2007-2011 Construction Skills Network Labour Market Intelligence

East Midlands

Construction Skills Network

experian

constructionskills

Table of contents

1. Headlines

Construction Skills Network

1. Headlines

1.1 East Midlands Economy

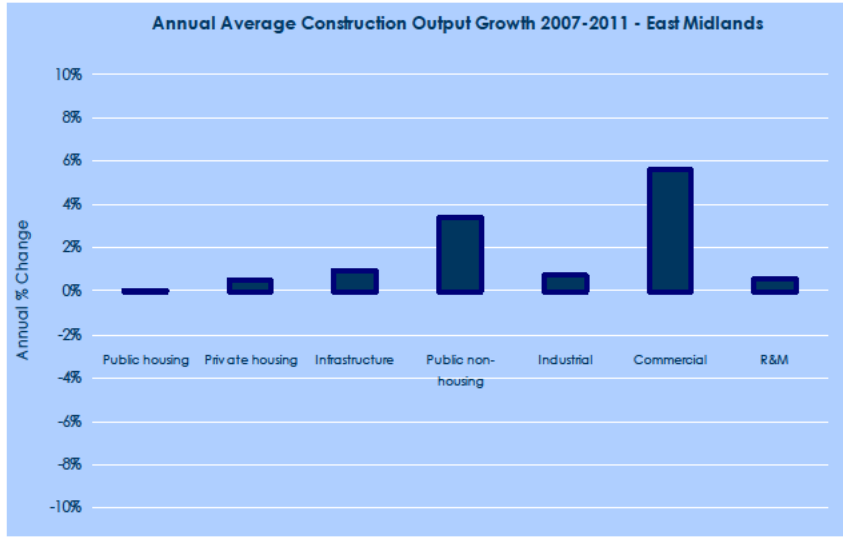
- Worth £69bn in 2005 (around 7% of the total UK economy), the East Midlands economy is forecast to grow at an annual average rate of 2.6% between 2007 and 2011.
- Although the Public Services sector accounts for almost 22% of GVA in 2005, it holds a smaller share in the East Midlands than elsewhere in the UK.
- The fastest growing sector over the forecast period is expected to be Transport & Communications, although its expansion is forecast to be moderate relative to the national average.

1.2 Construction Output in the East Midlands

- Construction output was worth £5.9bn in 2005, in 2000 prices, in the East Midlands, accounting for around 9% of the UK total.
- Output is forecast to grow at an annual average rate of 1.9% between 2007 and 2011.
- Growth in construction output will be fuelled by Building Schools for the Future schemes in Leicester and Nottingham and a large health PFI scheme in Leicester. These schemes will boost public non-housing and commercial sectors respectively.
- Construction output growth in the East Midlands is forecast to marginally trail the national average.

1.3 Construction Employment in the East Midlands

- Total construction employment of 164,810 in 2005 in the East Midlands is forecast to rise by 23% to 202,170 in 2011.
- To meet this demand, after taking account of those entering and leaving the industry, the East Midlands requires an extra 5,210 workers each year.
- Wood Trades & Interior Fit-out has the largest annual requirement as it is one of the largest occupational groups in the East Midlands.



Source: Experian

Regional Comparison 2007-2011

	Annual Average % Change in Output	Growth in Total Employment	Total Average Annual Requirement
North East	1.3%	4,380	3,300
Yorkshire and Humber	1.9%	16,110	6,090
East Midlands	1.9%	13,340	5,210
East of England	3.5%	36,360	10,160
Greater London	4.5%	42,350	12,880
South East	3.2%	41,390	13,560
South West	1.9%	16,350	6,360
Wales	2.5%	9,080	5,090
West Midlands	1.6%	16,070	6,340
Northern Ireland	4.3%	8,790	2,940
North West	1.4%	19,260	8,830
Scotland	1.5%	17,800	6,830
UK	2.6%	241,280	87,590

Source: CSN, Experian
Footnote: 2 (See Appendix III)

2. The Outlook for Construction in the East Midlands

2. The Outlook for Construction in the East Midlands

2.1 Construction Output in the East Midlands – Overview

Between 2001 and 2005, construction output in the East Midlands enjoyed its longest period of continuous growth, in real terms, for over 15 years (see graph below).

Over this period, output increased by an annual average rate of 9.6% in the region, rising from £4.1bn in 2001 to £5.9bn in 2005, in 2000 prices. While new work was the main force behind this growth, annual average growth of 6.1% in the R&M sector also made an important contribution.

Output in all but one of the new work sectors expanded robustly during the 2001 to 2005 period. The public non-housing sector saw its output increase by an annual average rate of around 29%, an exceptionally strong rate of growth, especially considering it is after any inflationary effects have been stripped out.

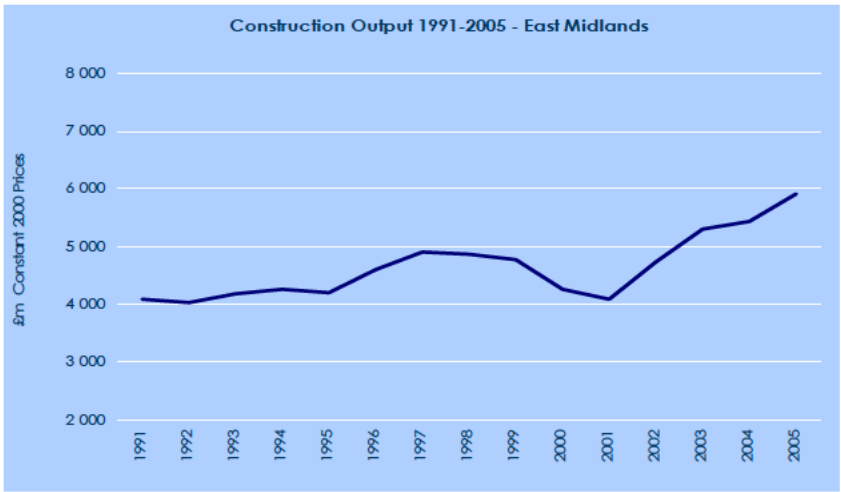
Annual average growth in the public housing, private housing, industrial and commercial sectors was still robust with growth rates of 20%, 9%, 18% and 12% respectively.

Infrastructure was the only sector to see output decline over the 2001-2005 period. By 2005 the sector was worth an estimated £371m, 17% lower than in 2001.

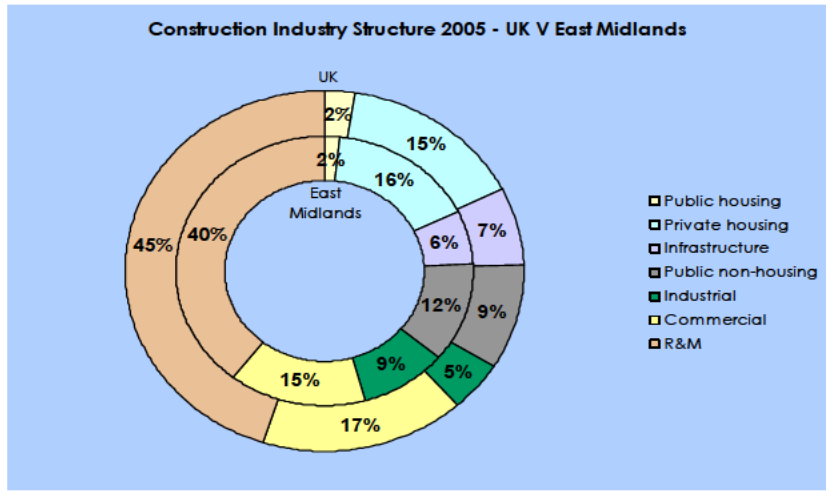
2.2 Industry Structure

The chart below highlights that there are some differences between the East Midlands construction industry and the UK industry as a whole. Particularly noticeable is the larger share the industrial sector takes. The region's central location and good transport links to the rest of the UK make it an ideal location for warehouses and distribution units. Also, given the high level of government spending on education facilities in recent years, the public non-housing sector now takes a greater share of total construction in the East Midlands.

Conversely R&M output takes a smaller share in the East Midlands than the UK as a whole. While interesting, the chart below presents just a snapshot and can change over time. In the early part of the decade, for example, the share R&M output took of the total in the East Midlands was roughly in line with the national average.



Source: Experian
Footnote: 1 (See Appendix III)



Source: DTI, DFP

2. The Outlook for Construction in the East Midlands

2.3 Economic Overview

The expected performance of a regional or national economy over the forecast period (2007-2011) provides an indication of the construction sectors in which demand is likely to be strongest.

2.4 Economic Structure

In 2005 the East Midlands economy was worth £69bn, in 2003 prices, 3.7% higher than in 2004 and worth around 7% of the UK total.

Public Services was the largest component of Gross Value Added (GVA) in the East Midlands, accounting for nearly 22% of the total in 2005 (see table below). Financial & Business Services and Manufacturing jointly took the second largest share and were both valued at around 20% of the total.

Over the forecast period (2007-2011) GVA in the East Midlands is forecast to grow by 10%. Expansion in the Public Services sector is likely to be subdued relative to the recent past, while the Financial & Business Services and Transport & Communications sectors step up to drive the region forward economically. To 2011, GVA in these sectors is forecast to increase by 20% and 26% respectively.

2.5 Forward Looking Economic Indicators

Economic growth in the East Midlands is likely to be slightly below the national average over the forecast period as a whole. Growth in household spending is expected to increase a little more rapidly than real household disposable income to 2011 (see table below). The benefit of this should be particularly noticeable in retail and leisure.

An inevitable consequence of stronger growth in spending than in income is an increasing credit burden. By 2011 we expect the debt to income ratio in the East Midlands to be 1.5. While this is lower than in many other parts of the UK, if economic prospects were to weaken, consumer confidence could quickly falter.

In 2005 the Department for Communities and Local Government (DCLG) reported that average house prices in the East Midlands reached £159,000. Prices are expected to be around 14% higher in 2011 than in 2006.

Economic Structure - East Midlands (£ billion, 2003 prices)

Selected Sectors	Actual	Forecast *Annual % Change, Real Terms*					
	2005	2006	2007	2008	2009	2010	2011
Public Services	15	2.1	1.6	1.6	1.8	1.7	2.2
Financial & Business Services	14	8.6	5.4	4.7	4.9	4.6	4.3
Transport & Communications	5	-0.7	0.2	4.5	6.2	6.5	6.4
Manufacturing	14	1.2	2.6	1.7	2.0	1.8	1.6
Distribution, Hotels & Catering	11	2.9	2.6	2.6	2.9	2.8	2.6
Total Gross Value Added (GVA)	69	2.6	2.2	2.2	2.7	2.7	2.6

Source: Experian
Footnote: 3 (See Appendix III)

Economic Indicators - East Midlands (£ billion, 2003 prices - unless otherwise stated)

	Actual	Forecast *Annual % Change, Real Terms (except *)*					
	2005	2006	2007	2008	2009	2010	2011
Real Household Disposable Income	52	3.0	2.9	2.3	2.3	2.3	2.3
Household Spending	50	2.4	2.6	2.4	3.1	3.0	2.6
Debt:Income Ratio*	1.3	1.3	1.4	1.4	1.5	1.5	1.5
House Prices (£'000, current prices)	159	3.0	2.4	1.3	2.7	3.7	3.2
LFS Unemployment (millions)	0.10	20.6	-3.7	-1.6	-3.2	-5.2	-0.9

Source: ONS, DCLG, Experian

2. The Outlook for Construction in the East Midlands

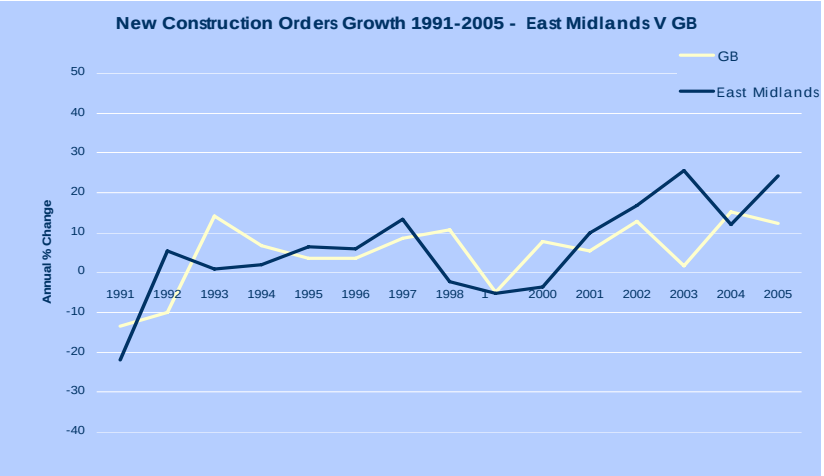
New orders statistics are based on the Department of Trade and Industry's (DTI) monthly survey of construction contractors. The time taken for new orders to feed into output differs from sector to sector and from project to project. As a general rule, Industrial orders tend to be converted into output relatively quickly and infrastructure orders relatively slowly, due to project scale and complexity.

2.6 New Construction Orders – Overview

Since 2000 new construction orders in the East Midlands have recorded strong year-on-year growth. In 2005 they reached £3.8bn, in current prices, more than double their value in 2001 (see chart and table below).

Prior to 2005, 2003 stands out as a particularly strong year. A large PFI hospital contract was let in the commercial sector for the Derby City General Hospital. In addition education orders increased robustly both in the commercial and public non-housing sectors.

The effect that large individual contracts can have on orders statistics is apparent from the volatility shown in the chart below. Resulting output streams tend to be much smoother.



Source: DTI
Footnote: 4 (See Appendix III)

2.7 New Construction Orders – Current Situation

Having grown by 12% in 2004, new orders rose by a further 24% in 2005. The upward trend looks set to continue in 2006, as orders rose by a further 7% in the first three quarters of 2006.

However, across the sectors fortunes were mixed. Infrastructure orders plummeted by around 45% in the first three quarters of 2006, as a large roads contract helped to inflate the 2005 figures. Also significant were declines of 30% and 15% respectively in industrial and public non-residential orders.

In contrast, public housing orders increased by 132% in the first three quarters of 2006 on the corresponding figure to September 2005, with the relatively small size of this sector making it particularly prone to large fluctuations. The commercial and private housing sectors both saw output increase robustly in the first three quarters, by 36% and 17% respectively.

New Work Construction Orders - East Midlands (£ million, current prices)

	Actual	Annual % Change				
	2005	2001	2002	2003	2004	2005
Public housing	103	*20.0*	*2.4*	*102.3*	*8.0*	*9.6*
Private housing	1111	*7.4*	*45.6*	*8.2*	*24.0*	*5.5*
Infrastructure	330	*-9.0*	*-29.3*	*25.3*	*-12.5*	*31.5*
Public non-housing	540	*94.9*	*46.1*	*16.5*	*38.4*	*-14.8*
Industrial	487	*-12.7*	*36.2*	*-22.7*	*67.9*	*33.1*
Commercial	1202	*13.2*	*-8.9*	*91.5*	*-21.2*	*88.7*
Total New Work	3773	*10.0*	*16.8*	*25.6*	*12.2*	*24.3*

Source: DTI
Footnote: 4 (See Appendix III)

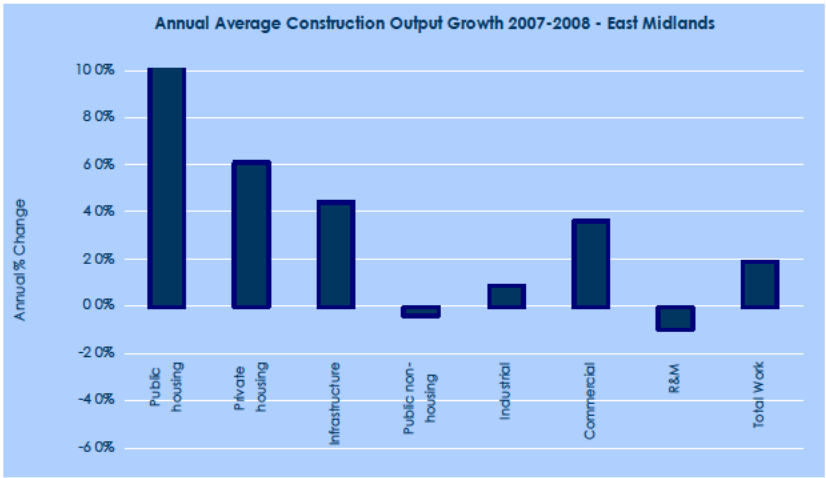
2. The Outlook for Construction in the East Midlands

2.8 Construction Output – Short-term Forecasts (2006-2008)

Total construction output, in current prices, in the East Midlands was 5% higher in the first half of 2006 than in the first half of 2005. Regional DTI output statistics are published in current prices, and thus are inclusive of any inflationary effect. At the time of writing DTI output statistics for the first half of 2006 were available.

Construction output in the East Midlands is forecast to grow moderately in the next few years, at an annual average rate of 1.9% (see chart and table below). The short term outlook for new work is much better than for R&M, which is expected to decline between 2006 and 2008.

The infrastructure and industrial sectors saw output decline in the first half of 2006 by 16% and 10% respectively. While the industrial sector is expected to be stronger in the second half of the year, an improvement in infrastructure is unlikely until 2007. To 2008 an annual average growth rate of 4.4% in the infrastructure sector is based on the first phase of rail work in North Lincolnshire for regeneration consortium Ravenscraig getting underway.



Source: Experian
Footnote: 2 (See Appendix III)

While the number of housing units being built in the East Midlands currently meets the Regional Spatial Strategy Plan, this may have to be increased to satisfy the DCLG's forecast growth in households. In the first half of 2006 private housing output rose by 17% and public housing output increased by 2 per cent. In the short-term a strong rate of annual average real output growth is forecast for both sectors.

Outside of housing, commercial will also help drive growth in the East Midlands' industry in the short-term, especially in 2006 when it is expected to rise by over 26%. This exceptionally high rate is unlikely to be sustained in 2007 and 2008, but the market is still predicted to expand by an annual average rate of 3.6% between 2007 and 2008.

Public non-housing construction is expected to contract a little over the coming years, although this minor fall comes after five years of double-digit growth to 2005. In the first half of 2006 current priced output was 16% down.

Compared to new work, R&M output was relatively weak in the first half of 2006 down by 6% on the first half of 2005. Year-on-year marginal declines are forecast to 2008.

Construction Output - East Midlands (£ million, 2000 prices)

	Actual	Forecast Annual % Change			Annual Average
	2005	2006	2007	2008	2007-2008
Public housing	105	4%	15%	10%	12.6%
Private housing	951	7%	5%	7%	6.1%
Infrastructure	374	-11%	3%	6%	4.4%
Public non-housing	700	-8%	-1%	0%	-0.4%
Industrial	558	4%	5%	-3%	0.9%
Commercial	894	26%	2%	6%	3.6%
New Work	3 582	6%	3%	4%	3.5%
R&M	2 323	-3%	-1%	-1%	-1.0%
Total Work	5 905	3%	2%	2%	1.9%

Source: DTI, Experian
Footnote: 1 & 2 (See Appendix III)

2. The Outlook for Construction in the East Midlands

2.9 Construction Output – Long-term Forecasts (2007-2011)

In the longer term, output is forecast to rise by an annual average rate of 1.9%. Annual average growth in new work output is forecast to be moderate at 2.6%, with a more subdued outlook for R&M output (see chart and table below).

The £600m British Drivers Club redevelopment of Silverstone is planned to start in 2007 and will help to boost output in the commercial sector. This, the sizeable PFI hospital scheme in Leicester and the redevelopment of the Broadmarsh shopping centre all contribute to a strong forecast annual average growth rate of 5.6% in the sector between 2007 and 2011.

Slower, but nevertheless robust, annual average growth is forecast for output in the public non-housing sector. Education is likely to be the main driver as Building Schools for the Future schemes come on stream, firstly in Leicester and then in Nottingham. Together, these schemes will rebuild or refurbish 29 secondary schools at a cost of around £390m.

The forecast period will see work commence on a cluster of relatively small infrastructure schemes, each valued at less than £100m. In addition, an improvement scheme is planned for the M1 between Leicester and Chesterfield and phase 1 is worth around £400m. Also the £150m redevelopment of Nottingham Railway Station could start in 2008.

A step-change is forecast for public housing in 2007 and 2008 as funding from the Housing Corporation's National Affordable Housing Programme is invested in building affordable homes. Beyond 2008, output is likely to remain relatively high, although another inflation-busting increase in funding is unlikely. Moderate declines are forecast in 2009 and 2010.

Further growth in the private housing sector is unlikely post 2008, but the near-term prospects remain positive. A moderation in house price inflation, coupled with rising land prices is expected to cause a slight fall in output. An annual average increase of 0.5% is expected between 2007 and 2011.

Industrial and R&M output is forecast to rise by less than 1% on average, each year, between 2007 and 2011. Respective annual average growth rates of 0.8% and 0.6% conceal different growth profiles in the two sectors. Industrial output growth is expected to be reasonably consistent throughout while declining output is forecast in the R&M sector until 2009.

Source: Experian
Footnote: 2 (See Appendix III)

Construction Output - East Midlands (£ million, 2000 prices)

	Estimate	Forecast Annual % Change					Annual Average
	2006	2007	2008	2009	2010	2011	2007-2011
Public housing	110	15%	10%	-4%	-4%	-1%	0.0%
Private housing	1 022	5%	7%	-1%	-2%	-1%	0.5%
Infrastructure	333	3%	6%	0%	-1%	-1%	1.0%
Public non-housing	644	-1%	0%	6%	5%	3%	3.4%
Industrial	578	5%	-3%	3%	3%	0%	0.8%
Commercial	1 128	2%	6%	4%	6%	7%	5.6%
New Work	3 815	3%	4%	2%	2%	3%	2.6%
R&M	2 249	-1%	-1%	2%	0%	1%	0.6%
Total Work	6 064	2%	2%	2%	1%	2%	1.9%

Source: Experian
Footnote: 2 (See Appendix III)

3. Construction Employment Forecasts for the East Midlands

3. Construction Employment Forecasts for the East Midlands

3.1 Total Construction Employment Forecasts by Occupation

The table, right, presents actual construction employment (SIC 45 and 74.2, see Appendix III) in the East Midlands for 2005 and the forecast total employment in 25 occupations and in the industry as a whole between 2007 and 2011. By 2011 total employment in construction in the East Midlands is expected to stand at around 202,170, with approximately 37,360 more people being employed in the industry than in 2005. 185,190 people will be classified as working in SIC 45 in 2011, with 16,980 falling under the SIC 74.2 umbrella.

The largest occupational groups are forecast to be Wood Trades & Interior Fit-out, Non-construction Operatives, Construction Professionals & Technical Staff, Construction Managers and Electrical Trades & Installation, each with employment forecast above 15,000 in the East Midlands in 2011.

Roofers is forecast to see the greatest proportional increase in its employment, with total employment expected to rise 15% between 2007 and 2011. Increases of more than 10% are also forecast for Other Professionals/Technical Staff & IT, Wood Trades & Interior Fit-out, Painters & Decorators, Floorers, Scaffolders, Plant Operatives and Plumbing & HVAC Trades.

Occupational groupings have been improved following the 2006-2010 model run to incorporate new research and to reflect feedback from Observatory members and other stakeholders. A full breakdown of the 25 occupations is provided in Appendix IV.

The most significant change is that research into the contents of the Construction Trades nec category has enabled us to publish numbers for Building Envelope Specialists, which includes activities like cladding. Wood Trades has become Wood Trades & Interior Fit-out and Architects & Professionals is now based on a more appropriate group of SOC codes and has been renamed Construction Professionals & Technical Staff.

Total Employment by Occupation - East Midlands

	Actual	Forecast	
	2005	2007	2011
Senior & Executive Managers	580	680	720
Business Process Managers	3,690	4,060	4,420
Construction Managers	13,080	14,400	15,560
Office-based Staff (excl. Managers)	12,590	13,870	14,750
Other Professionals/Technical Staff & IT	2,470	2,700	3,090
Wood Trades & Interior Fit-out	19,480	21,720	24,390
Bricklayers	8,050	9,910	10,820
Building Envelope Specialists	8,720	10,740	11,720
Painters & Decorators	5,940	6,680	7,610
Plasterers & Dry Liners	3,110	3,460	3,690
Roofers	1,310	1,490	1,710
Floorers	2,710	2,990	3,300
Glaziers	2,810	2,960	3,110
Specialist Building Operatives nec	4,040	4,510	4,930
Scaffolders	740	860	970
Plant Operatives	2,080	2,260	2,510
Plant Mechanics/Fitters	2,880	3,050	3,250
Steel Erectors/Structural	1,390	1,550	1,660
Labourers nec	7,070	7,980	8,640
Electrical Trades & Installation	13,030	14,600	15,920
Plumbing & HVAC Trades	10,020	11,540	12,670
Logistics	2,230	2,620	2,830
Civil Engineering Operatives nec	2,940	3,420	3,740
Non-construction Operatives	19,430	24,850	23,180
Construction Professionals & Technical Staff	14,420	15,930	16,980
Total (SIC 45)	**150,390**	**172,900**	**185,190**
Total (SIC 45 & 74.2)	**164,810**	**188,830**	**202,170**

Source: ONS, CSN, Experian
Footnote: 5 & 6 (See Appendix III)

3. Construction Employment Forecasts for the East Midlands

3.2 Construction Average Annual Requirements by Occupation

The table, right, outlines the Average Annual Requirement for 25 occupations within the East Midlands construction industry between 2007 and 2011. The Average Annual Requirement represents the number of extra workers that are required each year to enable the industry to meet the forecast change in construction output after taking into account those entering and leaving the industry.

To meet forecast demand for construction workers in the East Midlands it is estimated 5,210 additional workers will be required each year over the 2007-2011 period.

The group Wood Trades & Interior Fit-out is forecast to have the greatest Average Annual Requirement at 940. At 680, the requirement for Electrical Trades & Installation is also significant.

A relatively large Average Annual Requirement for Construction Professionals & Technical Staff, given the expected increase in total employment, is due in part to the high transferability of skills in this occupation between industries.

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 similar skills base or employing skilled migrant labour could mean the actual training requirement is lower.

Non-construction Operatives is a diverse occupational group including all of the activities under the SIC45 and 74.2 umbrella that cannot be classified elsewhere, such as Cleaners, Elementary Security Occupations nec and Routine Inspectors & Testers. The skills required in these occupations are highly transferable to other industries and forecasting such movement is hazardous given the lack of robust supportive data. Therefore the Average Annual Requirement for Non-construction Operatives is not published.

Average Annual Requirement by Occupation - East Midlands

	2007-2011
Senior & Executive Managers	<50
Business Process Managers	160
Construction Managers	410
Office-based Staff (excl. Managers)	380
Other Professionals/Technical Staff & IT	70
Wood Trades & Interior Fit-out	940
Bricklayers	290
Building Envelope Specialists	320
Painters & Decorators	200
Plasterers & Dry Liners	100
Roofers	90
Floorers	50
Glaziers	50
Specialist Building Operatives nec	150
Scaffolders	50
Plant Operatives	80
Plant Mechanics/Fitters	70
Steel Erectors/Structural	50
Labourers nec	130
Electrical Trades & Installation	680
Plumbing & HVAC Trades	280
Logistics	<50
Civil Engineering Operatives nec	100
Construction Professionals & Technical Staff	510
Total (SIC 45)	**4,700**
Total (SIC 45 & 74.2)	**5,210**

Source: CSN, Experian
Footnote: 5 & 6 (See Appendix III)

4. Regional Comparisons

4. Regional Comparisons

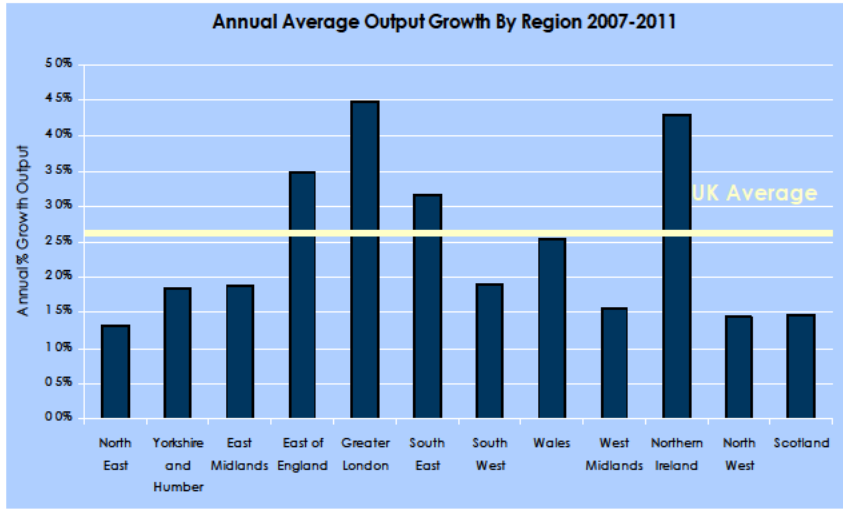
Construction output in Greater London is forecast to see strong year-on-year growth throughout the forecast period as infrastructure recovers and housing and commercial sectors continue to thrive. Prospects are also good for Northern Ireland, the East of England and the South East.

In the early part of this decade the northern half of the UK enjoyed something of a construction boom, with the North West, Yorkshire and Humber and the East Midlands faring especially well. Slower construction output growth is forecast in these regions going forward, although it is important to stress that all English regions, Wales, Northern Ireland and Scotland, are expected to see real output growth between 2007 and 2011.

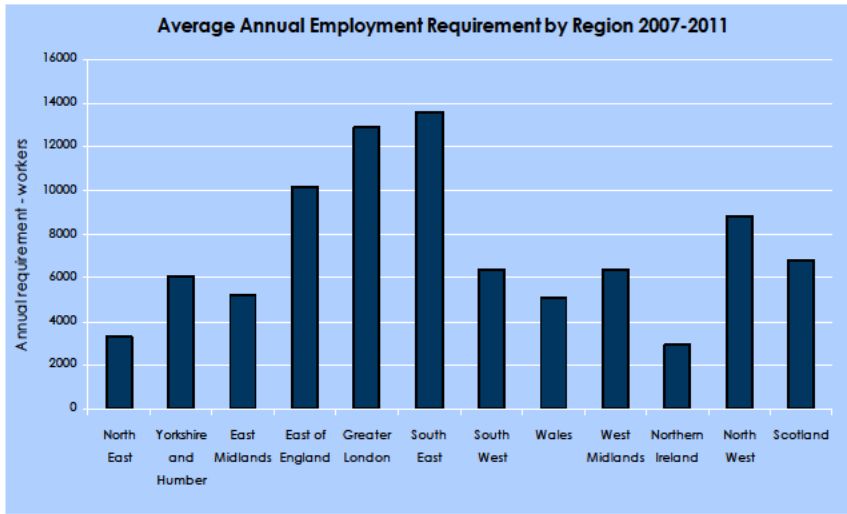
Over the past few years increased activity in the private housing and public non-housing sectors has driven construction output growth across the UK as a whole. While these sectors are expected to grow further over the forecast period (2007-2011), the outlook is much more subdued. The infrastructure and commercial sectors are expected to take the lead in driving the industry forward over the coming years.

Focusing on employment, the south has the greatest need for skilled construction workers between 2007 and 2011. Inward migration into Greater London is expected to be stronger than in the South East, lowering the average annual additional requirement slightly. Nevertheless the average annual requirement in this region still reaches 12,880. The annual average requirements of the South East and East of England both exceed 10,000.

Given that the construction industry of Northern Ireland is relatively small, it is forecast to have the smallest employment requirement each year. However, it is still estimated that total employment will need to rise by an average of 2,940 in order to meet demand.



Source: Experian
Footnote: 2 (See Appendix III)



Source: CSN, Experian

Appendix I - Methodology

Appendix I - Methodology

Background

The **Construction Skills Network (CSN)**, launched in 2005, represents a radical change in the way that ConstructionSkills collect and produce information on the future employment and training needs of the industry. CITB-ConstructionSkills, the Construction Industry Council (CIC) and CITB Northern Ireland work in partnership as the Sector Skills Council (SSC) for Construction to produce robust Labour Market Intelligence to provide a foundation on which to plan for future skills needs and to target investment.

The CSN functions at both the national and regional level. It comprises of a National Group, 12 Observatory groups, a forecasting model for each of the regions and countries, and a Technical Reference Group. An Observatory group currently operates in each of the nine English regions and also in Wales, Scotland and Northern Ireland.

Observatory groups currently meet bi-annually and consist of key regional 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.

The National Group also includes representatives from industry, Government, education and other SSCs. This group (which will convene twice in 2007) sets the national scene, effectively forming a backdrop for the Observatories.

At the heart of the CSN is a forecasting model which generates forecasts of employment requirements within the industry for a range of trades.

The model was designed and is managed by Experian under the independent guidance of the Technical Reference Group, comprised of statisticians and modelling experts.

It is envisaged that the model will evolve over time as new research is published and modelling techniques improve. Future changes to the model will only be made after consultation with the Technical Reference Group.

The Model Approach

The model approach relies on a combination of primary research and views from the CSN to facilitate it. National data is used as the basis for the assumptions that augment the model, which is then adjusted with the assistance of the Observatories and National Group. Each English region, Wales, Scotland and Northern Ireland 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 individual models and enables best use to be made of the most robust data (which is available at the national level). 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 upon 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 that takes into account the dynamic factors influencing 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.

Appendix I - Methodology

Demand is based upon the results of discussion groups comprising industry experts, a view of construction output and a set of integrated models relating to wider national and 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.

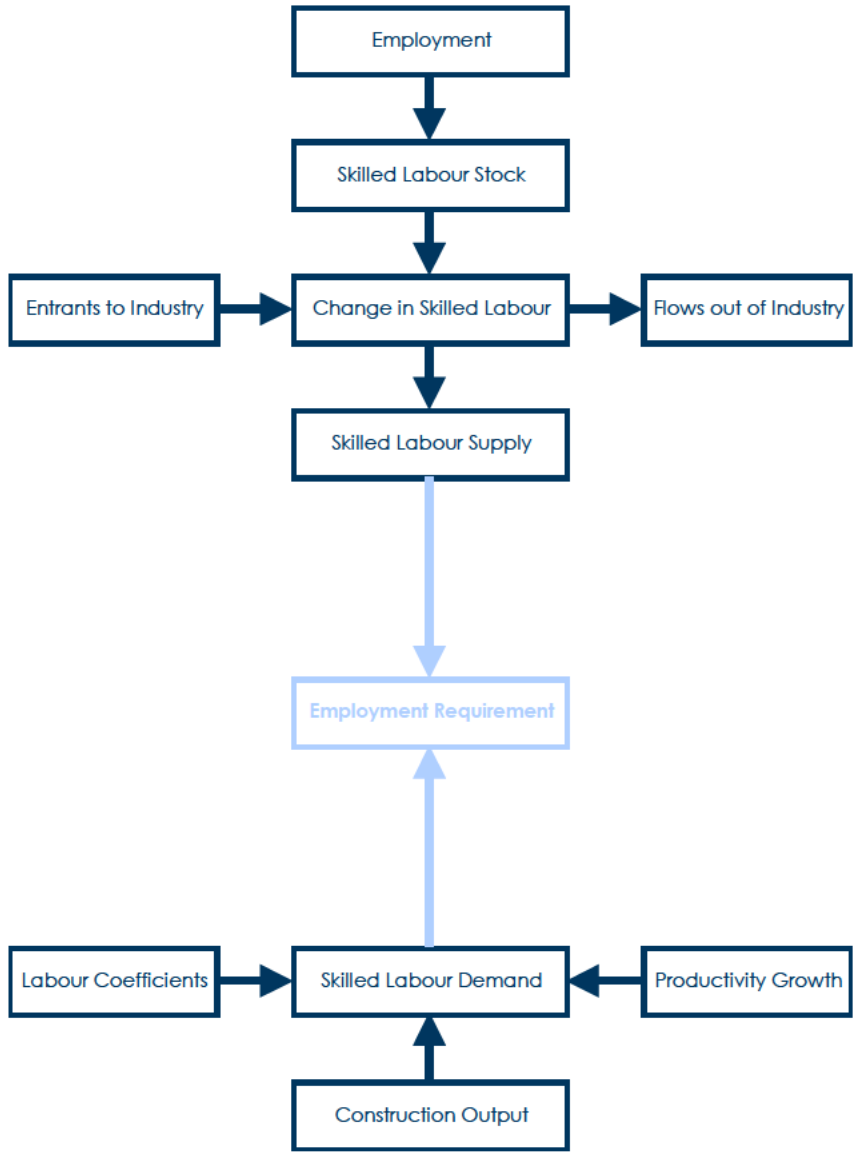
The key leakages (outflows) that need to be considered are:

- 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 is shown in the Flow Chart.



Source: Experian

Appendix II – Glossary of Terms

Appendix II – 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 Department of Trade and Industry (DTI) and the Department of Finance and Personnel Northern Ireland (DFP) output data. Vacancy data are usually taken from the National Employers Skills Survey from the Department for Education and Skills.
- **GDP** – Gross Domestic Product – total market value of all final goods and services produced. A measure of national income. GDP=**GVA** plus taxes on products minus 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.
- **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 part of 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 III – Footnotes & Footprints

Appendix III – Footnotes & Footprints

Footnotes

1. 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.
2. The annual average growth rate of output is a Compound Average Growth Rate, i.e. the rate at which output would grow each year if it increased steadily year-on-year over the forecast period.
3. Only selected components of Gross Value Added (GVA) are shown in this table and so do not sum to the total.
4. For New Construction orders comparison is made with GB rather than the UK, owing to the fact that there are no orders data series for Northern Ireland.
5. Employment numbers are rounded to the nearest 10.
6. 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, including SIC 45.31 and 45.33.

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.

Appendix IV – Occupational Groups (SOC codes)

Appendix IV – Occupational Groups

Bricklayers & Building Envelope Specialists
Bricklayers, masons 5312
Construction trades nec (50%) 5319
Labourers in building & woodworking trades (5%) 9121

Roofers
Roofers, roof tilers & slaters 5313

Plumbing & HVAC Trades
Plumbers, heating & ventilating engineers 5314
Pipe fitters 5216
Labourers in building & woodworking trades (6%) 9121
Construction trades nec (5%) 5319

Electrical Trades & Installation
Electricians, electrical fitters 5241
Electrical/electronic engineers nec 5249
Telecommunications engineers 5242
Lines repairers & cable jointers 5243

Civil Engineering Operatives nec
Road construction operatives 8142
Rail construction & maintenance operatives 8143
Quarry workers & related operatives 8123
Construction operatives nec (20%) 8149
Labourers in other construction trades nec 9129

Plant Operatives
Crane Drivers 8221
Plant & machine operatives nec 8129
Transport operatives nec 8219
Fork-lift truck drivers 8222
Mobile machine drivers & operatives nec 8229

Scaffolders
Scaffolders, stagers, riggers 8141

Wood Trades & Interior Fit-out
Carpenters & joiners 5315
Pattern makers 5493
Paper & wood machine operatives 8121
Furniture makers, other craft woodworkers 5492
Labourers in building & woodworking trades (9%) 9121
Construction trades nec (25%) 5319

Steel Erectors/Structural
Steel erectors 5311
Welding trades 5215
Sheet metal workers 5213
Metal plate workers, shipwrights & riveters 5214
Construction trades nec (5%) 5319

Labourers nec
Labourers in building & woodworking trades (80%) 9121

Logistics
Heavy goods vehicle drivers 8211
Van drivers 8212
Packers, bottlers, canners, fillers 9134
Other goods handling & storage occupations nec 9149
Buyers & purchasing officers (50%) 3541
Transport & distribution clerks 4134
Security guards & related occupations 9241

Plant Mechanics/Fitters
Metal working production & maintenance fitters 5223
Precision instrument makers & repairers 5224
Motor mechanics, auto engineers 5231
Labourers in process & plant operations nec 9139

Specialist Building Operatives nec
Construction operatives nec (80%) 8149
Construction trades nec (5%) 5319
Industrial cleaning process occupations 9132

Appendix IV – Occupational Groups

Non-construction Operatives
Metal making & treating process operatives 8117
Process operatives nec 8119
Metal working machine operatives 8125
Water & sewerage plant operatives 8126
Assemblers (vehicle & metal goods) 8132
Routine inspectors & testers 8133
Assemblers & routine operatives nec 8139
Stevedores, dockers & slingers 9141
Hand craft occupations nec 5499
Elementary security occupations nec 9249
Cleaners, domestics 9233
Road sweepers 9232
Gardeners & groundsmen 5113
Caretakers 6232

Construction Professionals & Technical Staff
Civil engineers 2121
Mechanical engineers 2122
Electrical engineers 2123
Chemical engineers 2125
Design & development engineers 2126
Production & process engineers 2127
Planning & quality control engineers 2128
Engineering professional nec 2129
Electrical/electronic technicians 3112
Engineering technicians 3113
Building & civil engineering technicians 3114
Science & engineering technicians nec 3119
Architectural technologists & town planning technicians 3121
Draughtspersons 3122
Quality assurance technicians 3115
Architects 2431
Town planners 2432
Quantity surveyors 2433
Chartered surveyors (not Quantity surveyors) 2434
Electronics engineers 2124
Building inspectors 3123

Painters & Decorators
Painters & decorators 5323
Construction trades nec (5%) 5319

Plasterers & Dry Liners
Plasterers 5321

Glaziers
Glaziers, window fabricators & fitters 5316
Construction trades nec (5%) 5319

Construction Managers
Production, works & maintenance managers 1121
Managers in construction 1122
Quality assurance managers 1141
Transport & distribution managers 1161
Recycling & refuse disposal managers 1235
Managers in mining & energy 1123
Occupational hygienists & safety officers (H&S) 3567
Conservation & environmental protection officers 3551

Other Professionals/Technical Staff & IT
IT operations technicians 3131
IT user support technicians 3132
Estimators, valuers & assessors 3531
Finance & investment analysts/advisers 3534
Taxation experts 3535
Financial & accounting technicians 3537
Vocational & Industrial trainers & instructors 3563
Business & related associate professionals nec 3539
Legal associate professionals 3520
Inspectors of factories, utilities & trading standards 3565
Software professionals 2132
IT strategy & planning professionals 2131

Appendix IV – Occupational Groups

Estate agents, auctioneers 3544
Solicitors & lawyers, judges & coroners 2411
Legal professionals nec 2419
Chartered & certified accountants 2421
Management Accountants 2422
Management consultants, actuaries, economists & statisticians 2423

Senior & Executive Managers
Directors & chief executives of major organisations 1112
Senior officials in local government 1113

Business Process Managers
Financial managers & chartered secretaries 1131
Marketing & sales managers 1132
Purchasing managers 1133
Advertising & Public relations managers 1134
Personnel, training & Industrial relations managers 1135
Office managers 1152
Civil Service executive officers 4111
Property, housing & land managers 1231
Information & communication technology managers 1136
Research & development managers 1137
Customer care managers 1142
Storage & warehouse managers 1162
Security managers 1174
Natural environment & conservation managers 1212
Managers & proprietors in other services nec 1239

Office-based Staff (excl. Managers)
Receptionists 4216
Typists 4217
Sales representatives 3542
Civil Service administrative officers & assistants 4112
Local government clerical officers & assistants 4113
Accounts & wages clerks, book-keepers, other financial clerks 4122
Filing & other records assistants/clerks 4131
Stock control clerks 4133
Database assistants/clerks 4136
Telephonists 4141
Communication operators 4142
General office assistants/clerks 4150
Personal assistants & other secretaries 4215
Sales & retail assistants 7111
Telephone salespersons 7113
Buyers & purchasing officers (50%) 3541
Marketing associate professionals 3543
Personnel & Industrial relations officers 3562
Credit controllers 4121
Market research interviewers 4137
Company secretaries (excluding qualified chartered secretaries) 4214
Sales related occupations nec 7129
Call centre agents/operators 7211
Customer care occupations 7212
Elementary office occupations nec 9219

Floorers
Floorers and wall tilers 5322

Appendix V – CSN Website

Appendix V – CSN Website & Contact Details

The CSN Website

The CSN website functions as a gateway into the construction industry.

Co-ordinated by ConstructionSkills, the CSN benefits from the technical expertise of Davis Langdon Management Consulting and Experian. It collates the knowledge and experience of Government; Sector Skills Councils; construction companies; education and training providers; regional agencies; and customers across the UK. In short, it provides a single, clear understanding of the industry's current skills position.

This unique collaboration means the CSN offers, as near as possible, a consensus view of the current and future skills and training needs of the industry.

The Network gives us an authoritative basis on which to plan for recruitment strategies, education and training requirements and funding delivery. The Network forecasts are based on a series of assumptions and trends, to provide a picture of how the industry could look in five years time.

The Network gives construction clients insight into what type of buildings are likely to be constructed, when and where, as well as how to invest training budgets. For contractors and consultants the data can inform the type of building they should design and how best to avoid regional or occupational skills shortages and high labour costs.

Employees and prospective new recruits can use these insights to discover where in the country they are likely to find consistent work, or what trade or profession offers the best career prospects.

The new CSN Website is found here at

http://www.constructionskills.net

The Members' area offers access to a wealth of documentation produced by the CSN Observatories. The CSN Members, wider group members and industry stakeholders can use this area to stay up to date with what is happening within the CSN Workshop cycle.

All the tables in this regional document, and the other regional and national documents, can be found on the website.

ConstructionSkills and partners produce a number of reports which have been based on evidence from various datasets. The Data Store, from the Research section, has been set up to give the CSN Members access to this resource so that they may carry out their own research utilising on this primary data.

For more information about us as a Sector Skills Council visit:

http://www.constructionskills.net

Workshop Essentials allows Members to stay in touch with CSN developments with their diary of upcoming events. This area also includes all feedback documentation from the current round of workshops, giving members all the relevant information they need in one place.

Contact Details

For enquiries relating to the work of the CSN please contact Sandra Lilley, CSN Manager, at

sandra.lilley@citb.co.uk

For further information about the CSN website, or to register your interest in joining the CSN please contact Sally Riley, Researcher, at

sally.riley@citb.co.uk