

# 2012–2016 Construction Skills Network South West

LABOUR MARKET INTELLIGENCE



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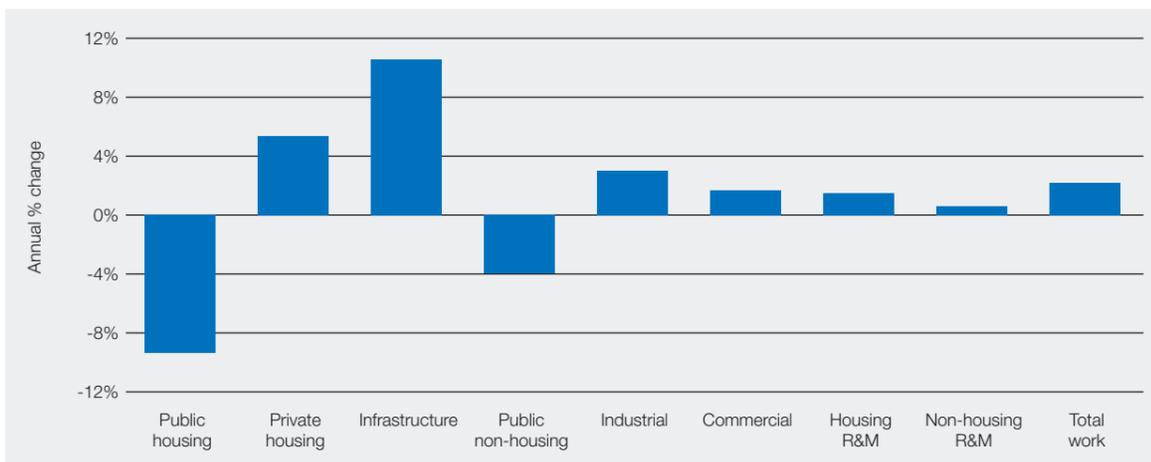
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# 1. Summary – South West

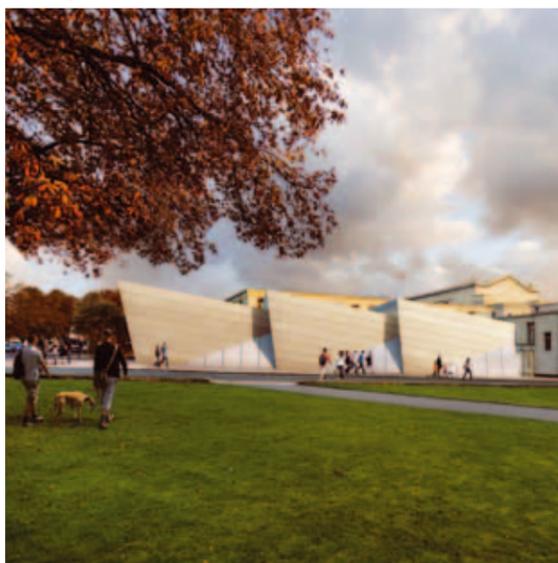
The construction industry is forecast to expand at an average rate of 2.2% per year over the five years to 2016 in the South West. This is substantially higher than the UK average of 1.4%. New work output is expected to be more buoyant than repair and maintenance, with average growth rates of 2.7% and 1.1%, respectively. Total construction employment in the region is projected to reach 207,140 in 2016, 6% above 2012's expected total but still 19% below 2006's peak.

Annual average construction output growth 2012-2016 - South West



Source: CSN, Experian  
ref. CSN Explained, Section 5.3, Note 2

Sea City



Construction is forecast to expand at an average rate of 2.2% per year in the South West, higher than the UK average of 1.4%

## Key findings

It is the infrastructure sector in the South West that is expected to be the most buoyant over the five years to 2016. Preliminary works have started on the new nuclear power station, Hinkley Point C, although main construction works are not expected to begin until late 2013. The region's infrastructure sector traditionally accounts for a smaller proportion of total construction output than it does nationally, although strong growth is expected to take output in the sector to a record high by 2016.

The private housing sector is also expected to fare well over the forecast period, as easing credit criteria and improving conditions in the wider economy stimulate demand for housing. However, despite growth in each of the five years to 2016, private housing construction output is still only expected to be about 80% of its 2007 peak by 2016.

Public housing construction in the South West has fared well in recent years, boosted by funding allocations under the 2008-11 National Affordable Housing programme. Funding for affordable housing in England for the 2011-15 period has been almost halved, and no region will be immune from these cuts. The latest affordable housing starts figures from the Homes and Communities Agency (HCA) showed that there were just 22 units started in the South West in the six months to September 2011, compared with 1,349 in the corresponding period of 2010. This highlights the bleak outlook for the sector, certainly in the short term.

The region's public non-housing sector is also expected to see output decline in each year, on average, over the forecast period. However, the pace of contraction is expected to be weaker than the national average, partly reflecting a much smaller allocation of funding for the South West under early stages of the Building Schools for the Future (BSF) programme compared with other regions. Thus the sector has less far to fall once work on the few remaining BSF schemes winds down.

Construction employment in the South West is forecast to continue to decline in the short term, returning to growth in 2014 and rising in the remaining years of 2012-16 period. It is expected to rise at an average rate of 0.9%, above the UK figure (0.6%). In absolute terms, the largest construction-specific increases in employment are forecast to be for wood trades and interior fit-out (5,720), other construction professionals and technical staff (1,530) and civil engineering operatives nec\* (1,490). In percentage terms civil engineering operatives nec\* (42%) and wood trades and interior fit-out (31%) are expected to be the most in demand.

The ARR for the South West is 7,220, the largest of all the regions and devolved nations, and equivalent to 3.7% of base 2012 employment.

## Regional comparison 2012-2016

	Annual average % change in output	Growth in total employment	Total ARR
North East	0.5%	4,840	2,170
Yorkshire and Humber	0.0%	-6,370	2,630
East Midlands	1.0%	-1,800	3,460
East of England	2.9%	10,660	5,710
Greater London	2.5%	16,560	1,790
South East	2.2%	28,020	4,520
South West	2.2%	9,560	7,220
Wales	1.3%	11,590	4,280
West Midlands	-1.1%	-7,360	3,730
Northern Ireland	2.1%	3,880	1,170
North West	-0.9%	-6,990	5,080
Scotland	1.3%	13,520	4,480
<b>UK</b>	<b>1.4%</b>	<b>76,110</b>	<b>46,240</b>

Source: CSN, Experian  
ref. CSN Explained, Section 5.3, Note 2

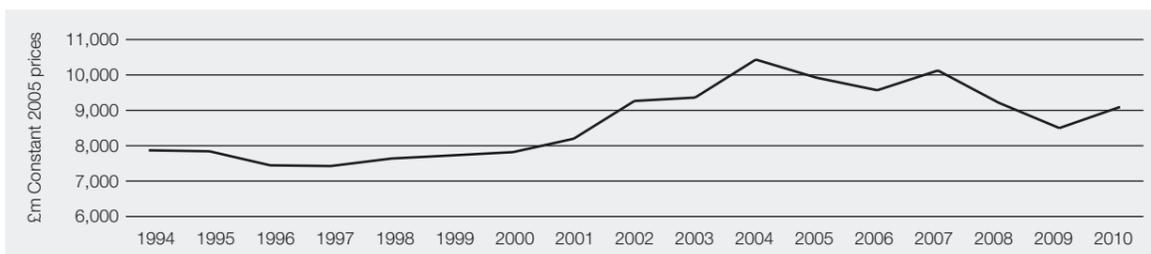
## 2. The outlook for construction in the South West

### 2.1 Construction output in the South West – overview

In 2010, construction output in the South West rose by 7% to £9.1bn, in 2005 prices, following two years of decline. Whilst repair and maintenance (R&M) output dropped by 10%, new work output rose by 18%.

On a sectoral basis, output rose across all the new work sectors, with the public housing seeing the strongest growth (45%). Output in this sector rose to a record high, but it remained the smallest sector in the region. The public non-housing (29%), private housing (25%) and infrastructure sectors (22%) also saw strong growth.

### Construction output 1994-2010 - South West



Source: ONS  
ref. CSN Explained, Section 5.3, Note: 1

### 2.2 Industry structure

The diagram, Construction Industry structure 2010 – 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.

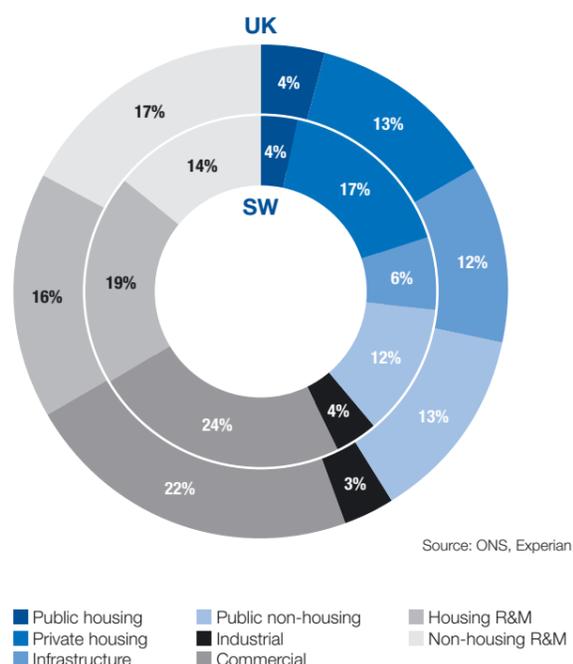
There are a number of differences in the structure of the South West's construction sector, compared with the UK. The R&M sector accounted for the same proportion of output (33%) as in the UK as a whole, but the non-housing R&M sector is relatively less important in the region, taking a 14% share of output compared with a national figure of 17%.

On the new work side, the most significant difference is the small size of the infrastructure sector in the South West, which took a 6% share of total output in 2010, whilst nationally this figure was 12%. The private housing sector in the region is larger than on a UK basis, with output shares in 2010 of 17% and 13%, respectively.

### 2.3 Economic overview

The expected performance of a regional or national economy over the forecast period (2012–2016) provides an indication of the construction sectors in which demand is likely to be strongest.

### Construction industry structure 2010 - UK vs. South West



Source: ONS, Experian



### Economic structure - South West (£ billion, 2006 prices)

Selected sectors	Actual	Forecast					
	2010	Annual % change, real terms					
	2010	2011	2012	2013	2014	2015	2016
Public services	24	0.4	-0.6	-0.2	-0.3	0.1	0.3
Financial and business services	19	0.6	1.3	2.2	2.5	3.1	3.2
Transport and communications	5	2.7	1.5	2.2	2.3	2.5	2.5
Manufacturing	11	2.8	2.6	3.2	2.3	1.7	1.1
Distribution, hotels and catering	13	1.2	1.0	2.2	2.4	2.7	2.9
<b>Total Gross Value Added (GVA)</b>	<b>89</b>	<b>1.0</b>	<b>0.8</b>	<b>1.6</b>	<b>1.7</b>	<b>2.0</b>	<b>2.1</b>

Source: Experian  
ref. CSN Explained, Section 5.3, Note 3

### 2.4 Economic structure

The South West accounted for 7.4% of total UK Gross Value Added (GVA) in 2010 but 8.5% of the population, suggesting that GVA per head was below the national average.

Whilst GVA in the UK as a whole rose by 1.8% in 2010, the South West saw a second successive year of decline, as output fell by 0.4%. The strongest fall was in the transport and communications sector, where output declined by 11.7%, whilst the distribution, hotels and catering sector saw a 2.7% contraction. In contrast, manufacturing output rose by 3.4% and public services by 1.3%.

The relative importance of the financial and business services sector in the region's GVA has increased since 1997, when it took a 16% share of output. This had risen to almost 22% in 2010, although this is still below the national average of 25%. In contrast, the public sector is slightly more important than on a national basis, accounting for nearly 27% of output in the South West but just 24% in the UK.

The South West's economy is expected to have returned to growth in 2011, with GVA rising by 1.0%. This is above the UK average of 0.6%.

### 2.5 Forward looking economic indicators

GVA in the South West is expected to rise in each year of the forecast period to 2016, at an average rate of 1.6%. This is slightly below the UK average of 1.8% and also marginally lower than the 1.7% average annual growth forecast for the region in 2010 for the 2011-15 period.

Growth is expected to be strongest in the financial and business services sector over the five years to 2016, with output rising on average by 2.5% a year. The distribution,

hotels and catering (2.3%), transport and communications (2.2%) and manufacturing (2.2%) are also expected to see reasonably good increases. The public services sector will see output decline by a negligible 0.1% per year, on average.

Disposable incomes in the region remained broadly unchanged in 2010, in contrast to a decline of 0.8% across the UK as a whole, but they are expected to have fallen by 2.3% in 2011, in line with the national average. Real disposable incomes are expected to rise in each year of the forecast period to 2016, as inflation abates and wage growth picks up as macroeconomic conditions improve. It is not surprising, given this weak picture for incomes that household spending has also been affected and is expected to have fallen by 0.7% in 2011. Over the 2012-16 period, consumer spending is expected to rise at an average rate of 1.9% per year, weaker than the 2.3% over the decade to 2010.

The unemployment rate in the South West is expected to continue to rise during 2012, reaching a high of 7.5% in the first quarter of the year. It will start to fall during the second half of 2012, as economic conditions begin to show some signs of improvement, and continue to decline throughout the remaining years of the forecast period, reaching 4.8% at the end of 2016.

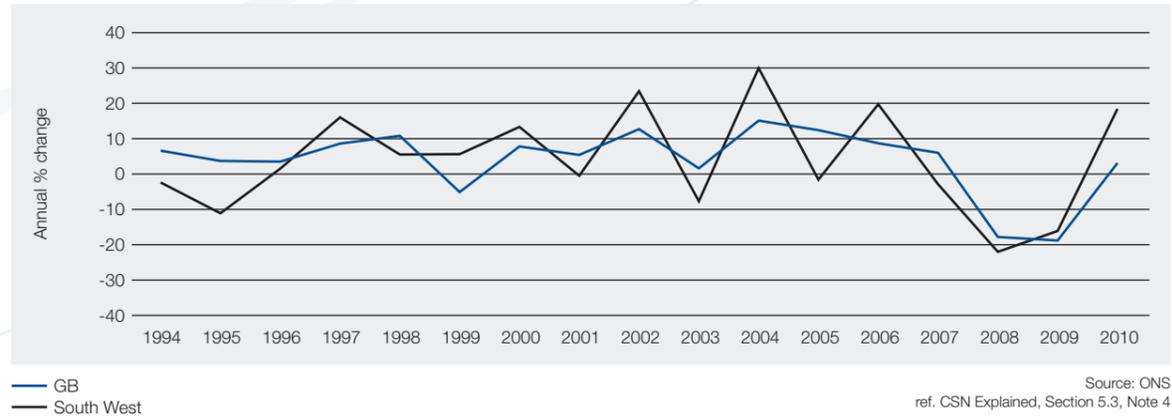
Average house prices in the South West stood at £214,985 in 2010, an increase of 8% on the previous year, according to the Department of Communities and Local Government (CLG). After declining by an estimated 1.6% in 2011, house prices in the region are expected to rise in each of the five years to 2016, although annual house price inflation is likely to average just 2.6%, substantially weaker than the average of 8.3% over the decade to 2010.

### Economic indicators - South West (£ billion, 2006 prices - unless otherwise stated)

	Actual	Forecast					
	2010	Annual % change, real terms					
	2010	2011	2012	2013	2014	2015	2016
Real household disposable income	78	-2.3	0.4	1.3	1.4	2.1	2.4
Household spending	78	-0.7	0.6	1.9	2.3	2.4	2.5
Working age population (000s and as % of all)	3,073	58.1	58.2	58.9	59.5	60.0	60.5
House prices (£)	214,985	-1.6	0.5	2.8	3.2	3.1	3.2
LFS unemployment (millions)	0.16	0.18	0.19	0.18	0.17	0.15	0.14

Source: ONS, DCLG, Experian

## New construction orders growth 1994-2010 - South West vs. GB



### 2.6 New construction orders – overview

New construction orders in the South West reached an 8 year low of £3.9bn, in current prices, in 2009 before rising by 18% to £4.6bn in 2010.

The private housing sector saw by far the strongest growth in new orders as they rose by 58% from 2009's very low level to push through the £1bn mark for the first time in three years. Infrastructure new orders rose by 29% and the public non-residential sector saw an increase of almost 19%, reaching a new record high of £1.38bn.

Commercial construction new orders in the region declined by 4% to just £1.1bn, the lowest annual total since 1998, whilst industrial new orders fell by a much weaker 1%.

### 2.7 New construction orders – current situation

In the first half of 2011, new construction orders in the South West fell by 21% from the corresponding period of 2010. The outturn of just £796m in the three months to June 2011 was the lowest quarterly total for two years. New orders in the region were also down by 9% from the previous half year.

The large fall in new construction orders was largely due to a substantial contraction in the public non-housing sector, although the industrial and commercial sectors also saw declines. Public non-housing orders plummeted by 75% in the six months to June 2011, with the outturn of just £76m in the second quarter of the year the weakest for 12 years.

Private housing new orders rose by one third, compared with the corresponding period of 2010, while public housing new orders increased by 27%. New construction orders for the infrastructure sector rose by 19% on an annual basis.

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

	Actual	Annual % change				
	2010	2006	2007	2008	2009	2010
Public housing	270	22.3	-10.7	44.2	16.3	9.0
Private housing	1,168	15.4	-19.3	-43.1	-22.5	58.3
Infrastructure	408	-31.8	12.5	-9.3	-3.1	29.3
Public non-housing	1,375	-24.7	32.6	49.3	10.7	18.6
Industrial	255	20.0	1.4	-36.7	-22.1	-1.0
Commercial	1,093	60.4	0.9	-30.5	-34.2	-4.1
<b>Total new work</b>	<b>4,569</b>	<b>19.7</b>	<b>-2.9</b>	<b>-22.0</b>	<b>-16.1</b>	<b>18.4</b>

Source: ONS ref. CSN Explained, Section 5.3, Note 4

### 2.8 Construction output – short-term forecasts (2012–2013)

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, ONS construction output statistics were only available for the first two quarters of 2011.

In the six months to June 2011, construction output rose by 7%, year-on-year, to total £4.9bn, in current prices. However, this was 3% lower than in the previous half year. New work output growth was stronger at 8%, year-on-year, compared with a weaker increase of 4% for the repair and maintenance (R&M) sector.

On a sectoral basis, growth was strongest in the industrial sector, where output rose by 40%, albeit from a low base. The infrastructure (33%), public housing (24%) and private housing (13%) sectors also saw double-digit growth.

Construction output in the South West is expected to have fallen in 2011 and see a further decline in 2012 before returning to growth in 2013. On average, output will rise by a weak 0.5% in the short term, with this increase being driven by the new work sector which is forecast to see average growth of 0.8% per year in the 2012-13 period, compared with a marginal annual average decline of 0.1% for R&M.

The infrastructure sector is forecast to be the best performing sector in the region in the short term, with output rising at an average rate of 9.8% per year. The major project in the sector

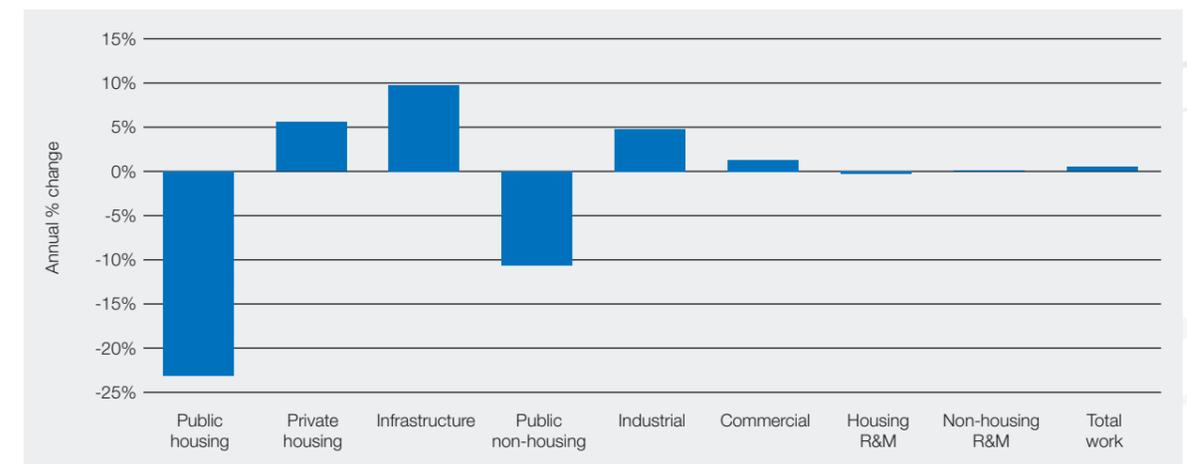
is the construction of a new nuclear power station, Hinkley Point C. EDF Energy is progressing work on this scheme and has submitted a planning application to the Infrastructure Planning Commission. A £100m preparation contract has already been awarded, with a tunnelling work contract and the main civils work contract currently out to tender.

The private housing sector is also expected to fare well, benefitting from gradually improving conditions in the wider economy which should boost demand for housing. The industrial construction sector will see average growth of 4.8% in the short term, partly driven by a bounce back from the strong falls seen during the recession.

In the short term, it is the public housing sector that is expected to see the strongest contraction with output falling by an average of 23% per year. This is a more marked decline than in the UK as a whole, where the fall is expected to average only 18% a year. The new funding mechanisms introduced for affordable housing, where the government grant will only cover around 20% of the build costs, will lead to some marked falls in output in the short term as providers adjust to the new business model.

Substantial public expenditure cuts will lead to sharp falls in public non-housing construction output in the short term, as current programmes of work wind down and there is little to replace them. However, the average annual decline in the sector in the South West is likely to be weaker than nationally, reflecting the smaller number of Building Schools for the Future (BSF) projects in the region.

### Annual average construction output growth 2012-2013 - South West



Source: Experian ref. CSN Explained, Section 5.3, Notes 1 and 2

### Construction output - South West (£ million, 2005 prices)

	Actual	Forecast annual % change			Annual average
	2010	2011	2012	2013	2012-13
Public housing	319	-4%	-30%	-16%	-23.2%
Private housing	1,518	0%	3%	8%	5.6%
Infrastructure	591	6%	2%	18%	9.8%
Public non-housing	1,112	-21%	-17%	-4%	-10.7%
Industrial	364	7%	5%	5%	4.8%
Commercial	2,159	-5%	-1%	4%	1.3%
<b>New work</b>	<b>6,064</b>	<b>-5%</b>	<b>-3%</b>	<b>5%</b>	<b>0.8%</b>
Housing R&M	1,759	-1%	-1%	0%	-0.3%
Non-housing R&M	1,274	2%	-2%	2%	0.1%
<b>Total R&amp;M</b>	<b>3,032</b>	<b>0%</b>	<b>-1%</b>	<b>1%</b>	<b>-0.1%</b>
<b>Total work</b>	<b>9,097</b>	<b>-3%</b>	<b>-3%</b>	<b>4%</b>	<b>0.5%</b>

Source: Experian  
ref. CSN Explained, Section 5.3, Notes 1 and 2

### 2.9 Construction output – long-term forecasts (2012–2016)

Construction output in the South West is expected to rise at an average rate of 2.2% per year over the period to 2016. This is weaker only than the East of England and Greater London, and substantially stronger than the national average of 1.4%. New work output is forecast to rise by an average of 2.7% per year, compared with an annual average of just 1.1% for the R&M sector.

As is the case over the shorter term, the most buoyant sector is expected to be the infrastructure one, with average growth of 10.6% per year. This is substantially higher than the UK average of 2.8% per year and largely predicated on main construction work on Hinkley Point C nuclear power station starting towards the end of 2013. In autumn 2011, it was confirmed that the £110m Kingskerswell Bypass in South Devon was one of the 20 infrastructure projects to receive government funding and construction is expected to get underway during 2012. However, it is worth noting that the infrastructure sector in the South West is relatively small, accounting for just 7% of total construction output in the region in 2010, compared to 12% nationally. Even with this strong growth it is expected to take only an 11% share of construction output in the region in 2016.

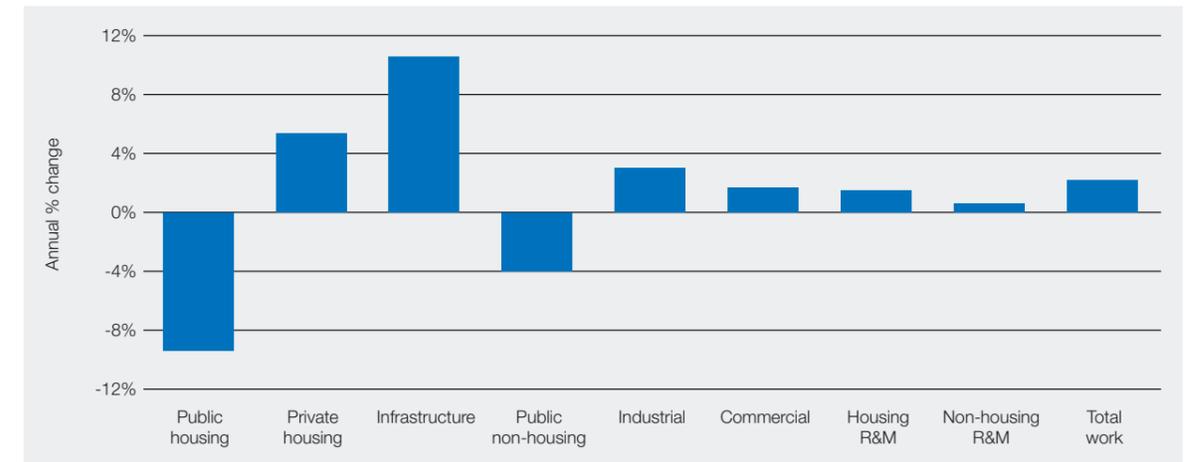
The private housing sector is forecast to see output rise in each year of the period to 2016, at an average annual rate of 5.4%. The sector will benefit from easing credit conditions and improvements in the wider economy which will boost demand for housing. There are also plans for a 5,000 home eco-town in Cornwall, to be built over six former clay quarries, for which the architects have just been appointed. Construction is due to start during the forecast period.

Industrial construction output in the South West is forecast to rise at a rate of 3.0% per year on average over the five years to 2016. There are plans for a £500m scheme to build and operate a new energy-from-waste incinerator in Gloucester. Assuming planning permission is granted, construction is due to start in 2013 and the incinerator should be operational from 2015. The outlook for the commercial construction sector is more muted with growth averaging just 1.7% per year. Demand for office, leisure and retail facilities continues to be weak, but this is likely to pick up during the forecast period as conditions in the wider economy begin to improve. The largest PFI health project in the region is the £430m Southmead Hospital in Bristol. Construction is well underway and the hospital is due to open in 2014.

Not surprisingly, it is the public sectors, housing and non-housing, that are expected to fare the worst over the 2012-16 period. An average decline of 9.4% per year is forecast for the public housing sector. The sector has seen substantial growth in recent years, boosted by the £863m of funding allocated to the region under the 2008-11 National Affordable Housing programme. Although it is not possible to directly compare the funding for the South West under the 2011-15 programme due to a change in the Homes and Communities Agency's (HCA) operating areas, the overall funding pot for England has been almost halved, and thus every English region will be affected by lower levels of funding.

The public non-housing sector is expected to see an annual average decline of 4.0%, a substantially smaller fall than the national figure of 9.1% per year. The South West did not benefit from the early waves of the BSF programme as much as other regions, thus explaining its relatively better performance. However, although it may have less far to fall, there is little scope for any substantial growth in public non-housing construction whilst government finances remain constrained.

### Annual average construction output growth 2012-2016 - South West



Source: CSN, Experian  
ref. CSN Explained, Section 5.3, Note 2

### Construction output - South West (£ million, 2005 prices)

	Estimate	Forecast annual % change					Annual average
	2011	2012	2013	2014	2015	2016	2012-16
Public housing	307	-30%	-16%	-2%	5%	1%	-9.4%
Private housing	1,518	3%	8%	6%	6%	4%	5.4%
Infrastructure	627	2%	18%	19%	10%	5%	10.6%
Public non-housing	875	-17%	-4%	-5%	3%	4%	-4.0%
Industrial	391	5%	5%	2%	2%	0%	3.0%
Commercial	2,061	-1%	4%	2%	2%	2%	1.7%
<b>New work</b>	<b>5,779</b>	<b>-3%</b>	<b>5%</b>	<b>4%</b>	<b>4%</b>	<b>3%</b>	<b>2.7%</b>
Housing R&M	1,743	-1%	0%	2%	4%	2%	1.5%
Non-housing R&M	1,298	-2%	2%	1%	1%	1%	0.6%
<b>R&amp;M</b>	<b>3,041</b>	<b>-1%</b>	<b>1%</b>	<b>2%</b>	<b>3%</b>	<b>1%</b>	<b>1.1%</b>
<b>Total work</b>	<b>8,820</b>	<b>-3%</b>	<b>4%</b>	<b>3%</b>	<b>4%</b>	<b>3%</b>	<b>2.2%</b>

Source: CSN, Experian  
ref. CSN Explained, Section 5.3, Notes 2

### 2.10 Beyond 2016

The main project that is likely to come on line post 2016 is the construction of a new nuclear power station at Oldbury in Gloucestershire, in addition to Hinkley Point C. Construction on the power station in Oldbury is due to start in 2019, with a build time of approximately five years.

As is the case across the UK as a whole, energy efficient retrofitting and the installation of microgeneration measures are likely to become relatively more important in driving construction output in the South West. Increasing concerns over rising energy costs and carbon emissions targets will boost demand for these measures.

# 3. Construction employment forecasts for 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 2010, the forecast total employment in 26 occupations and in the industry as a whole between 2012 and 2016. A full breakdown of occupational groups is provided in Section 5 of CSN explained.

Construction employment in the South West is expected to rise by 6% from 2012's projected level to total 207,140 in 2016. However, this is still 19% below 2006's peak. Employment in the region has been declining since 2006 and is expected to continue to fall until 2013. It is forecast to return to growth in 2014 and rise in the remaining years of the forecast period. Over the 2012-16 period as a whole, construction employment is expected to rise at an average rate of 0.9% per year, above the UK figure (0.6%).

In absolute terms, by far the largest increase in employment is expected to be for wood trades and interior fit-out (5,720), which will remain the biggest occupation in the region in 2016. Other construction-specific occupations which are forecast to see large rises in employment are other construction professionals and technical staff (1,530) and civil engineering operatives nec\* (1,490). Workers in the other construction professionals and technical staff occupation will include mechanical and electrical engineers, who are likely to be involved in the nuclear new build work at Hinkley point.

Civil engineering operatives nec\* are expected to see the largest increase in employment in percentage terms, of 42%. This may partly be due to work on Hinkley Point C nuclear power station, but as around 15% of work on a housing development is civil engineering, they are also likely to benefit from a return to growth in the private housing sector. In percentage terms, wood trades and interior fit-out (31%) and floorers (26%) are also expected to be in relatively high demand.

### Total employment by occupation - South West

	Actual	Forecast	
	2010	2012	2016
Senior, executive, and business process managers	7,840	7,900	8,180
Construction managers	19,510	20,660	20,970
Non-construction professional, technical, IT, and other office-based staff	19,680	19,410	21,390
Wood trades and interior fit-out	20,520	18,270	23,990
Bricklayers	5,650	5,080	5,060
Building envelope specialists	9,380	9,730	9,410
Painters and decorators	9,690	9,940	9,890
Plasterers and dry liners	4,310	4,390	4,430
Roofers	3,220	3,130	3,310
Floorers	3,450	3,100	3,900
Glaziers	3,120	3,060	3,060
Specialist building operatives nec*	4,560	4,680	4,900
Scaffolders	960	850	790
Plant operatives	4,120	4,330	4,340
Plant mechanics/fitters	3,720	3,750	3,960
Steel erectors/structural	2,350	2,110	1,860
Labourers nec*	6,070	5,460	4,600
Electrical trades and installation	15,020	13,470	13,680
Plumbing and HVAC trades	16,530	17,160	17,070
Logistics	1,930	1,700	2,140
Civil engineering operatives nec*	4,020	3,550	5,040
Non-construction operatives	2,880	2,550	2,270
Civil engineers	5,900	5,340	5,800
Other construction professionals and technical staff	17,350	17,910	19,440
Architects	3,950	3,980	3,770
Surveyors	3,850	3,420	3,890
<b>Total (SIC 41-43)</b>	<b>168,530</b>	<b>164,280</b>	<b>174,240</b>
<b>Total (SIC 41-43, 71.1, 74.9)</b>	<b>199,580</b>	<b>194,930</b>	<b>207,140</b>

Source: ONS, CSN, Experian  
ref. CSN Explained, Section 5.3, Notes 5 and 6  
NEC\* - 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, although robust data on training provision is being developed by ConstructionSkills. Thus, the annual recruitment requirement provides an indication of the number of new employees that would need to be recruited into construction each year in order to realise forecast output.

The ARR for the 26 occupations within the South West's construction industry is illustrated in the table. The figure of 7,220 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.

The South West's ARR is the largest of all the regions and devolved nations. It is equivalent to 3.7% of base 2012 employment in the region, substantially higher than the UK average (1.9%), suggesting a higher level of net outflows in the region than in the UK as a whole. The largest requirements for construction-specific occupations in

absolute terms are for wood trades and interior fit-out (670), plasterers and dry liners (580) and bricklayers (550). In terms of the percentage of base 2012 employment, the largest requirements are for plasterers and dry liners (13%), bricklayers (11%) and scaffolders (11%).

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

	2012-2016
Senior, executive, and business process managers	-
Construction managers	720
Non-construction professional, technical, IT, and other office-based staff	1,860
Wood trades and interior fit-out	670
Bricklayers	550
Building envelope specialists	-
Painters and decorators	-
Plasterers and dry liners	580
Roofers	300
Floorers	-
Glaziers	210
Specialist building operatives nec*	80
Scaffolders	90
Plant operatives	<50
Plant mechanics/fitters	180
Steel erectors/structural	-
Labourers nec*	1,090
Electrical trades and installation	190
Plumbing and HVAC trades	-
Logistics	170
Civil engineering operatives nec*	-
Non-construction operatives	-
Civil engineers	-
Other construction professionals and technical staff	440
Architects	-
Surveyors	50
<b>Total (SIC 41-43)</b>	<b>6,730</b>
<b>Total (SIC 41-43, 71.1, 74.9)</b>	<b>7,220</b>

Source: CSN, Experian  
ref. CSN Explained, Section 5.3, Notes 5 and 6  
NEC\* - Not elsewhere classified

# 4. Comparisons across the UK

With average construction output growth of 2.2% from 2012-2016, the South West is projected to be one of the stronger regions with growth above the UK rate of 1.4%. The best performing region is expected to be the East of England with a rate of 2.9%, however the North West (-0.9%) along with the West Midlands (-1.1%) are the only regions projected to see a decline.

Over the forecast period, we seem to be seeing the emergence of a north/south divide, with the greater South East (the South East, Greater London and the East of England) faring best, and the northern English regions faring worst. In between are the devolved nations, who, although they have their overall expenditure limits set by Westminster, through their devolved administrations have more control on what it will be spent than the English regions. Already the devolved administrations in Scotland and Northern Ireland have redirected a proportion of resource funding to the capital expenditure account, which should benefit the construction industry in these areas.

There are a number of reasons for the emergence of this north/south divide. The first is the more constrained outlook for public expenditure going forward. While declines in public housing activity are expected to be fairly similar across the board, with one or two exceptions, the profile for the public non-residential sector is very different. Output in this sector hit a new historic high in 2010 and since 2007 had grown by over 72% in real terms, primarily driven by work under the BSF programme. The South West did not benefit much from the BSF programme, with the exception of two schemes in Bristol in the early waves, and thus the region's public non-housing sector has less far to fall.

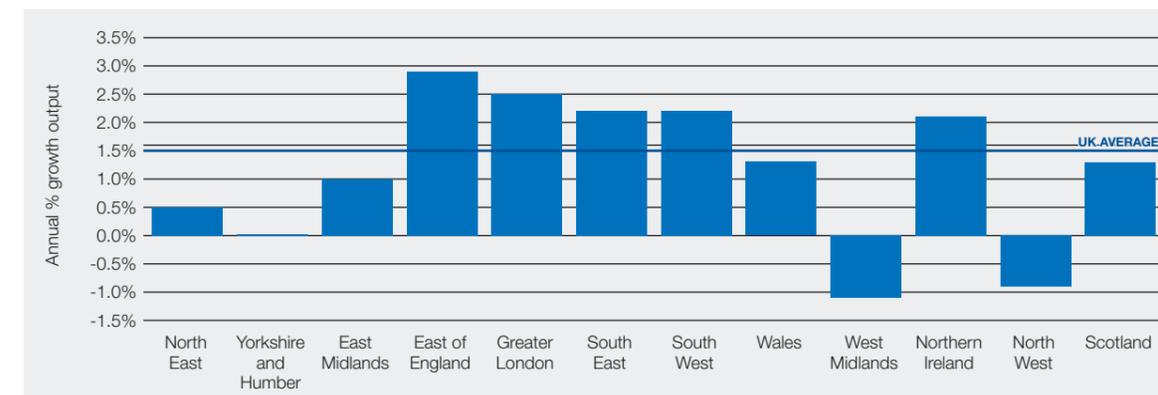
Second, major infrastructure projects are tending to be greater South East centric at present. Infrastructure activity in the UK is at a historic high, exceeding its previous peak in 1993 during the building of the Channel Tunnel. This level of activity is being driven largely by projects in the South East corner of England – Crossrail, Thameslink, M25 widening, London Gateway port, to name a few. That is not to say that there are not projects elsewhere, there are, but they are tending to be of a lesser size. The South West is about to get its first major infrastructure project for many years, the new nuclear plant at Hinkley Point, and this should help to push the share of infrastructure output in the region back up towards the UK average after almost a decade of under-performance.

Third, growth in the commercial sector is likely to be stronger in the greater South East than elsewhere in England. The offices market has already been strengthening in London and along the M4 corridor/Thames Valley, while excess capacity issues remain a problem across many regional centres. The northern English regions also have many currently mothballed retail and leisure developments for which it is difficult to see an economic imperative to restart, at least in the short term.

The South West is expected to see average employment growth of 1.4% per year over the 2012-16 period, stronger than the UK average of 0.6%, not surprising given the relatively strong output performance in the region. Wales is predicted to have the strongest growth in employment, despite only moderate growth in output. That is because most of its growth is focussed in the more labour intensive repair and maintenance sectors. Not surprisingly, employment growth is also stronger than the UK average in the South East, Greater London and the East of England.

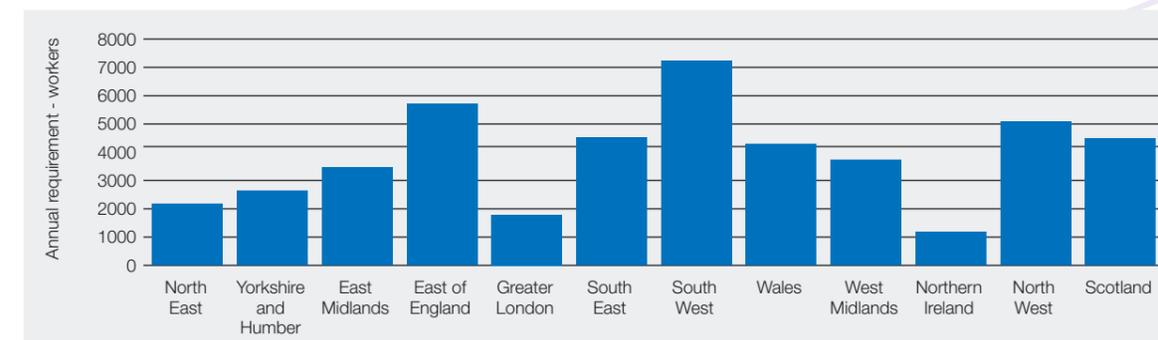
The South West's ARR is equivalent to 3.7% of base 2012 employment, substantially higher than the UK figure of 1.9%. This suggests that the region experiences stronger net employment outflows in the region than in the UK as a whole.

Annual average output growth by region 2012-2016



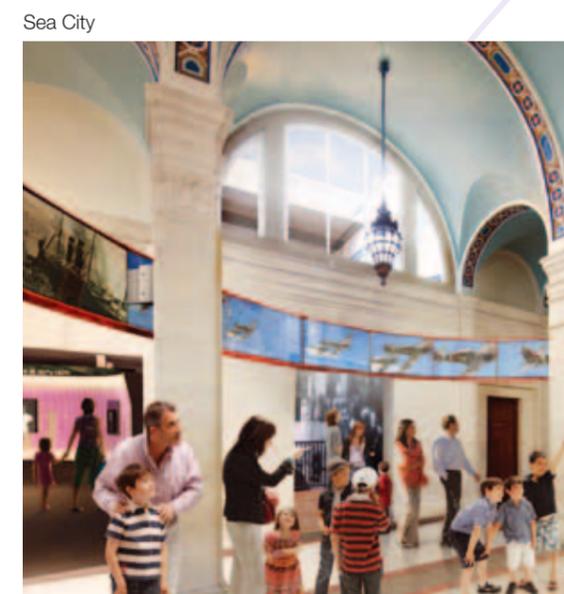
Source: CSN, Experian ref CSN Explained, Section 5.3, Note 2

Annual recruitment requirement (ARR) by region 2012-2016



Source: CSN, Experian

Strong growth, an average of over 10% per year, is expected to take infrastructure output to a record high by 2016



Construction employment is projected to reach 207,140 by 2016, but this is still 19% below 2006's peak employment in the region

## 5. CSN explained

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

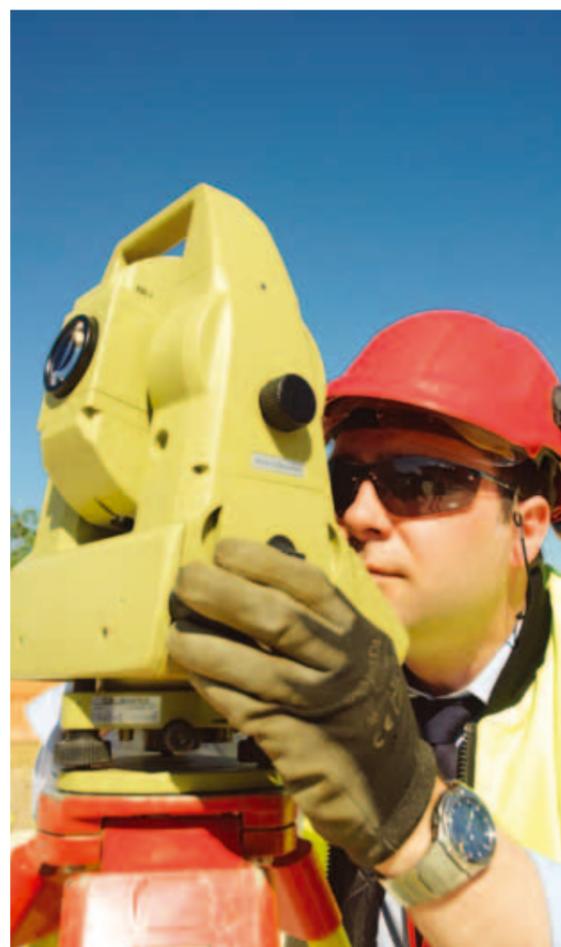
Section 5.1 gives an overview of the underpinning methods that are used by the CSN, working in partnership with Experian, to produce the suite of reports at both a UK, national and regional level.

Section 5.2 provides a glossary to clarify some of the terms that are used in the reports, while section 5.3 has some further notes that relate to the data sources that are used for the various charts and tables. Section 5.3 also outlines what is meant by the term footprint, when talking about the areas of responsibility that lie with a Sector Skills Council.

Section 5.4 explains the sector definitions used within the report and provides examples of what is covered in each.

Section 5.5 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 5.6 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.



## 5.1 CSN methodology

### Background

The **Construction Skills Network (CSN)**, launched in 2005, represents a radical change in the way that ConstructionSkills 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 once 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.

It is envisaged that the models will evolve over time as new research is published and modelling techniques improve. 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 the industry from training, although robust data on training provision is being developed by ConstructionSkills 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.

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 years' 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:

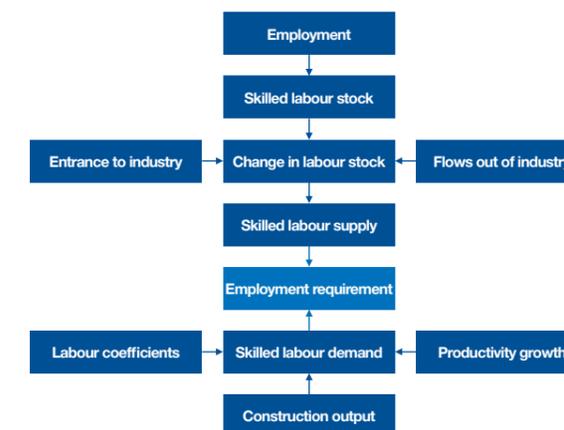
- transfers to other industries
- international/domestic OUT migration
- permanent retirements (including permanently sick)
- outflow to temporarily sick and home duties.

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.



## 5.2 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 years' supply. In essence this is the number of workers of 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.



## 5.3 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. Thus 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 45, 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 45.31 and 45.33.

### Footprints for Built Environment SSCs

ConstructionSkills is responsible for SIC 45 Construction and part of SIC 74.2 Architectural and Engineering activities and related technical consultancy.

The table summarises the SIC codes (2003) covered by ConstructionSkills:

	SIC Code	Description
<b>ConstructionSkills</b>	45.1	Site preparation
	45.2	Building of complete construction or parts; civil engineering
	45.3	Building installations (except 45.31 and 45.33 which are covered by SummitSkills)
	45.4	Building completion
	45.5	Renting of construction or demolition equipment with operator
	74.2*	Architectural and engineering activities and related technical consultancy

\* AssetSkills has a peripheral interest in SIC 74.2

The sector footprints for the other SSCs covering the Built Environment:

### SummitSkills

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

**Coverage** – Building Services Engineering.

ConstructionSkills shares an interest with SummitSkills in SIC 45.31 Installation of wiring and fittings and SIC 45.33 Plumbing. ConstructionSkills recognises the responsibility of Summit Skills across Standard Industrial Classifications (SIC) 45.31 and 45.33, thus data relating to the building services engineering sector is included here primarily for completeness.

### AssetSkills

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

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

AssetSkills has a peripheral interest in SIC 74.2.

### 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.

## 5.4 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, and decommissioning of nuclear power stations, onshore wind farms.

#### 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 & 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>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>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> 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.

## 5.5 Occupational groups

### Occupational group

Description, SOC 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

## 5.6 CSN website and contact details

### Logistics

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

### Civil engineering operatives nec\*

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

### Non-construction operatives

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

### Civil engineers

Civil engineers, 2121

### Other construction professionals and technical staff

Mechanical engineers, 2122  
Electrical engineers, 2123  
Chemical engineers, 2125  
Design and development engineers, 2126  
Production and process engineers, 2127  
Planning and quality control engineers, 2128  
Engineering professional nec\*, 2129  
Electrical/electronic technicians, 3112  
Engineering technicians, 3113  
Building and civil engineering technicians, 3114  
Science and engineering technicians nec\*, 3119  
Architectural technologists and town planning technicians, 3121  
Draughtspersons, 3122  
Quality assurance technicians, 3115  
Town planners, 2432  
Electronics engineers, 2124  
Building inspectors, 3123  
Scientific researchers, 2321

### Architects

Architects, 2431

### Surveyors

Quantity surveyors, 2433  
Chartered surveyors (not Quantity surveyors), 2434

### The CSN website – <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 research reports such as the '2020Vision' and 'Closer look at Greater London' are also freely available.

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
- CSN team contact information
- access to related ConstructionSkills research
- details for those interested in becoming members of the network.

The CSN website can be found at:

<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 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
- access sub-regional LMI reports
- 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)



For more information about the  
**Construction Skills Network**, contact

**Lee Bryer**

Research and Development

Operations Manager

0344 994 4400

Lee.bryer@cskills.org

<http://www.cskills.org/contact-us/offices.aspx>

**Cskills website**

<http://www.cskills.org/>

**CSN webpage**

<http://www.cskills.org/supportbusiness/businessinformation/csn/index.aspx>

