over the last two years, average employee numbers have grown again, reaching 7.2 in 2017.

Figure 9 shows the distribution of construction businesses within the GCGP area, and Figure 10 shows the distribution of the construction workforce. Interestingly, there are some noticeable differences between the two.

Comparing business to workforce distribution indicates that Cambridge has the highest share of employment compared to share of businesses meaning that the firms based there tend to be larger, employing on average 32 people. This situation is reversed, most notably, in Fenland and Rutland where there are higher proportions of businesses to workforce, meaning that smaller firms predominate, with an average business size of 1.8 people in Fenland and 2.2 in Rutland.

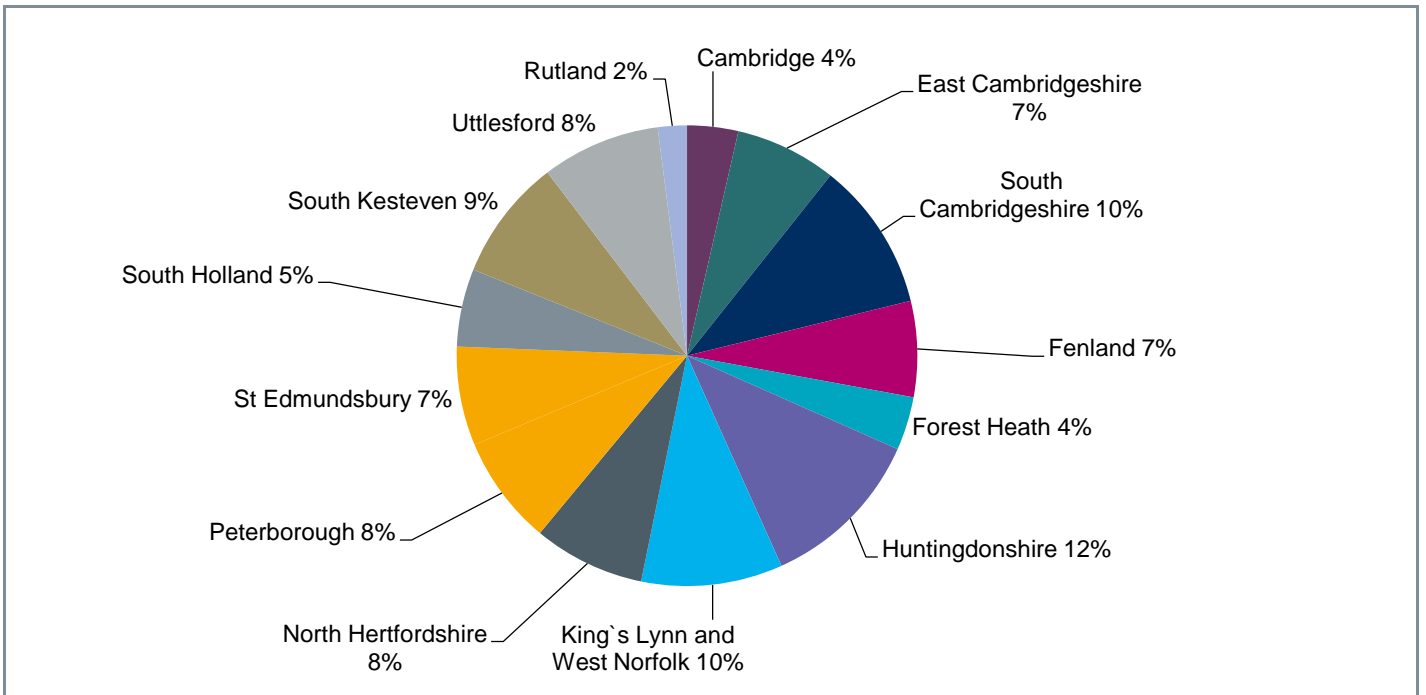


Figure 9: Distribution of construction businesses within the GCGP area (UK Business Count, NOMIS 2017)

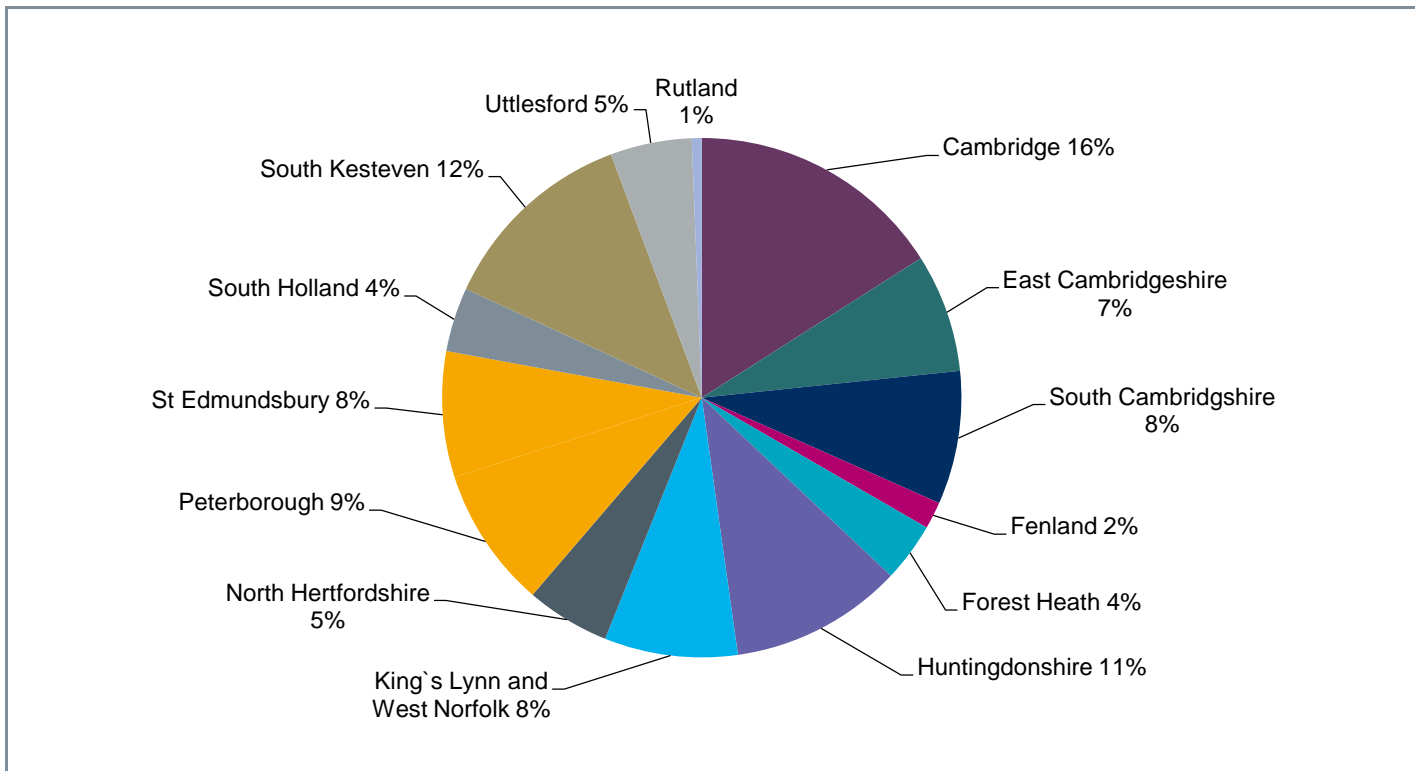


Figure 10: Construction employment by area within the GCGP (2017, NOMIS)

The different pattern between workforce and number of businesses highlights two of the main factors that are important when looking at the construction sector. These are:

- Direct employment vs. self-employment
- Size of businesses.

Overall the construction sector has high levels of self-employment with around 40% of the GB construction workforce being self-employed. This is broadly in line with the 37% level of self-employment in the GCGP area, but slightly lower than the 43% figure for the East as a whole. The level of self-employment in the GCGP area fell 26% between 2010 and 2012, but has since recovered, growing by around 41% between 2012 and 2017. The East of England region showed a pattern that was somewhat similar, but much less marked: Self-employment fell by 14.5% between 2010 and 2013, but rose again by around 17% between 2013 and 2017.

As Figure 11 below shows, when it comes to business size, the distribution of companies across the GCGP region is very close to the pattern seen across the East as a whole, and indeed the United Kingdom, with the majority of construction companies being micro sized, i.e. less than 10 employees.

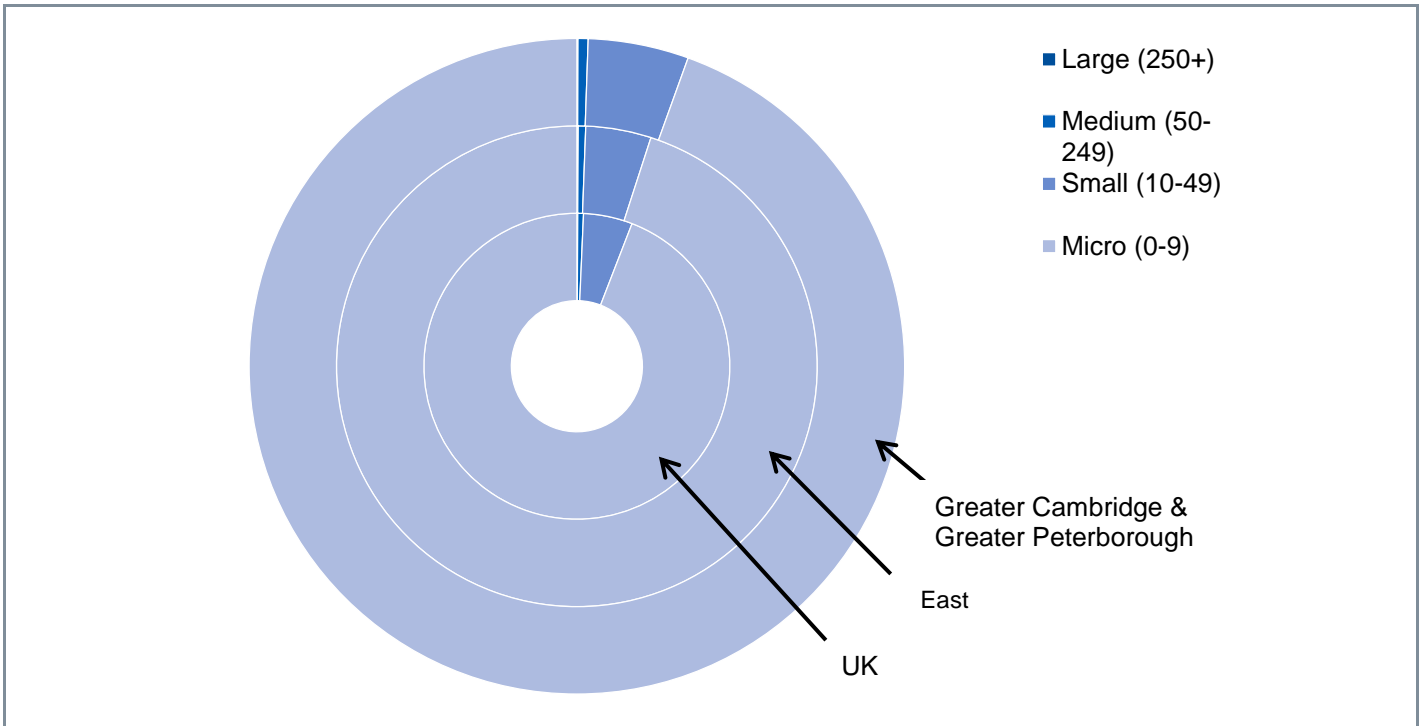


Figure 11: Size of Construction Businesses (UK Business Count, NOMIS 2017)

As noted above, most of the net growth in construction businesses between 2013 and 2017 within the GCGP area, a total of 1,335 additional firms, has come from an increase in the number of Micro sized companies (those employing fewer than ten people). There was also a small net increase of 30 firms employing between 10-49 workers, as well as very small increases in the number of medium and large firms during the same period.

GCGP expands into three districts of South Lincolnshire, the detailed occupational analysis needs to take into the account an expanded regional context. Accordingly, Table 5 below expands the regional definition across both the East and East Midlands. GCGP area covers 22.9% of the construction workforce across the East of England and 6.4% across the East Midlands. These percentage shares are applied to the CSN occupational breakdown for the two regions as a whole to give an estimate of total employment at occupational and industry level in the Greater Cambridge and Greater Peterborough Combined Authority. For comparison, figures for the two wider regions have also been included.

Table 5: Occupational breakdown GCGP / East & East Midlands region (Source: CSN / NOMIS 2017)

Occupation	Greater Cambridge & Greater Peterborough	East region	East Midlands region
MANAGERIAL, PROFESSIONAL AND OFFICE BASED ROLES			
Other construction professionals and technical staff	3,800	13,839	9,923
Other construction process managers	4,551	16,146	13,410
Senior, executive, and business process managers	4,369	15,720	12,091
Surveyors	1,483	5,235	4,474
Construction Project Managers	1,198	4,634	2,152
Civil engineers	1,715	6,611	3,152
Construction Trades Supervisors	1,032	4,016	1,760
Architects	940	3,887	774
SKILLED TRADES			
Wood trades and interior fit-out	6,693	23,876	19,255
Electrical trades and installation	4,655	16,165	14,989
Plumbing and HVAC Trades	4,222	15,502	10,563
Labourers nec*	3,359	12,262	8,659
Building envelope specialists	2,681	9,550	7,758
Painters and decorators	2,616	9,872	5,582
Specialist building operatives nec*	1,347	4,501	4,977
Bricklayers	2,170	8,325	4,142
Roofers	1,109	4,313	1,912
Plasterers	1,621	5,660	5,111
Plant mechanics/fitters	872	2,867	3,391
Plant operatives	954	3,142	3,684
Glaziers	773	2,604	2,780
Floorers	1,043	4,098	1,507
Logistics	800	3,073	1,507
Steel erectors/structural fabrication	649	2,431	1,452
Scaffolders	549	2,263	483
Civil engineering operatives nec*	328	889	1,954
NON CONSTRUCTION ROLES			
Non-construction professional, technical, IT & other office-based staff	8,961	32,379	24,301
Non-construction operatives	618	1,912	2,838
Total	65,100	235,773	174,581

4. TRAINING PROVISION

4.1. MAIN POINTS

The Greater Cambridge and Greater Peterborough area has:

- 83% of learner volumes covered by ten main providers
- Seen a rise in apprenticeship starts of 29% over the four years to 2016
- Good levels of competence qualifications achievements across many construction occupations, most notably Electrical trades and installation, Glaziers, Roofers, Plasterers and dry liners

Construction training provision overall has fallen by 17% in the GCGP over the four academic years from 2012/13 to 2015/16, with the number of new starters dropping from 6,142 to 5,076 during that time. Most local authorities within the GCGP area have witnessed declines in construction starts, with only five seeing increases.

CITB analysis of Skills Funding Agency Individualised Learner Records from 2012/13 through to 2015/16 academic years for construction learners shows that:

- The GCGP area accounts for 26% of identified construction related training starts across the East region – a proportion that has fallen slightly over the four years to 2016.
- The fall in the total number of learners starting all construction across the area (-17%), has been slightly more pronounced than the reduction (-6%) in learners starting across the wider East region as a whole.
- The number of construction apprenticeship starts in the GCGP area has increased by 29% between 2012/13 and 2015/16, with most districts seeing increases. Apprenticeship starts across the wider East region have also increased by 33% over the same time.

The information shown in Table 6 has been produced by mapping qualification reference numbers and titles to the most appropriate Construction Skills Network occupations. This has been built up over a number of years by CITB with over 1,800 qualifications reviewed and linked where possible. Note: there are some qualifications that have broad or generic titles that cannot be linked to distinct occupations.

Construction Occupations	12-13	13-14	14-15	15-16	Total Achievements	Total
Grand Total	30%	22%	23%	24%	3,960	25%
Occupations with good provision						
Electrical trades and installation	28%	35%	33%	38%	740	34%
Glaziers	79%	77%	28%	19%	460	54%
Civil engineering operatives nec*	29%	15%	27%	42%	210	27%
Bricklayers	32%	23%	22%	28%	210	26%
Roofers	85%	76%	34%	6%	130	59%
Building envelope specialists	46%	28%	16%	18%	120	33%
Scaffolders	21%	15%	48%	21%	90	26%
Plasterers and dry liners	35%	21%	92%	60%	70	40%
Plant mechanics/fitters	23%	21%	44%	44%	50	32%
Occupations to Monitor						
Wood trades and interior fit-out	19%	22%	24%	24%	490	23%
Plumbing and HVAC Trades	27%	16%	21%	14%	470	18%
Plant operatives	28%	14%	13%	24%	440	18%
Specialist building operatives nec*	25%	17%	14%	25%	250	21%
Painters and decorators	12%	29%	18%	37%	90	22%
Floorers	11%	15%	20%	4%	80	12%
Low Overall Learner Volumes						
Construction Trades Supervisors	22%	20%	9%	20%	40	18%
Steel erectors/structural	17%	10%	6%	15%	10	10%
Construction managers	13%	13%	0%	0%	10	13%
Other construction professionals and technical staff	5%	0%	6%	2%	<10	3%
Logistics	100%	0%	0%	0%	<10	4%

Table 6: Competence qualification achievement in Cambridge & Peterborough area as a % of total competence qualification achievements in East region as a whole (Source: CITB/SFA)

The majority of the achievements in the GCGP area are at Level 2 or above (59%).

The percentage comparison with East region as a whole, over the last four years, is used as a device to demonstrate the provision of training in the GCGP area. It takes into account that roughly 25% of regional achievement is based in the area from which it can be inferred whether provision is higher or lower than would be expected. Low provision may indicate that trainees have to travel outside the GCGP area to find appropriate training courses or, as in the case of plant operatives and mechanics, that an urban centre is not an appropriate location for such training.

Relatively high provision is highlighted in green and relatively low provision is highlighted in red.

All the occupations with Good Provision have good levels of training in comparison with average levels of training in the GCGP area which reflects the fact that many training providers offering FE courses are located in the area.

The second group – Occupations to monitor - identifies a number of occupations where we would expect higher levels of training, again linked to either the occupational size and/or demonstrating competence. For this cluster, the share of training within the GCGP area is lower than would be expected. It is possible that individuals within the GCGP area are travelling outside the area for these types of training.

Lastly there is a group of occupations where the low level of learner volumes makes it difficult to judge patterns across the years. For several of the courses in this group, notably courses for Construction Managers and Logistics, training has declined sharply from a higher level which may be of low overall achievement numbers. Whilst the training provider network can adjust to cover changes in demand, there will be a requirement for a certain volume of training to make it viable for a provider to deliver it. These occupations could suffer from this intermittent demand or learners could be travelling further afield to more specialist training providers.

In terms of training providers, from 2012/13 through to 2015/16, 100 different providers have delivered training in GCGP area. However, there is a consistent pattern with 83% of construction training being delivered by the ten largest providers as shown in Table 7 below.

Provider	2012-13	2013-14	2014-15	2015-16	Total (Learner Aims)	% Share of Total Quals	% of Quals Ofqual Registered
Cambridge Regional College	1,234	1,221	1,108	793	2,820	17.5%	36%
A4e Ltd	1,153	1,058	692	513	2,180	13.7%	82%
Peterborough Regional College	684	871	734	441	1,567	11.0%	79%
West Suffolk College	742	592	604	648	2,039	10.4%	79%
The College Of West Anglia	847	578	496	436	1,720	9.5%	83%
Huntingdonshire Regional College	436	412	269	254	945	5.5%	53%
New College Stamford	248	285	343	339	927	4.9%	72%
Grantham College	396	292	282	116	629	4.4%	54%
Milton Keynes College	121	228	248	235	592	3.3%	90%
Lincolnshire County Council	163	179	229	60	283	2.5%	0%

Table 7: Top 10 construction training providers GCGP area (Source: SFA)

Cambridge Regional College is the largest single provider, with 17.5% of total qualifications. However, A4E Ltd³, with a slightly lower overall share of learners, has a much larger proportion Ofqual qualifications registrations. Peterborough Regional College, West Suffolk College and The College of West Anglia also have high numbers of learners, together with high levels of Ofqual registrations.

This profile is typical of many geographic areas in that there is a relatively small group of FE colleges delivering the majority of construction training courses. A smaller proportion of additional training is then delivered by a larger number of other providers. Sometimes these smaller specialist providers can operate far from the normal base of those for whom they provide training. In total this training covers the majority of the main occupations involved in the construction workforce.

Table 8: Unique Learner starts by district, construction subjects, all levels (Source: CITB/SFA)

Local Authority	2012-13	2013-14	2014-15	2015-16	Net Change	% Net change	% Quals at Level 2+
East Cambridgeshire	40	60	60	80	40	100%	94%
Rutland	120	180	200	200	80	67%	38%
Cambridge	60	130	70	80	20	33%	88%
King's Lynn and West Norfolk	940	980	960	1,100	160	17%	81%
St Edmundsbury	810	840	820	850	40	5%	66%
Huntingdonshire	720	910	700	670	-50	-7%	31%
Fenland	320	330	260	240	-80	-25%	51%
Forest Heath	120	30	60	90	-30	-25%	85%
North Hertfordshire	120	90	200	80	-40	-33%	61%
South Kesteven	710	670	710	460	-250	-35%	50%
South Cambridgeshire	1,180	820	890	760	-420	-36%	59%
Peterborough	950	1,000	650	540	-410	-43%	56%
South Holland	120	70	70	60	-60	-50%	94%
Uttlesford	100	30	100	40	-60	-60%	89%
Total	6,310	6,140	5,750	5,250	-1,060	-17%	59%

³ A direct delivery, vocational learning company based in Sheffield

In the GCGP area as a whole, nearly 60% of this training is at Level 2 or above, with the highest figures recorded (Table 10 above) in East Cambridge and South Holland (94%) and the lowest in Huntingdonshire (31%).

Overall, the GCGP area has experienced a larger drop in construction training starts between, 2012/13 and 2015/16 than the wider East region (-17% and -6% respectively).

Whilst these courses are an important stepping stone or progression route for learners to acquire knowledge, construction employers tend to have a preference for practical or competence based skills, so it is reassuring therefore, despite the falls in overall training, that the number of construction apprenticeship starts in both the GCGP area and the region both increased (by 29% and 33% respectively).

Table 9 below shows that over the four years to 2015/16, construction apprenticeships starts have increased across most districts within the GCGP area: Only three have experienced falls.

Table 9: Construction apprenticeships starts within GCGP area (Source: SFA)

Local Authority	12-13	13-14	14-15	15-16	Change	% Net change
Rutland	6	16	30	25	19	317%
Forest Heath	24	25	33	57	33	138%
Huntingdonshire	54	97	155	115	61	113%
East Cambridgeshire	28	40	52	57	29	104%
Fenland	27	30	35	49	22	81%
King's Lynn and West Norfolk	408	495	571	661	253	62%
St Edmundsbury	123	158	146	199	76	62%
Cambridge	28	25	33	42	14	50%
South Kesteven	71	75	91	99	28	39%
South Holland	46	45	57	55	9	20%
Uttlesford	33	26	52	37	4	12%
North Hertfordshire	48	53	48	39	-9	-19%
Peterborough	142	97	129	109	-33	-23%
South Cambridgeshire	321	116	179	156	-165	-51%
Total	1,219	1,188	1,441	1,568	349	29%

The GCGP area has a number of Higher Education institutions within it. However, in view of the likely mobility associated with HE students, it is worth considering recent trends in achievements at national level: HESA data reveals that the level of all HE construction-related achievements fell by 28% between 2010/11 and 2014/15, from just over 23,000 to around 16,700.

5. MOBILITY OF THE WORKFORCE – EAST REGION

Construction workforces are fluid by nature and this section of the report will discuss findings from CITB's survey into Workforce Mobility and Skills in the UK Construction Sector 2015 to give a picture of mobility within the workforce. Data specific to the East Region is used to give an indication of circumstances that might impact on future training interventions and the supply of job opportunities for local people.

5.1. MAIN POINTS

- More than a quarter of East of England construction workers have worked in the construction industry for over 20 years (27%) and a total of more than half have worked in the industry for at least 10 years (52%).
- At the time of the research just over half of all construction workers in the East of England were working in the same region/nation in which they were living in when they started their construction career (55%).
- The average (mean) distance from workers' current residence (taking into account temporary residences) to their current site was 27 miles (22 miles is the UK average).
- Three quarters of all East of England construction workers are confident that when they finish their current job their next job will allow them to travel to work from their permanent home on a daily basis (76%).
- Overall two-fifths of all construction workers have only worked on one project type (40%).
- Amongst construction workers under the age of 60 in the East of England, well over a third (38%) believe they will definitely want to be working in the construction sector in five years' time, a further third (33%) believe it is very likely they will, and 10% believe it is quite likely they will. In total over four-fifths of workers in the region aged under 60 believe that it is likely they will still be working in construction in five years' time.

Table 10 shows the region or nation an employer operates in, compared with the region or nation they were previously working in. This is taken from the CITB survey into Workforce Mobility and Skills and gives an indication of the inter-regional movement of workers.

The East region has a lower proportion of workers who spend some or all of their time in the region compared to most others, implying relatively high mobility. Relatively large percentages have worked in Greater London and the South East, though some have gone further afield.

As some respondents would have indicated that they had worked in more than one region, the totals for percentage figures in the table exceed 100%.

Table 10: Region/nation employer operates in, compared with region/nation working in currently

Region/nation employer operates in	Region/nation currently working in											
	EM %	EE %	GL %	NE %	NW %	NI %	SC %	SE %	SW %	WA %	WM %	YH %
EAST MIDLANDS	83	16	8	13	3	2	4	12	8	7	24	11
EAST OF ENGLAND	12	67	15	11	2	1	4	19	8	7	9	6
London	10	27	84	13	4	1	5	27	12	7	9	6
North East	9	9	8	93	3	1	4	6	7	7	8	15
North West	11	9	8	14	93	1	4	6	7	11	11	10
Northern Ireland	3	3	3	2	1	99	3	2	1	3	2	1
Scotland	6	4	6	9	1	2	97	2	4	4	5	4
South East	13	23	27	12	3	*	4	65	21	7	11	6
South West	9	5	7	10	3	*	4	18	83	10	15	5
Wales	6	5	5	8	3	*	4	3	10	96	14	4
West Midlands	21	9	8	12	6	*	4	7	12	9	92	8
Yorkshire & the Humber	15	10	7	19	4	1	5	6	8	8	8	88
Republic of Ireland	1	2	3	*	*	2	1	1	1	2	2	*
Other parts of Europe	*	*	*	1	0	0	0	0	*	0	1	0
Outside Europe	*	1	0	*	0	0	0	0	*	0	*	0
Other / Unsure	1	3	2	3	2	*	1	3	1	*	1	3
Unweighted bases	410	366	452	427	435	274	463	439	494	290	352	369

Source: Workforce Mobility and Skills in the UK Construction Sector 2015 Report. BMG Research on behalf of CITB.

Base: All respondents. *denotes less than 0.5%

5.2. GREATER CAMBRIDGE AND GREATER PETERBOROUGH – GEOGRAPHY

It is worth considering that the geography of the area includes a mix of districts of relatively low population density and some with high population density; e.g. Cambridge is quite different from rural north Cambridgeshire and Peterborough. Whilst there may be mobility impacts in terms of differing local business opportunities and access to transport links, the actual data is insufficiently granular to plot consequent mobility trends.

5.3. WORK HISTORY

More than a quarter of East of England construction workers have worked in the construction industry for over 20 years (27%) and a total of more than half have worked in the industry for at least 10 years (52%).

The most likely reason for employees working in the East of England region is because their employers sent them there (50% of all workers), this compares to just 36% for the UK as a whole, suggesting a greater reliance on workers from other regions than may be typical in other parts of the UK. Just over two-fifths (43%) of workers in the East of England region state that they work in the region because they grew up there, this compares to 55% across the whole of the UK.

In terms of the regions/nations in which workers' current employer operates, around two-thirds (67%) of workers in the East of England reported that their employer operated within the region they were currently working in (the second lowest figure in the UK after the South East at 65%), while 27% operated in London, 23% in the South East and 16% in the East Midlands.

These figures suggest the workforce in the East is more transitory than might be expected in other regions.

5.4. WORKER ORIGINS

Workers were asked which region/nation they were living in just before they got their first job in construction in the UK. Overall just over half of all construction workers in the East of England were working in the same region/nation in which they were living in when they started their construction career (55%) the same as for the South East and slightly higher than London at 50%. Workers currently based in the East of England, therefore, are among the least likely to have remained in the same region/nation in which they were based for their first construction job.

In addition, only half of the construction workers in the East of England (50%) have remained in the same region/nation as they did their first qualification/training in. This is the lowest proportion of all the regions/nations in the UK, meaning that workers in the East are the most mobile. Among other regions/nations, the figure ranges from 55% of workers in the South East remaining in the area where they took their first qualification to 96% in Northern Ireland.

5.5. TRAVEL TO SITE

Almost two-thirds (63%) of construction workers in the East of England have their current residence in the region, with 37% travelling into the region for work from another region/nation in which their current residence is based. Only the South East had a higher figure for inward travel to work with 42% of workers living outside the region. At the time of the survey 12% of construction workers in the East had travelled into the region from the East Midlands, and a further 12% had travelled in from London.

Workers in the East were asked to indicate the furthest distance they have worked from their permanent or current home in the last 12 months: one in eight construction workers have worked no more than 20 miles away (12%) and a further third have worked between 21 and 50 miles away (34%). This leaves more than half that have worked more than 50 miles away from their permanent home (52%), with more than a quarter that have worked between 51 and 100 miles away (29%). Just under a quarter of construction workers in the East that have worked more than 100 miles away (23%) which is about average for the UK.

5.6. SITE DURATION AND CHANGE

Three in ten construction workers in the East of England (30%) do not expect to work on that site for more than a month, including 7% that only expect to be there for about a week or less. About four in ten anticipated being on site for more than a month, but less than a year (39%), while one in eight expects to stay on that site for a year or longer (13%). In just under one in five cases (18%) workers did not know how much longer they could expect to be on site, indicating that a significant minority of temporary workers are living with a certain amount of uncertainty and insecurity.

Almost three quarters of all construction workers in the East of England are confident that when they finish this job they will get a job that allows them to travel from their permanent home to work on a daily basis (70%).

5.7. SUB-SECTOR AND SECTOR MOBILITY

All workers were asked which of six types of construction work (new housing, housing repair and maintenance, commercial, private industrial, public non-housing, or infrastructure) they have spent periods of at least three months at a time working in.

Overall two fifths of all construction workers have only worked on one project type (40%), compared with a fifth in 2012 (19%), which again suggests a pattern of increased stability in the sector.

5.8. LEAVING THE SECTOR

In order to assess the potential outflow from the sector in the next five years (based on workers' preferences), all workers were asked how likely it is that in five years' time they will still want to be working in construction. Excluding those aged 60 and over (as those over 60 may be assumed to be considering retirement in the next five years): 38% believe they will definitely want to be working in the construction sector, 33% believe it is very likely they will want to be working in the construction sector and 10% believe it is quite likely they will want to be working in the construction sector, a total of 81%. Only 5% think that they will not want to be working in the construction sector in five years' time which is less than in 2012 (18%).

Overall the findings from the Mobility survey indicate that the East of England has one of the most mobile construction workforces in the UK. There is evidence of a high degree of movement between neighbouring regions, (specifically nearly one-quarter of the workforce is from either the East Midlands or London).

5.9. THE IMPACT OF BREXIT

While the issue of leaving the EU is of particular interest to the UK construction industry, it is impossible to offer with any certainty predictions of what may happen or how it will affect the local economy and construction, CITB has published a review that considers some potential implications for UK construction.

[Migration in the UK construction industry and built environment sector](#)

The report, published in July 2018, found that while more employers are feeling the impact of Brexit, less than a third have taken action or plan to do so as it approaches. The report updates CITB's previous 2017 migration research.

5.10. MODERN METHODS OF CONSTRUCTION

In initial consultation, stakeholders enquired about the potential of modern methods of construction, offsite and modular construction to help address the need to build more new housing. While no specific analysis has been undertaken to consider the specific opportunities and limitations associated with the LEP area, CITB has published a report that provides a timely assessment of how the adoption of offsite is changing the skills and training landscape for construction. This report is available on the CITB website.

[Faster, Smarter, More Efficient: Building Skills for Offsite Construction](#)

5.11. BARRIERS AND OPPORTUNITIES FOR PEOPLE ENTERING THE CONSTRUCTION INDUSTRY

Recruiting and retaining a sufficient talent pool has been one of the key challenges for the construction and built environment (CBE) sector for years. The challenge of finding and training the next generation of construction workers is immediate and pressing. CITB's 2017 White Paper considers:

- The value vocational qualifications offer to both individuals and employers in construction.
- What happens to those leaving FE after completing a construction related course, and how many end up working in the sector.
- The reasons people leave construction jobs or apprenticeships early.

[Achievers and leavers: barriers and opportunities for people entering the construction industry](#)

6. THE DIFFERENCE BETWEEN DEMAND AND SUPPLY

6.1. MAIN POINTS

The occupations for which there appears to be the greatest risk of a shortfall between anticipated peak demand and the estimated supply of workers are:

Among skilled trades:

- Painters and decorators
- Scaffolders
- Roofers
- Civil engineering operatives nec*
- Non-construction operatives
- Glaziers
- Specialist building operatives nec*
- Plumbing and HVAC Trades
- Labourers nec*
- Electrical trades and installation
- Wood trades and interior fit-out
- Plant Mechanics /Fitters Floorers
- Plasterers

Among professional and managerial roles:

- Construction Trades Supervisors
- Architects
- Construction Project Managers
- Other construction process managers
- Non-construction professional, technical, IT, and other office-based staff
- Senior, executive, and business process managers
- Other construction professionals and technical staff

Furthermore, there appears to be relatively high demand for most other occupations, including skills relevant to new housing.

Before looking at demand against supply, it should be noted that the Glenigan dataset used to produce the demand view is based on projects that are picked up at various stages of the planning process. As such there will be projects in the pipeline that may not go ahead or be subject to delay; additionally there will be newer projects that will be added to the list. In this respect the view is essentially a snapshot of what potential work could look like.

It is also important to note that the demand calculations are based on data covering the Greater Cambridge Greater Peterborough area, whereas the supply figures are an extrapolation of data for the East and East Midlands regions.

When looking forward, there will be less visibility on future projects for work that requires shorter planning times. Research carried out by CITB on behalf of UKCG showed that the lead time from planning to work starting on site varied by the type of work and value, as illustrated in Figure 12 below. Large scale infrastructure and commercial projects took the longest time whereas lower value work in general, along with work in the industrial sector, was able to get on site quickest.

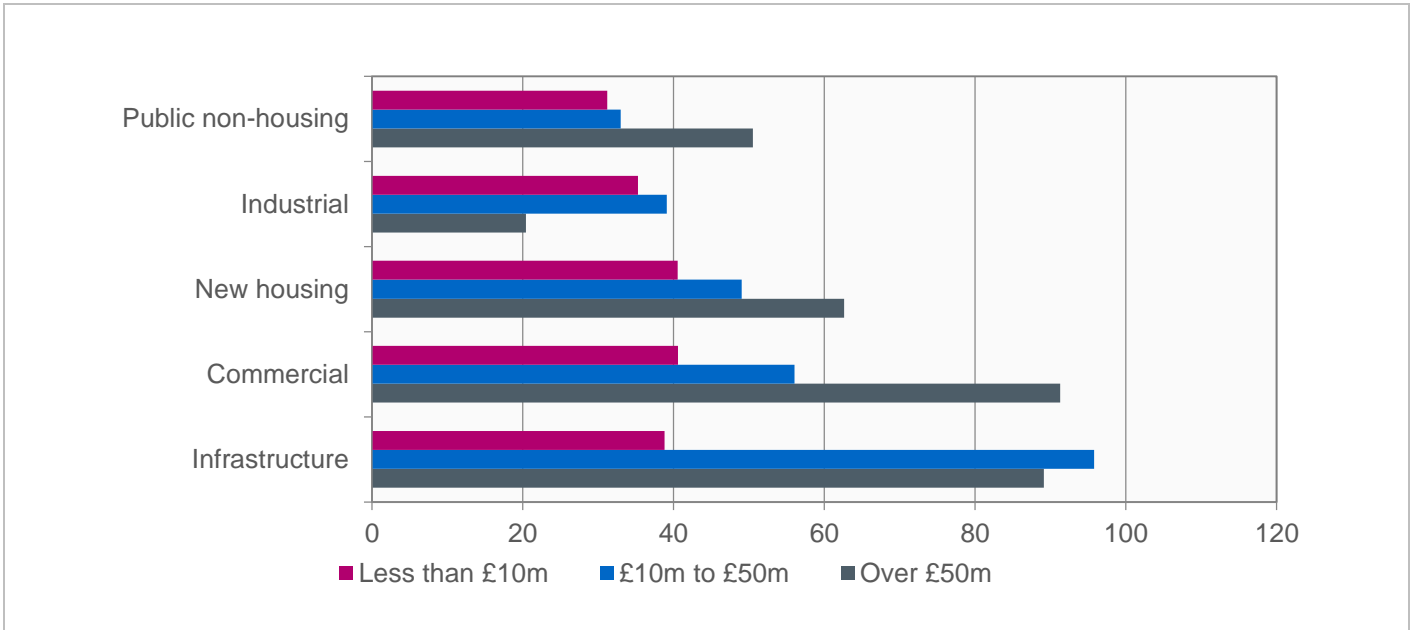


Figure 12: Average number of weeks from planning to work on site, UK 2010-2013 (source UKCG/Glenigan)

There will also be work carried out that does not require planning permission, for example household repair and maintenance (R&M) work, and this can account for a significant share of work in the construction sector. Current estimates for R&M work in the East indicate that it accounts for 26% of yearly construction output.

Also, whilst different types of projects can be categorised by their type of build, such as housing, commercial or industrial, the workforce skills required are less easy to categorise in the same way as some occupations will be able to apply their skills across a number of sectors. For example, evidence from the 2015 Mobility research shows that occupations such as general operatives, bankspersons, roofers and bricklayers are most likely to have only worked on one project type, while painters and decorators, carpenters and joiners, and site managers are more likely to have worked on a wide range of projects.

Occupation	Risk rating: shortfall 2019 demand compared with 2016 employment
Skilled Trades	
Civil engineering operatives nec*	2.77
Painters and decorators	2.31
Non-construction operatives	2.23
Roofers	2.06
Glaziers	2.01
Specialist building operatives nec*	2.01
Scaffolders	1.94
Electrical trades and installation	1.85
Wood trades and interior fit-out	1.75
Labourers nec*	1.75
Plumbing and HVAC Trades	1.74
Plant mechanics/fitters	1.63
Building envelope specialists	1.62
Plant operatives	1.62
Plasterers	1.54
Floorers	1.35
Bricklayers	1.25
Logistics	1.17
Steel erectors/structural fabrication	1.05
Professions and office based roles	
Construction Trades Supervisors	2.03
Other construction process managers	1.72
Construction Project Managers	1.64
Senior, executive, and business process managers	1.63
Non-construction professional, technical, IT, and other office-based staff	1.62
Other construction professionals and technical staff	1.58
Surveyors	1.55
Architects	1.52
Civil engineers	1.09
Total	1.69

Table 11: Occupational breakdown of demand for GCGP area against current employment (Source CITB/WLC)

Table 11 above shows that there are some possible disparities where demand is expected to outstrip the current estimates for employment available locally. These occupations show high relative gap in comparison with other occupations.

In Table 11 those occupations highlighted:

- **RED** – [Top quartile] are at high risk of an immediate shortfall of workers and are worthy of urgent consideration for action to increase numbers of skilled workers.
- **AMBER RED** – [Second quartile] appear to be at risk of a shortfall and should be reviewed to determine where opportunities for further training and development exist
- **AMBER** – [Third quartile] still show some risk of a shortfall but should be monitored and tested to compare with local qualitative opinions to assess whether greater priority should be given to address problems.
- **BLUE** – [Bottom quartile] appear to be at relatively low risk compared with other occupations. This does not mean changes in construction demand, training provision or the movement of workers will not change this status and so monitoring is recommended. There is also known demand for some of these occupations on a national level that may have the effect of drawing workers away from the area. Surveyors and civil engineers in particular fall into this category.

The gap analysis compares the number of workers calculated as being required to meet the peak construction demand (as described in the demand section of this report) with the number of workers estimated as being available in the GCGP area (as described in the supply section of the report). This gives an indication as to the comparative risk of a shortfall between construction occupations.

While some of these occupations are construction specific, others have cross-sector implications.

6.1.1. Construction specific occupations

Professionally qualified occupations tend to require degree qualifications and several years of education and training before becoming qualified plus years more to gain experience. If new candidates are to be encouraged to join the professions, it is likely that encouragement is required some years before they start training.

It is therefore highly likely that the short-term demand increase identified would require workers to be drawn into the area from the wider region and beyond.

It should also be noted that for some professions workers often have an office location away from the site location and travel between them. And for some, there is anecdotal evidence to suggest that demand is met by provision based in other centres of population.

6.1.2. Cross-sector occupations

As skills in these occupations can be used in other sectors, the degree to which demand can be met will be influenced by factors other than construction demand.

Logistics and plant operatives in particular work across several sectors and so demand could be addressed by providing more attractive employment and training options than other sectors. When compared to other occupational groups it is also lower in actual numbers which magnifies percentage changes.

6.2. GAP ANALYSIS TRAINING NEEDS

Looking at the future demand against current competence based training, there are two aspects:

- Is there training in the areas of potential demand?
- Is there the volume of training required across the spread of occupations?

Taking the first of these, 'is there the training in the areas of potential demand?'

The demand analysis identifies Wood trades and interior fit-out, Electrical trades and installation, Plumbing and HVAC Trades as the top three in demand.

Training for manual occupations, as measured by learner aims, has declined in the GCGP area and the wider East of England, meaning that there is likely to be a need, in the short-term at least, to rely on workers from outside the area to meet demand.

Demand for Non-construction professional, technical, IT, and other office-based staff would typically be met from graduate level recruitment, which would not be restricted to supply from within the Greater Cambridge Greater Peterborough area.

The second question "is there the volume of training required across the spread of occupations?" is possibly mixed in response. There would appear to be:

- Provision for training across the range of occupations;
- A core of providers who deliver the majority of training;
- Good provision of competence qualifications for certain occupations, most notably Electrical trades and installation, Glaziers, Civil engineering operatives nec*, Bricklayers, Roofers, Building envelope specialists, Scaffolders, Plasterers and dry liners, Plant mechanics/fitters. However:
- There are occupations, such as, Wood trades and interior fit-out, Plumbing and HVAC Trades, Plant operatives, Specialist building operatives nec*, Painters and decorators, Floorers appears to be slightly low.

Notably feedback received from employers across the locality indicated that recruiting senior roles including Site Managers, Project Managers and people with good design and planning skills remains an issue and overall the general calibre of new recruits (including behaviours) is an issue across some supply chains.

7. CONCLUSIONS AND RECOMMENDATIONS

The aim of the Greater Cambridge Greater Peterborough Combined Authority should be to address the immediate and long term challenges of the construction industry in its area. This should be based on the evidence presented in this report as well as other forms of information that it may have access to. In the case of the GCGP area there appears to be significant gaps in a number of occupations as well as a declining training provision in a number of local authorities. If these are not addressed, they could have long term implications on the volume of workforce available to work on new construction projects in the GCGP area. The Combined Authority should target balancing the supply of construction workers and skills against future demand. It should also ensure that a well-qualified workforce is in place which is likely to be assisted by the Combined Authority encouraging collaboration between influential local stakeholders. Positive progress is likely to be the result of a succession of incremental and interlinked actions undertaken by organisations working towards common goals.

There is strong evidence to suggest that the Greater Cambridge Greater Peterborough area will suffer a shortage of most critical construction occupations. While these may be drawn in from surrounding areas, the risk of inadequate local skills is that construction may be delayed or increase in price, inhibiting the achievement of local social and economic goals.

Based on the evidence presented in this report, below are six recommendations which are discussed in further detail in the following section:

1. Develop a Construction Skills Action Plan
2. Promote the construction sector
3. Collaborate with external stakeholders
4. Investigate barriers to and within the construction industry
5. Manage and access approaches to Procurement
6. Maintain the evidence base

7.1. DEVELOP A CONSTRUCTION SKILLS ACTION PLAN

Conclusion:

The report outlines and highlights the potential risk for skill shortages in the GCGP area, which if not managed, could become a significant obstacle to the short and long term growth of the GCGP area. The Combined Authority includes two major centres; Cambridge and Peterborough. As a result, demand is particularly high in the GCGP area. Projects could suffer delays and cost increases if there is not a construction skills plan in place which seeks to address shortages that may hinder developments essential to the strength of the local economy. According to the CSN, the East of England is expected to grow in term of construction output by an average annual rate of 1.3%, on par with the UK, however the employment is only expected to increase by 0.2% over the same period (below the UK rate of 0.5%). This further highlights the need for a construction skills plan for the GCGP area.

Recommendations:

- a) The Combined Authority is in a key position of influence in order to develop a construction skills action plan in collaboration with interested external stakeholders and other interested parties in construction. A construction skills plan should be developed and actioned by the Combined Authority with the help and coordination of external stakeholders. This should include but not be limited to: Further Education colleges, High Education institution, construction businesses, CITB and developers. A collaborative programme, targeted at addressing occupations highlight as 'at risk' would be beneficial and would require underpinning investment.
- b) As outlined in the executive summary, the construction industry is an incredibly important industry; not only in its own right but also a huge facilitator and enabler to other industries and sectors. Whilst it is correct that construction projects within the GCGP area have completed over the last year, attention needs to be given to the time frame of the projects. The time frame taken to complete the project relative to the time frame scheduled may give an indication of any skills gaps that have developed over time. Delays in construction projects may suggest that businesses may be suffering from recruitment difficulties or that retaining individuals with the correct skill set required, has become increasingly difficult. This is extremely important for the area because shortages and delays produce inefficiencies and lower overall productivity.
- c) The potential for further workforce shortages to occur is probably greater than the contrary and it is likely that BREXIT will mean that the Combined Authority will need to work with stakeholders to focus on recruiting a largely UK-based workforce in the future. Modern building methods should also be investigated, in order to solve or alleviate the housing crisis. The Combined Authority should investigate whether modular building can become an attribute to the GCGP area; improving productivity and efficiency in the sector. This may not solve the problem of high skills gaps however it could contribute to reducing the dependency on traditional occupations in the GCGP area.

7.2. PROMOTE THE CONSTRUCTION SECTOR

Conclusion:

There is evidence to suggest that the number of individuals attracted to the construction sector has decreased over the last five years (FE numbers endorse this too). Anecdotal evidence suggests that the construction industry is sometimes associated with negative and inaccurate stereotypes. This means that a lot of individuals may have preconceived ideas about working in the field, making it difficult to attract talented individuals into the industry. Promoting the construction sector with the GCGP will act as a useful aide in helping to combat this issue. With such a high level of mobility in the East of England, where the majority of local authorities in the GCGP sit, the Combined Authority will need to work particularly hard in this area in order to attract and retain individuals that are presently working within the area. After the South East, the East of England is the area with the least amount of workers from the area working in the area at 67%. To put this into perspective Northern Ireland is the highest at 99%.

Recommendations:

- a) The number of starts in construction courses in the GCGP area has fallen over the years and there have been falls in apprenticeships in some local authorities. The Combined Authority should endeavour to reverse this trend. The promotion of the construction industry needs to start in primary education as many students arriving at secondary school have already formed opinions about different sectors and may not see the construction industry as a viable industry. Being aware of the possibility of working in the construction sector from a young age could help initiate interest and form positive views of the sector; exposing young people to the plethora of opportunities that exist. If students can be pointed in the right direction, The Go Construct website (www.goconstruct.org) details and outlines the occupations and career pathways that are available. The construction industry provides many occupations for all levels of competency and talents and this message needs to be filtered through to students pre-college and university in order to increase the demand of courses within the GCGP area.
- b) There are a number of groups that are under-represented within construction including females and ethnic minorities. Construction has an incredibly low number of females and external evidence has shown that companies are improved with increased diversity in the organisation. There may also be pools of potential recruits that may require additional provision to help them enter the construction industry but where there is a potentially high value of their doing so – for example ex-offenders. The Combined Authority should investigate the possibility of working with prisons and charities in order to recruit and train those who may need to be re-habilitated into society. The main idea is that a reduction in unemployed individuals within the GCGP area would improve the local economy. Under-represented groups tend to be individuals with a higher risk of long term unemployment according to a 2013 OECD report. Therefore by employing more people in this category, the risk to higher levels of structural employment could be lowered; overall contributing positively to the socio-economic environment. As a result it is essential to encourage and promote the construction sector to these under-represented groups, not only through the use of advertising but also by involving existing construction workers in under-represented categories to promote the sector that they work in.
- c) Another important section of society is mature skilled professionals. Encouraging more mature audiences to move into construction careers may be a vital way to reduce the skills shortages in the sector. This might include people with relevant transferable skills (e.g. from manufacturing or ex-military) or those where there is a significant social gain by ensuring they are in valuable employment.

7.3. COLLABORATION WITH EXTERNAL STAKEHOLDERS

Conclusion:

There are a number of stakeholders and potential stakeholders that the Combined Authority should collaborate with in order to reduce the risk of skill gaps in the construction sector within the GCGP area. These include universities, primary and secondary schools, housing associations, developers, training colleges and construction businesses. The Greater Cambridge Greater Peterborough area spans two regions; East of England and East Midlands. The two regions are distinct and present unique opportunities for collaboration with neighbouring LEPs or Combined Authorities. The Combined Authority is in a unique position to bring about greater collaboration with those interested in construction.

Recommendations:

- a) The evidence in this report concludes that skill gaps will occur in current and future years. This will affect a number of occupations in both manual and non-manual categories. The Combined Authority should seek to engage and collaborate with neighbouring LEPs and Combined Authorities in order to understand the dynamics in terms of labour shortages. It may be able to share resources and utilise evidence that neighbouring local government institutions have carried out. This will enable the Combined Authority to be able to evaluate its current shortages in context of a wider regional context and create and ensure collaborative holistic plans are built. The Combined Authority needs to ensure that shortages and excesses in the supply are communicated to neighbouring combined authorities/LEPs in order for gaps to be effectively evaluated and managed.
- b) The UK construction industry is made up of a high self-employment percentage. The proportion of micro businesses (0-9 employees) in the construction sector is considerable in the UK; with this trend also extending both to the GCGP area and to the East of England. This means it can be an extremely fragmented industry which can be hard to reach and disseminate information to. As a consequence, the Combined Authority would benefit from trying to collaborate with the smaller businesses in order to capture the variety that exists within the construction sector, this includes supporting Apprenticeship programmes across SME's too. The Combined Authority in collaboration with CITB should seek to influence and change the current culture around training and skills in businesses in order to increase the overall volume of training in the area. By sharing this evidence and working with businesses the Combined Authority will be better placed to help solve problems that may exist for businesses operating within GCGP area. The aim is to help combat issues and improve the overall quality and productivity of the construction industry.
- c) The involvement of, and collaboration with, the academic institution is essential to the construction sector. Particularly as the Combined Authority engages in forward planning. It is important for the Combined Authority to understand trends and statistics among institutions so that it can target resources towards areas that need to be enhanced and developed. This includes addressing barriers and issues associated with retaining a good calibre of tutors at FE level. The education division is central to the development of a highly skilled workforce. It is therefore imperative that the Combined Authority work with Higher Education colleges and universities in order to improve the skills set within its area. Greater collaboration should be encouraged between colleges.

7.4. INVESTIGATE BARRIERS TO AND WITHIN THE CONSTRUCTION INDUSTRY

Conclusion:

The report states that the UK construction industry is primarily made up of businesses that are described as either micro or small. The GCGP area is not an exception; the numbers of smaller and micro sized companies have continued to increase over the last five years. This suggests the industry may become increasingly fragmented and harder to reach if action is not taken to reduce barriers to business growth and development within the construction industry. Another important barrier may exist around the level of qualification attainment in the industry. The numbers of people obtaining construction qualifications has fallen over the last five years implying that either there isn't enough demand from individuals or businesses or rather that the supply of trainers available has deteriorated over time. It is true that overall the number of apprenticeships has increased over time within the GCGP area however this number still needs to be improved in order to ensure there is adequate replacement of a skilled workforce.

Recommendations:

- a) The Combined Authority may need to highlight the importance of business development and progression to construction companies, encouraging them to expand and grow within the industry. Less fragmentation in the industry can aide greater collaboration amongst construction businesses which should make training and development more accessible and viable; potentially helping to increase the number of skilled workforce. Implementing this this action should see the skills gap reduced over time.
- b) It is important for the Combined Authority to investigate the reasons for the significant fall in the number of qualifications achieved over the past five years. This should be achieved by working with providers such as Cambridge Regional College, who provide the largest number of courses, to garner whether the availability of trainers in the industry may be an issue or whether the demand for courses is low or possibly a combination. If barriers do exist to qualification attainment, actions should be taken in order to encourage individuals into the training sphere; particularly ex-manual construction workers who have retired from the manual side of the industry or who are unable to work on manual projects.
- c) The Combined Authority should also understand whether employees or apprentices have barriers to entry and development in the industry. Consideration to both economic or transport inhibitors need to be given. There may be issues with transport links which could disrupt or even prevent individuals from being able to get to site locations in order to carry out their jobs or work experience. Transport to and from colleges may cause some issues for the students depending on the local transport infrastructure. The existing workforce is highly home grown which means that the workforce appears to be highly stable and will most likely stay in the region if trained. This means that training individuals in the sector could remain of high value for the region and the Combined Authority in the future.
- d) An early action plan should assess if employers are facing specific skills shortages or skills wage inflation and what short-term interventions can be activated to address them. If issues are identified, consideration should be given to working with CITB and partners to pursue funding that can be utilised to support delivery of new training intervention.

7.5. USE PROCUREMENT AND PLANNING REGULATION TO ENABLE SKILLS DEVELOPMENT

Conclusion:

Construction is delivered through construction suppliers, often funded by private developers as well as by local authorities and regulated by local planning authorities. These organisations are better placed to prepare for the future if they have certainty on which to base their plans.

Recommendations:

- a) The potential exists through smarter approaches to procurement to encourage those bidding for construction and infrastructure contracts to be mandated to include provision for co-ordinated recruitment, training, apprenticeships and outreach within their responses to tender. Provision would also be required to hold contractors to account for commitments made. Such an approach could be co-ordinated through local authorities and be a requirement of planning applications and local authority and public sector contracts.
- b) It may also be possible to encourage major contracting businesses to follow such an approach in support of the Region's skills and economic development. Early engagement with employers to discuss any such approach is recommended.
- c) Similarly procurement of major contracts, or conditions of planning consent could mandate the sharing of supply and sub-contracting through a locally managed portal available to businesses based within the area.

7.6. MAINTAIN THE EVIDENCE BASE

Utilise local qualitative knowledge and experience to inform the findings of this report. And use other sources of data available to help inform decision making. CITB publishes a range of research of relevance to the construction industry but other relevant information is also regularly published.

Regularly update the evidence base that supports decision making as circumstances change and to demonstrate construction pipeline opportunities. Ensuring that pipeline visibility assists the local industry in reducing risks such as economic instability or maintaining sustainable employment. The demand forecasts produced using data from Glenigan are the result of a snapshot at a moment in time and so it is wise to update demand at regular intervals according to the need and capability.

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V1	11.06.18	Edit
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CITB Analysis

Construction skills gap analysis for the Greater Cambridge & Greater Peterborough



Appendices to the Construction skills gap analysis for the Greater Cambridge & Greater Peterborough area

June 2018



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Appendix A. DEMAND ANALYSIS METHODOLOGY

Introduction

The Construction Skills Network (CSN) provides labour market intelligence for the construction industry. Developed by Experian on behalf of CITB it forecasts labour demand in each of 12 UK regions and provides forecasts of how the industry will change year on year. It is not designed however to predict labour demand at a sub-regional level. For this purpose, we use our prize-winning Labour Forecasting Tool (LFT) developed on behalf of CITB. Labour demand is calculated by converting the volume of construction activity forecast to take place in any geographical region into forecast labour demand using labour coefficients (the number of person years required to produce £1m of output). For the sake of consistency with ONS terminology the 'volume of activity' is referred to as 'output' throughout this report. The following sections describe:

- the sources of data we use;
- how the output is calculated;
- how we deal with the absence of comprehensive data that is the typical situation beyond the first year or two of our analysis;
- how we reconcile any differences between the results produced by the LFT and those produced by the CSN;
- the steps we take to deal with any shortcomings in the sources of data; and
- how the LFT converts output into labour demand.

Calculating construction output

Data sources

There are two principal sources of data: the Glenigan database and the National Infrastructure and Construction Pipeline (NICP).

Glenigan

The original purpose of the Glenigan database is to allow contractors to identify leads and to carry out construction market analysis. It is updated every quarter to provide details of planning applications from local authorities supplemented with additional project-specific data. Of particular relevance to this report, it provides a description of each project, its name, location, value, and in most cases, projected start and end dates. It contains many tens of thousands of projects. The Glenigan pipeline does not identify every single project in an area: projects which are small (typically but not exclusively those less than £250,000 in value), and most that involve repair and maintenance are not included.

We have used the latest available cut of Glenigan data including all the relevant projects which started before 2017 but excluding those which are already complete. We have included in our analysis only those projects shown to be at the following planning stages because there is a reasonable probability that these projects will be realised in practice.

- Planning not required
- Detail plans granted
- Reserved matters granted
- Application for reserved matters
- Plans approved on appeal
- Listed building consent

The values of some infrastructure projects given in the Glenigan database are the total value of construction and engineering works. In these cases, since the scope of this study is limited to the construction sector, an estimate of the engineering value has been calculated and subtracted from the total value. This provides what we have termed the construction value. The percentages applied to the total value of each infrastructure project type to derive the construction value are shown in Appendix Table 1. The construction/engineering proportions have been validated through work we have undertaken for other clients and have been used in the production of Infrastructure UK's National Infrastructure Plan for Skills and the Construction Skills Network forecasts.

An initial review of the projects in the pipeline is carried out to ensure that only projects which have (a) a defined value and (b) defined start and end dates, are considered in the analysis, and that no projects are duplicated. For example "major leads" and "frameworks" may include smaller projects that are separately identified in the database.

Because of the size of the database, it is impossible to review the details of every project. Instead, we identify the small number of projects that represent the greatest value, the so-called significant projects. To do this, we use the Mean Value Theorem developed at the University of Dundee which states that maximum information from any set of data is obtained simply by considering the data whose value is greater than the average. This is a version of the Pareto rule which suggests that 80% of the value in a data set is contained within the 20% of items whose value is the greatest. The significant projects are then thoroughly inspected to make sure that the information reported in the Glenigan database is consistent and accurate as far as can be ascertained. Any anomalies are resolved, if necessary by returning to the source of the data. Since this process typically picks up the projects whose value represents 80% of the total, the scope for any errors in the remaining data to have a significant impact is severely limited.

Appendix Table 1: Proportion of total value related to construction

Infrastructure type	Sub-type	Construction value as a proportion of total value
Flooding	Flooding	90%
Transport	Bridges	100%
	Road tunnel	100%
	Roads	100%
	Air traffic control	100%
	Airports	100%
	Ports	90%
	Stations (underground/Network Rail)	80%
	Mixed rail	55%
	Electrification	35%
	Underground/DLR (not incl. stations)	35%
	Rail maintenance	10%
	Trams	55%
	Contactless ticketing	20%
	Water	Water/wastewater treatment works
Communications	Broadband/Digital infrastructure	20%
Energy	Photovoltaics	80%
	Generation (biomass)	50%
	Generation (energy from Waste)	50%
	Generation (nuclear)	50%
	Undefined electricity generation	40%
	Generation (fossil fuel)	25%
	Generation (renewables - offshore)	20%
	Generation (renewables - onshore)	10%
	Gas Transmission/distribution	30%
	Electricity transmission/distribution	25%
	Interconnectors	20%
	Nuclear decommissioning	60%
	Smart meters	0%
	Oil and gas	10%
Mining	Mining	80%
General infrastructure	General infrastructure	100%

For the significant projects, the project descriptions in the database are assigned the most appropriate project type to be used when the data is input to the LFT (each type is driven by a different underlying model). Cases where a project consists of more than one type are broken down into multiple forecasts which are assigned specific project types to more closely predict the labour demand. This takes account of the different types of work which may exist within a single project, e.g. mixed developments comprising residential, commercial and industrial buildings. For the non-significant projects, the default project type defined in the Glenigan pipeline is applied.

In order to maintain consistency with the CSN we have limited our forecast to the same time period as the most recently published CSN forecast.

NICP data

The Infrastructure and Projects Authority (formerly Infrastructure UK and Major Projects Authority) compiles a pipeline of UK infrastructure and construction projects and the associated annual public and private investment.

We examine the NICP data to identify infrastructure projects or programmes of work taking place in the region under consideration that are not included in the Glenigan database. The construction cost is calculated from the total cost reported in the NICP using the percentages in Appendix Table 1. Projects in the Glenigan dataset and the NICP are combined (ensuring that there is no double counting) to create a pipeline of 'known' projects for the area. We have only considered those projects which are specifically allocated to the region under consideration in the NICP (i.e. projects at a national level have not been considered).

The pipeline includes both construction and infrastructure projects but for the purposes of this analysis we have included only projects which are clearly defined specific projects rather than regional programmes of work. This reduces the risk of double counting in the Glenigan data.

CSN data

The CSN model produced by Experian also uses Glenigan as a major source of data relating to the volume of construction activity in the UK. Experian supplement the Glenigan data with market intelligence collected by a variety of means including a series of 'Observatories' held every six months in each region, at which representatives of the industry are invited to comment on the validity of Experian's data and findings. In Experian's annual CSN report, their estimate of the output in each of the following sectors is published:

- Public housing
- Private housing
- Infrastructure
- Public non-housing
- Industrial
- Commercial
- Housing repair and maintenance
- Non-housing repair and maintenance

Aligning the Glenigan pipeline with CSN output

The following process is undertaken to ensure that the value of work in the Glenigan pipeline is aligned with output as measured by the CSN.

1. Considering the government region within which the Combined Authority lies, identify only the new build in the known projects by removing all repair and maintenance projects.
2. Compare the output identified in the known projects as new build at the regional level with the CSN new build at the regional level sector by sector e.g. residential, non-residential, infrastructure etc.
3. If in any sector the known new-build regional output for the peak year is more or less than that forecast by the CSN for the same year then the value of each new build known project is factored by the following ratio:

$$\frac{\text{Value of CSN new build at regional level for given sector}}{\text{Value of known new build projects at regional level for given sector}}$$

The outputs calculated in this way are referred to as 'factored new build outputs'

This process takes account of both projects (typically less than £250k in value) not included in the known projects and those whose value or probability of realisation is over-optimistic.

4. To take account of housing repair and maintenance (R&M) at the Combined Authority level, it is assumed that the proportion of the total output represented by housing R&M is the same at the Combined Authority level as it is at the regional level in the CSN. The Glenigan new build factored housing output is therefore multiplied by the following ratio:

$$\frac{\text{Value of CSN housing R\&M at regional level}}{\text{Value of CSN new build housing at regional level}}$$

to derive the output in housing R&M to be added to the factored new build output

5. The non-housing R&M to be added to the factored new build non-housing output is calculated in a similar way.

Dealing with the 'cliff edge'

As the time horizon extends there is less clarity on what is planned. As a result, the number of known projects declines the further into the future we look. This apparently declining workload is highly unlikely to reflect the total amount of work that will take place in the future. It is almost certain that there will be additional projects that come on stream which are yet to be identified. To overcome this 'cliff edge' effect we assume, based on an analysis of historical data, that the future workforce is approximately equal to the peak. It should be noted that the peak labour demand refers to the current "snapshot" of the scheduled construction spend. It is prudent to expect that, should the investment in future years follow the same pattern, the peak labour demand figures are likely to be roughly similar assuming the mix of projects remains consistent. The peak has, therefore, been projected forwards and backcast to create a more likely scenario of the ongoing workforce. The employment growth rate is based on the CSN employment forecast for the whole region under consideration.

A consequence of this approach is the implicit assumption that the proportion of people in each occupation in the additional projects remain unchanged year on year.

Calculating total labour demand

Our Labour Forecasting Tool is used to determine the labour demand generated by the construction outputs in the peak year. The LFT can determine the labour demand generated by a pipeline of construction projects given only the project types, their start and end dates and their locations. It quantifies the month-by-month demand in each of the 28 occupational groups shown in Appendix B. To do this, it uses labour coefficients (person years to produce £1m of output) derived from historical ONS data. The labour coefficients are updated annually as new data becomes available, and indexed to take account of different locations and changes in prices.

There are different labour coefficients for each occupation and for each of the following project types:

- residential
- non-residential
- infrastructure
- residential R&M
- non-residential R&M

Infrastructure projects can be broken down into the types shown in Appendix Table 1.

Appendix B. OCCUPATIONAL DEFINITIONS

Reference is made in this report to a range of occupational aggregates for construction occupations. This appendix contains details of the 166 individual occupations which are aggregated into 28 occupational aggregates.

Appendix Table 2: Occupation definitions

Occupations included within construction occupational aggregates (Four-digit codes refer to Office for National Statistics Standard Occupational Classification Codes).	
1 Senior, executive, and business process managers⁴	
(1115) Chief executives and senior officials (1131) Financial managers and directors (1132) Marketing and sales directors (1133) Purchasing managers and directors (1135) Human resource managers and directors (1251) Property, housing and estate managers (1136) Information technology and telecommunications directors (2150) Research and development managers	(1162) Managers and directors in storage and warehousing (1259) Managers and proprietors in other services nec (1139) Functional managers and directors nec (2133) IT specialist managers (2134) IT project and programme managers (3538) Financial accounts managers (3545) Sales accounts and business development managers
2 Construction project managers⁴	
(2436) Construction project managers and related professionals	
3 Other construction process managers⁴	
(1121) Production managers and directors in manufacturing (1122) Production managers and directors in construction (1161) Managers and directors in transport and distribution (1255) Waste disposal and environmental services managers	(3567) Health and safety officers (3550) Conservation and environmental associate professionals
4 Non-construction professional, technical, IT, and other office-based staff (excl. managers)⁴	
(3131) IT operations technicians (3132) IT user support technicians (3534) Finance and investment analysts and advisers (3535) Taxation experts (3537) Financial and accounting technicians (3563) Vocational and industrial trainers and instructors (3539) Business and related associate professionals nec (3520) Legal associate professionals (3565) Inspectors of standards and regulations (2136) Programmers and software development professionals (2139) Information technology and telecommunications professionals nec (3544) Estate agents and auctioneers (2413) Solicitors (2419) Legal professionals nec (2421) Chartered and certified accountants (2424) Business and financial project management professionals (2423) Management consultants and business analysts (4216) Receptionists (4217) Typists and related keyboard occupations (3542) Business sales executives (4122) Book-keepers, payroll managers and wages clerks (4131) Records clerks and assistants (4133) Stock control clerks and assistants (7213) Telephonists (7214) Communication operators (4215) Personal assistants and other secretaries (7111) Sales and retail assistants (7113) Telephone salespersons	(3541) Buyers and procurement officers (3562) Human resources and industrial relations officers (4121) Credit controllers (4214) Company secretaries (7129) Sales related occupations nec (7211) Call and contact centre occupations (7219) Customer service occupations nec (9219) Elementary administration occupations nec (2111) Chemical scientists (2112) Biological scientists and biochemists (2113) Physical scientists (3111) Laboratory technicians (3421) Graphic designers (2463) Environmental health professionals (2135) IT business analysts, architects and systems designers (2141) Conservation professionals (2142) Environment professionals (2425) Actuaries, economists and statisticians (2426) Business and related research professionals (4124) Finance officers (4129) Financial administrative occupations nec (4138) Human resources administrative occupations (4151) Sales administrators (4159) Other administrative occupations nec (4162) Office supervisors (7130) Sales supervisors (7220) Customer service managers and supervisors (4161) Office managers

⁴ Managerial, professional & office based staff

5 Construction trades supervisors⁵	
(5250) Skilled metal, electrical and electronic trades supervisors	
(5330) Construction and building trades supervisors	
6 Wood trades and interior fit-out⁵	
(5315) Carpenters and joiners	(5442) Furniture makers and other craft woodworkers
(8121) Paper and wood machine operatives	(5319) Construction and building trades nec (25%)
7 Bricklayers⁵	
(5312) Bricklayers and masons	
8 Building envelope specialists⁵	
(5319) Construction and building trades nec (50%)	
9 Painters and decorators⁵	
(5323) Painters and decorators	(5319) Construction and building trades nec (5%)
10 Plasterers⁵	
(5321) Plasterers	
11 Roofers⁵	
(5313) Roofers, roof tilers and slaters	
12 Floorers⁵	
(5322) Floorers and wall tillers	
13 Glaziers⁵	
(5316) Glaziers, window fabricators and fitters	(5319) Construction and building trades nec (5%)
14 Specialist building operatives not elsewhere classified (nec)⁵	
(8149) Construction operatives nec (100%)	(9132) Industrial cleaning process occupations
(5319) Construction and building trades nec (5%)	(5449) Other skilled trades nec
15 Scaffolders⁵	
(8141) Scaffolders, staggers and riggers	
16 Plant operatives⁵	
(8221) Crane drivers	(8222) Fork-lift truck drivers
(8129) Plant and machine operatives nec	(8229) Mobile machine drivers and operatives nec
17 Plant mechanics/fitters⁵	
(5223) Metal working production and maintenance fitters	(9139) Elementary process plant occupations nec
(5224) Precision instrument makers and repairers	(5222) Tool makers, tool fitters and markers-out
(5231) Vehicle technicians, mechanics and electricians	(5232) Vehicle body builders and repairers
18 Steel erectors/structural fabrication⁵	
(5311) Steel erectors	(5319) Construction and building trades nec (5%)
(5215) Welding trades	(5211) Smiths and forge workers
(5214) Metal plate workers, and riveters	(5221) Metal machining setters and setter-operators
19 Labourers nec⁵	
(9120) Elementary construction occupations (100%)	
20 Electrical trades and installation⁵	
(5241) Electricians and electrical fitters	(5242) Telecommunications engineers
(5249) Electrical and electronic trades nec	
21 Plumbing and heating, ventilation, and air conditioning trades⁵	
(5314) Plumbers and heating and ventilating engineers	(5319) Construction and building trades nec (5%)
(5216) Pipe fitters	(5225) Air-conditioning and refrigeration engineers
22 Logistics⁵	
(8211) Large goods vehicle drivers	(3541) Buyers and purchasing officers (50%)
(8212) Van drivers	(4134) Transport and distribution clerks and assistants
(9260) Elementary storage occupations	

⁵ Skilled trades & operatives

23 Civil engineering operatives not elsewhere classified (nec)⁵	
(8142) Road construction operatives	(8123) Quarry workers and related operatives
(8143) Rail construction and maintenance operatives	
24 Non–construction operatives⁵	
(8117) Metal making and treating process operatives	(9249) Elementary security occupations nec
(8119) Process operatives nec	(9233) Cleaners and domestics
(8125) Metal working machine operatives	(9232) Street cleaners
(8126) Water and sewerage plant operatives	(5113) Gardeners and landscape gardeners
(8132) Assemblers (vehicles and metal goods)	(6232) Caretakers
(8133) Routine inspectors and testers	(9241) Security guards and related occupations
(8139) Assemblers and routine operatives nec	(3319) Protective service associate professionals nec
25 Civil engineers⁴	
(2121) Civil engineers	
26 Other construction professionals and technical staff⁴	
(2122) Mechanical engineers	(3119) Science, engineering and production technicians nec
(2123) Electrical engineers	(3121) Architectural and town planning technicians
(2126) Design and development engineers	(3122) Draughtspersons
(2127) Production and process engineers	(3115) Quality assurance technicians
(2461) Quality control and planning engineers	(2432) Town planning officers
(2129) Engineering professionals nec	(2124) Electronics engineers
(3112) Electrical and electronics technicians	(2435) Chartered architectural technologists
(3113) Engineering technicians	(3531) Estimators, valuers and assessors
(3114) Building and civil engineering technicians	(3116) Planning, process and production technicians
27 Architects⁴	
(2431) Architects	
28 Surveyors⁴	
(2433) Quantity surveyors	
(2434) Chartered surveyors	

Appendix C. GLENIGAN PROJECTS REMOVED FROM GREATER CAMBRIDGE & GREATER PETERBOROUGH

This appendix contains a list of all the Glenigan projects removed from the analysis, stating the reason for their exclusion.

Appendix Table 3: Removed Glenigan projects from Greater Cambridge & Greater Peterborough

	Heading	Local authority	Value (£m)	Start date	End date	Reason for omission
1	Underground Cable Laying Works	St. Edmundsbury	0.3			Missing dates
2	Auction Centre (Extension)	Kings Lynn & West Norfolk	0.3			Missing dates
3	Convenience Store/Petrol Filling Station	St. Edmundsbury	0.3			Missing dates
4	3 Retail Units	Kings Lynn & West Norfolk	0.3			Missing dates
5	Industrial Building	South Cambridgeshire	0.3			Missing dates
6	Apartments (Alteration/Conversion)	North Hertfordshire	0.4			Missing dates
7	Office Building	St. Edmundsbury	0.4			Missing dates
8	Pavilion	St. Edmundsbury	0.4			Missing dates
9	Office (Conversion/Extension)	Fenland	0.4			Missing dates
10	Community Centre (Extension)	Fenland	0.4			Missing dates
11	Cold Store	Kings Lynn & West Norfolk	0.5			Missing dates
12	Petrol Filling Station	Fenland	0.5			Missing dates
13	Health Centre (Extension)	Huntingdon	0.5			Missing dates
14	7 Flats & 2 Take Away	Cambridge	0.5			Missing dates
15	10 Flats (Conversion/Extension)	North Hertfordshire	0.5			Missing dates
16	Flat/Abattoir/Butchery & Cafe(New/Conversion)	South Cambridgeshire	0.5			Missing dates
17	Office Building	Kings Lynn & West Norfolk	0.5			Missing dates
18	Convenience Store (Conversion)	South Cambridgeshire	0.5			Missing dates
19	6 Houses & 1 College (New/Extension)	Cambridge	0.5			Missing dates
20	9 Flats & 1 Public House	Cambridge	0.5			Missing dates
21	General Industrial Building	St. Edmundsbury	0.6			Missing dates
22	Office (Extension/Alterations)	Huntingdon	0.6			Missing dates
23	4 Office Units	East Cambridgeshire	0.6			Missing dates
24	12 Flats	North Hertfordshire	0.6			Missing dates
25	Light Industrial (Extension)	Kings Lynn & West Norfolk	0.6			Missing dates

26	3 Offices (Conversion)	Rutland	0.7			Missing dates
27	14 Flats	Cambridge	0.7			Missing dates
28	Cricket Club House	Fenland	0.7			Missing dates
29	12 Business units	East Cambridgeshire	0.7			Missing dates
30	Car Sales (Extension/Alterations)	Kings Lynn & West Norfolk	0.8			Missing dates
31	Industrial Unit (Extension)	Fenland	0.8			Missing dates
32	Church (Extension)	South Cambridgeshire	0.8			Missing dates
33	Scout Hall	St. Edmundsbury	0.8			Missing dates
34	Industrial Office Building (Extension/Alterations)	Kings Lynn & West Norfolk	0.8			Missing dates
35	18 Flats	Peterborough	0.9			Missing dates
36	11 Houses & 1 Bungalow	St. Edmundsbury	0.9			Missing dates
37	4 Starter Units	Forest Heath	1.0			Missing dates
38	14 Houses	Kings Lynn & West Norfolk	1.0			Missing dates
39	Offices Building	Fenland	1.0			Missing dates
40	11 Flats	Cambridge	1.0			Missing dates
41	Sports Pavilion/Playing Fields	Fenland	1.0			Missing dates
42	Crematorium & Sports Hub (New/Extension)	Huntingdon	1.0			Missing dates
43	2 Cafe & Retail Units (New/Alterations)	Peterborough	1.0			Missing dates
44	21 Flats	North Hertfordshire	1.1			Missing dates
45	Hotel (Extension/Alterations)	Kings Lynn & West Norfolk	1.1			Missing dates
46	13 Houses & 1 Bungalow	Huntingdon	1.1			Missing dates
47	Industrial/Storage & Distribution Unit	St. Edmundsbury	1.1			Missing dates
48	Food Industry	Kings Lynn & West Norfolk	1.2			Missing dates
49	17 Houses	Kings Lynn & West Norfolk	1.3			Missing dates
50	Workshop/MOT Centre	Cambridge	1.4			Missing dates
51	Care Home (Refurbishment/Extension)	East Cambridgeshire	1.5			Missing dates
52	20 Houses	East Cambridgeshire	1.5			Missing dates
53	13 Houses	Uttlesford	1.7			Missing dates
54	Sports Clubhouse (Extension)	St. Edmundsbury	1.7			Missing dates
55	Residential Dementia Home (Extension)	Kings Lynn & West Norfolk	1.9			Missing dates
56	26 Houses	South Cambridgeshire	2.0			Missing dates

57	College (Extension)	North Hertfordshire	2.0			Missing dates
58	Sports Hall	Rutland	2.1			Missing dates
59	30 Houses	Fenland	2.3			Missing dates
60	30 Houses	Kings Lynn & West Norfolk	2.3			Missing dates
61	Care Home (New/Extension)	Peterborough	2.3			Missing dates
62	College Classroom Building (Extension)	Huntingdon	2.4			Missing dates
63	31 Holiday Lodges & 1 Restaurant	Kings Lynn & West Norfolk	2.4			Missing dates
64	Taxiway Link	Uttlesford	2.5			Missing dates
65	51 Flats/Shop/Office/Restaurant/Pub Units	North Hertfordshire	2.6			Missing dates
66	26 Houses/8 Flats & 1 Bungalow	Uttlesford	2.7			Missing dates
67	66 Flats/2 Commercial Units & 1 Gym	South Cambridgeshire	3.5			Missing dates
68	Garden Centre (Extension/Alterations)	South Cambridgeshire	3.7			Missing dates
69	Student Accommodation	Cambridge	4.0			Missing dates
70	60 Houses/Bungalows	St. Edmundsbury	4.5			Missing dates
71	60 Houses	Huntingdon	4.5			Missing dates
72	Innovation Centre	St. Edmundsbury	5.0			Missing dates
73	Solar Photovoltaic Farm	Uttlesford	5.0			Missing dates
74	108 Residential Units	Huntingdon	6.3			Missing dates
75	61 House & 29 Flats	South Cambridgeshire	6.8			Missing dates
76	116 Houses/Flats/Bungalows	Uttlesford	8.7			Missing dates
77	135 Houses	Fenland	8.8			Missing dates
78	105 Houses & 20 Flats	Uttlesford	9.0			Missing dates
79	Dwellings	Huntingdonshire	9.5			Missing dates
80	Road (Improvements)	Peterborough	10.0			Missing dates
81	Residential Development	Huntingdon	10.9			Missing dates
82	Office Building	Cambridge	13.5			Missing dates
83	30 Flats/21 Key Worker Units & 19 Houses	South Cambridgeshire	14.0			Missing dates
84	Veterinary Hospital Development	Rutland	17.4			Missing dates
85	39 Homes & 2 Retail/Takeaway Units	North Hertfordshire	20.0			Missing dates
86	350 Residential Units	Peterborough	26.3			Missing dates
87	University	Cambridge	80.0			Missing dates

88	Hospital Redevelopment	Cambridge	120.0			Missing dates
89	Museum & Visitor Centre (New/Refurb)	South Holland	0.3			Missing dates
90	Offices/Lorry Maintenance/Storage Building	South Kesteven	0.5			Missing dates
91	10 Houses	South Holland	0.8			Missing dates
92	School Canteen & Kitchen Facility (Extension)	South Kesteven	0.9			Missing dates
93	Residential Development	South Holland	1.0			Missing dates
94	Education Centre	South Holland	1.0			Missing dates
95	Residential Development	South Holland	1.2			Missing dates
96	Offices	South Kesteven	1.2			Missing dates
97	31 Residential Units	South Kesteven	2.3			Missing dates
98	42 Houses	South Holland	2.8			Missing dates
99	39 Houses	South Kesteven	2.9			Missing dates
100	43 Houses	South Holland	3.2			Missing dates
101	44 Houses	South Kesteven	3.3			Missing dates
102	Mixed Use Development	South Kesteven	5.0			Missing dates
103	Care Home	South Kesteven	7.2			Missing dates
104	8 Office Buildings	South Kesteven	8.6			Missing dates
105	Business Park	South Kesteven	10.0			Missing dates
106	NHS Framework Contract	St. Edmundsbury	4.7	19/05/2017	22/05/2020	Consultancy
107	Design Consultant Framework	Cambridge	1.0	01/05/2017	30/04/2018	Consultancy
108	Design Framework	Cambridge	50.0	01/08/2016	01/08/2018	Consultancy
109	Asbestos Management	Cambridge	10.0	01/10/2013	01/10/2020	Consultancy
110	Building Consultancy Services	St Edmundsbury	0.6	01/08/2013	01/08/2018	Consultancy
111	Energy Park	Peterborough	450.0	11/06/2018	15/03/2021	In the NICP
112	Water/Wastewater Integrated Main Works Capital Framework	Peterborough	4000.0	01/04/2015	01/04/2030	In the NICP
113	Water (Maintenance)	Peterborough	1000.0	24/11/2014	26/11/2018	In the NICP
114	Delivery of Investment Programme	Peterborough	600.0	01/04/2015	01/04/2030	In the NICP
115	Integrated Metering & Developer Services	Peterborough	600.0	01/04/2015	01/04/2030	In the NICP
116	Wastewater (Repair & Maintenance)	Peterborough	525.0	01/04/2015	01/04/2030	In the NICP
117	Water/Wastewater Small Capital Works	Peterborough	525.0	01/04/2015	01/04/2030	In the NICP
118	Road (Improvements)	Cambridge	1800.0	06/03/2017	12/03/2021	In the NICP
119	Road Improvement Scheme	Cambridge	600.0	07/11/2016	02/11/2020	In the NICP
120	Road Improvement Scheme	Huntingdonshire	292.0	01/12/2016	29/11/2018	In the NICP
121	Pumping Station	South Holland	10.0	31/10/2018	31/12/2019	In the NICP
122	6 Cinema/Restaurant/Office/Community Hall Units	South Kesteven	5.0	09/04/2018	09/10/2019	Duplicate

Appendix D. SIGNIFICANT GLENIGAN PROJECTS IN GREATER CAMBRIDGE & GREATER PETERBOROUGH

This appendix provides a list of all the significant projects analysed. The projects appear in the order they were put into the LFT.

Appendix Table 4: Significant Glenigan projects in Greater Cambridge & Greater Peterborough

	Description	Local authority	Value (£m)	Start date	End date	Project type
1	600 Residential Units & 2 School/Leisure Units	South Cambridgeshire	526.8	01/08/2011	01/08/2021	New housing, Public Non-housing
2	4000 Houses/Flats	South Kesteven	342.9	31/01/2019	31/01/2024	New housing
3	Highway Services Contract	Cambridge	340.0	01/07/2017	03/07/2027	Infrastructure
4	Junction (Improvements)	Fenland	300.0	07/01/2019	07/01/2022	Infrastructure
5	103,000 Houses & Flats	Cambridge	265.8	06/03/2020	06/07/2033	New housing
6	Power Station	Kings Lynn & West Norfolk	240.0	20/03/2017	11/01/2019	Infrastructure
7	Estate Management Framework	Cambridge	220.0	01/08/2016	01/08/2018	Public Non-housing
8	Small/Medium Construction Works Framework	Uttlesford	180.0	05/11/2018	02/11/2026	Infrastructure
9	Roads (Framework)	Cambridge	175.7	01/04/2016	03/04/2020	Infrastructure
10	3703 Residential/Schools/Care Home/Commercial Units	South Kesteven	151.3	31/01/2019	30/04/2020	New housing, Private Industrial, Public Non-housing, Private Commercial, Infrastructure
11	Arrivals Building	Uttlesford	150.0	28/11/2018	07/02/2022	Infrastructure
12	Hangar & Airfield Operating Surfaces	Kings Lynn & West Norfolk	135.0	26/06/2017	26/07/2019	Infrastructure
13	Residential/Commercial Development	South Kesteven	132.8	03/06/2019	26/09/2022	New housing, Public Non-housing, Private Commercial
14	University (Extension)	Cambridge	132.0	07/01/2019	07/02/2022	Public Non-housing
15	Design & Build Contractor Framework	Cambridge	117.3	30/06/2017	02/07/2021	Public Non-housing
16	358 Flats & 4 Retail/Leisure Units	Peterborough	113.4	10/04/2017	10/09/2019	New housing, Private Commercial
17	2254 Homes	South Holland	106.7	04/07/2016	01/07/2019	New housing, Public Non-housing
18	Designer Outlet Village	South Kesteven	100.0	31/10/2018	31/05/2019	Private Commercial
19	Power Station (Expansion)	South Holland	100.0	01/07/2020	28/06/2023	Infrastructure
20	Residential Units/Care Home/School/Local Centre	St. Edmundsbury	98.6	09/10/2017	07/05/2021	New housing, Public Non-housing
21	Commercial & Residential Development	South Kesteven	98.2	07/05/2018	07/05/2021	Private Commercial, New housing
22	125 Houses & 115 Flats	South Cambridgeshire	85.3	01/01/2017	01/04/2020	New housing

23	1,500 Homes & Commercial Units	South Cambridgeshire	84.2	03/10/2016	03/10/2023	New housing, Public Non-housing, Private Industrial, Infrastructure
24	Engineering & Training Facility	Kings Lynn & West Norfolk	82.5	01/04/2016	06/04/2018	Infrastructure
25	RAF Station	Kings Lynn & West Norfolk	82.0	01/04/2016	31/08/2018	Infrastructure
26	1593 Homes & Commercial Units	Cambridge	80.7	20/09/2017	24/03/2027	New housing, Public Non-housing, Private Commercial
27	Arboretum & Visitor Facilities	East Cambridgeshire	80.5	04/02/2019	16/09/2019	Private Commercial
28	286 Houses	South Holland	76.9	04/02/2014	28/06/2019	New housing
29	600 New Homes	Kings Lynn & West Norfolk	74.1	14/11/2016	11/10/2021	New housing
30	264 Key Worker Units & Commercial Units	Cambridge	69.6	12/10/2015	30/04/2018	New housing, Private Commercial
31	900 Houses/Flats	South Holland	62.6	31/03/2019	30/04/2020	New housing
32	Hospital	Cambridge	61.6	07/04/2015	29/06/2018	Public Non-housing
33	Construction Framework	Cambridge	60.2	17/04/2012	17/04/2018	Public Non-housing
34	500 Residential Units & 1 Local Centre	St. Edmundsbury	56.0	16/09/2018	16/10/2019	New housing, Private Commercial
35	Gas Fired Power Station	Cambridge	50.0	10/09/2018	10/05/2021	Infrastructure
36	Office Building & Shop/Restaurant/Cafe Units	Cambridge	47.0	04/04/2016	28/02/2019	Private Commercial
37	Residential Contractor framework	Cambridge	46.3	24/04/2017	24/04/2021	New housing
38	457 Houses/Flats	Peterborough	46.3	01/09/2017	01/09/2023	New housing
39	University (Extension)	Cambridge	45.8	27/02/2017	28/02/2019	Public Non-housing
40	650 Houses	South Holland	45.2	31/10/2018	30/11/2019	New housing
41	Gas Pressure Reduction & Metering Station	Kings Lynn & West Norfolk	45.0	01/12/2016	01/06/2018	Infrastructure
42	700 Residential Units & School/Local Centre	North Hertfordshire	44.4	15/10/2018	15/09/2019	New housing, Public Non-housing
43	Highways (Term Maintenance)	Rutland	40.0	02/12/2013	02/12/2018	Infrastructure
44	Shop/Restaurant/Public House (Extension/Alterations)	Peterborough	38.0	20/03/2017	03/01/2020	Private Commercial
45	189 Houses/9 Flats & 5 Bungalows	St. Edmundsbury	37.1	01/03/2018	27/02/2020	New housing
46	University (Alterations)	Cambridge	35.2	01/08/2018	05/11/2018	Public Non-housing
47	Retail & Commercial Development	South Kesteven	32.6	31/10/2018	31/08/2019	Private Commercial, Private Industrial, Public Non-housing, Infrastructure
48	Retirement Village	Uttlesford	32.4	09/02/2018	03/02/2020	New housing
49	450 Residential Units	Peterborough	31.3	13/08/2018	13/08/2021	New housing
50	Carriageway Improvement Works	East Cambridgeshire	30.0	04/01/2017	30/06/2018	Infrastructure

51	Artificial Grass Pitches/Pavilion (New/Alterations)	Cambridge	29.7	25/06/2018	04/02/2019	Infrastructure
52	Squadron Accommodation Blocks	Kings Lynn & West Norfolk	28.0	06/02/2017	31/08/2018	Infrastructure
53	Office Building & Multi Storey Car Park (Conversion/Alterations)	Peterborough	27.0	23/01/2017	14/05/2018	Private Commercial, Infrastructure
54	Research & Development Building	South Cambridgeshire	26.4	12/12/2016	11/06/2018	Public Non-housing
55	Highway Maintenance Work	Cambridge	25.7	01/04/2017	30/03/2019	Infrastructure
56	Office/Laboratory & Multi Storey Car Park	South Cambridgeshire	25.0	14/11/2016	22/02/2019	Private Commercial
57	350 Residential Units	South Kesteven	24.3	31/10/2018	30/11/2019	New housing
58	3 Animal Buildings	South Kesteven	24.1	31/10/2018	30/04/2019	Private Industrial
59	332 Houses/Bungalows	South Kesteven	23.1	31/10/2018	30/11/2019	New housing
60	Operational Hub	St. Edmundsbury	23.0	07/05/2018	11/02/2019	Infrastructure
61	Military Buildings	Huntingdonshire	22.0	04/02/2019	02/11/2020	Public Non-housing
62	Horticultural Glasshouse	South Holland	22.0	30/01/2019	29/08/2019	Private Industrial
63	219 Residential Units	Huntingdon	21.8	01/05/2017	28/02/2020	New housing
64	117 Houses & 15 Flats	St. Edmundsbury	21.3	02/10/2017	31/07/2020	New housing
65	300 Houses	South Kesteven	20.9	31/10/2018	30/11/2019	New housing
66	300 Residential Units	South Kesteven	20.9	31/10/2018	31/12/2019	New housing
67	Research Laboratory Building	Cambridge	20.2	06/03/2017	28/12/2018	Public Non-housing
68	330 Houses & Highway Infrastructure	South Holland	20.0	21/05/2018	24/06/2019	New housing, Infrastructure
69	Sporting Village	South Cambridgeshire	20.0	03/06/2019	01/02/2021	Private Industrial
70	2 Offices & 1 Warehouse/Cafe	St. Edmundsbury	20.0	03/09/2018	08/03/2021	Private Commercial
71	Employment Development	Peterborough	19.3	17/09/2018	25/03/2019	Private Industrial
72	271 Residential Units	South Cambridgeshire	18.8	26/06/2017	23/07/2018	New housing
73	270 Residential Units	Huntingdon	18.8	01/08/2016	31/08/2018	New housing
74	2 Office Buildings	South Cambridgeshire	18.0	30/10/2017	23/03/2019	Private Commercial
75	Research & Development/Health Centre	Cambridge	17.6	01/03/2017	01/08/2018	Public Non-housing
76	3 Offices/2 Non Food Retail Units/1 Supermarket	East Cambridgeshire	17.6	24/09/2018	24/09/2019	Private Commercial
77	263 Houses & 6 Flats	Peterborough	17.4	30/04/2018	24/05/2019	New housing
78	240 Houses	South Kesteven	16.7	31/10/2018	30/11/2019	New housing
79	162 Houses & 75 Flats	Rutland	16.5	12/06/2017	30/07/2018	New housing
80	Supermarket/Hotel/Restaurant/Cafe	North Hertfordshire	16.0	14/05/2018	10/05/2019	Private Commercial
81	Hotel	Peterborough	16.0	13/11/2017	14/12/2018	Private Commercial
82	217 Houses & 10 Flats	South Kesteven	15.8	31/10/2018	30/11/2019	New housing
83	Office Development	Cambridge	15.6	22/02/2017	15/06/2018	Private Commercial
84	220 Residential Units	South Cambridgeshire	15.3	24/02/2019	24/03/2020	New housing
85	165 Homes	Huntingdon	15.3	01/05/2017	31/05/2019	New housing
86	96 Houses & 3 Flats	Uttlesford	15.1	03/04/2017	03/04/2019	New housing

87	160 Houses	Uttlesford	15.1	13/03/2017	13/09/2018	New housing, Infrastructure
88	Industrial Development	South Holland	15.1	31/10/2018	30/04/2019	Private Industrial
89	2 Office Buildings	Peterborough	15.0	30/05/2017	11/06/2018	Private Commercial
90	72 Houses & 12 Flats	Uttlesford	14.4	18/04/2017	29/03/2019	New housing
91	Enterprise Zone	St. Edmundsbury	14.0	23/04/2018	23/10/2018	Private Industrial
92	201 Houses	South Kesteven	14.0	31/10/2018	30/11/2019	New housing
93	199 Houses/Flats	South Cambridgeshire	13.9	27/08/2018	27/02/2019	New housing
94	200 Residential Units	South Holland	13.9	31/10/2018	30/11/2019	New housing
95	Schools & Leisure Facilities	St. Edmundsbury	13.6	03/12/2018	26/08/2019	Public Non-housing
96	195 Houses	South Holland	13.6	31/10/2018	30/11/2019	New housing
97	University Student Services Centre (Extension/Alterations)	Cambridge	13.2	02/05/2017	08/10/2018	Public Non-housing
98	215 Houses/Bungalows	South Holland	13.1	02/03/2019	29/03/2020	New housing
99	200 Residential Units/Leisure Parks	Huntingdon	13.1	10/04/2017	10/10/2018	New housing
100	155 Houses & 44 Flats	East Cambridgeshire	13.0	04/12/2017	31/12/2018	New housing
101	71 Sheltered Flats	North Hertfordshire	13.0	14/01/2019	14/02/2020	New housing
102	Aircraft Hangars (Extension)	Uttlesford	12.3	12/02/2018	12/08/2019	Infrastructure
103	11 Commercial Units	South Cambridgeshire	12.0	18/07/2018	24/04/2019	Private Industrial
104	Runway Resurfacing Works	Huntingdonshire	12.0	13/08/2018	12/08/2019	Infrastructure
105	School	Peterborough	11.9	22/04/2014	22/04/2018	Public Non-housing
106	176 Houses & 20 Flats	South Kesteven	11.9	31/10/2018	30/11/2019	New housing
107	2 Industrial Units	South Kesteven	11.8	31/10/2018	30/04/2019	Private Industrial
108	Manufacturing Facility/Head Offices	St. Edmundsbury	11.7	06/08/2018	16/02/2019	Private Industrial, Private Commercial
109	91 Houses & 15 Flats	Huntingdon	11.6	28/08/2017	24/09/2018	New housing
110	3 Laboratory/Office/Energy Centre (New/Alterations)	Cambridge	11.5	01/10/2018	27/09/2019	Public Non-housing, Private Commercial
111	43 Residential Units	Kings Lynn & West Norfolk	10.7	25/12/2017	25/01/2019	New housing
112	Industrial Building	East Cambridgeshire	10.5	21/05/2018	24/05/2019	Private Industrial
113	142 Houses & 9 Flats	Forest Heath	10.5	12/06/2017	09/07/2018	New housing
114	147 Houses/Bungalows/Flats & 1 Office Building	Uttlesford	10.4	14/08/2017	18/01/2019	New housing, Private Commercial
115	Petrol Filling Station	South Kesteven	10.3	27/04/2019	24/11/2019	Infrastructure
116	131 Houses/12 Flats & 7 Bungalows	Huntingdon	9.9	24/09/2018	24/10/2019	New housing
117	150 Residential Units	South Kesteven	9.9	31/10/2018	30/11/2019	New housing
118	3 Poultry Buildings	South Kesteven	9.9	31/10/2018	30/04/2019	Private Industrial
119	141 Houses	South Kesteven	9.8	31/10/2018	30/11/2019	New housing
120	Prison (Extension)	Rutland	9.7	06/03/2017	26/10/2018	Public Non-housing

121	75 Flats & Retail Units	Peterborough	9.6	29/03/2019	25/04/2020	New housing, Private Commercial
122	135 Houses & 1 Village Shop	South Holland	9.5	31/10/2018	30/11/2019	New housing, Private Commercial
123	135 Houses	South Holland	9.4	25/04/2018	25/05/2019	New housing
124	135 Residential Units	South Holland	9.4	31/10/2018	30/11/2019	New housing
125	37 Houses & 11 Flats	South Cambridgeshire	9.3	01/09/2018	28/09/2019	New housing
126	College Redevelopment	Cambridge	9.2	04/01/2017	04/06/2018	Public Non- housing
127	132 Houses	South Kesteven	9.2	31/10/2018	30/11/2019	New housing
128	131 Residential Units	South Kesteven	9.1	31/10/2018	30/11/2019	New housing
129	Storage & Distribution	South Holland	9.0	09/05/2018	09/11/2018	Private Industrial
130	2 Research & Development Buildings	South Cambridgeshire	8.8	26/03/2018	22/03/2019	Public Non- housing
131	Academic Building	Cambridge	8.8	05/06/2017	19/05/2019	Public Non- housing
132	126 Houses	South Cambridgeshire	8.8	24/02/2019	24/03/2020	New housing
133	120 Houses & 12 Flats	Peterborough	8.7	06/04/2018	06/05/2019	New housing
134	Industrial/Research/Office Units	South Kesteven	8.5	31/03/2019	30/09/2019	Private Commercial, Private Industrial
135	125 Houses/Town Houses/Flats	St. Edmundsbury	8.2	05/03/2018	04/03/2019	New housing
136	94 Houses/16 Flats & 6 Bungalows	Peterborough	8.1	11/06/2018	08/07/2019	New housing
137	27 Commercial Units	South Cambridgeshire	8.0	07/05/2018	11/02/2019	Private Industrial
138	120 Houses/Bungalows/Flats	Kings Lynn & West Norfolk	7.8	09/03/2019	09/03/2020	New housing
139	108 Residential Units	North Hertfordshire	7.7	24/04/2019	21/05/2020	New housing
140	91 Houses/10 Bungalows & 10 Commercial Units	Huntingdon	7.4	15/04/2019	11/05/2020	New housing, Private Commercial, Public Non- housing, Private Industrial, Infrastructure
141	100 Houses	South Holland	7.0	31/03/2019	30/09/2019	New housing
142	Office Building	Uttlesford	6.9	30/07/2018	30/04/2019	Private Commercial
143	Warehouse	South Kesteven	6.8	31/10/2018	30/04/2019	Private Industrial
144	94 Houses & 1 Office/Training/Leisure Centre	Uttlesford	6.7	28/05/2018	28/11/2018	New housing, Private Commercial
145	Student Accommodation	Cambridge	6.2	22/01/2018	08/07/2019	Public Non- housing
146	Anaerobic Digestion Plant	Cambridge	6.0	07/05/2018	06/05/2019	Infrastructure
147	University (New/Refurb)	Cambridge	5.9	08/08/2016	30/04/2018	Public Non- housing
148	Research & Development Building	South Cambridgeshire	5.9	09/04/2019	07/01/2020	Public Non- housing
149	Light Industrial Unit	St. Edmundsbury	5.6	24/09/2018	24/03/2019	Private Industrial

150	10 Industrial Units & 1 Warehouse	Rutland	5.5	05/03/2018	31/08/2018	Private Industrial
151	Hotel & Cafe/Takeaway	St. Edmundsbury	5.3	11/12/2017	27/07/2018	Private Commercial
152	Factory & Offices	South Kesteven	5.2	12/12/2018	24/06/2019	Private Industrial, Private Commercial
153	10 Retail/Restaurant/Cafe Units	Fenland	5.0	25/06/2018	21/01/2019	Private Commercial
154	Technical & Professional Centre	Uttlesford	4.8	23/10/2017	03/09/2018	Public Non-housing
155	Planned Asset Maintenance & Investment Works	Huntingdonshire	4.8	01/04/2019	31/03/2029	Housing R&M
156	Storage & Distribution/Bus Shelter Building	South Kesteven	4.5	31/10/2018	30/04/2019	Private Industrial
157	School	St. Edmundsbury	4.2	30/04/2018	03/06/2019	Public Non-housing
158	3 Industrial/Storage Units	Huntingdon	4.2	18/06/2018	24/12/2018	Private Industrial
159	Industrial Building	North Hertfordshire	3.9	27/08/2018	27/02/2019	Private Industrial
160	2 Industrial Units	South Holland	3.8	31/03/2019	30/09/2019	Private Industrial
161	College (Extension/Alterations)	Cambridge	3.5	17/09/2018	10/06/2019	Public Non-housing
162	Triple Span Bulk Grain Store	South Cambridgeshire	3.3	16/02/2018	27/07/2018	Private Industrial
163	School (Conversion/Extension)	St. Edmundsbury	3.2	06/11/2017	28/09/2018	Public Non-housing
164	School Building (Extension)	Peterborough	3.1	24/07/2017	29/06/2018	Public Non-housing
165	Hotel/Wedding Hall (Conversion)	St. Edmundsbury	2.9	11/06/2018	10/09/2018	Private Commercial
166	Anaerobic Digestion Plant	South Kesteven	2.9	31/10/2018	31/07/2019	Infrastructure
167	Light Industry (New/Extension)	East Cambridgeshire	2.5	01/07/2019	30/08/2019	Private Industrial
168	Crop Research Centre (Extension)	South Cambridgeshire	2.4	22/01/2018	17/09/2018	Public Non-housing
169	Hospital (Refurbishment)	St Edmundsbury	2.3	26/01/2018	26/08/2018	Public Non-housing
170	Mobile Classroom (Extension)	Fenland	2.2	11/03/2019	09/09/2019	Public Non-housing
171	Electric Substation	South Holland	2.1	23/01/2019	01/11/2019	Infrastructure
172	Hospital (Extension)	Kings Lynn & West Norfolk	1.5	03/04/2018	07/08/2018	Public Non-housing
173	17 Houses	Kings Lynn & West Norfolk	1.2	31/10/2018	30/11/2018	New housing
174	Medical Centre	South Kesteven	0.9	31/10/2018	31/01/2019	Public Non-housing

Appendix E. NICP PROJECTS IN GREATER CAMBRIDGE & GREATER PETERBOROUGH

This appendix provides a list of all the NICP and GCGP area projects analysed. The projects appear in the order they were put into the LFT.

Appendix Table 5: NICP and GCGP area projects in Greater Cambridge & Greater Peterborough

	Name	Value (£m)	Start date	End date	Source
1	A14 Cambridge to Huntingdon	1385.3	01/04/2016	01/04/2019	NICP
2	Anglian Water: Wastewater Service AMP6	219.5	01/04/2016	01/04/2019	NICP
3	Peterborough Energy Park	200.9	01/04/2016	01/04/2017	NICP
4	Highways Maintenance Block Funding (SR10 allocation)	145.9	01/04/2016	01/04/2019	NICP
5	Anglian Water: Water Service AMP6	141.0	01/04/2016	01/04/2019	NICP
6	Local Authority Major Schemes - Committed and Approved - East of England	92.6	01/04/2016	01/04/2019	NICP
7	UK Power Networks - East (EPN) RIIO	66.5	01/04/2016	01/04/2019	NICP
8	Local Enterprise Partnerships Allocation for Transport in Strategic Economic Plans - East of England	40.2	01/04/2016	01/04/2019	NICP
9	Integrated Transport Block	39.1	01/04/2016	01/04/2019	NICP
10	Severn Trent Water: Water Service AMP6	29.3	01/04/2016	01/04/2019	NICP
11	Severn Trent Water: Wastewater Service AMP6	28.9	01/04/2016	01/04/2019	NICP
12	East of England Development programme	23.0	01/04/2016	01/04/2019	NICP
13	Norwich Northern Distributor Road	19.4	01/04/2016	01/04/2019	NICP
14	Eon Central Networks East (EMID) RIIO	15.7	01/04/2016	01/04/2019	NICP
15	East of England Construction programme	15.0	01/04/2016	01/04/2019	NICP
16	Croxley Rail Link (Watford)	11.7	01/04/2016	01/04/2019	NICP
17	National Productivity Investment Fund Round 1 East	10.8	01/04/2019	01/04/2019	NICP
18	Anglia Traction Power Supply Upgrade	8.5	01/04/2016	01/04/2018	NICP
19	Lincshire	7.5	01/04/2016	01/04/2019	NICP
20	Challenge Fund Tranche 1 - East of England	6.7	01/04/2016	01/04/2018	NICP
21	Bulwell Energy	6.7	01/04/2016	01/04/2017	NICP
22	Local Enterprise Partnerships Allocation for Transport in Strategic Economic Plans - East Midlands	6.2	01/04/2016	01/04/2019	NICP
23	East Midlands Construction programme	3.6	01/04/2016	01/04/2019	NICP
24	East Midlands Development programme	3.4	01/04/2016	01/04/2019	NICP
25	East Anglia	1.9	01/04/2016	01/04/2019	NICP
26	National Productivity Investment Fund Round 1 East Midlands	1.8	01/04/2019	01/04/2019	NICP
27	Challenge Fund Tranche 1- East Midlands	1.4	01/04/2016	01/04/2017	NICP
28	Challenge Fund - Tranche 2A East of England	1.3	01/04/2018	01/04/2018	NICP
29	Common Barn Wind Farm	0.9	01/04/2017	01/04/2018	NICP
30	Challenge Fund - Tranche 2A East Midlands	0.7	01/04/2018	01/04/2018	NICP
31	Mine Water Treatment Schemes - New Scheme Build - East Midlands/Yorkshire	0.2	01/04/2016	01/04/2016	NICP

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V1	11.06.18	Edit
V2	26.06.18	Recommendations
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