

# INDUSTRY INSIGHTS

Construction Skills Network  
South West 2015-2019



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

In association with



CITB is tasked by Government to ensure the UK's construction 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 the South West.....	6
3	Construction employment forecasts for the South West.....	12
4	Comparisons across the UK.....	14

## Tables and charts

1	Annual average construction output growth 2015–2019.....	4
2	Regional comparison 2015-2019.....	5
3	Construction output 1997-2013.....	6
4	Construction industry structure 2013.....	6
5	Economic structure.....	7
6	Economic indicators.....	7
7	New construction orders growth 1997-2013.....	8
8	New work construction orders.....	8
9	Construction output 2015-2016.....	9
10	Annual average construction output growth 2015-2016.....	9
11	Annual average construction output growth 2015-2019.....	10
12	Construction output 2015-2019.....	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

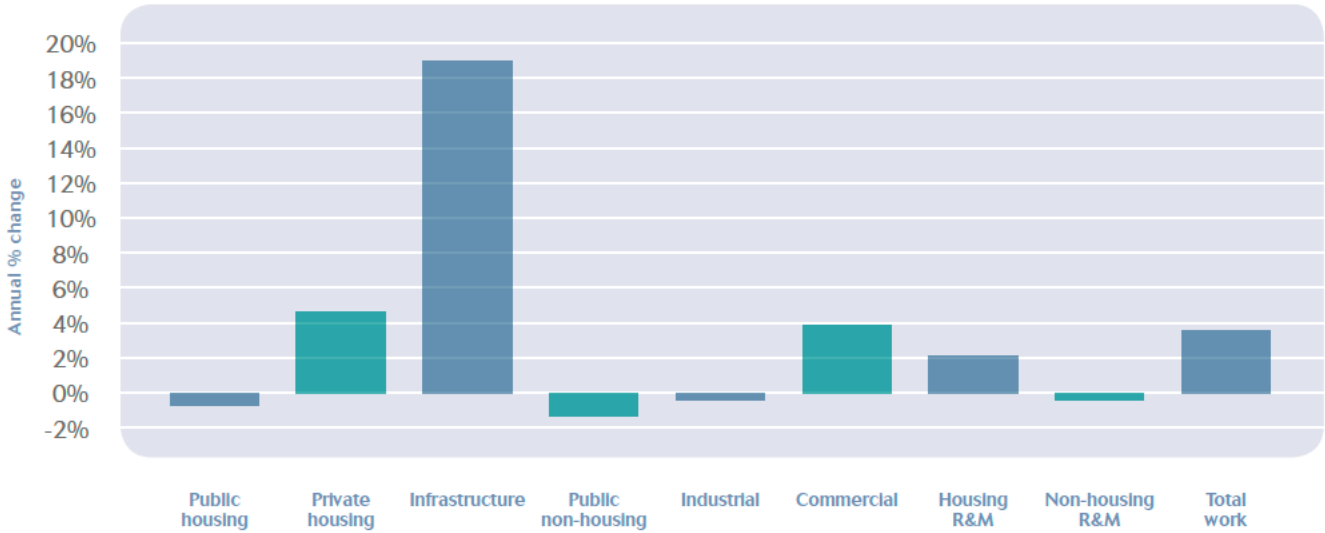
## CSN explained

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 – South West

The South West is projected to see annual average output growth of 3.6% over the 2015 to 2019 period, higher than the UK rate of 2.9% and driven by very robust expansion in the infrastructure sector (19.1%). This strong output growth rate is expected to generate employment growth of 1.9% on average per year, again above the UK average of 1.5%. The South West also has a large annual average recruitment requirement (ARR) of 6,320, representing 2.7% of base 2015 employment, higher than the UK ratio of 1.7%.

## Annual average construction output growth 2015-2019 – South West



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



## 1.1 Key findings

The South West's construction industry is estimated to have seen modest expansion of 1% a year in real terms in both 2013 and 2014, with private housing and repair and maintenance work the main engines of growth across the two years.

The South West's annual average growth rate of 3.6% over the five years to 2019 is heavily predicated on the start of work on nuclear new build at Hinkley Point C at some time during the first half of the forecast period. There will be other projects and programmes of work taking place in the infrastructure sector over the forecast period, such as capital investment in the water and sewerage sub-sector under the Asset Management Programme 6, which will run from April 2015 to March 2020 but, in terms of driving growth in the sector, they pale into insignificance against nuclear new build.

However, there is growth elsewhere. Private housing output is projected to rise by an average annual rate of 4.6% over the five years to 2019. While house price growth may be slowing, it is still expected to average between 3% and 5% a year over the 2015 to 2019 period. The scenario for house building remains benign at present, especially for the early part of the forecast period, with continued low interest rates and the stimulus from 'Help to Buy' joined by reductions in Stamp Duty for the majority of prospective purchasers and a plan to provide first-time buyers of new build dwellings with a 20% discount on market prices. However, over the medium term, growth will

By 2019, employment in the South West is forecast to be 246,000.

South West will see construction output grow on average by 3.6% per year higher than the UK average of 2.9%.

inevitably slow to more sustainable levels, particularly as affordability remains difficult and interest rates start to rise.

The commercial construction sector is also expected to see good growth at around 4% a year on average over the forecast period. The prospects for the economic sectors that drive demand for commercial premises are good, especially for professional and other private services and finance and insurance, suggesting that office construction could be the most buoyant of the commercial markets.

Good output growth leads to good employment growth, projected at 1.9% a year on average over the 2015 to 2019 period. This implies a productivity growth rate in the region of 1.7% (output growth minus employment growth), higher than the UK as a whole (1.4%). However, a significant proportion of the expansion is driven by nuclear new build, which is a relatively less labour intensive area than many others. Therefore this 'implied' productivity growth rate is as much a factor of where the growth is in terms of sector than any real gain.

The South West traditionally has quite a high annual recruitment requirement (ARR) as the construction industry in the region has to compete with a strong engineering manufacturing sector in particular for the available skilled workforce. The region's ARR, at 6,320 for the 2015 to 2019 period, is similar to that projected last year for the 2014 to 2018 period (6,370).

## Regional comparison 2015-2019

	Annual average % change in output	Growth in total employment	Total ARR
North East	2.3%	7,660	3,510
Yorkshire and Humber	2.3%	14,940	3,220
East Midlands	2.2%	9,340	3,120
East of England	2.5%	13,690	4,260
Greater London	4.2%	50,440	2,050
South East	2.5%	30,130	2,590
South West	3.6%	22,130	6,320
Wales	5.8%	13,890	5,320
West Midlands	2.1%	12,110	2,320
Northern Ireland	2.2%	3,220	1,490
North West	2.5%	17,130	4,790
Scotland	1.1%	1,320	5,700
UK	2.9%	196,000	44,690

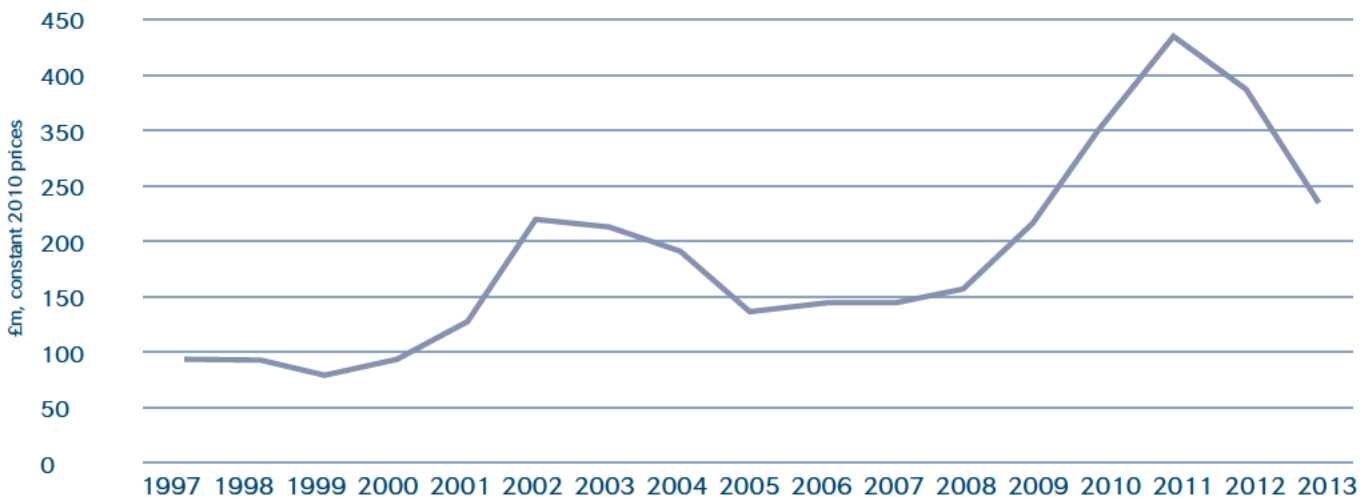
# 2 The outlook for construction in the South West

## 2.1 Construction output in the South West – overview

Construction output in the South West in 2013 rose by a modest 1% in real terms to an estimated outturn of just under £9bn in 2010 prices. Growth was seen in the private housing, public non-housing and housing

R&M sectors, but the remaining ones contracted. The 1% rise in 2013 came after a 9% decline in the previous year. Construction output in the South West peaked in 2004 in real terms, well before the financial crash and the outturn for 2013 remains 20% below this level.

### Construction output 1997-2013 – South West



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

## 2.2 Industry structure

The diagram, Construction Industry structure 2013 – UK vs. the South West, illustrates the sector breakdown of construction in the South West, compared to that in the UK. Effectively, the percentages for each sector illustrate what proportion of total output each sector accounts for.

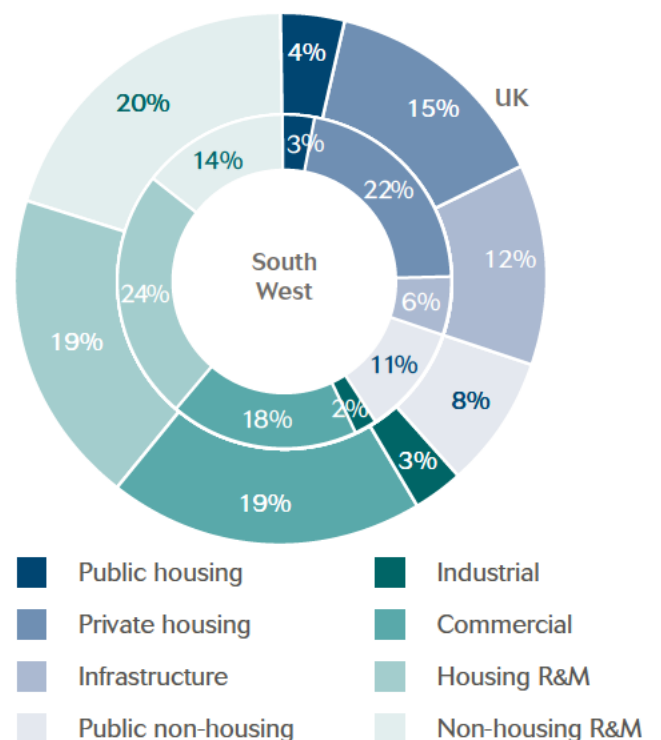
While the share of total construction output taken by new work in the South West is the same as across the UK as a whole at 62%, there are significant differences in the relative importance of individual sectors.

Private housing is a much more important sector in the South West than the UK as a whole, accounting for 22% of total construction output in the former compared with 15% in the latter. The public non-housing sector is also proportionally larger in the South West (11% vs 8%), but infrastructure accounts for only about half the share in the region compared with the UK (6% vs 12%).

While the overall share of repair and maintenance (R&M) is the same in the South West and the UK (38%), the former's R&M market is much more skewed towards housing (24% vs 19%) and away from non-housing (14% vs 20%).

previous year. However, GVA was still nearly 3% below its 2007 peak in the region. Of the major sectors, growth in 2013 was strongest in the wholesale and retail one (6.1%), but the largest, professional and other private services, experienced a 2.3% decline.

### Construction industry structure 2013 – UK vs South West



Source: ONS, Experian

## 2.3 Economic overview

The expected performance of a regional or national economy over the forecast period (2015 – 2019) provides an indication of the construction sectors in which demand is likely to be strongest.

Gross value added (GVA) in the South West totalled £99.8bn in 2010 prices in 2013, a rise of 1.3% on the

## 2.4 Economic structure

The South West's economy remains slightly skewed towards public services and manufacturing compared with the UK as a whole, with the former sector accounting for 21.3% of output in the South West in 2013 compared with 19% in the UK and the latter 12.3% compared with 10.1%. In contrast, the largest sector, professional and other private services, accounted for a slightly smaller share of output in the region than in the UK, 23.7% versus 24.8%.

Having said that, the South West has a diversified economy with a healthy balance of high-tech manufacturing, a well-developed tourist sector, and

professional and consumer services alongside a relatively large public sector. Bristol, the region's principal city, has a large presence of aerospace manufacturing which is benefiting from significant Government investment, and a vibrant professional service sector. Due to its location as an entry point into the rest of the South West and Wales, the city also has a sizeable logistics and transport industry. The South West's diversified economy enabled it to weather the 2007/08 recession and its aftermath better than most other UK regions. Growth has been stronger than in other regions outside the greater South East and unemployment lower than in the rest of the UK.

### Economic structure – South West (£ billion, 2010 prices)

Selected sectors	Actual	Forecast					
		Annual % change, real terms					
	2013	2014	2015	2016	2017	2018	2019
Professional and other private services	23.7	7.0	3.6	3.3	3.3	3.1	2.9
Public services	21.3	-0.7	0.1	-0.1	-0.3	0.3	1.2
Manufacturing	12.2	3.1	2.2	1.8	2.3	1.6	1.2
Wholesale and retail	11.4	4.1	3.3	2.6	2.7	2.6	2.5
Finance and insurance	7.7	-2.8	2.3	3.1	3.2	3.1	2.9
Total Gross Value Added (GVA)	99.8	2.9	2.5	2.2	2.3	2.2	2.2

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

## 2.5 Forward looking economic indicators

2014 is estimated to have been a good year for the South West's economy, with GVA growth in the region of 3%, in line with the UK average. The professional and other private services and information and communication sectors were particularly buoyant, with estimated growth of around 7% in each. Only the public services sector is likely to have seen a decline in 2014, of around 0.8%.

Economic performance in the South West is expected to be similar to the UK average over the next five years, with annual average GVA growth in the region just 0.1% below the UK average at 2.3%. Growth in professional and other private services is projected to subside to a more sustainable annual average of 3.2% and a similar profile is expected for the information and communication sector (3.3%). By 2019, professional and other private services share of GVA will rise to 25.8% on these forecasts, up from 24.7% in 2014 and 21.7% in the year 2000.

In contrast, the public services sector is predicted to see marginal growth of only 0.2% a year on average as public expenditure constraints remain tough in order to exercise further downward pressure on the deficit.

## 2.6 New construction orders – overview

New orders experienced their second consecutive year of growth in the South West in 2013, rising by nearly 16% to £4.64bn in current prices. Growth in infrastructure and industrial construction new orders was particularly robust, rising by 68% and 80% respectively, the former believed to be due to the placing of a number of contracts relating to nuclear new build at Hinkley Point C. Not all sectors saw growth, however, with new orders for public housing and public non-housing declining, albeit those for the former sector are coming down from a peak in 2010.

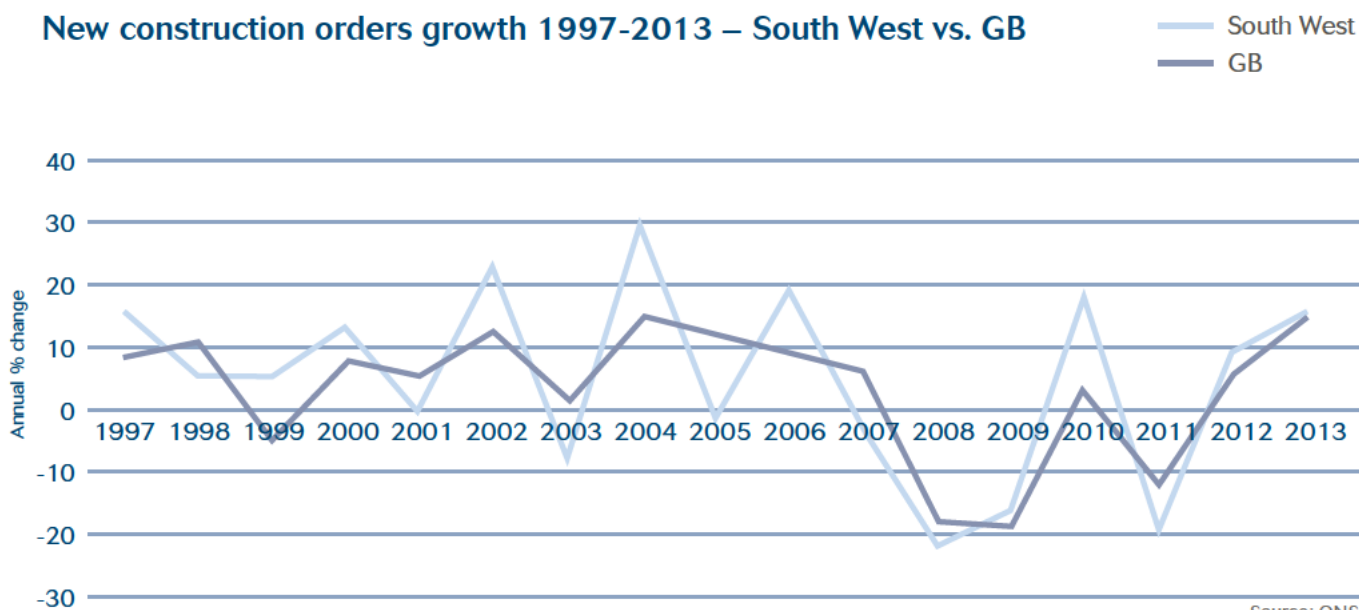
Despite two years of growth, total new orders in the South West remained nearly 24% below their 2006 peak.

### Economic indicators – South West (£ billion, 2010 prices – unless otherwise stated)

	Actual	Forecast					
		Annual % change, real terms					
	2013	2014	2015	2016	2017	2018	2019
Real household disposable income	85.9	1.5	2.0	1.3	2.3	2.7	2.5
Household spending	92.7	3.2	2.7	2.0	1.9	1.9	2.0
Working age population (000s and as % of all)	3,193	59.7%	60.0%	60.1%	60.0%	59.8%	59.8%
House prices (£)	229,089	7.4	6.9	4.8	3.5	3.3	3.4
LFS unemployment (millions)	0.17	-23.6	-4.3	-0.8	0.3	-0.2	1.8

Source: ONS, DCLG, Experian

## New construction orders growth 1997-2013 – South West vs. GB



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

## 2.7 New construction orders – current situation

New orders growth did not continue into the first half of 2014, with the outturn for that period, at £1.98bn, 11% down on the previous half-year and 18% lower than in the same period of 2013. Those for the public housing and industrial sectors were particularly weak and only the infrastructure sector experienced half-year on half-year growth (22%) although, compared with the same period of 2013, they halved.

On an annualised basis, total new orders stagnated in the first quarter of 2014 and fell by around 9% in the second.

## 2.8 Construction output – short-term forecasts (2015–2016)

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 2014.

Total construction output in the South West reached £5.27bn in the first half of 2014, 1% down on the previous half-year but 14% higher than in the

corresponding period of 2013. The only sectors to see growth on both measures were the private housing and industrial ones, the former up by 5% and 22% respectively and the latter by 46% and 50%. On an annualised basis, output has been expanding for six quarters to the second quarter of 2014 and stood at £10.61bn in that period, its highest level since the second quarter of 2008.

For 2014 as a whole, growth in output in real terms is expected to have remained modest at 1%, with expansion continuing to be centred in the private housing and R&M sectors, with the addition of a good performance from industrial construction.

The short-term forecast for the South West is a very strong annual average rate of 6.1%, but this is heavily predicated on a start of main construction work on Hinkley Point C sometime in 2015. The assumption at present is for a start on the project in the first quarter of the year, based on the timeline published by the Nuclear Industry Association in June 2014, which puts the vast bulk of the growth in 2015.

However, despite the fact that the European Commission has approved the Hinkley Point C State Aid case, removing one of the final hurdles to the start of main civil engineering works on the site, the scheme

## New work construction orders – South West (£ million, current prices)

	Actual	Annual % change				
		2013	2009	2010	2011	2012
Public housing	115	16.0	9.3	-11.5	-15.5	-43.1
Private housing	1,631	-22.4	58.1	6.6	9.5	19.7
Infrastructure	814	-3.4	29.5	-13.5	37.4	67.8
Public non-housing	784	10.6	18.6	-57.4	50.0	-10.8
Industrial	319	-22.3	-1.2	-43.5	22.9	80.2
Commercial	973	-34.1	-4.1	0.6	-18.0	7.9
Total new work	4,636	-16.2	18.5	-19.7	9.2	15.7

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



## Construction output – South West (£ million, 2011 prices)

	Actual 2013	Forecast annual % change			Annual average 2015-2016
		2014	2015	2016	
Public housing	263	-12%	-8%	-5%	-6.1%
Private housing	1,977	12%	9%	4%	6.3%
Infrastructure	548	-10%	118%	10%	54.5%
Public non-housing	935	-13%	-7%	-2%	-4.3%
Industrial	193	28%	-13%	4%	-4.8%
Commercial	1,634	-4%	6%	8%	6.9%
New work	5,549	0%	14%	5%	9.2%
Housing R&M	2,168	-1%	2%	1%	1.8%
Non-housing R&M	1,280	6%	-1%	-1%	-0.8%
Total R&M	3,448	2%	1%	1%	0.8%
Total work	8,997	1%	9%	3%	6.1%

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

is not quite out of the woods yet, with a number of organisations and one country threatening to prepare legal challenges to the Commission's decision. Thus growth could shift depending on when main works actually commence.

Both the private housing and commercial sectors are also expected to perform well over the short term, with a projected average annual growth rate of 6.3% for the former and nearly 7% for the latter. Private housing orders, output, starts and completions have all generally been on an upward trend over the past year or so, as have house prices. According to the ONS's mix-adjusted series, house prices in the South West rose by 3.8% in the third quarter of 2014 on a quarter-on-quarter basis and were up by 8.5% on an annualised basis. Data from the Halifax and Nationwide show the same trend, with the former reporting a 1.7% increase quarter-on-quarter and 8.7% on an annualised basis and the Nationwide 1% and 9.2% on the same measures.

In the commercial sector there are a couple of sizeable projects due to start in the next two years, Stanhope plc's new retail and leisure development in the Maltings area of Swindon, for which a planning application is due to be submitted in early 2015, and phase 2 of Simons' Charles Street redevelopment project in Dorchester. This £60m project will include new retail and residential units as well as car parking. Work on the site is currently scheduled to start in autumn 2015.

In contrast, the public housing, public non-housing and industrial sectors are expected to experience declines in the short term, projected at -6.1%, -4.3% and -4.8% respectively. Public housing output is still returning to more sustainable levels from its 2011 peak (£432m in 2010 prices), when it was around double its historic average. Public non-housing output surged by 12% in 2013 to its second highest level since 1990 and is on its way down from this despite projects such as the University of the West of England's £150m redevelopment and extension of its Frenchay Campus.

## Annual average construction output growth 2015-2016 – South West



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

## 2.9 Construction output – long-term forecasts (2015–2019)

Construction output growth in the South West is projected to average 3.6% a year over the 2015 to 2019 period, well above the UK average of 2.9%. This strong growth will continue to be driven largely by annual average growth of 19% a year in the infrastructure sector as long as main works on Hinkley Point C starts at some point during the forecast period. Elsewhere in the infrastructure sector work is ongoing to the £150m revamp of Bristol airport and should continue into the early part of 2017, while Helius Energy has a £380m proposal to build a 100MW biomass power plant at Avonmouth in the pipeline. In the Autumn Statement, four new road improvement projects were announced for the M49, M5, A303 and A358. Funding has been committed for these projects, but they could start at any time over the next two parliaments, and so may end up falling outside of the current forecast period.

The private housing sector is projected to expand throughout the forecast period, with annual average expansion of 4.6%, in line with what would be expected over the medium to long term. Two large projects in the pipeline are the redevelopment of the Filton Airfield site adjacent to Cribbs Causeway, a mixed-use regeneration project planned to deliver 2,750 new homes over a 10-year period, and a scheme for 700 new homes on the former Ministry of Defence site at Foxhills near Bath, at which demolition of the current structures has now been completed.

Public housing output is predicted to start growing again from 2017, but the declines in the first two years of the forecast period give an annual average fall in output of 0.8% over the five years to 2019. Allocation of some £886m of the £1.7bn pot of funding under the 2015 to 2018 Affordable Housing Programme (AHP) was announced in late July 2014, of which the South and South West captured £122m to build 4,678 units. The remainder of the £1.7bn funding programme will be allocated in due course through continuous market engagement.

Public non-housing output is also expected to show some slight growth in the second half of the forecast

period but declines in 2015 and 2016 give an overall fall of 1.3% a year on average in the five years to 2019. The strongest growth within the sector is likely to be in work for the Defence Infrastructure Organisation, particularly around the £1.8bn Basing Plan to prepare sites for the return of all British soldiers from Germany by 2019.

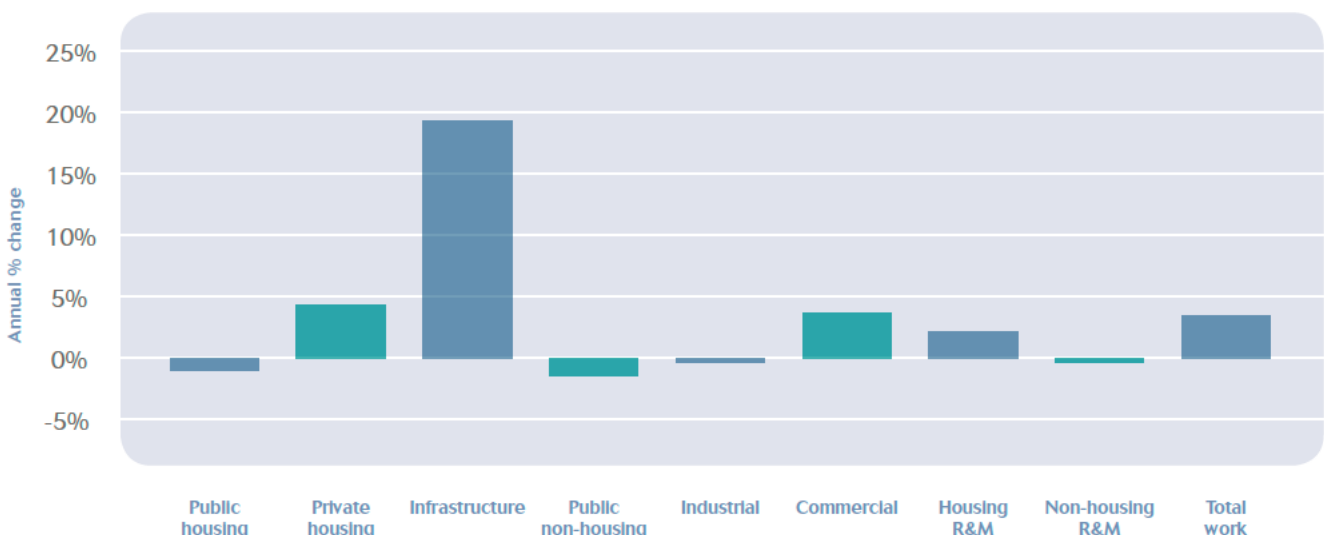
Good growth is projected for most of the sectors that drive demand for commercial premises. In particular professional and other private services (3.2% a year on average) and finance and insurance (2.9%), should provide the impetus for robust expansion in office construction. Property analysts have been reporting the return of speculative office development to some of the main regional markets around the UK for some time now. City centre take up of office space in Bristol in the third quarter of 2014 exceeded 140,000 square feet according to GVA, 20% up on the five-year average. Thus average annual growth of nearly 4% is projected for the commercial construction sector.

## 2.10 Beyond 2019

Construction activity in the South West is inevitably going to be driven by the nuclear new build programme, assuming that it goes ahead, with work on Hinkley Point C due to continue to 2024. As this project draws to a close, work should get underway on the second nuclear new build project in the region, at Oldbury, and continue until 2029. The construction element of these two projects will deliver at least £12bn of output over the 2015 to 2029 period in a market that is presently worth about £11bn annually in current prices.

The South West would also benefit, like Wales, from a resurrection of the Severn Barrage project. A company called Severn Tidal Energy was incorporated early in 2014 and has raised £10m in initial funding to take forward a proposal to build a barrage between Lavernock Point in the Vale of Glamorgan and the Brean Peninsula in Somerset. The barrage would incorporate a road and rail link over the structure, thus improving transport links between the South West and South Wales.

## Annual average construction output growth 2015-2019 – South West



## Construction output – South West (£ million, 2011 prices)

	Estimate 2014	Forecast annual % change					Annual average 2015-2019
		2015	2016	2017	2018	2019	
Public housing	233	-8%	-5%	2%	5%	2%	-0.8%
Private housing	2,215	9%	4%	3%	5%	3%	4.6%
Infrastructure	493	118%	10%	3%	-4%	2%	19.1%
Public non-housing	817	-7%	-2%	0%	2%	0%	-1.3%
Industrial	248	-13%	4%	1%	4%	4%	-0.3%
Commercial	1,565	6%	8%	1%	3%	2%	3.9%
New work	5,570	14%	5%	2%	2%	2%	4.9%
Housing R&M	2,142	2%	1%	3%	3%	1%	2.2%
Non-housing R&M	1,363	-1%	-1%	1%	-1%	0%	-0.3%
R&M	3,504	1%	1%	2%	1%	1%	1.2%
Total work	9,075	9%	3%	2%	2%	2%	3.6%

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

Infrastructure will be the best performing sector with output forecast to increase on average by 19% per year.



## 3 Construction employment forecasts for the South West

### 3.1 Total construction employment forecasts by occupation

The table presents actual construction employment (SICs 41-43, 71.1, and 74.9) in the South West for 2013, the estimated total employment across 28 occupational categories in 2014 and forecasts for the industry for 2015 to 2019. A full breakdown of occupational groups is provided in Section 5 of CSN Explained.

Construction employment in the South West is expected to be around 22,000 higher in 2019 than it was in 2014, representing an annual average increase of 1.9%, higher than the UK average of 1.5%.

This due in part to the very strong growth in infrastructure activity driving output growth of 0.7% more a year than in the UK as a whole, but also contributing strongly to employment growth will be expansion in the private housing, commercial and housing R&M sectors. Employment in 2019 in the region, at around 246,400, is expected to be very close to its 2008 peak (247,800).

Construction professionals are projected to be more in demand than managerial/supervisory and trade occupations, with annual average growth rates ranging from 3.3% to 4.1%. However, there is also likely to be strong demand for logistics personnel (4.4%) and plant operatives (3%).

#### Total employment by occupation – South West

	Actual 2013	Estimate 2014	Forecast 2015	Forecast 2019
Senior, executive, and business process managers	12,440	12,820	13,290	14,570
Construction project managers	2,850	3,000	3,120	3,580
Other construction process managers	11,020	11,570	12,050	13,800
Non-construction professional, technical, IT and other office-based staff	30,460	31,510	32,730	35,930
Construction trades supervisors	3,370	3,540	3,640	4,050
Wood trades and interior fit-out	29,510	30,320	31,050	32,750
Bricklayers	7,410	7,630	7,850	8,360
Building envelope specialists	10,810	11,090	11,350	11,970
Painters and decorators	10,680	10,790	11,110	11,350
Plasterers	4,420	4,620	4,650	4,810
Roofers	4,700	4,840	5,030	5,300
Floorers	1,090	1,100	1,120	1,160
Glaziers	2,770	2,840	2,930	3,080
Specialist building operatives nec*	3,900	3,970	4,060	4,190
Scaffolders	3,850	3,900	3,960	3,870
Plant operatives	4,280	4,540	4,660	5,270
Plant mechanics/fitters	2,250	2,200	2,300	2,110
Steel erectors/structural fabrication	2,350	2,380	2,390	2,430
Labourers nec*	6,760	6,710	6,710	6,270
Electrical trades and installation	13,480	13,690	13,980	14,350
Plumbing and HVAC Trades	20,270	20,490	20,770	21,330
Logistics	750	800	830	990
Civil engineering operatives nec*	2,290	2,290	2,280	2,410
Non-construction operatives	1,460	1,480	1,470	1,490
Civil engineers	2,530	2,640	2,760	3,110
Other construction professionals and technical staff	13,110	13,700	14,230	16,160
Architects	2,610	2,760	2,890	3,370
Surveyors	6,770	7,060	7,320	8,320
<b>Total (SIC 41-43)</b>	<b>193,170</b>	<b>198,120</b>	<b>203,330</b>	<b>215,420</b>
<b>Total (SIC 41-43, 71.1, 74.9)</b>	<b>218,190</b>	<b>224,280</b>	<b>230,530</b>	<b>246,380</b>

Source: ONS, CSN, Experian  
ref. CSN Explained, Section 3, Notes 5, 6 and 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, these flows do not include movements into the industry from training, due to the inconsistency and coverage of supply data. Therefore, the annual recruitment requirement provides an indication of the number of new employees that would need to be recruited into construction each year in order to realise forecast output.

The overall ARR for the South West, at 6,320, represents 2.7% of projected 2015 employment, a percentage point higher than the UK ratio (1.7%). The high ARR for the South West is partly as a result of the higher net employment demand in the region, but partly due to its strong manufacturing sector, which acts as a lure to those of the construction workforce in the region with the requisite skills. Given the strong growth in demand for logistics personnel, the occupation's ARR is high at 12% of base 2015 employment. Other construction-specific occupations with a high ARR over the 2015 to

2019 period are glaziers (6.8%), floorers (6.3%) and bricklayers (6%).

Please 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 already used, will be able to work in the industry without the need for significant retraining.

Non-construction operatives is a diverse occupational group including all of the activities under the SICs 41-43, 71.1, 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 – South West

	2015 - 2019
Senior, executive, and business process managers	980
Construction project managers	-
Other construction process managers	420
Non-construction professional, technical, IT and other office-based staff	2,050
Construction trades supervisors	190
Wood trades and interior fit-out	-
Bricklayers	470
Building envelope specialists	230
Painters and decorators	170
Plasterers	420
Roofers	130
Floorers	70
Glaziers	200
Specialist building operatives nec*	100
Scaffolders	160
Plant operatives	-
Plant mechanics/fitters	-
Steel erectors/structural fabrication	-
Labourers nec*	230
Electrical trades and installation	<50
Plumbing and HVAC Trades	-
Logistics	100
Civil engineering operatives nec*	-
Civil engineers	-
Other construction professionals and technical staff	220
Architects	-
Surveyors	140
Total (SIC 41-43)	5,960
Total (SIC 41-43, 71.1, 74.9)	6,320

Source: CSN, Experian  
ref. CSN Explained, Section 3, Notes 7 and 8  
\*Not elsewhere classified

## 4 Comparisons across the UK

Despite ongoing delays to the nuclear new build programme, Wales is still projected to have the strongest output growth, despite the main construction works at Wylfa unlikely to start before the beginning of 2019. Nuclear new build still remains in the forecast period for the South West, where main construction works on Hinkley Point C should begin in 2015, helping to boost the region's annual average output growth rate to 3.6%.

Greater London slips in between Wales and the South West, with a projected annual average output expansion of 4.2%. The area benefits from good growth in the commercial construction sector and very strong demand for public and private housing, despite recent indications that house prices in the capital are stabilising. Together, these three sectors accounted for 44% of London's construction output in 2013, well above the UK average (38%), and so proportionally providing a stronger driver for overall growth in the capital compared with elsewhere.

While most UK regions and nations are expected to experience quite strong growth in private housing output to 2016, followed by a slowdown to more sustainable levels, the prospects for public housing are much more uncertain as the current Affordable Homes Programme (AHP) winds down to April 2015. The overall pot of funding available from central Government for 2015–2018 is much the same on an annualised basis as it was in 2011–2015 and there are concerns that many housing associations may find it problematic to increase their borrowing from private sources in the future.

Outside of the South West, infrastructure growth is likely to be strongest in the North East and Wales, the former being driven by £400m of roads work in the Highways Agency's Area 14, which covers the region and the latter benefiting from Great Western Line electrification, road upgrades, energy works such as Swansea's tidal lagoon and, of course, nuclear new build at Wylfa in Anglesey.

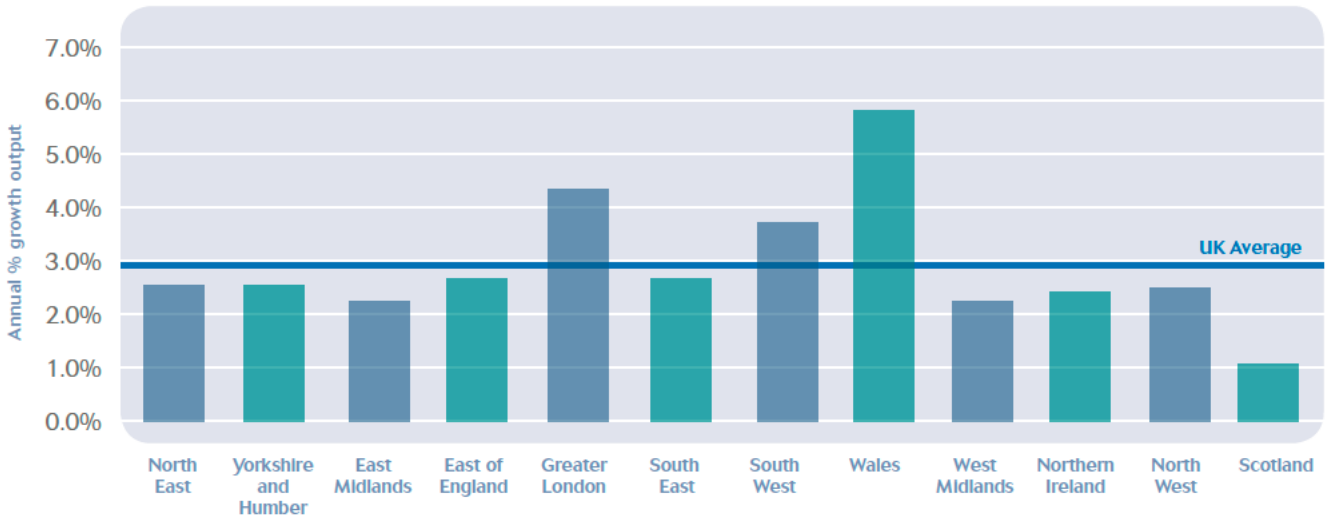
The strongest growth in commercial construction is expected to be in Yorkshire and the Humber (with an annual average growth of 6.3%), the North West (6.3%), Wales (5.9%) and Greater London (5.7%). South Yorkshire, in particular, seems to be benefiting from the reactivation of retail-led projects that were mothballed during the recession, while Wales is seeing an upsurge in conference and exhibition venue construction.

Annual average employment growth rates across the regions and nations tend to cluster within plus or minus half a percent of the 1.5% UK average. The exceptions are Greater London and Wales (2.4%) and Scotland (0.1%). For Greater London, workforce demand is mainly driven by growth in the sectors mentioned above, but even the infrastructure sector, which is already at a historic high in output terms, is expected to expand further over the next five years. Employment demand in Wales inevitably benefits from the start of main works at Wylfa, despite infrastructure being less labour intensive than many other sectors. Wylfa is a very large project in a relatively small market. Scotland's relatively poor projected output growth rate (1.1% a year on average) is only just enough to drive marginal employment growth given anticipated productivity gains.

Despite London's strong employment demand, its annual recruitment requirement (ARR) only equates to around 0.5% of projected 2015 employment. This is because the region acts as a magnet for the construction workforce within the UK and beyond. In contrast, Wales' strong employment demand is supplemented by traditional employment outflows to other regions, especially to the North West and South West; it therefore has a much higher ARR ratio than elsewhere, of 4.8%. Most other regions and nations have an ARR ratio of within a percentage point of the UK average (1.7%).

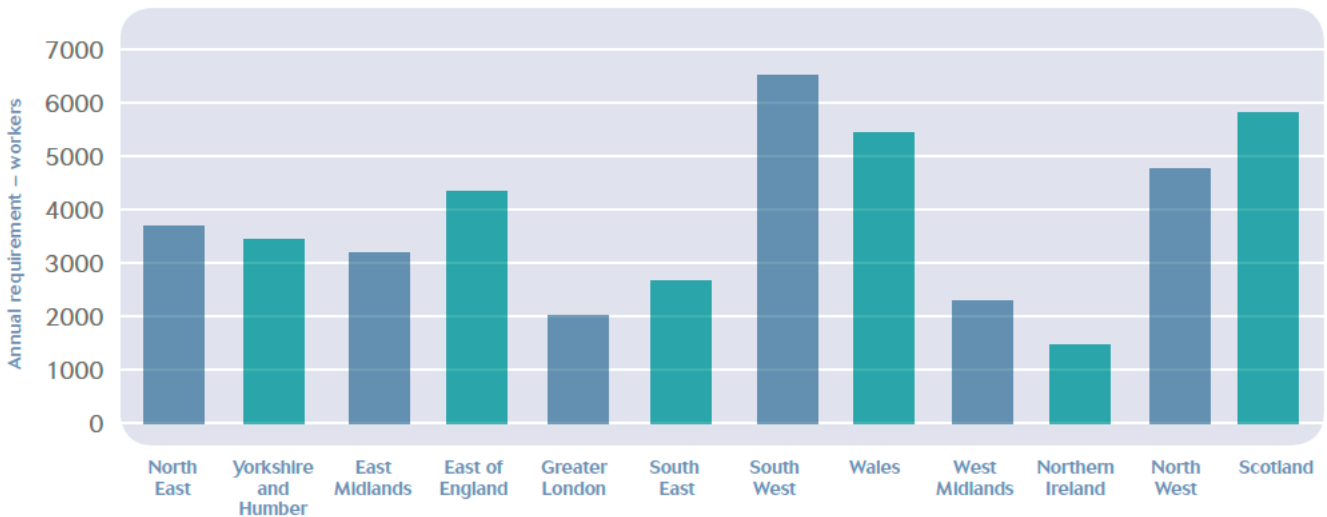


### Annual average output growth by region 2015-2019



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

### Annual recruitment requirement (ARR) by region 2015-2019



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 (SSC) or Sector Bodies.

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, other SSCs and Sector Bodies, 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, other SSCs and Sector Bodies. 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:

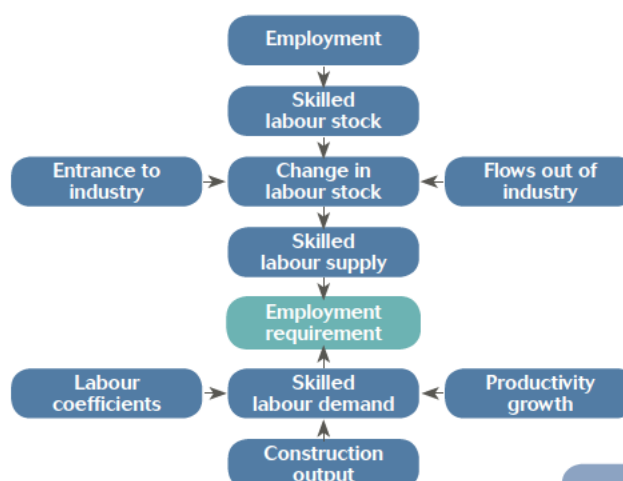
- Transfers to other industries
- International/domestic out migration
- Permanent retirements (including permanent sickness)
- Outflow to temporary sickness and home duties.

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 below.



## 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 SIC41-43 and SIC41-43, 71.1 and 74.9. The total for SIC41-43 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 SIC41-43, 71.1 and 74.9 includes all occupations.

### Footprints for Built Environment Sector Bodies

ConstructionSkills is responsible for SIC 41  
Construction of buildings, SIC 42 Civil engineering,

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

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 Sector Bodies 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 Summit Skills 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.

#### The Building Futures Group

**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.

The Building Futures Group 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.

\*The Building Futures Group 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>

<sup>1</sup> 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'.

<sup>2</sup> 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.

<sup>3</sup> 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
Sales supervisors	7130
Customer service managers and supervisors	7220
Office managers	4161

**Construction trades supervisors**

Skilled metal, electrical and electronic trades supervisors	5250
Construction and building trades supervisors	5330

**Wood trades and interior fit-out**

Carpenters and joiners	5315
Paper and wood machine operatives	8121
Furniture makers and other craft woodworkers	5442
Construction and building trades nec* (25%)	5319

**Bricklayers**

Bricklayers and masons	5312
------------------------	------

**Building envelope specialists**

Construction and building trades nec* (50%)	5319
---	------

**Painters and decorators**

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

**Plasterers**

Plasterers	5321
------------	------

**Roofers**

Roofers, roof tilers and slaters	5313
----------------------------------	------

**Floorers**

Floorers and wall tilers	5322
--------------------------	------

**Glaziers**

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

**Specialist building operatives not elsewhere classified (nec\*)**

Construction operatives nec* (100%),	8149
Construction and building trades nec* (5%)	5319
Industrial cleaning process occupations	9132
Other skilled trades nec*	5449

**Scaffolders**

Scaffolders, staggers and riggers	8141
-----------------------------------	------

**Plant operatives**

Crane drivers	8221
Plant and machine operatives nec*	8129
Fork-lift truck drivers	8222
Mobile machine drivers and operatives nec*	8229

**Plant mechanics/fitters**

Metal working production and maintenance fitters	5223
Precision instrument makers and repairers	5224
Vehicle technicians, mechanics and electricians	5231
Elementary process plant occupations nec*	9139
Tool makers, tool fitters and markers-out	5222
Vehicle body builders and repairers	5232

**Steel erectors/structural fabrication**

Steel erectors	5311
Welding trades	5215
Metal plate workers and riveters	5214
Construction and building trades nec* (5%)	5319
Smiths and forge workers	5211
Metal machining setters and setter-operators	5221

**Labourers nec\***

Elementary construction occupations (100%)	9120
--	------

**Electrical trades and installation**

Electricians and electrical fitters	5241
Electrical and electronic trades nec*	5249
Telecommunications engineers	5242

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

Plumbers and heating and ventilating engineers	5314
Pipe fitters	5216
Construction and building trades nec* (5%)	5319
Air-conditioning and refrigeration engineers	5225

**Logistics**

Large goods vehicle drivers	8211
Van drivers	8212
Elementary storage occupations	9260
Buyers and purchasing officers (50%)	3541
Transport and distribution clerks and assistants	4134

**Civil engineering operatives not elsewhere classified (nec\*)**

Road construction operatives	8142
Rail construction and maintenance operatives	8143
Quarry workers and related operatives	8123

**Non-construction operatives**

Metal making and treating process operatives	8117
Process operatives nec*	8119
Metal working machine operatives	8125
Water and sewerage plant operatives	8126
Assemblers (vehicles and metal goods)	8132
Routine inspectors and testers	8133
Assemblers and routine operatives nec*	8139
Elementary security occupations nec*	9249
Cleaners and domestics*	9233
Street cleaners*	9232
Gardeners and landscape gardeners	5113
Caretakers	6232
Security guards and related occupations	9241
Protective service associate professionals nec*	3319

\*Not elsewhere classified

## Civil engineers

Civil engineers 2121

## 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





## 6. CSN Website and contact details

### The CSN website

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

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

The main UK report, along with the twelve LMI reports (one for Northern Ireland, Scotland, Wales and each of the nine English regions) can be downloaded from the site, while other CITB 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
- Inflows and outflows across the regions and devolved nations.

CSN members therefore have:

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

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

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

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

### Contact details

For further information about the CSN website, enquiries relating to the work of the CSN, or to register your interest in 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:  
Karen Hazelden  
Research Analyst  
Research and Development  
07730 802395  
karen.hazelden@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. CITB is registered as a charity in England and Wales (Reg No 264289) and in Scotland (Reg No SC044875).