Construction Skills Network

West Midlands

Labour Market Intelligence 2006

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Contents

This document provides labour market intelligence for the West Midlands 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 West Midlands. 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 West Midlands construction industry is expected to increase by approximately 7% during the forecast period.
- In the West Midlands the average annual employment requirement for SIC 45[1] (Construction) is 6,220. With an Average Annual Requirement in Architects & Technical Engineers (SIC 74.2[1]) of 830 the annual requirement for both SIC 45 and 74.2 combined rises to 7,050.
- The largest Average Annual Requirement in the West Midlands will come from Wood Trades, with 920 employees needed annually between 2006 and 2010. Nationally, the largest requirement will also come from Wood Trades (11,090). The second largest average annual employment requirement in the West Midlands is with Electricians[2] at 890.
- Construction output in the West Midlands has been rising since 2000, with an average annual growth rate of 2%. However, strong output at the start of the century was marred by a single year of decline in 2003.
- From 2006, construction output in the West Midlands is forecast to grow year-on-year to 2010, at a similar rate to recent years, with growth expected to rise by an average annual rate of 2.1%. A decline in output is forecast for 2005 but a strong recovery is expected between 2006 and 2008.
- The commercial sub-sector in the region is forecast to see the fastest growth, rising by 5.7% on average each year. In contrast, the outlook for both the public and private housing sub-sectors is less encouraging, with both expected to decline over the forecast period in spite of strong performances in 2005.
- Growth in economic activity in the West Midlands eased in 2005 and is projected to be below the UK average. Growth prospects for the region are also amongst the weakest in the UK, with Gross Value Added (GVA) forecast to rise by just 2.3% in 2006, the second worst performance of any English region and below the national average of 2.6%.

[1] For definitions and a list of SIC Codes covered by ConstructionSkills see Appendices I & IV

[2] For the ConstructionSkills and SummitSkills sector footprints see Appendix 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.

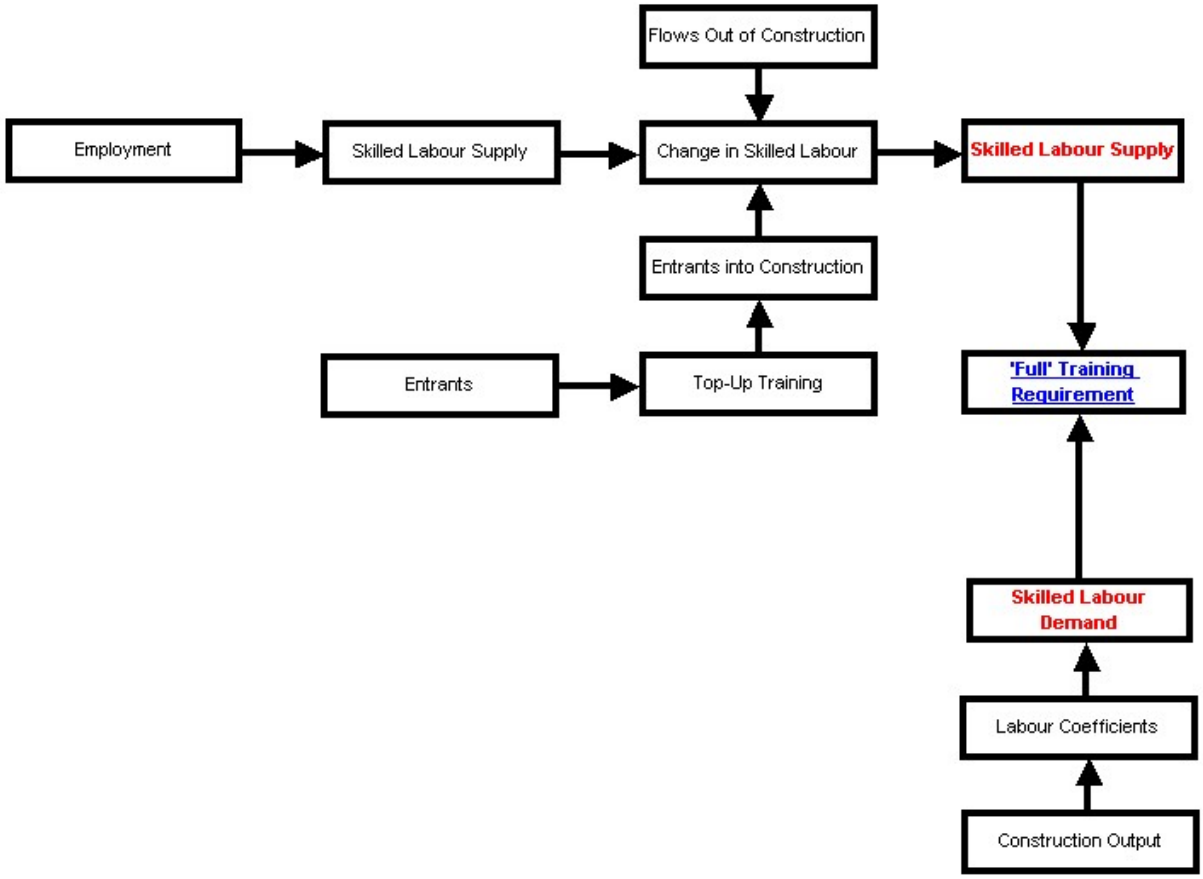
The main reason for outflow is likely to be transfer to other industries.

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

In 2005, the West Midlands Gross Value Added (GVA) is estimated at £79.9bn (in 2002 prices), accounting for 8.1% of UK GVA. On a structural basis, the West Midlands economy is more highly geared towards Engineering than the national average. transport & communications is forecast to be one of the fastest growing sub-sectors over the coming years, with an average annual growth rate of 5.2%.

The West Midlands, with a population of 5.3m*, contains 8.9% of the total UK population. GVA per capita, providing an indication of the region's standard of living, is below the UK average, at £15,325 compared to £17,258 nationally. Officially, average gross weekly earnings in Autumn 2005 were estimated at £415 in the West Midlands compared to £466 nationally.

Economic performance and expectations

Table 1 shows the macroeconomic forecasts for the years 2005 to 2010 for the West Midlands.

- Steady economic expansion seen in the early part of the century continued through 2004 and is expected to remain in the region of 2.3% between 2006 and 2010, significantly below the UK average. This is a far cry from growth in 2004 when GVA rose by 3.5%, outstripping the 3% national growth. Mirroring the national picture, growth in the West Midlands is likely to have slowed temporarily in 2005, dipping to just 1.5%. To 2010 the West Midlands' economy is forecast to grow by 12%, below the forecasted national increase of 14%. Strong growth in Financial and Business Services, and expansion in Transport and Communications will contribute to the consistent performance of the West Midlands economy.
- Relatively slow recovery is expected in total employment from 2005, following in the wake of two consecutive years of decline at the start of the century. Employment growth is forecast to trickle along at an average annual rate of 0.1%, with a decline expected toward the end of the forecast period. A steady decline in manufacturing employment will curtail overall growth in employment.
- Real household disposable income growth over the forecast period in the West Midlands will be below the national average of 2.5%. With reasonably steady year-on-year increases expected, at an average annual rate of 2.2%, the growth in household real income stock in the West Midlands is amongst the lowest in the country.

Table 1
Macroeconomic forecasts for the West Midlands

EXPERIAN BUSINESS STRATEGIES FORECASTS FOR THE WEST MIDLANDS						
						% change (except unemployment)
	2005	2006	2007	2008	2009	2010
Gross Value Added	1.5	2.3	2.3	2.2	2.3	2.3
Total employment	0.9	0.4	0.2	0.1	-0.1	-0.1
Unemployment rate (ILO)	4.7	5.4	5.4	5.4	5.5	5.6
Real household disposable income	2.5	2.2	2.1	2.2	2.3	2.2

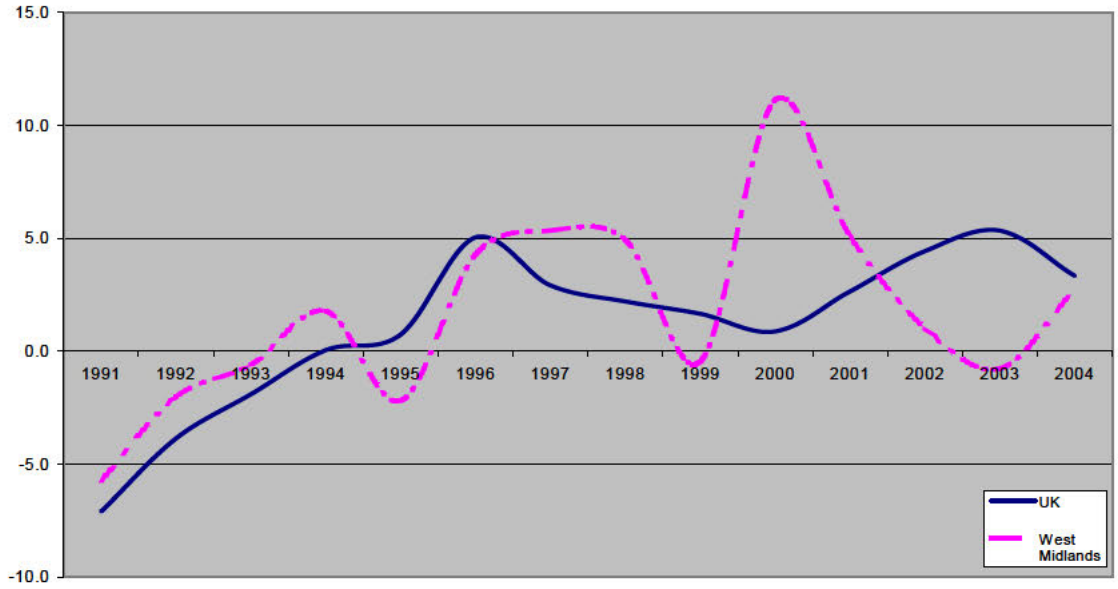
Source: Experian.

* Population figures, in millions, rounded to the nearest one hundred thousand. Taken from the Office for National Statistics. Mid-2004 figures.

Construction output in the West Midlands – Historical overview

- A comparison of regional construction output growth between the West Midlands and the UK is summarised in Figure 2. The graph shows that construction output growth in the region is slowly converging with the national figure, after being consistently lower over the past few years.
- In annual terms, all new work construction output fell at an average annual rate of 1.2% between 2000 and 2004, with strong growth in repair and maintenance (R&M) output (average annual growth of 6.2%) aiding to overall growth in total work over the period. In 2005, five out of the seven main construction sectors in the West Midlands are forecast to decline, with only the housing sub-sectors recording positive growth figures. The latest current price output figures show public housing increasing by 77% over the first three quarters of 2005, compared to the same period in 2004.
- Vast expansion in both of the housing sub-sectors has been a notable characteristic of the past two years, in the wake of large declines in 2001 and 2002. Output data for the first three quarters of 2005 (current prices), suggests that this trend will continue, especially in public housing. After rising by a substantial 62% in 2004, public housing is expected to continue to grow, albeit at a slower rate, until 2008 when a decline is predicted for the remainder of the forecast period.
- For the second year in a row, infrastructure is predicted to be the worst performing sub-sector in the West Midlands, with output forecast to fall by 15% in 2005, following on from a 17% drop in 2004. Between 2002 and 2004, real infrastructure output in the West Midlands fell by a staggering 34% (in constant 2001 prices). Elsewhere output in the West Midlands is expected to have fared better in 2005.

Figure 2
Construction output percentage change: UK vs. West Midlands



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.

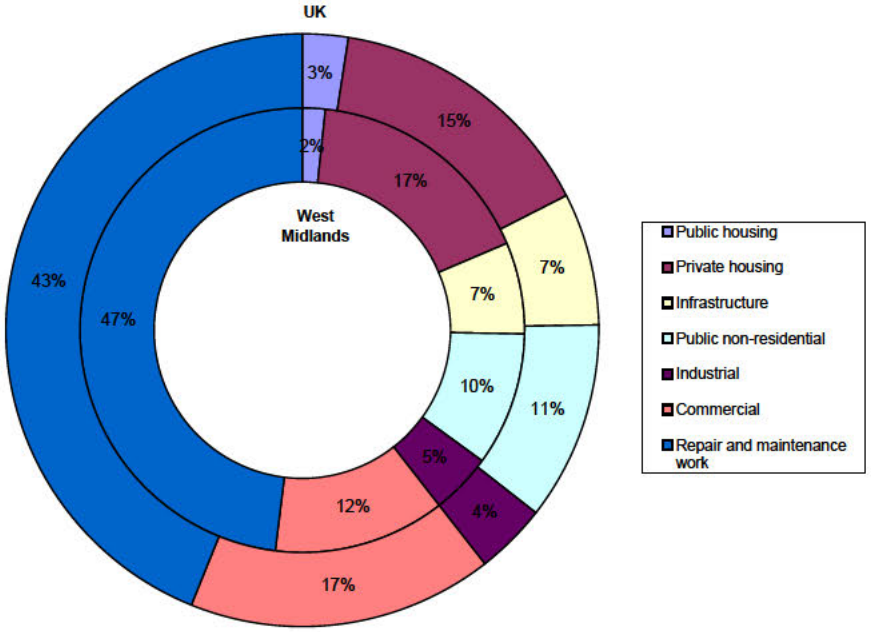
Source: DTI, Department of Finance and Personnel Northern Ireland (DFPNI), Experian.

Note: All figures relating to output in the first three quarters of 2005 are the latest current price values, available from the DTI.

Structure of the construction industry

Figure 3 shows the sectoral structure of the West Midlands construction industry compared with the UK as a whole. The chart shows that the make-up of the West Midlands construction industry is broadly in line with the national picture, but has a few small differences. With similarly proportioned public housing, infrastructure, public non-residential and industrial sub-sectors, the main differences arise in commercial, private housing and R&M. The commercial sub-sector in the West Midlands is proportionally smaller than in the UK industry as a whole, but with numerous large retail opportunities in the pipeline and forecast annual average growth of 5.7%, the commercial sub-sector may find itself expanding over the forecast period. With fairly substantial growth in private sector housing over the past two years, the sub-sector in the West Midlands has grown to take a 17% share of the region's total industry.

Figure 3
Construction output by main sub-sector: UK vs. West Midlands, 2004

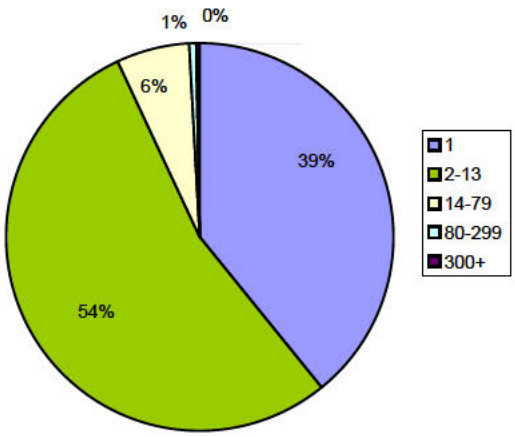


Source: DTI, DFPNI, Experian.

Figure 4 demonstrates that construction companies in the West Midlands are predominantly small, which is broadly in line with the UK as a whole. Less than 1% of all construction firms in the West Midlands have above 80 employees, with the largest amount of private contractors (54%) having between 2 and 13 employees.

Figure 4
Percentage of construction companies by size, 2004

Employees	3rd Quarter 2004	%
1	6072	39.0
2-13	8405	54.0
14-79	961	6.2
80-299	88	0.6
300+	28	0.2
Total	15554	100



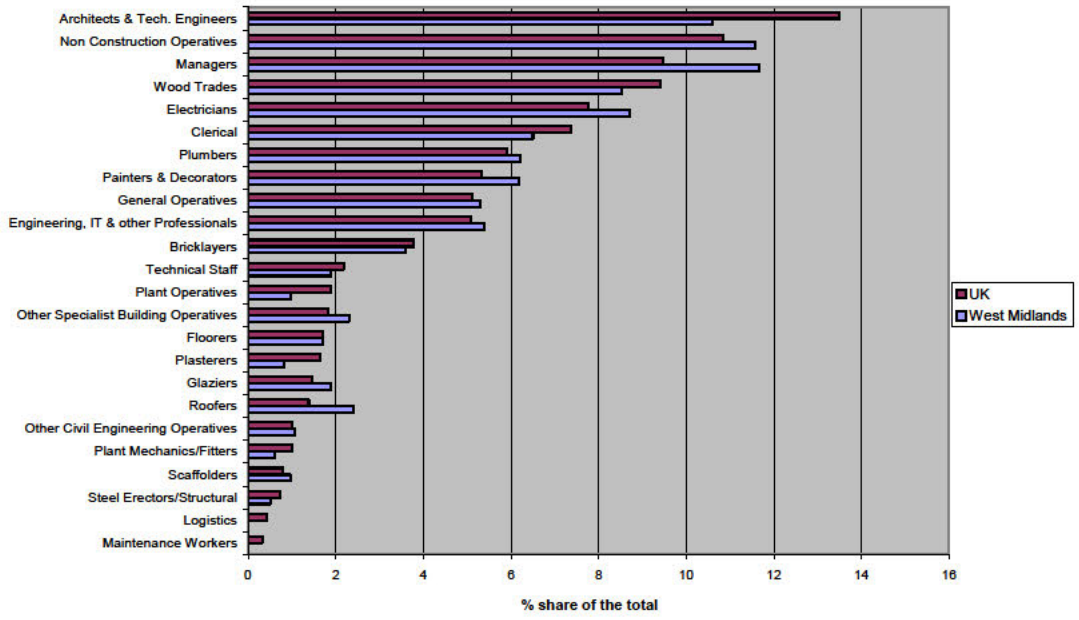
* Note: One employee indicates one person working for the company

Source: DTI.

Construction employment

Figure 5 shows the percentage share of total employment taken up by each occupation within the West Midlands, balanced against the UK industry as a whole. As indicated, the West Midlands largely follows the national trend, but for a few distinct differences. Nationally, Architects & Technical Engineers (which includes all SIC 74.2 occupations) is the largest occupational group, accounting for 13.5% of the total, with Non-construction Operatives as the second largest group. The West Midlands, however, has Non-construction Operatives and Managers as its largest occupational groups, with Architects & Technical Engineers as the third largest. The share of employment in Maintenance Workers and Logistics occupations was marginal in the West Midlands, a general trend seen in most UK regions.

Figure 5
Employment by occupation, UK vs. West Midlands: 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 figures for the main construction sectors in the West Midlands, in current prices. Since the beginning of the century, the annual change in new work orders in the West Midlands has been fairly volatile, with double-digit growth figures being reported in 2000, 2002, 2004 and 2005, and double-digit falls in 2001 and 2003. Between 2000 and 2005, new work orders rose by 8.4%, recording an average annual rate of 1.6%. This is in spite of average annual declines in the infrastructure, industrial and commercial sub-sectors. New work orders in the West Midlands in 2005 were just over £3.4bn, in current prices, which is one of the lowest of all the English regions. 2005 showed strong growth in new orders, with particularly strong performances from the infrastructure and commercial sub-sectors.

Since 2000, the best performing sub-sector in the West Midlands, in terms of new orders, has been the public housing sub-sector, with an average annual growth rate of 16.2%. Public housing orders have increased from £60m in 2000, to £127m in 2005, in current prices. The public non-housing and private housing sub-sectors have also performed well over the last five years, both delivering average annual growth in the region of 12%.

In 2005, public housing orders fell by 10% when compared with 2004 (in current prices). The infrastructure sub-sector performed well in 2005, with growth of 36% compared to the previous year. Both the commercial and industrial sub-sectors enjoyed healthy growth in 2005.

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 West Midlands, 1999–2005

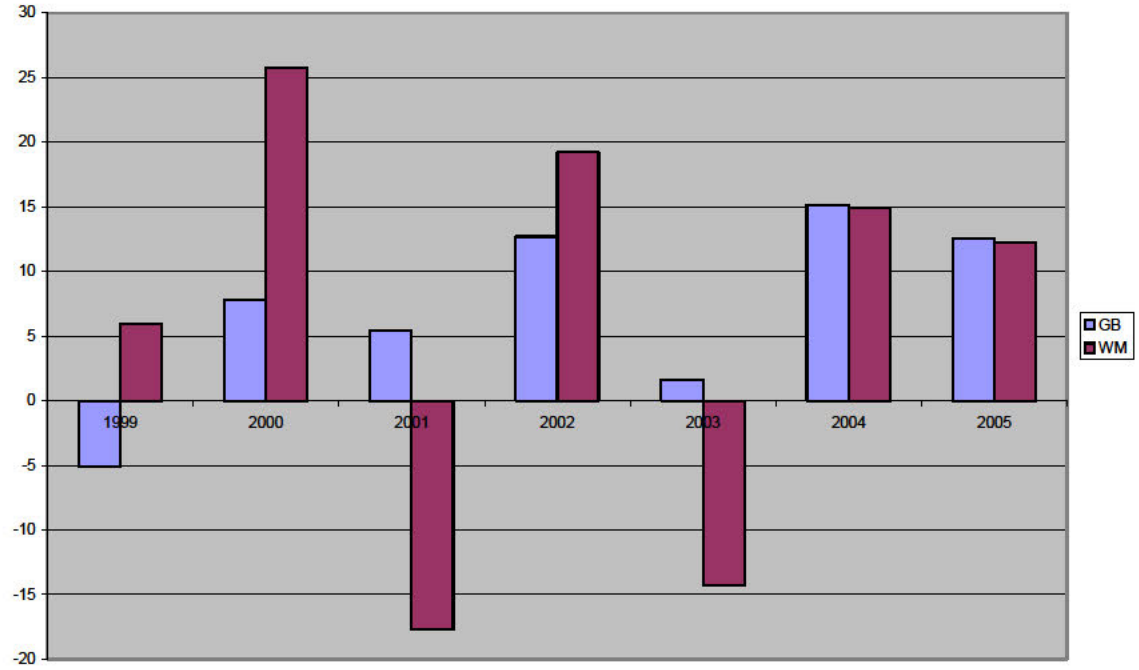
							£ million/*annual % change*
	1999	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Public housing	77	60	53	43	52	141	127
	-9	*-22*	*-12*	*-19*	*21*	*171*	*-10*
Private housing	708	763	721	747	985	1261	1334
	12	*8*	*-6*	*4*	*32*	*28*	*6*
Infrastructure	272	813	367	569	331	260	354
	-16	*199*	*-55*	*55*	*-42*	*-21*	*36*
Public non-housing	317	314	471	563	440	515	546
	28	*-1*	*50*	*20*	*-22*	*17*	*6*
Industrial	369	353	284	281	216	238	277
	1	*-4*	*-20*	*-1*	*-23*	*10*	*16*
Commercial	805	902	741	941	671	681	835
	7	*12*	*-18*	*27*	*-29*	*1*	*23*
All new work	**2548**	**3204**	**2637**	**3144**	**2694**	**3095**	**3473**
	6	*26*	*-18*	*19*	*-14*	*15*	*12*

Source: DTI.

Figure 6 compares the annual percentage changes in new orders for the West Midlands to GB figures. Compared with GB figures, the West Midlands significantly under-performed in 2001 and 2003. However, in 2004, the region converged with the national figures and recent orders figures have shown that this trend continued through 2005.

Figure 6
New orders: GB vs. West Midlands, 1999–2005

Annual % change



Source: DTI.

Construction output – forecasts

Real total construction output for the West Midlands is summarised in Table 3.

- Real total work output for the region is expected to grow steadily over the forecast period, with an average annual growth rate* of 1.9%. Official statistics on a regional basis are only available in current prices and the latest figures suggest only marginal growth so far in 2005 (0.8% in the first three quarters of 2005 compared with the same period in 2004).

- To 2010, the commercial sub-sector is expected to be the star performer, with average annual increases likely to be in the region of 5.7%. 2007 and 2008 are forecast to be particularly strong years, with growth expected to exceed 7% in both years. The projection of growth in the housing sector is less encouraging however, with both the public and private housing sub-sectors forecast to encounter an average annual decline over the years to 2010.

- Strong growth in 2004 and 2005 is likely to be followed by consecutive years of declining output at the end of the forecast period. The public housing sub-sector is expected to maintain its strong growth through 2006 and 2007, before the decline in output takes hold. In absolute terms, private housing output is expected to fall by 6.9% between 2006 and 2010, with public housing expected to realise a 10% decline over the same 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.

- 2007 is expected to be the only year in the forecast period when the West Midlands construction industry will experience growth across all sub-sectors. The public non-housing sub-sector is expected to expand at a healthy rate, with average annual growth expected in the region of 3.6%, making it the second largest sub-sector in terms of annual growth.

- Output growth in the infrastructure sub-sector in the West Midlands is expected to remain unchanged, with negligible average annual growth over the forecast period. This is due to a large decline in growth expected in 2005 and the recovery expected in 2006/7 being followed by consecutive years of decline.

Table 3
West Midlands construction output by sub-sector, 2004–2010

							£m, % change
	2004	2005	2006	2007	2008	2009	2010
Public housing	62%	8%	5%	4%	-3%	-5%	-6%
Private housing	27%	7%	-2%	2%	-1%	-4%	-4%
Infrastructure	-17%	-15%	4%	5%	-1%	-1%	-2%
Public non-housing	-1%	-3%	-1%	5%	1%	4%	4%
Industrial	11%	-4%	-7%	1%	0%	1%	2%
Commercial	-4%	-3%	4%	8%	7%	4%	4%
All new work	**6%**	**-1%**	**0%**	**4%**	**2%**	**0%**	**0%**
R&M	0%	-1%	5%	3%	3%	2%	2%
Total Work	**3%**	**-1%**	**2%**	**4%**	**2%**	**1%**	**1%**

Source: Experian.

Table 4 shows the total construction output and employment over the period 1998–2010. Real construction output in the West Midlands is set to be 8.8% higher in 2010 than in 2004, mainly due to strong performances from the commercial and R&M sub-sectors. Forecasted growth over the same period for the UK is somewhat higher, at 14%. Total employment is, however, anticipated to experience higher growth, with an increase of 16.6% forecast to 2010.

Table 4
Total construction output and employment, West Midlands: 1998–2010

	Year	Total Output Growth Rate %	Total Output £m 2001 prices	Total Employment (direct and indirect) 000s
Actual	1998	4.9	6067	168
	1999	-0.5	6039	163
	2000	11.1	6711	171
	2001	5.1	7052	183
	2002	1.0	7125	192
	2003	-0.8	7070	189
	2004	2.8	7265	205
Forecast	2005	-1.0	7193	217
	2006	2.0	7336	223
	2007	4.0	7630	229
	2008	2.0	7782	234
	2009	0.7	7837	236
	2010	0.9	7904	239

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 and 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.

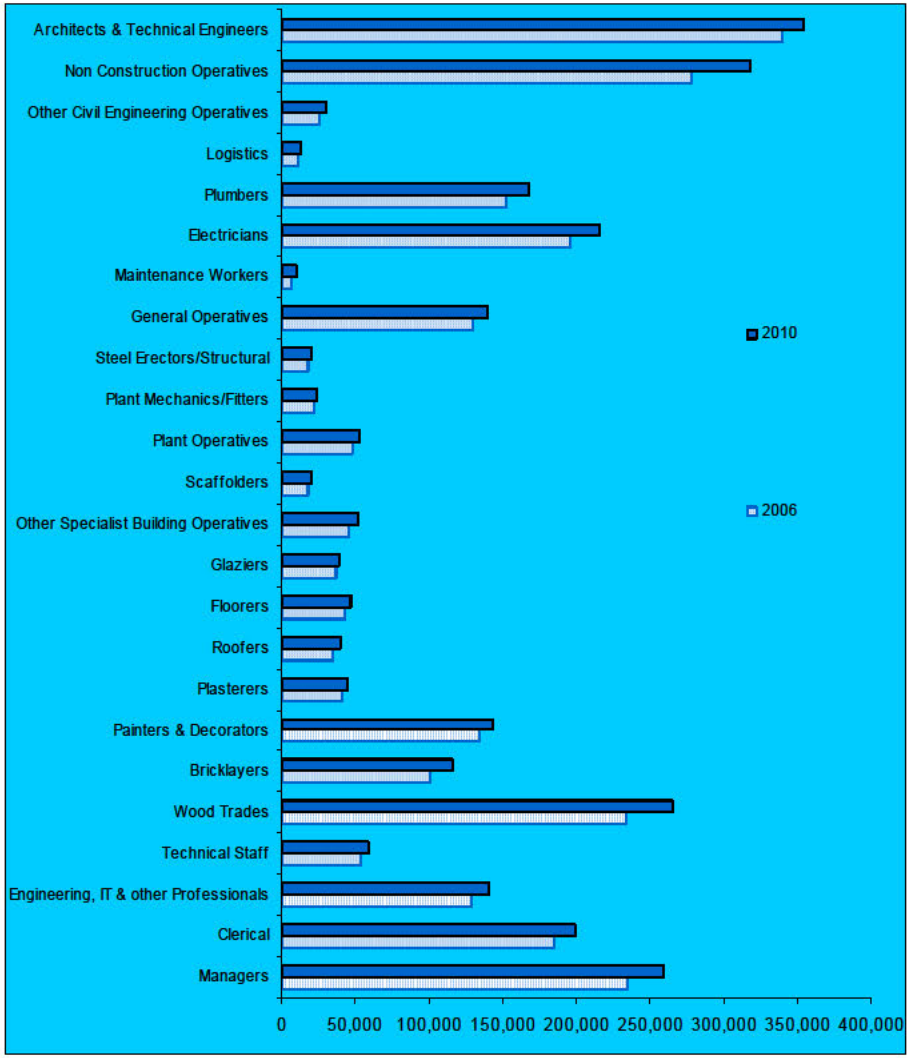
* For the ConstructionSkills and SummitSkills sector footprints see Appendix IV

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 10 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 indicated less than 1,000.

The West Midlands employment forecasts

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

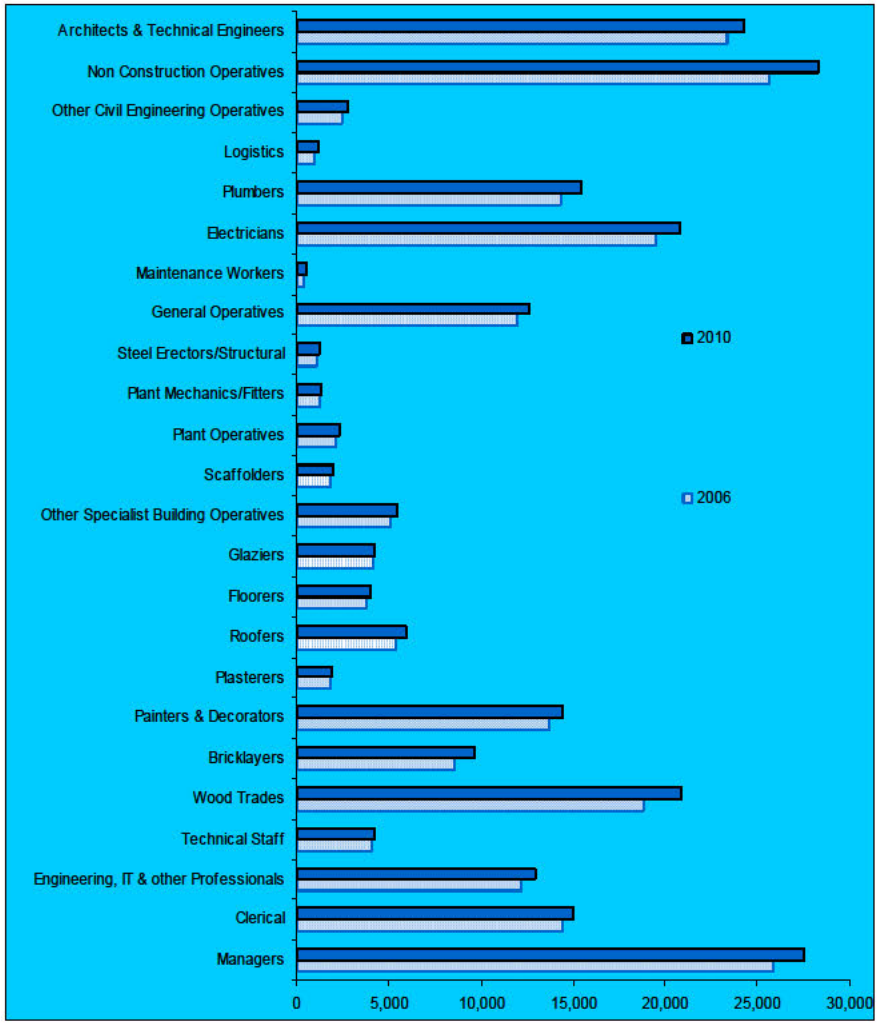
- Total employment in the West Midlands construction industry in 2010 is forecast to be nearly 240,000, a 7.3% increase from 2006.
- An Average Annual Requirement of 7,050 across both SIC 45 and SIC 74.2 is forecast (Table 6).
- Following the national trend, the greatest employment requirement will come from Wood Trades, with an estimated Average Annual Requirement of 920. Employment in Wood Trades is expected to rise by 2,060 to 2010 (Table 6).
- Electricians have the second largest Average Annual Requirement in the West Midlands at 890 (Table 6), a trend that is line with the national picture in which Electricians have the fifth highest employment requirement (Table 5).
- The Average Annual Requirement for Plant Operatives, Bricklayers, Glaziers and Maintenance Workers are the smallest in the region, all requiring less than 10 new employees over the forecast period from 2006 to 2010 (Table 6).
- The average annual employment requirement for Architects & Technical Engineers in the West Midlands is one of the highest in the region, with the third largest requirement, the same as the UK as a whole.
- In terms of occupational share of total employment the structure of the West Midlands is broadly in line with the UK as a whole. However, the West Midlands has a greater need for manual labour jobs than managerial roles, which differs from the national requirements.

Table 6
West Midlands
Total employment and Average Annual Requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	25,820	27,540	560
Clerical	14,430	15,050	580
Engineering, IT & other Professionals	12,210	12,930	630
Technical Staff	4,050	4,280	300
Wood Trades	18,840	20,900	920
Bricklayers	8,560	9,610	<10
Painters & Decorators	13,750	14,420	380
Plasterers	1,870	1,960	70
Roofers	5,400	5,960	200
Floorers	3,780	4,040	170
Glaziers	4,140	4,280	<10
Other Specialist Building Operatives	5,120	5,510	220
Scaffolders	1,870	2,040	110
Plant Operatives	2,130	2,300	<10
Plant Mechanics/Fitters	1,200	1,290	130
Steel Erectors/Structural	1,110	1,220	30
General Operatives	11,930	12,640	380
Maintenance Workers	380	540	<10
Electricians	19,480	20,850	890
Plumbers	14,360	15,450	480
Logistics	1,020	1,150	50
Other Civil Engineering Operatives	2,450	2,740	120
Non Construction Operatives	25,700	28,310	
Total (SIC 45)	199,600	215,010	6,220
Architects & Technical Engineers	23,380	24,330	830
Total (SIC 45 & 74.2)	222,980	239,340	7,050

Source: Construction Skills Network Model, 2006; Experian.
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

Figure 8
West Midlands
Total employment by occupation: 2006–2010



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

The following charts give an indication of employment and requirement by occupation for the LSC areas in the West Midlands. 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 less robust. Construction employment and future requirements on a sub-regional level are created as ratios of the data for the whole of the West Midlands 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
Shropshire
Total employment and annual requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	1,970	2,130	40
Clerical	1,100	1,160	40
Engineering, IT & other Professionals	930	1,000	50
Technical Staff	310	330	20
Wood Trades	1,430	1,610	70
Bricklayers	650	740	<10
Painters & Decorators	1,050	1,110	30
Plasterers	140	150	<10
Roofers	410	460	20
Floorers	290	310	10
Glaziers	320	330	<10
Other Specialist Building Operatives	390	430	20
Scaffolders	140	160	<10
Plant Operatives	160	180	<10
Plant Mechanics/Fitters	90	100	10
Steel Erectors/Structural	80	90	<10
General Operatives	910	980	30
Maintenance Workers	30	40	<10
Electricians	1,480	1,610	70
Plumbers	1,090	1,190	40
Logistics	70	70	<10
Other Civil Engineering Operatives	200	230	<10
Non Construction Operatives	1,960	2,180	<10
Total (SIC 45)	15,200	16,590	450
Architects & Technical Engineers	1,780	1,880	60
Total (SIC 45 & 74.2)	16,980	18,470	510

Source: Construction Skills Network Model, 2006; Experian.
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

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

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	5,280	5,480	110
Clerical	2,950	2,990	110
Engineering, IT & other Professionals	2,500	2,570	130
Technical Staff	830	850	60
Wood Trades	3,860	4,150	180
Bricklayers	1,750	1,910	<10
Painters & Decorators	2,810	2,870	80
Plasterers	380	390	10
Roofers	1,100	1,180	40
Floorers	770	800	30
Glaziers	850	850	<10
Other Specialist Building Operatives	1,050	1,100	40
Scaffolders	380	410	20
Plant Operatives	440	460	<10
Plant Mechanics/Fitters	240	260	30
Steel Erectors/Structural	230	240	<10
General Operatives	2,440	2,510	80
Maintenance Workers	80	110	<10
Electricians	3,990	4,140	180
Plumbers	2,940	3,070	100
Logistics	180	190	<10
Other Civil Engineering Operatives	530	580	<10
Non Construction Operatives	5,260	5,630	<10
Total (SIC 45)	40,840	42,740	1,200
Architects & Technical Engineers	4,780	4,840	160
Total (SIC 45 & 74.2)	45,620	47,580	1,360

Source: Construction Skills Network Model, 2006; Experian.
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

Table 9
Hereford & Worcestershire
Total employment and annual requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	4,180	4,340	90
Clerical	2,330	2,370	90
Engineering, IT & other Professionals	1,980	2,040	100
Technical Staff	660	670	50
Wood Trades	3,050	3,290	140
Bricklayers	1,390	1,510	<10
Painters & Decorators	2,220	2,270	60
Plasterers	300	310	10
Roofers	870	940	30
Floorers	610	640	30
Glaziers	670	670	<10
Other Specialist Building Operatives	830	870	30
Scaffolders	300	320	20
Plant Operatives	340	360	<10
Plant Mechanics/Fitters	190	200	20
Steel Erectors/Structural	180	190	<10
General Operatives	1,930	1,990	60
Maintenance Workers	60	90	<10
Electricians	3,150	3,290	140
Plumbers	2,320	2,430	80
Logistics	140	150	<10
Other Civil Engineering Operatives	420	460	<10
Non Construction Operatives	4,160	4,460	<10
Total (SIC 45)	32,280	33,860	950
Architects & Technical Engineers	3,780	3,830	130
Total (SIC 45 & 74.2)	36,060	37,690	1,080

Source: Construction Skills Network Model, 2006; Experian.
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

Table 10
The Black Country
Total employment and annual requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	5,830	6,320	130
Clerical	3,260	3,450	130
Engineering, IT & other Professionals	2,760	2,970	140
Technical Staff	920	980	70
Wood Trades	4,260	4,800	210
Bricklayers	1,930	2,210	<10
Painters & Decorators	3,110	3,310	90
Plasterers	420	450	20
Roofers	1,220	1,370	50
Floorers	850	930	40
Glaziers	940	980	<10
Other Specialist Building Operatives	1,160	1,270	50
Scaffolders	420	470	20
Plant Operatives	480	530	<10
Plant Mechanics/Fitters	270	300	30
Steel Erectors/Structural	250	280	<10
General Operatives	2,690	2,900	90
Maintenance Workers	90	120	<10
Electricians	4,400	4,790	200
Plumbers	3,240	3,550	110
Logistics	200	220	<10
Other Civil Engineering Operatives	590	670	<10
Non Construction Operatives	5,810	6,500	<10
Total (SIC 45)	45,100	49,370	1,380
Architects & Technical Engineers	5,280	5,590	190
Total (SIC 45 & 74.2)	50,380	54,960	1,570

Source: Construction Skills Network Model, 2006; Experian.
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

Table 11
Birmingham & Solihull
Total employment and annual requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	5,400	5,880	120
Clerical	3,020	3,210	120
Engineering, IT & other Professionals	2,550	2,760	130
Technical Staff	850	910	60
Wood Trades	3,940	4,460	200
Bricklayers	1,790	2,050	<10
Painters & Decorators	2,870	3,080	80
Plasterers	390	420	10
Roofers	1,130	1,270	40
Floorers	790	860	40
Glaziers	870	910	<10
Other Specialist Building Operatives	1,070	1,180	50
Scaffolders	390	440	20
Plant Operatives	450	490	<10
Plant Mechanics/Fitters	250	270	30
Steel Erectors/Structural	230	260	<10
General Operatives	2,490	2,700	80
Maintenance Workers	80	120	<10
Electricians	4,070	4,450	190
Plumbers	3,000	3,300	100
Logistics	180	210	<10
Other Civil Engineering Operatives	540	620	<10
Non Construction Operatives	5,370	6,040	<10
Total (SIC 45)	41,720	45,890	1,270
Architects & Technical Engineers	4,890	5,190	180
Total (SIC 45 & 74.2)	46,610	51,080	1,450

Source: Construction Skills Network Model, 2006; Experian.
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

Table 12
Coventry & Warwickshire
Total employment and annual requirement by occupation: 2006–2010

	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	3,160	3,400	70
Clerical	1,770	1,860	70
Engineering, IT & other Professionals	1,500	1,600	80
Technical Staff	500	530	40
Wood Trades	2,310	2,580	110
Bricklayers	1,050	1,190	<10
Painters & Decorators	1,680	1,780	50
Plasterers	230	240	<10
Roofers	660	740	20
Floorers	460	500	20
Glaziers	510	530	<10
Other Specialist Building Operatives	630	680	30
Scaffolders	230	250	10
Plant Operatives	260	280	<10
Plant Mechanics/Fitters	150	160	20
Steel Erectors/Structural	140	150	<10
General Operatives	1,460	1,560	50
Maintenance Workers	50	70	<10
Electricians	2,390	2,570	110
Plumbers	1,760	1,910	60
Logistics	110	120	<10
Other Civil Engineering Operatives	320	360	<10
Non Construction Operatives	3,150	3,500	<10
Total (SIC 45)	24,480	26,560	740
Architects & Technical Engineers	2,870	3,000	100
Total (SIC 45 & 74.2)	27,350	29,560	840

Source: Construction Skills Network Model, 2006; Experian.
Note: Numbers are rounded to the nearest 10 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** + taxes on products – 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, Domestics, 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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