

Construction Skills Network

Greater London

Labour Market Intelligence
2006

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This document provides labour market intelligence for Greater London 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 Greater London. 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 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

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

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 Greater London construction industry is expected to increase by approximately 11% during the forecast period.
- In Greater London, the average annual employment requirement for SIC 45* (Construction) is 7,530. A large Average Annual Requirement in Architects & Technical Engineers (SIC 74.2*) of 1,990 means that the Average Annual Requirement for both SIC 45 and 74.2 combined is 9,520.
- The greatest Average Annual Requirement in Greater London will be for Architects & Technical Engineers, which is estimated at 1,990. Nationally, Wood Trades is forecast to have the greatest requirement at 11,090, and in Greater London it has the fifth largest requirement at 800.
- Construction output in Greater London is estimated to have declined in 2005 by around 5%. Falls are expected in both new work and repair and maintenance (R&M), by 6% and 3%, respectively. Going forward, prospects for the new work sector are set to improve but the decline in R&M output is forecast to be more prolonged.
- In contrast with the recent past, infrastructure is forecast to be the strongest sub-sector in Greater London between 2006 and 2010. From 2007 double-digit growth is expected as work begins on a number of sizeable road and rail schemes. An additional boost from work directly attributable to the 2012 Olympic Games is also expected post 2007.
- Greater London's economy expanded robustly in 2004, increasing by 3.2% over the year as a whole. In 2005, economic growth was much more subdued and Gross Value Added (GVA) is estimated to have risen by just 1.6%. Slower activity resulted from lacklustre growth in private services and a contraction in manufacturing. Over the short term, a sharp downturn in distribution, hotels and catering will constrain more robust expansion in other areas of the economy. By 2008, year-on-year growth is forecast at a steady 3.2% and is expected to be maintained for the remainder of the forecast period.

* For definitions and a list of SIC Codes covered by ConstructionSkills see Appendices I & 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.

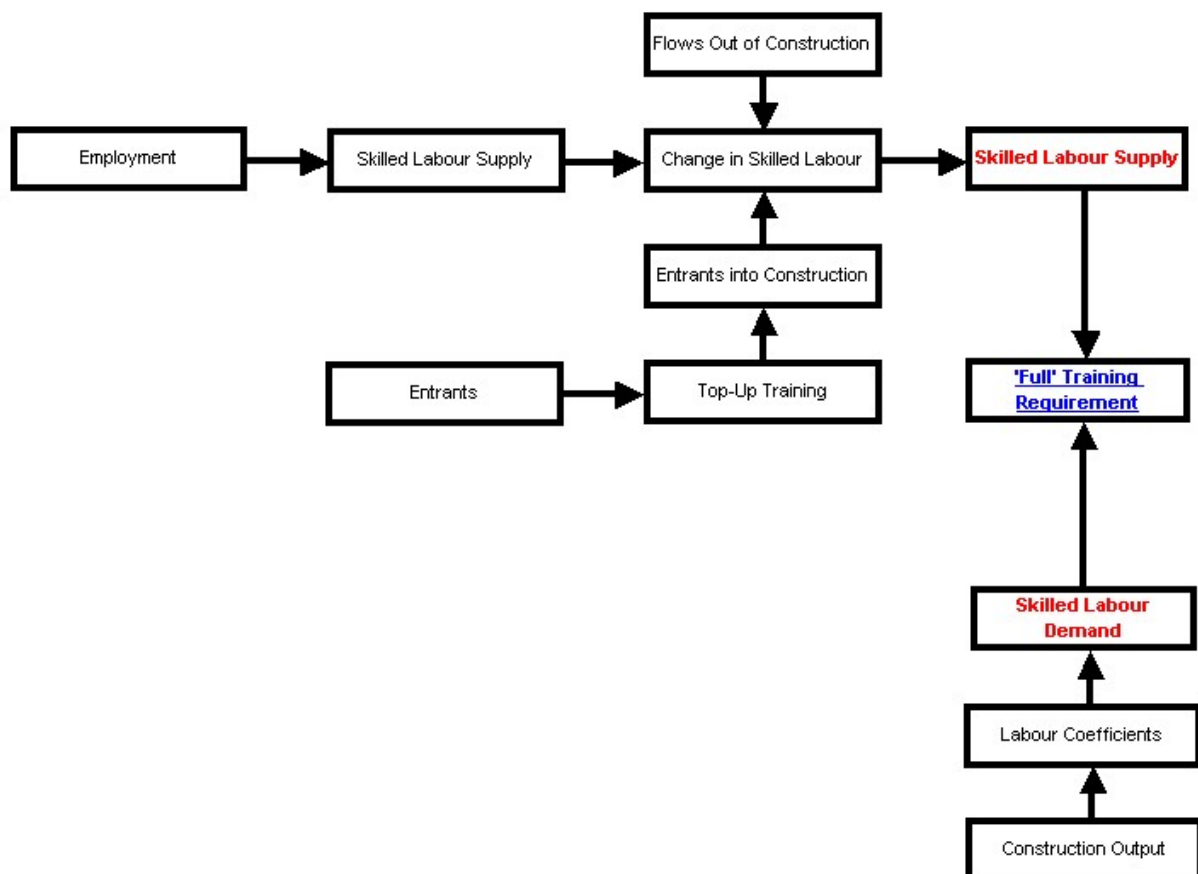
The main reason for outflow is likely to be transfer to other industries.

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

Greater London is the largest regional economy in the UK. In 2005, GVA is estimated at £178.2bn (in 2002 prices), accounting for 18% of UK GVA. Structurally, the Greater London economy is highly geared towards the service sector. Particularly large is the region's financial and business services sector, which contributes around 47% of total GVA compared to 25% of total output nationally. Unsurprisingly, manufacturing takes a relatively small share of output.

Greater London is home to 13% of the UK population. Estimated at £23,800, GVA per capita in the region is well above the UK average of £17,258.

Economic performance and expectations

The macroeconomic forecasts for Greater London are summarised in Table 1.

- Greater London's economy expanded robustly in 2004, increasing by 3.2% over the year as a whole. In 2005, economic growth was much more subdued and GVA is estimated to have risen by just 1.6%. Slower activity resulted from lacklustre growth in private services and a contraction in manufacturing. Over the short term, a sharp downturn in distribution, hotels and catering will constrain more robust expansion in other areas of the economy. By 2008 year-on-year growth is forecast at a steady 3.2%, and is expected to be maintained for the remainder of the forecast period.
- Reflecting weaker growth in the service sector in 2005, total employment in Greater London is forecast to rise only marginally in 2006. As with output growth, any slowdown in job creation is expected to be short lived and by 2007 total employment should be increasing at around 0.8% per year. Over the medium term, Greater London is forecast to record the strongest rate of job creation, mainly due to the strength of financial and business services.
- Greater London endured a marked consumer slowdown in 2004, with real household disposable income increasing by just 0.7%. Estimates for 2005 are more optimistic and by 2010 growth in real household disposable income is expected to be around 2.8%.

Table 1
Macroeconomic forecasts for Greater London

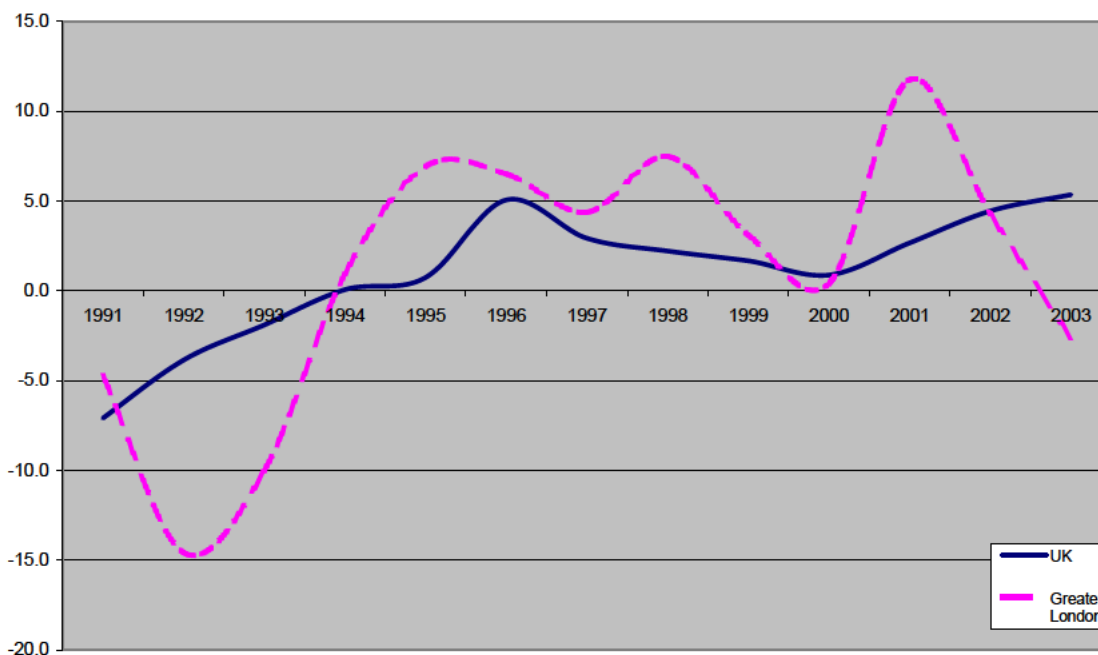
EXPERIAN BUSINESS STRATEGIES FORECASTS FOR GREATER LONDON						
	% change (except unemployment)					
	2005	2006	2007	2008	2009	2010
Gross Value Added	1.6	2.9	3.1	3.2	3.2	3.2
Total employment	0.9	0.5	0.8	1.0	0.9	0.9
Unemployment rate (ILO)	6.8	7.4	7.7	7.8	7.9	8.0
Real household disposable income	2.4	1.9	2.1	2.5	2.7	2.8

Source: Experian.

Construction output in Greater London – historical overview

- Figure 2 shows the annual percentage change in construction output in Greater London compared to the UK as a whole.
- In real terms construction output declined in both 2003 and 2004. Over the first three quarters of 2005 output was £10.6bn in current prices, 2% down on the first three quarters of 2004, suggesting a further fall in 2005 is probable. To achieve an outturn of a similar nominal magnitude to 2004, the fourth quarter of 2005 will have to be particularly strong.
- Respective declines in infrastructure of 7% and 31% in 2003 and 2004 are partially responsible for Greater London's relatively weak performance over the past few years. The sub-sector has been in the doldrums for three years, and is likely to have remained so in 2005. Over the first three quarters of 2005 output was 12% lower than during the first three quarters of 2004.
- The commercial sub-sector endured a short but severe recession in 2003, mainly as a result of a slump in the offices market, the sectors largest component. Recovery occurred almost immediately and output rose by 9% in 2004. The recovery is set to continue in 2005 and output rose by a further 4% over the first three quarters of the year.

Figure 2
Construction output percentage change: UK vs. Greater London



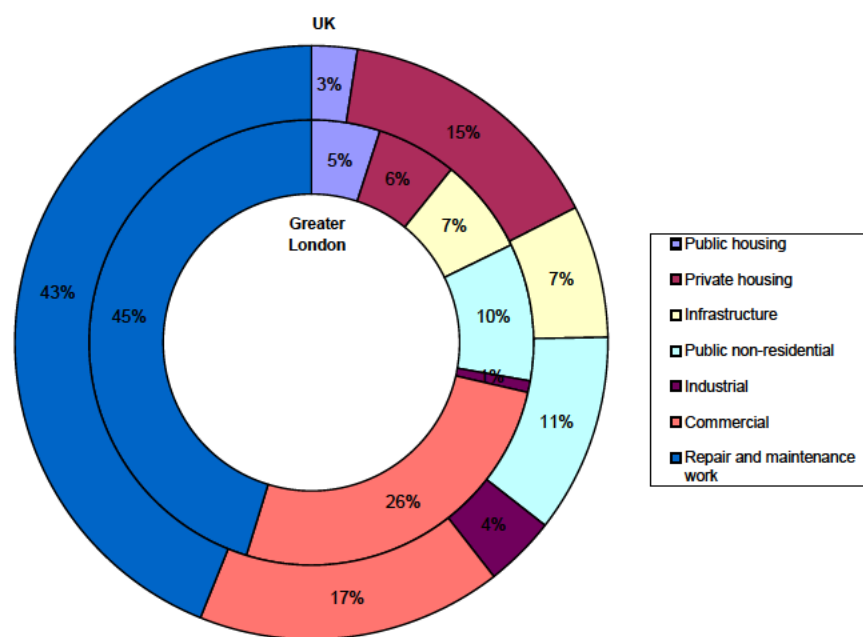
Notes: Except for Northern Ireland, output data for the English regions, Wales, and Scotland are supplied by the Department of Trade and Industry (DTI) on a current price basis. Thus national deflators produced by the DTI have been used to deflate to a 2000 constant price basis, i.e. the effects of inflation 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 Greater London's construction industry when compared with the UK as a whole. The greatest differences are in the commercial and private housing sub-sectors. The relative importance of the commercial sub-sector is unsurprising. A global hub for financial and business services needs to have an abundance of office space and associated facilities for workers. Relatively, Greater London has a small private housing sub-sector compared to the UK as a whole. The industrial sub-sector is also significantly smaller in Greater London than the UK.

Figure 3
Construction output by main sub-sector: UK vs. Greater London, 2004

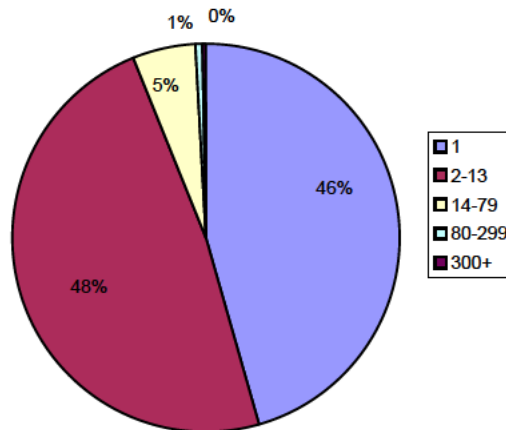


Source: DTI, DFPNI, Experian.

Figure 4 demonstrates that construction companies in Greater London are predominantly small. 94% of construction firms employ between one and 13 workers. Firms employing between 2 and 13 people are most common, accounting for approximately 48% of the total. Only around 5% of firms employ between 14 and 79 employees. Construction companies employing more than 80 people are scarce.

Figure 4
Percentage of construction companies by size, 2004

Employees	3rd Quarter 2004	%
1	8033	45.7
2-13	8496	48.3
14-79	901	5.1
80-299	114	0.6
300+	40	0.2
Total	17584	100



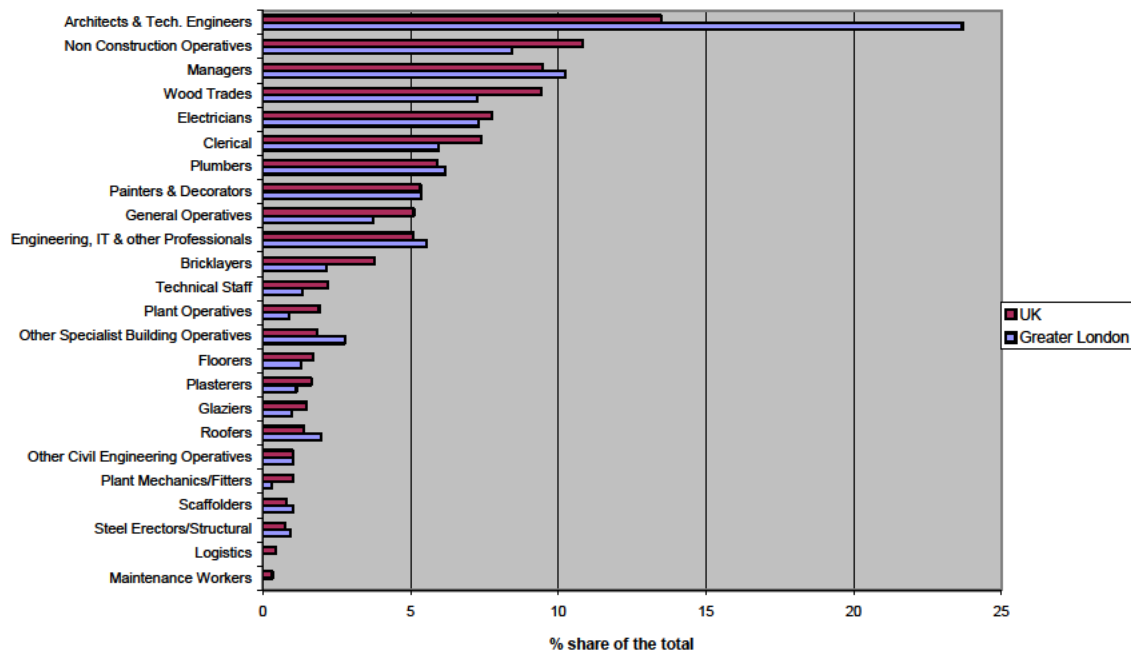
* Note: One employee indicates one person working for the company

Source: DTI.

Construction employment

Figure 5 demonstrates that employment by occupation in Greater London is roughly in line with the national picture. However, there are a few exceptions. Employment in Greater London is skewed towards the professional services, highlighted by relatively greater employment in Architects & Technical Engineers (which includes all SIC 74.2 occupations). A significant number of the other occupations are slightly under represented e.g. Non-Construction Operatives, Wood Trades, Clerical, General Operatives and Bricklayers.

Figure 5
Employment by occupation, UK vs. Greater London: 2005



Source: Construction Skills Network Model, 2006.

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 for the main construction sub-sectors in Greater London (current prices). Since 2000, the annual change in new work construction orders has been variable. Growth was particularly strong in 2000 and 2001. However, this was followed by a decline in both 2002 and 2003. In the last two years, growth has recovered with new work orders increasing to around £6 billion in 2005.

Commercial, the largest sub-sector, was almost entirely responsible for the region's overall slump in 2002 and 2003. A 4% decline in commercial orders in 2002 was followed by a sharp 31% decline in 2003. The overall effect was a 16% drop in total new work orders. In 2004 the commercial sub-sector recovered strongly, orders rose by 31%. Growth continued in 2005 but at a slower rate of 13%.

The shortage of affordable housing in Greater London has recently been made a government priority. In 2005 orders were a phenomenal 327% higher than in 2000. Orders in the public housing sub-sector have been rising for the past three years and, at 77%, growth in 2004 was particularly strong. Orders continued to rise in 2005 but the rate of increase slowed to 19%.

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 growth in 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 Greater London, 1999–2005

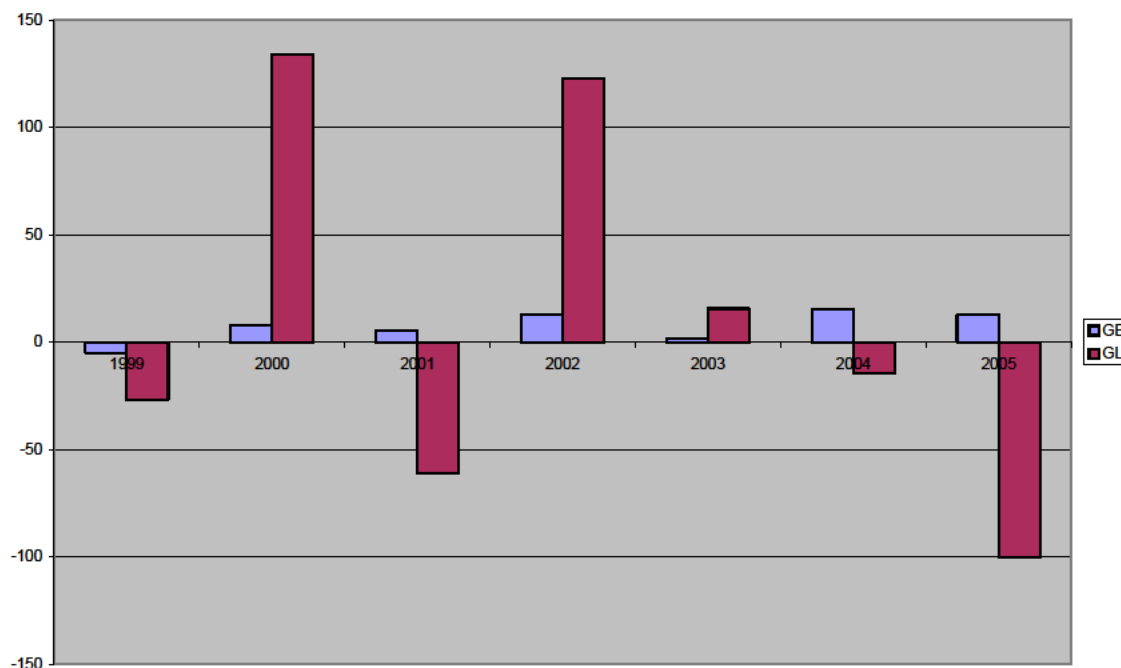
	£ million/annual % change						
	1999	2000	2001	2002	2003	2004	2005
Public housing	207	134	311	266	273	482	572
	10	-35	132	-14	3	77	19
Private housing	442	518	561	765	705	991	836
	-12	17	8	36	-8	41	-16
Infrastructure	593	645	1310	729	1094	588	593
	29	9	103	-44	50	-46	1
Public non-housing	528	1000	637	1113	778	848	818
	-26	89	-36	75	-30	9	-4
Industrial	118	140	216	128	127	125	141
	-54	19	54	-41	-1	-2	13
Commercial	2456	2643	3037	2930	2025	2646	2993
	8	8	15	-4	-31	31	13
All new work	4344	5079	6073	5931	5002	5681	5954
	-1	17	20	-2	-16	14	5

Source: DTI.

Figure 6 shows new orders growth in Greater London and GB. Orders growth tends to be more volatile in Greater London than across GB as a whole. Orders growth in Greater London was significantly higher than the national average in 2000 and 2002. In contrast, orders declined sharply against a national increase in 2001 and 2005.

Figure 6
New orders: GB vs. Greater London, 1999–2005

Annual % change



Source: DTI.

Construction output – forecasts

Real construction output for Greater London is summarised in Table 3.

- Falls of 6% and 3% are expected in 2005 for new work and R&M, respectively. Going forward prospects for the new work sector are set to improve. Output is forecast to hover around the same level in 2006 before recording stronger growth over the next four years. The decline in R&M output is forecast to be more prolonged. Falls are expected in 2006 and 2007 before a forecast recovery in 2008.
- In contrast with the recent past, infrastructure is forecast to be the strongest sub-sector in Greater London between 2006 and 2010. From 2007 double-digit growth is expected as work begins on a number of sizeable road and rail schemes. An additional boost from work directly attributable to the 2012 Olympic Games is also expected post 2007. The rate of growth^{*} is likely to average around 14% each year over the forecast period.

^{*} 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 nth root of the total percentage growth rate, where n is the number of years in the period being considered.

- Industrial is set to be Greater London's weakest sub-sector. Marginal growth expected in the latter stages of the forecast period is unlikely to compensate for the three years of decline forecast between 2006 and 2008. However, the relatively small size of this sub-sector will limit its affect on overall growth.
- Any slowdown in private housing activity, resulting from a less certain housing market, is likely to be short-lived and the outlook for the sub-sector is positive. Averaging around 10% per year, growth is forecast to peak at a little less than 15% in 2008.
- Public non-housing endured the sharpest decline in 2005 and, while the outlook is better, growth is forecast to under-perform the increases expected in most other sub-sectors. Peaking at 4% in 2009, annual average growth of just 2.6% is forecast.

Table 3
Greater London construction output by sub-sector, 2004–2010

	Annual % change						
	2004	2005	2006	2007	2008	2009	2010
Public housing	50%	-4%	0%	3%	13%	10%	8%
Private housing	-21%	5%	-4%	5%	15%	11%	11%
Infrastructure	-31%	-16%	-3%	13%	15%	15%	13%
Public non-housing	-5%	-17%	-1%	1%	1%	4%	4%
Industrial	-16%	9%	-3%	-3%	0%	1%	2%
Commercial	9%	-3%	3%	5%	7%	4%	4%
All new work	-3%	-6%	0%	5%	8%	7%	6%
R&M	-1%	-3%	0%	-3%	3%	2%	2%
Total Work	-2%	-5%	0%	1%	6%	5%	5%

Source: Experian.

Table 4 shows total construction output and employment over the period 1998–2010 for Greater London. Real construction output is set to be 12% higher in 2010 than in 2004, due to strong growth in the latter stages of the forecast period. However, its lacklustre performance over the next couple of years will prevent Greater London matching a 14% national increase over the same period. Total employment is expected to increase by 19% over the forecast period.

Table 4
Total construction output and employment, Greater London: 1998–2010

	Year	Total Output Growth Rate %	Total Output £m 2001 prices	Total Employment (direct and indirect) 000s
Actual	1998	7.5	10475	254
	1999	3.1	10799	254
	2000	0.4	10843	264
	2001	11.7	12116	287
	2002	4.3	12635	273
	2003	-2.6	12303	285
	2004	-2.4	12012	296
Forecast	2005	-5	11423	318
	2006	0	11408	319
	2007	1	11535	320
	2008	6	12244	332
	2009	5	12821	343
	2010	5	13437	353

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 is 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.

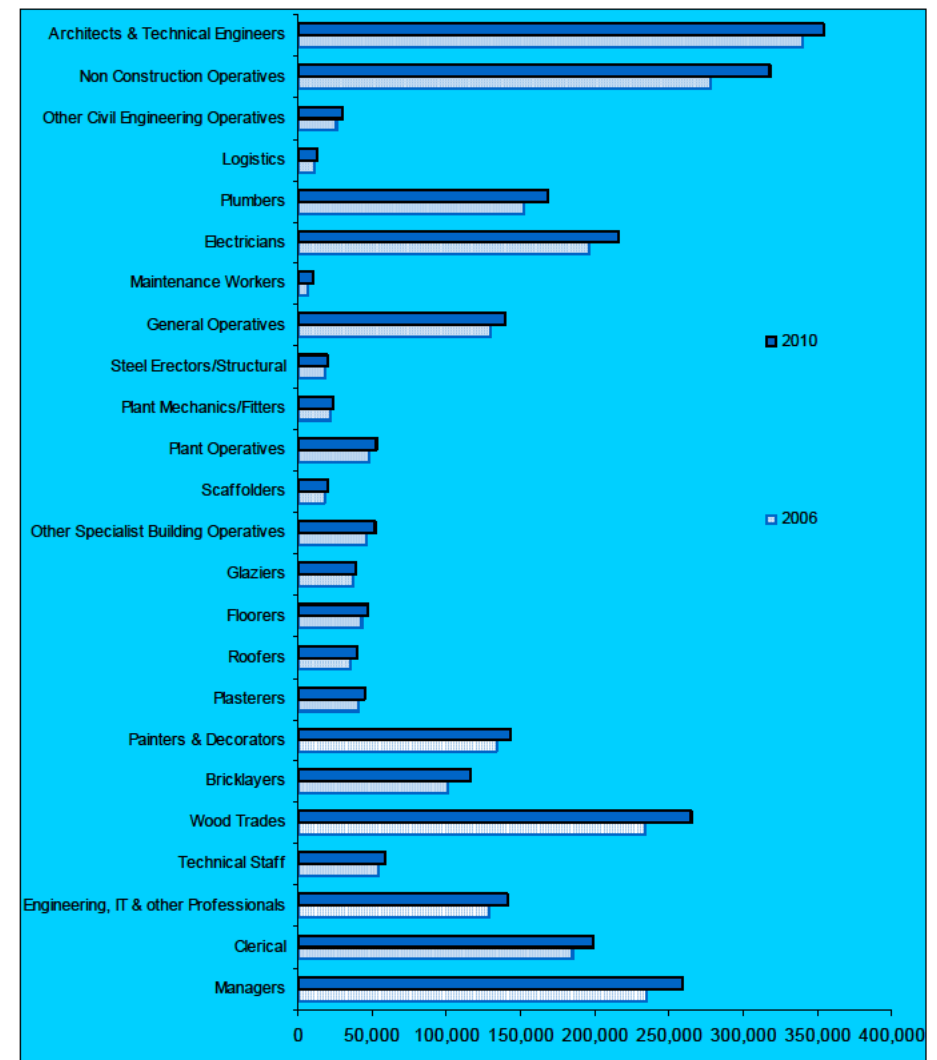
* For the ConstructionSkills and SummitSkills sector footprints see Appendix IV

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

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

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 Greater London employment forecasts

Table 6 and Figure 8 outline the forecast employment and Average Annual Requirements for 24 occupations within the Greater London construction industry between 2006 and 2010.

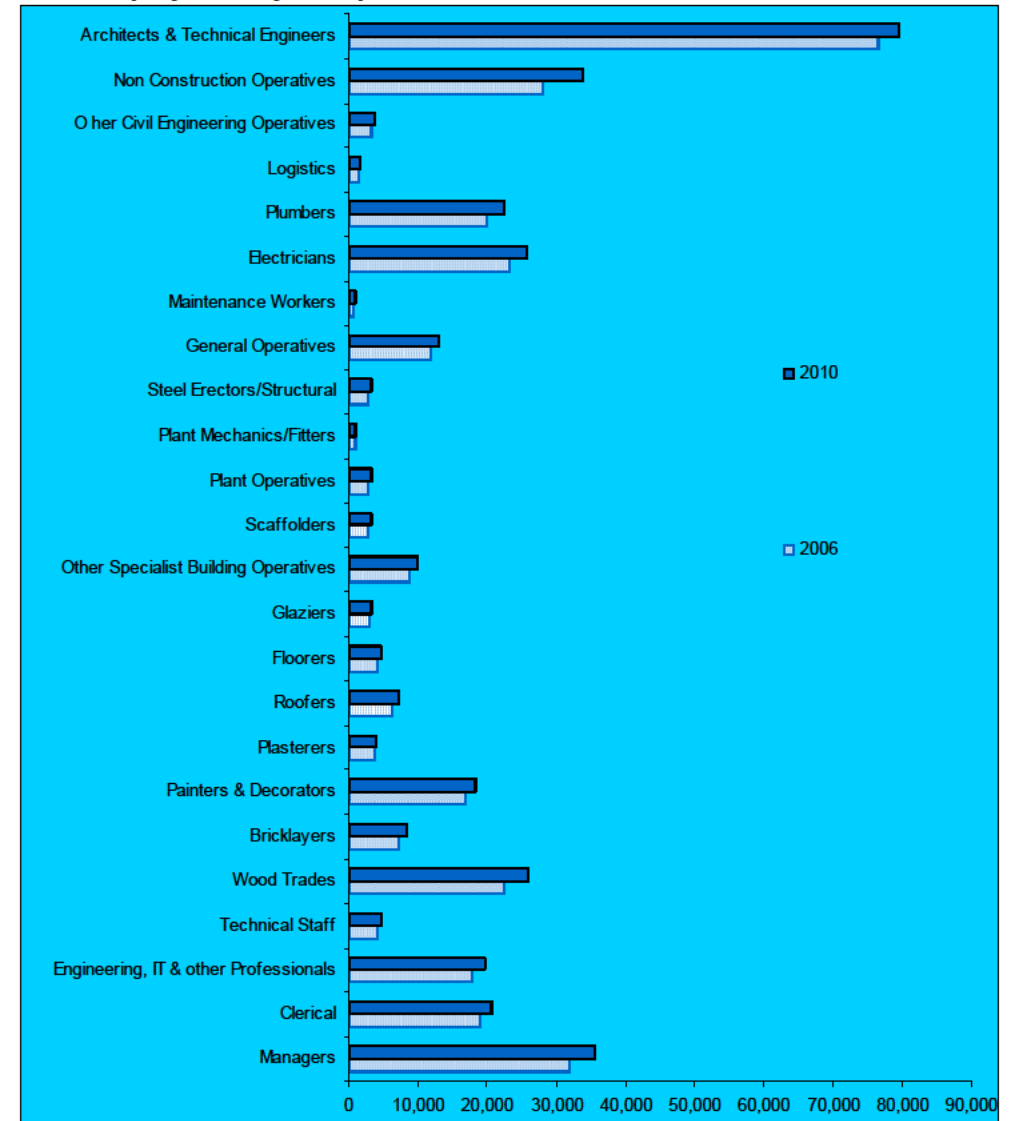
- Total construction employment is forecast to increase by 34,050 between 2006 and 2010 in both SIC 45 and SIC 74.2.
- Greater London has an Average Annual Requirement of 9,520 (Table 6 and Figure 8).
- The greatest Average Annual Requirement in Greater London will come from Architects & Technical Engineers (SIC 74.2), which is estimated at 1,990. Nationally, Wood Trades is forecast to have the greatest requirement. In Greater London, Wood Trades has the fifth largest requirement at 800 (Table 6).
- Other occupations with a large Average Annual Requirement include Clerical (1,250), Managers (890), Plumbers (870), Other Specialist Building Operatives (620) and Electricians (590) (Table 6).
- Four occupations have a requirement of less than 10, namely Technical Staff, Floorers, General Operatives and Maintenance Workers (Table 6).
- Non-construction Operatives is expected to see the greatest increase in total employment over the forecast period. Between 2006 and 2010 an extra 5,700 new employees are likely to be required (Table 6, Figure 8).

Table 6
Greater London
Total employment and Average Annual Requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006–2010
Managers	32,000	35,600	890
Clerical	18,920	20,510	1,250
Engineering, IT & other Professionals	17,710	19,650	340
Technical Staff	4,110	4,560	<10
Wood Trades	22,440	25,880	800
Bricklayers	7,180	8,440	220
Painters & Decorators	16,900	18,350	390
Plasterers	3,590	4,000	180
Roofers	6,240	7,160	320
Floorers	4,070	4,530	<10
Glaziers	3,100	3,350	270
Other Specialist Building Operatives	8,800	9,930	620
Scaffolders	2,770	3,160	150
Plant Operatives	2,870	3,220	50
Plant Mechanics/Fitters	930	1,010	120
Steel Erectors/Structural	2,750	3,130	140
General Operatives	11,870	12,930	<10
Maintenance Workers	610	860	<10
Electricians	23,070	25,710	590
Plumbers	19,910	22,360	870
Logistics	1,360	1,580	100
Other Civil Engineering Operatives	3,250	3,770	230
Non Construction Operatives	28,100	33,800	
Total (SIC 45)	242,550	273,490	7,530
Architects & Technical Engineers	76,500	79,610	1,990
Total (SIC 45 & 74.2)	319,050	353,100	9,520

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

Figure 8
Greater London
Total employment by occupation: 2006–2010



Source: Construction Skills Network 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 Greater London. 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
Central London
Total employment and annual requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	6,730	7,390	180
Clerical	3,980	4,260	260
Engineering, IT & other Professionals	3,720	4,080	70
Technical Staff	870	950	<10
Wood Trades	4,720	5,370	170
Bricklayers	1,510	1,750	50
Painters & Decorators	3,550	3,810	80
Plasterers	760	830	40
Roofers	1,310	1,490	70
Floorers	860	940	<10
Glaziers	650	700	60
Other Specialist Building Operatives	1,850	2,060	130
Scaffolders	580	660	30
Plant Operatives	600	670	10
Plant Mechanics/Fitters	200	210	30
Steel Erectors/Structural	580	650	30
General Operatives	2,500	2,680	<10
Maintenance Workers	130	180	<10
Electricians	4,850	5,340	120
Plumbers	4,190	4,640	180
Logistics	170	190	<10
Other Civil Engineering Operatives	800	920	<10
Non Construction Operatives	5,910	7,020	<10
Total (SIC 45)	51,020	56,790	1,510
Architects & Technical Engineers	16,080	16,520	410
Total (SIC 45 & 74.2)	67,100	73,310	1,920

Source: Construction Skills Network Model, 2006; Experian.

Table 8
West London
Total employment and annual requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	5,730	6,100	150
Clerical	3,390	3,510	210
Engineering, IT & other Professionals	3,170	3,370	60
Technical Staff	740	780	<10
Wood Trades	4,020	4,430	140
Bricklayers	1,290	1,450	40
Painters & Decorators	3,030	3,140	70
Plasterers	640	690	30
Roofers	1,120	1,230	50
Floorers	730	780	<10
Glaziers	560	570	50
Other Specialist Building Operatives	1,580	1,700	110
Scaffolders	500	540	30
Plant Operatives	510	550	<10
Plant Mechanics/Fitters	170	170	20
Steel Erectors/Structural	490	540	20
General Operatives	2,130	2,210	<10
Maintenance Workers	110	150	<10
Electricians	4,130	4,400	100
Plumbers	3,570	3,830	150
Logistics	140	160	<10
Other Civil Engineering Operatives	680	760	<10
Non Construction Operatives	5,030	5,790	<10
Total (SIC 45)	43,460	46,850	1,230
Architects & Technical Engineers	13,700	13,640	340
Total (SIC 45 & 74.2)	57,160	60,490	1,570

Source: Construction Skills Network Model, 2006; Experian.

Table 9
South London
Total employment and annual requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	6,270	7,030	170
Clerical	3,710	4,050	250
Engineering, IT & other Professionals	3,470	3,880	70
Technical Staff	810	900	<10
Wood Trades	4,400	5,110	160
Bricklayers	1,410	1,670	40
Painters & Decorators	3,310	3,620	80
Plasterers	700	790	40
Roofers	1,220	1,410	60
Floorers	800	890	<10
Glaziers	610	660	50
Other Specialist Building Operatives	1,730	1,960	120
Scaffolders	540	620	30
Plant Operatives	560	640	<10
Plant Mechanics/Fitters	180	200	20
Steel Erectors/Structural	540	620	30
General Operatives	2,330	2,550	<10
Maintenance Workers	120	170	<10
Electricians	4,520	5,080	120
Plumbers	3,900	4,410	170
Logistics	160	180	<10
Other Civil Engineering Operatives	750	870	<10
Non Construction Operatives	5,510	6,670	<10
Total (SIC 45)	47,550	53,980	1,410
Architects & Technical Engineers	15,000	15,720	390
Total (SIC 45 & 74.2)	62,550	69,700	1,800

Source: Construction Skills Network Model, 2006; Experian.

Table 10
North London
Total employment and annual requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	3,660	4,120	100
Clerical	2,160	2,370	150
Engineering, IT & other Professionals	2,030	2,270	40
Technical Staff	470	530	<10
Wood Trades	2,570	3,000	90
Bricklayers	820	980	30
Painters & Decorators	1,930	2,120	50
Plasterers	410	460	20
Roofers	710	830	40
Floorers	470	520	<10
Glaziers	350	390	30
Other Specialist Building Operatives	1,010	1,150	70
Scaffolders	320	370	20
Plant Operatives	330	370	<10
Plant Mechanics/Fitters	110	120	10
Steel Erectors/Structural	310	360	20
General Operatives	1,360	1,500	<10
Maintenance Workers	70	100	<10
Electricians	2,640	2,980	70
Plumbers	2,280	2,590	100
Logistics	90	110	<10
Other Civil Engineering Operatives	440	510	<10
Non Construction Operatives	3,210	3,910	<10
Total (SIC 45)	27,750	31,660	840
Architects & Technical Engineers	8,750	9,210	230
Total (SIC 45 & 74.2)	36,500	40,870	1,070

Source: Construction Skills Network Model, 2006; Experian.

Table 11
East London
Total employment and annual requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	8,000	9,200	230
Clerical	4,730	5,300	320
Engineering, IT & other Professionals	4,430	5,070	90
Technical Staff	1,030	1,180	<10
Wood Trades	5,610	6,680	210
Bricklayers	1,800	2,180	60
Painters & Decorators	4,230	4,740	100
Plasterers	900	1,030	50
Roofers	1,560	1,850	80
Floorers	1,020	1,170	<10
Glaziers	780	870	70
Other Specialist Building Operatives	2,200	2,560	160
Scaffolders	690	820	40
Plant Operatives	720	830	10
Plant Mechanics/Fitters	230	260	30
Steel Erectors/Structural	690	810	40
General Operatives	2,970	3,340	<10
Maintenance Workers	150	220	<10
Electricians	5,770	6,640	150
Plumbers	4,980	5,770	220
Logistics	200	240	<10
Other Civil Engineering Operatives	950	1,140	<10
Non Construction Operatives	7,030	8,730	<10
Total (SIC 45)	60,670	70,630	1,860
Architects & Technical Engineers	19,130	20,560	510
Total (SIC 45 & 74.2)	79,800	91,190	2,370

Source: Construction Skills Network Model, 2006; Experian.

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 outputs.

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 deals 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
ConstructionSkills	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

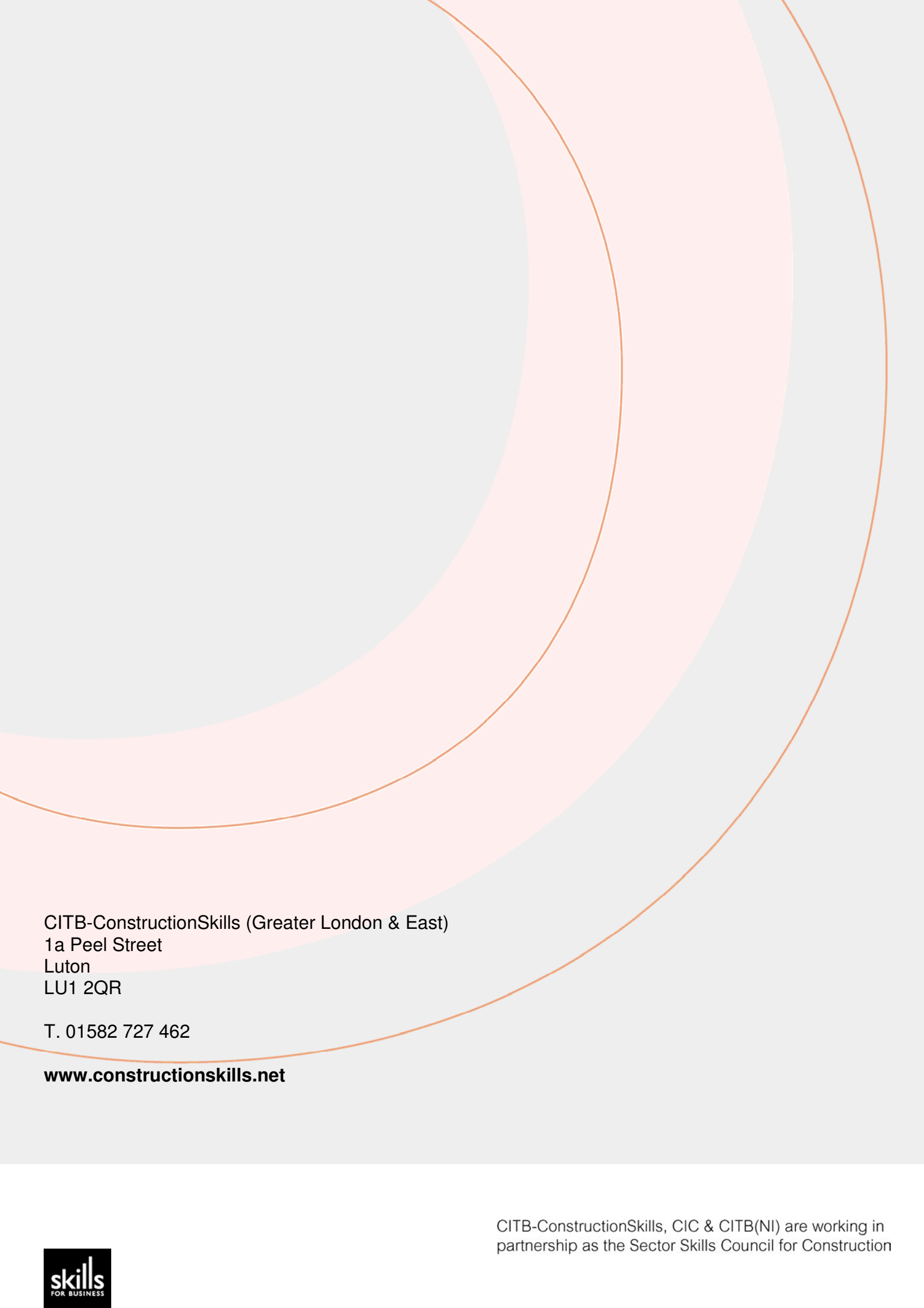
Coverage – Property, Housing and Land Managers, Chartered Surveyors, Estimators, Valuers, Home Inspectors, Estate Agents and Auctioneers (property and chattels), Caretakers, Mobile and Machine Operatives, Window Cleaners, Road Sweepers, Cleaners, Domestic, Facilities Managers.

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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