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Construction labour and skills analysis for the Coast to Capital LEP area

Final Report

Author: Callum Davidson, Stuart Greenacre and Andy Barron
Approved by: Mohamed El-Haram and Andy Barron
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CITB
Bircham Newton
Kings Lynn
Norfolk
PE31 6RH
t: +44 (0)344 994 4400
www.citb.co.uk

Whole Life Consultants Limited
Dundee University Incubator
James Lindsay Place
Dundee
DD1 5JJ
t/f: +44 (0)1382 224 304
enquiries@wlcuk.com

CITB is registered in England and Wales Charity No 264289 and in Scotland Charity No SC044875

Whole Life Consultants Ltd is registered in Scotland as SC259987, VAT number 852809506

Registered office c/o 14 City Quay, Dundee DD1 3JA

Executive Summary

This report summarises research undertaken by CITB to identify the opportunities, risks and issues facing employers and training providers in the construction sector in the coming five years in the Coast to Capital area. It has analysed what the likely occupational demand will be to meet the labour requirements by occupation for 696 construction projects in the Coast to Capital, including 150 major projects, as well as the demand to service repair and maintenance work. It also quantifies the current supply of labour and skills training in the LEP area, identifying potential risks and priorities for partners and industry to tackle. A joined up approach between the LEP, providers, industry and wider partners across the South East will be needed in order to realise the opportunities that activity in the construction sector can generate in developing skills, creating jobs and enhancing the local economy.

The Industry

Construction is a significant part of the economy of the Coast to Capital area; the sector accounts for over £12 billion/yr of spend on construction projects (2017), employs 83,630 people, and is currently experiencing employment growth of 4.9%/yr (2016/17). But it is also an enabler of economic growth and job creation and has a significant impact on enhancing the built environment. It creates the facilities required of a modern economy and addresses significant social issues, such as a shortage of housing. It is also an enabler of other sectors' success by building the facilities required for commercial and industrial advances as well as the infrastructure that is, in turn, an enabler of growth.

The sector has a highly mobile workforce which is willing to travel to construction projects across the South East, London and neighbouring regions. Equally, workers also travel into the Coast to Capital area to service construction project labour requirements. However, there are significant risks which the industry needs to face in coming years in this LEP area, notably an ageing workforce, a need to improve the image of a career in the industry, potentially significant impacts on the migrant workforce resulting from BREXIT which will be felt hardest in London and the South East, and a continuing 'draw for workers' to service major projects in London. It is also a sector which is dominated by micro and small companies, which account for 98.8% of the companies based in the Coast to Capital area. Self-employment within construction in the Coast to Capital LEP area is now 10% above 2012/13 levels at 35,000 workers. This does mean finding an inclusive way to engage and capture industry views is more challenging.

Training and Education

The total number of construction training achievements in the Coast to Capital area is around 900 (2012/13 to 2015/16) average), with 71% in knowledge based and 29% in competence based. Around 100 training providers are delivering construction-relevant FE courses within the Coast to Capital LEP area, with ten providers delivering over 90% of provision. Achievement numbers are not surprisingly highest in the areas of high population density and/or where the major colleges within the LEP are located, i.e. Epsom and Ewell, Crawley, Brighton and Hove, Reigate and Banstead, and Chichester.

Training is delivered across the full range of construction occupations, with good levels of competence qualifications achievements for electrical trades and installation, civil engineering operatives, steel erectors/structural fabrication, glaziers, roofers and painters & decorators. However, there are occupations where the level of competence qualifications falls below the levels

to be expected, these include construction trades supervisors, specialist building operatives, floorers, bricklayers and building envelope specialists. The total volume of training provision in the Coast to Capital LEP has also reduced over the four years from 2012/13 to 2015/16, with the number of new starters decreasing by 16%.

Construction apprenticeship starts in the LEP have increased 29% from 2012/13 to 2015/16, most notably in plumbing and HVAC trades, wood trades and interior fit out, and specialist building operatives. However there has been a decrease in apprenticeship starts over the same time period in roofers.

Of the four HE providers based within the LEP area, only the University of Brighton offers construction-related courses at HE level, for Architecture, Civil Engineering and Building. HE training provision for Planning is low in the LEP area, although learners/graduates in these professions are often prepared to travel, and this is an occupation which does not need to be site based.

Future Project Pipeline and Skills Demands

The labour demand arising from the construction spend in the Coast to Capital LEP area is currently projected to peak in 2018, with infrastructure, non-housing repair & maintenance and private commercial construction requiring the most workers. The occupations which will experience the **greatest demand** are:

1. Non-construction professional, technical, IT & other office-based
2. Wood trades & interior fit-out
3. Electrical trades and installation
4. Other construction process managers
5. Senior, executive & business process managers
6. Other construction professionals and technical staff
7. Plumbing & HVAC Trades
8. Labourers nec*
9. Painters and decorators
10. Building envelope specialists
11. Bricklayers
12. Surveyors
13. Specialist building operatives
14. Civil engineers

**Not elsewhere classified*

Occupations where there is a risk of labour shortages

The occupations with the **greatest risk of a shortfall** between the supply of workers and demand are:

1. Construction trade supervisors
2. Civil engineers
3. Civil engineering operatives
4. Scaffolders
5. Plasterers
6. Plant operatives
7. Plant mechanics/fitters
8. Logistics
9. Non-construction operative

Occupations where there is a risk of lack of training

Occupations in the LEP area where we would expect higher levels of training include construction trades supervisors, specialist building operatives, floorers, bricklayers and building envelope specialists. There are also lower than would be expected levels of competence based training for construction trades supervisors, specialist building operatives, floorers, bricklayers, and building envelope specialists.

This report also highlights the likely need for additional future training to keep pace with skills demand in occupations such as scaffolders, plasterers and dry liners and plant mechanics/fitters occupations. Although the overall number of apprenticeship starts has seen encouraging growth, there are still nine occupations where growth in the number of new starts has been stagnant or decline.

Recommendations

The report offers recommendations that include:

- **Build collaborative partnerships** ensuring that those interested in construction and with an influence over outputs and construction skills in the Coast to Capital LEP area work together;
- **Develop a Skills and Action Plan** which addresses the opportunities and issues facing construction within the broader context of the South East;
- **Address areas of disparity between skills and stakeholder requirements** where providers and industry work more closely on the requirements for vocational and practical/competence based training required to meet current and future demand;
- **Focus on improving the image of construction industry** by improving the advice and information available on careers in construction;
- **Use procurement to enable skills development** through smarter approaches to procurement (including co-ordinated approaches to Section 106 agreements) to encourage those bidding for construction and infrastructure contracts or those funding developments to be mandated to include provision for recruitment, training, apprenticeships and outreach;
- **Maintain and enhancing the evidence base,** this report is just 'snapshot in time' but provides enough detail to inform debate and enable decision making in a sensible way. Demand forecasts will need to be updated regularly, as the supply of labour data has an inbuilt lag effect and should realistically be updated annually.

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1. Introduction

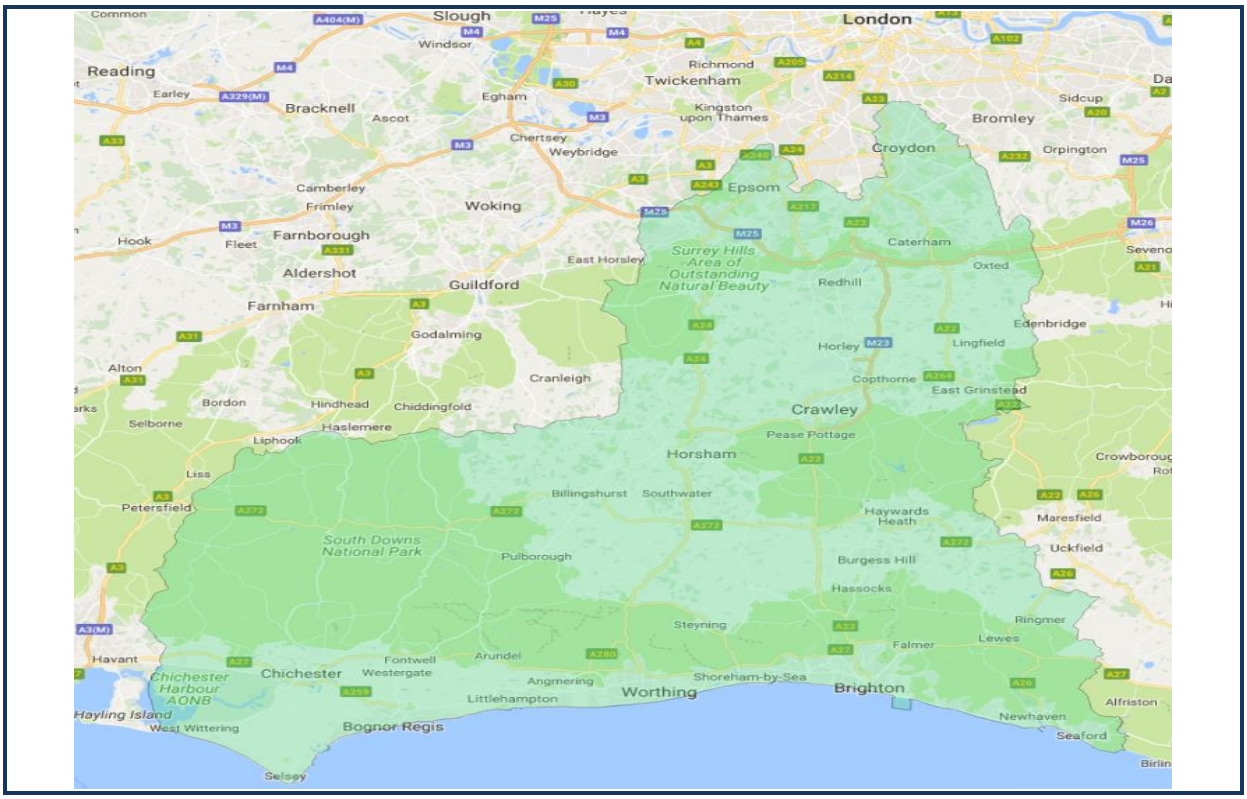

Figure 1: Map of Coast to Capital LEP and surrounding areas

Table 1: Local authorities analysed in the research

	Local Authority
Coast to Capital	Brighton and Hove
	Chichester
	Mid Sussex
	Horsham
	Adur
	Arun
	Crawley
	Worthing
	Croydon
	Reigate and Banstead
	Tandridge
	Mole Valley
	Lewes
	Epsom and Ewell

2. Demand analysis methodology

2.1. 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 details on 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 take account of any shortcomings in the sources of data; and how the LFT converts output into labour demand

2.2. Calculating construction output

2.2.1. Data sources

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

2.2.2. 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 (2017Q2) 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 Table 2. 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.

Table 2: 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	90%
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 thoroughly inspected and 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 housing, commercial and industrial. For the non-significant projects, the default project type defined in the Glenigan pipeline is applied.

In order to maintain consistency with the CSN, whose forecasts extend only as far as 2020/21, we have limited our analysis of the Glenigan data to the annual spends up to and including 2020/21.

2.2.3. NICP data

The Infrastructure and Projects Authority (formerly Infrastructure UK and Major Projects Authority) compile a pipeline of UK infrastructure and construction projects and the associated annual public and private investment. For this report we have used the autumn 2016 NICP which includes details of around 720 projects valued at some £500bn.

The NICP data is examined to identify infrastructure projects or programmes of work taking place in the Coast to Capital LEP 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 Table 2. Projects in the Glenigan dataset and the NICP are combined (ensuring that there is no double counting) to create a pipeline of 'denominated' projects for the area. We have only considered those projects which are specifically allocated to the Coast to Capital LEP in the NICP (i.e. projects at a national level have not been considered).

The autumn 2016 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 with data in Glenigan.

2.2.4. 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

2.3. 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 Coast to Capital LEP lies (in this case, the South East), identify only the new build in the denominated projects by removing all repair and maintenance projects from the CSN data.
2. Compare the output identified in the denominated 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 denominated 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 denominated project*** is factored by the following ratio:

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

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 denominated 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 LEP level, it is assumed that the proportion of the total output represented by housing R&M is the same at the LEP 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:

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

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.

2.4. Dealing with the 'cliff edge'

As the time horizon extends there is less clarity on what is planned. As a result, the number of denominated 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 back cast 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.

2.5. Calculating total labour demand

Our Labour Forecasting Tool is used to determine the labour demand generated by the construction outputs in the peak year calculated as described in Sections 2.2, and 2.4. 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 A. 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 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 Table 2.

3. Labour demand in the Coast to Capital LEP

3.1. Introduction

The following sections provide an estimate of the labour demand that construction investment will create across the Coast to Capital LEP over the period 2017-2021. They report the outputs determined from the analysis described in Section 2 and the labour demand they generate as calculated by the Labour Forecasting Tool.

In order to provide information on the levels of labour demand, the following key assumptions have been made:

1. Workforce demand (for the five year period) is approximately equal to current peak year (2017) demand, based on the premise that construction investment in future years will remain at similar levels;

2. Repair and maintenance(R&M) work is an estimate based on calculations where the proportion of the total output represented by housing and commercial R&M is the same at the LEP level as it is at the regional level in the Construction Skills Network;

3. Projects less than £250,000 have been excluded from the analysis unless stated otherwise; for example repair and maintenance work

3.2. Pipeline of denominated projects

3.2.1. Glenigan pipeline analysis

The initial review of the Glenigan database identified 777 projects in the Coast to Capital LEP area. Of these, 1 project was removed because there was no value provided, and 69 were removed due to missing dates. Also excluded were 11 projects which were clearly identified as consultancy projects. A full set of the projects which were omitted from the analysis is provided in Appendix B. The spend in projects which were removed because of missing dates is around 2.8% of the total pipeline. The projects omitted were typically valued at between £0.25m and £100m. It is possible that this work will take place at some undefined 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, but an assessment of the labour demand is made in the estimates of other work from the additional projects.

The Mean Value Theorem was applied to the remainder of the pipeline to identify the significant projects. The process identified 150 significant projects accounting for 84% 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.

Table 3 shows the number of significant projects within the Coast to Capital LEP area, the percentage of spend arising from the significant projects and the total spend. The construction spend shown in this table takes account of any adjustments for engineering works and any incomplete, duplicate or consultancy projects. Values are shown in 2017 prices, the base price used in the Glenigan database.

Table 3: Key data for significant projects in Glenigan[1]

	Number of projects	Construction spend (£m – 2017 values)
All Glenigan projects	696	12,199
Significant Glenigan projects	150	10,239
Percentage within significant projects	22%	84%

Appendix C provides a full breakdown of the significant projects and their construction values. The peak year for the Glenigan spend profile is 2018. The location of the significant projects within the Coast to Capital LEP can be seen in

Figure 2. The radius of the markers is proportional to the value of the work taking place.

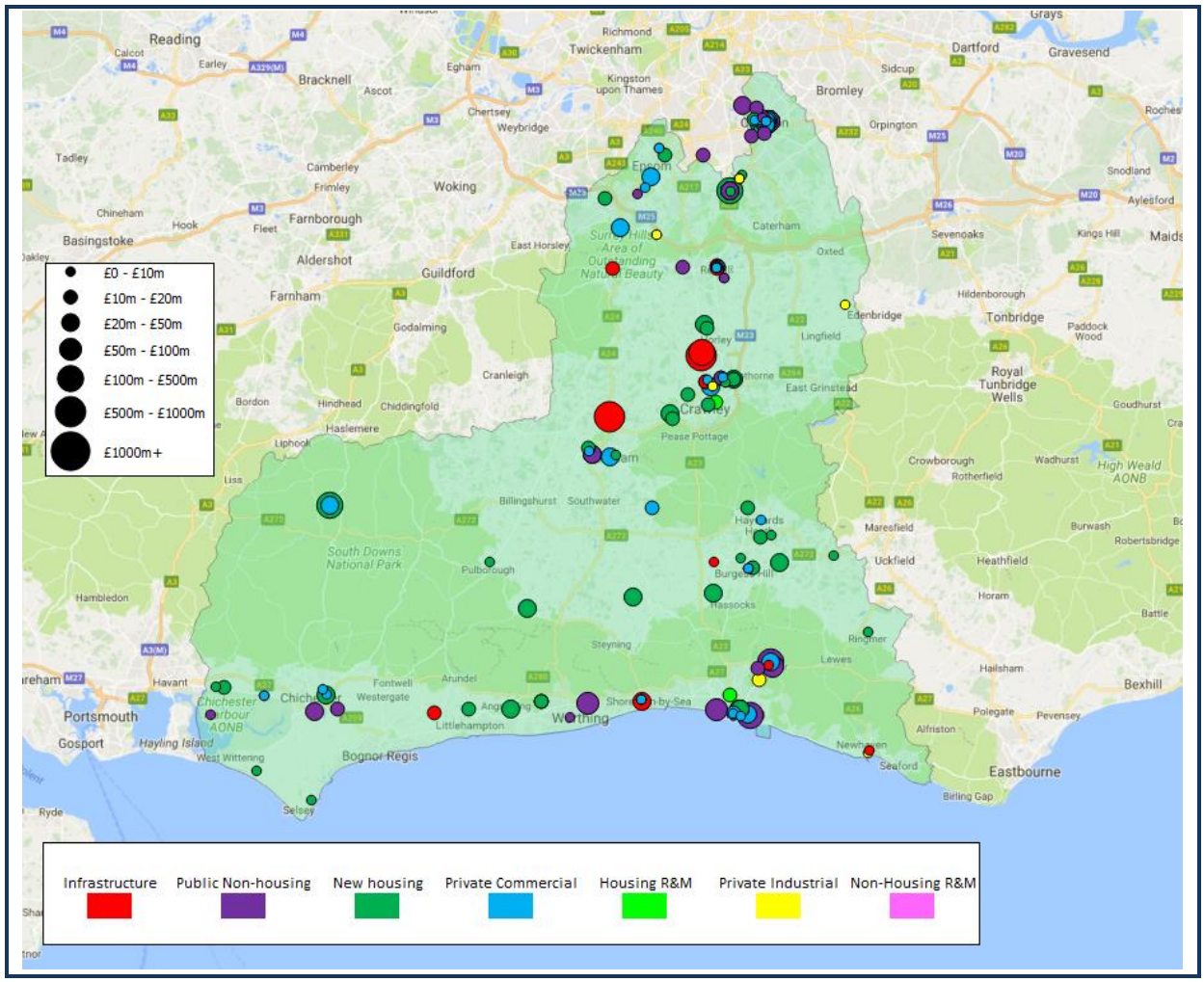

Figure 2: Location of significant projects included in the analysis

[1] The values in this table are the values from the Glenigan pipeline to which the construction element percentage has been applied and thus reflect the adjusted values of infrastructure projects values to distinguish between construction and engineering construction.

3.2.2. Glenigan & NICP spend analysis

Implementing the methodology outlined in Section 2 leads to the following findings for the peak year for denominated projects of 2018. The peak year is used because the tail off in the denominated projects is more likely to be due to a lack of future planning rather than an actual tail off in workload.

Table 4 shows the distribution by sector of new build spend for the total pipeline of denominated projects.

Table 4: New-build construction spend by project type in 2018 (total denominated project pipeline)

Project Type	Construction Spend in 2018 (2017 values - £m)	% of total
Infrastructure	1,167	48%
New Housing	591	24%
Private Commercial	487	20%
Public Non-housing	147	6%
Private Industrial	41	2%
Total	**2,433**	**100%**

Table 5 shows the infrastructure construction spend from both Glenigan and the NICP in 2018 by sub-sector.

Table 5: Construction spend per infrastructure sub-type in 2018 (total denominated project pipeline)

Project Type	Construction spend in 2018 (2017 values - £m)	% of total
Transport	678	58%
Water	166	14%
Energy	135	12%
General Infrastructure	132	11%
Flooding	56	5%
Total	**1,167**	**100%**

3.3. Estimate of future total labour demand

As outlined in the Section 2 the denominated 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 an employment growth rate included. The solid blue area shows the labour demand arising from the new build Glenigan and NICP projects. Any R&M included in Glenigan or the NICP is also shown. The red shaded area shows the likely total labour demand arising from estimates of other work. The total construction labour demand including the volume of R&M imputed from the CSN model peaks for the area in 2021 at 83,000.

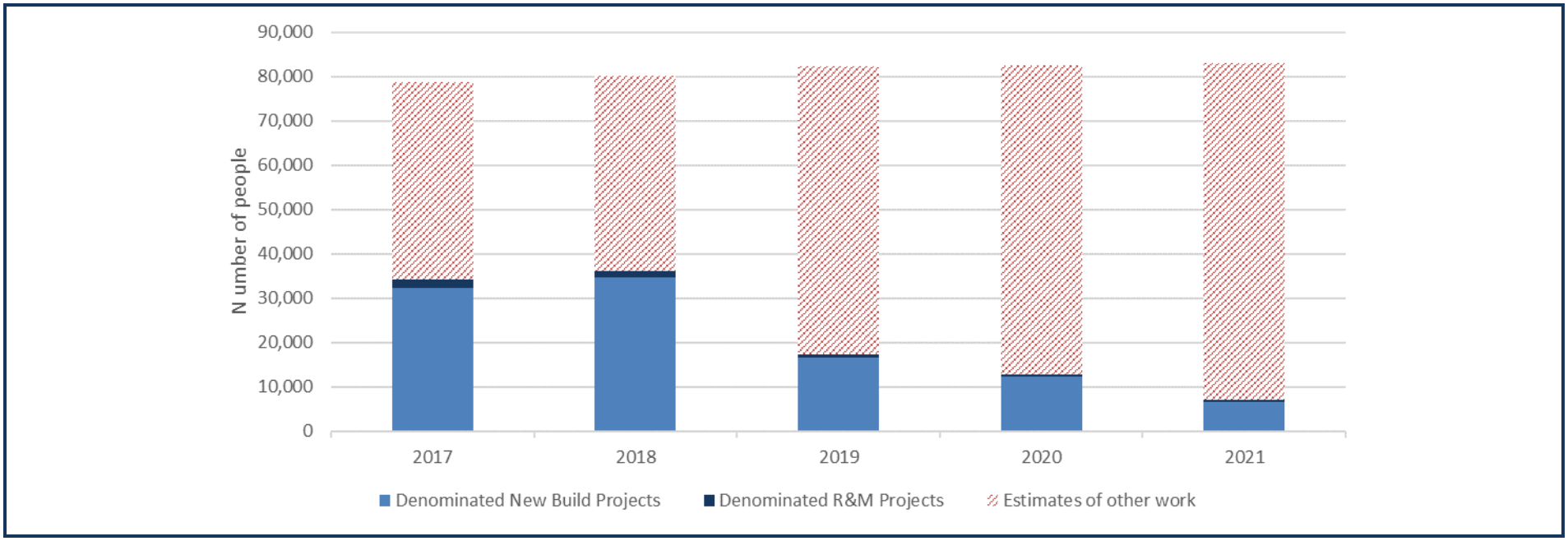

Figure 3: Total construction labour demand including estimates for both R&M and estimates of other work

3.3.1. Breakdown of labour demand by occupation

For the peak year in Glenigan of 2018 the detailed breakdown by each of the 28 occupational groups for the Glenigan and the NICP projects is shown in Figure 4. This shows the breakdown by occupation for both the pipeline of denominated projects and the estimates of other work.

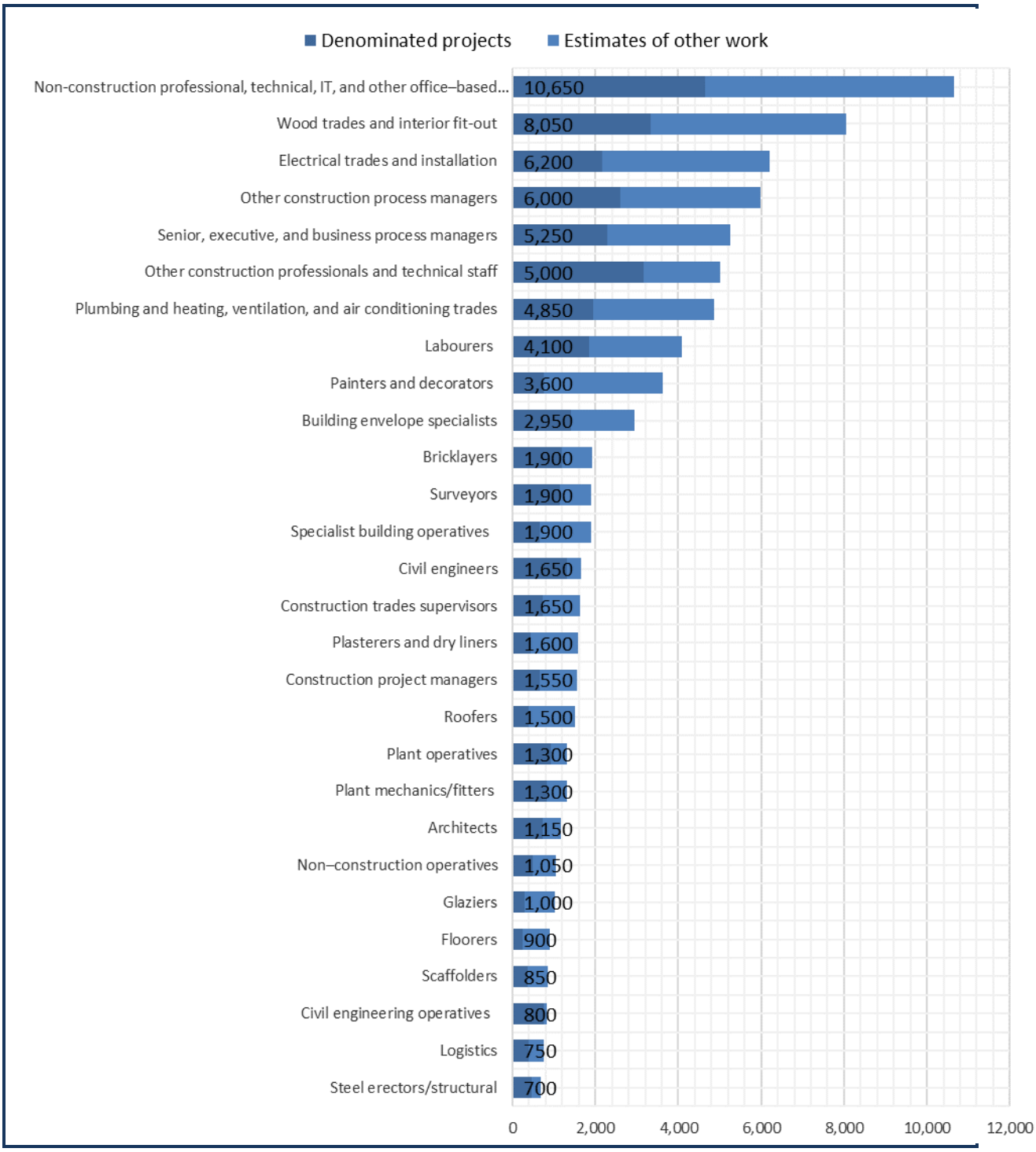

Figure 4: Construction labour demand by occupation in the peak year

3.3.2. Breakdown of labour demand by project type

Table 6 shows the labour demand generated by the denominated projects and the estimates of other work in 2018.

Table 6: Labour demand by work type in 2018

Project Type	Labour demand from denominated projects in 2018 (People)	Labour demand from estimates of other work in 2018 (People)	Total labour demand in 2018 (People)	% of total
Private Commercial	9,450	15,200	24,650.00	31%
Non-housing R&M	0	22,150	22,150.00	28%
Infrastructure	13,300	0	13,300.00	17%
Housing R&M	1,550	6,700	8,250.00	10%
New Housing	8,100	0	8,100.00	10%
Public Non-housing	2,900	0	2,900.00	4%
Private Industrial	850	0	850.00	1%
Total	36,150	44,050	80,200	100%

3.4. Summary of demand

- The labour demand arising from the construction spend in the Coast to Capital LEP area peaks at around 80,200 people in 2018, taking account of estimates of other work including R&M in addition to the pipeline of denominated projects.
- During 2018, the peak year of the denominated projects pipeline demand, the most labour-intensive occupation group is Non-construction professional, technical, IT, and other office–based staff (excl. managers) with an annual demand of 10,650 people.
- The estimate of labour demand for the trade occupations for the peak year of 2018 are as follows:
  - The trade occupation for which demand is highest is “Wood trades and interior fit-out” with a requirement for 8,050 people;
  - “Electrical Trades and installation” trades follow with 6,200 people;
  - “Plumbing and heating, ventilation, and air conditioning trades” rank third, with a demand of 4,850 people.

4. Construction labour supply in the Coast to Capital LEP area

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

The first part of this section takes a view on the current construction employment levels in the Coast to Capital LEP and how this relates to overall construction employment across the wider South East region and the UK as a whole. Aside from the London Borough of Croydon, the Coast to Capital LEP falls entirely within the South East region. All comparisons have therefore been made against the South East region as a whole and, where applicable, the UK. Data from CITB's Construction Skills Network (CSN) is used along with official Government sources. Employment and employers are considered together as they are intrinsically linked, particularly as a large proportion of construction workers are employed within micro businesses or are self-employed, where the business location is also the home location.

For the second part of this section, whilst training occurs at Further Education (FE) and Higher Education (HE) levels, the main focus of this report is on the FE training that takes place. This is because FE tends to be sourced and delivered in closer proximity to the home and workplace. Higher Education in the region is also analysed, but should be considered in the context of the enhanced mobility levels of the learners at this level.

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.

4.1. Existing workforce

- The Coast to Capital LEP construction workforce has experienced positive growth of 4.9% in the year to March 2017
- There has been a 29% increase in the number of micro sized construction businesses from 2013 to 2017 within the Coast to Capital LEP, accounting for almost all (over 99%) of the total growth in construction businesses in the LEP over this period
- Self-employment within construction in the Coast to Capital LEP is now 10% above 2012/13 levels at 35,000 workers.

An analysis of the Annual Population Survey shows that the Coast to Capital LEP area accounts for around 22% of construction employment in the South East region as a whole.[2] Please note this employment is 'workplace' analysis – i.e. it is the number of workers employed by employers within the Coast to Capital LEP. Table 7 applies the annual percentage shares across the CSN occupational breakdown for the South East region as a whole to give an estimate of total employment at occupational and industry level in the Coast to Capital LEP area. For comparison, the wider South East region has been included.

After a strong growth in construction employment of 16.1% in 2013/14, two years of contraction followed before the number of construction workers in the LEP returned to a growth of 4.9% in 2016/17, outperforming the growth in the South East region as a whole (2.1%) this year. This is shown in Figure 5 below.

[2] ONS/NOMIS (2017) Annual Population Survey workplace analysis by industry Apr 2016 to Mar 2017

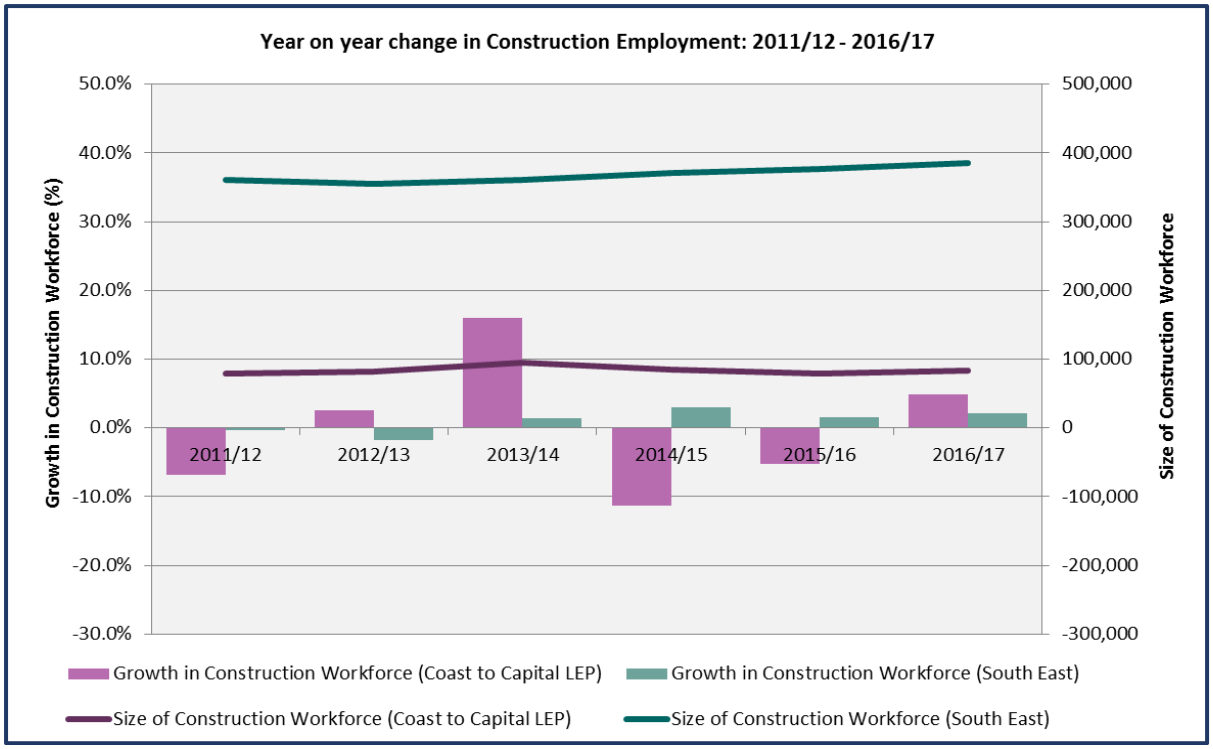

Figure 5: Year on year change in Construction Employment (Experian/CITB & NOMIS 2017)

The number of construction businesses within the Coast to Capital LEP has increased slightly from a 22% share of all construction businesses across the South East in 2013 to a 23% share in 2017. In actual numbers, the increase in construction businesses in the Coast to Capital LEP region is 2,660 from 2013 to 2017, a 28% rise over this period. Across the South East region there was an increase of around 9,650 businesses over the same time period, a rise of 22% on 2013 levels. This is shown in Figure 6 below.

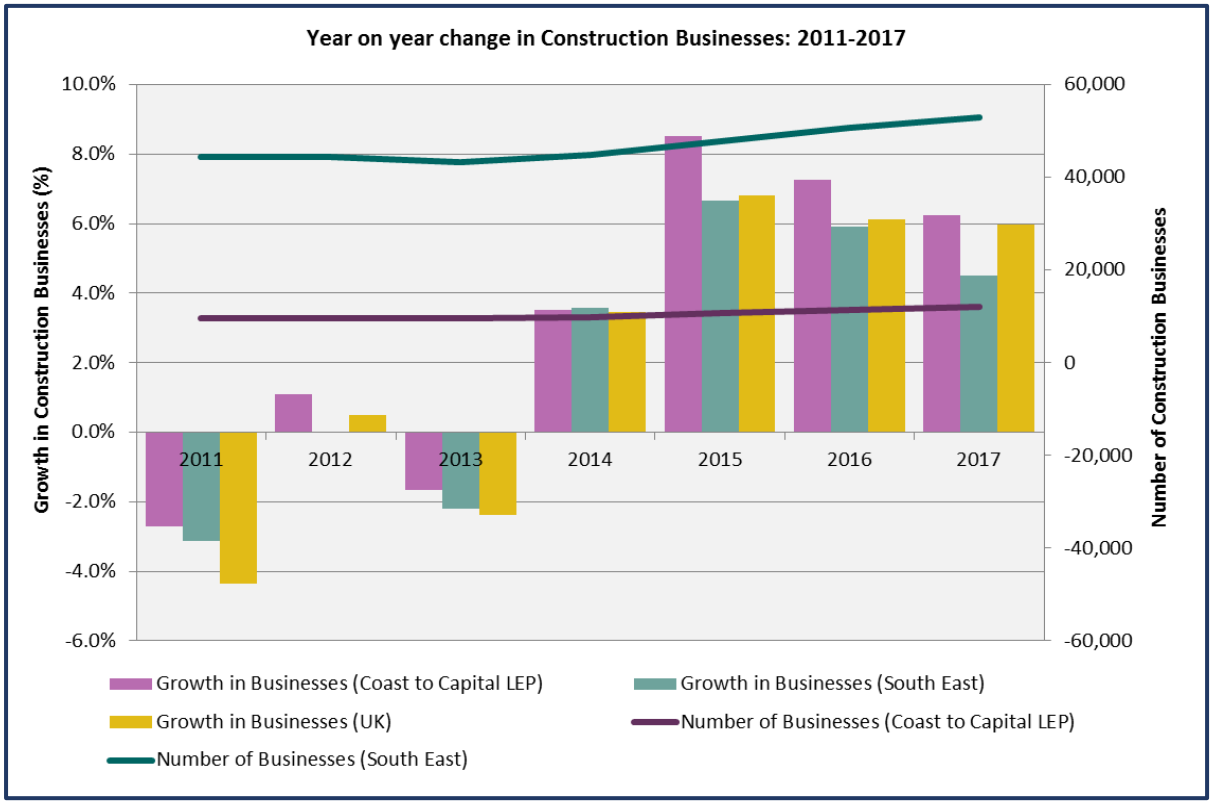

Figure 6: Year on year change in Construction Businesses (UK Business Count, NOMIS 2017)

Figure 7 shows the distribution of construction businesses within the Coast to Capital LEP, and Figure 8 shows the distribution of the construction workforce. There are noticeable differences;

- Comparing business to workforce distribution indicates that Arun, Tandridge, Mid-Sussex, Horsham and Adur all have notably higher shares of businesses compared to workforce and are therefore likely to have more micro (less than 10 employees) and small (10-49 employees) sized firms; and
- More large (250+ employees) and medium (50-249 employees) sized firms are likely to be located within the Brighton and Hove, Chichester, Crawley and Worthing areas.

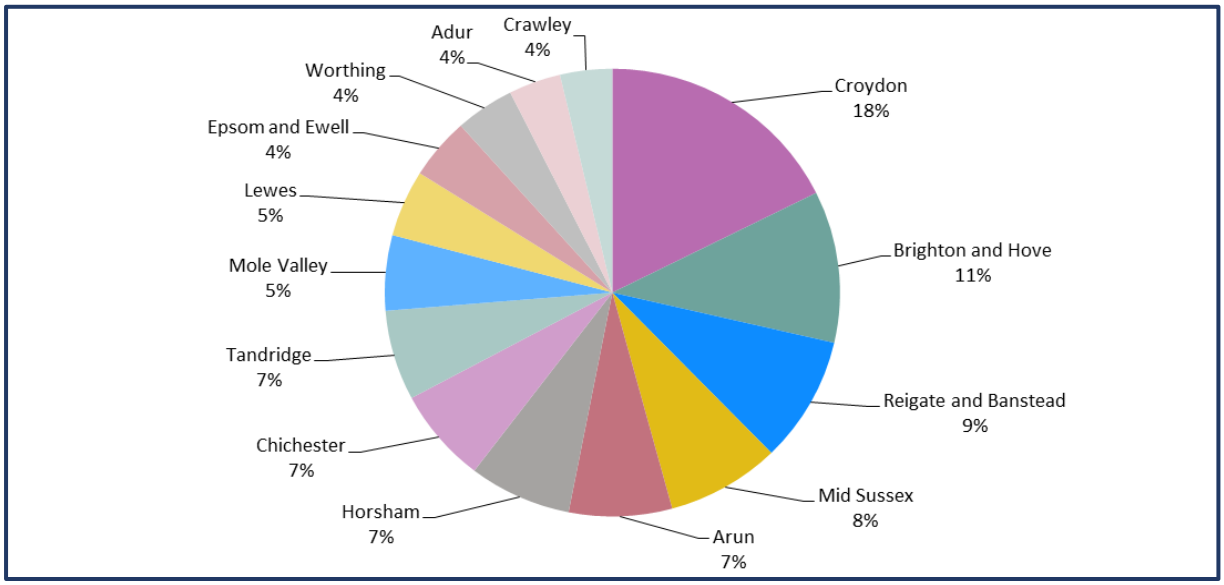

Figure 7: Distribution of construction businesses within the Coast to Capital LEP (UK Business Count, NOMIS 2017)

Between 2012/13 and 2016/17 there is a broadly consistent pattern in construction workforce distribution across the Coast to Capital LEP, with the main areas being Croydon, Brighton and Hove, Chichester and Reigate and Banstead, which together account for over a 50% share of the total, ref Figure 8. Incidentally, these are also the four areas which have also increased their shares of construction employment in the LEP the most over this period (1.4%, 6.2%, 5.8% and 2.4% respectively). The areas suffering the highest reductions in their share of the construction workforce in the LEP from 2012/13 to 2016/17 are Tandridge (-5.0%), Arun (-4.9%) and Lewes (-2.5%).

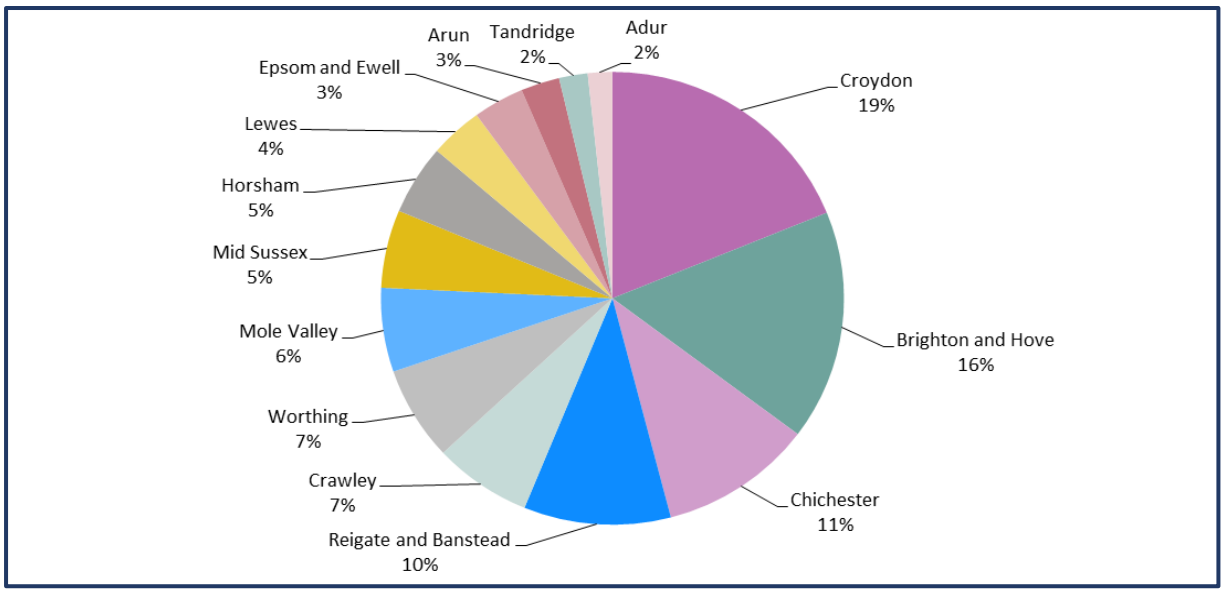

Figure 8: Construction employment by area within the Coast to Capital LEP area (2017, NOMIS)

This slightly 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 41% of the UK construction workforce being self-employed, a figure that rises to 46% for the South East region. Interestingly, the figure for the Coast to Capital LEP area is higher than both the UK and the South East, with 50% of those working in construction in the LEP classified as self-employed. This is perhaps as a consequence of the slightly higher proportion of micro sized companies in the Coast to Capital LEP as a percentage of total companies (95.8% in the Coast to Capital LEP vs. 94.1% average for the UK and 95.0% for the South East). Self-employment levels have increased across both the Coast to Capital LEP and the wider South East region since 2012/13, from 47% to 50% in the Coast to Capital LEP and from 43% to 46% across the South East, perhaps reflecting the fact growth in businesses in both areas has been driven mostly by an increase in micro-sized companies.

When it comes to business size, the distribution of companies across the Coast to Capital LEP area is however largely reflective of the pattern seen across the South East as a whole, and indeed the United Kingdom, with the majority of construction companies being micro sized. However, as mentioned, the Coast to Capital LEP has a slightly higher proportion of micro companies (96% of total companies in the LEP) and slightly lower proportions of small and medium sized companies (3.8% and 0.4% respectively of total companies in the Coast to Capital LEP) than the average for both the South East and the UK, as shown in Figure 9.

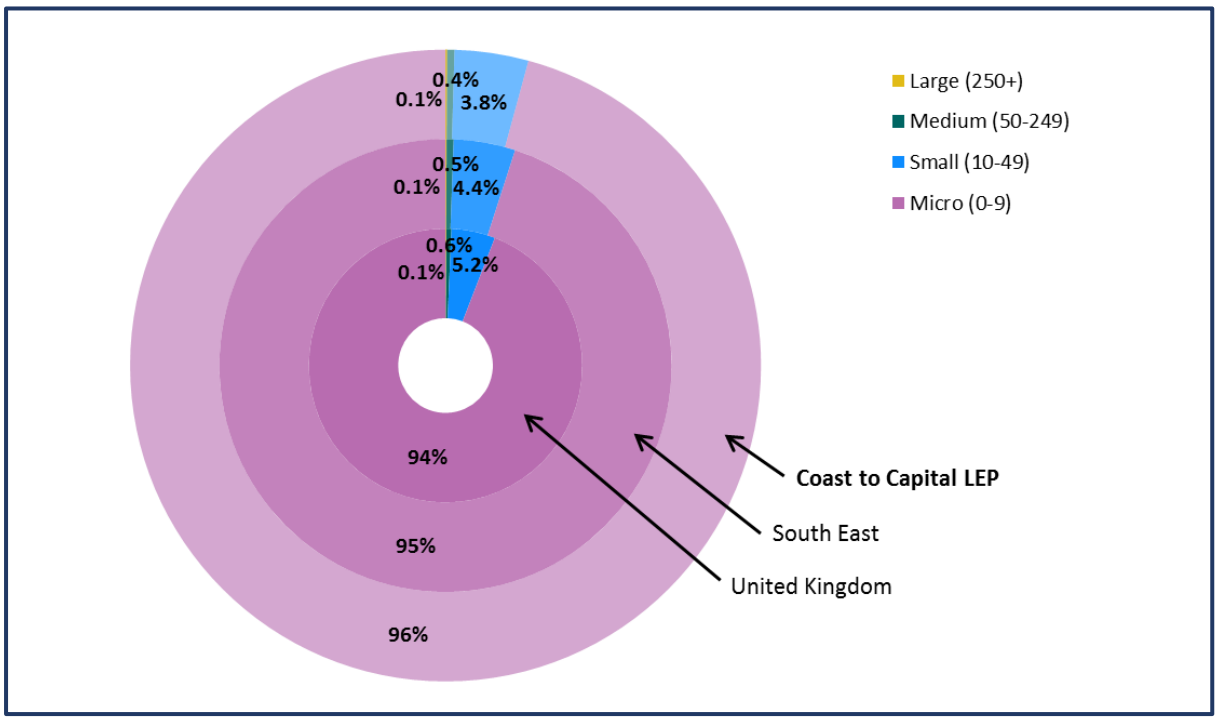

Figure 9: Construction Businesses by Size (UK Business Count, NOMIS 2017)

The majority of growth in construction businesses within the Coast to Capital LEP has been due to an increase in the number of micro sized companies, accounting for 99% of the growth in construction businesses from 2013 to 2017 in the LEP during this period. Growth in micro businesses in the Coast to Capital LEP has increased at a slightly higher rate than the South East (29% growth in Coast to Capital LEP vs 24% in the South East region as a whole since 2013).

Table 7: Current construction workforce - occupational breakdown, 2016 (Source Experian & CITB)

Construction workers in the Coast to Capital LEP area listed by occupation [Calculated as 21.7% of the CSN data for the South East Region]	**Coast to Capital LEP**	**South East**
Other construction professionals and technical staff	7,440	34,230
Other construction process managers	6,550	30,120
Senior, executive, and business process managers	5,690	26,190
Surveyors	1,900	8,740
Construction Project Managers	1,590	7,330
Civil engineers	1,370	6,280
Construction Trades Supervisors	1,290	5,920
Architects	1,110	5,090
Wood trades and interior fit-out	8,150	37,490
Electrical trades and installation	6,030	27,740
Plumbing and HVAC Trades	5,560	25,560
Labourers nec*	4,460	20,510
Building envelope specialists	4,050	18,620
Painters and decorators	3,720	17,120
Specialist building operatives nec*	1,800	8,300
Bricklayers	1,760	8,080
Roofers	1,680	7,740
Plasterers	1,200	5,500
Plant mechanics/fitters	1,080	4,970
Plant operatives	1,060	4,880
Glaziers	940	4,320
Floorers	830	3,830
Logistics	630	2,880
Steel erectors/structural fabrication	620	2,850
Scaffolders	520	2,370
Civil engineering operatives nec*	360	1,670
Non-construction professional, technical, IT, and other office-based staff	11,680	53,740
Non–construction operatives	580	2,660
Total	**83,630**	**384,720**

Note: numbers rounded to the nearest 10
Note: nec: not elsewhere classified; HVAC: Heating, ventilation and air-conditioning.*

Key

Manager/Professional occupations
Skilled Trades
Office-based Staff

4.2 Training provision

The total volume of training provision in the Coast to Capital LEP has reduced over the four years from 2012/13 to 2015/16, with the number of new starters decreasing by 16% over this period. However, despite an overall decline in numbers, the number of new starters on apprenticeships has increased by 29% over the same period.

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

- The Coast to Capital LEP accounts for 27% of all identified construction related training across the South East region
- Whilst there has been a reduction in the total number of construction learners starting in the Coast to Capital LEP (-16%), this has occurred against a back drop of a slightly higher reduction in construction learners starting across the South East region as a whole (-17%)
- Although construction apprenticeship starts have increased across the Coast to Capital LEP (29% increase from 2012/13 to 2015/16), this is slightly lower than the increase in construction apprenticeship starts across the South East as a whole over the same time period (36%)
- There has been a drop in other Education and Training construction learner starts (i.e. non-Apprenticeship construction qualifications) across both the Coast to Capital LEP (-22%) and the South East as a whole (-25%)
- Construction training within the Coast to Capital LEP is balanced slightly more towards qualifications at Level 2 and above, which account for 56% of starts over this period
- Looking at the location of provision, the decrease in starters within the Coast to Capital LEP has been driven largely by a reduction in learner volumes in Crawley, Chichester, Epsom & Ewell and Horsham, which between them account for a decrease of 920 starters
- Mid Sussex, Croydon and Reigate and Banstead are the main areas which have experienced an increase in starts within the Coast to Capital LEP over this period (accounting for an increase of 90 starters).

“Knowledge” based qualifications describe those qualifications that typically have a theoretical basis so are more likely to be ‘classroom based’. “Competence” based qualifications, in the main achieve a recognised NVQ and so a link can be made between the qualification title and the likely occupation that an individual will have. For example someone starting or achieving a Bricklaying qualification is highly likely to be working as a Bricklayer as competence based qualifications are based on an assessment of work based skills.

Table 8 shows qualification achievements over the last four years for the identified competence based qualifications, comparing achievement volumes against the overall pattern for the South East as a whole[3]. From this analysis there looks to be patterns for particular occupations.

The majority of the achievements referred to in Table 8 are at Level 2 (67%), with a smaller proportion at Level 3 (32%) and a very small minority at Level 4 and above (1%).

The percentage comparison with the South East region as a whole is used to demonstrate how the provision of training in the Coast to Capital LEP by occupation is relatively high or low against the regional context.

[3] The information shown in Table 8 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

The **first group** of occupations to be identified account for the **main training volumes**, and are generally consistent with the overall training pattern seen in the South East. These are:

- Electrical trades and installation
- Civil engineering operatives nec*
- Wood trades and interior fit-out
- Plumbing and HVAC trades, and
- Plant operatives

Here the qualification achievements are consistent with or slightly higher than the overall share of training being achieved in the LEP area or there is a larger volume of training being delivered against them. For occupations such as wood trades and plumbing, the volume of training will be related to their share of employment, while for others such as plant operators, training will be more related to the need to demonstrate competence for these roles through card scheme monitoring (for example the CPCS Card scheme for Plant Operatives).

Table 8: Competence qualification achievements in Coast to Capital LEP as a % of total competence qualification achievements in South East region as a whole (Source: CITB/SFA)

Construction Occupations	2012-13	2013-14	2014-15	2015-16	Total Competence Achievements (Learner Aims) 12-13 to 15-16	Total
Grand Total	**1,200**	**1,000**	**930**	**830**	**3,970**	**-**
Grand Total (% of South East Total)	**19%**	**18%**	**19%**	**21%**	**-**	**19%**
Main Occupations						
Electrical trades and installation	29%	28%	28%	25%	830	28%
Civil engineering operatives nec*	24%	15%	25%	19%	260	21%
Wood trades and interior fit-out	19%	19%	19%	15%	620	18%
Plumbing and HVAC Trades	9%	20%	18%	27%	680	17%
Plant operatives	23%	16%	13%	8%	550	17%
Occupations with good provision						
Steel erectors/structural fabrication	81%	20%	43%	25%	50	48%
Glaziers	16%	7%	14%	62%	180	31%
Roofers	11%	23%	29%	26%	50	22%
Painters and decorators	22%	16%	14%	22%	150	19%
Occupations to Monitor						
Construction Trades Supervisors	19%	17%	18%	0%	50	18%
Specialist building operatives nec*	16%	14%	17%	18%	150	16%
Floorers	20%	6%	21%	12%	70	16%
Bricklayers	12%	16%	14%	8%	190	13%
Building envelope specialists	14%	11%	10%	13%	50	12%
Low Overall Learner Volumes						
Logistics	58%	50%	37%	0%	20	45%
Construction managers	43%	0%	13%	67%	30	33%
Scaffolders	15%	6%	14%	10%	30	11%
Other construction prof/tech staff	8%	14%	3%	6%	20	8%
Plasterers and dry liners	14%	2%	0%	7%	10	8%
Plant mechanics/fitters	0%	10%	0%	0%	<10	3%

**nec – not elsewhere classified*

Note: Total achievements are across the period 2012-13 to 2015-16 have been rounded to the nearest 10

There is a **second group of occupations with good provision:** where there appears to be a higher level of provision for occupations such as steel erectors/structural fabrication, glaziers, roofers, and painters & decorators. It could be that there are providers with particular specialisms in these areas operating with the LEP, or a particular need for this type of training.

The third group – occupations to monitor: identifies a small number of occupations where we would expect higher levels of training, again linked to either the occupational size and/or demonstrating competence. This cluster includes construction trades supervisors, specialist building operatives, floorers, bricklayers and building envelope specialists, and represents where training happening within the LEP is lower than would be expected. It is possible that individuals within the Coast to Capital LEP may be travelling outside the area for this type 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. 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, just under 100 different providers have delivered training for the Coast to Capital LEP area between 2012/13 and 2015/16. However, there is a consistent pattern with over 90% of training being delivered by a core network of 10 providers, as shown in Table 9.

Table 9: Top 10 training providers delivering training to the Coast to Capital LEP by number of starts – excluding apprenticeships (Source: CITB/SFA)

Provider	2012-13	2013-14	2014-15	2015-16	Total (Learner Aims)	% Share of Total Quals	% of Quals Ofqual Registered
Central Sussex College	2,050	1,750	1,480	1,260	**6,530**	18.8%	**54%**
NE Surrey College of Tech. (NESCOT)	1,740	1,370	1,610	1,350	**6,070**	17.5%	**58%**
Chichester College	1,640	1,570	1,840	860	**5,920**	17.1%	**74%**
City College Brighton and Hove	860	880	780	730	**3,250**	9.4%	**82%**
East Surrey College	450	530	640	520	**2,140**	6.2%	**81%**
A4E Ltd	710	930	480	0	**2,120**	6.1%	**0%**
Croydon College	790	390	440	350	**1,970**	5.7%	**93%**
Manchester College	110	680	340	480	**1,600**	4.6%	**34%**
Northbrook College Sussex	240	190	190	190	**810**	2.3%	**74%**
Col. of Haringey, Enfield & NE London	0	240	430	140	**810**	2.3%	**100%**

Note: Number of starts has been rounded to the nearest 10
RAG rating indicates providers' performance against the average for all providers in the LEP (65%)

All of the top 10 providers are located within the Coast to Capital LEP, with the exception of Manchester College and the College of Haringey, Enfield & North East London. Central Sussex College, North East Surrey College and Chichester College are the largest providers of construction training to the LEP area, although the former two provide a lower percentage of Ofqual registered qualifications than the average for the area (65%). City College Brighton and Hove and East Surrey College perform better in this regard, with over 80% of their qualifications Ofqual registered.

This profile is typical of many LEP areas, where a relatively small group of FE colleges deliver the majority of construction training. 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.

When looking at training provision across individual local authorities within the Coast to Capital LEP (

Table *10*);

- Decreases in learner starts are most notable in Horsham, Worthing, Adur, Crawley and Chichester.
- This is compensated to a small degree by increases in Mid Sussex, Croydon and Reigate and Banstead.
- Whilst Croydon has a low level of qualifications at Level 2 or above (just 30%), Mid Sussex is well above average for the LEP as a whole at 85%.

Table 10: Unique Learner starts by area, construction subjects, all levels (Source: CITB/SFA)

Local Authority	2012-13	2013-14	2014-15	2015-16	% Net change 12/13 - 15/16	% Quals at Level 2+
Epsom and Ewell	1,400	1,110	1,240	1,220	-13%	63%
Crawley	1,280	1,040	1,090	920	-28%	55%
Croydon	840	880	1,370	870	4%	30%
Brighton and Hove	960	980	910	860	-10%	71%
Reigate and Banstead	720	760	810	730	1%	53%
Chichester	940	880	850	710	-24%	52%
Worthing	470	390	300	230	-51%	35%
Mid Sussex	140	90	210	190	36%	85%
Arun	140	120	200	130	-7%	55%
Horsham	250	440	300	110	-56%	69%
Lewes	60	60	180	60	0%	93%
Tandridge	70	80	90	60	-14%	98%
Adur	50	30	30	30	-40%	92%
Mole Valley	30	20	30	30	0%	96%
Grand Total	**7,160**	**6,780**	**7,420**	**6,020**	**-16%**	**56%**

Note: Number of starts has been rounded to the nearest 10
RAG rating indicates Local Authority performance against the average for all Local Authorities in the LEP

As a whole, the Coast to Capital LEP area is showing a decrease in the number of construction learner starts of -16% across the four years at a time when the wider South East region also experienced a similar decline of -17% over the same period.

Looking at where the decline in learning is taking place, it is perhaps positive to note the reduction in learner starts is most prominent in non-apprenticeship qualifications at entry level and level 1, where learner starts have reduced by 30% from 2012/13 to 2015/16. For non-apprenticeship qualifications at level 2 and above, the reduction is less severe at -14%, but does nevertheless highlight the extent to which providers within the Coast to Capital LEP have seen a reduction in learners on more college-based construction education and training courses.

However, countering this decline there has been a strong 29% increase in the number of apprenticeship starts within the Coast to Capital LEP between 2012/13 and 2015/16. Whilst the college based 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 positive that the Coast to Capital LEP has witnessed this increase in apprenticeships over these four years. Apprenticeships are investigated in more detail in the next section.

4.3. Apprenticeships

When apprenticeships are considered as a subset of all construction training in the Coast to Capital LEP, we can see that the number of apprenticeship starters is increasing at a time when volumes of training overall are declining. Table 11 shows that the number of apprenticeship starters in the Coast to Capital LEP went up by 29% from 2012/13 to 2015/16, in comparison to the 16% overall decrease in the total number of construction learner starts across the same time period (see Table 11).

The Local Authority areas within the Coast to Capital LEP making the biggest contribution to this increase from 2012/13 to 2015/16 are Mid Sussex, Reigate and Banstead, Epsom & Ewell and Croydon. These four Local Authority areas saw an increase of 350 apprenticeship starts. A few areas, most notably Brighton and Hove, have seen a decrease over the same period.

The Coast to Capital LEP has a 19% share of total apprenticeship starters per annum in the South East region, however the overall increase of 250 construction apprenticeship starters (a 29% increase) from 2012/13 to 2015/16 across the Coast to Capital LEP is slightly below the overall increase of 36% construction apprenticeship starters for the South East region as a whole.

Table 11: Unique apprenticeship starts by area (Coast to Capital LEP), construction subjects (Source: CITB/SFA)

Local Authority	2012-13	2013-14	2014-15	2015-16	Increase/ decrease 12-13 to 15-16	% Net Change
Mid Sussex	40	40	140	170	130	325%
Reigate and Banstead	50	60	90	160	110	220%
Epsom and Ewell	120	110	140	180	60	50%
Croydon	50	70	90	100	50	100%
Tandridge	40	40	60	50	10	25%
Horsham	60	80	70	70	10	17%
Lewes	30	20	40	40	10	33%
Worthing	40	40	40	40	0	0%
Crawley	50	20	50	50	0	0%
Mole Valley	20	20	<10	20	0	0%
Chichester	150	120	130	140	-10	-7%
Arun	40	20	30	20	-20	-50%
Adur	40	30	20	20	-20	-50%
Brighton and Hove	230	150	140	140	-90	-39%
Grand Total	**870**	**760**	**920**	**1,120**	**250**	**29%**

Note: Number of starts and any increase/decrease have been rounded to the nearest 10
RAG rating indicates Local Authority performance against the average for all Local Authorities in the LEP (29%)

Table 12 overleaf considers apprenticeship starts by trade, and shows the biggest increase in volume terms from 2012/13 to 2015/16 has occurred in plumbing and HVAC trades, wood trades and interior fit-out, and specialist building operatives (all increases of 30 or higher). The only occupation to experience a decrease in apprenticeship starts over the same time period is roofers.

Table 12: Unique apprenticeship starts by occupation (C2C LEP), construction subjects (Source: CITB/SFA)

Occupation	2012-13	2013-14	2014-15	2015-16	Increase/ decrease 12-13 to 15-16
Plumbing and HVAC Trades	240	180	260	280	**40**
Wood trades and interior fit-out	170	180	200	210	**40**
Specialist building operatives nec*	20	30	30	50	**30**
Electrical trades and installation	210	170	200	230	**20**
Civil engineering operatives nec*	10	30	20	30	**20**
Glaziers	10	20	20	30	**20**
Other construction prof & tech staff	<10	10	10	10	**10**
Plasterers and dry liners	<10	<10	10	10	**10**
Construction Trades Supervisors	0	0	0	10	**10**
Bricklayers	40	30	50	40	**0**
Painters and decorators	30	10	20	30	**0**
Floorers	10	10	10	10	**0**
Scaffolders	10	10	10	10	**0**
Building envelope specialists	<10	0	0	<10	**0**
Plant mechanics/fitters	<10	0	0	<10	**0**
Construction managers	<10	0	0	0	**0**
Plant operatives	<10	0	0	0	**0**
Roofers	10	<10	10	<10	**-10**

Note: Number of starts and any increase/decrease have been rounded to the nearest 10
RAG rating indicates Local Authority performance: green is positive, no change is amber and negative is red

Table 13 considers apprenticeship starts by provider. Just over 70 different providers in total have delivered apprenticeships in construction for the Coast to Capital LEP area between 2012/13 and 2015/16. However, as with non-apprenticeship training starts, the bulk is being delivered by a core network of 10 providers who account for 87% of all provision in the LEP. North East Surrey College of Technology and CITB are the two largest providers, both delivering 170 new apprenticeships starts in the LEP in 2015/16. City College Brighton and Hove, Chichester College and Central Sussex College, whilst all still delivering strong volumes, have however suffered declines in the number of new starters on construction apprenticeships since 2012/13.

Table 13: Unique apprenticeship starts by provider in Coast to Capital LEP (subjects (Source: CITB/SFA)

Occupation	2012-13	2013-14	2014-15	2015-16	Total 2012-13 to 2015-16	% share of all starts
North East Surrey College of Tech.	110	110	130	170	510	**14.0%**
CITB	90	100	140	170	500	**13.5%**
City College Brighton & Hove	190	90	70	110	460	**12.3%**
Chichester College	130	90	100	100	420	**11.2%**
Central Sussex College	120	80	100	70	370	**9.8%**
Fareham College	30	60	110	130	330	**8.9%**
Northbrook College Sussex	40	50	60	50	200	**5.3%**
East Surrey College	10	20	40	90	160	**4.4%**
JTL	30	40	40	40	150	**4.1%**
Croydon College	40	20	40	30	130	**3.4%**

Note: Number of starts and any increase/decrease have been rounded to the nearest 10

4.4. Higher Education

The Coast to Capital LEP area has:

- Four HE providers based within the LEP area, although only one, the University of Brighton, offers construction-related courses at HE level
- The University of Brighton accounted for 12% of construction related achievements at HE level across the South East in 2015/16, and has good provision across the three construction HE areas of Architecture, Civil Engineering and Building, but less so in Planning due to it only being offered at masters level
- A high number of HE achievements as a percentage of existing workforce: 9% for Architects, 7% for Civil Engineers, and 2% for Construction Project Managers/Construction Trade Supervisors, although less than 1% for Surveyors

There are five broad Higher Education (HE) qualifications that relate to construction: Architecture, Building, Civil Engineering, Planning, and Landscape & Garden Design.

All these courses, with the exception of Landscape & Garden Design, are offered in the South East region at the 12 HE institutions that offer construction-related courses here. Of these 12 HE institutions, one is based in the Coast to Capital LEP: the University of Brighton.

Figure 10 shows the number of achievements per annum at the sole institution offering construction-related courses at HE level in the Coast to Capital LEP (the University of Brighton). These have been decreasing year on year from 340 in 2011/12 to 270 in 2015/16 (a 21% decrease), but it is interesting to note that the reduction in numbers has been concentrated mainly in both Building (-41%) and Architecture (-17%), whilst Civil Engineering numbers have increased over the

same period (by 13%). There have only been a very small number of achievements in Planning each year in the Coast to Capital LEP, and none in Landscape & Garden Design since 2012/13.

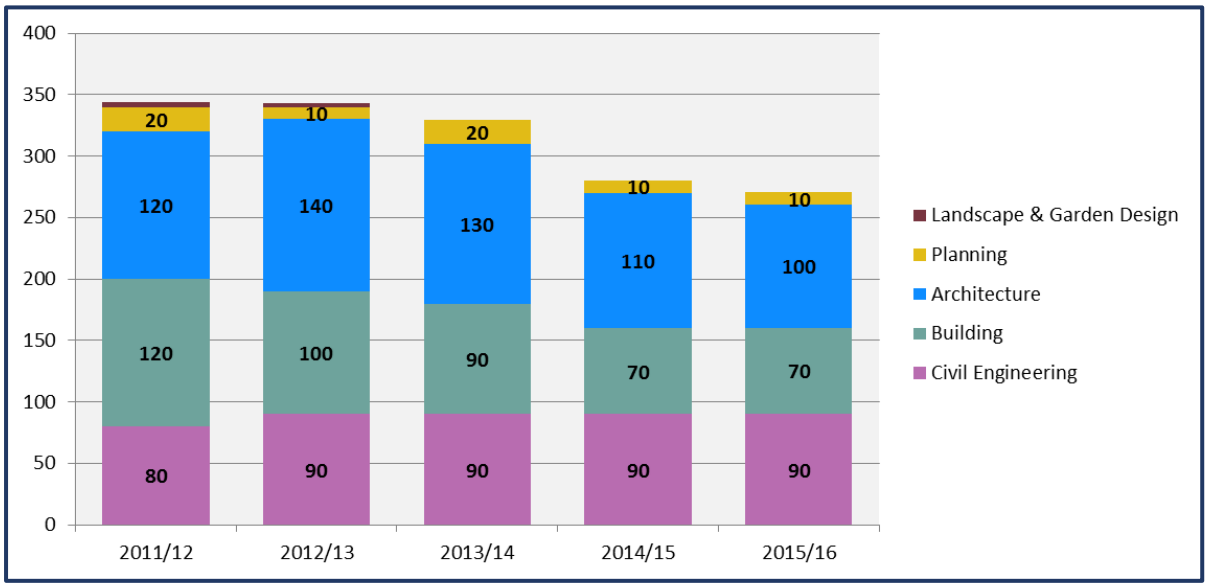

Figure 10: Higher Education achievements per annum in the Coast to Capital LEP (Source: HESA)

Table 14 looks at the spread of higher education achievements by qualification area across the institutions in the South East for the 2015/16 academic year. This highlights the extent to which the University of Brighton in the Coast to Capital LEP has a solid presence in the delivery of construction related qualifications at HE level in the South East region, accounting for 16% of Building qualifications, 13% of Civil Engineering qualifications, and 12% of Architecture qualifications in the region in 2015/16. It is slightly less well represented in the area of Planning, where the university accounted for only 3% of qualifications in the South East in 2015/16.

Institution	Civil Engineering	Building	Architecture	Planning	Others	Total
The University of Brighton	90	70	100	<10	0	**270**
Canterbury Christ Church University	0	10	0	0	0	**10**
University for the Creative Arts	0	0	80	0	0	**80**
The University of Kent	0	0	170	0	0	**170**
The Open University	<10	0	0	0	0	**<10**
Oxford Brookes University	0	50	270	160	0	**470**
The University of Portsmouth	150	60	190	<10	40	**450**
Southampton Solent University	20	80	40	0	0	**140**
The University of Oxford	0	0	0	20	0	**20**
The University of Reading	0	170	0	30	0	**210**
The University of Southampton	160	0	<10	0	0	**160**
The University of Surrey	270	0	0	0	0	**270**
Total - South East	700	440	850	220	40	**2,250**
Total - Coast to Capital LEP only	90	70	100	<10	0	**270**
% of total achievements in the South East delivered in C2C LEP	**13%**	**16%**	**12%**	**3%**	**0%**	**12%**

Table 14*: Achievements on construction related degree courses at HE institutions in the South East – 2015/16 academic year (Source: HESA)*

When achievements within the LEP area for 2015/16 are considered as a proportion of those currently employed in the corresponding roles within the LEP area for 2016, Civil Engineering achievements account for about 7% of the current number of civil engineers; Building achievements account for 2% of the current number of construction project managers and construction trade supervisors; and Architecture achievements account for 9% of the current number of architects. Less positively, due to the low number of Planning achievements, these only form a negligible percentage of people currently in these occupations in these occupations.

These figures for achievements per annum considered as a percentage of the existing workforce across Civil Engineering and Architecture, and perhaps to a lesser extent Building, are strong, indicating a good level of higher education provision in the Coast to Capital LEP for construction. However, unlike Further Education, there is a greater likelihood that after graduation, HE students will be more mobile and may take up employment opportunities out of the LEP area, or not take up positions in the jobs for which they studied. Nevertheless, it gives a crude indication of the adequacy of provision for these subjects within the LEP area, implying that apart from Planning, HE availability is sufficient to meet likely demand and the challenge will therefore be whether these graduates can be retained within the LEP to fill any demand for these roles that may exist going forward. The adequacy of skills supply and forecast demand is considered later in this report.

There are a number of significant challenges to address in understanding Higher Education's place in UK construction. Most significantly, those starting and completing HE level qualifications are more willing to travel significant distances to study and then find employment. For many students the opportunity to leave home and move to a new town or city is one motivation for entering HE. In the UK, this has become normalised. A 2014 study undertaken by Education Phase on behalf of TV Licensing indicated that the average distance from home to place of HE study was around 90 miles. This also indicated that of the sample, only around 5% of HE students were studying within 20 miles of home and that 78% moved 60 or more miles from home (or were from overseas).

However, when questioned, different institutions responded differently – with some universities indicating that they believe they attract students from closer to home while others have a more national and often international focus. This is in part down to the course type and its availability elsewhere. There does appear to be a rough correlation between UCAS points entry requirements and distance students are willing to travel. Typically, the most demanding universities draw students from a greater average distance, with many universities now targeting international students.

Once a student has finished their course there is limited centrally available data on their destination, both in terms of career type and location. HE institutions are now collecting increasingly detailed data on destinations, which could be harnessed to understand what proportion of those completing higher education move into a career in construction, and what proportion move into careers unrelated to their course

4.5 Career progression

Relatively limited information is available to explain any trends in career progression. The complexity of occupations, qualifications and the inability to track individuals make establishing a clear picture extremely difficult.

There is some anecdotal evidence to suggest that:

- Some more experienced workers are able to move into supervisory roles
- Some experienced workers take on a greater variety of occupational skills (and are therefore able to say they have experience working in several occupations)

- There is a more structured career progression among the professions (backed by professional development/CPD routes through Professional Chartership, to allow individuals to work progressively towards Member or Fellow status. However not all professionals will be a part of a professional body)
- The professions are more likely to work to an older age in their chosen field. However this is balanced against professionals tending to start at an older age as a result of the need for higher level education and accreditation.

In December 2016 CITB commissioned a report considering "Career progression in the construction industry". This identified a number of trends in relation to the **Progression of construction workers into teaching and training roles.**

Anecdotal evidence suggests that the primary issue, especially amongst full-time teaching staff, is fear about losing touch with one's professional or vocational background. There is a view that that regular return to industry should be facilitated so that technical teachers could refresh their practical knowledge, skills, and stay abreast of innovation.

Results of a 2010 study into what employers wanted from training and trainers showed that, while they prioritised industry skills and knowledge above education skills and knowledge, a complex mixture of the two was required, which was generally felt to be lacking.

This suggests that initiatives aiming to utilise 'retirees' in Vocational Education Training (VET) needs to consider how individuals can keep their skills up-to-date.

In this sense whilst any initiative to engage retirees in training has some benefit in terms of keeping skilled people engaged with the sector it creates another challenge if employers perceive those individuals to have 'out-dated' skills.

4.6 Main points – supply

Coast to Capital LEP area training provision:

- Around 100 training providers have delivered construction-relevant FE courses within the Coast to Capital LEP over the last four years
- Ten main providers deliver over 90% of provision
- Achievement numbers are highest in the areas of high population density and/or where the major colleges within the LEP are located. Epsom and Ewell, Crawley, Brighton and Hove, Reigate and Banstead, and Chichester all had achievement numbers of 850 or higher in 2015/16, whilst the remaining local authorities in the LEP each delivered 300 or fewer.
- Training is delivered across the full range of construction occupations
- There are good levels of competence qualifications achievements across many construction occupations, most notably electrical trades and installation, civil engineering operatives, steel erectors/structural fabrication, glaziers, roofers and painters & decorators
- The occupations where the level of competence qualifications falls below the levels we might expect for the LEP includes construction trades supervisors, specialist building operatives, floorers, bricklayers and building envelope specialists
- Construction apprenticeship starts in the LEP have increased 29% from 2012/13 to 2015/16, most notably in plumbing and HVAC trades, wood trades and interior fit out, and specialist building operatives. North East Surrey College of Technology and CITB are the largest providers of construction apprenticeships to the LEP

- Experienced workers often move into supervisory roles and take on a greater variety of occupational skills.
- Professionals are likely to have more structured career progression and work to an older age in their chosen field

Coast to Capital LEP area workforce:

- The current construction workforce within the Coast to Capital LEP is estimated at just over 83,630 workers, which experienced positive growth of 4.9% in 2016/17
- Over half of the workforce in the Coast to Capital LEP is located within the Croydon (19%), Brighton & Hove (16%), Chichester (11%) and Reigate & Banstead (10%) local authority areas
- The Coast to Capital LEP area accounts for 22% of the South East's total current construction workforce and 23% of all construction firms in the South East
- Recent employment shows an improving trend in construction workforce numbers within the Coast to Capital LEP area over the last three years and in 2016/17, it exceeded the level of growth in the South East as a whole for the first time since 2013/14.

5. Mobility of the workforce

Construction workforces are fluid by nature and this section of the report will look at findings from the CITB 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 South East Region will be analysed in order to understand how this might impact on future training interventions and the supply of job opportunities for local people.[4]

Appendix E shows the region or nation an employer currently 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. In comparison with other English regions, the South East has a relatively large proportion of workers who travel to other regions to work, as well as a large proportion of workers travelling into the South East to work.

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%.

5.1. Work history

Half of construction workers in the South East have worked in the construction industry for at least 10 years (50%), compared to a higher UK average (56%), with more than a quarter working in the construction industry for over 20 years (28%). The most likely reason for working in the region is because they grew up there/have always lived there (45%). The majority (72%) of construction workers in the region have remained in the South East for all or most of their career, again slightly lower than the UK average of 80%.

Further proof of the higher levels of fluidity of the construction workforce in the South East is emphasised by the finding that only just over half of the workers (56%) here reported their last construction site they worked on was also in the South East.

[4] CITB (2015) Workforce Mobility and Skills in the UK Construction Sector – South East

In terms of the regions/nations in which construction workers' current employer operates in, just under two thirds (65%) of workers in the South East reported that their employer operated within the same region they were currently working in (i.e. also the South East), the lowest of all regions in the UK. This is perhaps unsurprising given the South East's proximity to the capital, with 27% reporting their employer operated in London, whilst a high percentage cited their employer operating in the East of England (19%), the South West (18%) and the East Midlands (12%), as shown in Appendix E.

5.2. 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 more than half of all construction workers in the South East were living in the South East when they started their construction career (55%). Workers currently based in the South East are therefore amongst those least likely to have remained in the same region in which they were based when they started their construction careers, on a par with the East of England (55%) and only ahead of London (50%) in this respect.

Furthermore construction workers in the South East are again least likely to have stayed in the region where they studied for their first qualification (also 55%), with the East of England (50%) and London (58%) again also low. Unsurprisingly, there is a higher than average mention by workers in the South East (14%) of construction workers achieving their qualification in London, and vice-versa 24% of workers in London mentioning achieving their qualification in the South East, emphasising the high degree of mobility between these two regions for learning and training.

5.3. Travel to site

Appendix F shows that the majority of construction workers interviewed in the South East currently both work at a site in the South East and have a current residence in the South East (58%). This means that 42% of construction workers in the South East are travelling into the region for work from another region in which their current residence is based. This figure of 42% is the highest of any region in the UK, and highlights the extent to which workers are willing to travel into the South East to work, mostly from neighbouring regions: from London (12%), East Midlands (9%), East of England (8%) and South West (8%). When looking at the corresponding figures for the London region, 12% of the Capital's workforce has a current residence based in London but are travelling to the South East to work. Given the South East construction workforce currently stands at 384,720 and the Greater London construction workforce at 417,660, we can estimate that around 46,000 construction workers currently commute from the South East to London to work and around 50,000 currently commute from London to the South East to work. We can therefore infer from this that the extent to which the South East and London 'suck' construction workers in from each other's region is well balanced.

Workers in the South East were also asked to indicate the furthest distance they have worked from their permanent or current home in the last 12 months. Figure 11 shows that just over half have worked more than 50 miles away from their permanent home (55%), with 31% having worked between 51 and 100 miles away and 24% having worked more than 100 miles away. Workers based in South East were broadly similar to the UK average (21%) in terms of the proportion of workers that have travelled more than 100 miles from their permanent home to work in the last 12 months.

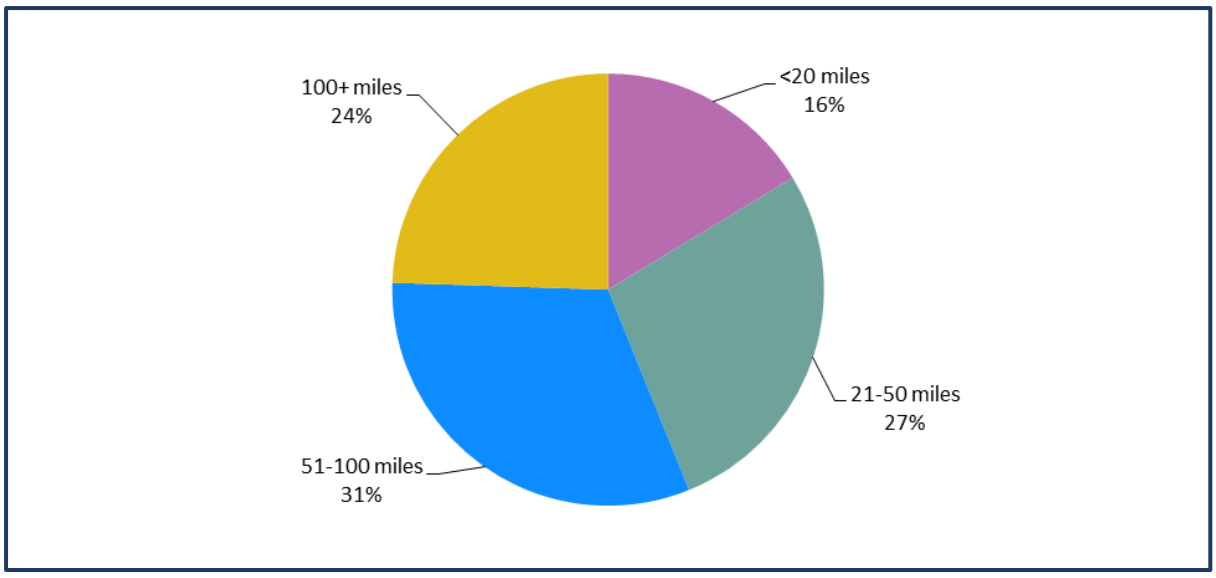

Figure 11: Furthest distance worked in past 12 months (CITB, 2015)

However, the average (mean) distance from workers' current residence (taking into account temporary residences) to their current site was 27 miles for the South East, slightly higher than the UK average of 22 miles. This indicates that although construction workers in the South East display willingness to travel some distance to work, this is likely to be intermittent.

5.4. Site duration and change

In order to get a measure of workplace stability, workers were asked to indicate how long in total they expect to continue working at their current site of work.

Around a fifth of all construction workers in the South East (21%) do not expect to work on that site for more than a month, including 8% that only expect to be there for about a week or less. 29% expect to stay on that site for a year or longer, a notable increase compared with 2012 (12%), suggesting more stable employment in the South East than in 2012. However in more than a fifth of cases (22%) workers do not know how much longer they can expect to be on site.

Three quarters of all construction workers in the South East 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 (77%).

5.5. Sub-sector and sector mobility

All construction workers were asked which types of construction work they have spent periods of at least three months at a time working in.

Compared with 2012 there has been a small increase in the proportion of construction workers that have worked on new housing within the South East, up from 82% to 84%. For all other types of projects the proportion of construction workers that have worked on them has fallen since 2012; this includes housing repair and maintenance (down from 47% to 41%), commercial work (down from 51% to 35%), private industrial (down from 43% to 30%), and infrastructure (down from 32% to 21%).

Around a half of all construction workers have only worked on one project type in the South East (47%), a large increase compared with 18% in 2012, which again suggests a pattern of increased stability in the sector.

5.6. Leaving the sector

In order to assess the potential outflow from the sector in the next five years (led by worker preference), all workers were asked how likely it is that in five years' time they will still want to be working in construction. Within the South East, more than two fifths of construction workers say they definitely will be (43%) and a similar proportion think it is very or quite likely (42%). Just 2% say they definitely won't be and a further 2% hope to be retired by then, while 7% don't know.

Excluding those aged 60 and over (as those over 60 may be assumed to be considering retirement in the next five years), 43% believe they will definitely want to be working in the construction sector and a further 43% believe it is very likely or quite likely they will want to be working in the construction sector. Only 8% think on any level that they will not want to be working in the construction sector in five years' time which is less than in 2012 (16%).

5.7. Main points – mobility

Overall the findings from the Mobility survey indicate a fairly stable, well established workforce across the South East, albeit prone to some movement to and from neighbouring regions. Evidence of movement between neighbouring regions is unsurprisingly most notable with regards to London, although also significant to and from the East Midlands, the East of England and the South West. On the whole though, the workforce in the South East has grown up in the South East or London, undertaken their initial construction training in the South East or London and have stayed there for the majority of their working life. Additionally, optimism across the workforce is high with a majority expecting to still be in the construction industry in five years' time.

Setting the Mobility survey research against the overall workforce and business patterns noted earlier indicates that whilst the South East as a whole region has a fairly stable workforce, workers within the Coast to Capital LEP will not be limited to working only within the LEP – they may travel to work in other areas of the South East region as well as perhaps outside of the region, most likely in London. Likewise, workers in other areas of the South East, as well as potentially other regions, will also be travelling to work within the Coast to Capital LEP.

- More than a quarter of all construction workers in the South East have worked in the industry for at least 20 years (28%). Half have done so for 10+ years (50%)
- More than half of all construction workers in the South East were living in the South East when they started their construction career (55%). Workers based in the South East are amongst those least likely to have remained in the same region in which they were based for their first construction job, with many moving to London to work
- 42% of all construction workers interviewed in the South East travelled into the region from another region in which their current residence is based, the highest of any region in the UK
- Within the South East, 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 construction workers in the South East 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 (77%)
- Overall about half of all construction workers in the South East have only worked on one project type (47%)
- Over two fifths of construction workers in the South East say they definitely will be working in the industry in five years' time (43%) and a further third think it is very or quite likely (42%).

6. Demand against supply

Before looking at demand for construction compared with supply of construction workers, 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 Coast to Capital LEP area, whereas the supply figures are an extrapolation of data for the South East Region.

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 UK Contractors Group UKCG showed that the lead time from planning to work starting on site varied by the type of work and value. Large scale infrastructure and commercial projects take the longest time whereas lower value work in general, along with work in the industrial sector, is able to get on site quickest.

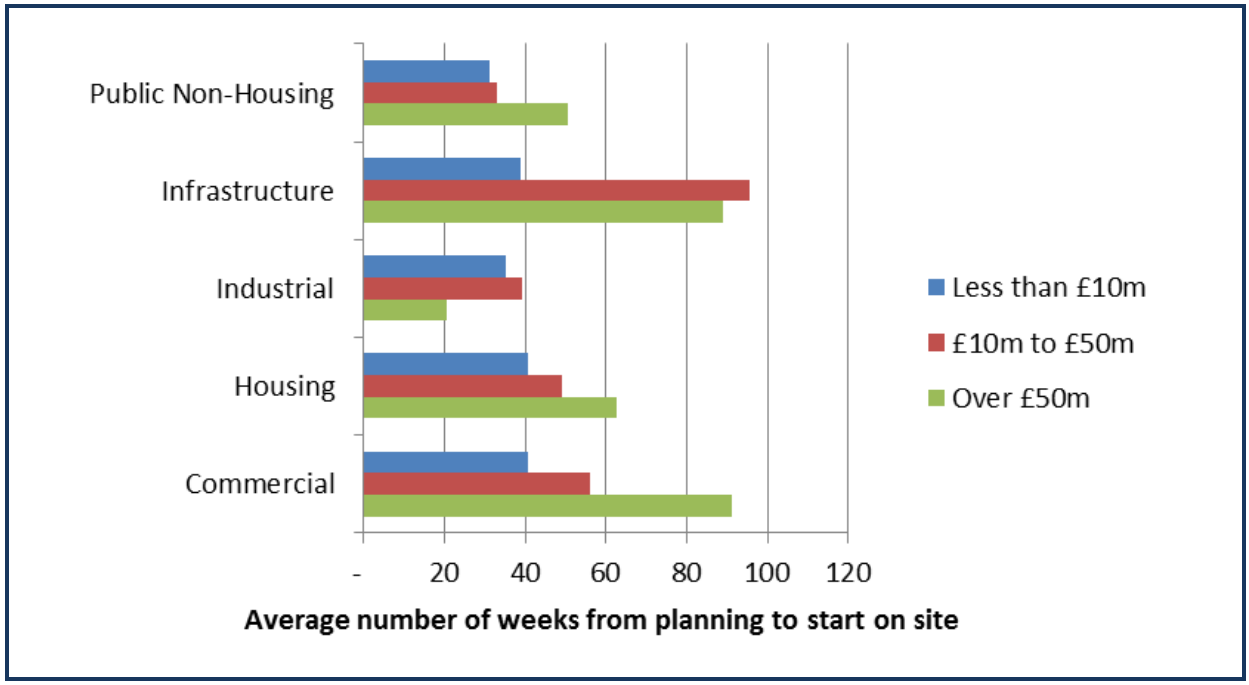

Figure 12: Average number of weeks from planning to work on site, UK 2010-2013 (Source: UKCG/Glenigan)

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 South East indicate that it accounts for 35% of yearly construction output.[5]

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 dryliners, electricians, banksmen/ bankspersons and electricians are most likely to have only worked on one project type, while bricklayers, site managers, plasterers, and plant operatives, are more likely to have worked on a wider range of projects.[6]

[5] CITB(2017) Construction Skills Network – South East
[6] CITB(2015) Workforce Mobility and Skills in the UK Construction Sector – South East

6.1. Gap Analysis

With current construction employment in the Coast to Capital LEP area estimated at just under 84,000, the identified demand forecast for 2018 from projects in Glenigan accounts for 96% of current employment, before reducing in later years as current visibility for future identified projects decreases. Current employment and demand by occupation for 2018 is shown in Table 15.

Table 15: Occupational breakdown of demand for Coast to Capital LEP area against current employment (Source CITB/WLC)

Occupation	Coast to Capital LEP - Current Employment	Coast to Capital LEP - 2018 Demand	Risk rating: shortfall 2018
Construction trades supervisors	1,290	1,630	**1.26**
Civil engineers	1,370	1,660	**1.22**
Architects	1,110	1,160	**1.05**
Surveyors	1,900	1,900	**1.00**
Construction project managers	1,590	1,560	**0.98**
Senior, executive, and business process managers	5,690	5,250	**0.92**
Other construction process managers	6,550	5,990	**0.92**
Other construction professionals and technical staff	7,440	5,020	**0.67**
Civil engineering operatives nec*	360	810	**2.25**
Scaffolders	520	840	**1.63**
Plasterers	1,200	1,580	**1.32**
Plant operatives	1,060	1,320	**1.24**
Plant mechanics/fitters	1,080	1,310	**1.21**
Logistics	630	740	**1.18**
Steel erectors/structural fabrication	620	680	**1.09**
Glaziers	940	1,020	**1.09**
Bricklayers	1,760	1,920	**1.09**
Floorers	830	910	**1.09**
Specialist building operatives nec*	1,800	1,890	**1.05**
Electrical trades and installation	6,030	6,190	**1.03**
Wood trades and interior fit-out	8,150	8,060	**0.99**
Painters and decorators	3,720	3,620	**0.97**
Labourers nec*	4,460	4,090	**0.92**
Roofers	1,680	1,510	**0.90**
Plumbing and HVAC Trades	5,560	4,870	**0.88**
Building envelope specialists	4,050	2,940	**0.73**
Non–construction operatives	580	1,040	**1.80**
Non-construction professional, technical, IT, & other office-based	11,680	10,650	**0.91**
Coast to Capital LEP Total	**83,630**	**80,160**	**0.96**

Key

Manager/Professional occupations
Skilled Trades
Office-based Staff

Note: nec: not elsewhere classified; HVAC: Heating, ventilation and air-conditioning.*
RAG rating: 0 to 0.99 = Green; 1.00 to 1.09 = Amber; 1.10+ = Red

Table 15 shows that there are nine occupations where there is a risk that demand is likely to outstrip current employment estimates. These occupations show a relatively high gap in comparison with other occupations.

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 Coast to Capital LEP 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. Those risks appear most likely to be:

Among professional and managerial roles:

- Construction trades supervisors
- Civil engineers

Among skilled trades:

- Civil engineering operatives
- Scaffolders
- Plasterers
- Plant operatives
- Plant mechanics/fitters
- Logistics

There also appears to be relatively high demand for non-construction operatives.

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

6.1.1. Construction specific occupations

Demand for **Civil engineers** (as well as **Architects** and **Surveyors**) is a reflection of the wider UK shortage.[7] Additionally as professionally qualified occupations, which tend to require degree qualifications, there will be at least three years of education and training before becoming qualified plus years more to gain experience. And if new candidates are to be attracted to join these 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 Coast to Capital LEP area from the wider South East 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.

[7] Migration Advisory Committee (MAC) Shortage Occupation List 2015

Non-construction operatives move between construction and other sectors such as manufacturing and wholesale/distribution. It is possible that experienced workers could be required by other sectors as well as across the broader South East region.

Logistics skills also have an element of cross over, particularly with retail and transport sectors, which could mitigate potential demand. When compared to other occupational groups it is also lower in actual numbers which magnifies percentage changes.

In addition to the major projects identified in the Glenigan Pipeline, there will also be other work carried out in the Coast to Capital LEP area that is captured within the demand analysis where additional workers will be required. This additional work includes projects that are less than £250,000, as well as repair and maintenance work that does not require planning consent, and as noted earlier, this is expected to mean a total workforce demand of just over 80,000 in 2018.

This is quite a static level of future work that would account for around 96% of current employment, which indicates that future employment demand in most cases will be focused on replacing the current workforce levels and equipping them with appropriate skills, rather than an overall increase in workforce supply.

6.2. Gap Analysis – Long Term

When looking at the longer term past 2018, the amount of known work in the LEP area decreases. To give a view on the gap analysis across the wider range of work and over the longer term, Table 16 details the annual Average Recruitment Requirement (ARR) reported within the wider South East CSN 2018-2022 report which can be used to give an indication of long term demand in the Coast to Capital LEP, based on the assumption that the Coast to Capital LEP area will face similar long term demands to those of the South East region as a whole. However, as the Coast to Capital LEP makes up only 22% of the South East's construction workforce, this should only be used as a long term indication.

[The ARR is a gross requirement that takes into account workforce flows into and out of construction, due to such factors as movements between industries, migration, sickness and retirement. However, these flows do not include movements into the industry from training. The ARR provides an indication of the number of new employees that would need to be recruited into construction each year in order to realise forecast output.]

Table 16: Occupational breakdown of ARR for South East region as a whole (Source: CITB)

Occupation	2016 Employment (South East)	ARR 2018-2022 (South East)	ARR as % of Current Employment
Other construction professionals and technical staff	34,230	390	1.1%
Painters and decorators	17,120	350	2.0%
Other construction process managers	30,120	290	1.0%
Construction project managers	7,330	180	2.5%
Non-construction professional, technical, IT, & other office-based	53,740	140	0.3%
Plant operatives	4,880	120	2.5%
Senior, executive, and business process managers	26,190	110	0.4%
Construction trades supervisors	5,920	110	1.9%
Logistics	2,880	110	3.8%
Labourers nec*	20,510	100	0.5%
Surveyors	8,740	100	1.1%
Architects	5,090	80	1.6%
Steel erectors/structural fabrication	2,850	80	2.8%
Floorers	3,830	70	1.8%
Civil engineering operatives nec*	1,670	70	4.2%
Wood trades and interior fit-out	37,490	-	-
Electrical trades and installation	27,740	-	-
Plumbing and HVAC Trades	25,560	-	-
Building envelope specialists	18,620	-	-
Specialist building operatives nec*	8,300	-	-
Bricklayers	8,080	-	-
Roofers	7,740	-	-
Civil engineers	6,280	-	-
Plasterers	5,500	-	-
Plant mechanics/fitters	4,970	-	-
Glaziers	4,320	-	-
Non–construction operatives	2,660	-	-
Scaffolders	2,370	-	-
South East	**384,720**	**2,300**	**0.6%**

Key

Manager/Professional occupations
Skilled Trades
Office-based Staff

Note: nec: not elsewhere classified; HVAC: Heating, ventilation and air-conditioning.*
RAG rating: Red highlights those occupations where ARR as a % of current employment exceeds 2.5% (i.e. the point where we would no longer expect an increase in demand to be covered by normal workforce flows)

The CSN 2018-2022 ARR is consistent with the earlier analysis in identifying a requirement for:

- Civil engineering operatives
- Plant operatives
- Logistics
- Construction trades supervisors
- Non-construction office based staff

And to a lesser extent:

- Architects
- Surveyors
- Steel erectors/structural fabrication
- Floorers

The CSN 2018-2022 ARR also identifies some other occupations with a high occupational requirement, either as actual volumes or as a percentage of current employment. These occupations are:

- Other construction professionals and technical staff (volume)
- Painters and decorators (volume)
- Other construction process managers (volume)
- Construction project managers (volume and % of employment)

The **non-construction office based staff** are likely to have skills that can be transferred over a range of industries so there will be a wider pool of potential recruitment to draw from across the wider LEP economy.

Plant operatives and **construction project managers** have been identified as a high risk due to a combination of comparatively high ARR by volume and an ARR as a percentage of current employment notably above the regional average.

Other construction professionals, painters and decorators and other construction process managers have been identified solely in volume terms because of their comparatively high ARR by volume and high overall employment levels, accounting for 21% of all regional construction employment.

For **civil engineering operatives**, **logistics**, and **steel erectors/structural fabrication** the ARR as a percentage of current employment is notably above the regional average at 4.2%, 3.8% and 2.8% respectively, which indicates potential occupational pressure to meet forecasted demand.

6.3. 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?'* both the demand analysis and CSN has identified civil engineering operatives, plant operatives, logistics, construction trades supervisors and non-construction office based staff as those occupations in greatest demand,

with the demand analysis alone also identifying civil engineers, scaffolders, plasterers and plant mechanics/fitters.

As covered earlier, logistics and non-construction office based staff are not construction specific; therefore we would anticipate supply and demand to be more influenced by retail/warehouse/ transport demands. For civil engineers and construction trades supervisors, much of this demand would typically be met from graduate level recruitment (although construction trades supervisors are increasingly moving to Further Education provision too), which would not be restricted to supply from within the Coast to Capital LEP area. With the wider impacts on these occupations, a training needs analysis specific to the Coast to Capital LEP area is unlikely to give credible views.

The Coast to Capital LEP area, like the wider region, already delivers a significant volume of civil engineering operative competence qualification achievements (21% of the total for the South East, 2% above the 19% average for all competence qualifications the Coast to Capital LEP). Encouragingly, there are also around 30 apprenticeship starts per annum in the LEP for civil engineering operatives. There is also a good volume of training provision for plant operatives (17% of the South East total), but one of the factors will be the exact type of training required, i.e. is an operative trained to use a particular type of machine or perform a niche task? Further work would have to be carried out to determine the extent to which specialist skills in these areas would match future demand, however at the moment the view would be that there is training capability to meet demand.

There is reason to be slightly more concerned with regards to scaffolders, plasterers and plant mechanics/fitters, where competence qualification achievement volumes are low and the Coast to Capital LEP's share of total competence qualification achievement volumes in the South East is also comparatively low – just 11%, 8% and 3% respectively. Apprenticeship starts are also low for these three occupations, at just 10 or less per annum for each.

The second question *"is there the volume of training required across the spread of occupations?"* is a mixed 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, civil engineering operatives, wood trades and interior fit-out, plumbing and HVAC trades, plant operatives, steel erectors/structural fabrication, glaziers, roofers, and painters & decorators.

However:

- There are occupations, such as construction trades supervisors, specialist building operatives, floorers, bricklayers, and building envelope specialists, and as mentioned above, scaffolders, plasterers & dry liners and plant mechanics/fitters, where the levels of competence based training appear to be lower than we would expect.

Although education and training levels within the Coast to Capital LEP appear to be declining, what is positive is this is mainly limited to "knowledge/theory" based qualifications and not the practical, competence based qualifications (particularly Apprenticeships) that employers have a preference for, which in many cases are growing.

7. CONCLUSIONS AND RECOMMENDATIONS

The aim of the Coast to Capital LEP should be to work with partners to address the short, medium and long term challenges that the construction industry faces in the area. Balancing the supply of construction workers and skills against future demand and ensuring that a well-qualified workforce is in place is likely to be assisted by the Local Enterprise Partnership 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 Coast to Capital LEP area will suffer a shortage for some critical construction occupations. While these may be drawn in from others areas, it seems more likely that any net effect will be for workers to be drawn to other neighbouring areas of population and so 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.

There are five core recommendations each including a number of options for tackling the challenge as resource allows.

7.1. BUILD COLLABORATIVE PARTNERSHIPS

7.1.1. Conclusion

It will be essential to ensure that those interested in construction and with an influence over outputs and construction skills in the Coast to Capital LEP area work together.

There are many opportunities for local influencers to work together to: better align the training delivered with the needs of construction employers; to find new opportunities for drawing people into construction related careers and to deliver action that addresses the following recommendations.

7.1.2. Recommendation

a. Establish a construction working group comprising those with a remit to, or influence in, developing the built environment in the LEP area and neighbouring areas and task it with delivering outputs that achieve the LEP's desired outcomes. The LEP will need to share available evidence with them with a view to building collaborative holistic action plans. Those stakeholders include: local construction businesses; major employers; CITB; local authorities; developers (especially those interested in housing); housing associations; those responsible for managing infrastructure (transport and utilities); construction training providers (a representative of where possible) and universities.

b. One possible approach is a Construction Skills Group, which looks holistically at activity, supported by activity specific task and finish groups, which will change and develop over time as activities are completed and new ones started.

7.2. DEVELOP A SKILLS AND ACTION PLAN

7.2.1. Conclusion

Establish and develop a Coast to Capital LEP area construction skills strategy and action plan which recognises collective and potentially unique actions and solutions that may be required.

The ambition should be to develop construction skills and training pathways which match the training and development needs of employers and the local economy.

In the Local Enterprise Partnership area the vast majority of Further Education (FE) training is provided by a small number of providers; so the greatest potential impact is through mediated collaboration with and between these FE colleges and local employers. The focus of these discussions also needs to include how to get learners 'site ready.'

In the Coast to Capital area there appears to be a mismatch between training achievements and occupational supply for some occupations. This suggests a need to work with colleges, employers and graduating students to help ensure that a greater proportion move into appropriate additional and vocational training and the career for which they have a qualification.

7.2.2. Recommendations

a. Develop the Coast to Capital LEP construction skills strategy along with an action plan that ensures that priority is given to trades and professions highlighted in this report as being:
    - In high demand AND at high risk of a shortfall.
    - In high demand
    - At high risk of a shortfall
b. Consideration needs to be given for whether the problem for each occupation lies with the availability of people entering the occupation, whether there is insufficient training provision or whether the required qualifications are available for that specific occupation. Identifying this will help to focus on the most suitable solution.
c. An early opportunity may be to assess if employers are facing specific skills shortages or skills wage inflation and what short-term interventions can be activated to address them.
d. Early consideration should be given to those occupations that need to be site-based, for which demand cannot be met by office based roles that could be located outside the Coast to Capital LEP area.
e. Identify demographic data available and associate, as far as possible, relevant skills and training pathways and actions with opportunities for those where the greatest potential social and economic impact can be gained by addressing occupational shortfalls or other priorities.

7.3. ADDRESS AREAS OF DISPARITY BETWEEN SKILLS AND STAKEHOLDER REQUIREMENTS

7.3.1. Conclusions

It is clear there is high demand for several construction occupations and so there will be continuing demand to train people in essential skills. There are also some apparent gaps between supply and demand where immediate action would help address shortfalls in the near future.

CITB has received anecdotal evidence that in some locations, colleges would like to support the provision of more apprenticeships but that employers are not always providing the opportunities.

In the area of future skills, the CITB report – 'Faster, Smarter, More Efficient: Building Skills for Offsite Construction' – provides an assessment of how the adoption of offsite is changing the skills

and training landscape for construction. New skills need to be considered in order to address new construction methods (e.g. offsite and modular build and the need for BIM applications.)

7.3.2. Recommendations

a. By working together, the major colleges can avoid duplication of effort or share resources, enhance specialisations and explore innovative ways of delivering the curriculum that meets employers' and students' needs.

b. The aims of this should be to: reduce the provision of under-subscribed courses; add provision for over-subscribed courses; add additional or enhance specialist courses to reflect the potential need for new construction skills and balance the provision of training with anticipated demand from the construction contractors locally.

c. A starting point may be to consider those occupations where there appears to be high demand and a high relative gap.

d. Regarding current skills training approaches, emphasis should be on ensuring that training shifts towards or leads to the provision of more competency based training and high quality sustainable apprenticeships. This should enhance the site readiness and behaviours that employers often require.

e. Address any anticipated specific local needs and ensure that training delivers what employers need as part of a complete package of training initiatives.

f. This may involve establishing training pathways through which students can complete initial knowledge based training before progressing into vocational training and apprenticeships and gaining site experience (while finishing their training).

g. In the longer term there may also be opportunities for the LEP to work with those colleges that offer Higher Education qualifications and Universities to consider how they can attract, train and retain the higher level, advanced and 'future' skills for which there appears to be demand and inadequate provision (across the UK). For example, that may be in high demand for the many significant projects that are expected to proceed in the Coast to Capital LEP area and further afield and that will increasingly need to utilise developing technology e.g. Building Information Modelling (BIM).

7.4. FOCUS ON IMPROVING THE IMAGE OF CONSTRUCTION INDUSTRY

7.4.1. Conclusion

Construction is sometimes associated with negative and inaccurate stereotypes that deter potential recruits, with education choices and career decisions often influenced in school and sometimes at a very early age.

It is increasingly clear that influences and preferences are established early in childhood and so it may be appropriate to build a positive profile of construction with children before the age of 11 as well as during secondary education.

This is more of a long term focus as changing perceptions takes time to achieve.

7.4.2. Recommendation

a. Identify which careers related activities, projects and programmes already exist in the area. Establishing whether links can be made between existing activities may achieve efficiencies and effectiveness whilst requiring little LEP resource. Once this mapping is complete then gaps can be identified and appropriate actions put in place.

b. There are opportunities for outreach with those aged 16 and above, in particular those studying relevant STE(A)M subjects but who have not considered that they lead into interesting and rewarding careers in construction or supporting construction.

c. CITB has supported employers across the construction and built environment to come together working with a number of stakeholders to develop an industry led initiative called Go Construct (www.goconstruct.org). This initiative inspires individuals to find out more about the sector, to access an experience with employers from school engagement via the Construction Ambassador scheme and find work experience placements.

d. There may also be more mature audiences that can be encouraged to move into construction careers. This may include people with relevant transferable skills (e.g. from manufacturing or ex-military see Careers Transition Partnership) or those where there is a significant social gain by ensuring they are in valuable employment, in particular the unemployed but also ex-offenders and so contact should be made with DWP and HM Prison Service. Targeted intervention should be included within the construction skills action plan.

7.5. USE PROCUREMENT TO ENABLE SKILLS DEVELOPMENT

7.5.1. Conclusion

Construction is delivered through construction employers and 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 build programme pipelines on which to base their plans. The proportion of employers that are small and micro companies are high and these companies have limited ability to maintain the processes and people to search for local opportunities or that enable collaboration to support larger projects.

7.5.2. Recommendations

a. Working with CITB and Industry to discuss and, where applicable, enable adoption of the National Skills Academy for construction (NSAfC) framework. This will ensure that workers across the main contractor and supply chain, at all levels, are trained to the exact skills needed by each project. There may be a potential for the LEP to adopt the use of a Client based approach; a free toolkit which seeks to provide information and guidance on employment and skills requirements. This would support all of the following recommendations.

b. The potential exists through smarter approaches to procurement (including co-ordinated approaches to Section 106 agreements) to encourage those tendering for construction and infrastructure contracts or those funding developments to be mandated to include provision

for recruitment, training, apprenticeships and outreach that is co-ordinated across the Local Enterprise Partnership area, to achieve both good value for money and wider social benefits.

c. Provision could be required to hold contractors to account for commitments made. Such an approach could be co-ordinated through the Coast to Capital LEP and local authorities and be a requirement of planning applications and local authority and public sector contracts.

d. Early engagement with employers to discuss any such approach is recommended to find ways of ensuring that such requirements take into consideration the industry's needs and circumstances. (i.e. discuss wider social gains with potential suppliers well before tenders documents are published).

e. 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 region.

f. Consideration of the use of smaller lots when procuring schemes and supporting access for small and medium sized employers onto frameworks and supply chains to enable them to grow their businesses which will build further delivery capacity across the Coast to Capital LEP area.

7.6. MAINTAINING & ENHANCING 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.

As part of this report, the Coast to Capital LEP is given 12 months access to the Labour Forecasting Tool, including the source project data used to compile this report. This should be utilised as part of the action planning process to test scenarios, and to update and check the evidence base that supports decision making as circumstances change.

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.

Appendix A. **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.

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 managers	
	(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 managers	
	(2436) Construction project managers and related professionals
3 Other construction process managers	
	(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)	
	(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
5 Construction trades supervisors	
	(5250) Skilled metal, electrical and electronic trades supervisors
	(5330) Construction and building trades supervisors
6 Wood trades and interior fit-out	
	(5315) Carpenters and joiners
	(8121) Paper and wood machine operatives
	(5442) Furniture makers and other craft woodworkers
	(5319) Construction and building trades nec (25%)
7 Bricklayers	
	(5312) Bricklayers and masons
8 Building envelope specialists	
	(5319) Construction and building trades nec (50%)
9 Painters and decorators	
	(5323) Painters and decorators
	(5319) Construction and building trades nec (5%)
10 Plasterers	
	(5321) Plasterers
11 Roofers	
	(5313) Roofers, roof tilers and slaters
12 Floorers	
	(5322) Floorers and wall tillers
13 Glaziers	
	(5316) Glaziers, window fabricators and fitters
	(5319) Construction and building trades nec (5%)
14 Specialist building operatives not elsewhere classified (nec)	
	(8149) Construction operatives nec (100%)
	(5319) Construction and building trades nec (5%)
	(9132) Industrial cleaning process occupations
	(5449) Other skilled trades nec

15 Scaffolders	
	(8141) Scaffolders, stagers and riggers
16 Plant operatives	
	(8221) Crane drivers
	(8129) Plant and machine operatives nec
	(8222) Fork-lift truck drivers
	(8229) Mobile machine drivers and operatives nec
17 Plant mechanics/fitters	
	(5223) Metal working production and maintenance fitters
	(5224) Precision instrument makers and repairers
	(5231) Vehicle technicians, mechanics and electricians
	(9139) Elementary process plant occupations nec
	(5222) Tool makers, tool fitters and markers-out
	(5232) Vehicle body builders and repairers
18 Steel erectors/structural fabrication	
	(5311) Steel erectors
	(5215) Welding trades
	(5214) Metal plate workers, and riveters
	(5319) Construction and building trades nec (5%)
	(5211) Smiths and forge workers
	(5221) Metal machining setters and setter-operators
19 Labourers nec	
	(9120) Elementary construction occupations (100%)
20 Electrical trades and installation	
	(5241) Electricians and electrical fitters
	(5249) Electrical and electronic trades nec
	(5242) Telecommunications engineers
21 Plumbing and heating, ventilation, and air conditioning trades	
	(5314) Plumbers and heating and ventilating engineers
	(5216) Pipe fitters
	(5319) Construction and building trades nec (5%)
	(5225) Air-conditioning and refrigeration engineers
22 Logistics	
	(8211) Large goods vehicle drivers
	(8212) Van drivers
	(9260) Elementary storage occupations
	(3541) Buyers and purchasing officers (50%)

	(4134) Transport and distribution clerks and assistants
23 Civil engineering operatives not elsewhere classified (nec)	
	(8142) Road construction operatives
	(8143) Rail construction and maintenance operatives
	(8123) Quarry workers and related operatives
24 Non–construction operatives	
	(8117) Metal making and treating process operatives
	(8119) Process operatives nec
	(8125) Metal working machine operatives
	(8126) Water and sewerage plant operatives
	(8132) Assemblers (vehicles and metal goods)
	(8133) Routine inspectors and testers
	(8139) Assemblers and routine operatives nec
	(9249) Elementary security occupations nec
	(9233) Cleaners and domestics
	(9232) Street cleaners
	(5113) Gardeners and landscape gardeners
	(6232) Caretakers
	(9241) Security guards and related occupations
	(3319) Protective service associate professionals nec
25 Civil engineers	
	(2121) Civil engineers
26 Other construction professionals and technical staff	
	(2122) Mechanical engineers
	(2123) Electrical engineers
	(2126) Design and development engineers
	(2127) Production and process engineers
	(2461) Quality control and planning engineers
	(2129) Engineering professionals nec
	(3112) Electrical and electronics technicians
	(3113) Engineering technicians
	(3114) Building and civil engineering technicians
	(3119) Science, engineering and production technicians nec
	(3121) Architectural and town planning technicians
	(3122) Draughtspersons
	(3115) Quality assurance technicians
	(2432) Town planning officers
	(2124) Electronics engineers

	(2435) Chartered architectural technologists (3531) Estimators, valuers and assessors (3116) Planning, process and production technicians
27 Architects	
	(2431) Architects
28 Surveyors	
	(2433) Quantity surveyors (2434) Chartered surveyors

Appendix B. **Glenigan projects removed from the Coast to Capital LEP**

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

Number	Heading	Local Authority	Value (£m)	Start Date	End Date	Reason for omission
1	Pumping Station	Horsham	0.0	02/10/2018	11/07/2019	Missing Values
2	Hospital (Refurbishment)	Reigate & Banstead	0.3			Missing dates
3	Windmill (Alterations)	Chichester	0.3			Missing dates
4	Showroom Building	Reigate & Banstead	0.3			Missing dates
5	8 Office Units	Brighton & Hove	0.4			Missing dates
6	Storage Development (New/Conversion)	Epsom & Ewell	0.5			Missing dates
7	Care Home Bedrooms (Extension)	Mid Sussex	0.5			Missing dates
8	9 Flats & 1 Industrial Unit (Extension/Alterations)	Croydon	0.5			Missing dates
9	Offices (Extension)	Mid Sussex	0.5			Missing dates
10	9 Flats & 1 MOT Centre/1 Shop (New/Extension)	Croydon	0.6			Missing dates
11	Hospice (Extension)	Arun	0.6			Missing dates
12	Care Home (Extension)	Reigate & Banstead	0.6			Missing dates
13	Bridge Works	Lewes	0.6			Missing dates
14	Care Home (Extension/Alterations)	Mole Valley	0.6			Missing dates
15	Rugby Club Changing Rooms (Extension)	Horsham	0.6			Missing dates
16	Hotel & Public House (New/Extension)	Worthing	0.6			Missing dates
17	Portable Office Building	Adur	0.7			Missing dates
18	Warehouse	Chichester	0.7			Missing dates
19	6 Houses & 4 Flats	Mole Valley	0.8			Missing dates
20	Hospital (Refurb)	Mole Valley	0.8			Missing dates
21	8 Industrial Units	Chichester	0.8			Missing dates

Number	Heading	Local Authority	Value (£m)	Start Date	End Date	Reason for omission
22	Football Pitch/Athletics Track	Epsom & Ewell	0.9			Missing dates
23	All Weather Pitch	Mid Sussex	0.9			Missing dates
24	4 Flats & 2 Shops/1 Office	Chichester	0.9			Missing dates
25	Village Centre	Mid Sussex	1.0			Missing dates
26	19 Flats	Croydon	1.0			Missing dates
27	Luxury House (Conversion/Extension)	Lewes	1.0			Missing dates
28	College (Extension)	Chichester	1.0			Missing dates
29	Office Building	Adur	1.0			Missing dates
30	Warehouse	Horsham	1.0			Missing dates
31	Airport (Refurbishment)	Chichester	1.1			Missing dates
32	2 Car Showrooms (New/Extension)	Brighton & Hove	1.2			Missing dates
33	Foot/Cycle Link	Mid Sussex	1.2			Missing dates
34	Residential Care Facility	Horsham	1.3			Missing dates
35	Golf Club (Extension)	Tandridge	1.3			Missing dates
36	Church Centre Buildings (Extension)	Reigate & Banstead	1.3			Missing dates
37	Outdoor Activities Centre (Extension)	Adur	1.4			Missing dates
38	4 Flats & 1 Church Hall	Croydon	1.5			Missing dates
39	Care Home Bedrooms (Extension)	Horsham	1.6			Missing dates
40	Supermarket (Expansion/Refurbishment)	Horsham	1.7			Missing dates
41	Sports Pavilion Building	Epsom & Ewell	1.7			Missing dates
42	Football Club Building	Tandridge	1.9			Missing dates
43	39 Flats & 1 Supermarket	Croydon	2.0			Missing dates

Number	Heading	Local Authority	Value (£m)	Start Date	End Date	Reason for omission
44	School	Reigate & Banstead	2.0			Missing dates
45	School Classroom Buildings (Extension/Alterations)	Mid Sussex	2.1			Missing dates
46	Office/Workshop	Croydon	2.2			Missing dates
47	12 Flats & 2 Houses	Mid Sussex	2.8			Missing dates
48	Hotel	Mid Sussex	3.0			Missing dates
49	23 Flats (Conversion/Alterations)	Brighton & Hove	3.0			Missing dates
50	4 Non Food Retail/Industrial/Warehouse Units & 17 Residential Units	Croydon	3.1			Missing dates
51	Mental Health Hospital (Extension)	Mole Valley	3.3			Missing dates
52	45 Holiday Units/Camping Sites	Mid Sussex	3.4			Missing dates
53	Industrial Unit (Extension)	Arun	4.5			Missing dates
54	Nursing Home (Extension)	Horsham	4.6			Missing dates
55	Leisure Centre & Restaurant/Cafe (Extension/Alterations)	Horsham	4.7			Missing dates
56	Care Home	Chichester	4.8			Missing dates
57	Nursing Home	Brighton & Hove	5.0			Missing dates
58	Junction Improvements	Croydon	5.0			Missing dates
59	Dwellings	Croydon	5.0			Missing dates
60	Care Home	Arun	5.4			Missing dates
61	Ambulance Make Ready Centre	Brighton & Hove	6.0			Missing dates
62	School Building	Reigate & Banstead	7.1			Missing dates
63	Golf Academy Building (New/Extension)	Horsham	11.5			Missing dates

Number	Heading	Local Authority	Value (£m)	Start Date	End Date	Reason for omission
64	78 Flats & 1 Retail Unit	Crawley	12.0			Missing dates
65	305 Flats & 4 Commercial Units/1 Gym	Croydon	15.5			Missing dates
66	150 Assisted Living Extra Care/Care Home Flats	Epsom & Ewell	17.9			Missing dates
67	Student Accommodation & Academic Buildings	Brighton & Hove	20.0			Missing dates
68	70 Flats/Offices & Commercial Units	Brighton & Hove	20.0			Missing dates
69	212 Houses/153 Flats/51 Sheltered Units & Commercial Units	Lewes	31.2			Missing dates
70	Horticultural Development	Chichester	96.8			Missing dates
71	School Teaching/Dining Block	Horsham	5.8	25/07/2016	21/07/2017	Consultancy
72	201 Flats & 26 Houses	Crawley	11.4	17/01/2018	17/02/2019	Consultancy
73	Construction Consultancy Projects Framework(New/Refurbishment)	Mole Valley	20.0	05/10/2015	30/09/2019	Consultancy
74	Consultancy Services	Worthing	200.0	01/04/2015	01/04/2020	Consultancy
75	Orbis Professional and Technical Services Framework Contract	Brighton & Hove	500.0	22/11/2017	06/03/2021	Consultancy
76	Hospital Repairs Framework	Worthing	75.0	31/03/2017	31/03/2022	Consultancy
77	Consultancy Framework	Crawley	2500.0	15/05/2017	16/05/2022	Consultancy
78	Design Consultants Contract	Crawley	1.8	10/07/2017	11/07/2022	Consultancy
79	Consultancy Framework	Horsham	2.0	19/07/2013	19/11/2017	Consultancy
80	Consultancy Framework	Worthing	12.0	27/03/2017	29/03/2021	Consultancy
81	Construction Design Framework: Medium/Higher Complexity	Crawley	40.0	07/08/2017	08/08/2022	Consultancy

Appendix C. **Significant Glenigan projects in the Coast to Capital LEP**

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

WLC ID	Description	Local Authority	Construction Value (£m)	Start Date	End Date	Project Type
CtC005	Material Resource Management	Horsham	906.7	26/07/2010	26/10/2018	Infrastructure
CtC288	Construction Framework - Medium Complexity	Crawley	544.0	04/07/2016	05/07/2021	Infrastructure
CtC592	Highway Maintenance Contract	Lewes	272.0	16/08/2016	15/08/2023	Infrastructure R&M
CtC652	Housing Maintenance Contract	Croydon	270.0	05/04/2014	31/03/2029	Housing R&M
CtC197	Bypass	Arun	226.7	14/06/2021	13/06/2022	Infrastructure
CtC242	Highway Infrastructure Design & Build Framework	Chichester	226.7	22/11/2017	01/03/2023	Infrastructure
CtC776	677 Residential Units & Commercial/Community Development	Croydon	198.2	04/07/2015	04/07/2020	New housing
CtC261	Motorway	Crawley	191.3	05/02/2018	06/02/2023	Infrastructure
CtC117	Infrastructure & Non-Infrastructure	Worthing	191.3	01/04/2015	01/04/2020	Infrastructure
CtC030	Hospital (Extension/Alterations)	Brighton & Hove	188.0	06/06/2016	08/06/2026	Public Non-housing
CtC633	501 Flats & Commercial	Croydon	181.4	21/10/2013	27/04/2018	New housing
CtC092	Pier (Extension)	Crawley	159.5	14/11/2017	19/07/2022	Infrastructure
CtC046	337 Residential & Commercial Units	Chichester	151.1	13/07/2013	01/11/2022	New housing
CtC103	Contractors Framework	Chichester	117.5	01/08/2014	01/08/2018	Public Non-housing
CtC575	1,900 Homes & Commercial Development	Crawley	100.8	07/08/2017	04/04/2022	New housing
CtC647	Shopping Centre(New/Refurb)	Croydon	90.0	01/01/2018	12/07/2021	Private Commercial
CtC118	Water/Sewerage (React & Maintain Services Delivery)	Worthing	86.9	01/04/2015	01/04/2020	Infrastructure
CtC127	Student Accommodation	Brighton & Hove	81.6	30/01/2017	28/09/2018	Public Non-housing
CtC576	142 Flats, 450 Student Beds, Academic & Commercial	Brighton & Hove	72.6	28/08/2012	28/08/2020	Public Non-housing

WLC ID	Description	Local Authority	Construction Value (£m)	Start Date	End Date	Project Type
CtC196	Road (Improvements)	Worthing	72.5	11/11/2019	11/05/2021	Infrastructure
CtC642	Street Lighting	Croydon	72.1	01/08/2011	01/11/2019	Infrastructure
CtC641	Highways Maintenance	Croydon	63.5	01/10/2011	01/10/2018	Infrastructure R&M
CtC145	Infrastructure Projects (Framework)	Brighton & Hove	61.7	01/04/2014	01/04/2018	Infrastructure
CtC692	58 Flats & 2 Cafe/Restaurant Units	Croydon	53.6	29/08/2017	28/02/2019	New housing
CtC679	Offices/Estate Management/Retail Building	Croydon	50.6	17/01/2018	17/10/2018	Private Commercial
CtC096	142 Flats & 3 Cinema/Hotel/Library/Retail Units	Mid Sussex	50.1	04/09/2017	10/09/2018	New housing
CtC680	Offices/Retail Building	Croydon	49.3	17/01/2018	17/10/2018	Private Commercial
CtC628	159 Flats & 1 Hotel/1 Restaurant	Croydon	49.1	25/09/2017	19/02/2018	New housing
CtC636	Public Realm Works	Croydon	45.3	12/03/2018	11/03/2024	Infrastructure
CtC677	Offices/Retail Building	Croydon	42.6	17/01/2018	17/10/2018	Private Commercial
CtC691	258 Flats (Conversion)	Croydon	40.0	06/02/2017	05/03/2018	Housing R&M
CtC026	1044 Residential/1 Commercial Unit	Horsham	39.9	17/01/2018	17/03/2021	New housing
CtC258	142 Homes	Brighton & Hove	39.3	02/10/2017	07/10/2019	New housing
CtC150	Pharmaceutical Production Building	Adur	39.2	03/02/2014	26/02/2021	Public Non-housing
CtC037	Supermarket (Redevelopment) /Hotel/ Gym	Reigate & Banstead	38.1	05/10/2015	29/09/2017	Private Commercial
CtC126	Sport & Leisure Complex	Brighton & Hove	38.0	07/08/2017	28/02/2020	Private Commercial
CtC472	Commercial Development (New/Conversion)	Horsham	35.0	14/08/2017	12/11/2018	Private Commercial
CtC087	46 Houses	Arun	34.6	01/09/2015	12/09/2018	New housing

WLC ID	Description	Local Authority	Construction Value (£m)	Start Date	End Date	Project Type
CtC186	Office Building	Epsom & Ewell	32.7	14/12/2016	03/10/2018	Private Commercial
CtC054	153 Residential & Retail Units	Reigate & Banstead	31.2	15/01/2018	18/01/2021	New housing
CtC051	Hotel & Golf Course	Mole Valley	30.0	23/09/2015	20/09/2017	Private Commercial
CtC536	Offices (Refurbishment)	Crawley	30.0	13/02/2017	30/03/2018	Private Commercial
CtC537	Swimming Pool (Extension/Alterations)	Arun	30.0	07/08/2017	01/03/2019	Private Commercial
CtC531	493 Houses/Flats	Crawley	29.0	28/04/2018	26/05/2019	New housing
CtC191	University Building (New/Alterations)	Brighton & Hove	27.4	26/01/2018	02/10/2020	Public Non-housing
CtC338	300 Houses & 98 Flats/1 Local Centre	Chichester	25.1	01/08/2016	01/09/2017	New housing
CtC192	2 Offices & 2 Multi Storey Car Park Decks	Crawley	24.8	11/01/2016	17/11/2017	Private Commercial
CtC315	Flood Defence Works	Adur	24.5	09/09/2016	11/06/2018	Infrastructure
CtC066	291 Homes	Horsham	23.6	27/05/2016	31/05/2018	New housing
CtC644	200 Houses/Bungalows & Flats Framework	Croydon	23.6	02/06/2014	28/05/2018	New housing
CtC097	Strategic Construction Partnership Framework	Brighton & Hove	23.5	06/01/2014	01/01/2018	Public Non-housing
CtC098	Construction Team Framework	Brighton & Hove	23.5	01/10/2013	01/10/2017	Public Non-housing
CtC048	Town Regeneration	Reigate & Banstead	21.8	03/10/2016	30/09/2019	New housing
CtC083	126 Houses & 14 Flats	Mid Sussex	21.4	29/08/2016	31/08/2018	New housing
CtC605	71 Houses & 4 Flats	Lewes	20.0	05/10/2016	27/04/2018	New housing
CtC464	Operations Building/Office/Training Centre	Crawley	19.5	22/05/2017	24/12/2018	Private Commercial
CtC100	160 Residential Units	Horsham	19.1	04/04/2016	30/06/2019	New housing

WLC ID	Description	Local Authority	Construction Value (£m)	Start Date	End Date	Project Type
CtC681	232 Flats & Shop/Office/Restaurant Units	Croydon	17.9	18/12/2017	14/01/2019	New housing
CtC270	266 Houses & 34 Flats	Horsham	17.7	08/01/2018	18/02/2019	New housing
CtC664	175 Residential Units & 1 Office	Croydon	16.8	02/05/2016	02/11/2017	New housing
CtC317	600 Residential Units	Reigate & Banstead	16.5	01/08/2016	01/02/2019	New housing
CtC301	Tidal Walls Scheme	Adur	16.3	19/09/2016	15/09/2018	Infrastructure
CtC412	Residential Development	Brighton & Hove	15.9	04/04/2016	27/04/2018	New housing
CtC386	Hotel & Health Spa	Mole Valley	15.0	04/04/2016	25/08/2017	Private Commercial
CtC411	6 Restaurants (Extension/Conversion)	Adur	15.0	01/11/2017	02/05/2018	Private Commercial
CtC062	Highway Maintenance Work	Mole Valley	14.7	01/11/2013	01/11/2018	Infrastructure
CtC326	Office & Manufacturing (Conversion)	Brighton & Hove	13.5	30/01/2017	29/01/2018	Private Industrial
CtC278	63 Flats (Conversion)	Brighton & Hove	13.5	09/01/2017	08/06/2018	Housing R&M
CtC140	91 Houses	Epsom & Ewell	13.4	31/08/2015	31/08/2017	New housing
CtC466	159 Houses & 66 Flats	Crawley	13.3	13/02/2017	12/03/2018	New housing
CtC130	Waste Treatment Facility	Arun	12.7	05/02/2018	04/02/2019	Infrastructure
CtC339	210 Houses & Flats	Mid Sussex	12.4	09/04/2018	06/05/2019	New housing
CtC369	230 Flats (Conversion/Alterations)	Crawley	12.1	02/04/2018	26/04/2019	Housing R&M
CtC457	Railway Station Upgrade	Reigate & Banstead	11.7	07/10/2016	02/03/2018	Infrastructure
CtC506	Cinema/Restaurant/Cafe/Office/Shop	Brighton & Hove	11.5	05/02/2018	17/09/2018	Private Commercial

WLC ID	Description	Local Authority	Construction Value (£m)	Start Date	End Date	Project Type
CtC245	Hotel (Extension)	Horsham	11.5	21/11/2016	20/04/2018	Private Commercial
CtC222	116 Flats & 77 Houses	Crawley	11.4	01/06/2016	30/05/2018	New housing
CtC648	School	Croydon	11.4	09/11/2015	09/11/2017	Public Non-housing
CtC181	Leisure Centre	Arun	11.0	07/08/2017	04/02/2019	Private Commercial
CtC153	60 Extra Care Flats & 1 Pavilion	Epsom & Ewell	10.7	01/08/2016	26/01/2018	New housing
CtC658	Public Realm (Improvements)	Croydon	10.6	02/04/2018	01/04/2019	Infrastructure
CtC657	Junction (Improvements)	Croydon	10.6	03/12/2018	03/01/2020	Infrastructure
CtC505	168 Houses & 12 Flats	Mid Sussex	10.6	03/08/2017	03/09/2018	New housing
CtC441	126 Houses & 44 Flats	Horsham	10.0	16/10/2017	12/11/2018	New housing
CtC771	Tower Blocks (Refurbishment)	Croydon	10.0	28/08/2017	27/11/2017	Housing R&M
CtC727	Housing (Refurbishment)	Croydon	10.0	14/08/2017	13/08/2018	Housing R&M
CtC416	170 Residential Units & 3 Commercial Units	Mid Sussex	9.9	22/05/2017	18/06/2018	New housing
CtC373	110 Houses & 24 Flats	Mid Sussex	9.4	02/12/2016	28/07/2017	New housing
CtC178	124 Houses/28 Flats & 5 Bungalows	Chichester	9.3	02/10/2017	29/10/2018	New housing
CtC397	155 Residential Units	Adur	9.1	30/10/2017	26/11/2018	New housing
CtC307	School (New/Alterations)	Chichester	9.0	30/01/2017	10/08/2018	Public Non-housing
CtC489	Offices (Fit Out)	Crawley	8.8	15/12/2016	10/11/2017	Private Commercial
CtC396	149 Residential Units	Worthing	8.8	06/11/2017	03/12/2018	New housing
CtC525	117 Houses/30 Flats	Crawley	8.7	28/04/2018	26/05/2019	New housing
CtC417	8 Extra Care Flats/4 Bungalows & 1 Care Home	Horsham	8.6	18/12/2017	14/01/2019	New housing
CtC666	Academy	Croydon	8.5	18/01/2016	25/08/2017	Public Non-housing
CtC210	Hospice	Chichester	8.4	03/07/2017	31/12/2018	Public Non-housing

WLC ID	Description	Local Authority	Construction Value (£m)	Start Date	End Date	Project Type
CtC006	90 Residential Units	Mole Valley	8.2	31/03/2017	30/08/2018	New housing
CtC399	140 Houses	Worthing	8.2	18/09/2017	15/10/2018	New housing
CtC162	99 Dwellings	Crawley	8.2	11/12/2017	21/01/2019	New housing
CtC113	61 Flats & 59 Townhouses/1 Light Industry/1 Retail & 1 Cafe	Adur	8.2	17/09/2017	15/10/2018	Private Industrial
CtC437	University Building and Student Accommodation	Arun	8.2	14/12/2016	01/08/2018	Public Non-housing
CtC556	104 Houses & 19 Flats	Reigate & Banstead	8.1	14/06/2018	12/07/2019	New housing
CtC450	3 General Industrial Units/Storage Units	Crawley	8.1	15/05/2017	11/06/2018	Private Industrial
CtC353	Leisure Centre	Horsham	8.0	05/06/2017	18/06/2018	Private Commercial
CtC565	120 Houses & 6 Flats	Arun	7.9	29/06/2018	27/07/2019	New housing
CtC371	120 Houses	Tandridge	7.7	13/02/2017	12/03/2018	New housing
CtC273	121 Houses & 4 Flats	Chichester	7.6	17/06/2018	17/07/2019	New housing
CtC003	26 Houses & 11 Flats/1 Industry/1 Office/1 Workshop/1 Storage	Reigate & Banstead	7.6	10/03/2017	10/06/2018	New housing
CtC487	Railway Station (Improvements)	Reigate & Banstead	7.5	12/12/2019	10/12/2020	Infrastructure
CtC346	5 Hotel & Retail/Bank/Restaurant/Cafe/Pub Units	Brighton & Hove	7.4	18/09/2017	18/09/2018	Private Commercial
CtC198	Woodcote Park Redevelopment (New, Refurbishment)	Epsom & Ewell	7.3	04/09/2017	09/04/2018	Private Commercial
CtC624	Enabling Works	Lewes	7.3	11/09/2017	12/03/2018	Infrastructure
CtC444	Multi Storey Car Park	Brighton & Hove	7.3	04/09/2017	16/04/2018	Infrastructure

WLC ID	Description	Local Authority	Construction Value (£m)	Start Date	End Date	Project Type
CtC674	170 Flats & Shop/Office/Restaurant Units	Croydon	7.1	17/01/2018	17/02/2019	New housing
CtC340	158 Flats/Cinema/Shop/Restaurant/Cafe/Leisure Centre Units	Reigate & Banstead	7.1	11/12/2017	07/01/2019	New housing
CtC715	116 Houses	Croydon	6.8	14/08/2017	10/09/2018	New housing
CtC719	116 Houses	Croydon	6.8	17/01/2018	17/02/2019	New housing
CtC334	Research & Laboratory Building	Reigate & Banstead	6.7	15/01/2018	15/10/2018	Public Non-housing
CtC217	59 Flats & 6 Houses	Horsham	6.7	17/07/2017	17/07/2018	New housing
CtC609	73 Houses & 40 Flats	Lewes	6.7	31/07/2017	27/08/2018	New housing
CtC661	Hospital (Extension/Alterations)	Croydon	6.5	21/09/2015	22/11/2017	Public Non-housing
CtC588	94 Houses & 16 Flats	Lewes	6.5	14/04/2018	12/05/2019	New housing
CtC148	100 Houses & 10 Bungalows	Chichester	6.5	07/08/2017	02/02/2018	New housing
CtC099	98 Houses & 12 Flats/Bungalows	Chichester	6.5	07/05/2018	03/06/2019	New housing
CtC282	Research Centre	Chichester	6.4	14/08/2017	27/04/2018	Public Non-housing
CtC540	78 Houses & 30 Flats	Mid Sussex	6.4	21/05/2018	21/06/2019	New housing
CtC601	Windfarm Operations & Maintenance Facility	Lewes	6.3	05/04/2017	19/12/2017	Private Industrial
CtC123	Care Home	Reigate & Banstead	6.3	30/08/2016	08/05/2018	Public Non-housing
CtC306	81 Flats & 78 Houses	Crawley	6.2	17/01/2018	17/02/2019	New housing
CtC385	Marina Redevelopment	Brighton & Hove	6.1	02/01/2017	01/01/2018	Infrastructure
CtC675	155 Flats & Retail/Office/Restaurant/Pub/Takeaway Units	Croydon	6.1	17/01/2018	17/02/2019	New housing
CtC516	Employment Building	Crawley	6.1	03/04/2017	01/01/2018	Private Commercial

WLC ID	Description	Local Authority	Construction Value (£m)	Start Date	End Date	Project Type
CtC041	99 Houses & 4 Flats	Horsham	6.1	14/08/2017	13/08/2018	New housing
CtC597	Harbour (Extension/Alterations)	Lewes	6.0	09/10/2017	16/07/2018	Infrastructure
CtC102	Student Accommodation	Brighton & Hove	5.9	07/03/2016	26/09/2017	Public Non-housing
CtC108	Brighton Dome Capital Redevelopment	Brighton & Hove	5.8	13/02/2017	24/08/2018	Public Non-housing
CtC279	Members Club (New/Extension)	Brighton & Hove	5.5	20/11/2017	02/07/2018	Private Commercial
CtC114	83 Houses/19 Flats & 1 Office/Community/Leisure Centre	Tandridge	4.5	18/12/2017	21/01/2019	New housing
CtC483	Animal Building (New/Extension)	Tandridge	4.5	09/10/2017	16/04/2018	Private Industrial
CtC705	School	Croydon	4.3	09/05/2016	01/11/2017	Public Non-housing
CtC358	Hotel/Restaurant	Mid Sussex	4.3	16/01/2018	28/08/2018	Private Commercial
CtC684	School	Croydon	4.2	18/07/2016	07/11/2017	Public Non-housing
CtC591	63 Residential Units	Lewes	3.7	16/10/2017	16/04/2018	New housing
CtC285	School Swimming Pool/Sports Hall (Extension)	Mole Valley	3.1	10/10/2016	15/09/2017	Public Non-housing
CtC322	Military Building (New/Alterations)	Chichester	2.9	14/11/2016	28/08/2017	Public Non-housing
CtC219	58 Care Flats & 33 Retirement Flats	Adur	2.9	10/04/2017	09/04/2018	Public Non-housing
CtC403	3 Shops (Alterations)	Chichester	2.1	28/08/2017	27/11/2017	Private Commercial
CtC731	Health Centre (Fit Out)	Croydon	1.8	30/01/2017	31/07/2017	Public Non-housing
CtC547	Workshop & Car Showroom (Conversion/Alterations)	Crawley	1.2	24/04/2017	17/07/2017	Private Commercial

Appendix E. **Region employer operates in, compared with working in**

Appendix Table 17: 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 and 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%

Appendix F. **Region/nation of current site in relation to current residence**

Appendix Table 18: Region/nation of current site in relation to current residence

Region/nation of current residence	Region/nation currently working in											
	EM %	EE %	GL %	NE %	NW %	NI %	SC %	SE %	SW %	WA %	WM %	YH %
East Midlands	**74**	12	1	1	0	0	0	**9**	*	0	2	7
East of England	2	**63**	13	0	0	0	0	**8**	1	0	1	0
London	0	12	**71**	0	0	0	0	**12**	1	0	0	0
North East	0	2	0	**97**	0	0	0	**0**	0	0	0	5
North West	3	0	0	0	**88**	0	0	**1**	*	5	3	2
Northern Ireland	2	*	0	0	0	**99**	2	**1**	1	1	0	0
Scotland	0	0	1	1	1	0	**96**	**0**	0	0	0	0
South East	**3**	**3**	**12**	**0**	**0**	**0**	**0**	**58**	**7**	**0**	**0**	**0**
South West	*	0	0	0	0	0	0	**8**	**85**	0	5	0
Wales	0	1	0	*	3	0	0	**0**	2	**93**	6	0
West Midlands	7	1	*	1	8	0	0	**1**	2	0	**82**	0
Yorkshire and the Humber	8	1	0	*	1	0	1	**0**	1	0	*	**86**
No permanent address	1	3	2	0	0	1	1	**1**	1	*	*	0
Unweighted bases	275	235	284	314	340	155	314	**306**	364	206	216	291

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%