

citb.co.uk

In association with



Construction Skills Network Greater London 2014-2018

Labour Market Intelligence



CITB is tasked by Government to ensure the UK's largest industry has the skilled workforce it requires. Working with Government, training providers and employers, it is responsible for ensuring that the industry has enough qualified new entrants and that the existing workforce is fully skilled and qualified, as well as for improving the performance of the industry and the companies within it.

These materials, together with all of the intellectual property rights contained within them, belong to the Construction Industry Training Board (CITB). Copyright 2005 ("CITB") and should not be copied, reproduced nor passed to a third party without CITB prior written agreement. These materials are created using data and information provided to CITB and/or EXPERIAN Limited ("Experian") by third parties of which EXPERIAN or CITB are not able to control or verify the accuracy. Accordingly neither EXPERIAN nor CITB give any warranty about the accuracy or fitness for any particular purpose of these materials. Furthermore, these materials do not constitute advice and should not be used as the sole basis for any business decision and as such neither EXPERIAN nor CITB shall be liable for any decisions taken on the basis of the same. You acknowledge that materials which use empirical data and/or statistical data and/or data modelling and/or forecasting techniques to provide indicative and/or predictive data cannot be taken as a guarantee of any particular result or outcome.

Contents

1	Summary and key findings.....	4
2	The outlook for construction in Greater London	6
3	Construction employment forecasts for Greater London	12
4	Comparisons across the UK.....	14

Tables and charts

1	Annual average construction output growth 2014-2018	4
2	Regional comparison 2014-2018.....	5
3	Construction output 1996-2012	6
4	Construction industry structure 2012 – UK vs. Greater London	6
5	Economic structure	7
6	Economic indicators.....	7
7	New construction orders growth 1996-2012.....	8
8	New work construction orders	8
9	Construction output 2014-2015	9
10	Annual average construction output growth 2014-2015	9
11	Annual average construction output growth 2014-2018	10
12	Construction output 2014-2018.....	11
13	Total employment by occupation.....	12
14	Annual recruitment requirement by occupation.....	13
15	Annual average output growth by region.....	15
16	Annual recruitment requirement by region	15

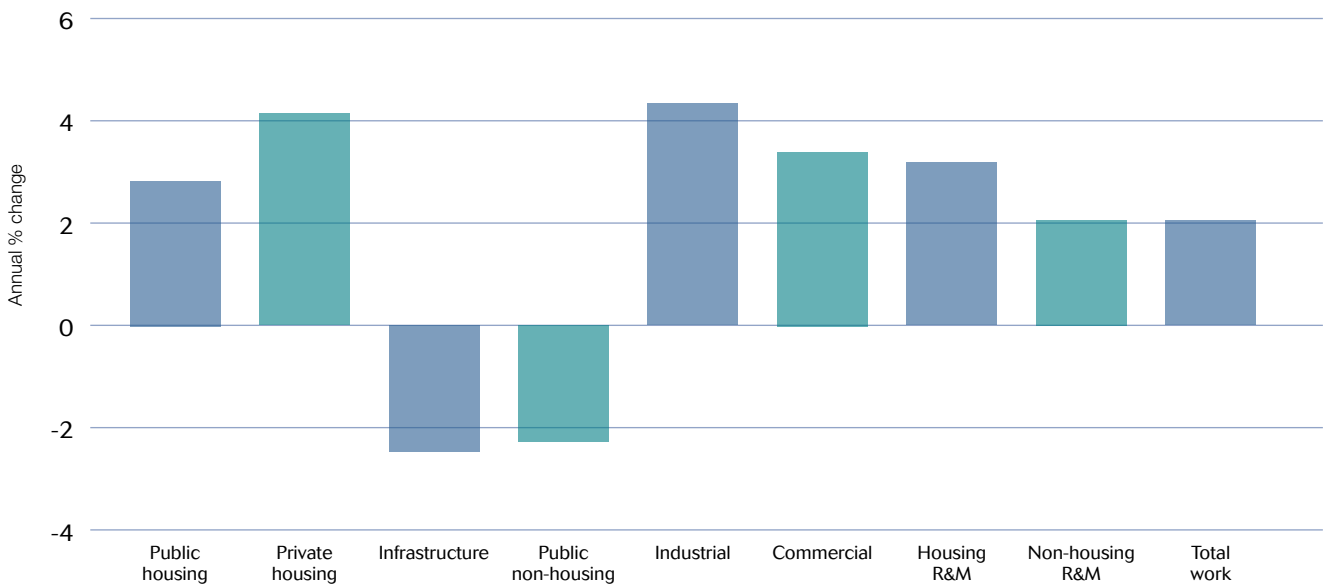
CSN explained

1	CSN methodology.....	17
2	Glossary of terms	18
3	Notes and footprints	19
4	Definitions: types and examples of construction work.....	20
5	Occupational groups.....	22
6	CSN website and contact details.....	25

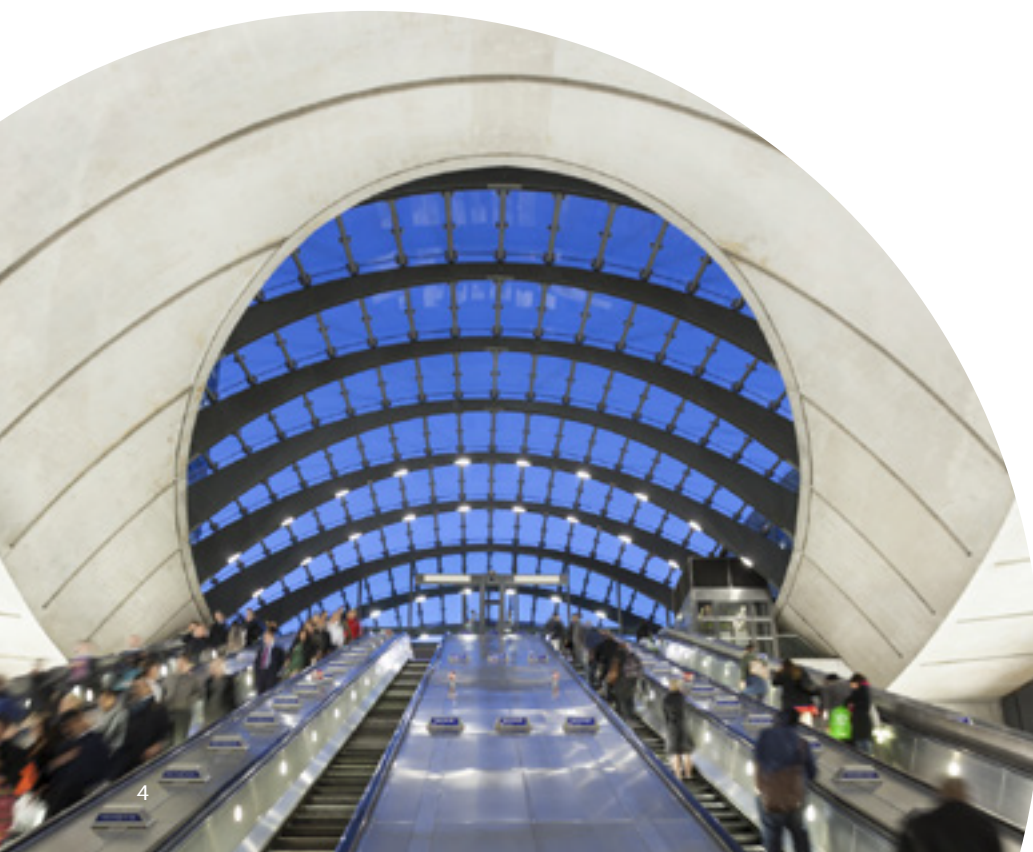
1 Summary – Greater London

The region is projected to see growth in total construction activity over the forecast period, with an average annual increase of 2%, which was a slightly smaller rise than the UK as a whole, where annual average growth of 2.2% is expected. Construction employment is forecast to reach 406,840 in 2018, rising at an average annual rate of 1.4% during the 2014 and 2018 period. The annual recruitment requirement (ARR) for Greater London is 1,290, which is equivalent to just 0.3% of base 2014 employment and much lower than the corresponding UK figure of 1.5%.

Annual average construction output growth 2014-2018 – Greater London



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



1.1 Key findings

For the capital, the industrial sector is expected to perform best, with an annual average growth of 4.3% predicted over the next five years. Nevertheless, the market is still going to be only 51% of its 2001 peak by the end of the forecast period and it accounts for around 1% of total construction output in London.

An annual average rise of 4.1% over the five years to 2018 is estimated for the private housing sector. The Greater London housing market has held up better than any other region or devolved nation since the 2008–2009 crisis; therefore some other parts of the country are likely to see higher annual average growth rates over the forecast period as their private housing markets recover from a low base. By contrast, private housing output is already at a historic high in the capital and is expected to grow further over the forecast period.

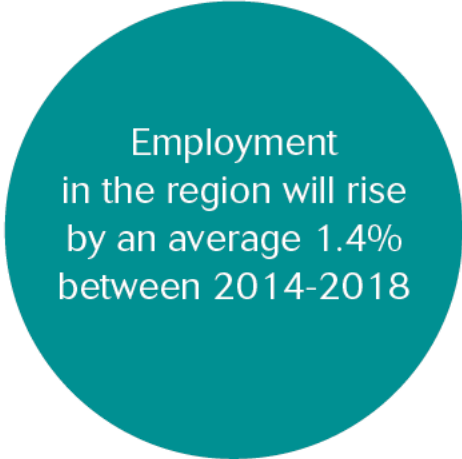
Activity in the commercial sector will pick up towards the end of the forecast period, with annual average increases of 3.3% over the longer term. A number of large schemes are in the pipeline, such as the Westfield Group's £1bn expansion project, which is due to start in the latter half of 2014. The five-year development will be adjacent to the existing shopping centre in Shepherd's Bush and will contain new shops, including a flagship department store.

Greater London is the only region or devolved nation forecast to experience a decline in infrastructure output over the five years to 2018, at an annual average rate of 2.4%. Activity on the Crossrail project is due to peak in 2014–2015 and the scheme should be completed in 2018. Work on projects such as Thameslink and the Victoria Station upgrade should also be coming to an

end over the second half of the forecast period. Thames Tideway is expected to start on site in 2016–2017, but the overall impact of movement in the project mix is expected to be negative.

Construction employment in the region is forecast to see an annual average increase of 1.4% per annum over the next five years. The strongest increases in employment are projected for civil engineering operatives not elsewhere classified (nec), with annual average growth of 6%. A robust yearly rise of 4.8% is also predicted for construction trades supervisors.

The region's ARR, at 1,290, represents just 0.3% of total projected base 2014 employment, significantly lower than the UK average (1.5%). The largest absolute requirement is for wood trades and interior fit-out (230) but as a share of 2014 base employment, plasterers will be the most sought after, at 7%.



Employment
in the region will rise
by an average 1.4%
between 2014-2018

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 Greater London

2.1 Construction output in Greater London – overview

After reaching a record high in 2011, total construction output in the capital saw negligible growth of 0.5% to £20.9bn in 2012. Whilst the new work sector saw a fall of 6% to £13.9bn, the R&M sector recorded a new high as output rose by 17% to £6.9bn.

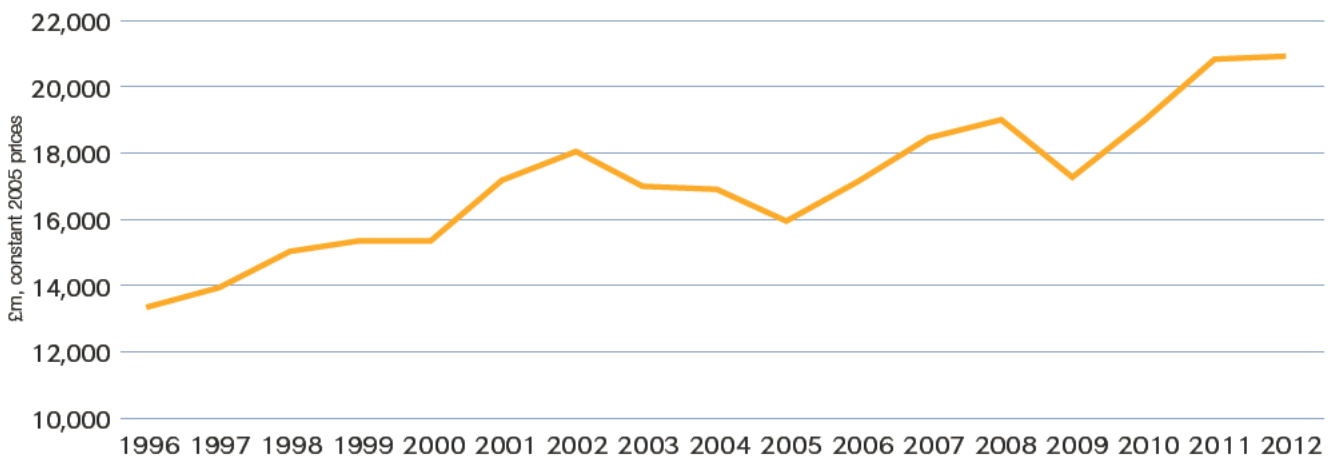
The only new work sector to see a rise in output was private housing, which went up by 8% to £2.5bn. The public non-housing sector experienced the greatest decline, of 26% to £1.5bn, as the scrapping of the Building Schools for the Future (BSF) programme

continued to drag on output levels. A large decrease, of 20%, was also registered in the industrial sector, taking it down to £205m, a new historic low and representing only 1% of the total London construction market.

2.2 Industry structure

The diagram, Construction Industry structure 2012 – UK vs. Greater London, illustrates the sector breakdown of construction in the capital compared to that in the UK as a whole. The percentages for each sector illustrate what proportion of total output each sector accounts for.

Construction output – Greater London 1996-2012



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

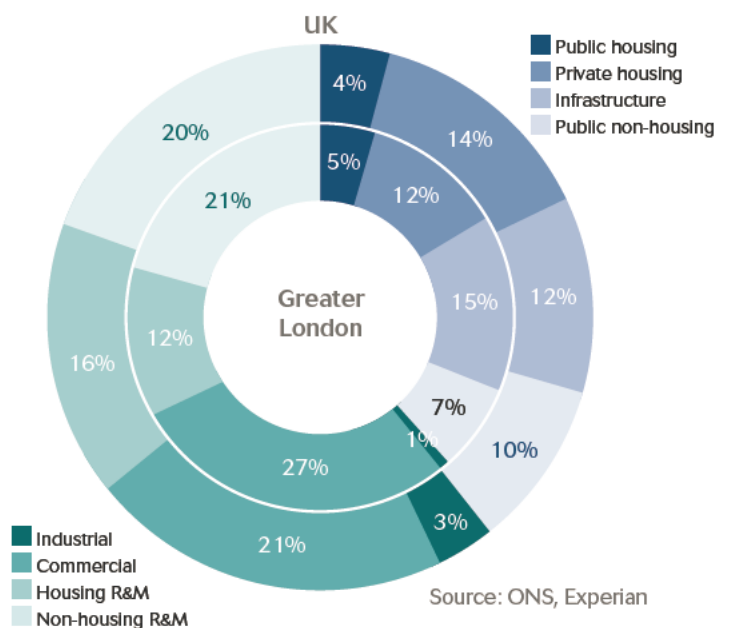
In 2012, the new work sector in Greater London was larger than in the UK as a whole, taking a 67% share of total output in the region compared with a national figure of 64%.

There are some significant differences in the structure of the London construction market compared with the UK as a whole, the largest of which is a proportionally much bigger commercial sector in the capital (27% vs. 21%). The infrastructure sector in the region was also bigger, at 15% compared with a share in the wider UK of 12%. By contrast, both the housing R&M (12% vs. 16%) and public non-housing (7% vs. 10%) sectors were smaller when compared to the UK as a whole.

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.

Construction Industry structure 2012 UK vs. Greater London



Source: ONS, Experian

2.4 Economic structure

In 2012, gross value added (GVA) in the region went up for the third consecutive year, by 1.5%, to £292.5bn at 2010 prices. As a share of the UK, the capital accounted for 22% of GVA in 2012.

Professional and other private services accounted for the greatest share of the region's GVA at 29%, whilst finance and insurance came in second at 20%. These two sectors account for nearly a half of economic activity in London, whereas they only make up a third across the UK as a whole. The public services and information and communication sectors were ranked third and fourth respectively. Of the top four sectors,

finance and insurance was the only sector to register a fall in output in 2012, of 2%.

The London economy is much more service sector-based than the UK as a whole, with manufacturing and construction only accounting for 2.1% and 4.5% of GVA respectively, compared with 10.3% and 5.8% UK-wide.

The strongest growth was seen in the accommodation, food services and recreation (9.9%) sector in 2012, undoubtedly boosted by the Olympics, but only accounting for about 5% of output in the capital in that year.

Economic structure – Greater London (£ billion, 2010 prices)

Selected sectors	Actual	Forecast					
		Annual % change, real terms					
	2012	2013	2014	2015	2016	2017	2018
Professional and other private services	84.8	4.3	2.9	2.5	2.8	2.8	2.8
Finance and insurance	58.4	-2.1	2.2	3.0	3.6	3.6	3.3
Public services	42.3	0.7	0.4	0.5	0.6	1.0	1.6
Information and communication	30.1	5.4	3.1	3.1	3.5	3.2	2.9
Wholesale and retail	24.8	4.9	2.8	2.4	2.5	2.3	2.3
Total Gross Value Added (GVA)	292.5	1.8	2.4	2.4	2.7	2.8	2.7

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

2.5 Forward looking economic indicators

Over the 2014 to 2018 period, GVA is projected to grow at an annual average rate of 2.6%, higher than the UK average of 2%.

Annual average growth of 2.8% is likely to be seen in the largest sector, professional and other private services. Finance and insurance, the second-largest sector, is likely to perform better, with growth of 3.2% a year over the five year period to 2018. Unsurprisingly, public services is predicted to see annual average growth of 0.8%, while for information and communication the corresponding figure is 3.2%.

As the economy begins to see more of a sustained recovery, real household disposable income growth

should begin to pick up over the forecast period, eventually reaching 2.6% in 2018, higher than the corresponding whole-UK figure of 2.3%. With this increase, household spending also sees an upward trend over the five years to 2018.

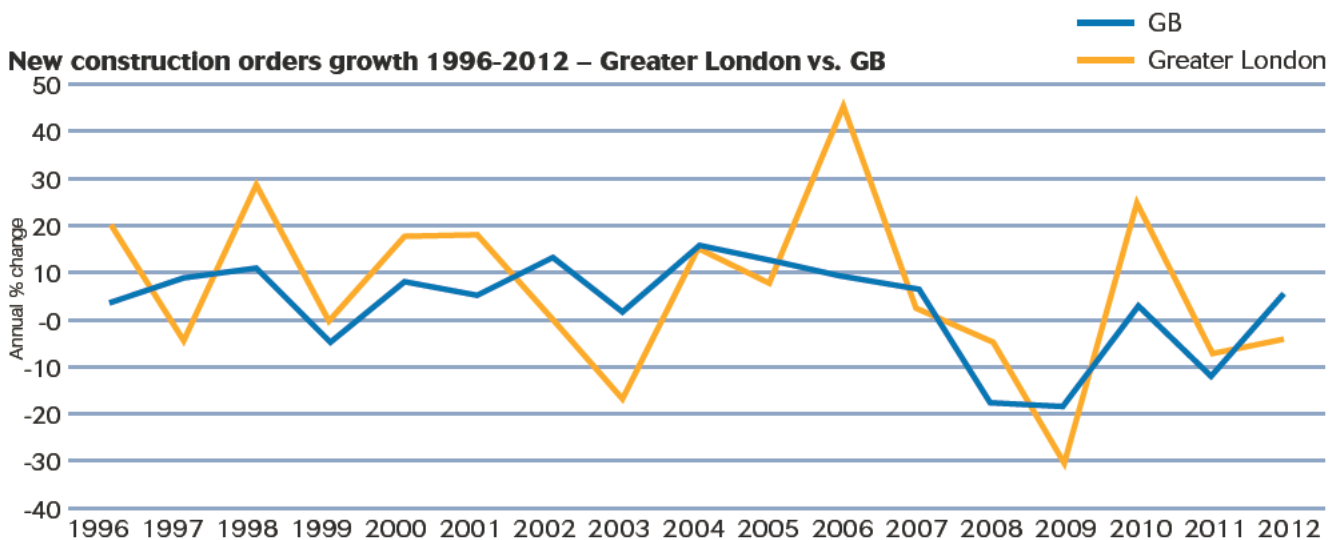
Unemployment levels in the region are projected to see a small rise in 2013 and 2014, but they are expected to fall for the remainder of the forecast period.

The working age population stood at 5.376m in 2012 and is predicted to rise as a share of total population over the next five years. House prices are estimated to experience moderate annual growth over the same timeframe, at a higher rate than the UK average.

Economic Indicators – Greater London (£ billion, 2010 prices – unless otherwise stated)

	Actual	Forecast					
		Annual % change, real terms					
	2012	2013	2014	2015	2016	2017	2018
Real household disposable income	165.20	0.8	2.1	2.0	2.2	2.4	2.6
Household spending	139.88	2.6	2.5	2.6	2.8	2.9	3.0
Working age population (000s and as % of all)	5,376	67.0	67.3	67.6	67.8	68.0	68.1
House prices (£)	388,049	4.8	4.0	4.5	4.6	4.6	4.9
LFS unemployment (millions)	0.38	0.09	0.49	-4.81	-1.59	-1.09	-1.51

Source: ONS, DCLG, Experlan



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

2.6 New construction orders – overview

Following a decline of 8% in 2011, last year total construction orders fell further, by 5% to just under £10bn. The region’s construction orders are now approximately 71% of their 2007 peak.

In 2012, infrastructure orders were the only ones to experience an increase, of 26% to £3.5bn, the highest level since the current data series began in 1985. The industrial sector experienced the greatest decline, of 49% to just £99m – the weakest level since the series began, and only 18% of its 2006 peak. Public non-housing orders fell by 21% to £1.08bn, whereas commercial orders went down by 17% to £2.9bn. The former fell to its lowest level in 12 years while the latter dropped to its weakest in 4 years. The private housing market saw its orders decline by 15% to £1.73bn, while public housing orders saw the smallest contraction, of 2% to £635m.

2.7 New construction orders – current situation

In the first six months of 2013, new work orders increased by 37% to £5.7bn compared to the corresponding period in the preceding year.

Very strong year-on-year rises were seen across a number of sectors in the first half of 2013 – 155% in the industrial sector, 150% in public housing new orders and 110% in the private housing sector.

However, given the low level of new orders in the industrial construction sector in 2012, it was almost inevitable that they would rise. The infrastructure sector was the only one to experience a fall, of 22% to £595m.

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

Regional 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 were only available for the first two quarters of 2013.

While the recent trend across most regions and devolved nations has been upward, construction output in Greater London seems to be slowing down. It declined by nearly 6%, to £11.3bn, in the first half of 2013 compared to the same period in 2012, with falls of 6% in new work and 5% in R&M.

There were falls across all the new work sectors except public housing, which experienced a rise of 18%. The largest fall, of 46% to just £72m, was registered in the industrial market.

For 2013 as a whole, construction output in the capital is estimated to have fallen by 3% in real terms, with only the housing sectors – public, private and R&M – showing any growth.

New work construction orders – Greater London (£ million, current prices)

	Actual	Annual % change				
		2012	2008	2009	2010	2011
Public housing	635	-15.8	9.9	22.9	-32.2	-1.6
Private housing	1,729	-17.6	-30.9	102.4	35.3	-15.3
Infrastructure	3,547	13.1	39.1	43.9	-12.9	26.3
Public non-housing	1,081	79.0	-33.7	-11.0	-39.9	-21.1
Industrial	99	14.6	-71.5	70.9	11.4	-49.5
Commercial	2,901	-28.5	-52.7	19.5	6.5	-16.7
Total new work	9,992	-5.2	-31.6	24.5	-7.6	-5.2

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

Construction output 2014-2015 – Greater London (£ million, 2005 prices)

	Actual	Forecast			Annual average
		Annual % change			
	2012	2013	2014	2015	2014-15
Public housing	963	16%	2%	3%	2.6%
Private housing	2,479	4%	5%	4%	4.6%
Infrastructure	3,056	-1%	11%	1%	6.1%
Public non-housing	1,490	-10%	-13%	-2%	-7.7%
Industrial	205	-7%	2%	11%	6.5%
Commercial	5,747	-7%	-2%	0%	-1.1%
New work	13,940	-3%	1%	2%	1.4%
Housing R&M	2,599	1%	1%	4%	2.6%
Non-housing R&M	4,350	-6%	1%	2%	1.6%
Total R&M	6,949	-4%	1%	3%	2.0%
Total work	20,889	-3%	1%	2%	1.6%

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

Total construction output is expected to rise by an annual average of 1.6% over the next two years. Growth is forecast to be stronger in the R&M sector (2%) than the new work sector (1.4%).

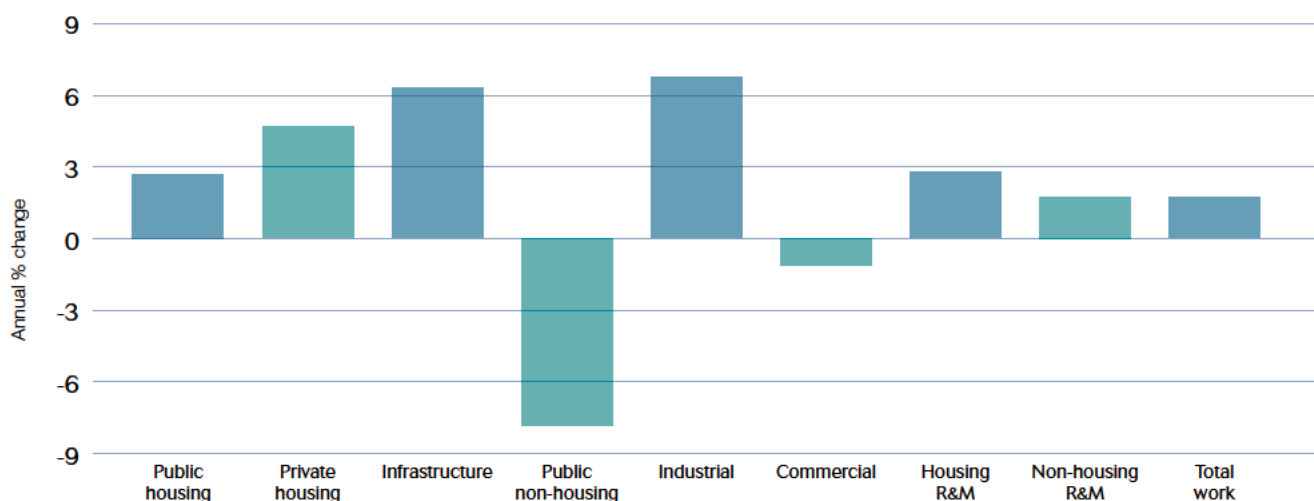
The industrial market is expected to experience the largest yearly increase, of 6.5%. However, due to its small size, this does not equate to a significant figure in value terms.

Another sector to perform well between 2014 and 2015 is the infrastructure sector, with an average annual increase of 6.1%. A number of projects are either ongoing or about to start in the sector, the largest one being Crossrail. Activity on this project is expected to peak in 2014–2015, with the main construction works complete by 2018. Work started on the Custom House station in the third quarter of 2013 (the final station to commence construction) and the tunnelling drive from Limmo to Victoria Dock is due to commence in the first quarter of 2014. Work is also ongoing on major station upgrades such as at Victoria Underground. The final element of the Thameslink

project, the redevelopment of London Bridge station, has also recently started. By 2015, the outturn for the infrastructure sector is predicted to reach a new high.

An annual average rise of 4.6% per year over the next two years is estimated for the private housing sector. The Greater London housing market held up far better than that in any other region or devolved nation since the 2008–2009 crisis, in part because demographic pressures are particularly strong in the city, and also because London acts as a magnet for investment buyers, particularly at the top end of the market, and especially from abroad. Given that activity in the sector in London is already at a historic high, there is less room for growth than in some other parts of the country that are recovering from a low base.

Greater London's public housing orders have seen a recent upsurge, and in 2013 double-digit growth is estimated. However, expansion in the following two years is expected to be much more modest. Overall, in the short term, a yearly average growth of 2.6% is projected.

Annual average construction output growth 2014-2015 – Greater London

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

Construction activity in the capital will increase by an average 2% per year over the forecast period

The public non-housing sector is expected to see the strongest decrease in output, falling by 7.7% per year on average in 2014 and 2015. The capital benefitted heavily from the early waves of the BSF programme and it is expected that the scrapping of this project will have a negative impact on the market until 2015, when output will be around 48% of its 2010 peak and more in line with its pre-BSF level.

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

Over the five years to 2018, Greater London’s construction sector is predicted to see annual average growth of 2%, slightly weaker than the UK average of 2.2%. While the R&M sector is predicted to rise by 2.4% per year, the new work sector will see a lower annual average increase of 1.8%.

Similar to the short-term prognosis, industrial construction is forecast to be the best performing sector between 2014 and 2018, with annual average growth of 4.3%. Despite this, the market is still going to be only 51% of its 2001 peak by the end of the forecast period.

The next largest growth is projected to be for private housing, with an annual average increase of 4.1% expected. By the end of the forecast period, output is likely to reach a new high of £3.1bn and the region will account for around 17% of the UK’s total private housing market, challenging the South East, which traditionally has had the largest share of activity in this sector.

The commercial construction sector is forecast to see

annual average growth of 3.3% over the five years to 2018. In the short term, a small decline is expected in 2014 before flat growth in 2015. However, the sustained improvement in the economy is likely to provide more impetus for new development work. As a result, the market will begin to see a healthy turnaround in 2016.

Westfield Group’s £1bn expansion of its Shepherd’s Bush shopping centre is due to start in the latter half of 2014. The five-year development will be adjacent to the existing site and will include new shops, leisure facilities and residential units.

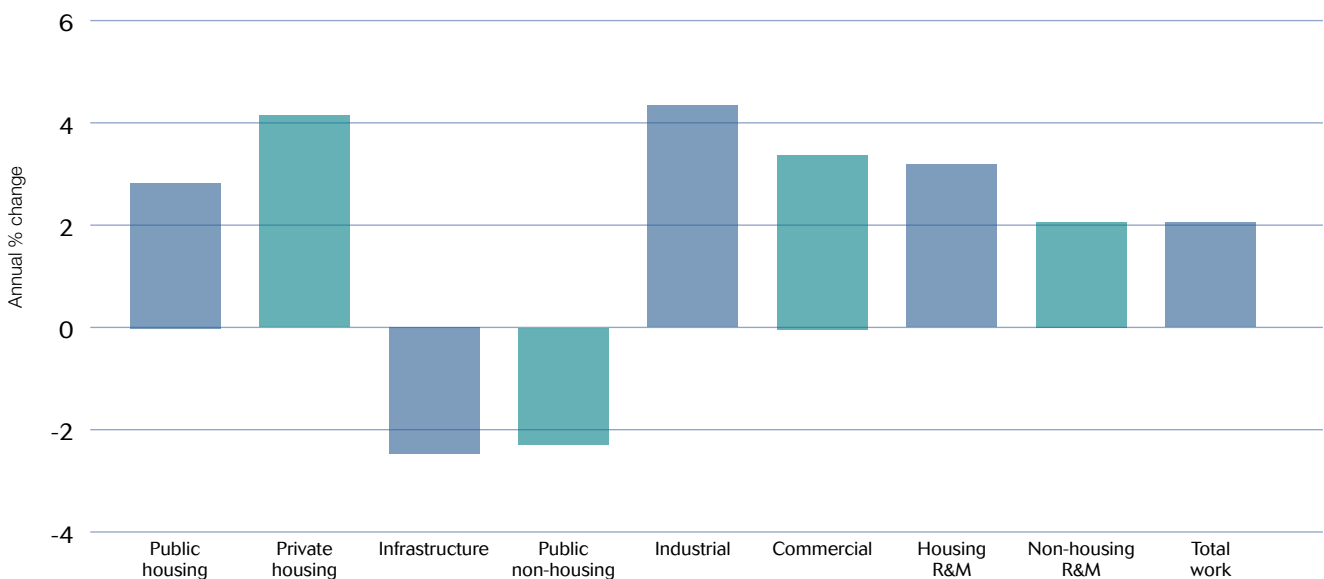
Floor space availability has been dropping sharply across the London office market according to latest property analyst reports; therefore the impetus is to get new projects into the pipeline. Work is due to start soon on the Shoreditch Estate and 100 Liverpool Street, both being taken forward by British Land.

Of all regions and devolved nations, Greater London is the only one projected to see a decline in infrastructure output, estimated at 2.4% a year on average. Work on Crossrail is due to peak in 2014–2015 before winding down towards the end of the forecast period, along with some of the other large transport projects currently on site in the capital, such as the redevelopment of London Bridge station and works at Victoria, Bond Street and Tottenham Court Road underground stations. The Thames Tideway project should begin from 2016 onwards, assuming it goes ahead. High Speed 2 (HS2) is assumed not to start within the current forecast period.

2.10 Beyond 2018

A number of large-scale regeneration projects are planned in the capital, with the largest long-term project currently being the Vauxhall/Nine Elms/Battersea regeneration, which covers a total of 195 hectares of central London on the south bank of the Thames. The redevelopment of Battersea power station as part of this regeneration is due to deliver 60,000 square metres of new retail space, with retail taking a share

Annual average construction output growth 2014-2018 – Greater London



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

Construction output 2014-2018 – Greater London (£ million, 2005 prices)

	Estimate	Forecast Annual % change					Annual average
		2013	2014	2015	2016	2017	
Public housing	1,118	2%	3%	2%	2%	5%	2.8%
Private housing	2,566	5%	4%	3%	4%	4%	4.1%
Infrastructure	3,011	11%	1%	-4%	-9%	-10%	-2.4%
Public non-housing	1,336	-13%	-2%	1%	1%	3%	-2.2%
Industrial	190	2%	11%	0%	5%	4%	4.3%
Commercial	5,348	-2%	0%	6%	6%	7%	3.3%
New work	13,569	1%	2%	2%	1%	2%	1.8%
Housing R&M	2,629	1%	4%	2%	4%	3%	3.1%
Non-housing R&M	4,073	1%	2%	3%	3%	1%	2.0%
R&M	6,702	1%	3%	3%	4%	2%	2.4%
Total work	20,271	1%	2%	2%	2%	2%	2.0%

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

of 200,000 square metres of new space on other sites. Construction has already begun on a number of projects within the regeneration area and work is expected to continue well into the 2030s.

New transport requirements are likely to continue to be one of the main drivers of construction activity in the long term. Assuming that Royal Assent is given, work on Phase 1 of HS2 between London and Birmingham should start sometime between 2017 and 2020, although the project is far from being definite yet. However, apart from the redevelopment of Euston station, most of the work on this project would take place outside of Greater London, in the South East and West Midlands.

Thoughts are already turning to the possibility of Crossrail 2, a south-north connection to complement the east-west line currently in construction. A possible route has not yet been finalised but it is likely to run south-west to north-east across London. An initial public consultation took place in

mid-2013, the results of which are now available, and the next stage of the process will be to protect the preferred route from development. If the project goes ahead, construction should begin in the first half of the 2020s.



The industrial sector will perform best in Greater London with an annual average increase of 4.3%

3 Construction employment forecasts for the Greater London

3.1 Total construction employment forecasts by occupation

The table presents actual construction employment (SICs 41-43, 71.1 and 74.9) in the Greater London 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.

Annual average employment growth for the capital over the next five years is 1.4%, slightly higher than the UK rate of 1.2%, in spite of slightly lower levels of construction output growth in the region when compared to the UK as a whole. Greater London was one of the few regions that saw employment fall faster than output over the past five years, so, unlike in some other parts of the UK, there is likely to be little or no excess capacity in the region to be taken up before employment grows.

In 2012, the largest construction trade occupation in the region was wood trades and interior fit-out, which accounted for 8.8% of the total workforce, a slightly lower share than across the UK as a whole (9.9%).

The majority of occupations are forecast to see employment rise over the five years to 2018, with civil engineering operatives not elsewhere classified (nec) likely to experience the greatest annual average increase of 6%. Construction trade supervisors are also projected to see strong annual average employment growth of 4.8%.

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, due to the inconsistency and coverage of supply data, these flows do not include movements into the industry from training.

Total employment by occupation – Greater London

	Actual	Estimate	Forecast	
	2012	2013	2014	2018
Senior, executive and business process managers	30,030	27,780	28,330	30,440
Construction project managers	11,750	12,830	12,930	13,480
Other construction process managers	30,950	30,820	31,680	34,970
Non-construction professional, technical, IT and other office-based staff	57,730	55,840	56,450	59,060
Construction trades supervisors	7,320	7,770	8,240	9,830
Wood trades and interior fit-out	33,890	34,690	35,360	37,700
Bricklayers	5,260	5,490	5,380	5,130
Building envelope specialists	22,090	23,200	22,710	22,460
Painters and decorators	16,850	17,430	17,380	17,670
Plasterers	3,450	3,190	3,110	2,880
Roofers	2,550	2,780	2,730	2,610
Floorers	2,600	2,320	2,370	2,610
Glaziers	4,940	4,510	4,520	4,640
Specialist building operatives nec*	9,440	8,930	8,960	9,340
Scaffolders	1,530	1,670	1,590	1,520
Plant operatives	4,640	5,070	5,110	5,370
Plant mechanics/fitters	3,020	2,700	2,800	3,290
Steel erectors/structural fabrication	3,040	2,990	2,880	2,580
Labourers nec*	16,380	14,640	14,710	15,060
Electrical trades and installation	21,830	20,370	20,740	22,330
Plumbing and HVAC Trades	18,360	16,490	16,930	18,840
Logistics	2,550	2,780	2,830	2,990
Civil engineering operatives nec*	1,690	1,850	1,950	2,470
Non-construction operatives	5,370	4,800	4,540	3,670
Civil engineers	9,790	8,750	8,760	8,860
Other construction professionals and technical staff	30,030	31,180	31,860	34,540
Architects	16,280	16,860	17,160	18,530
Surveyors	12,980	11,600	12,100	13,970
Total (SIC 41-43)	317,260	310,940	314,230	330,940
Total (SIC 41-43, 71.1, 74.9)	386,340	379,330	384,110	406,840

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

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 28 occupations within the capital's construction industry is illustrated in the table. The figure of 1,290 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 (230), equivalent to 18% of the region's total ARR. However, as a proportion of base 2014 employment, plasterers are likely to be most in demand (7%). The region's ARR of 1,290 is equivalent to just 0.3% of base 2014 employment and is much lower than the UK average (1.5%).

The main reason for the traditionally low ARR for London is that the capital acts like a magnet for workers from across the UK and further afield, and this is reflected in the flows data from the Labour Force Survey. The actuality of this pattern has been further evidenced by CITB's 2012 Workforce Mobility and Skills report. This survey indicated that only 46% of the Greater London construction workforce originated from the capital, the lowest share of any region or devolved nation. Applying this percentage to Labour Force

Survey data suggests that over 208,500 of the capital's construction workforce in 2012 came from outside the region. The same methodology indicates that 82,000 of London's indigenous construction workforce was active in other parts of the UK, suggesting a net inflow to London of 126,500, bigger than some regions' and devolved nations' total construction workforce.

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 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 – Greater London

	2014-2018
Senior, executive and business process managers	200
Construction project managers	-
Other construction process managers	-
Non-construction professional, technical, IT and other office-based staff	-
Construction trades supervisors	-
Wood trades and interior fit-out	230
Bricklayers	-
Building envelope specialists	210
Painters and decorators	110
Plasterers	210
Roofers	<50
Floorers	70
Glaziers	190
Specialist building operatives nec*	<50
Scaffolders	-
Plant operatives	<50
Plant mechanics/fitters	-
Steel erectors/structural fabrication	-
Labourers nec*	-
Electrical trades and installation	-
Plumbing and HVAC Trades	-
Logistics	-
Civil engineering operatives nec*	-
Non-construction operatives	-
Civil engineers	-
Other construction professionals and technical staff	-
Architects	-
Surveyors	-
Total (SIC 41-43)	1,290
Total (SIC 41-43, 71.1, 74.9)	1,290

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.

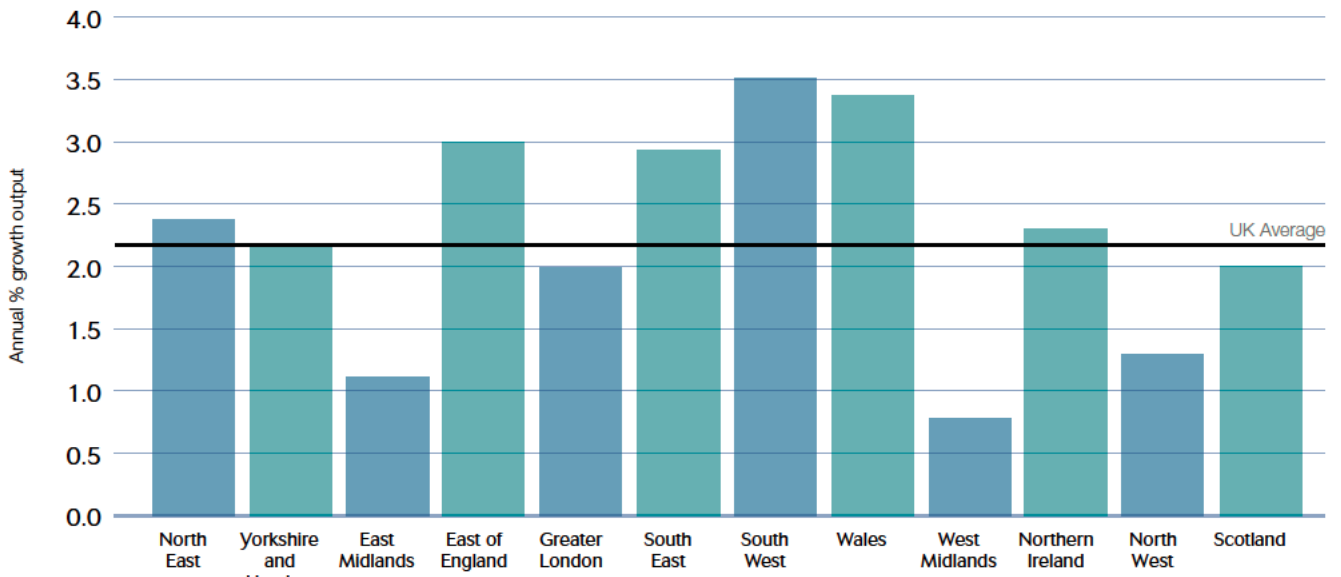
Interestingly however, Greater London's projected annual average output growth rate of 2% is slightly below the UK average (2.2%). Greater London is the only region to have experienced expansion in construction output in real terms over the five years to 2012; therefore activity in some sectors may be 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.

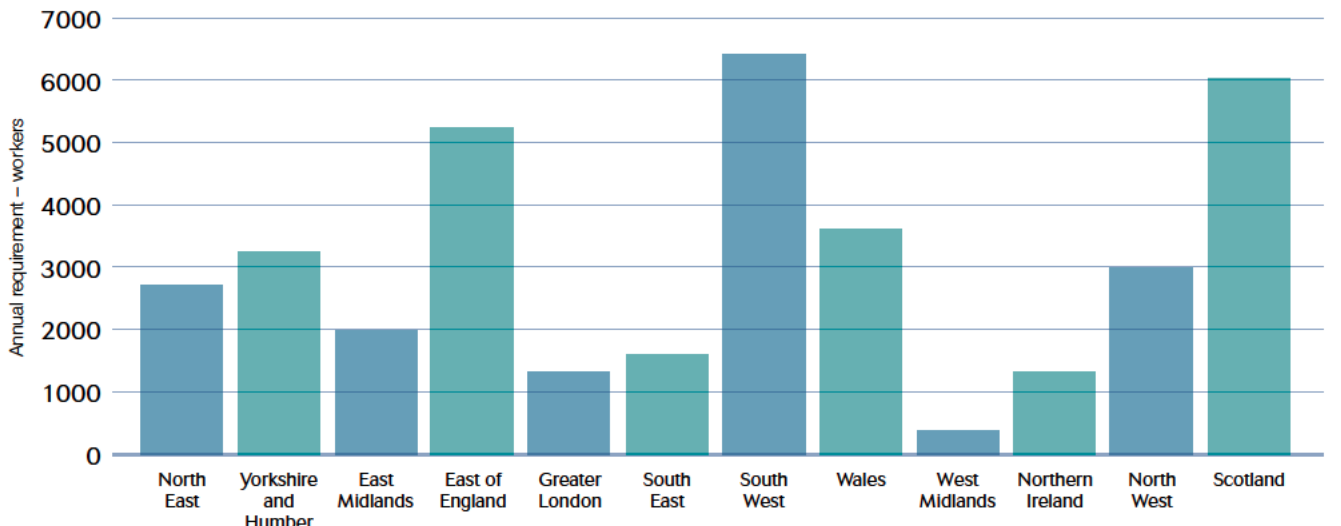


Annual average output growth by region 2014-2018



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

Annual recruitment requirement (ARR) by region 2014-2018



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.

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:

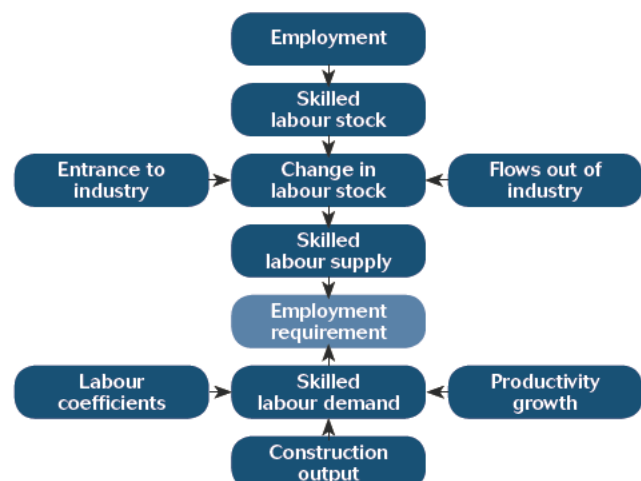
- Transfers to other industries
- International/domestic OUT migration
- Permanent retirements (including permanent sickness)
- Outflow to temporary sickness and home duties.

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 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.

Private commercial work¹

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.²

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.³

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
---	------

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		
Construction trades supervisors		Steel erectors/structural fabrication	
Skilled metal, electrical and electronic trades supervisors	5250	Steel erectors	5311
Construction and building trades supervisors	5330	Welding trades	5215
Wood trades and interior fit-out		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		
Bricklayers		Labourers nec*	
Bricklayers and masons	5312	Elementary construction occupations (100%)	9120
Building envelope specialists		Electrical trades and installation	
Construction and building trades nec* (50%)	5319	Electricians and electrical fitters	5241
Painters and decorators		Electrical and electronic trades nec*	5249
Painters and decorators	5323	Telecommunications engineers	5242
Construction and building trades nec* (5%)	5319	Plumbing and heating, ventilation and air conditioning trades	
Plasterers		Plumbers and heating and ventilating engineers	5314
Plasterers	5321	Pipe fitters	5216
Roofers		Construction and building trades nec* (5%)	5319
Roofers, roof tilers and slaters	5313	Air-conditioning and refrigeration engineers	5225
Floorers		Logistics	
Floorers and wall tilers	5322	Large goods vehicle drivers	8211
Glaziers		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
Specialist building operatives nec*		Transport and distribution clerks and assistants	4134
Construction operatives nec* (100%)	8149	Civil engineering operatives nec*	
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
Scaffolders		Non-construction operatives	
Scaffolders, staggers and riggers	8141	Metal making and treating process operatives,	8117
Plant operatives		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
Plant mechanics/fitters		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
		Civil engineers	
		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
------------	------

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

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

For more information about the
Construction Skills Network,
contact:

Kirsty Woolsey

Research and Development

Research Analyst

0344 994 4400

kirsty.woolsey@citb.co.uk



citb.co.uk



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