

# Construction Skills Network East of England 2014-2018

Labour Market Intelligence



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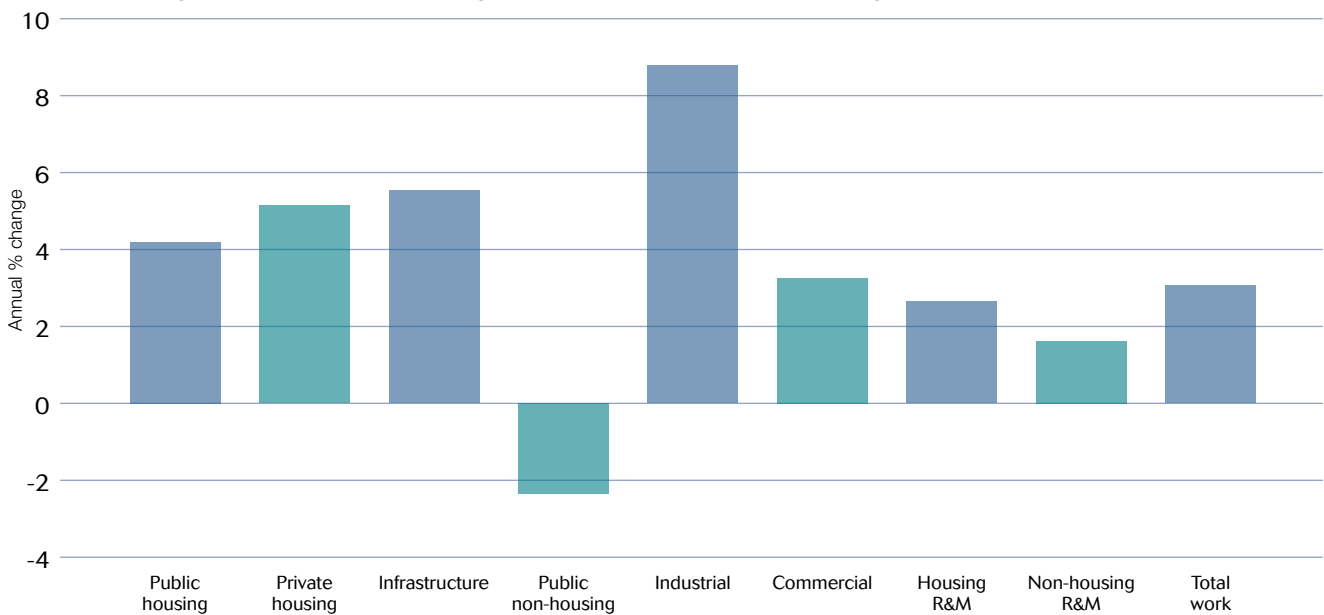
## CSN explained

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# 1 Summary – East of England

The East of England is set to see an annual average increase in construction output over the forecast period of 3%, significantly above the average UK rate of 2.2%. Repair and maintenance (R&M) activity is expected to grow by 2.1% per year on average, well below new work, which is set for a 3.7% expansion over the same period. The industrial sector is forecast to be the strongest performer, with robust annual average growth of 8.8%. The region is projected to see an increase in construction employment over the forecast period at an annual average rate of 2%. Given the positive prospects for employment, the annual average recruitment requirement (ARR) for the East of England, at 5,150, is the third highest figure among all regions and devolved nations.

**Annual average construction output growth 2014-2018 – East of England**



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



## 1.1 Key findings

Strong growth in industrial construction output comes on the back of a number of medium-sized warehouse developments, the largest being a £200m distribution centre in Thurrock. Long-term development of distribution and logistics facilities around the London Gateway port should also provide a strong output stream for the sector over the forecast period. However, the sector accounts for only 3% of total construction output in the East of England, so the impact of growth on overall activity levels in this sector is minimal.

Output in the infrastructure sector is projected to expand at an annual average rate of 5.5% over the forecast period. The region's infrastructure pipeline includes a number of offshore wind developments, all above the £1bn mark, ongoing improvements to the A11, and two large power station projects, one at King's Lynn and one at Thurrock.

Public non-housing activity is expected to see a 2.3% annual average decline in the five years to 2018, this is the only new work sector predicted to see a decline overall. Nevertheless, the sector is expected to return to growth in the latter half of the forecast period, as the impact of public expenditure cuts eases. The East of England was not a major beneficiary of the Building Schools for the Future programme, so education construction output hasn't experienced the strong contraction that some other regions have seen following the programme's cancellation.

Employment growth is projected to average 2% a year in the 2014-2018 period, above the UK average of 1.2%, and in line with expectations, given the 3% average annual output forecasts.

Scaffolders are expected to be the occupational category with the strongest growth rate in the five years to 2018, at 4.9% (annual average), followed by other construction process managers (4.8%) and plant mechanics/fitters (4.7%). The vast majority of occupational categories (26 out of 28) should see an increase in employment over the forecast period.

The East of England's annual recruitment requirement (ARR) is 5,150, which is equivalent to 2.1% of base 2014 employment, and above the UK average of 1.5%. In absolute terms, the trade sector with the largest requirement is wood trades and interior fit-out, at 690. In terms of base 2014 employment, plant mechanics/fitters and logistics personnel have the largest requirement, at nearly 10% each.

### Regional comparison 2014-2018

	Annual average % change in output	Change in total employment	Total ARR
North East	2.4%	2,660	2,680
Yorkshire and Humber	2.2%	8,590	3,170
East Midlands	1.1%	5,910	1,980
East of England	3.0%	24,220	5,150
Greater London	2.0%	27,490	1,290
South East	2.9%	28,900	1,600
South West	3.5%	16,700	6,370
Wales	3.4%	9,490	3,570
West Midlands	0.8%	-2,090	380
Northern Ireland	2.3%	3,400	1,280
North West	1.3%	10,300	2,970
Scotland	2.0%	12,240	5,960
UK	2.2%	147,810	36,400

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

# 2 The outlook for construction in the East of England

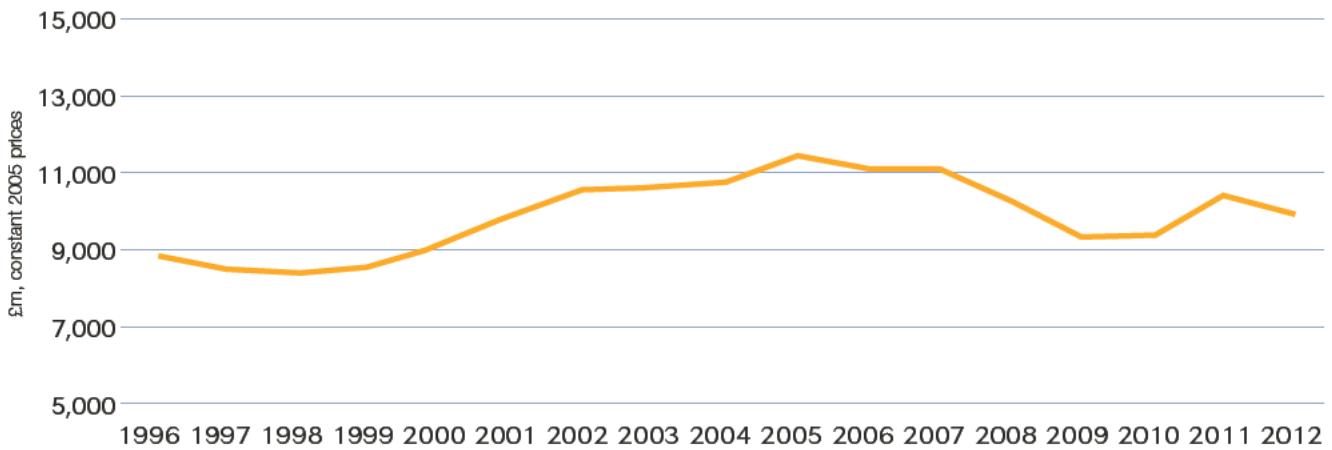
## 2.1 Construction output in the East of England – overview

After two years of growth, construction output in the East of England fell by 4% in 2012 in real terms, to just under £10bn at 2005 prices. However, the East's construction sector has held up better than in many other regions and devolved nations, with output in 2012 being only 13% below its 2005 peak.

The majority of new work sectors saw a fall in activity in 2012, with only industrial and public non-housing managing any growth, with rises of 8% and 3% respectively.

Growth in public non-housing activity follows on from a particularly severe contraction in 2011 rather than presaging any long-term growth. Public housing activity saw by far the largest contraction, with a 31% decline in 2012, the second double-digit annual contraction in as many years. The impact of a much lower level of funding in the 2011-2015 Affordable Housing Programme (AHP), compared with 2008-2011, has been reflected in the output figures fairly quickly.

### Construction output – East of England 1996-2012



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

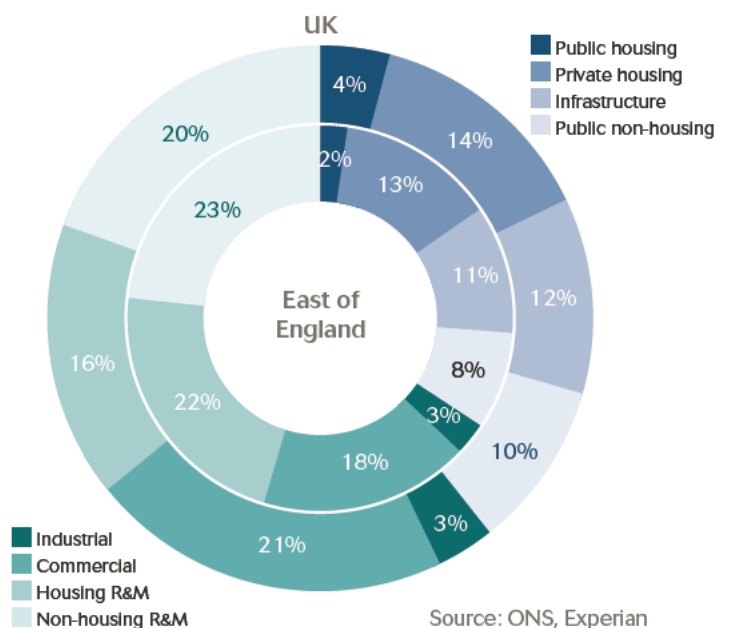
## 2.2 Industry structure

The diagram, Construction industry structure 2012 – 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 the proportion of total output accounted for by each sector.

New work's share of total construction output stood at 55% in 2012 for the East of England, down from 56% in the previous year and well below the UK average of 64%.

There are some significant differences in the structure of the East of England's construction industry compared with the UK total, with only industrial construction having a similar share at the national and regional level. The region's housing (22%) and non-housing R&M (23%) sectors are both notably larger proportionally than they are at a UK level (16% and 20% respectively). Conversely, both the public non-housing (8%) and public housing (2%) sectors are proportionally smaller when compared to the UK as a whole (10% and 4% respectively). The commercial sector is also smaller in the East of England, taking an 18% share of all work compared with 21% across the UK.

### Construction Industry structure 2012 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 (2014-2018) provides an indication of the construction sectors in which demand is likely to be strongest.

## 2.4 Economic structure

Gross value added (GVA) in the East of England totalled £113.7bn in 2010 prices in 2012, an increase of 1.2% on 2011. The East of England increased its share of UK GVA slightly from 8.3% in 2011 to 8.4% in 2012. However, GVA in the region remains more than 4% below its 2007 peak in real terms.

Professional and other private services formed the largest component of GVA within the East of England (24.5%), roughly in line with the national proportion (24.3%). The second largest sector was public services, making up 16.8% of GVA, which is relatively unchanged from the previous year and significantly lower than its share in the UK as a whole (19.2%). The next largest sectors were wholesale and retail and manufacturing, with shares of 14.1% and 13.2% respectively, both above their corresponding UK-wide figures of 11.3% and 10.3%. Meanwhile, construction accounted for 7.5% of the region's GVA, above the average UK level (5.8%).

### Economic structure – East of England (£ billion, 2010 prices)

Selected sectors	Actual	Forecast					
		Annual % change, real terms					
	2012	2013	2014	2015	2016	2017	2018
Professional and other private services	27.8	3.6	1.2	2.2	2.7	2.6	2.6
Public services	19.1	1.7	1.0	0.7	0.8	1.1	1.6
Wholesale and retail	16.0	5.0	3.1	2.5	2.4	2.2	2.3
Manufacturing	15.1	-5.3	2.5	1.3	1.3	1.1	1.0
Finance and insurance	6.7	-0.9	2.0	2.3	2.8	2.6	2.5
<b>Total Gross Value Added (GVA)</b>	<b>113.7</b>	<b>1.4</b>	<b>2.0</b>	<b>2.0</b>	<b>2.3</b>	<b>2.2</b>	<b>2.2</b>

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

Of the largest sectors, the professional and other private services sector was the most buoyant one in 2012, with output rising by 2.9%, after a larger contraction in the previous year (4.5%). The information and communication sector saw the sharpest increase, expanding by a very strong 10%, while wholesale and retail also saw reasonable expansion of 2.5%.

## 2.5 Forward looking economic indicators

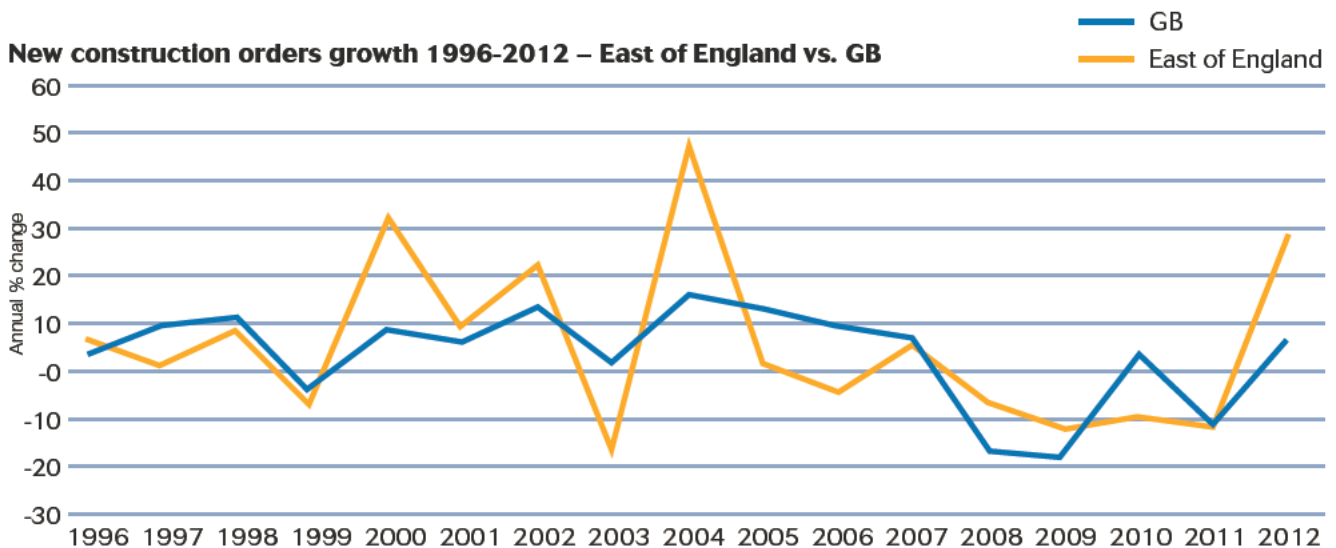
The East of England's economy is estimated to have expanded by 1.4% in 2013, a slightly stronger growth rate than in the previous year (1.2%). Over the 2014-2018 period, GVA growth in the East of England is expected to be similar to the UK average (2.1% a year vs. 2% a year).

Of the dominant sectors in the region, wholesale and retail is expected to fare best in the five years to 2018, with annual average growth of 2.5%, which will further increase its share of the East of England economy. Ongoing financial constraints will limit growth in the public services sector to around 1% a year on average. Information and communication is expected to see the strongest growth, of 3.6%, a trend which is consistent across the UK, and taking its share of the East's economy up to 6.3% in 2018, from 5.5% in 2012. In fact, information and communication is predicted to take over from finance and insurance as the fifth largest sector in the East of England economy over the forecast period.

### Economic Indicators – East of England (£ billion, 2010 prices – unless otherwise stated)

	Actual	Forecast					
		Annual % change, real terms					
	2012	2013	2014	2015	2016	2017	2018
Real household disposable income	97.7	-0.1	1.6	1.7	2.0	2.1	2.4
Household spending	92.6	2.3	2.2	2.3	2.7	2.7	2.8
Working age population (000s and as % of all)	3,573	60.4%	60.7%	61.0%	61.3%	61.4%	61.5%
House prices (£)	246,871	2.0	3.3	3.1	3.1	3.0	3.4
LFS unemployment (millions)	0.21	2.33	-0.52	-6.59	-3.41	-2.95	-4.14

Source: ONS, DCLG, Experian



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

In the East of England, household spending is estimated to have grown by 2.3% in 2013, but real household disposable income is likely to have fallen slightly (-0.1%). This would indicate a decline in the savings ratio in the region and/or a rise in debt. The prospects for household income are better over the forecast period, with inflation expected to edge down towards the 2% mark over the next year or so, and with average annual earnings growth expected to increase. Real household disposable income is forecast to rise at an average rate of 2% per year over the 2014–2018 period and this should boost consumer spending growth to around 2.5% a year.

The working age population of the East of England is estimated at just under 3.6 million in 2012, 60.1% of the total population, and is projected to grow to 61.5% of the total by 2018. The estimated unemployment rate for the region in 2013 is 6.9%, below the UK average of 7.8%, and it is projected to fall to 5.5% by 2018.

### 2.6 New construction orders – overview

After four straight years of decline (three of which were at the double digit level), new construction orders in the East of England picked up sharply by 29% in 2012 to total £4.8bn.

All but one of the new work sectors saw an increase in new orders, and they were all at a double digit rate, the most notable being infrastructure, with a 77% increase to £1.3bn, well above the long-term average. Private housing (£1.2bn) and public non-housing (£931m) also saw significant upswings, the former up by 21% and the latter by 30%.

In contrast, public housing orders dropped by 36%, to £117m, their lowest level since 2002. It was the only new work sector to see a fall in new orders in 2012.

### 2.7 New construction orders – current situation

The sharp rise in new orders in 2012 seems to have been short-lived, as they fell by 15% to £1.9bn in the first half of 2013 compared with the corresponding period of 2012. However, sector performance was variable, with public housing (+57%), private housing (+11%) and the public non-housing (+15%) all showing year-on-year rises, while new orders in the infrastructure (-44%), industrial (-24%) and commercial (-33%) sectors declined sharply.

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

	Actual	Annual % change				
	2012	2008	2009	2010	2011	2012
Public housing	117	-19.1	-5.7	-12.2	-33.6	-35.7
Private housing	1168	-37.8	-23.7	76.4	-16.7	21.2
Infrastructure	1263	183.2	10.0	-61.1	20.6	76.6
Public non-housing	931	5.8	7.2	-16.4	-29.6	30.0
Industrial	205	-55.2	-31.0	-28.2	18.0	15.8
Commercial	1111	-23.2	-41.7	20.7	-11.7	15.8
<b>Total new work</b>	<b>4,795</b>	<b>-7.9</b>	<b>-13.4</b>	<b>-11.2</b>	<b>-13.2</b>	<b>29.1</b>

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



**Construction output 2014-2015 – East of England (£ million, 2005 prices)**

	Actual	Forecast			Annual average
		Annual % change			
	2012	2013	2014	2015	2014-15
Public housing	217	-9%	8%	5%	6.1%
Private housing	1,328	4%	9%	3%	6.0%
Infrastructure	1,084	8%	2%	2%	2.3%
Public non-housing	807	13%	-11%	-6%	-8.6%
Industrial	264	2%	18%	13%	15.6%
Commercial	1,755	0%	4%	1%	2.5%
<b>New work</b>	<b>5,454</b>	<b>4%</b>	<b>3%</b>	<b>2%</b>	<b>2.4%</b>
Housing R&M	2,184	-4%	3%	4%	3.6%
Non-housing R&M	2,326	8%	-1%	2%	0.6%
<b>Total R&amp;M</b>	<b>4,510</b>	<b>2%</b>	<b>1%</b>	<b>3%</b>	<b>2.0%</b>
<b>Total work</b>	<b>9,964</b>	<b>3%</b>	<b>2%</b>	<b>2%</b>	<b>2.2%</b>

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

**2.8 Construction output – short-term forecasts (2014-2015)**

Regional Office for National Statistics (ONS) output statistics are published in current prices and are thus inclusive of any inflationary effect. At the time of writing, regional ONS construction output statistics were only available for the first two quarters of 2013.

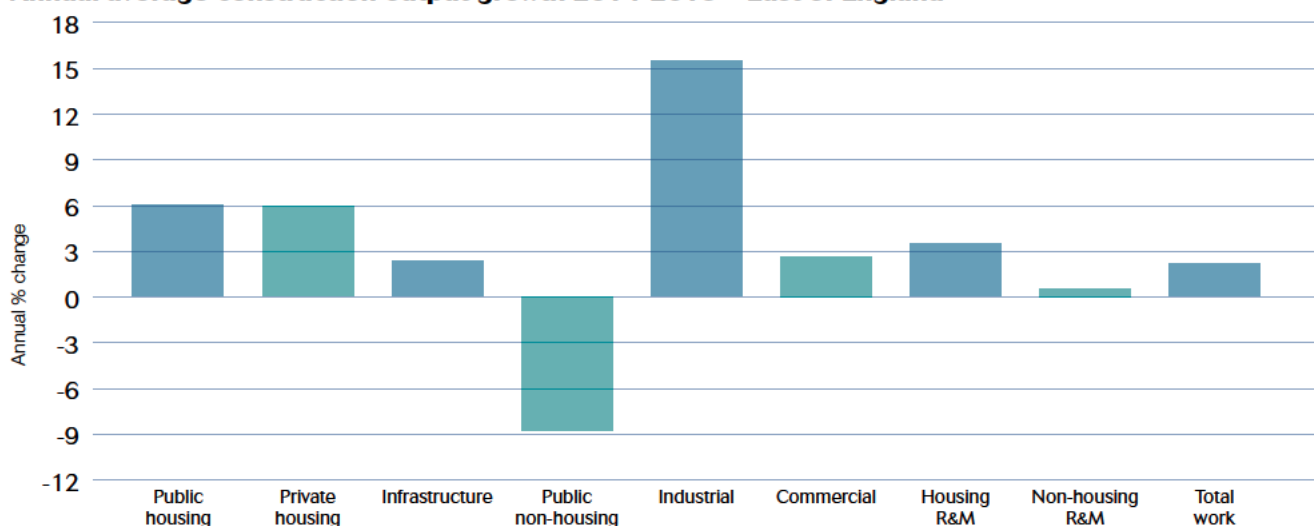
In the six months to June 2013, construction output in the East of England totalled £6.3bn in current prices, 8% above the corresponding period of 2012. New work output fared better than R&M, with increases of 10% and 5% respectively.

Of the new work sectors, the strongest increases were seen in infrastructure (£734m) and public non-housing (£520m) sectors, with rises of 18% and 31% respectively year-on-year. In contrast, industrial and public housing sectors both suffered falls, with the former down 13% and the latter down 26%. However, it is worth noting that these are two of the smallest new work sectors, only responsible for 4% and 5% respectively of new work in 2012.

Turning to the table and chart, for 2013 as a whole, construction output in the East of England is estimated to have increased by 3% in real terms. Annual average growth of 2.2% is projected for the short term. New work and R&M are both set to grow at similar rates, of 2.4% and 2.0% respectively.

The region's industrial sector is projected to be the strongest performer in the short term, with annual average output growth of 15.6% over the two years to 2015. Demand for industrial units within London Gateway's logistic park is expected to help keep the sector buoyant over the short term. There are also a number of mid-sized projects in the pipeline, with a £200m distribution facility in Thurrock due to commence in late-2014.

The public housing sector is expected to see growth averaging 6.1% over the next two years, although activity within the sector remains well below its 2010 peak. When it begins in mid-2014, work on Basildon Council's £1bn housing development will help support growth.

**Annual average construction output growth 2014-2015 – East of England**

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

Construction output in the East of England is forecast to rise at an average rate of 3% per year until 2018

Private housing output in the East of England has been recovering from its 2009 low over the past three years, and the estimated outturn for 2013 should be close to its 2008 level, although it will still be 28% down on its 2005 peak.

House starts have been much weaker, with the 2012 outturn approximately 50% below their 2004 peak.

Nevertheless, they are back on a rising trend, with starts in the first three quarters of 2013 27% up on the corresponding period of 2012.

The only sector which is forecast to decline in the short term is public non-housing construction, with a predicted average fall of 8.6% in each year to 2015. While the sector is expected to post double digit growth in 2013, once the current tranche of education work is completed then output is expected to fall in 2014 and 2015 as activity in the much smaller health sub-sector is unlikely to compensate for this.

### 2.9 Construction output – long-term forecasts (2014-2018)

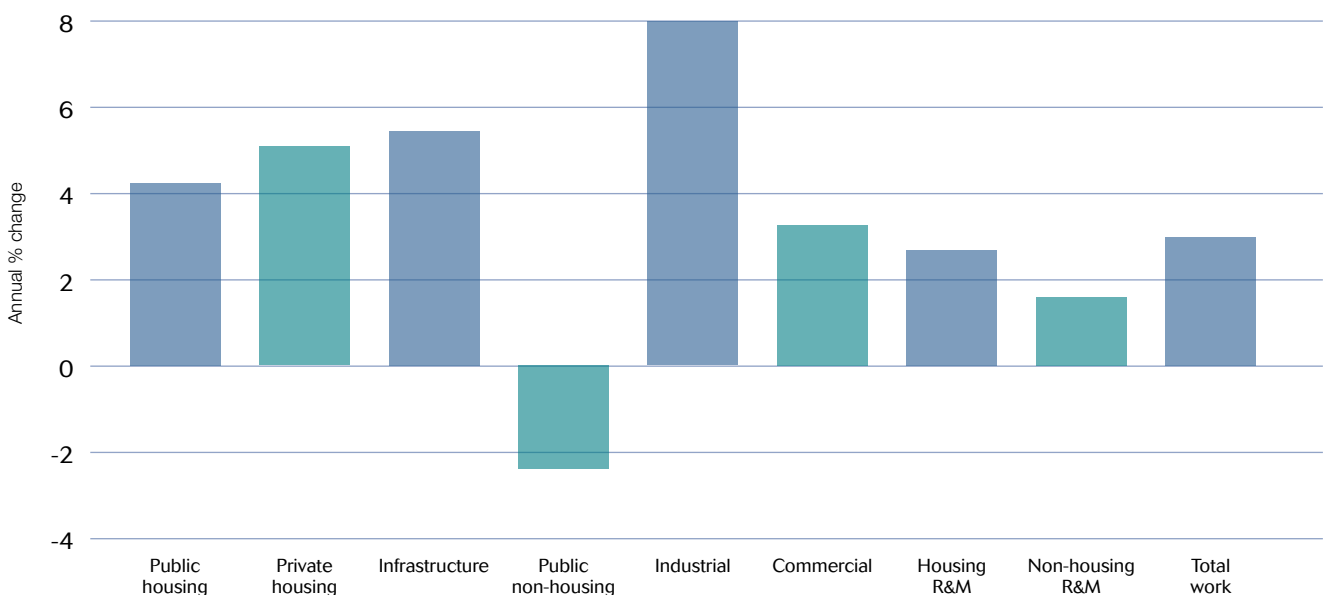
The East of England's annual average output growth rate over the longer period is higher than that for 2014 to 2015, at 3%. This compares favourably with the UK average of 2.2%. New work is expected to fare better than R&M, with average annual growth rates of 3.7% and 2.1% respectively.

Industrial construction maintained its mantle as the strongest growing sector over the medium term, with an annual average growth rate of 8.8% over the five years to 2018. However, the rate of expansion does slow down over the forecast period, particularly as work reaches a peak on the London Gateway logistics park. A large number of small to medium sized projects are also in the pipeline, in Thurrock, Peterborough and Chelmsford, which should help keep activity in the sector buoyant over the medium-term.

Growth in infrastructure is predicted to accelerate to an average of 5.5% a year between 2014 and 2018. This is mainly to due to an acceleration in growth in the sector towards the end of forecast period, as work gets underway on Sizewell C, which is scheduled to be the third new nuclear power station in the UK, according to the latest projected start times from the Nuclear Industry Association (NIA). There are also plans for two new combined-cycle gas turbine power stations in the region – one at King's Lynn, which could start in late-2014, and one at Thurrock currently estimated to begin in late-2015. In the roads sub-sector, work should begin on the A14 Cambridge to Huntingdon scheme in 2016.

Private housing construction is projected to expand at a rate of 5.1% a year on average over the five years to 2018, with moderate growth across the whole of the forecast period. Schemes such as Help to Buy and Funding for Lending have been benefitting the sector, although the Bank of England has recently redirected the latter away from mortgage lending and towards small business lending. This was mainly to try to boost finance available for small businesses, but also to signal to the markets that the Bank of England is prepared to take measures to dampen the housing market and prevent the creation of a new house price bubble.

Annual average construction output growth 2014-2018 – East of England



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

**Construction output 2014-2018 – East of England (£ million, 2005 prices)**

	Estimate	Forecast Annual % change					Annual average
		2013	2014	2015	2016	2017	
Public housing	197	8%	5%	3%	3%	3%	4.2%
Private housing	1,387	9%	3%	6%	3%	4%	5.1%
Infrastructure	1,173	2%	2%	4%	7%	12%	5.5%
Public non-housing	909	-11%	-6%	2%	1%	3%	-2.3%
Industrial	269	18%	13%	5%	5%	4%	8.8%
Commercial	1,754	4%	1%	2%	4%	5%	3.2%
<b>New work</b>	<b>5,689</b>	<b>3%</b>	<b>2%</b>	<b>4%</b>	<b>4%</b>	<b>6%</b>	<b>3.7%</b>
Housing R&M	2,106	3%	4%	2%	2%	1%	2.7%
Non-housing R&M	2,515	-1%	2%	3%	3%	1%	1.6%
<b>R&amp;M</b>	<b>4,621</b>	<b>1%</b>	<b>3%</b>	<b>3%</b>	<b>3%</b>	<b>1%</b>	<b>2.1%</b>
<b>Total work</b>	<b>10,310</b>	<b>2%</b>	<b>2%</b>	<b>3%</b>	<b>3%</b>	<b>4%</b>	<b>3.0%</b>

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

Beyond these two schemes, we expect private housing demand to increase in line with economic improvement, with easing consumer credit and increases to real wages. By the end of the forecast period, we expect output in the sector to be within 10% of its 2005 peak.

Moderate growth of 4.2% is predicted for the public housing sector over the five years to 2018. After a fall in activity in 2013, we expect output to increase in each year of the forecast period.

Improvement in the wider economy should increase spending on commercial construction, which is forecast to see annual average output increases of 3.2%. A £1bn mixed-use redevelopment of Basildon town centre is in the pipeline, and work has already started on a similarly sized scheme in Chelmsford. Construction is also ongoing on the Charter Place shopping centre in Watford, which was brought forward when economic conditions improved during 2013.

## 2.10 Beyond 2018

As mentioned earlier, the largest project by some margin will be the new nuclear build, Sizewell C, at an approximate cost of £10bn. According to NIA guidelines, work on Unit One of the plant should commence by the end of 2017 and carry on until 2024, while work on the second unit should commence in late-2019, with a late-2025 completion date.

Offshore wind will also be a key driver towards the end of the forecast period and beyond, with projects in Great Yarmouth and Breckland, both in Norfolk, having an estimated value of £4.8bn. While wind farms are not particularly 'construction-intensive', significant work is still required to build the bases of the turbines and to connect the facilities to the national grid.

There is also the prospect of airport expansion work in the long term. A decision will need to be taken on the options for capacity expansion in the south-east corner of England, which will be sorely needed in the medium term. The options include expansion at Stansted and a new airport in the Thames Estuary, both of which could benefit the East of England construction industry.



# 3 Construction employment forecasts for the East of England

## 3.1 Total construction employment forecasts by occupation

The table presents actual construction employment (SICs 41-43, 71.1 and 74.9) in the East of England for 2012, the estimated total employment across 28 occupational categories in 2013 and forecasts for the industry for 2014 to 2018. A full breakdown of occupational groups is provided in Section 5 of CSN Explained.

Construction employment in the East of England is forecast to increase by 2% a year on average over the five years to 2018. Total employment is expected to rise in each year of the forecast period. This rate of employment growth is projected to be substantially higher than the UK average of 1.2%. This is partly a function of the region's higher output growth rate (3% vs. 2.2%), but is because the East of England has a larger R&M sector than the UK average, and this sector is more labour intensive than new work.

As a proportion of the 2012 total, the largest construction-specific occupations in the East of England are wood trades and interior fit-out (10.3%) followed by electrical trades and installation (7.3%). Wood trades and interior fit-out's share of total construction employment in the East of England is slightly higher than the UK average (9.9%).

Employment growth is forecast to be strongest for scaffolders (4.9% a year on average), other construction process managers (4.8% a year) and plant mechanics/fitters (4.7% a year). The vast majority of occupational aggregates (26 out of 28) should see some growth in employment levels over the next five years.

## 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,

### Total employment by occupation – East of England

	Actual	Estimate	Forecast	
	2012	2013	2014	2018
Senior, executive, and business process managers	12,810	13,990	14,430	16,280
Construction project managers	3,890	4,250	4,430	5,030
Other construction process managers	16,560	17,050	18,070	21,600
Non-construction professional, technical, IT and other office-based staff	34,640	33,410	33,700	35,360
Construction trades supervisors	4,710	5,140	5,420	6,190
Wood trades and interior fit-out	23,990	23,650	24,250	26,460
Bricklayers	7,270	7,020	7,070	7,390
Building envelope specialists	10,150	9,910	10,180	11,160
Painters and decorators	8,600	9,390	9,440	9,800
Plasterers	5,560	4,970	4,910	4,850
Roofers	4,240	3,790	3,880	4,250
Floorers	3,320	3,620	3,600	3,640
Glaziers	3,120	2,830	2,860	3,020
Specialist building operatives nec*	3,750	3,350	3,370	3,510
Scaffolders	2,390	2,610	2,770	3,320
Plant operatives	3,010	3,290	3,330	3,500
Plant mechanics/fitters	2,350	2,570	2,680	3,230
Steel erectors/structural fabrication	1,670	1,590	1,590	1,600
Labourers nec*	12,000	12,080	12,080	12,160
Electrical trades and installation	17,060	18,350	18,390	18,960
Plumbing and HVAC Trades	14,060	15,360	15,450	15,790
Logistics	3,140	3,110	3,150	3,310
Civil engineering operatives nec*	1,240	1,110	1,150	1,300
Non-construction operatives	1,400	1,250	1,200	1,000
Civil engineers	7,350	7,500	7,760	8,770
Other construction professionals and technical staff	15,870	16,520	17,160	19,270
Architects	4,550	4,970	5,080	5,450
Surveyors	4,300	4,690	4,850	5,390
<b>Total (SIC 41-43)</b>	<b>200,930</b>	<b>203,690</b>	<b>207,400</b>	<b>222,710</b>
<b>Total (SIC 41-43, 71.1, 74.9)</b>	<b>233,000</b>	<b>237,370</b>	<b>242,250</b>	<b>261,590</b>

Source: ONS, CSN, Experian. Ref. CSN Explained, Section 3, Notes 5 and 6

\*Not elsewhere classified

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. Thus, 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 28 occupations within the East of England's construction industry is illustrated in the table. The figure of 5,150 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 requirement is for wood trades and interior fit-out (690) but, as a proportion of projected 2014 employment, plant mechanics/fitters and logistics personnel will be the most required (nearly 10% for both). The region's ARR of 5,150 is equivalent to 2.1% of base 2014 employment, higher than the UK average (1.5%)

CITB's 2012 Workforce Mobility and Skills report provides some useful figures on geographical migration of the construction workforce. According to the report, only 48% of the construction workforce in the East of England originated there, the second lowest proportion after Greater London. Some 16% of the region's

workforce originated from the South East, 14% from the East Midlands and 10% from London. Only 2% of the East of England's construction workforce originated from overseas, which is one of lowest figures of all regions and devolved nations, and is much lower than Greater London (16%) and the South East (10%).

Note that all of the ARRs 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 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 and 74.9 umbrella that cannot be classified elsewhere, such as cleaners, elementary security occupations nec (not elsewhere classified) 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

	2014-2018
Senior, executive, and business process managers	510
Construction project managers	100
Other construction process managers	270
Non-construction professional, technical, IT and other office-based staff	-
Construction trades supervisors	-
Wood trades and interior fit-out	690
Bricklayers	270
Building envelope specialists	280
Painters and decorators	240
Plasterers	-
Roofers	230
Floorers	<50
Glaziers	120
Specialist building operatives nec*	110
Scaffolders	210
Plant operatives	-
Plant mechanics/fitters	260
Steel erectors/structural fabrication	<50
Labourers nec*	290
Electrical trades and installation	580
Plumbing and HVAC Trades	270
Logistics	310
Civil engineering operatives nec*	<50
Non-construction operatives	-
Civil engineers	360
Other construction professionals and technical staff	-
Architects	-
Surveyors	-
<b>Total (SIC 41-43)</b>	<b>4,790</b>
<b>Total (SIC 41-43, 71.1, 74.9)</b>	<b>5,150</b>

Source: CSN, Experian. Ref. CSN Explained, Section 3, Notes 5 and 6

\*Not elsewhere classified

## 4 Comparisons across the UK

The strongest growth in construction output is expected in the South West and Wales, as both will benefit from new nuclear build projects during the forecast period. Even though main construction works at Wylfa, Wales, are not due to start until mid-2017 at the earliest, this is a very large project in a relatively small market, making its impact on overall construction output similar to Hinkley Point in the South West, despite the latter starting three years earlier.

Once the South West and Wales are stripped away, the south east corner of England is again due to do rather better than the rest of the UK. The South East benefits disproportionately from growth in the private housing sector which takes a larger share of output in the region than the UK average (18% vs. 14%). This combined with a higher than average growth rate (5.7% vs. 4.6%) helps boost overall expansion in the South East's construction sector (with an annual average growth of 2.9% to 2018). The East of England has a slightly stronger average growth rate of 3% a year. The main reasons for the region's higher than average increase in construction output are good growth in private housing, combined with higher than average infrastructure

expansion when work starts on the site of the Sizewell C new nuclear project at the beginning of 2018. In addition, strong growth in industrial construction is linked to the development of distribution and logistics facilities around London Gateway Port.

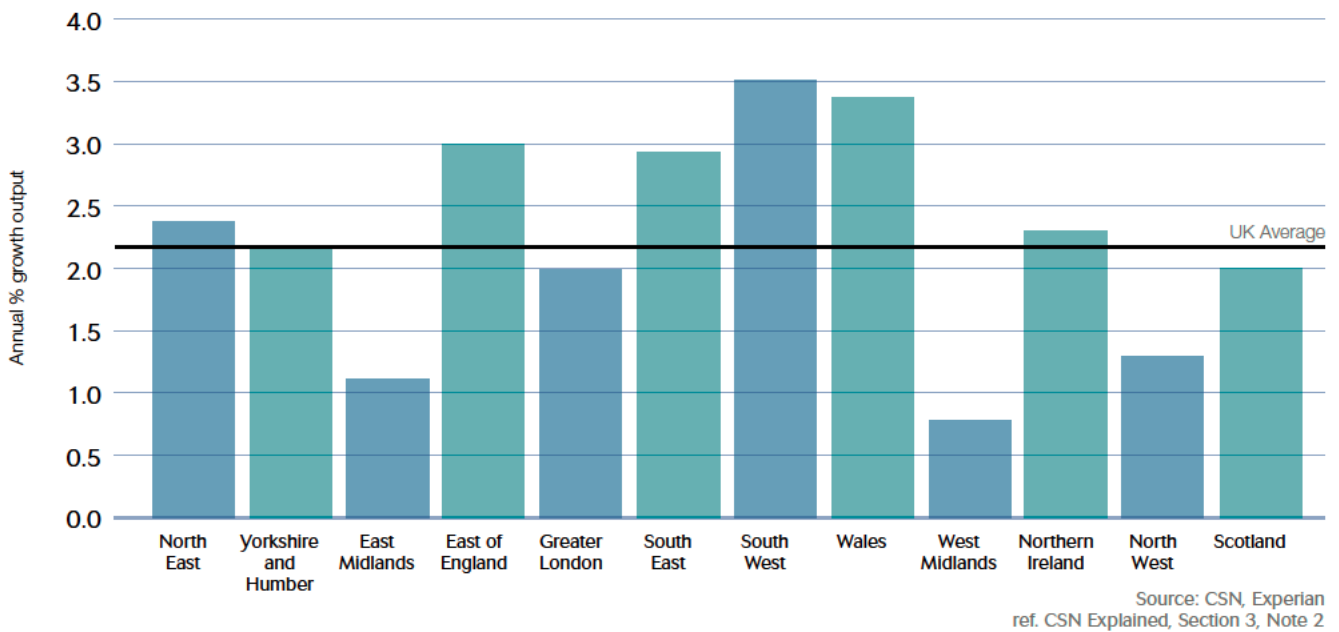
Interestingly however, Greater London's projected annual average output growth rate of 2% is slightly below the UK average (2.2%). Greater London is the only region to have experienced expansion in construction output in real terms over the five years to 2012; therefore activity in some sectors may be close to peaking. For example, infrastructure activity is projected to decline by an annual average of 2.4% in the five years to 2018, as projects such as Crossrail and Thameslink wind down in the second half of the forecast period.

Despite the South West and Wales being the strongest areas in output terms, they do not top the employment rankings. Infrastructure work has a smaller labour requirement than other sectors and so impacts employment much less than output. The East of England has the strongest employment growth rate, of 2% a year on average over the forecast period. This is due to two factors – a strong output growth rate and the region's higher than average share of the much more labour intensive R&M sectors compared with the UK as whole (45% vs. 36%). All regions are expected to see employment growth except the West Midlands, where output growth of just 0.8% a year on average is not enough to drive expansion of employment given anticipated productivity gains.

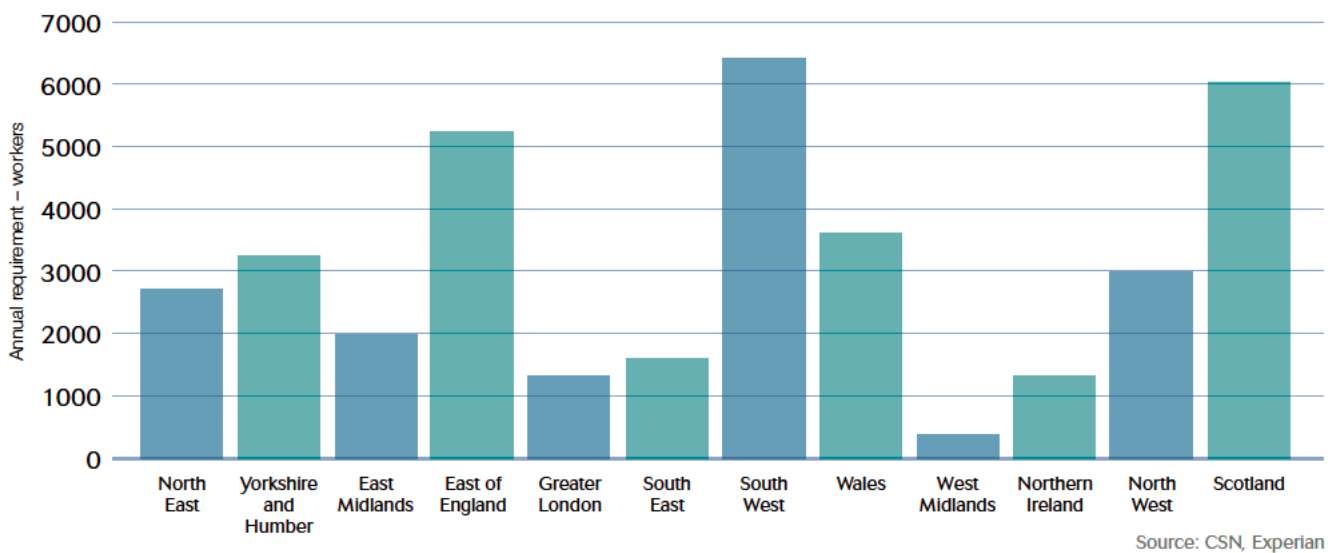
Concerns about prospective skills shortages have been increasing in some quarters recently, which may initially seem surprising given the industry's position in the recovery cycle. Construction output in 2013 is likely still to be 15% below its 2007 peak, and employment is likely to be 13% down on its 2008 peak. This would suggest that a substantial pool of construction workers is waiting to re-enter the industry. However, many of these workers may have taken jobs in other sectors, or retired. Questions remain about the number of workers who will come back into the industry as growth continues and, of these, how many will have been out of the industry for such a length of time that they will require some level of retraining.



**Annual average output growth by region 2014-2018**



**Annual recruitment requirement (ARR) by region 2014-2018**



The East of England's annual recruitment requirement (ARR) is 5,150 with the largest proportional requirement expected for plant mechanics/fitters and logistics personnel

# 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.

Section 3 has some further notes relating to the data sources used for the various charts and tables. This section 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 28 occupational groups into the individual standard occupational classification (SOC) codes that are aggregated to provide the employment and recruitment requirement.

Section 6 concludes this appendix by giving details about the range of LMI reports, the advantages of being a CSN member and details of who to contact if readers are interested in joining.





# 1 CSN methodology

## Background

The **Construction Skills Network** has been evolving since its conception in 2005, acting as vehicle for ConstructionSkills to collect and produce information on the future employment and training needs of the industry. CITB, CIC and CITB-ConstructionSkills Northern Ireland are working as ConstructionSkills, the Sector Skills Council for Construction, to produce robust labour market intelligence which provides 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 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 twice a year and consist of key regional stakeholders invited from industry, Government, education and other SSCs, all of whom contribute their 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 several 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, which is comprised of statisticians and modelling experts.

The models have evolved over time and will continue to do so, 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 interrelated 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 the industry from training, although robust data on training provision is being developed by CITB in partnership with public funding agencies, further education, higher education and employer representatives. Thus, 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. Estimates of demand are based upon the results of discussion groups comprising industry experts, a view of construction output and 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 use a set of specific statistics for each major type of work to 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:

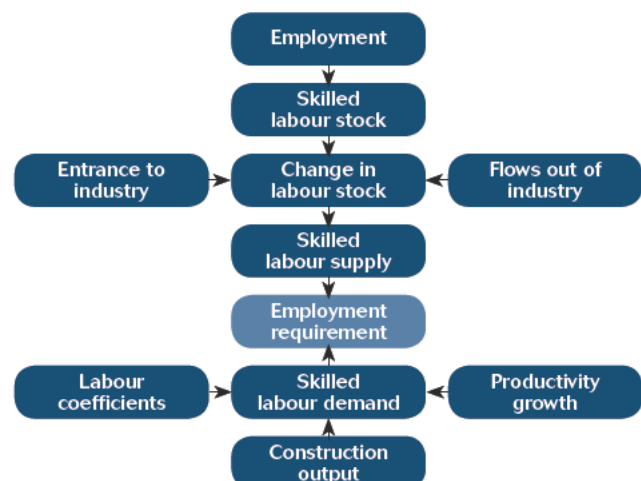
- Transfers to other industries
- International/domestic OUT migration
- Permanent retirements (including permanent sickness)
- Outflow to temporary sickness and home duties.

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

Flows into the labour market include:

- Transfers from other industries
- International/domestic immigration
- Inflow from temporary sickness 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 a building other than bricklaying, e.g. curtain walling.

**Demand** – this 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 Employer Skills Survey, produced by the Department for Education and Skills. These data sets are translated into labour requirements by trade using a series of coefficients to produce figures for labour demand that relate to forecast output levels.

**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.

**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 of each occupation or trade needed 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. Information is collected from around 53,000 households each quarter (the sample totals more than 100,000 people).

**LMI** (labour market intelligence) – data that is quantitative (numerical) or qualitative (insights and perceptions) on workers, employers, wages, conditions of work, etc.

**Macroeconomics** – the study of an economy at 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) – organisation producing official statistics on the economy, population and society at both a national 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 United Kingdom Standard Industrial Classification of Economic Activities produced by the ONS.

**SOC codes** (Standard Occupational Classification codes) – from the United Kingdom Standard Occupational Classification produced by the ONS.

**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 is supplied by the Office for National Statistics (ONS) on a current price basis. Thus, national deflators produced by the ONS have been used to deflate prices to a 2005 constant price basis, so that 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 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 ConstructionSkills that SummitSkills has responsibility for these occupations across a range of SIC codes, including SIC 43.2.
- 7 A reporting minimum of 50 is used for the annual recruitment requirement (ARR). As a result some region and devolved nation ARR forecasts do not sum to the total UK requirement.
- 8 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 24 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

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 and related technical consultancy.

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

### 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.

ConstructionSkills shares an interest with SummitSkills in SIC 43.21 Electrical installation and SIC 43.22 Plumbing, heat and air-conditioning installation. ConstructionSkills recognises the responsibility of SummitSkills across Standard Industrial Classifications (SIC) 43.21 and 43.22; thus 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, domestics, facilities managers.

AssetSkills has a peripheral interest in 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.

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

# 4 Definitions: types and examples of construction work

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

Housing schemes, care homes for the elderly 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 construction<sup>1</sup>**

### **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.

## Private commercial work<sup>1</sup>

### 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 property.<sup>2</sup>

## 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 maintenance.<sup>3</sup>

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'.

2 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.

3 Except where stated, mixed development schemes are classified to whichever sector provides the largest share of finance.

## 5 Occupational groups

### Occupational group

Description, SOC (2010) reference.

#### Senior, executive, and business process managers

Chief executives and senior officials	1115
Financial managers and directors	1131
Marketing and sales directors	1132
Purchasing managers and directors	1133
Human resource managers and directors	1135
Property, housing and estate managers	1251
Information technology and telecommunications directors	1136
Research and development managers	2150
Managers and directors in storage and warehousing	1162
Managers and proprietors in other services nec*	1259
Functional managers and directors nec*	1139
IT specialist managers	2133
IT project and programme managers	2134
Financial accounts managers	3538
Sales accounts and business development managers	3545

#### Construction project managers

Construction project managers and related professionals	2436
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#### Other construction process managers

Production managers and directors in manufacturing	1121
Production managers and directors in construction	1122
Managers and directors in transport and distribution	1161
Waste disposal and environmental services managers	1255
Health and safety officers	3567
Conservation and environmental associate professionals	3550

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

IT operations technicians	3131
IT user support technicians	3132
Finance and investment analysts and 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 standards and regulations	3565

Programmers and software development professionals	2136
Information technology and telecommunications professionals nec*	2139
Estate agents and auctioneers	3544
Solicitors	2413
Legal professionals nec*	2419
Chartered and certified accountants	2421
Business and financial project management professionals	2424
Management consultants and business analysts	2423
Receptionists	4216
Typists and related keyboard occupations	4217
Business sales executives	3542
Book-keepers, payroll managers and wages clerks	4122
Records clerks and assistants	4131
Stock control clerks and assistants	4133
Telephonists	7213
Communication operators	7214
Personal assistants and other secretaries	4215
Sales and retail assistants	7111
Telephone salespersons	7113
Buyers and procurement officers	3541
Human resources and industrial relations officers	3562
Credit controllers	4121
Company secretaries	4214
Sales related occupations nec*	7129
Call and contact centre occupations	7211
Customer service occupations nec*	7219
Elementary administration occupations nec*	9219
Chemical scientists	2111
Biological scientists and biochemists	2112
Physical scientists	2113
Laboratory technicians	3111
Graphic designers	3421
Environmental health professionals	2463
IT business analysts, architects and systems designers	2135
Conservation professionals	2141
Environment professionals	2142
Actuaries, economists and statisticians	2425
Business and related research professionals	2426
Finance officers	4124
Financial administrative occupations nec*	4129
Human resources administrative occupations	4138
Sales administrators	4151
Other administrative occupations nec*	4159
Office supervisors	4162

\*Not elsewhere classified

Sales supervisors	7130	Tool makers, tool fitters and markers-out	5222
Customer service managers and supervisors	7220	Vehicle body builders and repairers	5232
Office managers	4161		
<b>Construction trades supervisors</b>		<b>Steel erectors/structural fabrication</b>	
Skilled metal, electrical and electronic trades supervisors	5250	Steel erectors	5311
Construction and building trades supervisors	5330	Welding trades	5215
<b>Wood trades and interior fit-out</b>		Metal plate workers and riveters	5214
Carpenters and joiners	5315	Construction and building trades nec* (5%)	5319
Paper and wood machine operatives	8121	Smiths and forge workers	5211
Furniture makers and other craft woodworkers	5442	Metal machining setters and setter-operators	5221
Construction and building trades nec* (25%)	5319		
<b>Bricklayers</b>		<b>Labourers nec*</b>	
Bricklayers and masons	5312	Elementary construction occupations (100%)	9120
<b>Building envelope specialists</b>		<b>Electrical trades and installation</b>	
Construction and building trades nec* (50%)	5319	Electricians and electrical fitters	5241
<b>Painters and decorators</b>		Electrical and electronic trades nec*	5249
Painters and decorators	5323	Telecommunications engineers	5242
Construction and building trades nec* (5%)	5319	<b>Plumbing and heating, ventilation and air conditioning trades</b>	
<b>Plasterers</b>		Plumbers and heating and ventilating engineers	5314
Plasterers	5321	Pipe fitters	5216
<b>Roofers</b>		Construction and building trades nec* (5%)	5319
Roofers, roof tilers and slaters	5313	Air-conditioning and refrigeration engineers	5225
<b>Floorers</b>		<b>Logistics</b>	
Floorers and wall tilers	5322	Large goods vehicle drivers	8211
<b>Glaziers</b>		Van drivers	8212
Glaziers, window fabricators and fitters	5316	Elementary storage occupations	9260
Construction and building trades nec* (5%)	5319	Buyers and purchasing officers (50%)	3541
<b>Specialist building operatives nec*</b>		Transport and distribution clerks and assistants	4134
Construction operatives nec* (100%)	8149	<b>Civil engineering operatives nec*</b>	
Construction and building trades nec* (5%)	5319	Road construction operatives	8142
Industrial cleaning process occupations	9132	Rail construction and maintenance operatives	8143
Other skilled trades nec*	5449	Quarry workers and related operatives	8123
<b>Scaffolders</b>		<b>Non-construction operatives</b>	
Scaffolders, staggers and riggers	8141	Metal making and treating process operatives,	8117
<b>Plant operatives</b>		Process operatives nec*	8119
Crane drivers	8221	Metal working machine operatives	8125
Plant and machine operatives nec*	8129	Water and sewerage plant operatives	8126
Fork-lift truck drivers	8222	Assemblers (vehicles and metal goods)	8132
Mobile machine drivers and operatives nec*	8229	Routine inspectors and testers	8133
<b>Plant mechanics/fitters</b>		Assemblers and routine operatives nec*	8139
Metal working production and maintenance fitters	5223	Elementary security occupations nec*	9249
Precision instrument makers and repairers	5224	Cleaners and domestics	9233
Vehicle technicians, mechanics and electricians	5231	Street cleaners	9232
Elementary process plant occupations nec*	9139	Gardeners and landscape gardeners	5113
		Caretakers	6232
		Security guards and related occupations	9241
		Protective service associate professionals nec*	3319
		<b>Civil engineers</b>	
		Civil engineers	2121

\*Not elsewhere classified

**Other construction professionals and technical staff**

Mechanical engineers	2122
Electrical engineers	2123
Design and development engineers	2126
Production and process engineers	2127
Quality control and planning engineers	2461
Engineering professionals nec*	2129
Electrical and electronics technicians	3112
Engineering technicians	3113
Building and civil engineering technicians	3114
Science, engineering and production technicians nec*	3119
Architectural and town planning technicians	3121
Draughtspersons	3122
Quality assurance technicians	3115
Town planning officers	2432
Electronics engineers	2124
Chartered architectural technologists	2435
Estimators, valuers and assessors	3531
Planning, process and production technicians	3116

**Architects**

Architects	2431
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**Surveyors**

Quantity surveyors	2433
Chartered surveyors	2434

\*Not elsewhere classified





## 6 CSN website and contact details

### The CSN website

[citb.co.uk/research/construction-skills-network](http://citb.co.uk/research/construction-skills-network)

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 research reports are also freely available on the CITB 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 to enter the workforce.

The website also contains information about:

- How the CSN functions
- The CSN model approach
- How the model can be used to explore scenarios
- CSN team contact information
- Access to related CITB research
- Details for those interested in becoming members of the network.

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 that play a vital role in feeding back observations, knowledge and insight into 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 goes into the forecasting programme such as:

- Details of specific projects
- Demand within various types of work or sectors
- Labour supply issues
- 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 contact with the CITB research team CSN members can:

- Access observatory-related material such as meeting dates, agendas, presentations and notes
- Access additional research material
- Comment/feedback on the CSN process.

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 becoming a member of the CSN, please contact us at: [csn@citb.co.uk](mailto:csn@citb.co.uk)

For more information about the  
Construction Skills Network,  
contact:

Alan Tanner

Research and Development

Research Analyst

0344 994 4400

[alan.tanner@citb.co.uk](mailto:alan.tanner@citb.co.uk)



[citb.co.uk](http://citb.co.uk)



CITB, CIC and CITB-ConstructionSkills Northern Ireland are working as ConstructionSkills, the Sector Skills Council for Construction.