# INDUSTRY INSIGHTS

Construction Skills Network
East of England 2015-2019







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

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

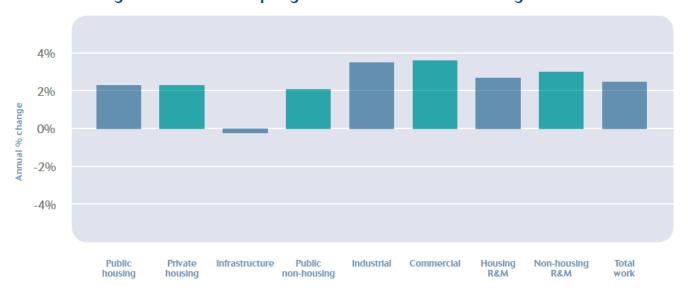
# **Contents**

1	Summary and key findings	4
2	The outlook for construction in the East of England	6
3	Construction employment forecasts for the East of England	12
4	Comparisons across the UK	14
Tal	bles and charts	
1	Annual average construction output growth 2015–2019	4
2	Regional comparison 2015–2019	5
3	Construction output 1997–2013	6
4	Construction industry structure 2013	6
5	Economic structure	7
6	Economic indicators	7
7	New construction orders growth 1997–2013	8
8	New work construction orders	8
9	Construction output 2015-2016	9
10	Annual average construction output growth 2015–2016	9
11	Annual average construction output growth 2015–2019	10
12	Construction output 2015–2019	11
13	Total construction employment by occupation	12
14	Annual recruitment requirement by occupation	13
15	Annual average output growth by region	15
16	Annual recruitment requirement by region	15
CS	SN explained	
1	CSN methodology	17
2	Glossary of terms	18
3	Notes and footprints	19
4	Definitions: types and examples of construction work	20
5	Occupational groups	22
6	CSN website and contact details	25

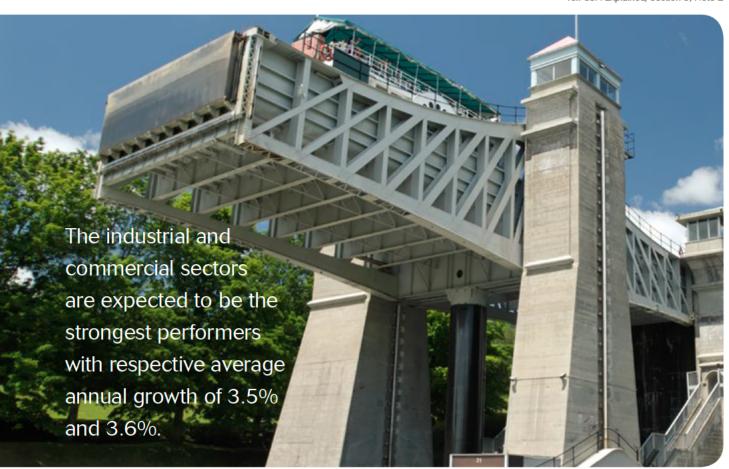
# 1 Summary – East of England

Construction output in the East of England is set to expand at an annual average rate of 2.5% between 2015 and 2019. This is slower than the equivalent UK rate of 2.9%. Growth in new work output is set to underperform when compared to the repair and maintenance (R&M) sector over the same period (2.2% vs 2.9%). Employment growth in the East of England is also expected to lag the UK average, at an average annual rate of 1.1% compared with 1.5%. The region's annual recruitment requirement (ARR) of 4,260 represents 1.7% of base 2015 employment, in line with the UK average.

# Annual average construction output growth 2015-2019 East of England



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



# 1.1 Key findings

Construction output in the East of England increased by 9% in 2013 and we expect a more moderate rise in 2014. Activity is projected to continue to increase, at an average annual rate of 2.5% in the five years to 2019.

The industrial and commercial sectors are expected to be the strongest performers with respective average annual growth of 3.5% and 3.6% over the forecast period. Despite the strong growth projected for the former sector, activity in 2019 is set to remain 44% below its 2006 peak. Total output for the latter sector is also set to stay below its historic (2002) peak, but to a lesser extent (13%).

The industrial and commercial sectors are expected to be the strongest performers with respective average annual growth of 3.5% and 3.6% over the forecast period.

Output in both the public and private housing sectors is expected to rise at an average annual rate of 2.3% in each year to 2019. The former sector should have returned to growth in 2014, with a predicted double-digit expansion, following on from three successive annual contractions. Private housing saw a return to growth in 2013 and this trend is expected to have continued in 2014. Schemes such as 'Help to Buy' have been credited with boosting growth in the private housing sector. This is also evident in our forecasts which anticipate stronger growth in the first half of the forecast period as opposed to the latter half.

The infrastructure sector is the only one predicted to see a fall in activity over the five years to 2019 with an average annual contraction of 0.2%. Output in the sector has been rising steadily since 2009, driven by particularly strong new orders figures and a healthy pipeline of new work. Activity is currently at a record high, boosted by Anglian Water's capital expenditure plans, a number of highway maintenance projects and Intergen's new power station on the London Gateway Logistics Park. We do not anticipate this rate of growth to continue through to 2019, although activity should remain fairly close to its current level.

Employment growth is expected to average 1.1% over the forecast period, which is below the equivalent UK rate of 1.5%. Construction trade supervisors (3.3%) are set for the strongest growth, followed by plasterers (2.6%), and scaffolders, painters and decorators and specialist building operatives nec (2.5%). The majority of occupational aggregates (24 out of 28) should see an increase in employment over the forecast period.

The East of England's annual recruitment requirement (ARR) of 4,260 represents 1.7% of base 2015 employment, in line with the UK average. Electrical trades and installation has the highest requirement at 810.

# Regional comparison 2015-2019

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

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

# 2 The outlook for construction in the East of England

# 2.1 Construction output in the East of England – overview

Construction output in the East of England picked up quite strongly in 2013. At £12.39bn in 2010 prices it was at its highest level since 2007 and only 2% below its peak a year earlier.

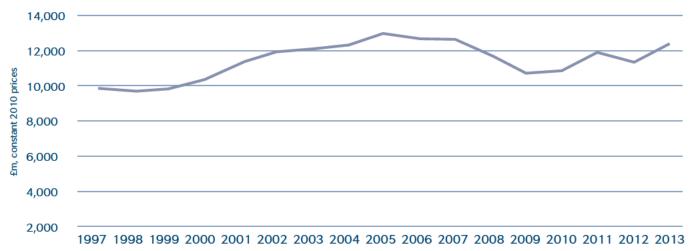
The majority of new work sectors posted growth last year, with the infrastructure and public non-housing ones leading the way. Both increased by 13% year-on-year. At £1.41bn the former posted its highest total

on record, while the latter increased to £984m, a level well above its average one for the decade leading up to 2013.

Commercial construction grew by 12% to £1.95bn, its highest total since 2008, but it remained 23% short of its 2002 peak level.

Public housing was the only new work sector to experience a decrease in output in 2013. It was its third successive double-digit annual decline, and at £208m output was at its lowest level since 2002.

### Construction output 1997-2013 – East of England



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

# 2.2 Industry structure

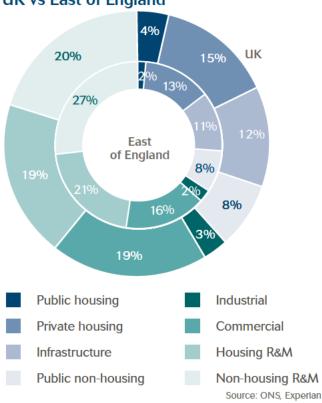
The diagram, Construction Industry structure 2013 – UK vs. East of England, illustrates the sector breakdown of construction in East of England, compared to that in the UK. Effectively, the percentages for each sector illustrate what proportion of total output each sector accounts for.

The industrial structure of the East of England remains fairly similar to the UK as a whole in terms of new work shares. However, new work as a share of total output varies significantly across both geographies. At the UK level, it accounts for 62% of overall output whereas at the regional level its share is much lower at 52% which highlights the prominence of the repair and maintenance sectors, especially the non-housing one, in the East of England.

Accordingly, the majority of new work sectors are slightly underrepresented in the region with public housing (2% vs 4%), private housing (13% vs 15%), infrastructure (11% vs 12%), industrial (2% vs 3%) and commercial (16% vs 19%) construction all falling below their corresponding UK proportions.

It then follows on that both the R&M sectors are over represented in the East of England. Non-housing R&M showed the largest divergence with a 27% share of total activity, which is well above the UK average of 20%. Housing R&M had a smaller gap in shares (21% vs 19%).

# Construction industry structure 2013 – UK vs East of England



### 2.3 Economic overview

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

#### 2.4 Economic structure

The East of England's gross value added (GVA) totalled £113.1bn in 2010 prices in 2013. This was up 0.6% on the previous year's total and 3.4% off its 2007 peak level.

The region's economy is heavily dependent upon services, especially professional and other private

ones, which accounted for 26% of regional GVA in 2013. Its proportion of regional GVA increased by 2% in the decade to 2013. Manufacturing is also more prominent in the region than it is across the UK. Last year it made up 11% of regional GVA, as opposed to 10% nationally. In contrast the finance and insurance sector is less important at the regional level than it is nationally, with respective shares of 5% and 9% in 2013. Its importance has decreased by 2% over the previous ten years. The wholesale and retail sector saw annual average growth of 1.1% over the same period, however its share of GVA has remained unchanged at 14%.

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

Selected sectors	Actual	Forecast Annual % change, real terms					
	2013	2014	2015	2016	2017	2018	2019
Professional and other private services	29.6	2.9	4.0	3.7	3.6	3.4	3.1
Public services	20.2	1.6	0.1	-0.1	-0.3	0.3	1.3
Wholesale and retail	16.1	5.1	3.5	2.7	2.6	2.7	2.6
Manufacturing	12.9	7.0	1.6	1.5	2.1	1.6	1.2
Finance and insurance	6.0	2.9	4.0	3.7	3.6	3.4	3.1
Total Gross Value Added (GVA)	113.1	3.3	2.8	2.5	2.5	2.4	2.4

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

# 2.5 Forward looking economic indicators

The East of England's economy is estimated to have posted much stronger growth of 3.3% in 2014, after ticking up by 0.6% a year earlier. Over the five years to 2019 GVA in the region is expected to expand at an annual average rate of 2.4%, in line with the UK average.

Over that period the largest sector, professional and other private services, is expected to see robust annual average growth of 3.4%. The second largest one, public services, is not expected to perform nearly as well, with annual average growth of 0.3%.

The wholesale and retail sector is projected to expand at an average annual rate of 2.7% between 2015 and 2019. Manufacturing activity is also forecast a reasonable expansion (1.6%) to maintain its place as the fourth largest contributor to regional GVA.

Real household disposable income (RHDI) is estimated to have increased by 1.7% in 2014, after edging downwards in the previous year. RHDI is expected to increase in each year to 2019 at a progressively stronger rate, moving in-line with expected earnings growth and moderate inflation. We anticipate an annual average increase of 2.3% over the forecast period, reasonably robust rate of growth but still a long way off that seen in the early 2000s.

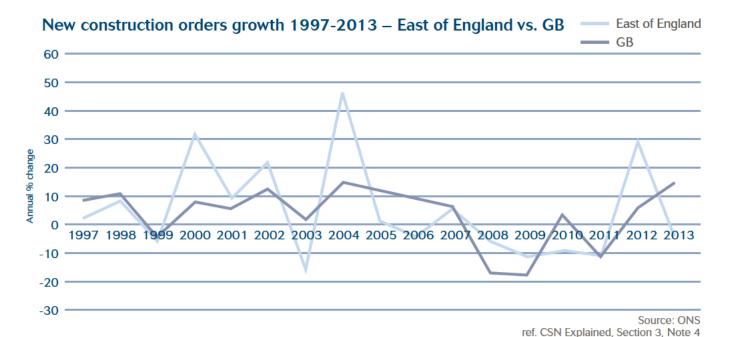
House prices in the East of England rose to £255,000 in 2013, according to the Office for National Statistics' mix-adjusted house price series. In the third quarter of 2014 prices rose 4.9% quarter-on-quarter and 11.9% on the same period of the previous year.

The unemployment rate on the LFS measure is expected to decrease for the second successive year in 2014 to 5%. It is expected to continue falling over the forecast period, reaching 4.4% by 2019.

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

Actual	Forecast Annual % change, real terms					
2013	2014	2015	2016	2017	2018	2019
98.9	1.7	2.2	1.6	2.5	2.8	2.6
95.6	3.6	3.3	2.7	2.7	2.8	2.8
3,586	60.50%	60.78%	60.92%	60.81%	60.67%	60.70%
255,306	8.66	7.97	5.44	4.03	3.83	3.96
0.19	-15.79	-5.86	-2.45	0.77	1.51	0.13
	2013 98.9 95.6 3,586 255,306	2013 2014 98.9 1.7 95.6 3.6 3,586 60.50% 255,306 8.66	2013     2014     2015       98.9     1.7     2.2       95.6     3.6     3.3       3,586     60.50%     60.78%       255,306     8.66     7.97	Actual         Annual % chain           2013         2014         2015         2016           98.9         1.7         2.2         1.6           95.6         3.6         3.3         2.7           3,586         60.50%         60.78%         60.92%           255,306         8.66         7.97         5.44	Actual         Annual % change, real term           2013         2014         2015         2016         2017           98.9         1.7         2.2         1.6         2.5           95.6         3.6         3.3         2.7         2.7           3,586         60.50%         60.78%         60.92%         60.81%           255,306         8.66         7.97         5.44         4.03	Actual         Annual % change, real terms           2013         2014         2015         2016         2017         2018           98.9         1.7         2.2         1.6         2.5         2.8           95.6         3.6         3.3         2.7         2.7         2.8           3,586         60.50%         60.78%         60.92%         60.81%         60.67%           255,306         8.66         7.97         5.44         4.03         3.83

Source: ONS, DCLG, Experian



#### 2.6 New construction orders – overview

After a sharp increase in 2012, new orders fell 6% in the following year to reach £4.53bn on a current price basis. At that level, they were 27% below their peak in 2004 and 12% below the average level of orders for the decade preceding 2013.

Public housing orders managed a return to growth in 2013 after falling in each of the five preceding years. At £226m they had nearly doubled on an annual basis yet they remained at approximately half of their 2007 level. Industrial construction was the only other new work sector to manage growth last year. Industrial orders increased for their third successive year to reach £264m, although this total is less than a third of its 2005 peak.

New infrastructure orders took the largest hit last year, with a decline of 19%, although this was after two years of particularly strong growth. However, at £1.02bn, they remained at a high level.

Private housing, public non-housing and commercial orders all saw more moderate declines in 2013 on an annual basis.

# 2.7 New construction orders – current situation

In the first six months of 2014 new construction orders in the East of England totalled £2.12bn in current prices. This was 18% below the previous six months' total but 9% above their level for same period a year earlier.

Infrastructure orders saw the largest increase. At £609m they were up 75% year-on-year. Public housing and industrial orders also made significant gains on the same measures, but it's worth noting that these are the smallest sectors and are susceptible to significant volatility in terms of percentage changes. The commercial sector also saw its orders increase at a double-digit rate over the same period.

Orders for both the private housing and public non-housing sectors fell on an annual basis. The former was down 12% to £477m, and the latter 24% to £386m.

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

Regional Office for National Statistics (ONS) output statistics are published in current prices and are thus inclusive of any inflationary effect. At the time of writing, regional ONS construction output statistics were only available for the first two quarters of 2014.

Construction output in the first half of 2013 totalled £6.4bn in current prices, decreasing 10% half-year on half-year, yet it was slightly above (1%) its level for the same period of last year.

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

	Actual	Annual % change					
	2013	2009	2010	2011	2012	2013	
Public housing	226	-5.7	-12.2	-33.6	-35.7	93.2	
Private housing	1059	-23.7	76.4	-16.7	21.2	-9.3	
Infrastructure	1018	10.0	-61.1	20.6	76.6	-19.4	
Public non-housing	888	7.2	-16.4	-29.6	30.0	-4.6	
Industrial	264	-31.0	-28.2	18.0	15.8	28.8	
Commercial	1073	-41.7	20.7	-11.7	15.8	-3.4	
Total new work	4,528	-13.4	-11.2	-13.2	29.1	-5.6	

# Construction output – East of England (£ million, 2011 prices)

	Actual 2013	Foreca	Annual average		
	2013	2014	2015	2016	2015-2016
Public housing	208	27%	8%	-3%	2.4%
Private housing	1,624	6%	5%	0%	2.5%
Infrastructure	1,409	5%	-6%	-2%	-3.9%
Public non-housing	984	0%	1%	4%	2.7%
Industrial	286	18%	6%	2%	3.8%
Commercial	1,948	-5%	2%	2%	2.0%
New work	6,459	3%	1%	1%	1.1%
Housing R&M	2,602	4%	5%	3%	4.2%
Non-housing R&M	3,327	4%	4%	5%	4.6%
Total R&M	5,929	4%	4%	4%	4.4%
Total work	12,389	3%	3%	3%	2.7%

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

Public housing was the only sector to make gains on both measures. At £156m, it was up 47% on its preceding six months' total and 68% higher than in the same period of 2013. The upswing was also apparent on a four-quarter moving total basis, as output strengthened for its third consecutive quarter in the three months to June of this year.

Performance was more mixed for the private housing and infrastructure sectors. At £827m output in the former fell 8% half-year on half-year, but rose 2% on the same period of 2013. Infrastructure activity (£838m) followed a similar trend, falling 1% and rising 11% on the same measures.

Output in both the industrial (£152m) and commercial (£1.02bn) sectors in the first half of this year was up on the corresponding period of 2013.

The public non-housing sector was the worst performing new work sector. At £453m, output was down 20% on the previous six months' total, and also down 12% on the latter half of last year.

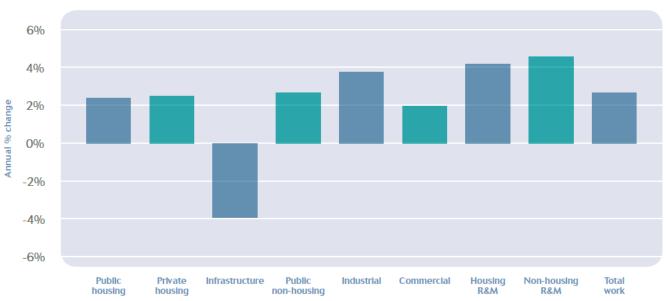
Total output for the region is expected to grow by 3% in 2015 and a further 3% in the following year.

On an average annual basis between 2015 and 2016, industrial output is forecast the greatest expansion at 3.8%, largely driven by ongoing work on the London Gateway Logistics Park. However, given its relatively small size, this growth rate is likely to only amount to approximately £30m worth of new output.

The public housing, private housing, and public non-housing sectors are also set for solid short-term growth with respective rates of 2.4%, 2.5% and 2.7%.

Infrastructure is the only sector which is anticipated to contract on average annual basis (3.9%) in the short term. However, output in the sector is at historically high levels and will continue to exceed £1.3bn in 2010 prices over the short term, driven by Anglian Water's capital expenditure under its Asset Management Programme 6 (AMP6), a number of highway maintenance projects and Intergen's £600m power station on the London Gateway Logistics Park.

# Annual average construction output growth 2015-2016 – East of England



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

Annual average output growth between 2015 and 2019 is expected to reach 2.5% in the East of England, below the equivalent UK rate of 2.9%. Over that period of growth in new work, activity is projected to lag that of the R&M sector, with respective increases of 2.2% and 2.9%.

Growth is forecasted to be strongest in the commercial (3.6% annual average) and industrial (3.5% annual average) sectors. Given its small size, the increase in industrial construction does not have a strong impact on overall output, but the commercial construction sector, on the other hand, is expected to further strengthen its position as the largest new work sector in the East of England.

Work on AstraZeneca's new headquarters could begin as early as next year. The £330m project would be built on Cambridge Biomedical Campus, to accommodate the company's global R&D centre. The uniquely designed building would feature glass walls and a 'sawtooth' roof. Construction work is scheduled to commence early next year and carry on until 2017.

The public and private housing sectors should both achieve reasonably robust growth over the forecast period at an average annual rate of 2.3% apiece, although the year-on-year profile will be different for each one. The latter sector should see stronger growth in the first half of the forecast period, which may, in part, be explained by Government incentives such as 'Help to Buy' and continuing low interest rates in the short term. The market may also be boosted by the recent changes to Stamp Duty, which should reduce the cost of house purchase for most buyers. Large projects such as the £950m redevelopment of Purfleet Centre in Thurrock should also support growth in the medium term.

The public non-housing sector is set to expand at an annual average rate of 2.1% over the five years to 2019. There are currently four publicly-funded health projects either under construction or in the pipeline

within the region, two of which are in Ipswich, one in Stevenage and one in Basildon. The profile of capital expenditure on these projects suggests that most of their boost to output will take place in the short term. This is reflected in our medium-term forecasts, as output growth is expected to taper off towards 2019.

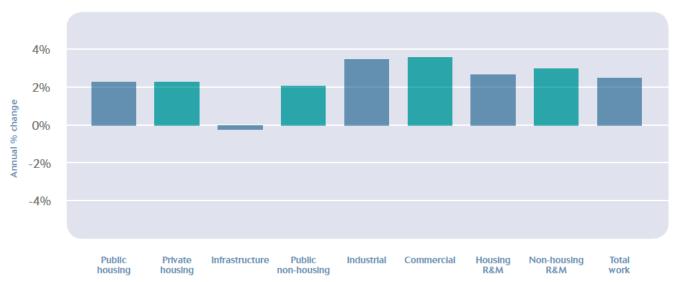
Infrastructure is the only new work sector which is forecast a decline (0.2% annual average) in output growth over the 2015 to 2019 period. Year-on-year growth in the sector is expected to be a bit volatile, the main period of growth probably coming in 2017/18 as projects such as Progress Power Ltd's proposed new gas-fired power plant at the Eye Airfield industrial estate in mid-Suffolk get underway in the second half of 2016. However, as mentioned before, infrastructure output is predicted to remain at historically high levels throughout the forecast period.

### 2.10 Beyond 2019

Most of the output growth beyond 2019 will most likely come from large infrastructure projects, by far the largest of which is the new nuclear plant at Sizewell C. According to the NIA timeline (June 2014) the start of construction work will not be until sometime after 2019. Other schemes include AMP frameworks which have already started, but are expected to continue well beyond 2019. The expansion of national airport capacity may also be a factor with some large-scale proposals for the region.

As outlined in the 2014 Autumn Statement, the Government is looking to invest up to £7bn to better integrate the Greater South East and North of England. Proposals include new high speed rail lines, greater broadband connectivity and upgraded road infrastructure. It's difficult to put an exact value of what this means for the East of England, but any effect will only be positive for regional output, although again it will primarily be in the infrastructure sector. Given the scale of some of the proposals it's more than likely that most of the work will be taking place beyond 2019.

# Annual average construction output growth 2015-2019 – East of England



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

# Construction output – East of England (£ million, 2011 prices)

	Estimate		Annual average				
	2014	2015	2016	2017	2018	2019	2015-2019
Public housing	264	8%	-3%	3%	3%	1%	2.3%
Private housing	1,729	5%	0%	3%	2%	2%	2.3%
Infrastructure	1,481	-6%	-2%	7%	5%	-4%	-0.2%
Public non-housing	986	1%	4%	1%	3%	1%	2.1%
Industrial	336	6%	2%	5%	2%	3%	3.5%
Commercial	1,848	2%	2%	5%	7%	2%	3.6%
New work	6,644	1%	1%	4%	4%	1%	2.2%
Housing R&M	2,697	5%	3%	2%	2%	1%	2.7%
Non-housing R&M	9,477	4%	5%	3%	1%	2%	3.0%
R&M	6,173	4%	4%	3%	1%	2%	2.9%
Total work	12,818	3%	3%	3%	3%	1%	2.5%

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



# 3 Construction employment forecasts for the East of England

# 3.1 Total construction employment forecasts by occupation

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

Construction employment in the East of England is expected to total approximately 256,000 in 2019, with a forecasted annual average growth rate of 1.1% between 2015 and 2019. This rate is slightly below the UK average which is projected at 1.5% in the same

period. Employment growth is expected be strongest in the short-term, before the rate begins to ease towards the latter end of the forecast period. The 2019 projection of around 256,000 is a little over 2% below the 2008 peak for the region.

Of the 28 occupational aggregates, 24 are expected to see growth over the forecast period. The strongest rises are predicted for construction trade supervisors (3.3%), plasterers (2.6%), scaffolders, painters and decorators, and specialist building operatives nec., (2.5%). Overall growth in demand is likely to be strongest for a number of the skilled trades and supervisory grades, while managers and professionals see more moderate growth. This could be a function of the relatively large size of the repair and maintenance sector in the region.

# Total employment by occupation – East of England

	Actual 2013	Estimate 2014	Forecast 2015	Forecast 2019
Senior, executive, and business process managers	13,960	14,020	14,050	13,870
Construction project managers	4,280	4,450	4,590	4,910
Other construction process managers	15,530	16,100	16,610	17,870
Non-construction professional, technical, IT and other office-based staff	33,950	34,690	35,200	35,560
Construction trades supervisors	5,180	5,460	5,730	6,430
Wood trades and interior fit-out	24,110	24,560	24,870	24,830
Bricklayers	7,760	7,950	8,090	8,230
Building envelope specialists	9,890	10,110	10,280	10,400
Painters and decorators	9,460	9,870	10,210	11,170
Plasterers	5,000	5,360	5,590	6,080
Roofers	3,810	3,880	3,920	3,900
Floorers	3,650	3,600	3,580	3,510
Glaziers	2,800	2,820	2,830	2,800
Specialist building operatives nec*	3,770	3,920	4,050	4,440
Scaffolders	2,630	2,450	2,700	2,770
Plant operatives	3,310	3,440	3,550	3,730
Plant mechanics/fitters	2,590	2,700	2,780	3,040
Steel erectors/structural fabrication	1,800	1,860	1,920	2,020
Labourers nec*	11,330	11,650	11,890	12,160
Electrical trades and installation	18,760	19,080	19,360	20,120
Plumbing and HVAC Trades	14,970	15,390	15,820	16,830
Logistics	2,830	2,930	3,020	3,270
Civil engineering operatives nec*	1,120	1,110	1,100	1,020
Non-construction operatives	1,540	1,580	1,620	1,680
Civil engineers	7,140	7,260	7,350	7,500
Other construction professionals and technical staff	15,800	16,100	16,380	17,030
Architects	5,010	5,180	5,330	5,670
Surveyors	4,730	4,840	4,950	5,170
Total (SIC 41-43)	204,030	208,980	213,360	220,640
Total (SIC 41-43, 71.1, 74.9)	236,710	242,360	247,370	256,010

Source: ONS, CSN, Experian ref. CSN Explained, Section 3, Notes 5, 6 and 8

# 3.2 Annual recruitment requirements (ARR) by occupation

The ARR is a gross requirement that takes into account workforce flows into and out of construction, due to factors such as movements between industries, migration, sickness, and retirement. However, these flows do not include movements into the industry from training, due to the inconsistency and coverage of supply data. 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 East of England projected ARR for the 2015 to 2019 period is 4,260, which represents 1.7% of base 2015 employment, in line with the UK average. Of the 28 occupational aggregates, electrical trades and installation have the highest absolute requirement (810), but in terms of ratio of base 2015 employment, the requirement is highest for logistics personnel (12%), plant mechanics/fitters (8%) and specialist building operatives nec., (6%).

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

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

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

# Annual recruitment requirement by occupation – East of England

	2015 - 2019
Senior, executive, and business process managers	-
Construction project managers	50
Other construction process managers	-
Non-construction professional, technical, IT and other office-based staff	-
Construction trades supervisors	-
Wood trades and interior fit-out	160
Bricklayers	310
Building envelope specialists	80
Painters and decorators	490
Plasterers	<50
Roofers	160
Floorers	-
Glaziers	80
Specialist building operatives nec*	240
Scaffolders	100
Plant operatives	-
Plant mechanics/fitters	230
Steel erectors/structural fabrication	<50
Labourers nec*	410
Electrical trades and installation	810
Plumbing and HVAC Trades	540
Logistics	360
Civil engineering operatives nec*	-
Non-construction operatives	-
Civil engineers	160
Other construction professionals and technical staff	-
Architects	-
Surveyors	
Total (SIC 41-43)	4,100
Total (SIC 41-43, 71.1, 74.9)	4,260

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

# 4 Comparisons across the UK

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

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



While most UK regions and nations are expected to experience quite strong growth in private housing output to 2016, with a slowdown to more sustainable levels thereafter, the prospects for public housing are much more uncertain as the current Affordable Housing Programme (AHP) winds down to April 2015. The overall pot of funding available from central Government for 2015-18 is much the same on an annualised basis as in 2011-15 and there are concerns that many housing associations may find increasing their borrowing levels from private sources more problematical in the future.

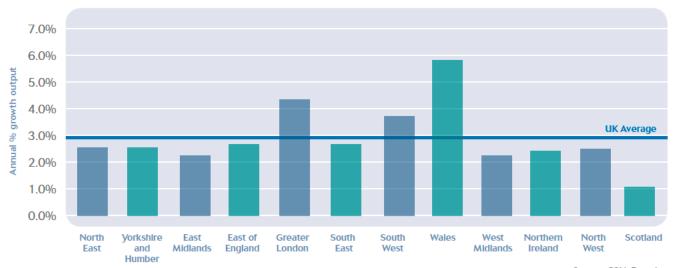
Outside of the South West, infrastructure growth is likely to be strongest in the North East and Wales, the former being driven by £400m of roads work in the Highways Agency's Area 14, which covers the region and the latter benefiting from Great Western Line electrification, road upgrades, energy works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

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

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

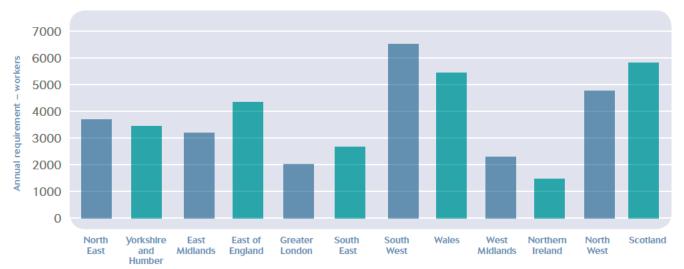
Despite London's strong employment demand, its annual recruitment requirement (ARR) only equates to around 0.5% of projected 2015 employment. This is because the region acts as a natural magnet for the construction workforce within the UK and beyond anyway. In contrast, Wales' strong employment demand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

# Annual average output growth by region 2015-2019



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

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



Source: CSN, Experian



# **CSN Explained**

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

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

Section 2 provides a glossary to clarify some of the terms that are used in the reports.

Section 3 has some further notes relating to the data sources used for the various charts and tables. This section also outlines what is meant by the term 'footprint', when talking about the areas of responsibility that lie with a Sector Skills Council (SSC) or Sector Bodies.

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

Section 5 gives a detailed breakdown of the 28 occupational groups into the individual standard occupational classification (SOC) codes that are aggregated to provide the employment and recruitment requirement.

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



# 1. CSN Methodology

### Background

The Construction Skills Network has been evolving since its conception in 2005, acting as vehicle for ConstructionSkills to collect and produce information on the future employment and training needs of the industry.

CITB, CIC and CITB-ConstructionSkills Northern Ireland are working as ConstructionSkills, the Sector Skills Council for Construction, to produce robust labour market intelligence which provides a foundation on which to plan for future skills needs and to target investment.

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

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

At the heart of the CSN are several models which generate forecasts of employment requirements within the industry for a range of occupational groups. The models are designed and managed by Experian under the independent guidance and validation of the Technical Reference Group, which is comprised of statisticians and modelling experts.

The models have evolved over time and will continue to do so, to ensure that they account for new research as it is published as well as new and improved modelling techniques. Future changes to the model will only be made after consultation with the Technical Reference Group.

# The model approach

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

The models work by forecasting demand and supply of skilled workers separately. The difference between demand and supply forms the employment requirement. The forecast total employment levels are derived from expectations about construction output

and productivity. Essentially, this is based upon the question 'How many people will be needed to produce forecast output, given the assumptions made about productivity?'.

The annual recruitment requirement (ARR) is a gross requirement that takes into account workforce flows into and out of construction, due to such factors as movements between industries, migration, sickness and retirement. However, these flows do not include movements into the industry from training, although robust data on training provision is being developed by CITB in partnership with public funding agencies, further education, higher education and employer representatives. Thus, the annual recruitment requirement provides an indication of the number of new employees that would need to be recruited into construction each year in order to realise forecast output.

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

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

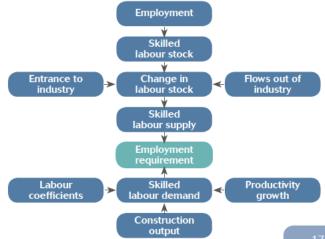
- Transfers to other industries
- International/domestic out migration
- Permanent retirements (including permanent sickness)
- Outflow to temporary sickness and home duties.

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

Flows into the labour market include:

- Transfers from other industries
- International/domestic immigration
- Inflow from temporary sickness and home duties.

The most significant inflow is likely to be from other industries. A summary of the model is shown in the flow chart below.



# 2. Glossary of terms

**Building envelope specialists** – any trade involved with the external cladding of a building other than bricklaying, e.g. curtain walling.

**Demand** – this is calculated using construction output data from the Office for National Statistics (ONS) and the Department of Finance and Personnel Northern Ireland (DFP), along with vacancy data from the National Employer Skills Survey, produced by the Department for Education and Skills. These data sets are translated into labour requirements by trade using a series of coefficients to produce figures for labour demand that relate to forecast output levels.

**GDP** (gross domestic product) – total market value of all final goods and services produced. A measure of national income. GDP = GVA plus taxes on products minus subsidies on products.

**GVA** (gross value added) – total output minus the value of inputs used in the production process. GVA measures the contribution of the economy as a difference between gross output and intermediate outputs.

**Coefficients** – to generate the labour demand, the model makes use of a set of specific statistics for each major type of work, to determine employment by trade or profession, based upon the previous year's supply. In essence, this is the number of workers of each occupation or trade needed to produce £1m of output across each sub-sector.

**LFS** (Labour Force Survey) — a UK household sample survey which collects information on employment, unemployment, flows between sectors and training. Information is collected from around 53,000 households each quarter (the sample totals more than 100,000 people).

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

**Macroeconomics** – the study of an economy at a national level, including total employment, investment, imports, exports, production and consumption.

 ${f Nec}$  – not elsewhere classified, used as a reference in LFS data.

**ONS** (Office for National Statistics) – organisation producing official statistics on the economy, population and society at both a national and local level.

**Output** – total value of all goods and services produced in an economy.

**Productivity** – output per employee.

**SIC codes** (Standard Industrial Classification codes) – from the United Kingdom Standard Industrial Classification of Economic Activities produced by the ONS

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

**Supply** – the total stock of employment in a period of time, plus the flows into and out of the labour market. Supply is usually calculated from LFS data.



# 3. Notes and Footprints

#### Notes

- 1 Except for Northern Ireland, output data for the English regions, Scotland and Wales is supplied by the Office for National Statistics (ONS) on a current price basis. Thus, national deflators produced by the ONS have been used to deflate prices to a 2005 constant price basis, so that the effects of inflation have been stripped out.
- 2 The annual average growth rate of output is a compound average growth rate, i.e. the rate at which output would grow each year if it increased steadily over the forecast period.
- 3 Only selected components of gross value added (GVA) are shown in this table and so do not sum to the total.
- 4 For new construction orders, comparison is made with Great Britain rather than the UK, owing to the fact that there are no orders data series for Northern Ireland.
- 5 Employment numbers are rounded to the nearest 10.
- 6 The tables include data relating to plumbers and electricians. As part of SIC 43, plumbers and electricians working in contracting are an integral part of the construction process. However, it is recognised by ConstructionSkills that SummitSkills has responsibility for these occupations across a range of SIC codes, including SIC 43.2.
- 7 A reporting minimum of 50 is used for the annual recruitment requirement (ARR). As a result some region and devolved nation ARR forecasts do not sum to the total UK requirement.
- 8 The Employment and ARR tables show separate totals for SIC41-43 and SIC41-43, 71.1 and 74.9. The total for SIC41-43 covers the first 24 occupational groups on the relevant tables and excludes civil engineers, other construction professionals and technical staff, architects and surveyors. The total for SIC41-43, 71.1 and 74.9 includes all occupations.

# Footprints for Built Environment Sector Bodies

ConstructionSkills is responsible for SIC 41 Construction of buildings, SIC 42 Civil engineering, SIC 43 Specialised construction activities and SIC 71.1 Architectural and engineering activities and related technical consultancy.

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

# The sector footprints for the other Sector Bodies covering the Built Environment:

#### SummitSkills

**Footprint** – plumbing, heating, ventilation, air conditioning, refrigeration and electrotechnical.

Coverage – Building services engineering.

ConstructionSkills shares an interest with SummitSkills in SIC 43.21 Electrical installation and SIC 43.22 Plumbing, heat and air-conditioning installation. ConstructionSkills recognises the responsibility of Summit Skills across Standard Industrial Classifications (SIC) 43.21 and 43.22; thus data relating to the building services engineering sector is included here primarily for completeness.

### The Building Futures Group

**Footprint** – property services, housing, facilities, management, cleaning.

**Coverage** – property, housing and land managers, chartered surveyors, estimators, valuers, home inspectors, estate agents and auctioneers (property and chattels), caretakers, mobile and machine Operatives, window cleaners, road sweepers, cleaners, domestics, facilities managers.

The Building Futures Group has a peripheral interest in SIC 71.1 Architectural and engineering activities and related technical consultancy.

### **Energy and Utility Skills**

**Footprint** – electricity, gas (including gas installers), water and waste management.

**Coverage** – electricity generation and distribution, gas transmission, distribution and appliance installation and maintenance, water collection, purification and distribution, waste water collection and processing, waste management.

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

# 4. Definitions: types and examples of construction work

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

Housing schemes, care homes for the elderly and the provision within housing sites of roads and services for gas, water, electricity, sewage and drainage.

## Private sector housing

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

# Infrastructure – public and private

#### Water

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

### Sewerage

Sewage disposal works, laying of sewers and surface drains.

### **Electricity**

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

### Gas, communications, air transport

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

#### Railways

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

#### **Harbours**

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

#### Roads

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

#### Public non-residential construction<sup>1</sup>

#### **Factories and warehouses**

Publicly owned factories, warehouses, skill centres.

### Oil, steel, coal

Now restricted to remedial works for public sector residual bodies.

#### Schools, colleges, universities

State schools and colleges (including technical colleges and institutes of agriculture); universities including halls of residence, research establishments etc.

#### Health

Hospitals including medical schools, clinics, welfare centres, adult training centres.

#### Offices

Local and central Government offices, including town halls, offices for all public bodies except the armed services, policeheadquarters.

#### **Entertainment**

Theatres, restaurants, public swimming baths, caravan sites at holiday resorts, works and buildings at sports grounds, stadiums, racecourses etc. owned by local authorities or other public bodies.

#### **Garages**

Buildings for storage, repair and maintenance of road vehicles, transport workshops, bus depots, road goods transport depots and car parks.

#### **Shops**

Municipal shopping developments for which the contract has been let by a Local Authority.

#### **Agriculture**

Buildings and work on publicly financed horticultural establishments; fen drainage and agricultural drainage, veterinary clinics.

#### Miscellaneous

All work not clearly covered by any other headings, such as fire stations, police stations, prisons, reformatories, remand homes, civil defence work, UK Atomic Energy Authority work, council depots, museums, libraries.

### Private industrial work

Factories, warehouses, wholesale depots, all other works and buildings for the purpose of industrial production or processing, oil refineries, pipelines and terminals, concrete fixed leg oil production platforms (not rigs); private steel work; all new coal mine construction such as sinking shafts, tunnelling, etc.

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

#### Schools and universities

Schools and colleges in the private sector, financed wholly from private funds.

#### Health

Private hospitals, nursing homes, clinics.

#### Offices

Office buildings, banks.

#### Entertainment

Privately owned theatres, concert halls, cinemas, hotels, public houses, restaurants, cafés, holiday camps, swimming pools, works and buildings at sports grounds, stadiums and other places of sport or recreation, youth hostels.

### Garages

Repair garages, petrol filling stations, bus depots, goods transport depots and any other works or buildings for the storage, repair or maintenance of road vehicles, car parks.

#### Shops

All buildings for retail distribution such as shops, department stores, retail markets, showrooms, etc.

### Agriculture

All buildings and work on farms, horticultural establishments.

## Miscellaneous

All work not clearly covered by any other heading, e.g. exhibitions, caravan sites, churches, church halls.

#### New work

### **New housing**

Construction of new houses, flats, bungalows only.

### All other types of work

All new construction work and all work that can be referred to as improvement, renovation or refurbishment and which adds to the value of the property.<sup>2</sup>

# Repair and maintenance

#### Housing

Any conversion of, or extension to any existing dwelling and all other work such as improvement, renovation, refurbishment, planned maintenance and any other type of expenditure on repairs or maintenance.

### All other sectors

Repair and maintenance work of all types, including planned and contractual maintenance.<sup>3</sup>

<sup>1</sup> Where contracts for the construction or improvement of non-residential buildings used for public service provision, such as hospitals, are awarded by private sector holders of contracts awarded under the Private Finance Initiative, the work is classified as 'private commercial'.

<sup>2</sup> Contractors reporting work may not always be aware of the distinction between improvement or renovation work and repair and maintenance work in the non-residential sectors.

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

# **5. Occupational Groups**

Occupational group		Information technology and telecommunications professionals nec*	2139
Description, SOC (2010) reference.		•	3544
Senior, executive, and business proce	ess	Estate agents and auctioneers Solicitors	
managers	,,,,,	Legal professionals nec*	2413 2419
Chief executives and senior officials	1115	Chartered and certified accountants	2418
Financial managers and directors	1131		242
Marketing and sales directors	1132	Business and financial project management professionals	2424
Purchasing managers and directors	1133	Management consultants and business analysts	2423
Human resource managers and directors	1135	Receptionists	4216
Property, housing and estate managers	1251	Typists and related keyboard occupations	4217
Information technology and telecommunications directors	1136	Business sales executives	3542
Research and development managers	2150	Book-keepers, payroll managers and wages clerks	4122
Managers and directors in storage and		Records clerks and assistants	4131
warehousing	1162	Stock control clerks and assistants	4133
Managers and proprietors in other services nec*	1259	Telephonists	7213
Functional managers and directors nec*	1139	Communication operators	7214
IT specialist managers	2133	Personal assistants and other secretaries	4215
IT project and programme managers	2134	Sales and retail assistants	7111
Financial accounts managers	3538	Telephone salespersons	7113
Sales accounts and business development		Buyers and procurement officers	3541
managers	3545	Human resources and industrial relations officers	3562
Construction project managers		Credit controllers	4121
Construction project managers and related		Company secretaries	4214
professionals	2436	Sales related occupations nec*	7129
Other construction process managers	6	Call and contact centre occupations	7211
Production managers and directors in		Customer service occupations nec*	7219
manufacturing	1121	Elementary administration occupations nec*	9219
Production managers and directors in construction	า1122	Chemical scientists	2111
Managers and directors in transport and		Biological scientists and biochemists	2112
distribution	1161	Physical scientists	2113
Waste disposal and environmental services	1255	Laboratory technicians	3111
managers Health and safety officers	3567	Graphic designers	3421
Conservation and environmental	3307	Environmental health professionals	2463
associate professionals	3550	IT business analysts, architects and systems designers	2135
Non-construction professional,		Conservation professionals	2141
technical, IT, and other office-based s	taff	Environment professionals	2142
(excl. managers)		Actuaries, economists and statisticians	2425
IT operations technicians	3131	Business and related research professionals	2426
IT user support technicians	3132	Finance officers	4124
Finance and investment analysts and advisers	3534	Financial administrative occupations nec*	4129
Taxation experts	3535	Human resources administrative occupations	4138
Financial and accounting technicians	3537	Sales administrators	4151
Vocational and industrial trainers and instructors	3563	Other administrative occupations nec*	4159
Business and related associate professionals nec*		Office supervisors	4162
Legal associate professionals	3520	Sales supervisors	7130
Inspectors of standards and regulations	3565	Customer service managers and supervisors	7220
Programmers and software development	2136	Office managers	4161

Construction trades supervisors Skilled metal, electrical and electronic trades		Steel erectors/structural fabrication Steel erectors	5311
supervisors	5250	Welding trades	5215
Construction and building trades supervisors	5330	Metal plate workers and riveters	5214
Wood trades and interior fit-out		Construction and building trades nec* (5%)	5319
Carpenters and joiners	5315	Smiths and forge workers	5211
Paper and wood machine operatives	8121	Metal machining setters and setter-operators	5221
Furniture makers and other craft woodworkers	5442	Labourers nec*	
Construction and building trades nec* (25%)	5319	Elementary construction occupations (100%)	9120
Bricklayers		Electrical trades and installation	
Bricklayers and masons	5312	Electricians and electrical fitters	5241
Building envelope specialists		Electrical and electronic trades nec*	5249
Construction and building trades nec* (50%)	5319	Telecommunications engineers	5242
Painters and decorators		Plumbing and heating, ventilation, and	d air
Painters and decorators	5323	conditioning trades	F014
Construction and building trades nec* (5%)	5319	Plumbers and heating and ventilating engineers	5314
Plasterers		Pipe fitters	5216 5319
Plasterers	5321	Construction and building trades nec* (5%) Air-conditioning and refrigeration engineers	5225
D			3223
Roofers	E212	Logistics	
Roofers, roof tilers and slaters	5313	Large goods vehicle drivers	8211
Floorers		Van drivers	8212
Floorers and wall tilers	5322	Elementary storage occupations	9260
Glaziers		Buyers and purchasing officers (50%)	3541
Glaziers, window fabricators and fitters	5316	Transport and distribution clerks and assistants	4134
Construction and building trades nec* (5%)	5319	Civil engineering operatives not	
Specialist building operatives not		elsewhere classified (nec*) Road construction operatives	8142
elsewhere classified (nec*)		Rail construction and maintenance operatives	8143
Construction operatives nec* (100%),	8149	Quarry workers and related operatives	8123
Construction and building trades nec* (5%)	5319		0120
Industrial cleaning process occupations	9132	Non-construction operatives	
Other skilled trades nec*	5449	Metal making and treating process operatives	8117
Scaffolders		Process operatives nec*	8119
Scaffolders, stagers and riggers	8141	Metal working machine operatives	8125
		Water and sewerage plant operatives	8126
Plant operatives	0004	Assemblers (vehicles and metal goods) Routine inspectors and testers	8132
Crane drivers	8221	Assemblers and routine operatives nec*	8133 8139
Plant and machine operatives nec*	8129	Elementary security occupations nec*	9249
Fork-lift truck drivers	8222	Cleaners and domestics*	9233
Mobile machine drivers and operatives nec*	8229	Street cleaners*	9232
Plant mechanics/fitters		Gardeners and landscape gardeners	5113
Metal working production and maintenance fitters	5223	Caretakers	6232
Precision instrument makers and repairers	5224	Security guards and related occupations	9241
Vehicle technicians, mechanics and electricians	5231	Protective service associate professionals nec*	3319
Elementary process plant occupations nec*	9139	·	
Tool makers, tool fitters and markers-out	5222		

5232

Vehicle body builders and repairers

\*Not elsewhere classified

$\sim$		
	ODO	noore
		neers
• • • • • • • • • • • • • • • • • • • •	~	

Civil engineers	2121	Electronics engineers	2124
Other construction must essionals		Chartered architectural technologists	2435
Other construction professionals and technical staff		Estimators, valuers and assessors	3531
		Planning, process and production technicians	3116
Mechanical engineers	2122		
Electrical engineers	2123	Architects	
Design and development engineers	2126	Architects	2431
Production and process engineers	2127	Surveyors	
Quality control and planning engineers	2461		
Engineering professionals nec*	2129	Chartered surveyors	2433 2434
Electrical and electronics technicians	3112		
Engineering technicians	3113		
Building and civil engineering technicians	3114		
Science, engineering and production			
technicians nec*	3119		
Architectural and town planning technicians	3121		
Draughtspersons	3122		
Quality assurance technicians	3115		
Town planning officers	2432		



# 6. CSN Website and contact details

#### The CSN website

citb.co.uk/csn

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

The main UK report, along with the twelve LMI reports (one for Northern Ireland, Scotland, Wales and each of the nine English regions) can be downloaded from the site, while other CITB research reports are also freely available on the CITB website. Having access to this range of labour market intelligence and trend insight allows industry, Government, regional agencies and key stakeholders to:

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

The website also contains information about:

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

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

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

- Details of specific projects
- · Demand within various types of work or sectors
- Labour supply
- Inflows and outflows across the regions and devolved nations.

CSN members therefore have:

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

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

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

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

# Contact details

For further information about the CSN website, enquiries relating to the work of the CSN, or to register your interest in becoming a member of the CSN, please contact us at: csn@citb.co.uk

For more information about the Construction Skills Network, contact: Alan Tanner Research Analyst Research and Development 0300 456 7276 alan.tanner@citb.co.uk



citb.co.uk



CITB, CIC and CITB-ConstructionSkills Northern Ireland are working as ConstructionSkills, the Sector Skills Council for Construction. CITB is registered as a charity in England and Wales (Reg No 264289) and in Scotland (Reg No SCO44875).