

# Construction Skills Network

## South East

Labour Market Intelligence  
2006

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This document provides labour market intelligence for the South East and also includes national UK data. Similar reports have been produced for the other English regions and for Scotland, Wales and Northern Ireland. These reports are all available upon request from ConstructionSkills.

The document replaces the Skills Foresight Report that was previously published annually for the South East. This new Labour Market Intelligence Report links into the work of the Construction Skills Network.

For information on the numbers of people currently entering construction training, as well as the workload and recruitment difficulties being experienced by the industry, this report should be read in conjunction with the CITB-ConstructionSkills Trainee Numbers Survey and Employers' Skills Needs Survey Reports.

Future papers and briefings that reconcile the employment forecasts with the results from these other ConstructionSkills surveys will be published through the Network. Similarly, the Network will produce discussion papers that compare the differences between the Construction Skills Network forecasts with those published from other sources.

A glossary of terms used in this document is provided in Appendix I. Supplementary information, including the CITB-ConstructionSkills Employers' Skills Needs Survey and Trainee Numbers Survey, is available on the ConstructionSkills website at:

[www.constructionskills.net](http://www.constructionskills.net)

Extra resources for members of the Construction Skills Network are available at:

[www.constructionskills.net/csn/membersarea](http://www.constructionskills.net/csn/membersarea)

# 1 The headlines

- Across the UK, total employment in the construction industry is expected to rise by approximately 250,000 to 2.8 million during the forecast period (2006–2010).
- Total employment in the South East construction industry is expected to increase by about 14% during the forecast period.
- In the South East, the Average Annual Requirement for SIC 45<sup>\*</sup> (Construction) is 10,210. An Average Annual Requirement for SIC 74.2<sup>\*</sup> (Architects & Technical Engineers) of 1,500 means that the annual requirement for both SIC 45 and 74.2 combined is 11,710.
- The largest Average Annual Requirement in the South East will be for Managers, with 1,710 employees needed annually between 2006 and 2010. Nationally, the greatest requirement will come from Wood Trades (11,090), which in the South East has the third highest requirement at 1,390.
- Construction output in the South East has been rising continuously for over a decade. Double-digit growth in 2003 and 2004 is unlikely to have been sustained in 2005 because output over the first three quarters of the year was only 2% higher than during the first three quarters of 2004.
- Following a predicted fall in 2005, construction output in the South East is forecast to grow year-on-year to 2010, growing by an annual average rate of 4.3% over the forecast period (2006–10). Robust 5.5% growth is forecast for 2008, mainly due to strong performance in the commercial and housing sub-sectors.
- In the South East, the housing sectors are forecast to see the strongest growth over the forecast period, rising by 9.5% on average each year in the private sector, and 9.3% in the public sector. In contrast, the outlook for the industrial sub-sector is less encouraging. Overall, industrial output growth is likely to be negligible to 2010, after several years of decline between 2005 and 2008.
- Growth in economic activity in the South East continued in 2005 with 2% growth expected in Gross Value Added (GVA). Both employment and real household disposable income are also set to grow.

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<sup>\*</sup> For definitions and a list of SIC Codes covered by ConstructionSkills see Appendices I and IV

## 2 Introduction

### Background

CITB-ConstructionSkills, CIC and CITB(NI) are working in partnership as the Sector Skills Council (SSC) for Construction. The **Construction Skills Network**, launched in 2005, represents a radical change in the way that ConstructionSkills will collect and produce information on the future employment and training needs of the industry. The model generates forecasts of recruitment and training requirements within the industry for a range of trades and will provide a crucial foundation on which to plan for future skills needs and target investment.

The Construction Skills Network functions at both national and regional levels, comprising a National Group, 12 Observatory groups, a redesigned model and a Technical Reference Group. The Observatories consist of key stakeholders invited from industry, government, education and other SSCs who can contribute local knowledge of the industry and views on training, skills, recruitment, qualifications and policy. An Observatory group currently operates in each of the nine English regions and also in Wales, Scotland and Northern Ireland (note that in the context of the model, Wales, Scotland and Northern Ireland are hereafter referred to as “regions”). The input of the members of the Construction Skills Network is fundamental to the forecasting process and the contributions made to date have been invaluable.

### The model approach

The new model approach relies on a combination of primary research and views from the Construction Skills Network to facilitate it. National data were used as the basis for the assumptions that augment the model, which was then adjusted with the assistance of the Observatories and National Group.

Each “region” has a separate model (although all models are inter-related due to labour movements) and, in addition, there is one national UK model that acts as a constraint to the “regional” models and enables best use to be made of the most robust data (which is available at the national level). Each model considers the skilled trades within the industry as well as the professionals.

The models work by forecasting demand and supply of skilled workers separately. The difference between demand and supply forms the employment requirement.

The forecast **total employment** levels are derived from expectations about construction output and productivity. Essentially this is based on the question “How many people will be needed to produce forecast output, given the assumptions made about productivity?”.

The **Average Annual Requirement** is a gross requirement which takes into account the dynamic factors that influence all of the flows into and out of construction employment, such as movement to and from other industries, migration, sickness, and retirement. Young trainees are not included in the flows. Therefore, the Average Annual Requirement 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. How the Average Annual Requirement is fulfilled can range from training the indigenous population to recruiting already skilled labour from overseas and will vary across the UK. At present the model does not separately forecast the numbers requiring “top-up” training although data are being collected and these figures should be included in future publications.

Demand is based upon the results of discussion groups comprising industry experts, an econometric model of construction output and a set of integrated models relating to wider “regional” economic performance. The model is dynamic and reflects the general UK economic climate at any point in time. To generate the labour demand, the model makes use of a set of specific statistics for each major type of work (labour coefficients) that determine the employment, by trade, needed to produce the predicted levels of construction output.

The labour supply for each type of trade or profession is based upon the previous years' supply (the total stock of employment) combined with flows into and out of the labour market.

The key leakages (outflows) that need to be considered are:

- transfers to other industries
- international/domestic OUT migration
- permanent retirements (including permanently sick)
- outflow to temporarily sick and home duties.

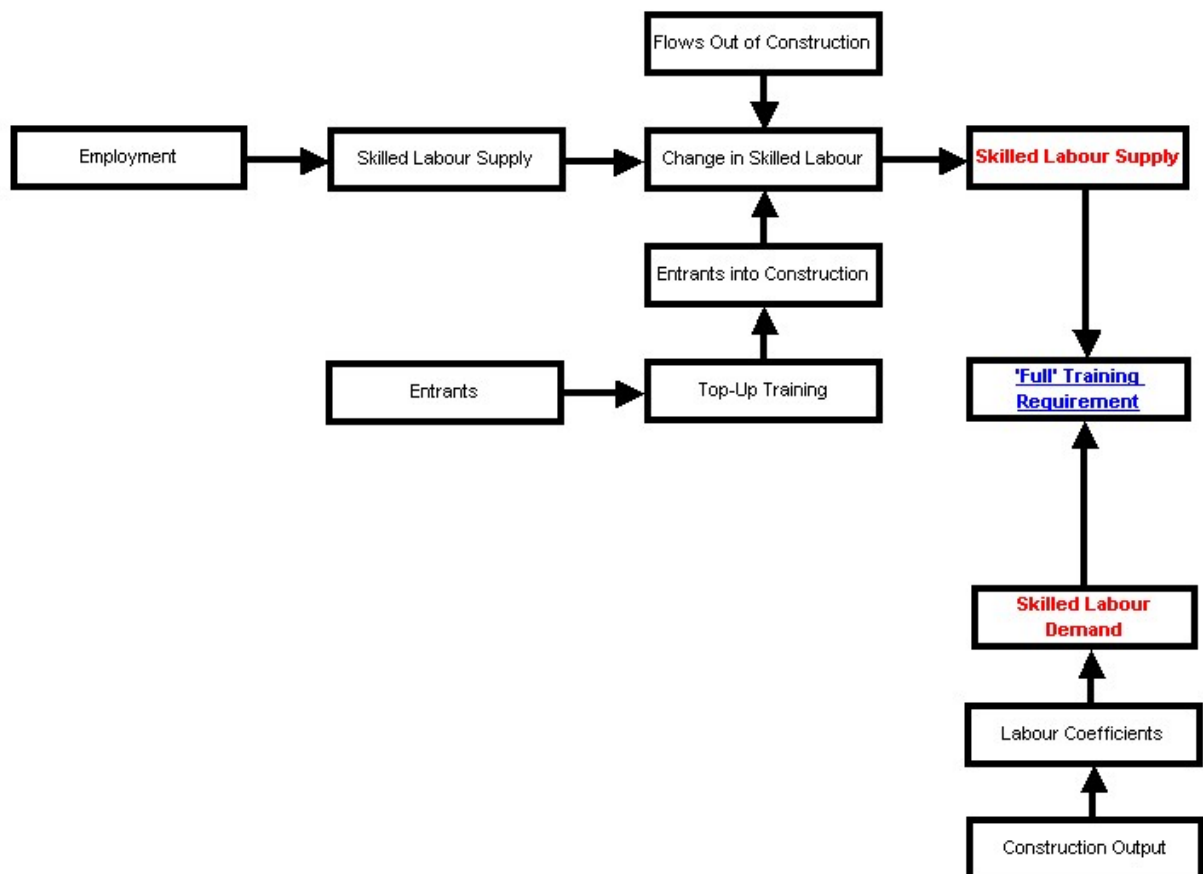
The main reason for outflow is likely to be transfer to other industries.

Flows into the labour market include:

- transfers in from other industries
- international/domestic IN migration
- inflow from temporarily sick and home duties.

New entrants (e.g. young trainees attached to formal training programmes) are not included in the flows of the labour market but are derived from the forecasted Average Annual Requirement for employment. The most significant inflow is likely to be from other industries. A summary of the model components is shown in Figure 1.

**Figure 1**  
**Model flowchart**



The flows into the market are not merely the counterbalancing figures for the flows out of the market, because those people flowing into the market are likely to require some form of training. It is likely that this training will merely be to top-up their skills, rather than full training. The model recognises two distinct types of training as an input: Top-up training and Full training.

## 3 The current situation

### Economic overview

The South East is the second largest regional economy in the UK. In 2005, Gross Value Added (GVA) was estimated at £147.7bn (in 2002 prices), accounting for 15% of UK GVA. As is generally the case in the southern part of the country, the South East economy is more highly geared towards non-manufacturing activity, with non-manufacturing output accounting for an estimated 87% of GVA in 2005, 2% higher than the national average. It is therefore not surprising that the largest single contribution was made by financial and business services. At £38.3bn (in 2002 prices) this sector represents 26% of the South East's GVA. Nationally, financial and business services account for 25% of economic output.

The South East is home to 14% of the UK's population. GVA per capita, providing an indication of the region's standard of living, is above the UK average at £19,505 compared to £17,258.

### Economic performance and expectations

The macroeconomic forecasts for the South East are summarised in Table 1.

- GVA increased by just 2.9% in the South East in 2004, well below a 3.3% rise nationally. While estimated expansion in 2005 is slower at 2%, the region is once again expected to have performed better than the national average. Over the medium term a favourable industry mix, strong skills and supportive demographics foster an above average expansion driven by robust growth in transport and communications and, to a lesser extent, in financial and business services.
- Employment growth in the South East is forecast to slow in 2006 and, in line with the national trend, will fail to pick up significantly in 2007 (Table 1). Job creation in private services, a key driver of growth in the past, will slow, largely because of a contraction in distribution, hotels and catering. Losses are, however, partially offset by gains in public services in the short term. Unemployment rates remain well below the national average at an estimated 3.8% of the workforce over the next three years (Table 1).
- Real household disposable income growth in the South East in 2005 is estimated at 1.5% (Table 1). Over the forecast period this is set to gradually improve, and should peak at 2.9% in 2008. Consumer spending is also expected to recover, but remains weaker than in most regions with growth of 1.1% and 2% forecast for 2006 and 2007 respectively. High levels of consumer debt in this region will have an inevitable impact.

**Table 1**  
**Macroeconomic forecasts for the South East**

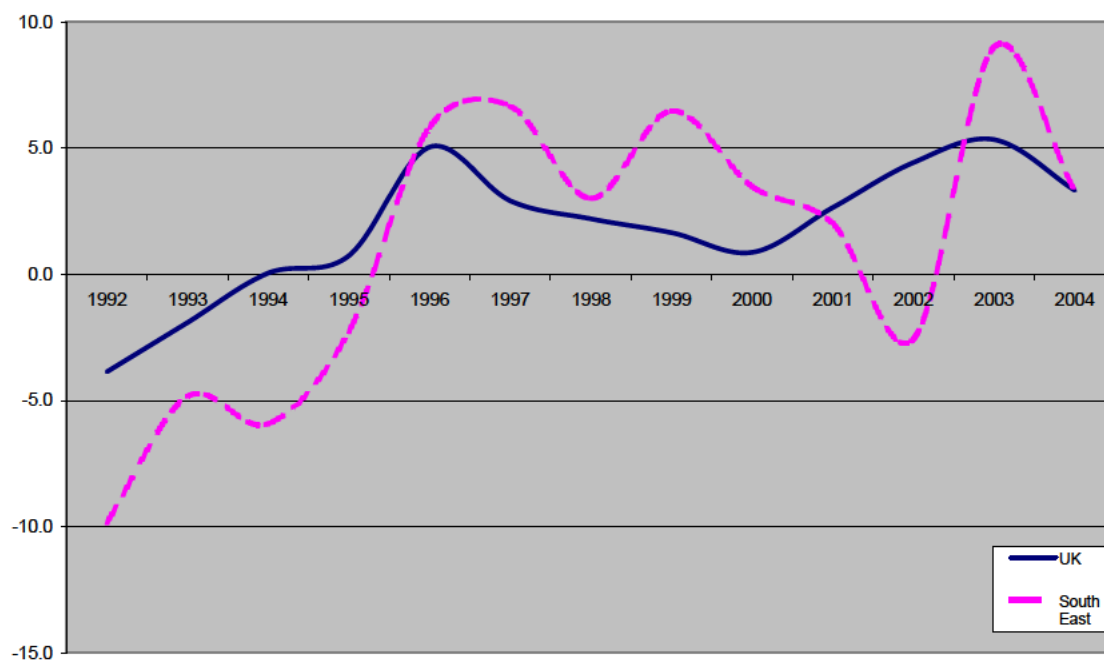
EXPERIAN BUSINESS STRATEGIES FORECASTS FOR THE SOUTH EAST						
	% change (except unemployment)					
	2005	2006	2007	2008	2009	2010
Gross Value Added	2.0	2.7	2.6	2.8	2.9	2.9
Total employment	0.7	0.3	0.4	0.5	0.5	0.6
Unemployment rate (ILO)	3.7	3.8	3.8	3.8	3.9	3.9
Real household disposable income	1.5	2.6	2.7	2.9	2.8	2.8

Source: Experian.

## Construction output in the South East - Historical overview

- The annual percentage change in real construction output in the South East compared to the UK as a whole is shown in Figure 2. In nominal terms total construction output has been rising year-on-year for the past 11 years. However, after allowing for estimated inflation, output suffered a marginal decline in real terms within 2002.
- Since 2000, output has increased by 43% to stand at £15.3bn (current prices) in 2004. Double-digit growth was recorded in 2003 and 2004 and output rose by 16% and 10% respectively. In the first three quarters of 2005 the situation was less rosy. Over this period current priced output was only 2% higher than during the first three quarters of 2004. This slowdown is entirely attributable to the new work sector. Repair and maintenance (R&M) output in the first three quarters of 2005 increased at a similar rate to 2004, while new work output recorded a decline.
- Robust expansion in both the public and private housing sub-sectors has helped to sustain this prolonged period of output growth in the region. Since the turn of the century public housing output has increased by 162% and private housing by 88%. Over the first three quarters of 2005 the rate of increase in the private housing sub-sector slowed considerably to just 7%. Public housing output failed to record further growth during this period, even in current prices. Output fell 11% from the first three quarters of 2004.
- Commercial output increased robustly in 2004, rising by 18% over the year. Output in the first three quarters of 2005 failed to match this and was 15% down on the first three quarters of 2004. Output in the industrial sub-sector was similarly subdued over the first three quarters of 2005. A fall of 18% from the first three quarters of 2004 made industrial the weakest sub-sector in the South East over this period.
- In other sub-sectors, output in the South East followed the same trend as described above. The exception to this was output in infrastructure, which has struggled recently, showing negative or stagnant growth rates. However, in the third quarter of 2005 excellent recovery was reported for infrastructure, with growth of 7.1% (current prices).

**Figure 2**  
**Construction output percentage change: UK vs. South East**



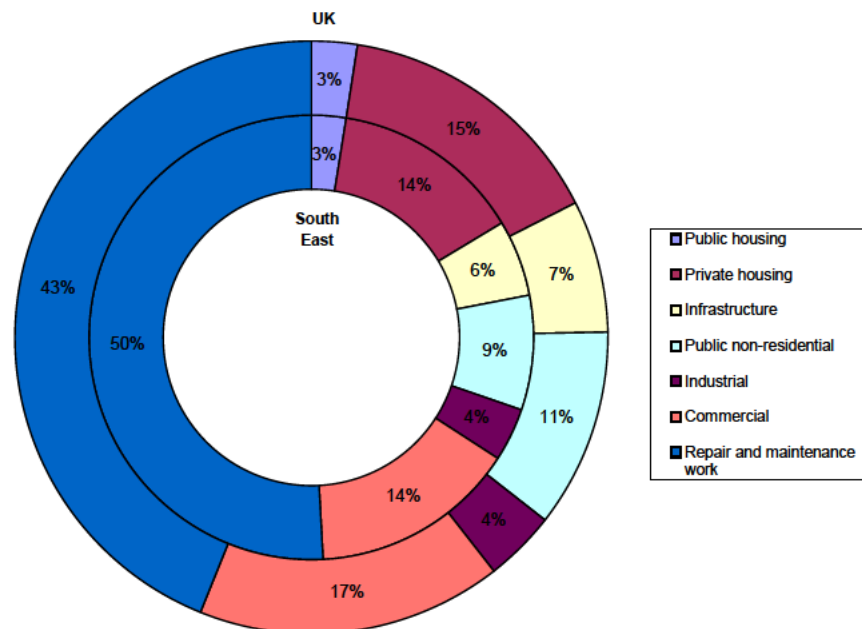
Notes: Except for Northern Ireland, output data for the English regions, Wales, and Scotland are supplied by the Department of Trade and Industry (DTI) on a current price basis. Thus national deflators produced by the DTI have been used to deflate to a 2000 constant price basis, i.e. the effects of inflation have been stripped out.

Source: DTI, Department of Finance and Personnel Northern Ireland (DFPNI), Experian.

## Structure of the construction industry

Figure 3 shows the sectoral structure of the South East construction industry when compared with the UK as a whole. The most notable difference is that the R&M sub-sector makes a greater contribution to total output, accounting for 50% of the total in the South East compared to 43% nationally. Somewhat surprisingly the commercial sub-sector accounted for a lesser share of the South East's output in 2004. However, over the coming years this is likely to change due to an increase in activity relating to both the Olympic Games and better economic prospects. Public non-residential was the only other sub-sector in the South East whose share of output deviated significantly from that of the UK, accounting for 9% of the total against 11% nationally.

**Figure 3**  
**Construction output by main sub-sector: UK vs. South East, 2004**

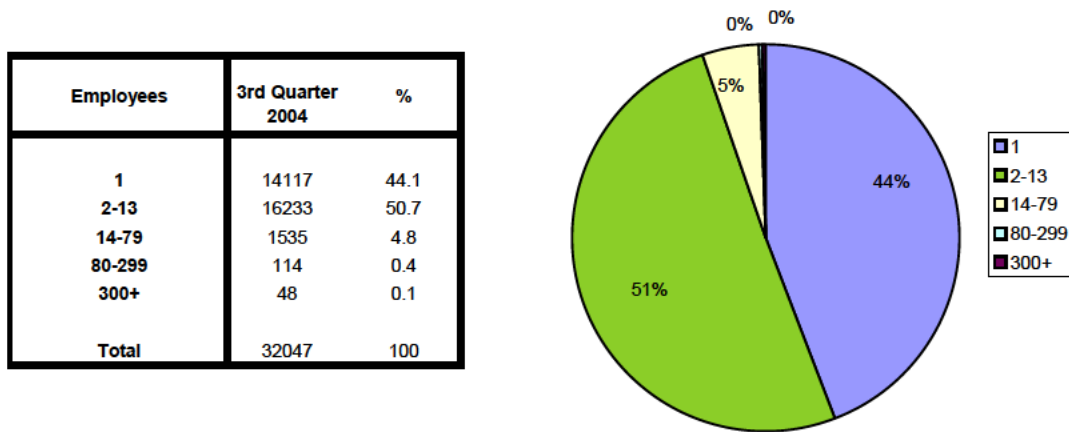


Source: DTI, DFPNI, Experian.



Figure 4 demonstrates that construction companies in the South East are predominantly small. Most companies (approximately 51%) employ between 2 to 13 workers, and sole traders account for 44% of all companies. Less than 1% of firms in the South East employ more than 80 people.

**Figure 4**  
**Percentage of construction companies by size, 2004**



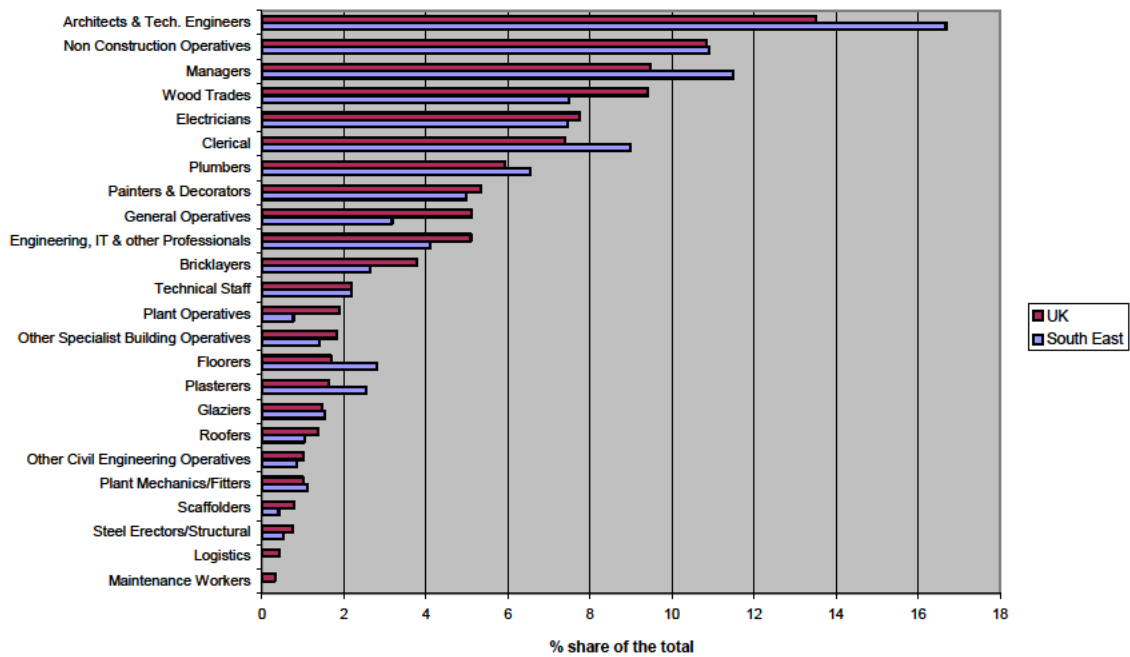
\* One employee indicates one person working in the company

Source: DTI.

## Construction employment

Employment by occupation in the South East roughly follows the UK as a whole (Figure 5). Architects & Technical Engineers (which includes all SIC 74.2 occupations) is the largest occupational group in both the UK and the South East. However, their relative importance is much greater in the South East, accounting for nearly 17% of all employees in construction compared to just 14% for the UK as a whole. Other professions and occupations having a greater presence in the South East include Managers, Clerical, Plumbers, Floorers and Plasterers. In contrast, the proportion of Wood Trades, Engineering, IT & Other Professionals, Bricklayers and General Operatives is greater in the UK compared to the South East.

**Figure 5**  
**Employment by occupation, UK vs. South East: 2005**



Source: Construction Skills Network Model, 2006.

<sup>†</sup> For ConstructionSkills and SummitSkills sector footprints see Appendix IV

## 4 The outlook for construction

### New construction orders - Historical overview

In this section, comparison is made with GB rather than the UK, owing to the fact that official orders data for Northern Ireland are not available.

Table 2 shows new work orders figures for the main construction sectors in the South East in current prices.

Current priced orders growth in the South East has been strong over the past two years. Orders rose by 11% in 2004 and 28% in 2005. Prior to this a robust 17% rise in 2001 was the only high point in the period 1999 to 2003. Moderate increases in 2002 and 2003 amount to very little after inflation, so in real terms orders declined in four of the years between 1999 and 2003.

Orders growth in both housing and the commercial sub-sectors has been consistently strong over the past two years. The private housing sub-sector appears to have been unaffected by the slowdown in housing market activity in 2005, with orders up by 16% over the year. A better economic outlook, following a couple of years of under-performance compared to the UK as a whole, has helped to boost the commercial sub-sector. In 2004 and 2005 orders rose by 19% and 15% respectively.

Public housing sub-sector orders have been the fastest growing since the turn of the century, rising by a phenomenal 344% and reflecting the government's commitment to addressing the acute shortage of affordable housing in the region. However, the relatively small size of this sub-sector in value terms means that its overall affect is limited.

Nationally, new work orders rose strongly in 2004, increasing by 15%. With the exception of infrastructure and public non-housing, all sub-sectors saw their orders rise over the year. The rate of increase slowed slightly in 2005 to 11%, due mainly to a sharp slowdown in the growth of the private housing sub-sector. In contrast to 2004, orders in the public non-housing sub-sector increased robustly, by 48% in 2005. Commercial orders were similarly buoyant over the year, also rising by 48%. Infrastructure orders failed to recover in 2005 and declined by a further 9%.

**Table 2**  
**New work orders for the South East, 1999–2005**

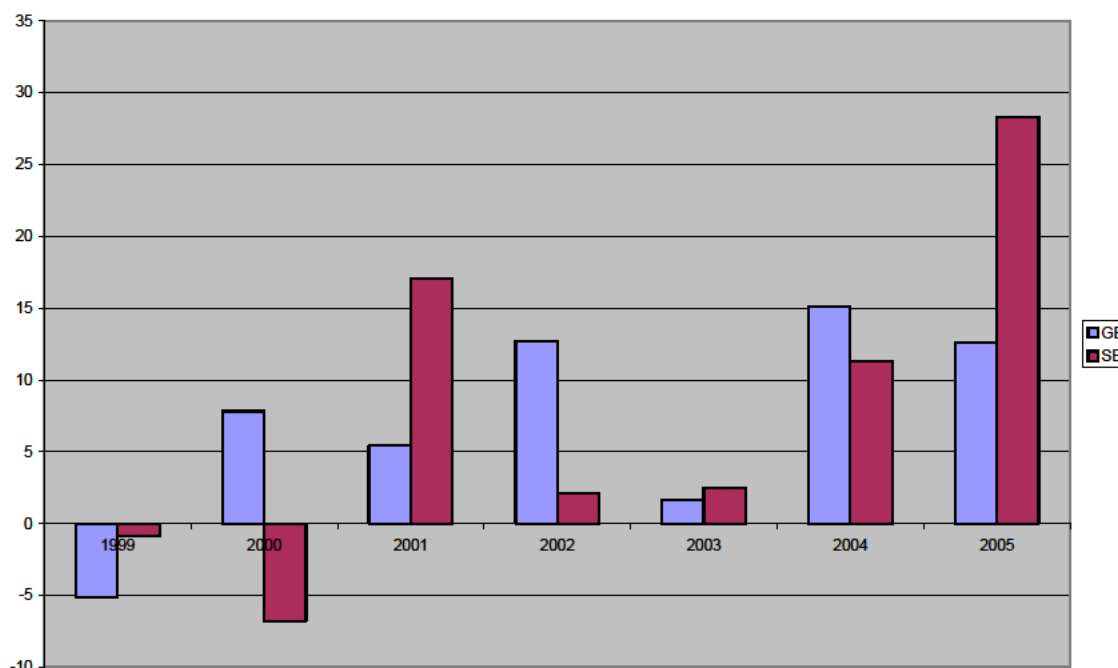
	£ million/annual % change						
	1999	2000	2001	2002	2003	2004	2005
Public housing	127	62	95	167	229	244	275
	-11	-51	53	76	37	7	13
Private housing	964	965	1102	1271	1356	1648	1915
	24	0	14	15	7	22	16
Infrastructure	695	485	571	572	483	510	1136
	0	-30	18	0	-16	6	123
Public non-housing	512	506	551	815	781	808	987
	1	-1	9	48	-4	3	22
Industrial	255	256	333	363	389	302	386
	-41	0	30	9	7	-22	28
Commercial	1340	1355	1597	1148	1208	1440	1651
	-2	1	18	-28	5	19	15
<b>All new work</b>	<b>3892</b>	<b>3629</b>	<b>4248</b>	<b>4337</b>	<b>4446</b>	<b>4950</b>	<b>6352</b>
	-1	-7	17	2	3	11	28

Source: DTI.

Figure 6 shows that new orders growth in the South East generally follows the GB trend. The decline in orders nationally in 1999 was less pronounced in the South East. In 2000, a significant decline in the region was noted. This decline was not observed nationally. In 2004, new orders regained momentum, but failed to match the national performance. South East orders growth in 2005 was robust, and a 28% rise substantially exceeded a 13% national rise.

**Figure 6**  
**New orders: GB vs. South East, 1999–2005**

Annual % change



Source: DTI.

## Construction output - forecasts

Real construction output for the South East is summarised in Table 3.

- With fairly strong orders growth over the past few years acting as a good foundation, the region is expected to perform consistently well over the forecast period, following a dip in output forecast for 2005.
- The housing sectors are forecast to see the strongest growth<sup>\*</sup> over the forecast period, rising by 10% on average each year in the private sector, and 9% in the public sector. Slower growth in the housing market is likely to have an impact upon private housing construction in 2006, although this is expected to be short-lived and output should remain relatively high nevertheless. From 2008 double-digit growth in both sub-sectors is likely.
- In contrast to the housing sub-sectors, output in the industrial sub-sector is expected to struggle to maintain current levels during the coming years. Two years of moderate decline

<sup>\*</sup> The annual average growth in construction output is not simply an average of the percentages shown in Tables 3 or 4. It is a Compound Average Growth Rate, i.e. it is the rate at which output would grow each year if it increased steadily year-on-year over the forecast period. It is calculated by taking the *n*th root of the total percentage growth rate, where *n* is the number of years in the period being considered.

are forecast for 2006 and 2007, which are expected to be followed by marginal rises from 2008 to 2010. Over the forecast period as a whole very little change is expected in output.

- Infrastructure in the region has been in the doldrums for the past few years but the outlook is getting better. Several large-scale projects are forecast to come on stream during the forecast period and moderate year-on-year growth is forecast to 2010.
- The commercial sub-sector should flourish between 2006 and 2010. Annual average growth is forecast to be in the region of 6% and the most buoyant year is expected to be 2007, when output growth of 9% is forecast.

**Table 3**  
**South East construction output by sub-sector, 2004–2010**

	Annual % change						
	2004	2005	2006	2007	2008	2009	2010
Public housing	18%	-10%	2%	6%	13%	10%	8%
Private housing	6%	5%	-6%	2%	15%	11%	11%
Infrastructure	-5%	-4%	4%	3%	4%	4%	3%
Public non-housing	16%	1%	3%	0%	1%	4%	4%
Industrial	-2%	-13%	-3%	-3%	0%	1%	2%
Commercial	12%	-5%	7%	9%	7%	4%	4%
<b>All new work</b>	<b>8%</b>	<b>-2%</b>	<b>1%</b>	<b>4%</b>	<b>8%</b>	<b>6%</b>	<b>6%</b>
R&M	-1%	-3%	-2%	2%	3%	2%	2%
<b>Total Work</b>	<b>3%</b>	<b>-3%</b>	<b>0%</b>	<b>3%</b>	<b>5%</b>	<b>4%</b>	<b>4%</b>

Source: Experian.

Table 4 shows the total construction output and employment over the period 1998–2010. Real construction output in the South East is set to be 18% higher in 2010 than in 2004, making it one of the strongest growing UK regions. Total employment in the region is forecast to demonstrate robust growth with year-on-year increases for the duration of the forecast period, growing at an average annual rate of 2% from 2004.

**Table 4**  
**Total construction output and employment, South East: 1998–2010**

	Year	Total Output Growth Rate %	Total Output £m 2001 prices	Total Employment (direct and indirect) 000s
<b>Actual</b>	1998	3.0	10247	287
	1999	6.5	10912	291
	2000	3.5	11292	296
	2001	2.0	11519	334
	2002	-2.5	11226	333
	2003	9.0	12237	342
	2004	3.3	12642	340
<b>Forecast</b>	2005	0.3	12680	337
	2006	-0.3	12640	338
	2007	3.1	13034	346
	2008	5.5	13751	360
	2009	4.2	14328	371
	2010	4.4	14952	383

Source: Experian, Construction Skills Network Model, 2006.

## 5 Construction industry employment requirements

Table 5 and Figure 7 show total employment levels and Average Annual Requirements for the UK, region, and Learning and Skills Council (LSC) areas in order to highlight where the greatest requirements are, and also for the purpose of comparison.

The tables include data relating to Plumbers and Electricians\*. As part of SIC 45, Plumbers and Electricians working in contracting are an integral part of the construction process. However, it is recognised by ConstructionSkills that SummitSkills has responsibility for these occupations across a range of SIC Codes (SIC 45.31 and 45.33). Thus, outputs from the Construction Skills Network Model relating to these two occupations have been passed to SummitSkills for their analysis but have been included here for completeness.

The figures for the Average Annual Requirement are based upon the net balance of inflows and outflows, and cover replacement and expansion of the industry.

### The national UK forecasts

The average annual gross employment requirement across the UK over the period 2006 to 2010 is estimated at 87,000, including all occupations in SIC 74.2 and in SIC 45 with the exception of Non-construction Operatives (Table 5). Non-construction Operatives captures all of the other elements involved in construction as defined by SIC 74.2 and SIC 45, outside of the main occupations listed in the following charts and tables. The Average Annual Requirement for Non-construction Operatives is not shown because the activities covered by this group are too diverse.

Total employment is forecast to rise by 246,760 to 2.8 million between 2006 and 2010.

- At 11,090 Wood Trades are likely to have the highest Average Annual Requirement going forward (Table 5).
- Three out of the four occupations with the highest Average Annual Requirement from 2006 to 2010 are focused on management and organisation, namely Managers, Architects & Technical Engineers (SIC 74.2) and Clerical (Table 5).
- The Average Annual Requirement for Electricians, Plumbers, Engineering, IT & Other Professionals and Bricklayers is also expected to be high (Table 5).
- At the other end of the scale, the Average Annual Requirement for Scaffolders and Logistics is significantly lower at just 900 and 580 respectively (Table 5).
- Nationally, the professionals working within architectural and engineering activities and related technical consultancy (SIC 74.2) (Architects & Technical Engineers) take the largest share of total employment with an estimated 340,450 employed in 2006, rising to 354,270 by 2010. Second in line is Managers with 235,400 in 2006, increasing to 258,520 by 2010. Particularly strong demand for Wood Trades between 2006 and 2010 should make this the second largest occupation in employment terms by 2010 (Table 5 and Figure 7).
- Whilst the forecasts for an increase in total employment for **Maintenance Workers** are shown in Table 5, the Average Annual Requirement has been excluded. The model is currently forecasting a low requirement for this group compared to other occupations. Further research is being undertaken on the factors influencing this result and the Average Annual Requirement will be published when this work has been completed.

Please note that all of the average annual requirements presented in this section are employment requirements and not necessarily training requirements. Recruiting from other industries with a similar skills base or employing skilled migrant labour could mean the actual training requirement is lower.

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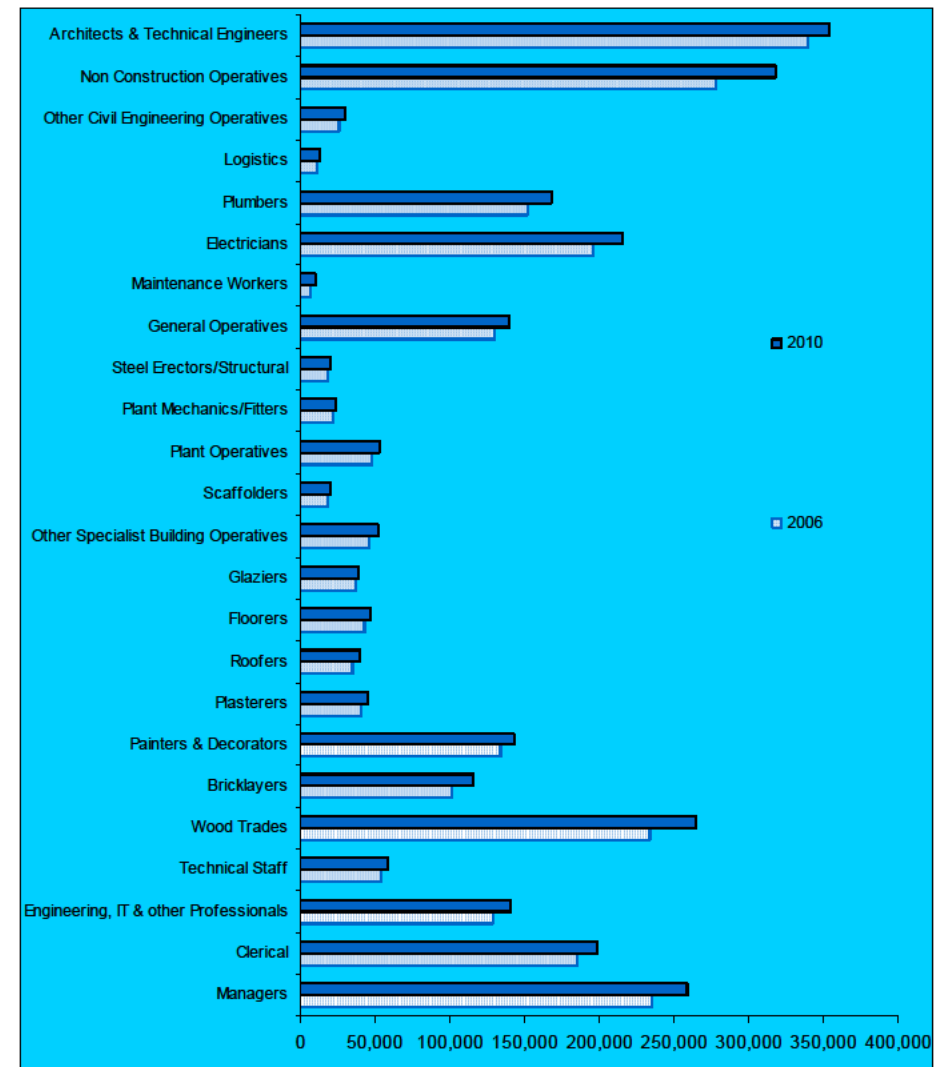
\* For ConstructionSkills and SummitSkills sector footprints see Appendix IV

**Table 5**  
**UK**  
**Total employment and Average Annual Requirement by occupation: 2006–2010**

	Employment		Average Annual Requirement
	2006	2010	2006-2010
<b>Managers</b>	235,400	258,520	10,530
<b>Clerical</b>	185,270	198,600	8,610
<b>Engineering, IT &amp; other Professionals</b>	129,320	140,890	4,790
<b>Technical Staff</b>	54,280	59,260	3,260
<b>Wood Trades</b>	233,790	265,290	11,090
<b>Bricklayers</b>	101,290	116,220	4,730
<b>Painters &amp; Decorators</b>	133,640	143,430	3,620
<b>Plasterers</b>	41,060	44,930	1,780
<b>Roofers</b>	35,110	39,720	1,750
<b>Floorers</b>	42,670	46,840	1,510
<b>Glaziers</b>	36,660	38,660	990
<b>Other Specialist Building Operatives</b>	46,250	51,520	2,370
<b>Scaffolders</b>	17,700	19,870	900
<b>Plant Operatives</b>	48,200	52,750	1,780
<b>Plant Mechanics/Fitters</b>	22,200	24,060	1,920
<b>Steel Erectors/Structural</b>	17,570	19,760	1,150
<b>General Operatives</b>	130,320	139,950	1,510
<b>Maintenance Workers</b>	6,750	9,550	*
<b>Electricians</b>	196,400	216,240	8,130
<b>Plumbers</b>	152,450	167,810	5,330
<b>Logistics</b>	10,980	12,600	580
<b>Other Civil Engineering Operatives</b>	26,240	30,110	1,390
<b>Non Construction Operatives</b>	277,900	317,810	
<b>Total (SIC 45)</b>	<b>2,181,450</b>	<b>2,414,390</b>	<b>77,720</b>
<b>Architects &amp; Technical Engineers</b>	340,450	354,270	9,280
<b>Total (SIC 45 &amp; 74.2)</b>	<b>2,521,900</b>	<b>2,768,660</b>	<b>87,000</b>

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest ten and may not sum to the total.  
\* See text for note on Maintenance Workers

**Figure 7**  
**UK**  
**Total employment by occupation: 2006–2010**



Source: Construction Skills Network Model, 2006; Experian.  
Note: No bar indicates less than 1,000

## The South East employment forecasts

Table 6 and Figure 8 outline the forecast employment and Average Annual Requirement for 24 occupations within the South East construction industry, between 2006 and 2010.

- Total employment in the South East construction industry is forecast to increase by 45,560 people between 2006 and 2010.
- The region has an average annual employment requirement of 11,710 across both SIC 45 and SIC 74.2 (Table 6).
- The greatest Average Annual Requirement will come from Managers with an estimated requirement of 1,710. Employment in Managers is forecast to rise by 5,270 over the forecast period (Table 6).
- In line with the national trend, the average annual employment requirement for Architects & Technical Engineers (SIC 74.2) in the South East is one of the highest in the region, with an Average Annual Requirement of 1,500.
- Wood Trades, the occupation likely to have the largest requirement nationally, has the third largest Average Annual Requirement in the South East, at 1,390 (Table 6).
- The Average Annual Requirement for Glaziers, Plant Operatives, General Operatives, Other Specialist Building Operatives and Maintenance workers are the smallest in the region, all requiring an Average Annual Requirement of less than 10 (Table 6).

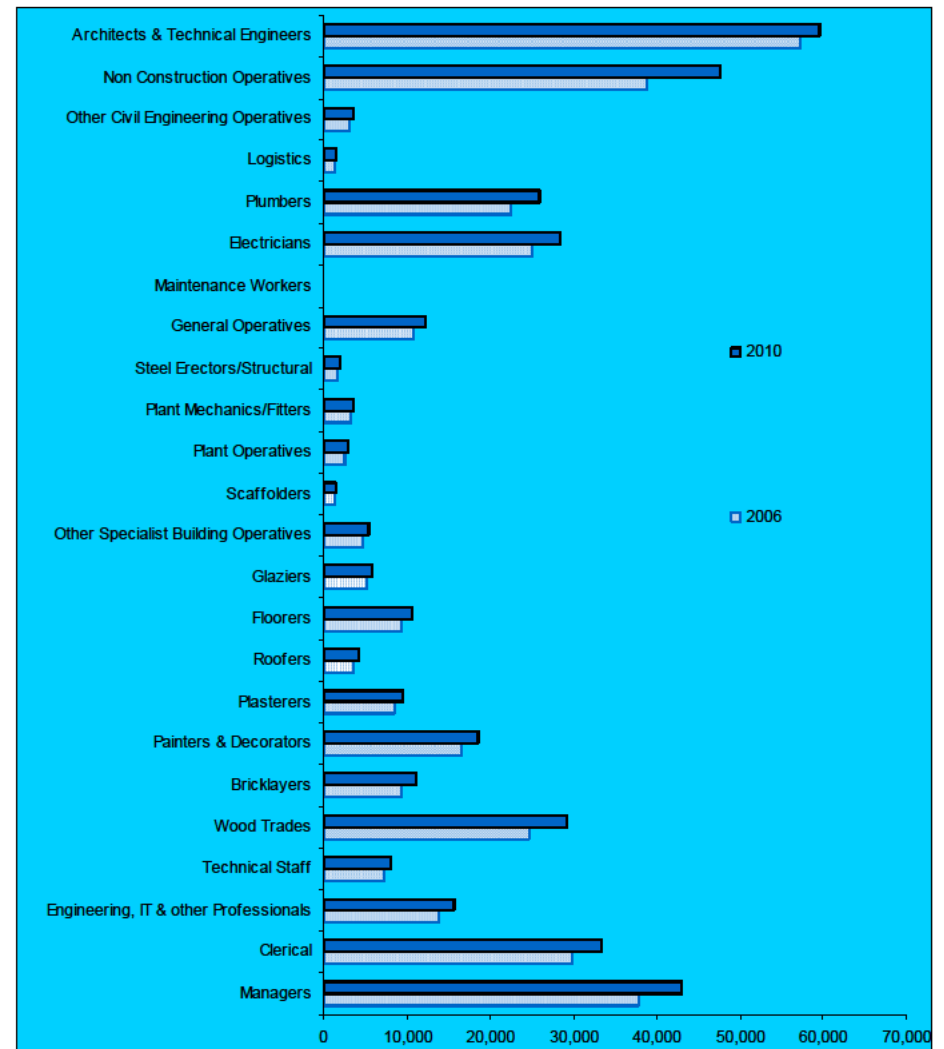


**Table 6**  
**South East**  
**Total employment and Average Annual Requirement by occupation: 2006–2010**

	Employment		Average Annual Requirement
	2006	2010	2006-2010
<b>Managers</b>	37,810	43,080	1,710
<b>Clerical</b>	29,870	33,220	1,060
<b>Engineering, IT &amp; other Professionals</b>	13,800	15,680	890
<b>Technical Staff</b>	7,170	8,160	700
<b>Wood Trades</b>	24,660	29,200	1,390
<b>Bricklayers</b>	9,300	11,220	540
<b>Painters &amp; Decorators</b>	16,610	18,490	360
<b>Plasterers</b>	8,460	9,530	340
<b>Roofers</b>	3,520	4,140	200
<b>Floorers</b>	9,280	10,590	530
<b>Glaziers</b>	5,170	5,690	<10
<b>Other Specialist Building Operatives</b>	4,650	5,340	<10
<b>Scaffolders</b>	1,250	1,450	160
<b>Plant Operatives</b>	2,560	2,920	<10
<b>Plant Mechanics/Fitters</b>	3,160	3,580	230
<b>Steel Erectors/Structural</b>	1,700	2,000	90
<b>General Operatives</b>	10,820	12,220	<10
<b>Maintenance Workers</b>	<10	<10	<10
<b>Electricians</b>	24,940	28,490	1,030
<b>Plumbers</b>	22,500	25,910	710
<b>Logistics</b>	1,250	1,480	80
<b>Other Civil Engineering Operatives</b>	2,980	3,540	190
<b>Non Construction Operatives</b>	38,800	47,650	
<b>Total (SIC 45)</b>	<b>280,260</b>	<b>323,580</b>	<b>10,210</b>
<b>Architects &amp; Technical Engineers</b>	57,240	59,570	1,500
<b>Total (SIC 45 &amp; 74.2)</b>	<b>337,500</b>	<b>383,150</b>	<b>11,710</b>

Source: Construction Skills Network Employment Model, 2006; Experian.  
 Note: numbers are rounded to the nearest ten and may not sum to the total.

**Figure 8**  
**South East**  
**Total employment by occupation: 2006–2010**



Source: Construction Skills Network Employment Model, 2006; Experian.  
 Note: no bar indicates less than 1,000.

The following charts give an indication of employment and requirement by occupation for the LSC areas in the South East. The areas and populations being looked at are considerably smaller than those on a regional level and the data available at this sub-regional level are much less robust. Construction employment and future requirements on a sub-regional level are created as ratios of the regional data and as such the results that are presented should be treated with a significant degree of caution. ConstructionSkills is currently working with Observatory members and other partners and stakeholders to review regional research to improve the robustness of these data.

**Table 7**  
**Berkshire**  
**Total employment and annual requirement by occupation: 2006–2010**

	Employment		Average Annual Requirement
	2006	2010	2006-2010
<b>Managers</b>	3,700	3,950	160
<b>Clerical</b>	2,920	3,050	100
<b>Engineering, IT &amp; other Professionals</b>	1,350	1,440	80
<b>Technical Staff</b>	700	750	60
<b>Wood Trades</b>	2,410	2,680	130
<b>Bricklayers</b>	910	1,030	50
<b>Painters &amp; Decorators</b>	1,630	1,700	30
<b>Plasterers</b>	830	870	30
<b>Roofers</b>	340	380	20
<b>Floorers</b>	910	970	50
<b>Glaziers</b>	510	520	<10
<b>Other Specialist Building Operatives</b>	450	490	<10
<b>Scaffolders</b>	120	130	10
<b>Plant Operatives</b>	250	270	<10
<b>Plant Mechanics/Fitters</b>	310	330	20
<b>Steel Erectors/Structural</b>	170	180	<10
<b>General Operatives</b>	1,060	1,120	<10
<b>Maintenance Workers</b>	<10	<10	<10
<b>Electricians</b>	2,440	2,620	90
<b>Plumbers</b>	2,200	2,380	60
<b>Logistics</b>	130	140	<10
<b>Other Civil Engineering Operatives</b>	280	320	<10
<b>Non Construction Operatives</b>	3,800	4,370	<10
<b>Total (SIC 45)</b>	<b>27,420</b>	<b>29,690</b>	<b>890</b>
<b>Architects &amp; Technical Engineers</b>	5,600	5,470	140
<b>Total (SIC 45 &amp; 74.2)</b>	<b>33,020</b>	<b>35,160</b>	<b>1,030</b>

Source: Construction Skills Network Model, 2006; Experian.  
 Note: numbers are rounded to the nearest ten and may not sum to the total.

**Table 8**  
**Sussex**  
**Total employment and annual requirement by occupation: 2006–2010**

	Employment		Average Annual Requirement
	2006	2010	2006-2010
<b>Managers</b>	6,770	7,760	310
<b>Clerical</b>	5,350	5,980	190
<b>Engineering, IT &amp; other Professionals</b>	2,470	2,820	160
<b>Technical Staff</b>	1,280	1,470	130
<b>Wood Trades</b>	4,420	5,260	250
<b>Bricklayers</b>	1,670	2,020	100
<b>Painters &amp; Decorators</b>	2,980	3,330	60
<b>Plasterers</b>	1,510	1,720	60
<b>Roofers</b>	630	750	40
<b>Floorers</b>	1,660	1,910	90
<b>Glaziers</b>	930	1,030	<10
<b>Other Specialist Building Operatives</b>	830	960	<10
<b>Scaffolders</b>	220	260	30
<b>Plant Operatives</b>	460	530	<10
<b>Plant Mechanics/Fitters</b>	570	650	40
<b>Steel Erectors/Structural</b>	300	360	20
<b>General Operatives</b>	1,940	2,200	<10
<b>Maintenance Workers</b>	<10	<10	<10
<b>Electricians</b>	4,470	5,130	180
<b>Plumbers</b>	4,030	4,670	130
<b>Logistics</b>	240	280	<10
<b>Other Civil Engineering Operatives</b>	520	620	<10
<b>Non Construction Operatives</b>	6,950	8,580	<10
<b>Total (SIC 45)</b>	<b>50,200</b>	<b>58,290</b>	<b>1,790</b>
<b>Architects &amp; Technical Engineers</b>	10,260	10,730	270
<b>Total (SIC 45 &amp; 74.2)</b>	<b>60,460</b>	<b>69,020</b>	<b>2,060</b>

Source: Construction Skills Network Model, 2006; Experian.  
 Note: numbers are rounded to the nearest ten and may not sum to the total.

**Table 9**  
**Hampshire & Isle of Wight**  
**Total employment and annual requirement by occupation: 2006–2010**

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	8,420	9,620	380
Clerical	6,650	7,420	240
Engineering, IT & other Professionals	3,070	3,500	200
Technical Staff	1,600	1,820	160
Wood Trades	5,490	6,520	310
Bricklayers	2,070	2,510	120
Painters & Decorators	3,700	4,130	80
Plasterers	1,880	2,130	80
Roofers	780	920	40
Floorers	2,070	2,370	120
Glaziers	1,150	1,270	<10
Other Specialist Building Operatives	1,030	1,190	<10
Scaffolders	280	320	40
Plant Operatives	570	650	<10
Plant Mechanics/Fitters	700	800	50
Steel Erectors/Structural	380	450	20
General Operatives	2,410	2,730	<10
Maintenance Workers	<10	<10	<10
Electricians	5,550	6,360	230
Plumbers	5,010	5,790	160
Logistics	290	350	<10
Other Civil Engineering Operatives	650	770	<10
Non Construction Operatives	8,640	10,640	<10
<b>Total (SIC 45)</b>	<b>62,390</b>	<b>72,260</b>	<b>2,230</b>
Architects & Technical Engineers	12,750	13,310	340
<b>Total (SIC 45 &amp; 74.2)</b>	<b>75,140</b>	<b>85,570</b>	<b>2,570</b>

Source: Construction Skills Network Model, 2006; Experian.  
 Note: numbers are rounded to the nearest ten and may not sum to the total.

**Table 10**  
**Kent & Medway**  
**Total employment and annual requirement by occupation: 2006–2010**

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	8,930	10,520	420
Clerical	7,050	8,110	260
Engineering, IT & other Professionals	3,260	3,830	220
Technical Staff	1,690	1,990	170
Wood Trades	5,820	7,130	340
Bricklayers	2,200	2,740	130
Painters & Decorators	3,920	4,520	90
Plasterers	2,000	2,330	80
Roofers	830	1,010	50
Floorers	2,190	2,590	130
Glaziers	1,220	1,390	<10
Other Specialist Building Operatives	1,100	1,300	<10
Scaffolders	290	350	40
Plant Operatives	600	710	<10
Plant Mechanics/Fitters	750	870	60
Steel Erectors/Structural	400	490	20
General Operatives	2,560	2,990	<10
Maintenance Workers	<10	<10	<10
Electricians	5,890	6,960	250
Plumbers	5,310	6,330	170
Logistics	310	380	<10
Other Civil Engineering Operatives	690	840	<10
Non Construction Operatives	9,160	11,640	<10
<b>Total (SIC 45)</b>	<b>66,170</b>	<b>79,020</b>	<b>2,430</b>
Architects & Technical Engineers	13,520	14,550	370
<b>Total (SIC 45 &amp; 74.2)</b>	<b>79,690</b>	<b>93,570</b>	<b>2,800</b>

Source: Construction Skills Network Model, 2006; Experian.  
 Note: numbers are rounded to the nearest ten and may not sum to the total.

**Table 11**  
**Oxfordshire & Buckinghamshire**  
**Total employment and annual requirement by occupation: 2006–2010**

	Employment		Average Annual Requirement
	2006	2010	2006-2010
<b>Managers</b>	5,170	5,830	230
<b>Clerical</b>	4,090	4,490	140
<b>Engineering, IT &amp; other Professionals</b>	1,890	2,120	120
<b>Technical Staff</b>	980	1,100	90
<b>Wood Trades</b>	3,370	3,950	190
<b>Bricklayers</b>	1,270	1,520	70
<b>Painters &amp; Decorators</b>	2,270	2,500	50
<b>Plasterers</b>	1,160	1,290	50
<b>Roofers</b>	480	560	30
<b>Floorers</b>	1,270	1,430	70
<b>Glaziers</b>	710	770	<10
<b>Other Specialist Building Operatives</b>	640	720	<10
<b>Scaffolders</b>	170	200	20
<b>Plant Operatives</b>	350	390	<10
<b>Plant Mechanics/Fitters</b>	430	480	30
<b>Steel Erectors/Structural</b>	230	270	10
<b>General Operatives</b>	1,480	1,650	<10
<b>Maintenance Workers</b>	<10	<10	<10
<b>Electricians</b>	3,410	3,860	140
<b>Plumbers</b>	3,080	3,510	100
<b>Logistics</b>	180	210	<10
<b>Other Civil Engineering Operatives</b>	400	470	<10
<b>Non Construction Operatives</b>	5,310	6,450	<10
<b>Total (SIC 45)</b>	<b>38,340</b>	<b>43,770</b>	<b>1,340</b>
<b>Architects &amp; Technical Engineers</b>	7,830	8,060	200
<b>Total (SIC 45 &amp; 74.2)</b>	<b>46,170</b>	<b>51,830</b>	<b>1,540</b>

Source: Construction Skills Network Model, 2006; Experian.  
 Note: numbers are rounded to the nearest ten and may not sum to the total.

**Table 12**  
**Surrey**  
**Total employment and annual requirement by occupation: 2006–2010**

	Employment		Average Annual Requirement
	2006	2010	2006-2010
<b>Managers</b>	4,810	5,390	210
<b>Clerical</b>	3,800	4,160	130
<b>Engineering, IT &amp; other Professionals</b>	1,760	1,960	110
<b>Technical Staff</b>	910	1,020	90
<b>Wood Trades</b>	3,140	3,650	170
<b>Bricklayers</b>	1,180	1,400	70
<b>Painters &amp; Decorators</b>	2,110	2,310	40
<b>Plasterers</b>	1,080	1,190	40
<b>Roofers</b>	450	520	20
<b>Floorers</b>	1,180	1,330	70
<b>Glaziers</b>	660	710	<10
<b>Other Specialist Building Operatives</b>	590	670	<10
<b>Scaffolders</b>	160	180	20
<b>Plant Operatives</b>	330	370	<10
<b>Plant Mechanics/Fitters</b>	400	450	30
<b>Steel Erectors/Structural</b>	220	250	10
<b>General Operatives</b>	1,380	1,530	<10
<b>Maintenance Workers</b>	<10	<10	<10
<b>Electricians</b>	3,170	3,570	130
<b>Plumbers</b>	2,860	3,240	90
<b>Logistics</b>	170	200	<10
<b>Other Civil Engineering Operatives</b>	370	430	<10
<b>Non Construction Operatives</b>	4,940	5,960	<10
<b>Total (SIC 45)</b>	<b>35,670</b>	<b>40,490</b>	<b>1,230</b>
<b>Architects &amp; Technical Engineers</b>	7,290	7,460	190
<b>Total (SIC 45 &amp; 74.2)</b>	<b>42,960</b>	<b>47,950</b>	<b>1,420</b>

Source: Construction Skills Network Model, 2006; Experian.  
 Note: numbers are rounded to the nearest ten and may not sum to the total.

## Appendix I – Glossary of terms

**Demand** – construction **output**, vacancies, and a set of **labour coefficients** to translate demand for workers to labour requirements by trade. Demand is calculated using DTI and DFP output data. Vacancy data are usually taken from the National Employers Skills Survey (NESS) from the Department for Education and Skills (DfES).

**GDP** – Gross Domestic Product – total market value of all final goods and services produced. A measure of national income.  $GDP = GVA + \text{taxes on products} - \text{subsidies on products}$

**GVA** – Gross Value Added – total output minus the value of inputs used in the production process. GVA measures the contribution of the economy as a difference between gross output and intermediate inputs.

**Labour coefficients** – the labour inputs required for various types of construction activity. The number of workers of each occupation/trade to produce £1m of output in each sub-sector.

**LFS** – Labour Force Survey – a UK household sample survey which collects information on employment, unemployment, flows between sectors and training, from around 53,000 households each quarter (>100,000 people).

**LMI** – Labour Market Information – data that are quantitative (numerical) or qualitative (insights and perceptions) on workers, employers, wages, conditions of work, etc.

**LMI** – Labour Market Intelligence – labour market information analysed.

**Macroeconomics** – the study of an economy on a national level, including total employment, investment, imports, exports, production and consumption.

**ONS** – Office for National Statistics – official statistics on economy, population and society at national UK and local level.

**Output** – total value of all goods and services produced in an economy.

**Productivity** – output per employee

**SIC Codes** – Standard Industrial Classification Codes – from the UK Standard Industrial Classification of Economic Activities produced by the **ONS**.

ConstructionSkills is responsible for SIC 45 Construction and SIC 74.2 Architectural and engineering activities and related technical consultancy.

ConstructionSkills shares an interest with SummitSkills in SIC 45.31 Installation of wiring and fittings and SIC 45.33 Plumbing. AssetSkills has a peripheral interest in SIC 74.2.

**SOC Codes** – Standard Occupational Classification Codes

**Supply** – the total stock of employment in a period of time plus the flows into and out of the labour market. Supply is usually calculated from **LFS** data.

## **Appendix II – Note on Logistics and Other Civil Engineering Operatives**

In this initial run of the Construction Skills Network Model, the categories Logistics and Other Civil Engineering Operatives are derived from the category Other Civil Engineering Operatives to take account of the different employment requirements within each category.

Logistics consists of labour within construction that deals with transportation, handling and storage.

Other Civil Engineering Operatives consists of workers within construction that deal directly with construction work itself, for instance labourers and operatives in road and rail construction. This is a part of ongoing research.

### **Appendix III – Data sources – Construction Skills Network Model**

- Accession Monitoring Report – Home Office
- Analysis of Construction Industry Employment using the British Household Panel Survey – CITB-ConstructionSkills
- British Household Panel Survey – Institute for Social and Economic Research (University of Essex)
- Building the Future: Skills Training in Construction and Building Services Engineering
- Construction Apprentices' Survey – CITB-ConstructionSkills
- Construction Forecasts – Experian
- Construction Skills Foresight Report – CITB-ConstructionSkills
- Construction Skills Report – Learning & Skills Councils (England)
- Construction Statistics Annual – DTI
- Employer Panel Consultation – CITB-ConstructionSkills
- Employers' Skills Needs Survey – CITB-ConstructionSkills
- Foresight, Regional construction forecasts – Experian
- Investment Strategy for Northern Ireland – Strategic Investment Board
- Labour Force Survey – ONS
- International Passenger Survey – ONS
- Measuring the Competitiveness of UK Construction – DTI
- National Employer Skills Survey – LSC, SSDA, & DfES
- Northern Ireland Census of Employment
- Northern Ireland Construction Bulletin – DFPNI
- Occupational Skills Survey 2003 – CITB-ConstructionSkills
- Quarterly output and New orders bulletin – DTI
- Skills Needs Analysis – ConstructionSkills
- Trainee Numbers Survey 2004/05 – CITB-ConstructionSkills
- Travel Trends – ONS
- Workforce Mobility and Skills in the UK Construction Sector – ConstructionSkills, ECITB, SEEDA, DTI



## Appendix IV – Footprints for Built Environment SSCs

The table summarises the SIC Codes covered by ConstructionSkills.

	SIC Code	Description
<b>ConstructionSkills</b>	45.1	Site preparation
	45.2	Building of complete construction or parts; civil engineering
	45.3	Building installations (except 45.31 and 45.33 which are covered by SummitSkills)
	45.4	Building completion
	45.5	Renting of construction or demolition equipment with operator
	74.2*	Architectural and engineering activities and related technical consultancy

\* *AssetSkills* has a peripheral interest in SIC 74.2

### The sector footprints for the other SSCs covering the Built Environment:

#### **SummitSkills**

Footprint – Plumbing, Heating, Ventilation, Air Conditioning, Refrigeration and Electrotechnical.  
Coverage – Building Services Engineering.

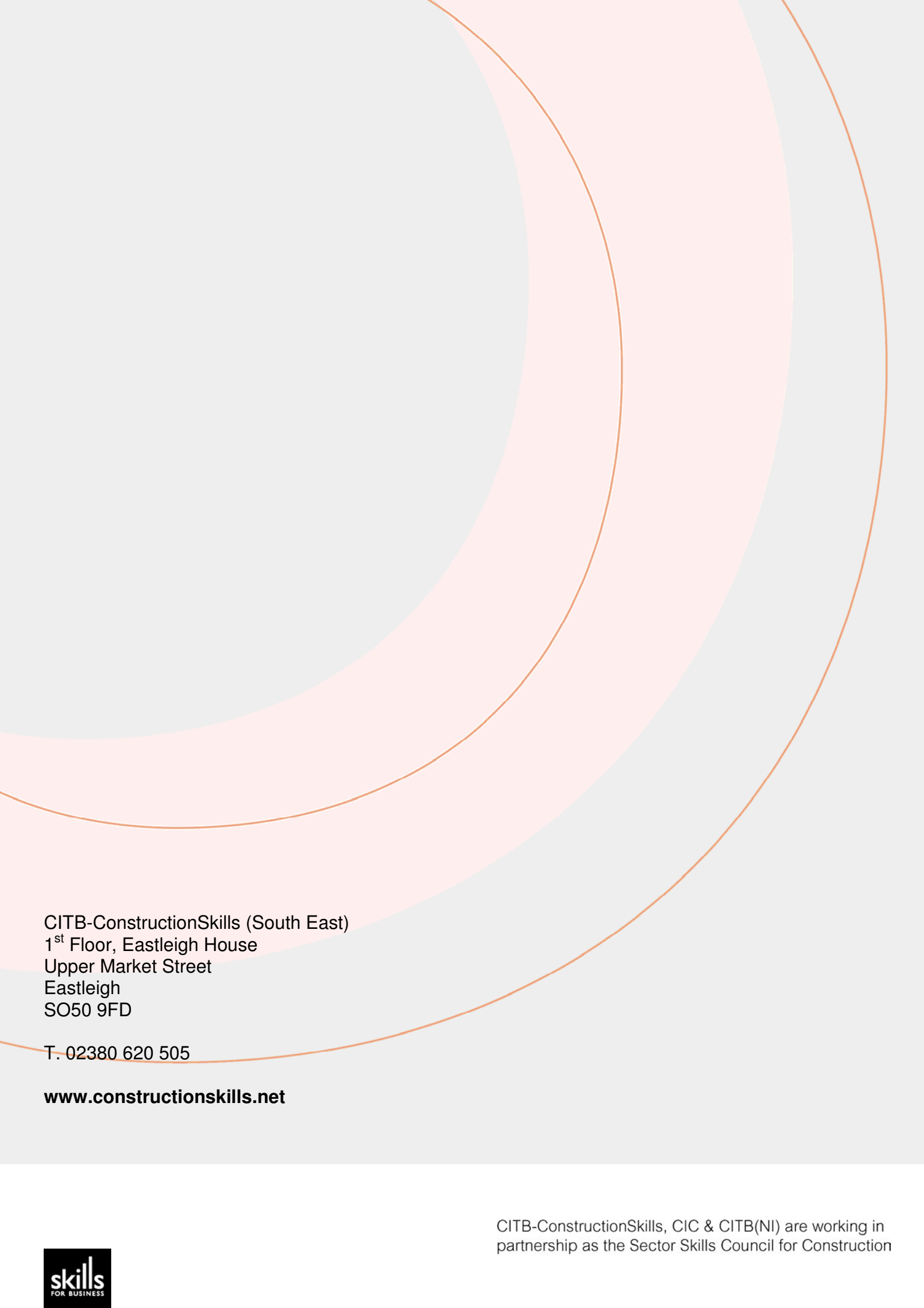
#### **AssetSkills**

Footprint – Property Services, Housing, Facilities Management, Cleaning.  
Coverage – Property, Housing and Land Managers, Chartered Surveyors, Estimators, Valuers, Home Inspectors, Estate Agents and Auctioneers (property and chattels), Caretakers, Mobile and Machine Operatives, Window Cleaners, Road Sweepers, Cleaners, Domestic, Facilities managers.

#### **Energy & Utility Skills**

Footprint – Electricity, Gas (including Gas Installers), Water and Waste Management.  
Coverage – Electricity generation and distribution; Gas transmission, distribution and appliance installation and maintenance; Water collection, purification and distribution; Waste water collection and processing; Waste Management.

At national level, ConstructionSkills and SummitSkills are in discussions to determine the most appropriate way of working together on forecasting employment requirements for trades/occupations where there is overlap between the two SSCs.



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CITB-ConstructionSkills, CIC & CITB(NI) are working in partnership as the Sector Skills Council for Construction