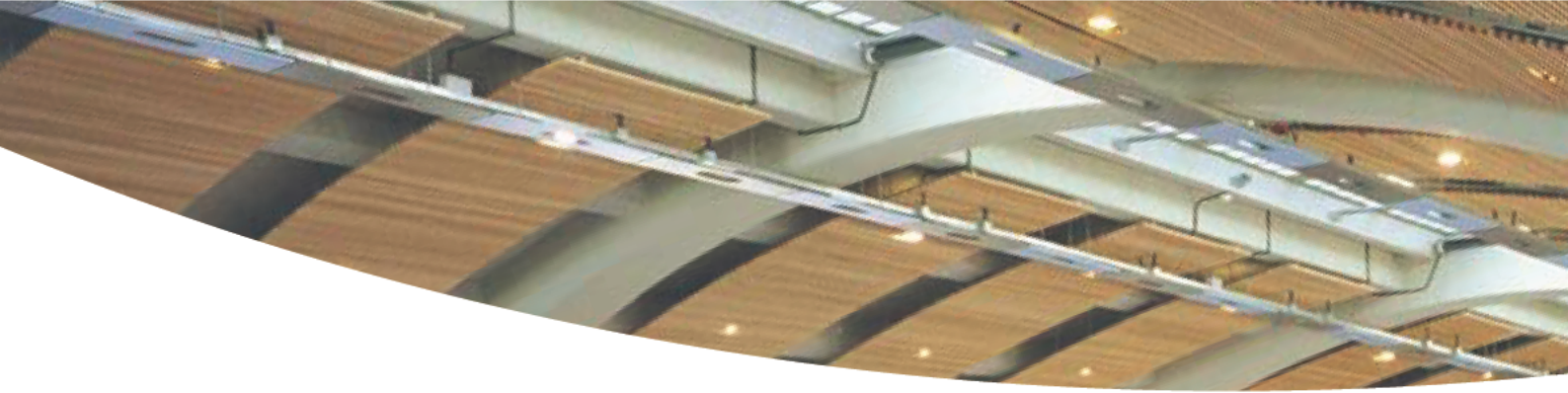


Construction Skills Network

East of England 2013-2017

Labour Market Intelligence





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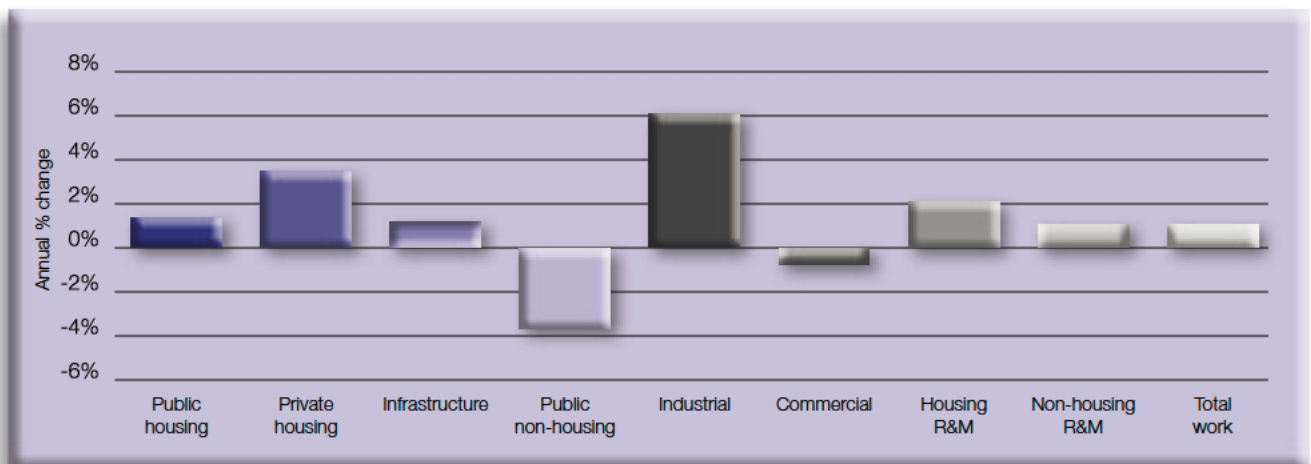
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1. Summary – East of England

Construction output in the East of England is forecast to rise at an average rate of 1.2% per year over the five years to 2017. New work output is expected to see growth average 0.9% per year compared with a stronger figure of 1.5% on average per year for repair and maintenance (R&M). The strongest performing sector is forecast to be the industrial one, boosted by work on the logistics park adjacent to the London Gateway Port. The region is expected to be one of only two regions and devolved nations to see construction employment rise each year on average, albeit by only a weak 0.5%. The East of England has an annual recruitment requirement (ARR) of 5,820, the largest in absolute terms across the UK.

Annual average construction output growth 2013-2017 East of England



Source: CSN, Experian
ref. CSN Explained, Section 3, Note 2

Construction output in the East of England is forecast to rise at an average rate of 1.2% per year until 2017



Key findings

The industrial construction sector is forecast to see average growth of 6.1% per year over the forecast period to 2017. It is expected to benefit strongly from work on the London Gateway logistics park, in addition to improving economic conditions providing some impetus for investment in manufacturing and other distribution and logistics facilities.

Average annual growth of 3.5% is forecast for the private housing sector. At present, demand is being dampened by concerns over unemployment and the continued squeeze on households. The steadily improving macro-economic conditions and the increasing availability of credit should provide some boost to demand over the next couple of years. Plans for up to 10,000 new homes at Northstowe in Cambridgeshire are back on track, after the masterplan was approved by the council. The first phase of work on the scheme is due to start in the second half of 2013.

Output in the public non-housing sector is expected to decline by 3.6% per year on average over the forecast period, as work on the remaining Building Schools for the Future (BSF) legacy completes and public funding cuts continue to bite. However, this is a weaker decline than for the UK as a whole (-5.8%), as the region saw a smaller increase in output between 2007 and 2010. The East of England's public non-housing sector saw output rise by 52% over that period, compared with a national figure of 72%; therefore it has less far to fall to return to its pre-BSF levels of output.

Regional comparisons 2013-2017

	Annual average % change in output	Change in total employment	Total ARR
North East	1.7%	-7,950	690
Yorkshire and Humber	-0.9%	-16,110	1,910
East Midlands	-0.4%	-8,590	1,860
East of England	1.2%	6,550	5,820
Greater London	1.9%	10,060	1,180
South East	1.1%	-12,780	4,570
South West	1.3%	-12,400	2,910
Wales	2.7%	-7,080	2,950
West Midlands	-1.4%	-23,210	830
Northern Ireland	1.7%	-5,040	660
North West	-0.4%	-14,500	2,870
Scotland	1.1%	-10,690	2,800
UK	0.8%	-101,740	29,050

Source: CSN, Experian
ref. CSN Explained, Section 3, Note 2

Construction employment in the East of England is expected to return to growth in 2014, a year before output in 2015. This is because the fall in output in 2014 is largely due to a weak outlook for less labour-intensive sectors such as infrastructure. In contrast, the private housing and R&M sectors, which are more labour-intensive, are expected to see robust growth that year. Despite average annual growth of 0.5% over the period to 2017, construction employment in the region is projected to still be 7% lower than its 2008 peak at 255,590 at the end of the forecast period.

The number of architects employed in the region is expected to rise by 12% over the five years to 2017, whilst floorers are forecast to see employment rise by 10% over the same period.

The East of England's annual recruitment requirement (ARR) for the 2013-2017 period is 5,820. This is equivalent to 2.3% of base 2013 employment, substantially above the UK average of 1.2%. In absolute terms, construction managers and wood trades / interior fit-out are the two occupations expected to be most in demand. However, in terms of base 2013 employment, the largest recruitment requirement is forecast to be for floorers and plant operatives.

2. The outlook for construction in the East of England

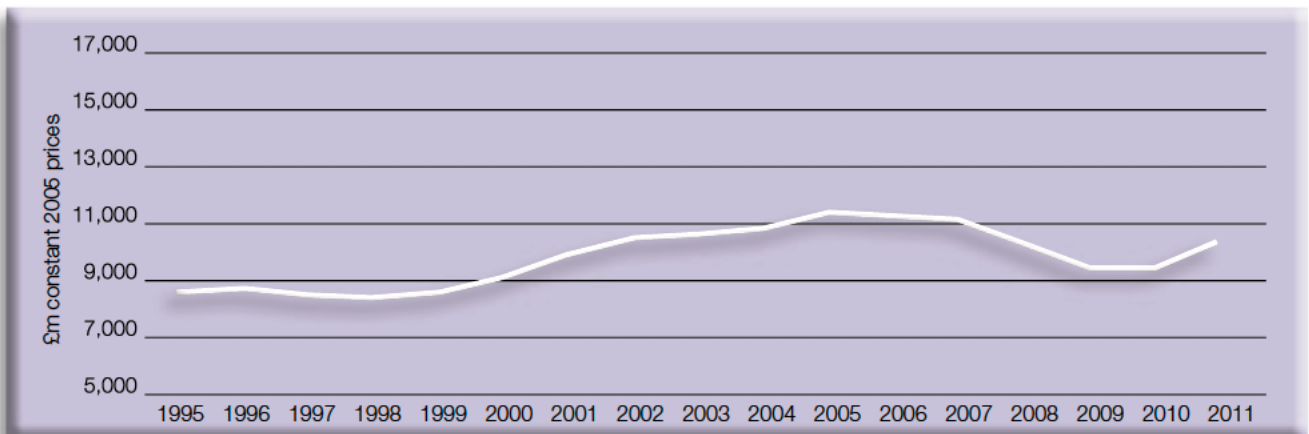
2.1 Construction output in the East of England – overview

After returning to growth with a weak 1% increase in 2010, construction output in the East of England rose by 10% in 2011. Totalling £10.4bn in 2005 prices, it was the highest annual outturn since 2007. New work rose by 3% during the year, whilst the repair and maintenance (R&M) sectors saw output increase by 20%.

The weakest performance was from the public non-housing sector, where output fell by 21%, which was not especially surprising considering the winding down of the remaining

Building Schools for the Future (BSF) legacy projects. Public housing output also saw a double-digit decline, falling by 18% as the lower levels of funding under the 2011-15 Affordable Housing Programme (AHP) began to be felt. In contrast, output rose by 14% in the infrastructure sector in the East of England, with work on the London Gateway port project gathering steam. Commercial construction output rose by 11%, a second successive year of growth, and the private housing sector saw output rise by 9% following a strong increase in 2010.

Construction output 1995-2011 – East of England



Source: ONS ref. CSN Explained, Section 3, Note: 1

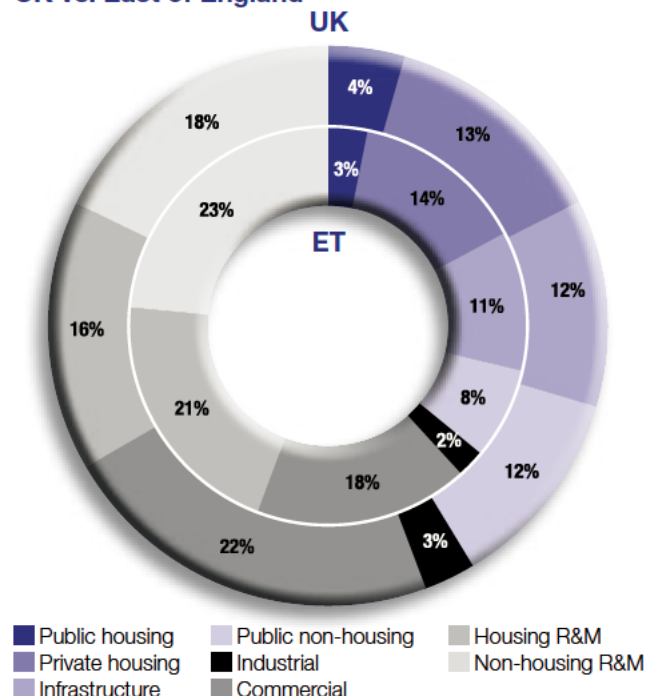
2.2 Industry structure

The diagram, construction industry structure 2011 – UK vs. East of England, illustrates the sector breakdown of construction in the East of England compared to that in the UK as a whole. Effectively, the percentages for each sector illustrate what proportion of total output each sector accounts for.

In 2011, the repair and maintenance (R&M) sector in the East of England accounted for 44% of total construction output in the region, substantially higher than the 33% in the UK as a whole. It was up from 40% in 2010 in the region.

There are a number of substantial differences in the structure of the industry at a sectoral level in the East of England. The commercial sector is much smaller in the East of England, taking an 18% share of output in 2011, compared with the national average of 22%. The public non-housing sector is also relatively less important in the region, accounting for just 8% of output in 2011 in contrast to 12% at a UK level. The housing R&M and the non-housing R&M sectors are relatively more important in the region than in the UK as a whole.

Construction industry structure 2011 – UK vs. East of England



Source: ONS, Experian

2.3 Economic overview

The expected performance of a regional or national economy over the forecast period (2013-2017) provides an indication of the construction sectors in which demand is likely to be strongest.

2.4 Economic structure

The East of England's economy returned to growth in 2010 with a weak increase of 0.6% but the recovery strengthened substantially in 2011 as Gross Value Added (GVA) rose by 4.1% to £113.3bn in 2009 prices. This was equivalent to 8.7% of the UK total, up marginally from 8.5% in 2010.

The professional and other private services sector remained the largest in the East of England in 2011, although its share of output fell from 25% in 2010 to 23.8% in 2011, as output declined by 1.6% during the year. The public services sector was again the second largest in the region, accounting for

17.5% of output in 2011, interestingly a rise from 16.7% in 2010 as output rose by a marked 9%. The wholesale and retail and manufacturing sectors each took a 13% share of output in 2011, an increase from 12% for manufacturing from 2010.

In addition to strong growth in public services output in 2011, the accommodation, food services and recreation (12.4%) and the manufacturing (7.3%) sectors also saw substantial increases. In fact, utilities (-8%) and professional and other private services (-1.6%) were the only two sectors in the region to see output contract during the year.

One of the main differences in the structure of the East of England's economy compared to the UK as a whole, is the relative importance of wholesale and retail, which takes a 13% share in the region but accounted for only 11% of output in the UK in 2011. The region's manufacturing sector took a 13% share of output in 2011, compared to a national figure of 11%.

Economic structure – East of England (£ billion, 2009 prices)

Selected sectors	Actual 2011	Forecast <i>Annual % change, real terms</i>					
		2012	2013	2014	2015	2016	2017
Professional and other private services	26.9	2.1	1.2	2.2	2.5	2.8	2.8
Public services	19.8	1.4	0.1	0.6	0.6	0.8	1.2
Wholesale and retail	14.7	-0.4	1.3	2.4	2.6	2.6	2.5
Manufacturing	14.4	-0.5	1.9	2.5	1.9	1.4	1.2
Finance and insurance	6.0	-0.2	1.2	1.7	3.0	3.7	3.9
Total Gross Value Added (GVA)	113.3	-0.1	0.8	2.0	2.2	2.4	2.4

Note: Top 5 sectors, excluding construction
Source: Experian
ref. CSN Explained, Section 4, Note 3

2.5 Forward looking economic indicators

Following an estimated negligible decline of 0.1% in 2012, the East of England's economy is expected to return to growth in 2013 and see rises in each year of the forecast period to 2017. Average annual growth of 2% per year is forecast for GVA in the region for the five years to 2017, marginally above the UK average of 1.9%.

An average increase of 2.3% per year is forecast for the largest sector in the region, professional and other private services, although output in the next largest, public services, is expected to rise at a much more modest rate of 0.7% per year on average. Wholesale and retail and manufacturing, the sectors taking the next biggest shares of output in the region, are forecast to see average annual growth of 2.3% and 1.8%, respectively.

Household spending declined by 0.5% in the East of England in 2011, as consumers were faced with weak wage

growth and high inflation squeezing their incomes – real disposable incomes fell by 0.8% during the year. Prospects for consumers are better over the forecast period, with inflation having followed a downward path throughout most of 2012. Real household disposable incomes are expected to have returned to growth in 2012, rising by 1.1%, and increasing at an average rate of 2% per year over the five years to 2017. The better prospects for incomes will stimulate consumer spending, which is forecast to rise by 2.6% per year on average over the forecast period.

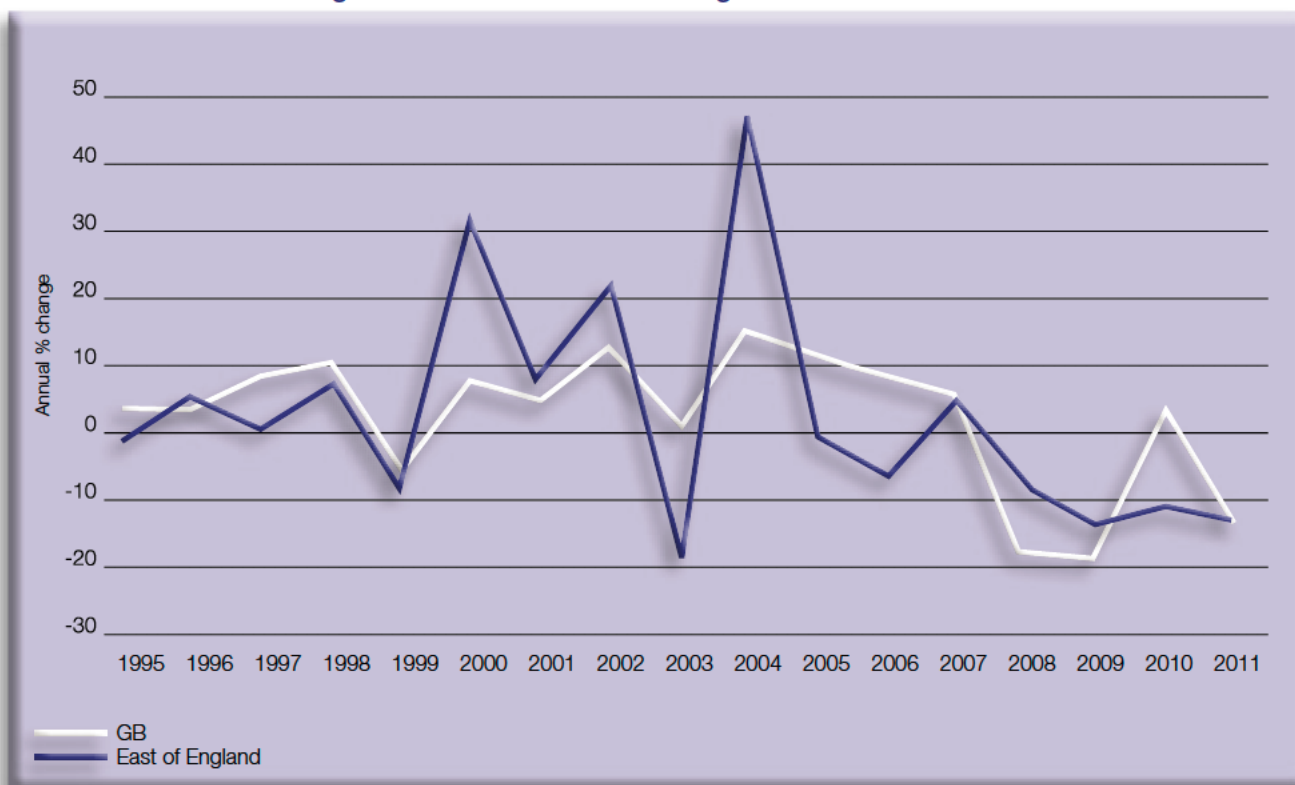
The working population stood at 60.2% as a proportion of the total population in the East of England in 2011, lower than the UK level of 61.8%. Over the period to 2017, the region is expected to see a steady increase in this proportion which will reach 61.4% by 2017. In contrast, in the UK as a whole, the proportion will edge down to 61.4% by the end of the current forecast period.

Economic indicators – East of England (£ billion, 2009 prices - unless otherwise stated)

	Actual 2011	Forecast <i>Annual % change, real terms</i>					
		2012	2013	2014	2015	2016	2017
Real household disposable income	91	1.1	1.2	2.1	2.1	2.2	2.7
Household spending	86	1.4	1.8	2.4	2.8	2.9	2.9
Working age population (000s and as % of all)	3,573	60.1%	60.4%	60.7%	61.0%	61.3%	61.4%
House prices (£)	235,043	1.1	1.0	1.8	2.5	2.7	3.0
LFS unemployment (millions)	0.20	3.94	3.91	-6.23	-6.59	-3.59	-6.02

Source: ONS, DCLG, Experian

New construction orders growth 1995-2011 – East of England vs. GB



Source: ONS
ref. CSN Explained, Section 3, Note 4

2.6 New construction orders – overview

In 2011, new construction orders in the East of England totalled £3.7bn in current prices, a decline of 13% on the previous year. It was a fourth successive year of contraction in orders, and took them to their lowest level since 1999.

Despite the overall decline in new orders in the region, infrastructure new orders jumped by 20% to £714m. However, this followed a marked decline in 2010 and new orders in the sector were still only 47% of their 2009 peak. Industrial construction new orders also rose, by 18%, but this was from a record low of just £150m in 2010. At the other end of the scale, public housing new orders fell by 33% during the year, reaching a seven-year low of £182m, and public non-housing orders declined by 29% to £717m. This was not unexpected given the public funding cuts, particularly the halving of funding available under the 2011-2015 Affordable Housing Programme (AHP) compared with the previous 2008-2011 programme. Private housing new orders dropped by 17%, although this followed an increase of 76% in 2010.

2.7 New construction orders – current situation

The recent negative trend in new construction orders in the East of England reversed in the first half of 2012, as orders rose by 13% from the corresponding period of 2011. Totalling £2.3bn in current prices, they were also 25% higher than the second half of 2011.

This return to growth for new construction orders in the six months to June 2012 was primarily driven by a further marked increase in new orders in the infrastructure sector, which rose by 69% on an annual basis. Commercial construction new orders increased by 24% from a year earlier and, rather surprisingly, public non-housing new orders rose by 11%. The housing sectors fared less well with private housing new orders declining by 7% and those for public housing dropping by 67% on an annual basis. However, it is worth highlighting that public housing new orders are at a low level and therefore any changes are magnified in percentage terms.

New work construction orders – East of England (£ million, current prices)

	Actual 2011	Annual % change				
		2007	2008	2009	2010	2011
Public housing	182	5.6	-18.7	-6.1	-12.4	-33.4
Private housing	964	-3.0	-37.7	-23.8	76.4	-16.7
Infrastructure	714	0.0	183.2	9.8	-61.0	20.3
Public non-housing	717	43.8	5.7	7.3	-16.4	-29.5
Industrial	178	4.4	-55.0	-31.5	-27.9	18.5
Commercial	960	-4.2	-23.1	-41.7	20.6	-11.6
Total new work	3,714	4.2	-7.9	-13.4	-11.2	-13.1

Source: ONS
ref. CSN Explained, Section 3, Note 4

2.8 Construction output – short-term forecasts (2013-2014)

Office for National Statistics (ONS) output statistics are published in current prices and are therefore inclusive of any inflationary effect. At the time of writing, ONS construction output statistics at a regional level were only available for the first two quarters of 2012.

Construction output in the East of England rose by 2%, year-on-year, in the first six months of 2012, totalling £5.9bn in current prices. However, this was 7% lower than in the second half of 2011. On an annual basis, R&M output fared better than new work in the first half of 2012, with the former seeing growth of 12% and the latter a decline of 6%. The industrial construction sector was the only new work one in the region where output rose, by 7% from a year earlier, although it remained unchanged in the commercial construction sector. In contrast, the public housing sector saw a decline of 32% and infrastructure output fell by 10% from the corresponding period of 2011.

Following an estimated contraction of 4% in 2012, construction output in the East of England is forecast to decline at an average rate of 1.2% per year in 2013 and 2014. Whilst new work is forecast to contract in both years, R&M output is expected to stagnate in 2013 and edge up by 1% in 2014.

In the short term, the best-performing sector is expected to be industrial, with average growth of 7.5% in 2013 and 2014. Work has recently started on the £140m Gateway Peterborough distribution and logistics park, with the 240-acre site due to be completed in the next couple of years. However, the largest project in the region is the development of the 560 acre logistics port around DP World's London Gateway port, on which work has also recently started.

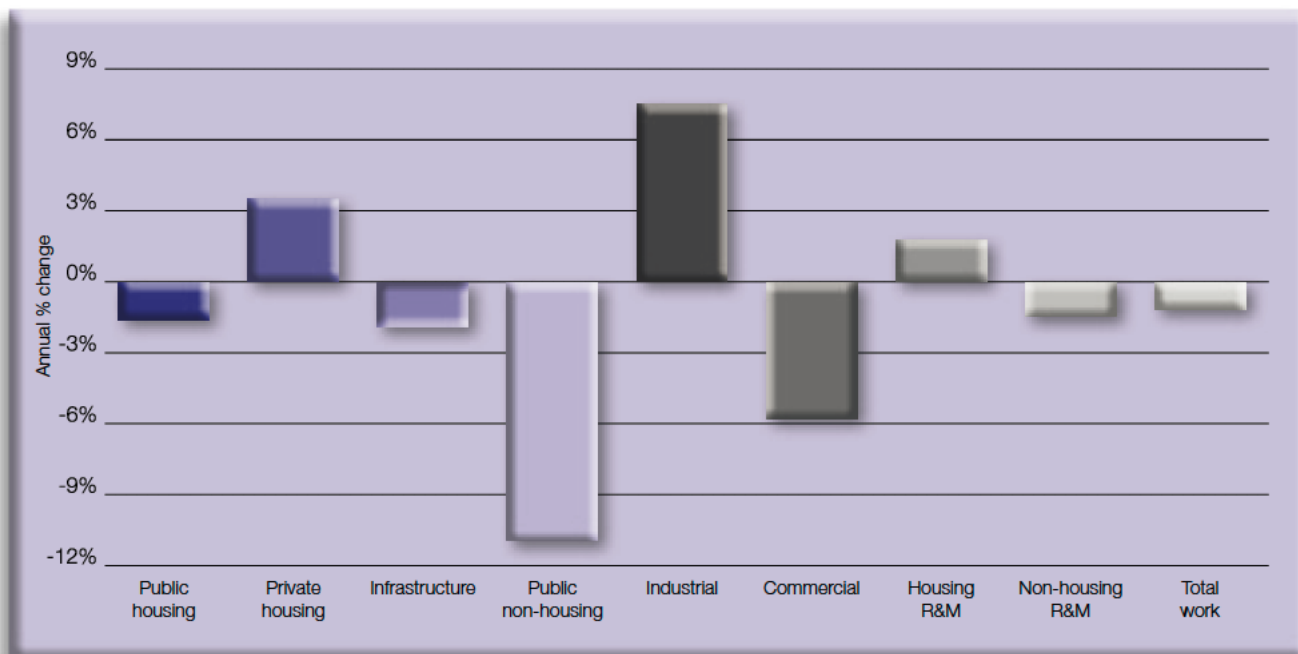
The private housing sector is the only other new-work forecast to see output rise in the shorter term, with average growth of 3.6% in 2013 and 2014. Demand is constrained by concerns over unemployment and the continuing squeeze on consumers, but we expect the situation to improve in the short term and stimulate activity in the housing market. Credit conditions are beginning to ease, with higher loan-to-value mortgages being made available at lower rates.

In contrast, the public non-housing sector is forecast to see output decline by 11% per year on average over the 2013-14 period. Work is now beginning to wind down on the remaining Building Schools for the Future (BSF) legacy projects and this, coupled with public spending cuts, will lead to some strong falls in output in the sector over the next few years.

Commercial construction output in the East of England is forecast to contract by 5.7% per year on average in 2013 and 2014. It remains difficult at the moment for developers to judge when to bring new space onto the market in the present climate and there is little incentive for them to activate new schemes while economic conditions remain so weak.

An average annual decline of 2% is forecast for the infrastructure sector in 2013 and 2014. However, this average masks growth of 6% in 2013 and a decline of 9% in 2014. Work is ongoing on DP World's London Gateway port, but that is due to be operational by the final quarter of 2013 and therefore activity on the project will wind down during the second half of next year. It was initially expected that work on Sizewell C nuclear power station would mitigate some of the fall in output from the completion of the London Gateway port, but more recent information from the Nuclear Industry Association (NIA) suggests that preliminary works will not start until the second half of 2016.

Annual average construction output growth 2013-2014 – East of England



Source: CSN, Experian ref. CSN Explained, Section 3, Note 2

Construction output – East of England (£ million, 2005 prices)

	Actual	Forecast annual % change			Annual average
	2011	2012	2013	2014	2013-14
Public housing	314	-28%	-5%	2%	-1.6%
Private housing	1,459	-8%	-1%	8%	3.6%
Infrastructure	1,188	-11%	6%	-9%	-2.0%
Public non-housing	788	-6%	-14%	-8%	-11.0%
Industrial	244	9%	6%	9%	7.5%
Commercial	1,843	-8%	-6%	-5%	-5.7%
New work	5,835	-9%	-3%	-2%	-2.4%
Housing R&M	2,126	3%	1%	3%	1.9%
Non-housing R&M	2,428	3%	-2%	-1%	-1.5%
Total R&M	4,555	3%	0%	1%	0.1%
Total work	10,390	-4%	-2%	-1%	-1.2%

Source: Experian
ref. CSN Explained, Section 3, Notes 1 and 2

2.9 Construction output – long-term forecasts (2013-2017)

Construction output in the East of England is expected to increase at an average rate of 1.2% per year over the five years to 2017. New work output is forecast to see average annual growth of 0.9% per year, whilst R&M output is expected to rise by a stronger 1.5% per year, on average, over the forecast period to 2017. The region's construction industry will return to growth in 2015, a year later than the UK.

The industrial construction sector is expected to fare the best over the forecast period, with average annual growth of 6.1%. The sector has seen output plummet to record low levels in recent years, and part of its strong performance over the forecast period is a bounce back. Work on Europe's largest logistics park, adjacent to DP World's London Gateway port, is expected to continue over the next few years.

Private housing output in the region is expected to rise at an average rate of 3.5% per year over the period to 2017. Demand will return in line with improving conditions in the wider economy and easier access to credit. The masterplan for Northstowe, a new town in Cambridgeshire incorporating up to 10,000 new homes, has recently been approved, with planning permission for the first 1,500 homes also being granted. This means that construction is expected to start during the second half of 2013. The first phase of the scheme will also include a primary school, shops, sports facilities and a community centre.

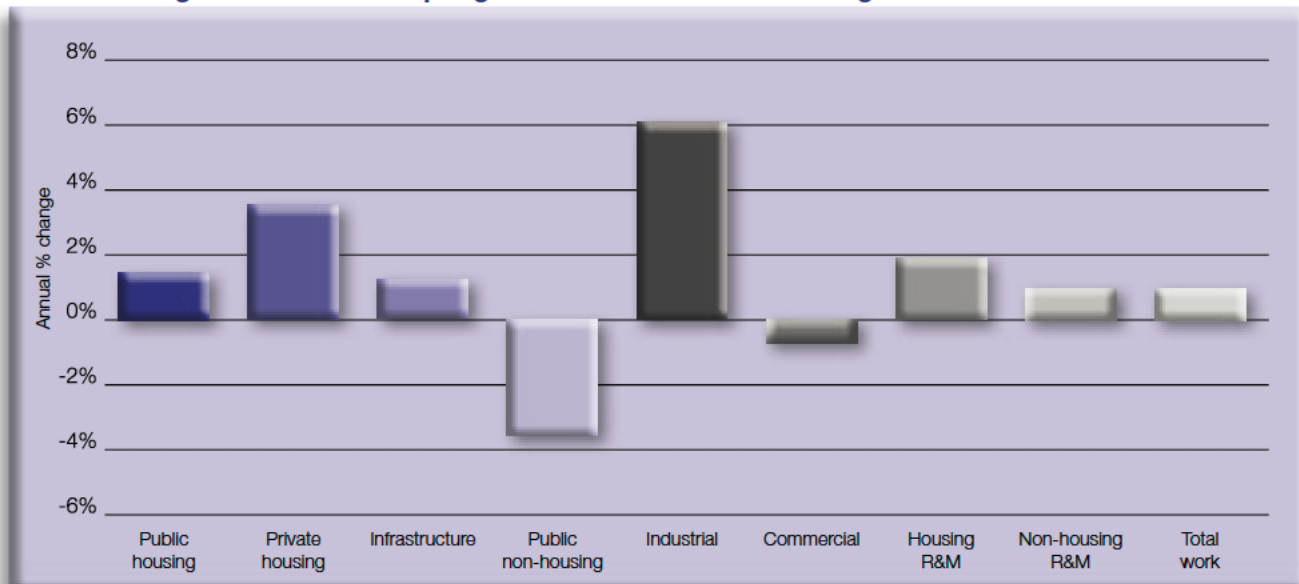
The public housing sector in the East of England is forecast to see output rise by 1.4% per year, on average, over the 2013-2017 period. The latest figures from the Homes and Communities Agency (HCA) show that the region will receive £107m to fund the development of just over 8,000 homes over the 2011-2015 period, compared to £870m over the 2008-2011 period. Output in the sector fell by 18% in 2011, compared with growth of 3% at a national level, and therefore the region's public housing sector has less far to fall over the forecast period, as some of the funding cuts have already been felt.

Over the five years to 2017, infrastructure output is forecast to rise at an average rate of 1.2% per year. There are a number of road schemes planned for the East of England over the forecast period, including the £131m upgrade of the A11 from Fiveways to Thetford which is due to start in early 2013, and work on the A5-M1 Link scheme could start as early as 2014. Preliminary works at Sizewell C are not expected to start until the second half of 2016, with a public consultation for the nuclear build project at Sizewell launched in November 2012 by EDF Energy.

The commercial construction sector is forecast to see output decline at an average rate of 0.8% per year between 2013 and 2017. A further two years of contraction in 2013 and 2014 will be followed by a return to growth in 2015, with output rising in the remaining years of the forecast period as economic conditions become more conducive to investment. Preliminary works on the £240m Watford Health Campus development were due to start towards the end of 2012, with the project expected to be completed by 2021. The scheme includes a new 510-bed hospital to replace the existing Watford General Hospital, a specialist women's and children's unit, a new mental health unit and new offices for health agencies. In addition, 300 new homes will be built on adjacent land, along with new business and leisure facilities and an enhanced stadium for Watford FC.

The industrial construction sector is forecast to see average growth of 6.1% per year over the forecast period to 2017

Annual average construction output growth 2013-2017 – East of England



Source: CSN, Experian
ref. CSN Explained, Section 3, Note 2

Construction output – East of England (£ million, 2005 prices)

	Estimate 2012	Forecast annual % change					Annual average 2013-17
		2013	2014	2015	2016	2017	
Public housing	225	-5%	2%	5%	3%	3%	1.4%
Private housing	1,338	-1%	8%	6%	4%	1%	3.5%
Infrastructure	1,058	6%	-9%	1%	2%	8%	1.2%
Public non-housing	740	-14%	-8%	2%	2%	1%	-3.6%
Industrial	266	6%	9%	6%	5%	5%	6.1%
Commercial	1,689	-6%	-5%	2%	2%	4%	-0.8%
New work	5,316	-3%	-2%	3%	3%	3%	0.9%
Housing R&M	2,181	1%	3%	3%	2%	0%	2.0%
Non-housing R&M	2,504	-2%	-1%	3%	3%	3%	1.1%
R&M	4,685	0%	1%	3%	3%	2%	1.5%
Total work	10,000	-2%	-1%	3%	3%	3%	1.2%

Source: CSN, Experian
ref. CSN Explained, Section 3, Note 2

2.10 Beyond 2017

The timeline from the NIA suggests that preliminary construction will not start at Sizewell C until the second half of 2016 and therefore a large part of the work will fall outside the current forecast period. The latest information suggests that the first reactor will be at full power by the end of 2023, with the second reactor expected to be operational by the end of 2025.

A number of the offshore wind farms in Round 3 of the Crown Estates development are off the East of England coast, including the East Anglia Offshore Wind Farm, which should provide some boost to construction in the region.

In addition, there is the potential for energy efficiency and micro-generation work to be a substantial driver of activity going forwards. There is the potential for a sizeable increase in retrofitting work, both residential and non-domestic, although this may in part depend on the success of the Green Deal and similar Government schemes to incentivise investment in these measures.

3. Construction employment forecasts for the East of England

3.1 Total construction employment forecasts by occupation

The table presents actual construction employment (SIC 41-43, 71.1, and 74.9) in the East of England for 2011, the forecast total employment in 26 occupations and in the industry as a whole between 2013 and 2017. A full breakdown of occupational groups is provided in Section 5 of CSN Explained.

Construction employment in the East of England is expected to rise at an average rate of 0.5% per year between 2013 and 2017, one of only two regions or devolved nations expected to see employment growth over the forecast period. In contrast, construction employment in the UK is expected to decline by 0.8% per year on average over the same period. There is evidence of underemployment across a number of other regions and devolved nations, but this has not been the case in the East of England, with output declining by 10% between 2007 and 2012 and employment by 8% over the same period. Therefore, there is not expected to be the same lag between returns to growth in output and employment in the region as expected elsewhere.

Output in the East of England is forecast to return to growth in 2015, whilst construction employment in the region is expected to rise by 0.5% in 2014. This slightly unusual relationship reflects the sectoral pattern of output growth and decline in 2014 – there is a strong fall in the infrastructure sector forecast for 2014 due to the completion of a major project (London Gateway) but this is not one of the more labour-intensive sectors. However, growth is expected in 2014 for the private housing and R&M sectors, all of which are relatively more labour intensive.

The largest construction-specific occupation in 2011 was wood trades and interior fit-out, which accounted for 11% of total construction employment in the region, followed by electrical trades and installation with 8%. The share of wood trades and interior fit-out is expected to edge down to 10% by 2017, as the occupation is expected to see a slightly weaker increase than total construction employment over the 2013-2017 period.

Total employment by occupation – East of England

	Actual 2011	Forecast	
		2013	2017
Senior, executive, and business process managers	14,760	14,670	14,840
Construction managers	22,350	22,060	22,580
Non-construction professional, technical, IT, and other office-based staff	34,910	35,340	36,880
Wood trades and interior fit-out	26,860	24,790	25,600
Bricklayers	9,310	8,860	9,060
Building envelope specialists	10,270	9,970	10,350
Painters and decorators	10,790	10,580	11,080
Plasterers and dry liners	4,130	3,700	3,710
Roofers	3,690	3,450	3,480
Floorers	4,470	4,490	4,880
Glaziers	4,800	4,910	5,190
Specialist building operatives nec*	2,660	2,580	2,590
Scaffolders	2,070	2,000	2,080
Plant operatives	4,420	4,170	4,240
Plant mechanics/fitters	4,020	4,110	4,420
Steel erectors/structural	2,710	2,650	2,750
Labourers nec*	9,170	8,960	9,570
Electrical trades and installation	21,080	19,570	19,230
Plumbing and HVAC trades	18,060	17,620	18,360
Logistics	2,830	2,660	2,570
Civil engineering operatives nec*	7,040	6,390	6,260
Non-construction operatives	2,280	2,070	2,040
Civil engineers	5,480	5,380	5,670
Other construction professionals and technical staff	18,510	18,210	18,860
Architects	2,280	2,350	2,590
Surveyors	6,810	6,640	6,710
Total (SIC 41-43)	222,680	215,600	221,760
Total (SIC 41-43, 71.1, 74.9)	255,760	248,180	255,590

Source: ONS, CSN, Experian
ref. CSN Explained, Section 3, Notes 5 and 6
* Not elsewhere classified

Over the five years to 2017, the strongest increase is expected for architects (12%), floorers (10%) and plant mechanics/fitters (10%). In contrast, logistics personnel (-5%), civil engineering operatives (-5%) and electrical trades (-4%) are forecast to see the most marked declines in employment.

3.2 Annual recruitment requirements (ARR) by occupation

The ARR is a gross requirement that takes into account workforce flows into and out of construction, due to factors such as movements between industries, migration, sickness, and retirement. However, these flows do not include movements into the industry from training, due to the inconsistency and coverage of supply data. Therefore, the annual recruitment 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.

The ARR for the 26 occupations within the East of England's construction industry is illustrated in the table. The figure of 5,820 is indicative of the average requirements per year for the industry, as based on the output forecasts for the region. This takes into account 'churn' i.e. the flows into and out of the industry, excluding training flows.

In absolute terms, the largest requirements are for construction managers (750) and wood trades and interior fit-out (700). However, as a proportion of base 2013 employment, floorers (7.3%), plant operatives (6.5%) and glaziers (5.9%) are expected to be most in demand. The region's total ARR is equivalent to 2.3% of base 2013 employment, the second highest of all the regions and devolved nations and substantially above the average figure of 1.2% for the UK as a whole.

CITB-ConstructionSkills' latest mobility report provides an indication of geographic flows for the construction industry. The survey shows that just 48% of the construction workforce in the East of England originates there, with only Greater London having a lower proportion (46%). The next largest contributions to the region's workforce came from the South East (16%) and the East Midlands (14%).

Please note that all of the ARR's presented in this section are employment requirements and not necessarily training requirements. This is because some new entrants to the construction industry, such as skilled migrants or those from other industries where similar skills are already used, will be able to work in the industry without the need for significant retraining.

Non-construction operatives is a diverse occupational group including all of the activities under the SICs 41-43, 71.1, 74.9 umbrella that cannot be classified elsewhere, such as cleaners, elementary security occupations and routine inspectors and 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 ARR for non-construction operatives is not published.

Finally, for certain occupations there will be no appreciable requirement over the forecast period, partly due to the recession creating a 'pool' of excess labour.

Annual recruitment requirement by occupation – East of England

	2013-2017
Senior, executive, and business process managers	270
Construction managers	750
Non-construction professional, technical, IT, and other office-based staff	710
Wood trades and interior fit-out	700
Bricklayers	370
Building envelope specialists	150
Painters and decorators	260
Plasterers and dry liners	80
Roofers	80
Floorers	330
Glaziers	290
Specialist building operatives nec*	80
Scaffolders	60
Plant operatives	270
Plant mechanics/fitters	50
Steel erectors/structural	50
Labourers nec*	420
Electrical trades and installation	150
Plumbing and HVAC trades	120
Logistics	130
Civil engineering operatives nec*	70
Non-construction operatives	-
Civil engineers	160
Other construction professionals and technical staff	220
Architects	<50
Surveyors	<50
Total (SIC 41-43)	5,390
Total (SIC 41-43, 71.1, 74.9)	5,820

4. Comparisons across the UK

Interestingly, the profile of output growth at regional and devolved nation level over the 2013-2017 period is not as south-east centric as we might have expected, with Wales forecast to have the strongest average annual growth. However, Wales' growth is almost entirely due to the new nuclear power station planned at Wylfa in Anglesey, with average annual growth of just 0.6% if the project is removed from the forecast period. Although Hitachi's technology, the Advanced Boiling Water Reactor (ABWR) will need to go through a generic design assessment, construction is still expected to start during the current forecast period.

The North East is coming back up from a very low base – the region saw the worst fall of all the English regions between 2007 and 2012, with output declining by 30% over the period – hence the relatively stronger outlook for the region over the forecast period. In comparison, Scotland's decline over the same period was just 17%. To demonstrate how the greater south-east has weathered the last five years better than elsewhere, the best three performing regions were Greater London (+13%), the South East (-1%) and the East of England (-7%). Northern Ireland, in contrast, is coming back from an even lower base – output declined by 36% between 2007 and 2012. This, combined with the fact that it saw a fall-off in public sector work a year before the other regions and devolved nations (2010 compared with 2011), this results in smaller declines going forward, indicating that the outlook for Northern Ireland may be a little better than the UK average.

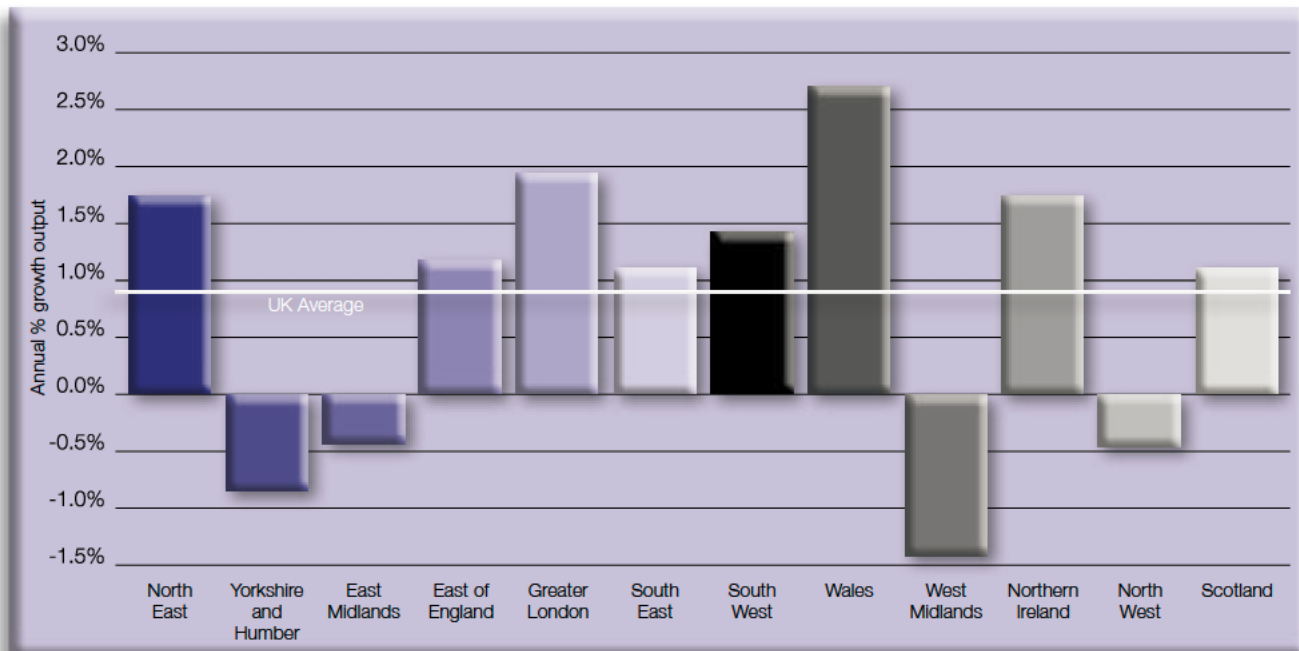
The profile of employment changes across the regions and devolved nations is different to that of output over the period to 2017. The relationship between overall output and employment is not straightforward given that some sectors are much more labour-intensive than others, and the relative performances of the sectors within overall output impacts on the prospects for employment across the UK. For example, Wales' output growth is largely predicated on the new nuclear power station at Wylfa and new nuclear build is one of the least labour intensive areas of the construction industry. Greater London and the East of England are the only two regions predicted to see employment growth over the forecast period, and even here it is very weak.

There is also the issue of underemployment in the industry coming to the fore, which will impact on the speed with which construction employment in a particular region and devolved nation returns to growth. For example, the North West saw output fall by an estimated 29% between 2007 and 2012 in real terms, whilst employment declined by just 11% over the same period. This substantial output and employment 'gap' suggests that firms in the region have not been shedding staff at the same rate as activity has been dropping. Job-shedding is likely to continue in the region for some time after output starts to improve. A similar profile of output and employment declines has been seen across a number of regions and devolved nations to various degrees, with the 'gap' widening outside of the greater south east. It appears to be the case that parts of the UK with more directly-employed labour have seen this effect more than those with a more labour-only sub-contractor focus in terms of construction employment.



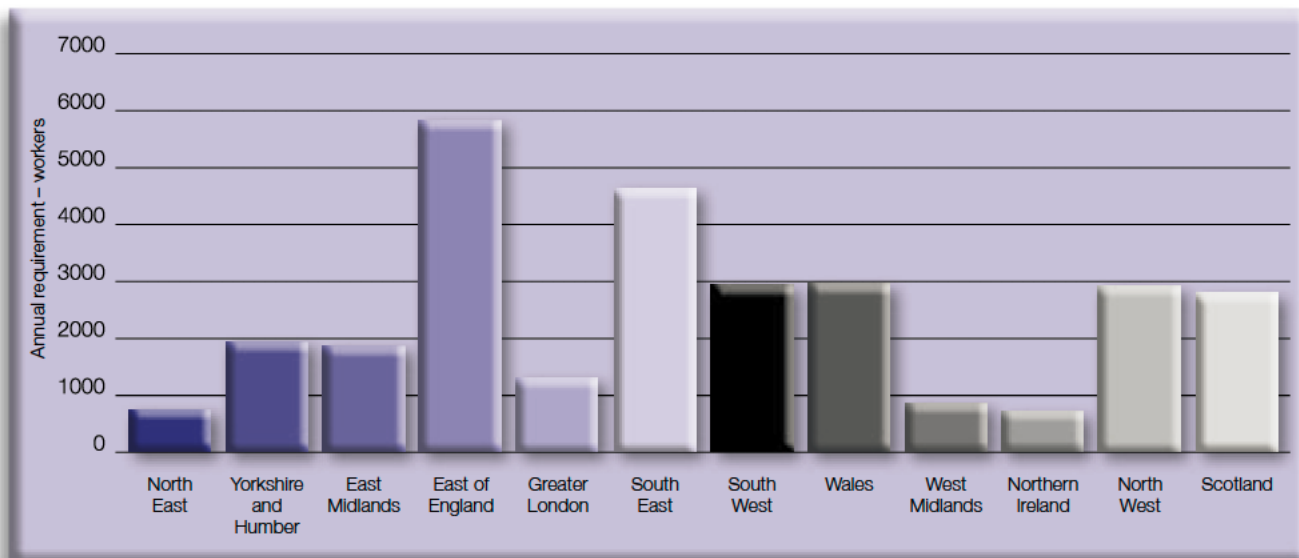
The East of England's annual recruitment requirement (ARR) is 5,820, with the largest requirement expected for floorers and plant operatives

Annual average output growth by region 2013-2017



Source: CSN, Experian
ref. CSN Explained, Section 3, Note 2

Annual recruitment requirement (ARR) by region 2013-2017



Source: CSN, Experian



CSN Explained

This appendix provides further details and clarification of some of the points covered in the report.

Section 1 gives an overview of the underpinning methods that are used by the CSN, working in partnership with Experian, to produce the suite of reports at a UK, national and regional level.

Section 2 provides a glossary to clarify some of the terms that are used in the reports, while Section 3 has some further notes that relate to the data sources that are used for the various charts and tables. Section 3 also outlines what is meant by the term footprint, when talking about the areas of responsibility that lie with a Sector Skills Council.

Section 4 explains the sector definitions used within the report and provides examples of what is covered in each.

Section 5 gives a detailed breakdown of the 26 occupational groups into the individual standard occupational classification (SOC) codes that are aggregated to provide the employment and recruitment requirement.

Section 6 then concludes by giving details about the range of LMI reports, the advantages of being a CSN member and the contact details should people be interested in joining.



1. CSN Methodology

Background

The **Construction Skills Network** has been evolving since its conception in 2005 acting as vehicle for CITB-ConstructionSkills to collect and produce information on the future employment and training needs of the industry. CITB-ConstructionSkills, CIC and CITB Northern Ireland are working as ConstructionSkills, the Sector Skills Council 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 a 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, all of whom contribute local industry knowledge and views on training, skills, recruitment, qualifications and policy. The National Group also includes representatives from industry, Government, education and other SSCs. This Group convenes twice a year and sets the national scene, effectively forming a backdrop for the Observatories.

At the heart of the CSN are a number of forecasting models which generate forecasts of employment requirements within the industry for a range of occupational groups. The models are designed and managed by Experian under the independent guidance and validation of the Technical Reference Group, comprised of statisticians and modelling experts. The Models have been, and will continue to be, evolved over time to ensure that they account for new research as it is published as well as new and improved modelling techniques. 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 models, which are 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 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 **annual recruitment requirement (ARR)** is a gross requirement that takes into account workforce flows into and out of construction, due to such factors as movements between industries, migration, sickness, and retirement. However, these flows do not include movements into industry from training, due to the inconsistent currency and coverage of supply data. Therefore, the annual recruitment 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.

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 models are dynamic and reflect the general UK economic climate at any point in time. To generate the labour demand, the models make use of a set of specific statistics for each major type of work 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 year's 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.

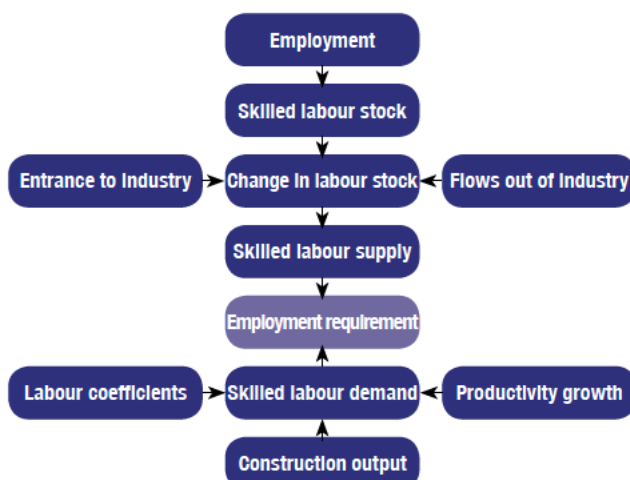
The main reason for outflow is likely to be transfer to other industries.

Flows into the labour market include:

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

The most significant inflow is likely to be from other industries.

A summary of the model is shown in the flow chart.



2. Glossary of Terms

- **Building envelope specialists** – any trade involved with the external cladding of the building other than bricklaying, e.g. curtain walling.
- **Demand** – demand is calculated using construction output data from the Office for National Statistics (ONS) and the Department of Finance and Personnel Northern Ireland (DFP), along with vacancy data from the National Employers Skills Survey, from the Department for Education and Skills. These data sets are translated into labour requirements by trade by using a series of coefficients to produce the labour demand that relates to the forecasted output levels.
- **GDP** – Gross Domestic Product – total market value of all final goods and services produced. A measure of national income. $GDP = GVA + \text{taxes on products} - \text{subsidies on products}$.
- **GVA** – Gross Value Added – total output minus the value of inputs used in the production process. GVA measures the contribution of the economy as a difference between gross output and intermediate outputs.
- **Coefficients** – To generate the labour demand, the model makes use of a set of specific statistics for each major type of work to determine employment, by trade or profession, based upon the previous year's supply. In essence this is the number of workers in each occupation/ trade to produce £1m of output across 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 Intelligence)** – 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.
- **Nec** – not elsewhere classified, used as a reference in LFS data.
- **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.
- **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.



3. Notes and Footprints

Notes

- 1 Except for Northern Ireland, output data for the English regions, Scotland and Wales are supplied by the Office for National Statistics (ONS) on a current price basis. Therefore national deflators produced by the ONS have been used to deflate to a 2005 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 Great Britain 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 43, plumbers and electricians working in contracting are an integral part of the construction process. However, it is recognised by CITB-ConstructionSkills that SummitSkills has responsibility for these occupations across a range of SIC codes, including SIC 43.2.
- 7 The employment and ARR tables show separate totals for SIC 41-43 and SIC 41-43, 71.1 and 74.9. The total for SIC 41-43 covers the first 22 occupational groups on the relevant tables and excludes civil engineers, other construction professionals and technical staff, architects and surveyors. The total for SIC 41-43, 71.1 and 74.9 includes all occupations.

Footprints for Built Environment SSCs

CITB-ConstructionSkills is responsible for SIC 41 Construction of Buildings, SIC 42 Civil Engineering, SIC 43 Specialised Construction Activities and SIC 71.1 Architectural and engineering activities; Technical Testing and Analysis.

The table summarises the SIC codes (2007) covered by CITB-ConstructionSkills:

CITB-ConstructionSkills	
SIC Code	Description
41.1	Development of building projects
41.2	Construction of residential and non-residential buildings
42.1	Construction of roads and railways
42.2	Construction of utility projects
42.9	Construction of other civil engineering projects
43.1	Demolition and site preparation
43.3	Building completion and finishing
43.9	Other specialised construction activities nec
71.1*	Architectural and engineering activities and related technical consultancy

* AssetSkills has a peripheral interest in SIC 71.1

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.

CITB-ConstructionSkills shares an interest with SummitSkills in SIC 43.21 Electrical Installation and SIC 43.22 Plumbing, heat and air-conditioning installation. CITB-ConstructionSkills recognises the responsibility of Summit Skills across Standard Industrial Classifications (SIC) 43.21 and 43.22, therefore data relating to the Building Services Engineering sector is included here primarily for completeness.

AssetSkills

Footprint – Property Services, Housing, Facilities Management, Cleaning.

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

AssetSkills has a peripheral interest SIC 71.1 Architectural and engineering activities and related technical consultancy.

Energy and 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.

4. Definitions: types and examples of construction work

Public sector housing – local authorities and housing associations, new towns and government departments

Housing schemes, old people's homes and the provision within housing sites of roads and services for gas, water, electricity, sewage and drainage.

Private sector housing

All privately owned buildings for residential use, such as houses, flats and maisonettes, bungalows, cottages and the provision of services to new developments.

Infrastructure – public and private

Water

Reservoirs, purification plants, dams, water works, pumping stations, water mains, hydraulic works etc.

Sewerage

Sewage disposal works, laying of sewers and surface drains.

Electricity

Building and civil engineering work for electrical undertakings such as power stations, dams and other works on hydroelectric schemes, onshore wind farms and decommissioning of nuclear power stations.

Gas, communications, air transport

Gas works, gas mains and gas storage; post offices, sorting offices, telephone exchanges, switching centres etc.; air terminals, runways, hangars, reception halls, radar installations.

Railways

Permanent way, tunnels, bridges, cuttings, stations, engine sheds etc., signalling and other control systems and electrification of both surface and underground railways.

Harbours

All works and buildings directly connected with harbours, wharves, docks, piers, jetties, canals and waterways, sea walls, embankments and water defences.

Roads

Roads, pavements, bridges, footpaths, lighting, tunnels, flyovers, fencing etc.

Public non-residential construction¹

Factories and warehouses

Publicly owned factories, warehouses, skill centres.

Oil, steel, coal

Now restricted to remedial works for public sector residual bodies.

Schools, colleges, universities

State schools and colleges (including technical colleges and institutes of agriculture); universities including halls of residence, research establishments etc.

Health

Hospitals including medical schools, clinics, welfare centres, adult training centres.

Offices

Local and central Government offices, including town halls, offices for all public bodies except the armed services, police headquarters.

Entertainment

Theatres, restaurants, public swimming baths, caravan sites at holiday resorts, works and buildings at sports grounds, stadiums, racecourses etc. owned by local authorities or other public bodies.

Garages

Buildings for storage, repair and maintenance of road vehicles, transport workshops, bus depots, road goods transport depots and car parks.

Shops

Municipal shopping developments for which the contract has been let by a Local Authority.

Agriculture

Buildings and work on publicly financed horticultural establishments; fen drainage and agricultural drainage; veterinary clinics.

Miscellaneous

All work not clearly covered by any other headings, such as fire stations, police stations, prisons, reformatories, remand homes, civil defence work, UK Atomic Energy Authority work, council depots, museums, libraries.

Private industrial work

Factories, warehouses, wholesale depots, all other works and buildings for the purpose of industrial production or processing, oil refineries, pipelines and terminals, concrete fixed leg oil production platforms (not rigs); private steel work; all new coal mine construction such as sinking shafts, tunnelling, etc.

¹ Where contracts for the construction or improvement of non-residential buildings used for public service provision, such as hospitals, are awarded by private sector holders of contracts awarded under the Private Finance Initiative, the work is classified as 'private commercial'.

Private commercial work²

Schools and universities

Schools and colleges in the private sector, financed wholly from private funds.

Health

Private hospitals, nursing homes, clinics.

Offices

Office buildings, banks.

Entertainment

Privately owned theatres, concert halls, cinemas, hotels, public houses, restaurants, cafés, holiday camps, swimming pools, works and buildings at sports grounds, stadiums and other places of sport or recreation, youth hostels.

Garages

Repair garages, petrol filling stations, bus depots, goods transport depots and any other works or buildings for the storage, repair or maintenance of road vehicles, car parks.

Shops

All buildings for retail distribution such as shops, department stores, retail markets, showrooms, etc.

Agriculture

All buildings and work on farms, horticultural establishments.

Miscellaneous

All work not clearly covered by any other heading, e.g. exhibitions, caravan sites, churches, church halls.

New work

New housing

Construction of new houses, flats, bungalows only.

All other types of work

All new construction work and all work that can be referred to as improvement, renovation or refurbishment and which adds to the value of the property³.

Repair and maintenance Housing

Any conversion of, or extension to, any existing dwelling and all other work such as improvement, renovation, refurbishment, planned maintenance and any other type of expenditure on repairs or maintenance.

All other sectors

Repair and maintenance work of all types including planned and contractual maintenance⁴.



² Where contracts for the construction or improvement of non-residential buildings used for public service provision, such as hospitals, are awarded by private sector holders of contracts awarded under the Private Finance Initiative, the work is classified as 'private commercial'.

³ Contractors reporting work may not always be aware of the distinction between improvement or renovation work and repair and maintenance work in the non-residential sectors.

⁴ Except where stated, mixed development schemes are classified to whichever sector provides the majority (i.e. over 50%) of finance.

5. Occupational Groups

Occupational group

Description, SOC (2000) reference.

Senior, executive and business process managers

Directors and chief executives of major organisations, 1112
Senior officials in local government, 1113
Financial managers and chartered secretaries, 1131
Marketing and sales managers, 1132
Purchasing managers, 1133
Advertising and public relations managers, 1134
Personnel, training and industrial relations managers, 1135
Office managers, 1152
Civil service executive officers, 4111
Property, housing and land managers, 1231
Information and communication technology managers, 1136
Research and development managers, 1137
Customer care managers, 1142
Storage and warehouse managers, 1162
Security managers, 1174
Natural environment and conservation managers, 1212
Managers and proprietors in other services nec*, 1239

Construction managers

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

Non-construction professional, technical, IT, and other office-based staff (excl. managers)

IT operations technicians, 3131
IT user support technicians, 3132
Estimators, valuers and assessors, 3531
Finance and investment analysts/advisers, 3534
Taxation experts, 3535
Financial and accounting technicians, 3537
Vocational and Industrial trainers and instructors, 3563
Business and related associate professionals nec*, 3539
Legal associate professionals, 3520
Inspectors of factories, utilities and trading standards, 3565
Software professionals, 2132
IT strategy and planning professionals, 2131
Estate agents, auctioneers, 3544
Solicitors and lawyers, judges and coroners, 2411
Legal professionals nec*, 2419
Chartered and certified accountants, 2421
Management accountants, 2422
Management consultants, actuaries, economists and statisticians, 2423
Receptionists, 4216
Typists, 4217
Sales representatives, 3542
Civil Service administrative officers and assistants, 4112

Local government clerical officers and assistants, 4113
Accounts and wages clerks, book-keepers, other financial clerks, 4122
Filing and 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 and other secretaries, 4215
Sales and retail assistants, 7111
Telephone salespersons, 7113
Buyers and purchasing officers (50%), 3541
Marketing associate professionals, 3543
Personnel and 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

Wood trades and interior fit-out

Carpenters and joiners, 5315
Pattern makers, 5493
Paper and wood machine operatives, 8121
Furniture makers, other craft woodworkers, 5492
Labourers in building and woodworking trades (9%), 9121
Construction trades nec* (25%), 5319

Bricklayers

Bricklayers, masons, 5312

Building envelope specialists

Construction trades nec* (50%), 5319
Labourers in building and woodworking trades (5%), 9121

Painters and decorators

Painters and decorators, 5323
Construction trades nec* (5%), 5319

Plasterers and dry liners

Plasterers, 5321

Roofers

Roofers, roof tilers and slaters, 5313

Floorers

Floorers and wall tilers, 5322

Glaziers

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

Specialist building operatives nec*

Construction operatives nec* (80%), 8149
Construction trades nec* (5%), 5319
Industrial cleaning process occupations, 9132

Scaffolders

Scaffolders, staggers, riggers, 8141

Plant operatives

Crane drivers, 8221
Plant and machine operatives nec*, 8129
Transport operatives nec*, 8219
Fork-lift truck drivers, 8222
Mobile machine drivers and operatives nec*, 8229
Agricultural machinery drivers, 8223

Plant mechanics/fitters

Metal working production and maintenance fitters, 5223
Motor mechanics, auto engineers, 5231
Labourers in process and plant operations nec*, 9139
Tool makers, tool fitters and markers-out, 5222
Vehicle body builders and repairers, 5232
Auto electricians, 5233
Vehicle spray painters, 5234
Tyre, exhaust and windscreen fitters, 8135

Steel erectors/structural

Steel erectors, 5311
Welding trades, 5215
Sheet metal workers, 5213
Metal plate workers, shipwrights and riveters, 5214
Construction trades nec* (5%), 5319
Smiths and forge workers, 5211
Moulders, core makers, die casters, 5212
Metal machining setters and setter-operators, 5221

Labourers nec*

Labourers in building and woodworking trades (80%), 9121

Electrical trades and installation

Electricians, electrical fitters, 5241
Electrical/electronic engineers nec*, 5249
Telecommunications engineers, 5242
Lines repairers and cable jointers, 5243
TV, video and audio engineers, 5244
Computer engineers, installation and maintenance, 5245

**Plumbing and heating, ventilation,
and air conditioning trades**

Plumbers and HVAC trades, 5314
Pipe fitters, 5216
Labourers in building and woodworking trades (6%), 9121
Construction trades nec* (5%), 5319

Logistics

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

Civil engineering operatives nec*

Road construction operatives, 8142
Rail construction and maintenance operatives, 8143
Quarry workers and related operatives, 8123
Construction operatives nec* (20%), 8149
Labourers in other construction trades nec*, 9129

Non-construction operatives

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

Civil engineers

Civil engineers, 2121

**Other construction professionals
and technical staff**

Mechanical engineers, 2122
Electrical engineers, 2123
Chemical engineers, 2125
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6. CSN website and contact details

The CSN website – www.cskills.org/csn

The CSN website functions as a public gateway for people wishing to access the range of Labour Market Intelligence (LMI) reports and research material regularly produced by the CSN.

The main UK report, along with the twelve LMI reports (one for Northern Ireland, Scotland, Wales and each of the nine English regions) can be downloaded from the site, while other CITB-ConstructionSkills research reports are also freely available on our website.

Having access to this range of labour market intelligence and trend insight allows industry, Government, regional agencies and key stakeholders to:

- pinpoint the associated, specific, skills that will be needed year by year
- identify the sectors which are likely to be the strongest drivers of output growth in each region and devolved nation
- track the macro economy
- understand how economic events impact on regional and devolved nations' economic performance
- highlight trends across the industry such as national and regional shifts in demand
- plan ahead and address the skills needs of a traditionally mobile workforce
- understand the levels of qualified and competent new entrants required into the workforce.

The website also contains further information about:

- how the CSN functions
- the CSN Model approach
- how the Model can be used to explore scenarios
- how to contact the CSN team
- related CITB-ConstructionSkills research
- how to become a member of the network.

The CSN website can be found at:

www.cskills.org/csn

CSN members area

While the public area of the CSN website is the gateway to the completed LMI and research reports, being a member of the CSN offers further benefits.

As a CSN member you will be linked to one of the Observatory groups, which play a vital role in being able to feed back observations, knowledge and insight on what is really happening on the ground in every UK region and nation. This feedback is used to fine tune the assumptions and data that go into the forecasting programme such as:

- details of specific projects
- demand within various types of work or sectors
- labour supply
- inflows and outflows across the regions and devolved nations.

CSN members therefore have:

- early access to forecasts
- the opportunity to influence and inform the data
- the ability to request scenarios that could address 'What would happen if...' types of questions using the Model.

Through the members' area of the CSN website, members can:

- access observatory-related material such as meeting dates, agendas, presentations and notes
- download additional research material
- comment/feedback to the CSN team.

As the Observatory groups highlight the real issues faced by the industry in the UK, we can more efficiently and effectively plan our response to skills needs. If you would like to contribute your industry observations, knowledge and insight to this process and become a member of the CSN, we would be delighted to hear from you.

Contact details

For further information about the CSN website, enquiries relating to the work of the CSN, or to register your interest in joining the CSN as a member, please contact us at:

csn@cskills.org



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For more information about the
Construction Skills Network, contact:

Alan Tanner

Research and Development

Research Analyst

0344 994 4400

alan.tanner@cskills.org

www.cskills.org

