

# Construction Skills Network

North West 2013-2017

Labour Market Intelligence





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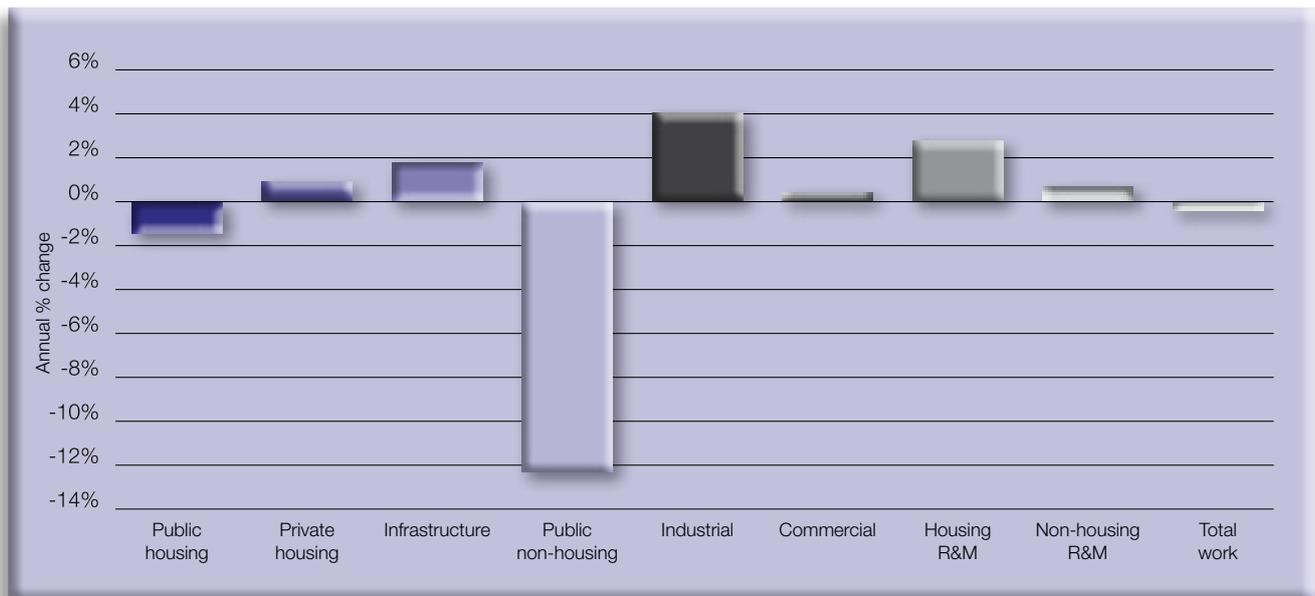
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# 1. Summary – North West

Construction output in the North West is forecast to decline at an average rate of 0.4% per year over the five years to 2017, in contrast to annual average growth of 0.8% for the UK as a whole. The repair and maintenance (R&M) sectors are expected to fare better than the new work sectors, with average growth of 1.3% in the former but an average contraction of 1.6% in the latter. Given this weak overall output performance, it is not a surprise that employment in the region is expected to fall by 1.1% per year on average. The North West's annual recruitment requirement is 2,870, equivalent to 1.1% of base 2013 employment, in line with the UK average.

**Annual average construction output growth 2013-2017 – North West**



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

The short term prospects for the region's construction sector are weak with output expected to return to growth in 2015



## Key findings

The North West's construction sector returned to growth in 2010, but expansion has been short-lived with a 3% fall in output in 2011 followed by an estimated drop of 13% in 2012. The short-term prospects for the region's construction sector are weak, with a further two years of contraction expected in 2013 and 2014, albeit much more modest. This reflects weakness across the majority of sectors, with only the industrial one expected to see any substantial increase in the short term.

Medium term prospects are better, with output expected to return to growth in 2015 and rise in the remaining years of the forecast period, albeit only weakly. The region benefitted strongly from the early stages of the Building Schools for the Future (BSF) programme, which drove marked growth in the public non-housing sector between 2007 and 2011, with output almost doubling over the period. Therefore, the sector is expected to decline markedly over the five years to 2017 as output returns to more 'normal' levels.

The private construction sectors continue to be affected by weakness in the wider economy with poor business and consumer confidence providing little impetus for investment in new developments. Conditions should pick up over the next year or so and will provide some boost to demand. Preliminary construction works at Moorside nuclear power station are due to start in 2017, driving strong growth in the infrastructure sector at the end of the forecast period. In addition, the sector will benefit from work starting on the new Mersey Crossing, expected in 2013, and the Liverpool 2 deep-water container terminal at the Port of Liverpool.

The underemployment issue in the North West suggests that, although output in the region will return to growth in 2015, employment will continue to decline over the forecast period to 2017. At 247,360 in 2017, construction employment in the region is expected to be slightly below its level in 2001 and 17% below its 2008 peak.

Although overall construction employment in the region is forecast to fall over the five years to 2017, there are some occupations which are still expected to see employment rise over the forecast period. The strongest increase in employment is expected to be for floorers (5.6%) and glaziers (3.2%). In contrast, the number of surveyors employed in the North West is forecast to fall by 18.6% and plant mechanics/fitters by almost 15%.

The annual recruitment requirement (ARR) for the North West is 2,870, which is equivalent to 1.1% of base 2013 employment. As a proportion of base 2013 employment, the largest requirements are for plant operatives, glaziers, floorers and logistics personnel.

## Regional comparisons 2013-2017

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

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

# 2. The outlook for construction in the North West

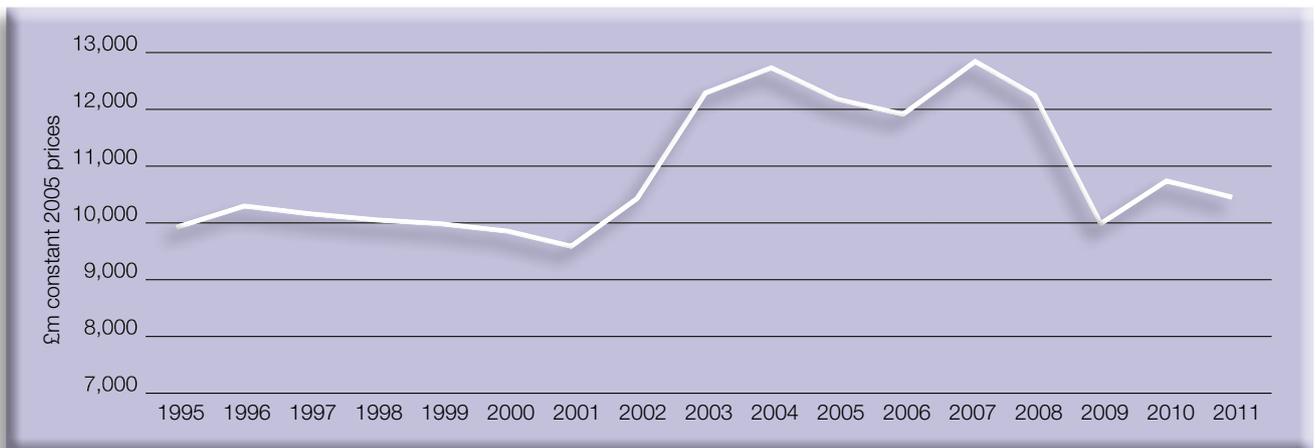
## 2.1 Construction output in the North West – overview

After 8% growth in 2010, output fell back by 3% in 2011 to total an estimated £10.44bn in 2005 prices in 2011 in the North West. There was a significant difference in performance between the new work and repair and maintenance (R&M) sectors, with output in the former declining by 5% while it rose by 3% in the latter.

The lower affordable housing programme (AHP) funding for the 2011-2015 period began to make itself felt in the second half of 2011, with public housing output down by

4% over the year as a whole, although this was after a 60% rise in activity in 2010. In contrast public non-housing output continued to grow in the North West in 2011, buoyed by Building Schools for the Future (BSF) projects that were allowed to go ahead despite the programme's cancellation in mid-2010. The weakest sector in 2011 was industrial construction, with a 35% fall in output, hit by weak domestic demand and the evaporation of growth in our main export markets.

### Construction output 1995-2011 – North West



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

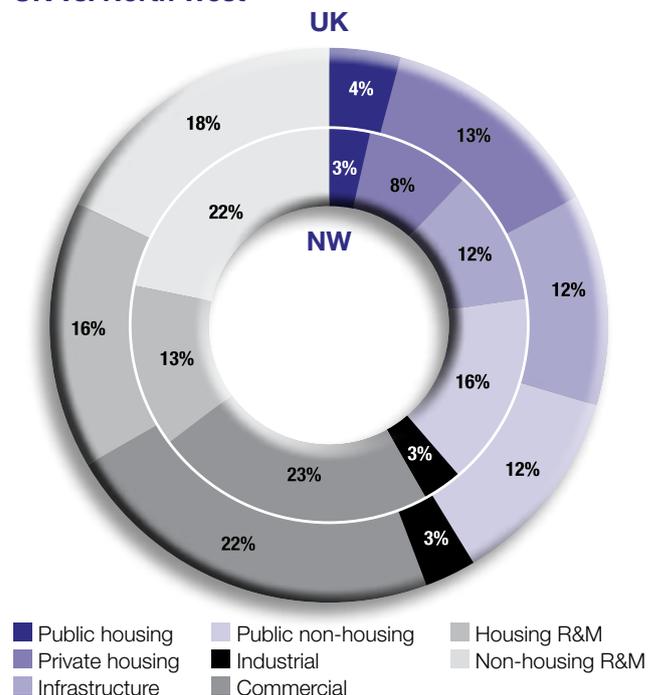
## 2.2 Industry structure

The diagram, construction industry structure 2011 – UK vs. North West, illustrates the sector breakdown of construction in the North West compared to that in the UK. Effectively, the percentages for each sector illustrate what proportion of total output each sector accounts for. It should be noted that the Office for National Statistics (ONS) has revised its economic sector disaggregation since 2011, therefore data on industry structure in previous Labour Market Intelligence reports is not directly comparable with data in this one.

The structure of the North West's construction industry showed some divergence from the UK as a whole last year. Whereas in 2010 new work accounted for the same share, 67%, of total construction output in both the North West and the UK, in 2011 new work's share in the North West dropped to 65%, and fell to 66% in the UK as a whole.

The main sector differences have widened a little bit. Private housing only took an 8% share of total output in the North West in 2011, compared with 13% across the UK as a whole. The corresponding shares in 2010 were 9% and 12% respectively. For the public non-housing sector the gap in 2011 widened to 4% from 2% in the previous year, with the sector taking a larger proportion of output in the North West (16%) than in the UK as a whole (12%).

### Construction industry structure 2011 – UK vs. North West



Source: ONS, Experian

## 2.3 Economic overview

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

## 2.4 Economic structure

In 2011 Gross Value Added (GVA) in the North West totalled a little less than £120bn in 2009 prices, a 1% increase on the previous year and the second consecutive year of growth after the dark days of 2008 and 2009. As a share of the UK, the North West accounted for 9.2% of GVA in 2011, the same share as in 2010.

Professional and other private services took over as the biggest sector in the North West economy in 2011, taking a 20.8% share of GVA and pushing public services into

second place (20%). While the former grew by 3.6% in 2011 the latter shrunk by 1.5%. Strongest growth in the region in 2011 was in the information and communication sector (8.8%), while at the other end of the scale the utilities sector experienced a 7.8% decline in GVA and finance and insurance a 6% fall.

The main difference between the North West economy and that of the UK is the importance of manufacturing. The manufacturing sector accounted for 15% of the North West's GVA in 2011 compared with 11% for the UK as a whole.

### Economic structure – North West (£ billion, 2009 prices)

Selected sectors	Actual 2011	Forecast <i>Annual % change, real terms</i>					
		2012	2013	2014	2015	2016	2017
Professional and other private services	24.9	1.5	0.6	1.5	2.0	2.2	2.2
Public services	23.9	0.9	-0.3	0.1	0.3	0.5	0.8
Manufacturing	18.4	-1.2	1.7	2.0	1.5	1.1	0.9
Wholesale and retail	14.0	-0.6	0.9	1.9	2.3	2.2	2.1
Finance and insurance	6.8	-0.6	0.8	1.3	2.7	3.4	3.6
<b>Total Gross Value Added (GVA)</b>	<b>119.6</b>	<b>-0.4</b>	<b>0.5</b>	<b>1.5</b>	<b>1.9</b>	<b>2.0</b>	<b>1.9</b>

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

## 2.5 Forward looking economic indicators

GVA in the North West is projected to grow at an annual average rate of 1.5% over the 2013-2017 period, slower than the UK average of 1.9%. Only moderate growth is expected in most of the main economic sectors in the North West.

Professional and other private services, the biggest sector, is forecast to see annual average growth of 1.7%, while public services, only just behind in terms of size, is likely to see only meagre growth of 0.3% a year on average. Given the pressure on public budgets, the poor performance of public services should come as no surprise. Manufacturing, the third biggest sector in the North West, has a predicted annual average growth rate of 1.4%, with wholesale and retail, the next largest sector, expected to see a 1.9% increase in GVA a year over the forecast period.

On the demand side, real household disposable income

(RHD) and consumer spending fell sharply in the region in 2011, by 2.1% in the former and 1.7% in the latter. RHD in particular was affected by high inflation and sluggish wage growth. It is expected to have returned to growth in 2012 as inflation eased somewhat, but consumer spending is still believed to have remained negative as consumers continued to pay down debt and increase savings. Growth in RHD is projected to slowly accelerate during the forecast period and consumer spending growth should start exceeding that of RHD again by 2014, signalling a return to more normal credit conditions.

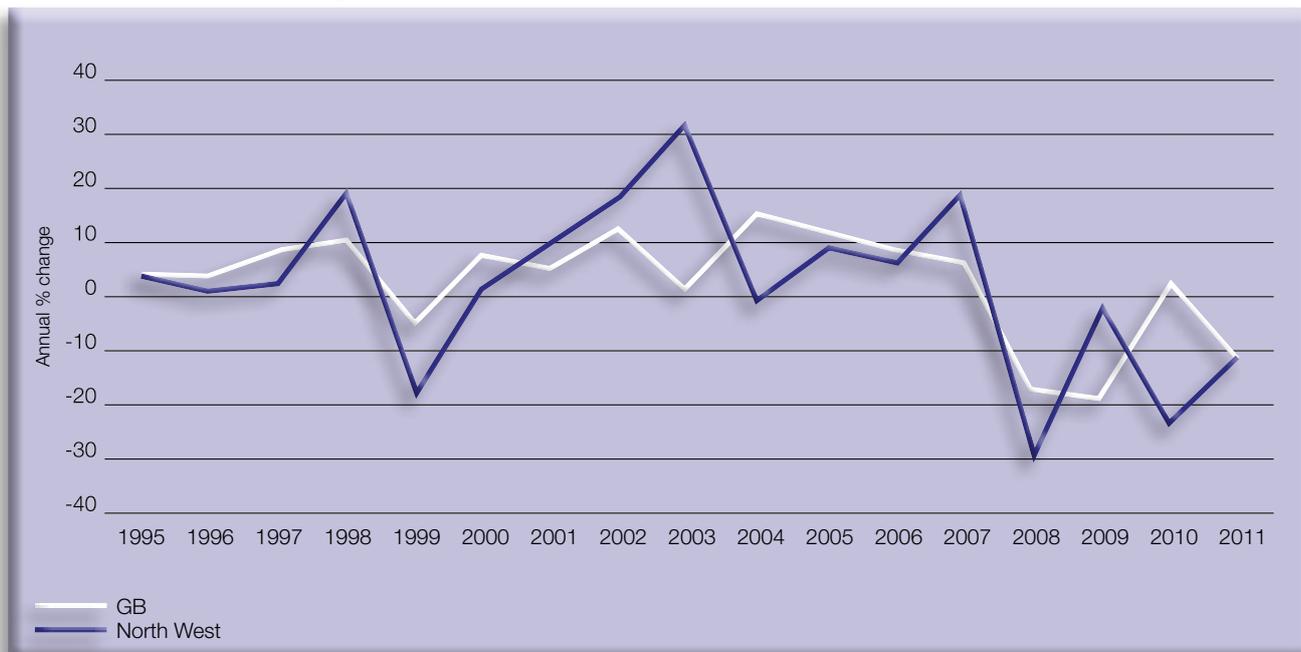
The working age population stood at 4.272m in 2011 and is predicted to increase as a share of total population over the forecast period. House prices are estimated to have fallen marginally in the region in 2012 and are expected to continue to do so this year before mild growth sets in by 2014.

### Economic indicators – North West (£ billion, 2009 prices – unless otherwise stated)

	Actual 2011	Forecast <i>Annual % change, real terms</i>					
		2012	2013	2014	2015	2016	2017
Real household disposable income	93	0.8	0.7	1.6	1.7	1.8	2.2
Household spending	94	-0.9	0.3	1.7	2.2	2.3	2.2
Working age population (000s and as % of all)	4,272	61.2%	61.5%	61.8%	62.1%	62.3%	62.4%
House prices (£, current prices)	152,743	-0.4	-0.3	1.1	1.8	2.0	2.2
LFS unemployment (millions)	0.30	11.18	2.15	-7.26	-7.46	-5.08	-7.06

Source: ONS, DCLG, Experian

## New construction orders growth 1995-2011 – North West vs. GB



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

### 2.6 New construction orders – overview

New construction orders in the North West have continued on their downward path, falling by over 10% to £4.28bn in current prices, their lowest level in the region since 2001. This represents their fourth consecutive year of decline and left new orders in the region in 2011 at only 47% of their 2007 peak.

The only sectors that saw any growth in new orders in 2011 were the housing ones. Public housing new orders rose by nearly 32% to £256m in current prices, albeit after a very poor 2010. Over half of these new orders were placed in the first quarter of 2011 and therefore are likely to result from final allocations in the 2008-2011 AHP. All the non-housing sectors experienced sharp declines in the level of new orders in 2011, the worst being for the industrial sector. New orders for industrial construction in 2011, at £186m, were a mere 27% of their 2006 peak and the lowest since the current regional data series started in 1985.

### 2.7 New construction orders – current situation

New orders in the first half of 2012 totalled £1.92bn in current prices, 9% down compared with the previous half-year and 12% below their level in the corresponding period of 2011.

New orders in the first half of the year were particularly weak in the public non-housing sector, down by 17% compared with the previous half-year and 35% below their level in the corresponding period of 2011. Infrastructure orders were also heavily down (24%) half-year-on-half-year, although they were 29% higher than in the same period of 2011.

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

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

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

	Actual 2011	Annual % change				
		2007	2008	2009	2010	2011
Public housing	256	46.1	-42.8	17.8	-29.0	31.8
Private housing	741	-11.0	-46.0	-43.3	3.6	32.2
Infrastructure	645	80.9	58.5	61.8	-55.9	-16.6
Public non-housing	1205	18.2	21.6	31.4	-20.4	-22.2
Industrial	186	-3.3	0.8	-49.6	-19.4	-32.4
Commercial	1252	31.8	-54.0	-29.4	2.3	-12.6
<b>Total new work</b>	<b>4,285</b>	<b>18.6</b>	<b>-29.2</b>	<b>-2.4</b>	<b>-23.5</b>	<b>-10.4</b>

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

Construction output in the North West totalled £5.28bn in current prices in the first six months of 2012, a 12% decline on the previous half-year and 9% below the corresponding period of 2011. The infrastructure (-26%/-29% on the above measures), public non-housing (-20%/-18%) and industrial (-12%/-35%) sectors were particularly weak in the first half of last year. It is illuminating that, while the decline in public non-housing output was no surprise given the Government's austerity measures, it is not only the public construction sectors that are struggling to see growth.

New orders provide an indication of short-term trends in construction output and the recent weak trends in new orders suggest that output will continue to decline in 2013 and 2014, following an estimated contraction of 13% in 2012. However, the pace of decline will ease with output forecast to fall at an average rate of 2.9% over the 2013-2014 period.

Not surprisingly it is expected to be the public sectors, both housing and non-housing, which fare the worst in the short term. The weakest performing sector is expected to be the public non-housing one, with an annual average decline of 23.6% in both 2013 and 2014. The region benefitted strongly from the early stages of the Building Schools for the Future (BSF) programme, with output in the sector almost doubling between 2007 and 2011, and therefore it has further to fall to reach more 'normal' levels of output.

Public housing output is expected to fall by 8.3% a year on average in 2013 and 2014, although this masks a fall of 16% in the first year and a very weak return to growth in 2014 (1%). Given the marked cuts in the 2011-2015 Affordable Housing Programme for England as a whole it is no surprise that output in the public housing sector will be affected. The North West received £689m of funding under the 2008-2011 National Affordable Housing Programme but is due to receive just £188m over the five years to 2015 to fund the development of around 9,300 new affordable homes.

In contrast, the industrial construction sector is expected to fare well in the short term, with growth forecast to average 7.9% in 2013 and 2014. However, this growth follows an estimated decline of 21% in 2012 which took output in the sector to its lowest level since at least 1990, when our constant price data series start. Work is expected to start in 2013 on the construction element of the £125m investment in Vauxhall's Ellesmere Port factory, with the production of the new Astra expected to start at the plant in 2015.

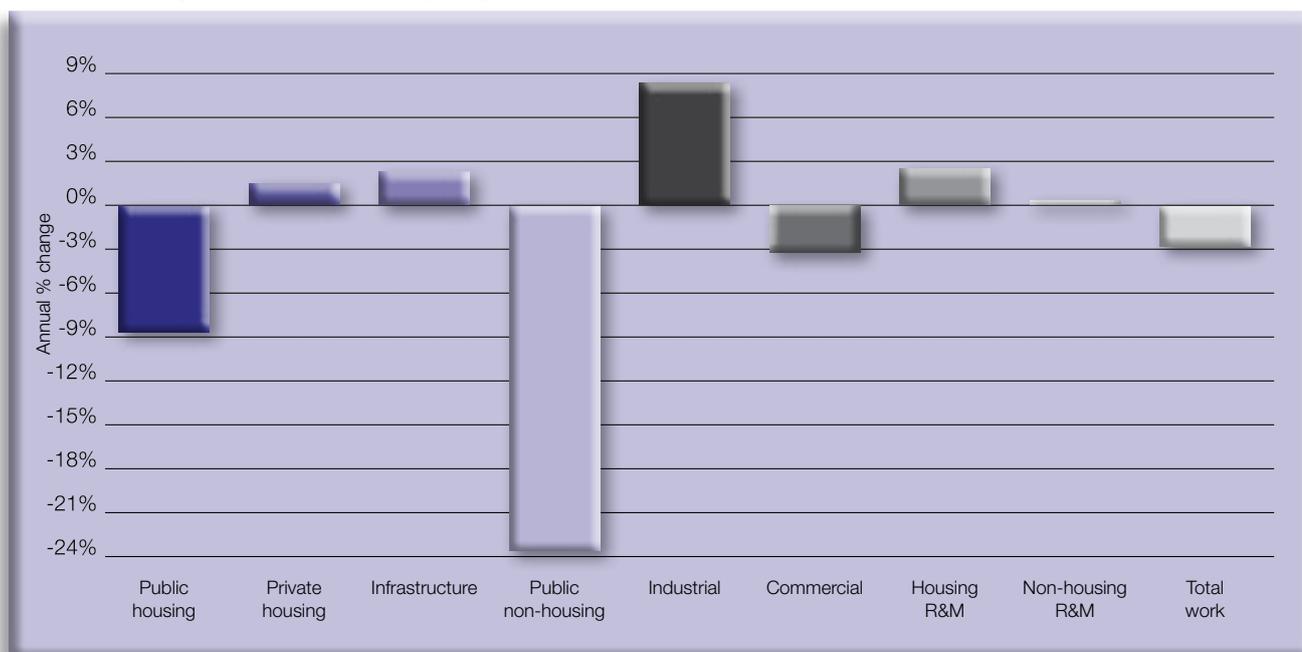
## 2.9 Construction output – long-term forecasts (2013-2017)

Over the five years to 2017, construction output in the North West is forecast to decline at an average rate of 0.4% per year, in contrast to growth averaging 0.8% per year in the UK as a whole. Whilst new work output is expected to decline at an average annual rate of 1.6%, the R&M sector will fare better, with growth averaging 1.3% per year over the period.

The housing R&M sector is forecast to see average annual growth of 2.7% over the five years to 2017. The sector is expected to benefit from Project Viridis, the plans to retrofit 100,000 social housing units in Liverpool. However, recent cuts to the feed-in tariffs have led Liverpool Council to cut back on the solar photovoltaic installation aspect under the scheme.

The preferred bidder for the £600m new Mersey Gateway bridge is due to be announced by spring 2013, with main construction work likely to begin later in the year, providing some boost to the infrastructure sector throughout the forecast period. It is expected to take three years to complete this dual, three-lane bridge. Work is also due to start on Peel Ports' £300m deep-water container terminal in Liverpool, called Liverpool 2. It includes a £70m, 854m-long quay wall and the construction of 3.5km of new roads. Preliminary works at the new nuclear power station at Moorside in Cumbria are due to start in 2017, providing

### Annual average construction output growth 2013-2014 – North West



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

## Construction output – North West (£ million, 2005 prices)

	Actual	Forecast annual % change			Annual average
	2011	2012	2013	2014	2013-14
Public housing	342	-12%	-16%	1%	-8.3%
Private housing	868	-2%	1%	2%	1.3%
Infrastructure	1,182	-28%	0%	4%	2.3%
Public non-housing	1,639	-23%	-26%	-22%	-23.6%
Industrial	347	-21%	4%	12%	7.9%
Commercial	2,418	-15%	-3%	-4%	-3.1%
<b>New work</b>	<b>6,796</b>	<b>-18%</b>	<b>-7%</b>	<b>-4%</b>	<b>-5.4%</b>
Housing R&M	1,379	2%	0%	4%	2.4%
Non-housing R&M	2,265	-7%	-1%	1%	-0.1%
<b>Total R&amp;M</b>	<b>3,645</b>	<b>-4%</b>	<b>0%</b>	<b>2%</b>	<b>0.9%</b>
<b>Total work</b>	<b>10,441</b>	<b>-13%</b>	<b>-5%</b>	<b>-1%</b>	<b>-2.9%</b>

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

more impetus to the sector at the end of the forecast period. Over the five years to 2017, infrastructure construction output is expected to average 1.9% per year.

The private housing sector in the North West is forecast to see only weak annual average growth of 0.8% over the five years to 2017. According to various measures of house price inflation, house prices in the region continue to decline on an annualised basis, with house price growth not expected to return until 2014. Demand continues to be constrained by concerns over unemployment and the ongoing squeeze on incomes from weak wage growth and elevated inflation. Improving economic conditions should provide some boost to demand, but growth will be lacklustre and output is expected to be only 36% of its 2006 peak in 2017.

Commercial construction output is expected to see two further years of decline in 2013 and 2014, before weak growth returns in 2015. Weak economic conditions are impacting on both consumer and business confidence, providing little incentive for investment in new developments. Retail and leisure facilities are being particularly affected by poor consumer spending growth. Conditions should improve over the next couple of years, providing more impetus for new development work. A new £450m hospital and biomedical research facility is planned in Liverpool to replace the Royal Liverpool University Hospital. It will be delivered through PFI funding and work is due to start on the new building in spring 2013 with completion of the project expected by the end of 2016. Liverpool Football Club has recently announced that it is committed to remain at Anfield and will invest in redevelopment of the site, which could start in 2014.

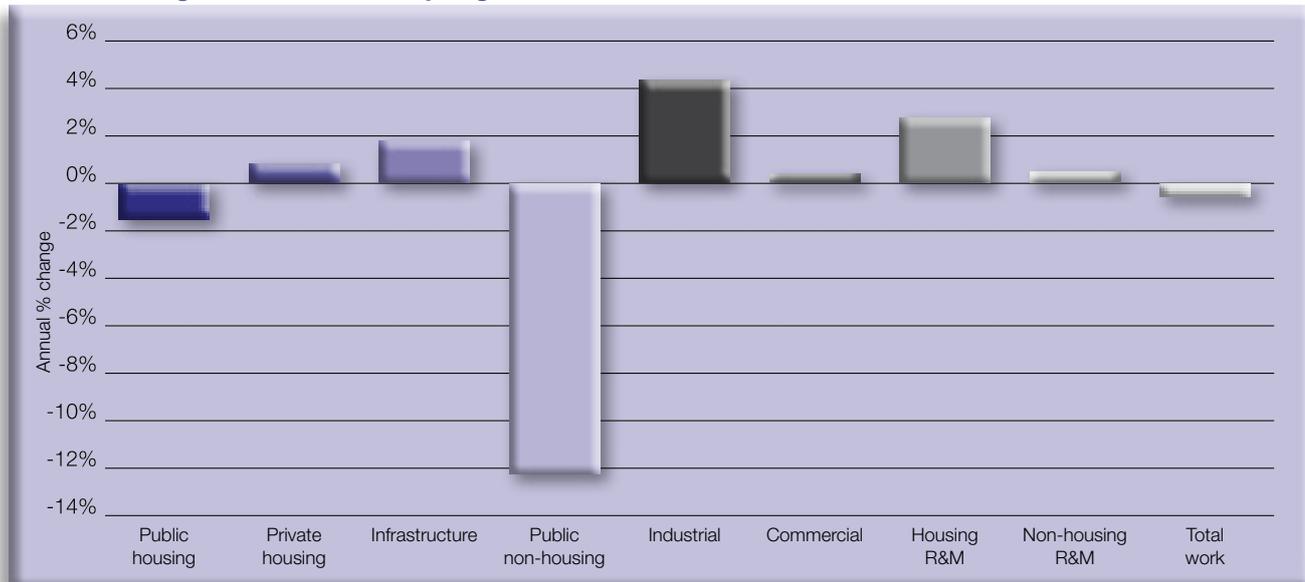
The public non-housing sector is expected to fare the worst over the forecast period, with an average decline of 12.3% per year over the five years to 2017. This is a much stronger contraction than the 5.8% per year on average for the UK as a whole. The region benefitted markedly from the early waves of BSF but, given the prospects for public spending, there are unlikely to be any significant Government investment programmes of a similar scale to replace this. The relative importance of this sector in the region (16%) compared to nationally (12%) means that this decline has a bigger impact on the overall performance of the region's new work construction sectors than in the UK as a whole.

### 2.10 Beyond 2017

Enabling works at Moorside nuclear power station are now not expected to start until 2017, according to the latest information from the Nuclear Industry Association (NIA). This suggests that main construction work will fall outside the current forecast period, providing a boost to the North West's infrastructure sector beyond 2017. The reactors are expected to be at full power by 2025. The planned new nuclear power station at Heysham has been dropped from the pre-2020 programme, but it is still expected to go ahead at a later date.

The housing R&M sector is forecast to see average annual growth of 2.7% over the five years to 2017

## Annual average construction output growth 2013-2017 – North West



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

## Construction output – North West (£ million, 2005 prices)

	Estimate	Forecast annual % change					Annual average 2013-17
		2012	2013	2014	2015	2016	
Public housing	300	-16%	1%	6%	2%	3%	-1.4%
Private housing	851	1%	2%	3%	1%	-2%	0.8%
Infrastructure	848	0%	4%	-5%	2%	9%	1.9%
Public non-housing	1,255	-26%	-22%	-7%	-6%	2%	-12.3%
Industrial	273	4%	12%	5%	2%	-1%	4.1%
Commercial	2,061	-3%	-4%	1%	1%	5%	0.1%
<b>New work</b>	<b>5,589</b>	<b>-7%</b>	<b>-4%</b>	<b>0%</b>	<b>0%</b>	<b>3%</b>	<b>-1.6%</b>
Housing R&M	1,411	0%	4%	4%	5%	-1%	2.7%
Non-housing R&M	2,101	-1%	1%	1%	1%	0%	0.3%
<b>R&amp;M</b>	<b>3,512</b>	<b>0%</b>	<b>2%</b>	<b>2%</b>	<b>3%</b>	<b>0%</b>	<b>1.3%</b>
<b>Total work</b>	<b>9,100</b>	<b>-5%</b>	<b>-1%</b>	<b>1%</b>	<b>1%</b>	<b>2%</b>	<b>-0.4%</b>

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

Liverpool Waters is a £5.5bn development of a disused dockland, with the work expected to be spread over 30 years. It could start as early as 2013, but it still needs approval from central Government. The long timeframe of the project means it is likely to provide a steady stream of work for the construction sector, rather than drive any significant growth in any one year. The new waterfront quarter will include office space, 9,000 new homes, a new cruise terminal and a cultural building.

Energy efficiency and microgeneration work could be a substantial driver of construction activity going forwards. Project Viridis in Liverpool is expected to continue post-2017, and work in both the residential and non-domestic sectors could be stimulated by the Green Deal and other Government schemes to encourage investment in these measures.



# 3. Construction employment forecasts for the North 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 North West for 2011, the forecast total employment in 26 occupations and in the industry as a whole between 2013 and 2017. A full breakdown of occupational groups is provided in Section 5 of CSN Explained.

Construction output in the North West is expected to fall until 2014 before picking up in the remaining years of the period to 2017, but the lagged affect between output and employment, coupled with underemployment, is projected to affect employment until 2017. Output has fallen by an estimated 29% in the region in the five years to 2012, but employment has dropped by just 11% over the same period. This significant output/employment gap suggests that firms in the North West have not been shedding staff at the same rate that output has been contracting. Considering

the weakness of the output forecasts over the five years to 2017, employment is therefore likely to continue to decline in the region for some time after output starts to improve.

In 2011, the largest construction-specific occupation was wood trades and interior fit-out, which accounted for 12% of total construction employment, followed by 10% for construction managers. The share of both occupations is expected to edge down, to 11% and 9%, respectively, as they see slightly stronger declines than for overall construction employment in the region.

Although overall employment is expected to decline over the five years to 2017, there are a number of occupations which are forecast to see growth. The strongest increases are expected for floorers (5.6%) and glaziers (3.2%). In contrast, surveyors (-18.6%), plant mechanics/fitters (-14.9%) and bricklayers (-9.7%) are likely to see the most marked falls in employment over the same period.

### Total employment by occupation – North West

	Actual 2011	Forecast	
		2013	2017
Senior, executive, and business process managers	12,630	12,070	11,490
Construction managers	26,090	24,810	23,330
Non-construction professional, technical, IT, and other office-based staff	29,220	29,410	30,480
Wood trades and interior fit-out	31,590	29,060	27,770
Bricklayers	10,170	9,150	8,640
Building envelope specialists	8,860	8,540	8,430
Painters and decorators	13,220	12,220	11,510
Plasterers and dry liners	5,680	5,260	5,070
Roofers	2,920	2,820	2,770
Floorers	2,930	2,920	3,070
Glaziers	3,250	3,150	3,270
Specialist building operatives nec*	5,200	4,800	4,510
Scaffolders	2,000	1,980	1,990
Plant operatives	4,600	4,410	4,370
Plant mechanics/fitters	4,790	4,440	3,950
Steel erectors/structural	4,500	4,360	4,360
Labourers nec*	11,590	10,740	10,320
Electrical trades and installation	23,990	22,990	22,370
Plumbing and HVAC trades	13,380	13,380	13,590
Logistics	2,140	2,070	1,940
Civil engineering operatives nec*	6,000	5,560	5,240
Non-construction operatives	4,650	4,490	4,300
Civil engineers	6,020	5,930	5,950
Other construction professionals and technical staff	17,860	16,850	15,870
Architects	3,870	3,740	3,680
Surveyors	11,980	10,460	9,090
<b>Total (SIC 41-43)</b>	<b>229,400</b>	<b>218,630</b>	<b>212,770</b>
<b>Total (SIC 41-43, 71.1, 74.9)</b>	<b>269,130</b>	<b>255,610</b>	<b>247,360</b>

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

### 3.2 Annual recruitment requirements (ARR) by occupation

The ARR is a gross requirement that takes into account workforce flows into and out of construction, due to factors such as movements between industries, migration, sickness, and retirement. However, these flows do not include movements into the industry from training, due to the inconsistency and coverage of supply data. Therefore, the annual recruitment requirement provides an indication of the number of new employees that would need to be recruited into construction each year in order to realise forecast output.

The ARR for the 26 occupations within the North West's construction industry is illustrated in the table. The figure of 2,870 is indicative of the average requirements per year for the industry, as based on the output forecasts for the region. This takes into account 'churn' i.e. the flows into and out of the industry, excluding training flows.

In absolute terms, the largest requirements for construction-specific occupations are expected to be for construction managers (350), plant operatives (290) and wood trades and interior fit-out (200). However, in terms of the percentage of base 2013 employment, plant operatives (6.6%), logistics personnel (6.3%), glaziers (5.4%) and floorers (5.1%) are forecast to be most in demand.

Some interesting data has emerged on the geographic mobility of the construction workforce from the latest mobility

report from CITB-ConstructionSkills. According to the study, 79% of the North West's construction workforce in 2012 originated in the region, higher than the UK average of 65.8%. Not surprisingly the biggest shares from outside the North West came from the regions immediately adjacent: 5% from Yorkshire and the Humber and 4% from the West Midlands. Wales accounted for 3% of the North West's construction workforce, as did Northern Ireland and Scotland.

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

Non-construction operatives is a diverse occupational group including all of the activities under the SICs 41-43, 71.1, 74.9 umbrella that cannot be classified elsewhere, such as cleaners, elementary security occupations and routine inspectors and testers. The skills required in these occupations are highly transferable to other industries and forecasting such movement is hazardous given the lack of robust supportive data. Therefore the ARR for non-construction operatives is not published.

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

#### Annual recruitment requirement by occupation – North West

	2013-2017
Senior, executive, and business process managers	-
Construction managers	350
Non-construction professional, technical, IT, and other office-based staff	330
Wood trades and interior fit-out	200
Bricklayers	170
Building envelope specialists	<50
Painters and decorators	180
Plasterers and dry liners	120
Roofers	60
Floorers	150
Glaziers	170
Specialist building operatives nec*	<50
Scaffolders	80
Plant operatives	290
Plant mechanics/fitters	-
Steel erectors/structural	<50
Labourers nec*	190
Electrical trades and installation	130
Plumbing and HVAC trades	<50
Logistics	130
Civil engineering operatives nec*	110
Non-construction operatives	-
Civil engineers	100
Other construction professionals and technical staff	-
Architects	-
Surveyors	-
<b>Total (SIC 41-43)</b>	<b>2,770</b>
<b>Total (SIC 41-43, 71.1, 74.9)</b>	<b>2,870</b>

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

## 4. Comparisons across the UK

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

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

The profile of employment changes across the regions and devolved nations is different to that of output over the period to 2017. The relationship between overall output and employment is not straightforward given that some sectors are much more labour-intensive than others, and the relative

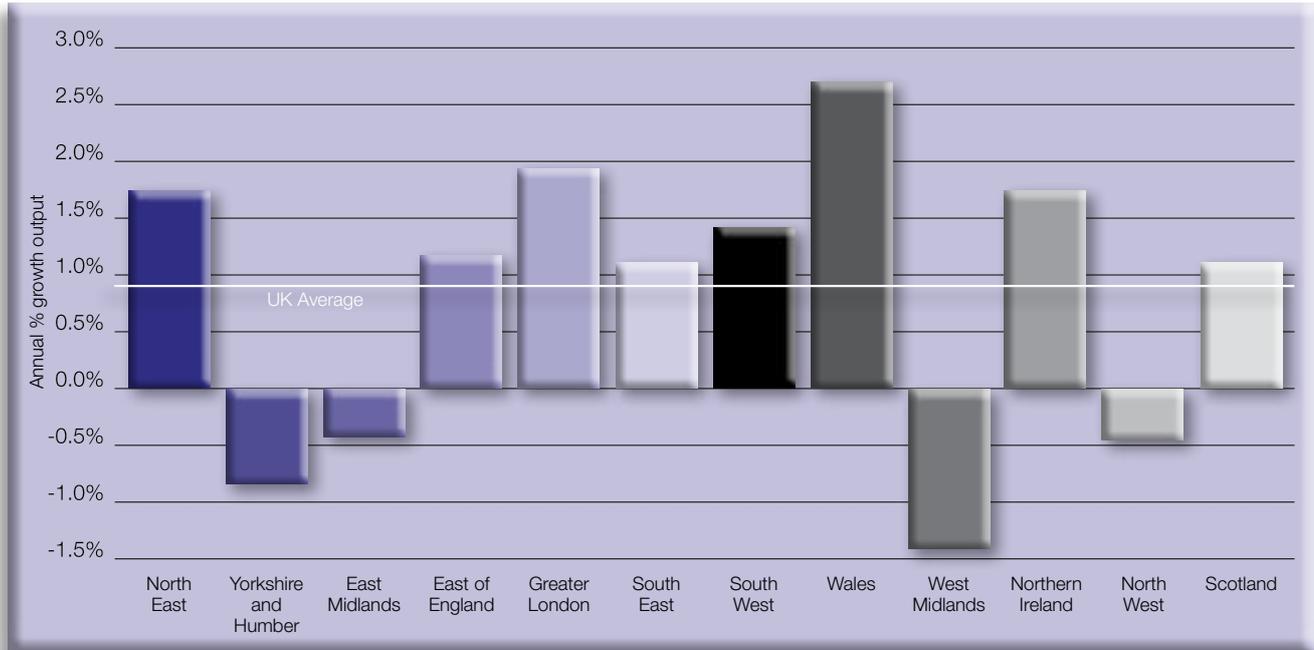
performances of the sectors within overall output impacts on the prospects for employment across the UK. For example, Wales' output growth is largely predicated on the new nuclear power station at Wylfa and new nuclear build is one of the least labour intensive areas of the construction industry. Greater London and the East of England are the only two regions predicted to see employment growth over the forecast period, and even here it is very weak.

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



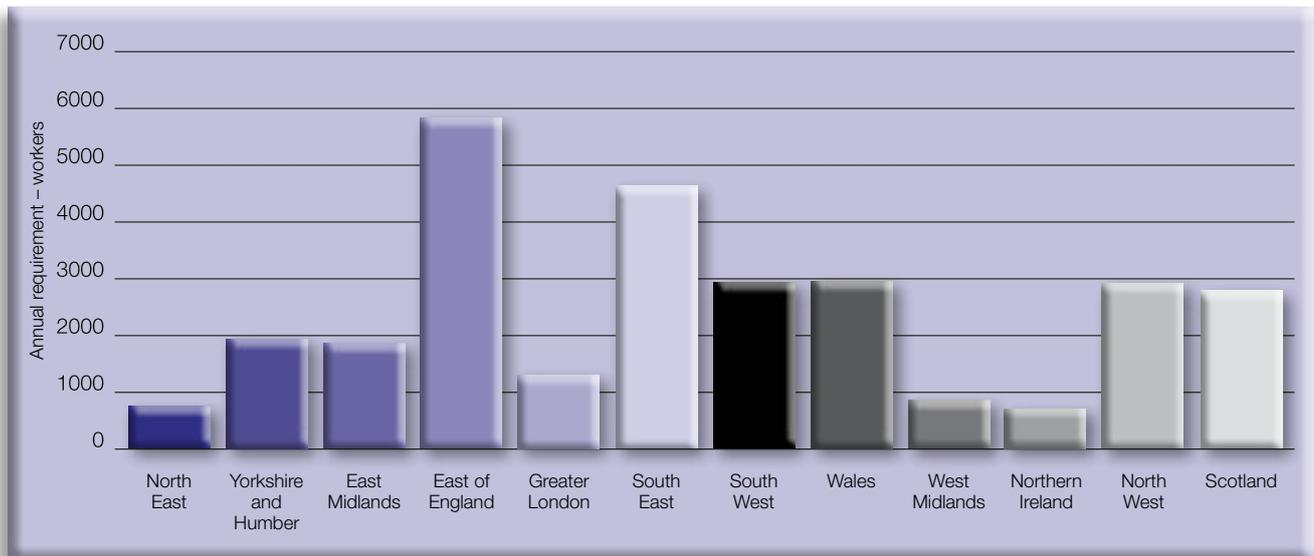
At 247,360 in 2017, construction employment in the region is expected to be 17% below its 2008 peak

### Annual average output growth by region 2013-2017



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

### Annual recruitment requirement (ARR) by region 2013-2017



Source: CSN, Experian



# CSN Explained

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

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

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

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

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

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



# 1. CSN Methodology

## Background

The **Construction Skills Network** has been evolving since its conception in 2005 acting as vehicle for CITB-ConstructionSkills to collect and produce information on the future employment and training needs of the industry. CITB-ConstructionSkills, CIC and CITB Northern Ireland are working as ConstructionSkills, the Sector Skills Council for Construction to produce robust Labour Market Intelligence to provide a foundation on which to plan for future skills needs and to target investment.

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

Observatory groups currently meet bi-annually and consist of key regional stakeholders invited from industry, Government, education and other SSCs, all of whom contribute local industry knowledge and views on training, skills, recruitment, qualifications and policy. The National Group also includes representatives from industry, Government, education and other SSCs. This Group convenes twice a year and sets the national scene, effectively forming a backdrop for the Observatories.

At the heart of the CSN are a number of forecasting models which generate forecasts of employment requirements within the industry for a range of occupational groups. The models are designed and managed by Experian under the independent guidance and validation of the Technical Reference Group, comprised of statisticians and modelling experts. The Models have been, and will continue to be, evolved over time to ensure that they account for new research as it is published as well as new and improved modelling techniques. Future changes to the model will only be made after consultation with the Technical Reference Group.

## The model approach

The model approach relies on a combination of primary research and views from the CSN to facilitate it. National data is used as the basis for the assumptions that augment the models, which are then adjusted with the assistance of the Observatories and National Group. Each English region, Wales, Scotland and Northern Ireland has a separate model (although all models are inter-related due to labour movements) and, in addition, there is one national model that acts as a constraint to the individual models and enables best use to be made of the most robust data (which is available at the national level). The models work by forecasting demand and supply of skilled workers separately. The difference between demand and supply forms the employment requirement.

The forecast total employment levels are derived from expectations about construction output and productivity. Essentially this is based upon the question 'How many people will be needed to produce forecast output, given the assumptions made about productivity?'.

The **annual recruitment requirement (ARR)** is a gross requirement that takes into account workforce flows into and out of construction, due to such factors as movements between industries, migration, sickness, and retirement. However, these flows do not include movements into industry from training, due to the inconsistent currency and coverage of supply data. Therefore, the annual recruitment requirement provides an indication of the number of new employees that would need to be recruited into construction each year in order to realise forecast output.

Demand is based upon the results of discussion groups comprising industry experts, a view of construction output and a set of integrated models relating to wider national and regional economic performance. The models are dynamic and reflect the general UK economic climate at any point in time. To generate the labour demand, the models make use of a set of specific statistics for each major type of work that determine the employment, by trade, needed to produce the predicted levels of construction output. The labour supply for each type of trade or profession is based upon the previous year's supply (the total stock of employment) combined with flows into and out of the labour market.

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

- transfers to other industries
- international/domestic OUT migration
- permanent retirements (including permanently sick)
- outflow to temporarily sick and home duties.

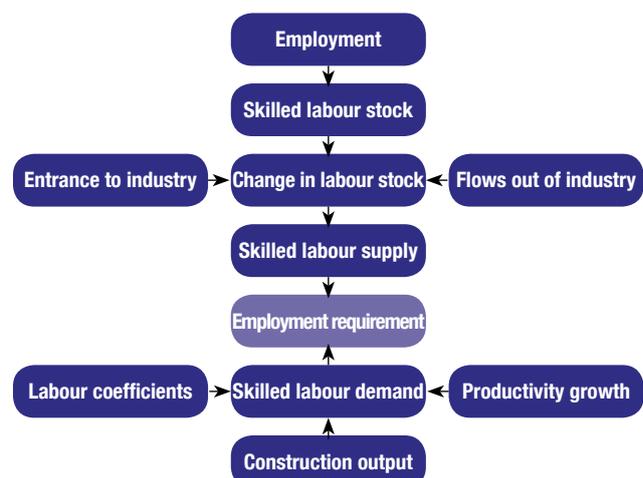
The main reason for outflow is likely to be transfer to other industries.

Flows into the labour market include:

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

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

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



## 2. Glossary of Terms

- **Building envelope specialists** – any trade involved with the external cladding of the building other than bricklaying, e.g. curtain walling.
- **Demand** – demand is calculated using construction output data from the Office for National Statistics (ONS) and the Department of Finance and Personnel Northern Ireland (DFP), along with vacancy data from the National Employers Skills Survey, from the Department for Education and Skills. These data sets are translated into labour requirements by trade by using a series of coefficients to produce the labour demand that relates to the forecasted output levels.
- **GDP** – Gross Domestic Product – total market value of all final goods and services produced. A measure of national income.  $GDP = GVA$  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 in each occupation/ trade to produce £1m of output across each sub-sector.
- **LFS (Labour Force Survey)** – a UK household sample survey which collects information on employment, unemployment, flows between sectors and training, from around 53,000 households each quarter (>100,000 people).
- **LMI (Labour Market Intelligence)** – data that are quantitative (numerical) or qualitative (insights and perceptions) on workers, employers, wages, conditions of work, etc.
- **Macroeconomics** – the study of an economy on a national level, including total employment, investment, imports, exports, production and consumption.
- **Nec** – not elsewhere classified, used as a reference in LFS data.
- **ONS** – Office for National Statistics – official statistics on economy, population and society at national UK and local level.
- **Output** – total value of all goods and services produced in an economy.
- **Productivity** – output per employee.
- **SIC codes** – Standard Industrial Classification codes – from the UK Standard Industrial Classification of Economic Activities produced by the ONS.
- **SOC codes** – Standard Occupational Classification codes.
- **Supply** – the total stock of employment in a period of time plus the flows into and out of the labour market. Supply is usually calculated from LFS data.



# 3. Notes and Footprints

## Notes

- 1 Except for Northern Ireland, output data for the English regions, Scotland and Wales are supplied by the Office for National Statistics (ONS) on a current price basis. Therefore national deflators produced by the ONS have been used to deflate to a 2005 constant price basis, i.e. the effects of inflation have been stripped out.
- 2 The annual average growth rate of output is a compound average growth rate, i.e. the rate at which output would grow each year if it increased steadily year-on-year over the forecast period.
- 3 Only selected components of gross value added (GVA) are shown in this table and so do not sum to the total.
- 4 For new construction orders comparison is made with Great Britain rather than the UK, owing to the fact that there are no orders data series for Northern Ireland.
- 5 Employment numbers are rounded to the nearest 10.
- 6 The tables include data relating to plumbers and electricians. As part of SIC 43, plumbers and electricians working in contracting are an integral part of the construction process. However, it is recognised by CITB-ConstructionSkills that SummitSkills has responsibility for these occupations across a range of SIC codes, including SIC 43.2.
- 7 The employment and ARR tables show separate totals for SIC 41-43 and SIC 41-43, 71.1 and 74.9. The total for SIC 41-43 covers the first 22 occupational groups on the relevant tables and excludes civil engineers, other construction professionals and technical staff, architects and surveyors. The total for SIC 41-43, 71.1 and 74.9 includes all occupations.

## Footprints for Built Environment SSCs

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

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

The sector footprints for the other SSCs covering the built environment:

### SummitSkills

**Footprint** – Plumbing, Heating, Ventilation, Air Conditioning, Refrigeration and Electrotechnical.

**Coverage** – Building Services Engineering.

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

### AssetSkills

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

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

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

### Energy and Utility Skills

**Footprint** – Electricity, Gas (including gas installers), Water and Waste Management.

**Coverage** – Electricity generation and distribution; Gas transmission, distribution and appliance installation and maintenance; Water collection, purification and distribution; Waste water collection and processing; Waste Management.

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

\* AssetSkills has a peripheral interest in SIC 71.1

# 4. Definitions: types and examples of construction work

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

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

## **Private sector housing**

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

## **Infrastructure – public and private**

### **Water**

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

### **Sewerage**

Sewage disposal works, laying of sewers and surface drains.

### **Electricity**

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

### **Gas, communications, air transport**

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

### **Railways**

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

### **Harbours**

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

### **Roads**

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

## **Public non-residential 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.

<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'.

## Private commercial work<sup>2</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>3</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>4</sup>.



<sup>2</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>3</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>4</sup> Except where stated, mixed development schemes are classified to whichever sector provides the majority (i.e. over 50%) of finance.

# 5. Occupational Groups

## Occupational group

Description, SOC (2000) reference.

### Senior, executive and business process managers

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

### Construction managers

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

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

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

Local government clerical officers and assistants, 4113  
Accounts and wages clerks, book-keepers, other financial clerks, 4122  
Filing and other records assistants/clerks, 4131  
Stock control clerks, 4133  
Database assistants/clerks, 4136  
Telephonists, 4141  
Communication operators, 4142  
General office assistants/clerks, 4150  
Personal assistants and other secretaries, 4215  
Sales and retail assistants, 7111  
Telephone salespersons, 7113  
Buyers and purchasing officers (50%), 3541  
Marketing associate professionals, 3543  
Personnel and industrial relations officers, 3562  
Credit controllers, 4121  
Market research interviewers, 4137  
Company secretaries (excluding qualified chartered secretaries), 4214  
Sales related occupations nec\*, 7129  
Call centre agents/operators, 7211  
Customer care occupations, 7212  
Elementary office occupations nec\*, 9219

### Wood trades and interior fit-out

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

### Bricklayers

Bricklayers, masons, 5312

### Building envelope specialists

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

### Painters and decorators

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

### Plasterers and dry liners

Plasterers, 5321

### Roofers

Roofers, roof tilers and slaters, 5313

### Floorers

Floorers and wall tilers, 5322

### Glaziers

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

### Specialist building operatives nec\*

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

**Scaffolders**

Scaffolders, staggers, riggers, 8141

**Plant operatives**

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

**Plant mechanics/fitters**

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

**Steel erectors/structural**

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

**Labourers nec\***

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

**Electrical trades and installation**

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

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

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

**Logistics**

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

**Civil engineering operatives nec\***

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

**Non-construction operatives**

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

**Civil engineers**

Civil engineers, 2121

**Other construction professionals  
and technical staff**

Mechanical engineers, 2122  
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Engineering professional nec\*, 2129  
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**Architects**

Architects, 2431

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\* not elsewhere classified

# 6. CSN website and contact details

## The CSN website – [www.cskills.org/csn](http://www.cskills.org/csn)

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

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

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

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

The website also contains further information about:

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

The CSN website can be found at:

**[www.cskills.org/csn](http://www.cskills.org/csn)**

## CSN members area

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

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

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

CSN members therefore have:

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

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

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

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

## Contact details

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

**[csn@cskills.org](mailto:csn@cskills.org)**



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