



# INDUSTRY INSIGHTS

Construction Skills Network  
Forecasts 2016–2020

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North East 2016 – 2020





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## CSN EXPLAINED

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## SECTION 1

# SUMMARY – NORTH EAST

# 1.5%

The region's total construction output is forecast to grow by annual average of 1.5% over the next five years. Construction employment is anticipated to increase by an average yearly rate of 0.7% and by 2020 it is likely to be around 98,130, about 88% of its 2008 peak level. At 3.2% of base 2016 employment, the North East has one of the highest annual recruitment requirements (ARR). The region's ARR is also well above the UK rate of 1.7%.

### Key Findings

The region is predicted to see an annual average growth rate of 1.5% in its total construction output between 2016 and 2020, one of the lowest compared with other regions and devolved nations, and lagging the national rate of 2.5%.

The private housing market is likely to be the best performing, with the near-term forecasts more upbeat than the medium-term ones. The sector is supported by housing demand as a result of various government initiatives such as Help to Buy and the Starter Homes Initiative. In addition to this, the Chancellor's target of starting 400,000 'affordable' homes by 2020/2021 could boost these forecasts, which were locked prior to this announcement.

Yearly expansion of 3% on average is forecast for the commercial sector. There are several schemes currently on the ground or about to start over the forecast period such as the £100m regeneration of South Shields town centre. Moderate expansion is predicted during the middle of the forecast period on the back of benign economic conditions.

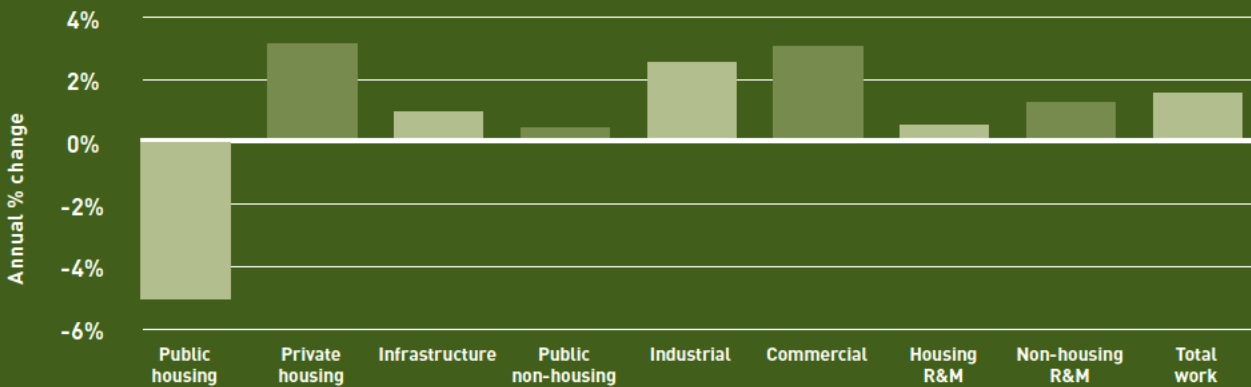
The industrial sector is likely to see average annual increases of 2.5%. The largest scheme that should take place over the next five years is the £100m Swan Hunter shipyard scheme. The project has been delayed from its initial start date of 2014 and work is now anticipated to start in spring 2016.

Between 2015 and 2020 the public housing sector is the only sector projected to see an average decline, of 5.1% per annum. After the North West this is the second biggest annual average fall and higher than the corresponding UK rate of -0.7%. Across most English regions activity is anticipated to suffer over the next few years as the extension of Right to Buy and constraints on rents introduced in last summer's budget will impact registered social landlords' profits. This inevitably creates a funding gap, leading to fewer homes being built than would otherwise be the case.

In 2015 the North East accounted for around 3.7% of UK construction employment. Over the next five years construction employment is likely to rise by 0.7% per year on average in the region, slower than the national rate of 1.1%.

At 3,160 extra employees required per year over the forecast period, the region's ARR is 3.2% of base 2016 employment, much higher than the UK rate of 1.7%. Given that the region normally suffers from strong outflows, around half of occupational categories have an ARR above 2.5% of base 2016 employment.

## ANNUAL AVERAGE CONSTRUCTION OUTPUT GROWTH 2016-2020 – NORTH EAST



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

## REGIONAL COMPARISON 2016-2020

|                      | Annual average % change in output | Change in total employment | Total ARR     |
|----------------------|-----------------------------------|----------------------------|---------------|
| North East           | 1.5%                              | 3,260                      | 3,160         |
| Yorkshire and Humber | 2.4%                              | 8,360                      | 3,230         |
| East Midlands        | 1.0%                              | 1,210                      | 3,110         |
| East of England      | 2.3%                              | 13,950                     | 3,910         |
| Greater London       | 3.5%                              | 42,670                     | 3,650         |
| South East           | 0.9%                              | 2,110                      | 1,730         |
| South West           | 4.4%                              | 25,850                     | 6,480         |
| Wales                | 7.1%                              | 17,490                     | 5,440         |
| West Midlands        | 1.7%                              | 10,200                     | 3,030         |
| Northern Ireland     | 3.0%                              | 4,660                      | 1,760         |
| North West           | 2.6%                              | 22,430                     | 6,650         |
| Scotland             | 0.5%                              | -7,360                     | 4,270         |
| <b>UK</b>            | <b>2.5%</b>                       | <b>144,830</b>             | <b>46,420</b> |

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

■ ■ In 2014 new construction orders increased for the second successive year. ■ ■



## SECTION 2

# THE OUTLOOK FOR CONSTRUCTION IN THE NORTH EAST

### 2.1 Construction output in North East – overview

In 2014 total construction output rose for the second consecutive year, by 16% to £4.6bn, around 81% of its 2008 peak. The new work sector increased by 23% to £3.4bn whereas the repair and maintenance (R&M) sector fell by 2% to £1.1bn.

The industrial market experienced the greatest growth of 172% to £418m as a number of small and medium sized projects took place. The public housing sector also experienced significant expansion, of 123% to £271m. However, this sector is small and is therefore subject to volatile movement. The public non-housing (£392m) and infrastructure (£789m) sectors jumped by 44% and 31% respectively whilst the private housing market experienced the smallest rise of 2% to £724m. The commercial sector was the only sector to see a decrease, of 9% to £852m, around 60% of its 2008 peak.

### 2.2 Industry structure

The diagram, Construction Industry Structure 2014 – UK vs. North East, illustrates the sector breakdown of construction in North East, compared to that in the UK. Effectively, the percentages for each sector illustrate what proportion of total output each sector accounts for.

In 2014 the region's new work sector accounted for 76% of total construction output, much higher than the national share of 62%.

The structure of the North East's construction industry has some large differences compared to the UK. Greater emphasis is placed on the region's infrastructure sector (17% vs. 11%) whilst at 9%, the North East's industrial market is three times as large as the national one. In contrast, the shares for the housing R&M (12% vs. 19%) and non-housing R&M (12% vs. 19%) sectors were significantly smaller compared with the UK.

### 2.3 Economic overview

The expected performance of a regional or national economy over the forecast period (2016–2020) provides an indication of the construction sectors in which demand is likely to be strongest.

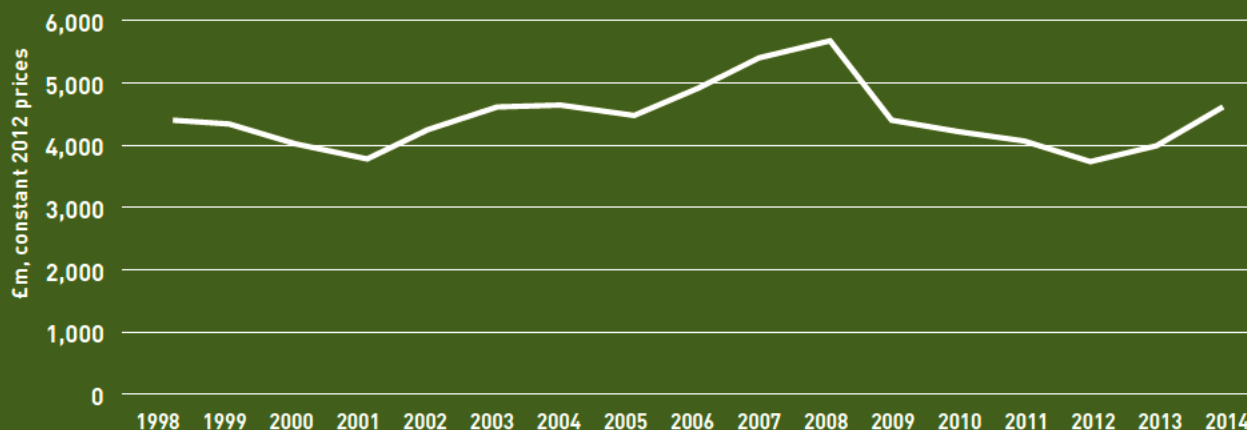
### 2.4 Economic structure

In 2014 gross value added (GVA) in the North East went up for the second year running, by 1.8% to £44.8bn in 2012 prices. As a share of the UK, the region accounted for just 3% of GVA.

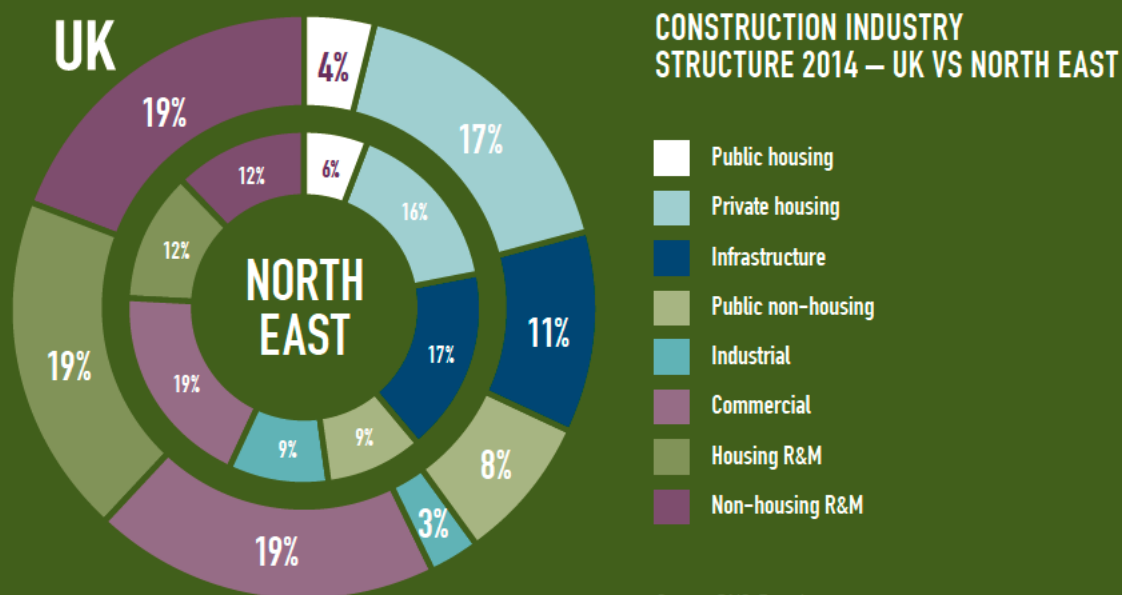
Public services was the largest sector, accounting for 26.3% of the region's GVA in 2014, whilst the professional and other private services sector took the next biggest share, at 21.7%. The manufacturing and wholesale and retail sectors were ranked third and fourth respectively while information and communication was the fifth largest market. Of the top five sectors, the wholesale and retail market recorded the greatest growth of 3.9% whilst the information and communication sector posted the biggest decline of 3.6%.

The North East has a higher than average exposure to the manufacturing and public services sectors whilst many of the private services sectors are underrepresented compared to the UK as a whole.

## CONSTRUCTION OUTPUT 1998-2014 – NORTH EAST



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



Source: ONS, Experian

## ECONOMIC STRUCTURE – NORTH EAST (£ BILLION, 2012 PRICES)

| Selected sectors                        | Actual      | Forecast<br>Annual % change, real terms |            |            |            |            |            |
|---|-------------|---|------------|------------|------------|------------|------------|
|   | 2014        | 2015                                    | 2016       | 2017       | 2018       | 2019       | 2020       |
| Public services                         | 11.8        | 0.3                                     | -0.3       | -0.3       | 0.5        | 1.2        | 2.1        |
| Professional and other private services | 9.7         | 3.0                                     | 2.7        | 2.7        | 2.8        | 2.4        | 2.3        |
| Manufacturing                           | 6.3         | 0.8                                     | 1.3        | 2.7        | 2.9        | 1.7        | 1.2        |
| Wholesale and retail                    | 4.7         | 3.6                                     | 2.2        | 2.3        | 2.5        | 2.2        | 2.2        |
| Information and communication           | 2.1         | 4.2                                     | 3.6        | 2.9        | 2.9        | 2.6        | 2.4        |
| <b>Total Gross Value Added (GVA)</b>    | <b>44.8</b> | <b>1.9</b>                              | <b>1.6</b> | <b>1.9</b> | <b>2.2</b> | <b>2.0</b> | <b>2.1</b> |

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



## 2.5 Forward looking economic indicators

In the five years to 2020 the region's GVA is projected to grow at an annual average rate of 2%, lower than the national average of 2.4%.

Of the top five sectors, the information and communication sector is likely to see the greatest yearly expansion of 2.9% on average, whilst the largest sector, public services, is projected to experience a much weaker annual average increase of 0.6%.

Real household disposable income is expected to rise by an annual average of 1.5% over the forecast period, lower than the UK rate of 1.9% whilst average yearly increases in household spending is also projected to be lower (1.7% vs. 2.2%)

In 2014 the region's working age population was around 1.62m, which accounted for just 4% of the UK total. Over the forecast period, the North East's working age population as a share of the total population is expected to hover around 62%.

The North East's unemployment rate stood at 9.1% in 2014, the highest for all regions and devolved nations and much higher than the corresponding UK rate of 6.2%. However, the unemployment rate is predicted to fall in the next five years with the strongest declines projected for 2015. By 2020 the North East's unemployment rate is expected to be at 6.9%, still higher than the national rate (5.1%) but the gap between the two narrowing.

## 2.6 New construction orders – overview

In 2014 new construction orders increased for the second successive year, by 3% to £2.6bn, around 86% of their 2007 peak. Industrial orders saw the greatest rise of 58% to £366m whilst private housing orders experienced a jump of 55% to £696m. Orders in the public non-housing sector recorded the smallest growth of 20% to £394m taking them to just over half their 2008 high. The public housing sector registered the largest decrease of 68% to £71m whilst the infrastructure (£559m) and commercial (£504m) sectors also saw falls of 18% and 17% respectively.

## 2.7 New construction orders – current situation

In the first half of this year all new orders went down by 19% to £1.1bn compared with the corresponding period in the preceding year. Across the new work sectors there was a mixed picture. Orders in the private housing market registered the greatest increase of 59% to £447m whilst the commercial sector went up by 12% to £162m. The greatest decrease of 65% to £111m was recorded in the industrial sector while declines of 54% and 49% were posted in the public housing and infrastructure sectors respectively. Public non-housing orders recorded the smallest drop of 20% to £177m.



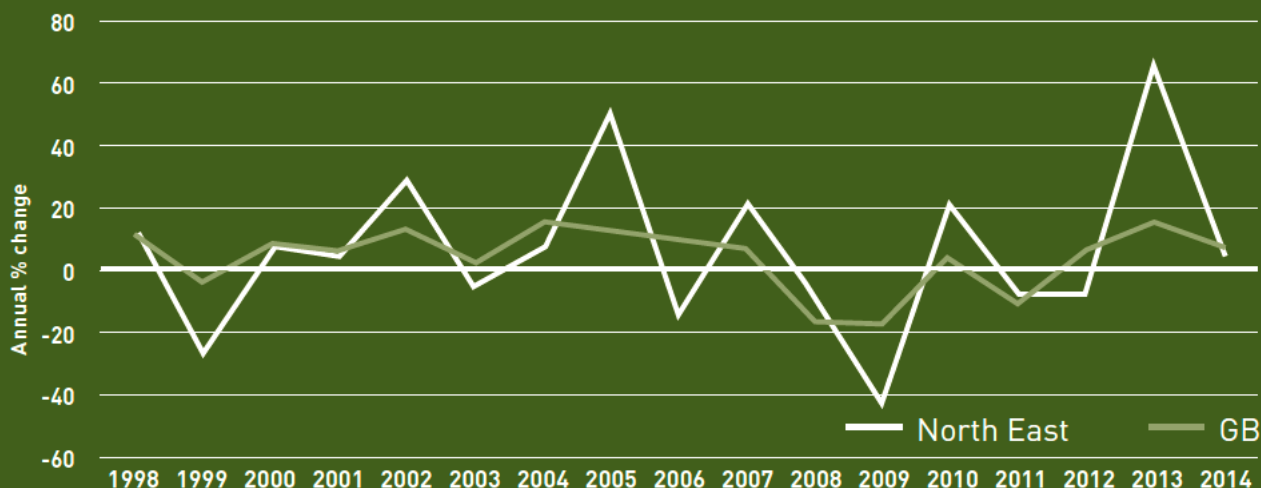


## ECONOMIC INDICATORS – NORTH EAST (£ BILLION, CURRENT PRICES – UNLESS OTHERWISE STATED)

| Selected sectors                                 | Actual  | Forecast                    |       |       |       |       |       |
|--|---------|-----------------------------|-------|-------|-------|-------|-------|
|  | 2014    | Annual % change, real terms |       |       |       |       |       |
|  | 2014    | 2015                        | 2016  | 2017  | 2018  | 2019  | 2020  |
| Real household disposable income                 | 37.9    | 3.1                         | 1.4   | 1.6   | 1.8   | 1.1   | 1.6   |
| Household spending                               | 41.5    | 2.1                         | 1.5   | 1.8   | 1.8   | 1.8   | 1.8   |
| Working age population<br>(000s and as % of all) | 1,622   | 62.2%                       | 62.3% | 62.2% | 62.0% | 62.0% | 62.3% |
| House prices (£)                                 | 151,270 | 3.3                         | 1.9   | 2.7   | 1.9   | 2.0   | 2.7   |
| LFS unemployment (millions)                      | 0.15    | -15.9                       | -3.5  | -2.2  | -1.9  | -1.4  | -1.8  |

Source: ONS, DCLG, Experian

## NEW CONSTRUCTION ORDERS GROWTH 1998-2014 – NORTH EAST VS. GB



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

## NEW WORK CONSTRUCTION ORDERS – NORTH EAST (£ MILLION, CURRENT PRICES)

|                       | Actual       | Annual % change |             |             |             |            |
|-----------------------|--------------|-----------------|-------------|-------------|-------------|------------|
|                       | 2014         | 2010            | 2011        | 2012        | 2013        | 2014       |
| Public housing        | 71           | 153.3           | -90.1       | 60.0        | 825.0       | -68.0      |
| Private housing       | 696          | 179.7           | -66.0       | 169.8       | -13.5       | 55.4       |
| Infrastructure        | 559          | 112.8           | 209.3       | -75.3       | 384.3       | -17.6      |
| Public non-housing    | 394          | -39.0           | -16.8       | -30.6       | 42.4        | 19.8       |
| Industrial            | 366          | -9.5            | 38.1        | 20.7        | 32.6        | 57.8       |
| Commercial            | 504          | 7.1             | 0.5         | 3.8         | 38.0        | -17.0      |
| <b>Total new work</b> | <b>2,590</b> | <b>20.5</b>     | <b>-8.2</b> | <b>-8.8</b> | <b>64.7</b> | <b>2.8</b> |

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



## 2.8 Construction output – short-term forecasts (2016–2017)

Regional Office for National Statistics (ONS) output statistics are published in current prices and are therefore inclusive of any inflationary effect. At the time of writing, regional ONS construction output statistics were only available for the first two quarters of 2015.

In the first six months of this year total construction output went up by 5% to £2.4bn compared with the same period a year earlier. Of the new work sectors, the private housing market saw the largest growth of 48% to £511m while the infrastructure sector also experienced double digit expansion of 30% to £501m. The public non-housing sector recorded the smallest rise of 7% to £202m. In contrast, the industrial sector registered the greatest drop of 37% to £131m while the commercial (£368m) and public housing (£109m) sectors both posted falls of 19%.

In 2015 total construction output in the region is estimated to have increased by 6% to £4.8bn in 2012 prices. Output is expected to rise by an annual average of 2.9% over the next two years. Growth is forecast to be stronger in the new work sector compared with the R&M sector (3.7% vs. 0.1%).

Over the near term the North East's infrastructure sector is predicted to see the highest annual average growth rate of 8.1%. There are a number of schemes that have either started or are about to commence, which is likely to keep short term prospects buoyant. Plans for the new Wear bridge scheme in Sunderland were cancelled in Autumn 2013 due to soaring costs. However, two years on the project has been redesigned and together Farrans Construction and Victor Buyck Steel Construction have been selected as preferred bidders. Work has recently begun on site and the bridge is set to have an A-frame pylon rising to 105 metres as well as two lanes of traffic in both directions. In addition to this, there are also plans for a dedicated cycleway and footpath along the full stretch of the bridge. The overall cost of the scheme is £118m with £35m of City Council funding and £83m of Government funding. All works should be complete by spring 2018. Another significant project is the £650m combined heat and power biomass plant near Middlesbrough. Site preparation works are due to start during the first quarter of 2016 and it is thought the plant will burn imported wood pellets and chips from the US and Europe, allowing it to produce enough energy to power 600,000 homes. Other sizeable schemes also include the North East Procurement Organisation's new civil engineering framework, which could be worth up to £1.5bn over the next four years. Firms will be invited to bid and the framework will be divided up into six categories with each one split to cover projects below £1m and above it. It is hoped this split will allow smaller firms in the region to take part in the process.

The private housing market is expected to see annual average expansion of 8% due to a number of current schemes on site. The government has announced in its 2015 Autumn Statement that it expects to see up to 400,000 'affordable' homes developed across the country by 2020, which could provide an upside risk to these forecasts as they were locked prior to their release. The questions around this announcement are how much more does this entail above current build rates and secondly, affordable to whom? Nevertheless it could lead to extra homes being built in the region and therefore lead to higher growth in output than was previously expected.

An average yearly rise of 1.3% is expected for the commercial sector due to a number of medium sized projects either in the pipeline or about to start. For example regeneration work on South Shields town centre began last year. As part of the £100m project, a new three-storey building located on Ferry Street is being built, which will include a digital media centre and a new central library. The second phase of construction work will see new shops and restaurants being built as well as a cinema. Another project is the £30m redevelopment of The Gates shopping centre in Durham. Planning approval has just been given and as part of the project a new riverside promenade will be built that will include around 35,000 square feet of restaurant space as well as student apartments. Work on the two-year scheme is likely to start in early 2016.

The greatest average annual fall in output, of 11.6% is forecast for the public housing sector. The general feeling across the English regions is that activity in the sector will suffer over the next few years as the extension of Right to Buy and constraints on rents introduced in last summer's budget will impact registered social landlords' balance sheets and make it more difficult for them to access finance from other sources than the public purse.

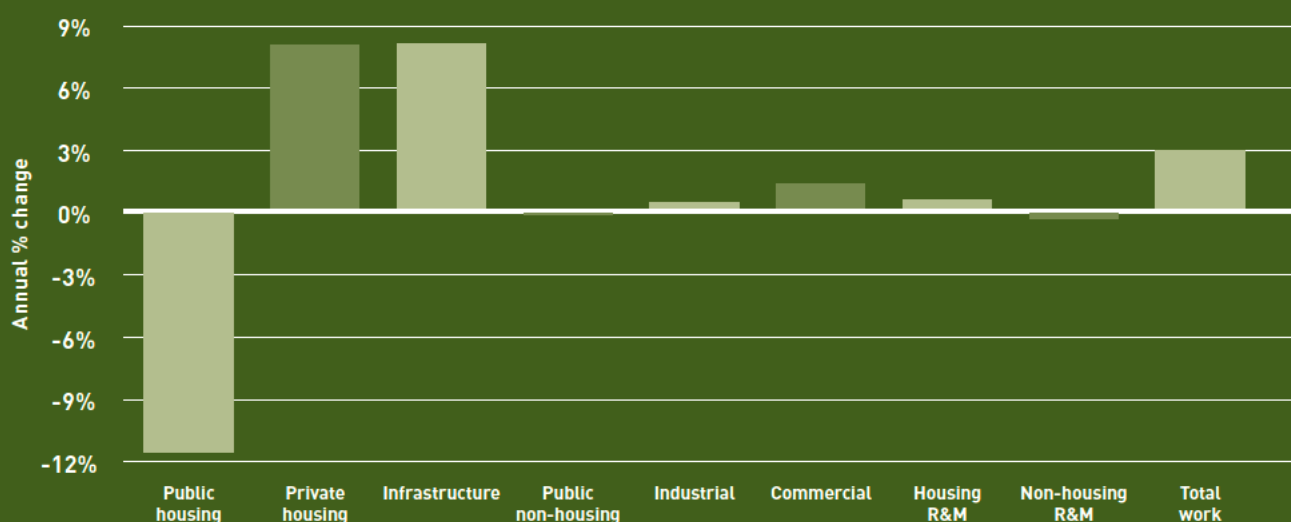


## CONSTRUCTION OUTPUT – NORTH EAST (£ MILLION, 2012 PRICES)

|                       | Actual       | Forecast annual % change |           |            | Annual average |
|-----------------------|--------------|--------------------------|-----------|------------|----------------|
|                       | 2014         | 2015                     | 2016      | 2017       | 2016-2017      |
| Public housing        | 271          | -14%                     | -21%      | -1%        | -11.6%         |
| Private housing       | 724          | 16%                      | 12%       | 4%         | 8.0%           |
| Infrastructure        | 789          | 28%                      | 13%       | 3%         | 8.1%           |
| Public non-housing    | 392          | -11%                     | -1%       | 1%         | -0.1%          |
| Industrial            | 418          | 13%                      | -1%       | 1%         | 0.4%           |
| Commercial            | 852          | -3%                      | 1%        | 2%         | 1.3%           |
| <b>Total new work</b> | <b>3,445</b> | <b>8%</b>                | <b>5%</b> | <b>3%</b>  | <b>3.7%</b>    |
| Housing R&M           | 551          | 0%                       | 2%        | -1%        | 0.5%           |
| Non-housing R&M       | 551          | -4%                      | -1%       | 0%         | -0.3%          |
| <b>Total R&amp;M</b>  | <b>1,103</b> | <b>-2%</b>               | <b>1%</b> | <b>-1%</b> | <b>0.1%</b>    |
| <b>Total work</b>     | <b>4,547</b> | <b>6%</b>                | <b>4%</b> | <b>2%</b>  | <b>2.9%</b>    |

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

## ANNUAL AVERAGE CONSTRUCTION OUTPUT GROWTH 2016-2017 – NORTH EAST



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

“ The region’s total construction output is forecast to grow by annual average of 1.5%. ”



## 2.9 Construction output – long-term forecasts (2016–2020)

Overall construction output in the region is likely to see annual average expansion of 1.5% in the five years to 2020, lower than the UK rate of 2.5%.

Over the next five years the region's strongest performing sector is likely to be private housing with average yearly increases of 3.1%. Growth over the near term is likely to be higher due to government plans for 400,000 'affordable' homes to be developed across the country alongside other initiatives such as the equity loan part of Help to Buy and the Starter Homes programme. However, expansion is likely to slow during the second half of the forecast period with a fall in 2018 as interest rates rises dampen demand in the sector.

With an annual rise of 3% per annum, the commercial market is also likely to be a key driver of expansion for the region's construction industry. The good growth predicted for the professional and other private services and information and communication sectors should keep demand for office premises high over the forecast period whilst decent expansion in the wholesale and retail sector should provide a demand boost for shopping sites. However, even by 2020 commercial output is projected to be only around 68% of its 2008 peak.

The industrial construction sector is predicted to see annual average increases of 2.5% in the five years to 2020. In terms of projects, the largest one that should take place is the £100m Swan Hunter shipyard scheme with work expected to start in spring this year. The 14-hectare site will be marketed to advanced manufacturing companies specialising in offshore projects. There is anticipated to be other schemes taking place over the forecast period however they are likely to be smaller developments such the extension of German-based retailer Lidl's existing warehouse at Newton Aycliffe, County Durham. It is hoped work will start in January 2016 and will be carried out over two phases. During phase one the existing warehouse will be extended by 10,000 square metres and the second phase will add a further 7,000 square metres.

Lacklustre average yearly increases of 0.4% have been predicted for the public non-housing sector. There will be a number of small and medium sized projects taking place between 2015 and 2020 however at present there are no signs of large schemes in the pipeline as local councils are still anticipated to be suffering from the on-going austerity measures.

## 2.10 Beyond 2020

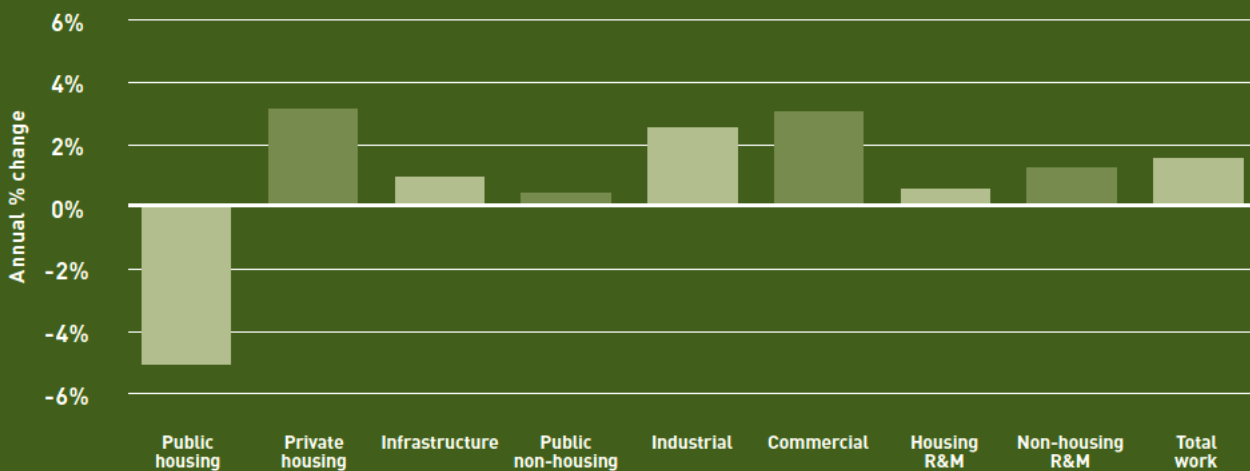
Major road transport is likely to be an area in which further work is likely to take place post 2020. Highways England's 2015–2020 business plan identifies four feasibility studies relating to further upgrading of the A1 in the region that will be undertaken in that period and these could lead to further work on the ground after the current forecast period.

## CONSTRUCTION OUTPUT – NORTH EAST (£ MILLION, 2012 PRICES)

|                       | Actual       | Forecast annual % change |            |           |            |            | Annual average |
|-----------------------|--------------|--------------------------|------------|-----------|------------|------------|----------------|
|                       | 2015         | 2016                     | 2017       | 2018      | 2019       | 2020       | 2016-2020      |
| Public housing        | 232          | -21%                     | -1%        | 10%       | 3%         | -13%       | -5.1%          |
| Private housing       | 841          | 12%                      | 4%         | -3%       | 1%         | 2%         | 3.1%           |
| Infrastructure        | 1,011        | 13%                      | 3%         | 4%        | -11%       | -4%        | 0.9%           |
| Public non-housing    | 349          | -1%                      | 1%         | 2%        | -3%        | 3%         | 0.4%           |
| Industrial            | 470          | -1%                      | 1%         | 7%        | 3%         | 2%         | 2.5%           |
| Commercial            | 830          | 1%                       | 2%         | 7%        | 5%         | 0%         | 3.0%           |
| <b>Total new work</b> | <b>3,733</b> | <b>5%</b>                | <b>3%</b>  | <b>3%</b> | <b>-2%</b> | <b>-1%</b> | <b>1.7%</b>    |
| Housing R&M           | 552          | 2%                       | -1%        | -2%       | 2%         | 2%         | 0.5%           |
| Non-housing R&M       | 530          | -1%                      | 0%         | 2%        | 4%         | 1%         | 1.2%           |
| <b>Total R&amp;M</b>  | <b>1,082</b> | <b>1%</b>                | <b>-1%</b> | <b>0%</b> | <b>3%</b>  | <b>1%</b>  | <b>0.9%</b>    |
| <b>Total work</b>     | <b>4,815</b> | <b>4%</b>                | <b>2%</b>  | <b>3%</b> | <b>-1%</b> | <b>0%</b>  | <b>1.5%</b>    |

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

## ANNUAL AVERAGE CONSTRUCTION OUTPUT GROWTH 2016-2020 – NORTH EAST



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



### SECTION 3

# CONSTRUCTION EMPLOYMENT FORECASTS FOR THE NORTH EAST

## 3.1 Total construction employment forecasts by occupation

The table presents actual construction employment (SICs 41-43, 71.1, and 74.9) in the North East for 2014, the estimated total employment across 28 occupational categories in 2015 and forecasts for the industry for 2016 to 2020. A full breakdown of occupational groups is provided in Section 5 of CSN Explained.

Employment in the region is likely to grow by an annual average of 0.7% over the next five years with the corresponding UK rate higher at 1.1%. In numbers terms this indicates an increase of around 3,300 in the North East's construction workforce over the forecast period.

By 2020 construction employment is likely to have reached 98,130, around 88% of its 2008 peak. By that time output will be up to 92% of its 2008 peak, indicating some increase in productivity in the region.

Most of the occupations in the North East are likely to see annual average expansion in the five years to 2020 with construction trade supervisors predicted to experience the largest average yearly increase of 4.7%. By the end of the forecast period, construction trade supervisors are projected to reach a new high of 4,810. Surveyors are also predicted to experience robust average yearly growth of 4.2%.



## TOTAL EMPLOYMENT BY OCCUPATION – NORTH EAST

|   | Actual<br>2014 | Estimate<br>2015 | Forecast      |               |
|---|----------------|------------------|---------------|---------------|
|   |                |                  | 2016          | 2020          |
| Senior, executive, and business process managers                          | 4,130          | 4,270            | 4,240         | 3,750         |
| Construction project managers   | 1,390          | 1,450            | 1,500         | 1,670         |
| Other construction process managers                                       | 5,540          | 5,790            | 6,040         | 6,820         |
| Non-construction professional, technical, IT and other office-based staff | 10,060         | 9,740            | 9,740         | 8,800         |
| Construction trades supervisors   | 3,660          | 3,820            | 4,020         | 4,810         |
| Wood trades and interior fit-out  | 6,320          | 6,630            | 6,900         | 6,800         |
| Bricklayers   | 2,780          | 2,910            | 3,060         | 3,080         |
| Building envelope specialists   | 2,440          | 2,370            | 2,480         | 2,490         |
| Painters and decorators   | 2,340          | 2,450            | 2,480         | 2,230         |
| Plasterers  | 2,380          | 2,430            | 2,450         | 2,250         |
| Roofers   | 2,420          | 2,310            | 2,400         | 2,350         |
| Floorers  | 2,510          | 2,630            | 2,720         | 2,680         |
| Glaziers  | 760            | 720              | 720           | 630           |
| Specialist building operatives nec*                                       | 3,450          | 3,600            | 3,720         | 3,510         |
| Scaffolders   | 1,400          | 1,320            | 1,320         | 1,300         |
| Plant operatives  | 2,760          | 2,890            | 2,940         | 3,000         |
| Plant mechanics/fitters   | 2,220          | 2,320            | 2,350         | 2,230         |
| Steel erectors/structural fabrication                                     | 1,620          | 1,570            | 1,660         | 1,690         |
| Labourers nec*  | 6,330          | 5,990            | 6,100         | 6,090         |
| Electrical trades and installation  | 8,080          | 7,980            | 8,190         | 7,700         |
| Plumbing and HVAC Trades  | 6,380          | 6,640            | 6,950         | 6,940         |
| Logistics   | 440            | 420              | 420           | 410           |
| Civil engineering operatives nec*   | 1,290          | 1,350            | 1,370         | 1,490         |
| Non-construction operatives   | 510            | 480              | 500           | 520           |
| Civil engineers   | 1,380          | 1,440            | 1,510         | 1,710         |
| Other construction professionals and technical staff                      | 9,030          | 9,430            | 9,820         | 10,990        |
| Architects  | 370            | 380              | 400           | 330           |
| Surveyors   | 1,500          | 1,510            | 1,600         | 1,860         |
| <b>Total (SIC 41-43)</b>  | <b>81,210</b>  | <b>82,080</b>    | <b>84,270</b> | <b>83,240</b> |
| <b>Total (SIC 41-43, 71.1, 74.9)</b>                                      | <b>93,490</b>  | <b>94,840</b>    | <b>97,600</b> | <b>98,130</b> |

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



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

The ARR is a gross requirement that takes into account workforce flows into and out of construction, due to factors such as movements between industries, migration, sickness, and retirement. However, these flows do not include movements into the industry from training, due to the inconsistency and coverage of supply data. Therefore, the ARR 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 total ARR for the North East has an amber light indicating that we believe there is a medium requirement for extra employees during the forecast period. At 3,160 extra employees required per year over forecast period, this is 3.2% of base 2016 employment, higher than the UK average of 1.7%. We believe the ratio is higher in the North East as its outflows are traditionally stronger than its inflows.

In absolute terms the largest requirement is for wood trades and interior fit-out (500), equivalent to 16% of the region's total ARR. However, as a proportion of base 2016 employment, steel erectors/structural fabrication are likely to be most in demand (10.2%).

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

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







## ANNUAL RECRUITMENT REQUIREMENT BY OCCUPATION – NORTH EAST

|   | 2016-2020    |
|---|--------------|
| Senior, executive, and business process managers                          | -            |
| Construction project managers   | 120          |
| Other construction process managers                                       | -            |
| Non-construction professional, technical, IT and other office-based staff | 390          |
| Construction trades supervisors   | 400          |
| Wood trades and interior fit-out  | 500          |
| Bricklayers   | 120          |
| Building envelope specialists   | <50          |
| Painters and decorators   | -            |
| Plasterers  | <50          |
| Roofers   | 130          |
| Floorers  | 160          |
| Glaziers  | -            |
| Specialist building operatives nec*                                       | 160          |
| Scaffolders   | <50          |
| Plant operatives  | <50          |
| Plant mechanics/fitters   | -            |
| Steel erectors/structural fabrication                                     | 170          |
| Labourers nec*  | 230          |
| Electrical trades and installation  | -            |
| Plumbing and HVAC Trades  | 260          |
| Logistics   | -            |
| Civil engineering operatives nec*   | -            |
| Civil engineers   | 70           |
| Other construction professionals and technical staff                      | 330          |
| Architects  | -            |
| Surveyors   | 70           |
| <b>Total (SIC 41-43)</b>  | <b>2,690</b> |
| <b>Total (SIC 41-43, 71.1, 74.9)</b>                                      | <b>3,160</b> |

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



## SECTION 4

# COMPARISONS ACROSS THE UK

# 2.5%

The overall UK forecast of an annual average rise in output of 2.5% over the 2016 to 2020 period is a little higher than the 2.1% seen in the last growth period for construction between 1995 and 2007. However, it disguises some quite different regional/devolved nation performances, from expected expansion of over 7% in Wales to just 0.5% in Scotland.

Wales and the South West are top of the growth rankings and have remained so for some time, but their strong performance is heavily predicated on nuclear new build projects at Hinkley Point and Wylfa. Greater London is also projected to have a strong infrastructure sector, with the work starting on the Northern Line extension and Thames Tideway and High Speed 2 in the pipeline. These projects should more than offset completion of the Crossrail and Thameslink schemes.

While growth in London and the East of England is expected to be robust, the forecast for the South East is relatively poor with a dearth of major projects in the pipeline, the £2bn Paramount Park scheme excepted. Therefore, the forecasts are less South East England centric than they sometimes can be.

Northern Ireland is likely to be one of the faster growing regions in the five years to 2020, although construction output will be coming back from a very low base and there are concerns that current political uncertainties could delay the start of public projects.

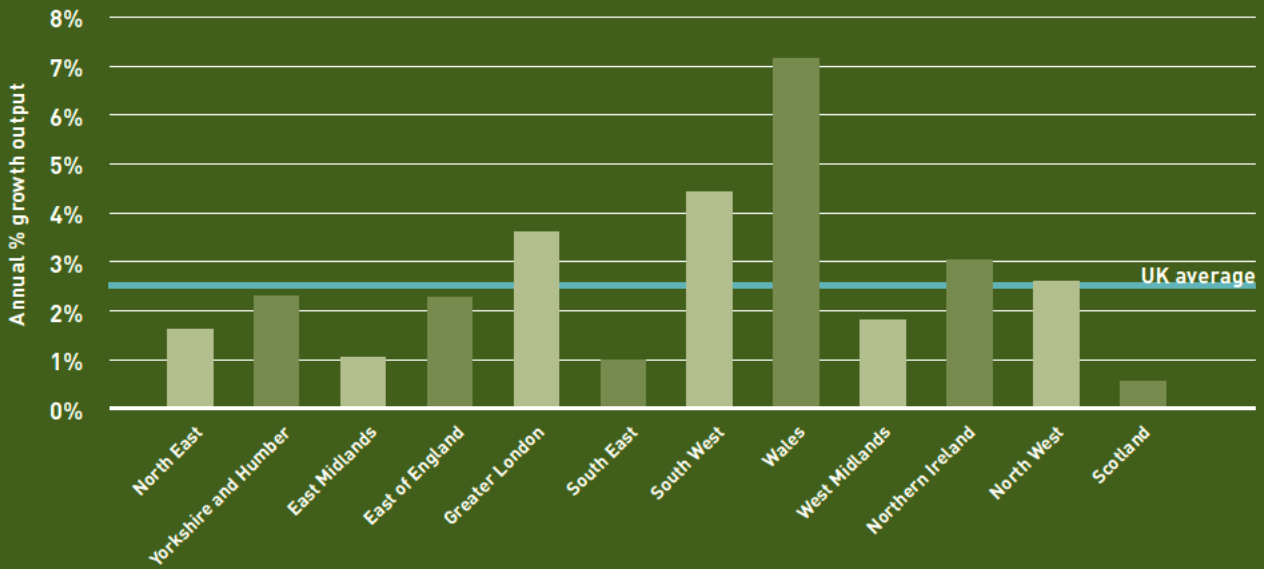
Scotland is seeing an exceptionally high level of investment in infrastructure at present, with output in 2014 around twice its previous 10 year average and due to increase even further in 2015. Thereafter projects, such as the current spate of motorway upgrades, begin to complete and activity in the sector is likely to fall sharply, bringing the overall Scottish construction growth rate down to only about half a per cent a year on average.

Employment growth across the regions and devolved nations tends to mirror that of output, but at a lower level to take account of expected productivity gains and with some minor adjustments depending on whether output growth is in high or low labour intensive sectors. Annual employment growth across the UK as a whole is projected to average 1.1% over the 2016 to 2020 period, with a high of 2.9% in Wales and a low of a 0.7% a year decline in Scotland. Despite the fact that nuclear new build is not particularly labour intensive, Wylfa is a very big project in a small market, therefore it will add nearly 2% to construction employment in Wales in 2020. The impact is smaller in the South West, which has a bigger construction market, but even there it will help to drive good employment growth of over 2% a year on average. In Scotland the converse is true and a sharp fall in infrastructure output, despite its relatively low labour input, is likely to lead to a drop in construction employment north of the border post 2016.

The pattern of ARR can look significantly different from the profile of output and employment, as some regions and devolved nations have historically strong net inflows and some suffer from large net outflows. The most extreme examples of this trend tend to be Greater London and Wales. London has a relatively low ARR despite strong projected employment growth (2% a year) as it acts as a natural magnet for construction workers throughout the UK and beyond, therefore its ARR ratio to base 2016 employment is low at 0.9%. At the other end of the scale Wales tends to suffer strong net outflows, in particular to the North West and South West of England and this, combined with a buoyant output and employment growth forecast, means its ARR ratio to base 2016 employment is a high 4.7%.

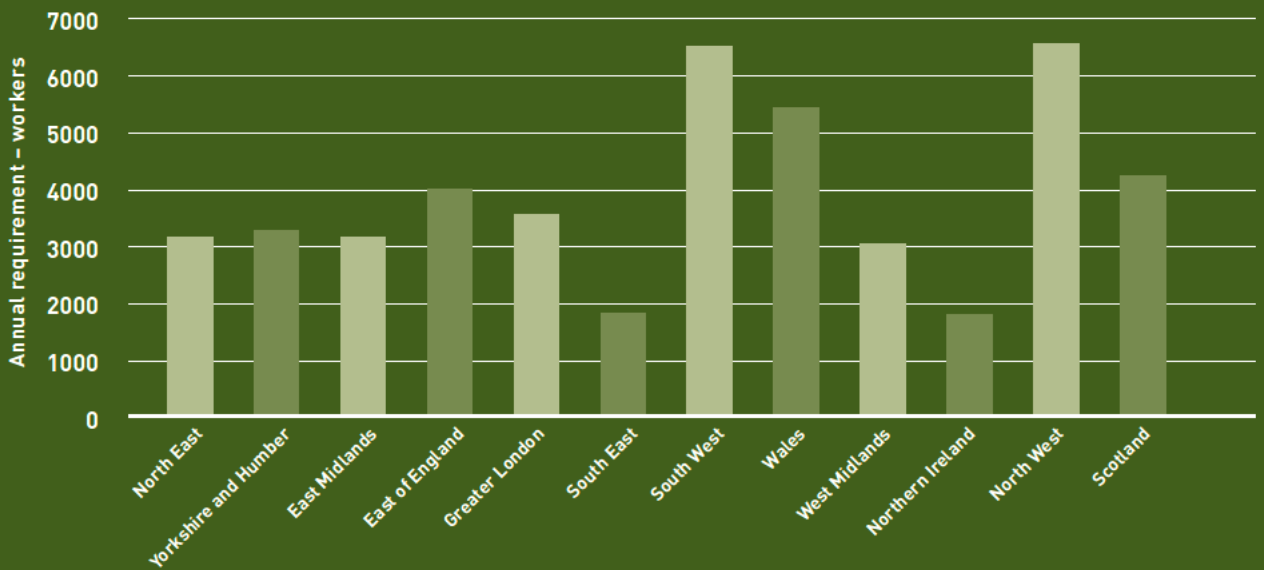


### ANNUAL AVERAGE CONSTRUCTION OUTPUT GROWTH BY REGION 2016-2020



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

### ANNUAL RECRUITMENT REQUIREMENT (ARR) BY REGION 2016-2020



Source: CSN, Experian

“ The commercial market is likely to be a key driver of expansion. ”



# 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.





## SECTION 1

# CSN METHODOLOGY

## Background

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

ConstructionSkills is the Sector Skills Council for Construction and produces robust labour market intelligence that provides a foundation on which to plan for future skills needs and to target investment.

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

Observatory groups currently meet twice a year and consist of key regional stakeholders invited from industry, Government, education and other SSCs 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 and 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 that generate forecasts of employment requirements within the industry for a range of occupational groups. The models are designed and managed by Experian under the independent guidance and validation of the Technical Reference Group, which is comprised of statisticians and modelling experts.

The models have evolved over time and will continue to do so, to ensure that they account for new research as it is published as well as new and improved modelling techniques.

Future changes to the model will only be made after consultation with the Technical Reference Group.

## The model approach

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

The models work by forecasting demand and supply of skilled workers separately. The difference between demand and supply forms the employment requirement. The forecast total employment levels are derived from expectations about construction output and productivity. Essentially, this is based upon the question 'How many people will be needed to produce forecast output, given the assumptions made about productivity?'

The annual recruitment requirement (ARR) is a gross requirement that takes into account workforce flows into and out of construction, due to such factors as movements between industries, migration, sickness and retirement. However, these flows do not include movements into the industry from training, although robust data on training provision is being developed by CITB in partnership with public funding agencies, further education, higher education and employer representatives. Thus, the ARR 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:

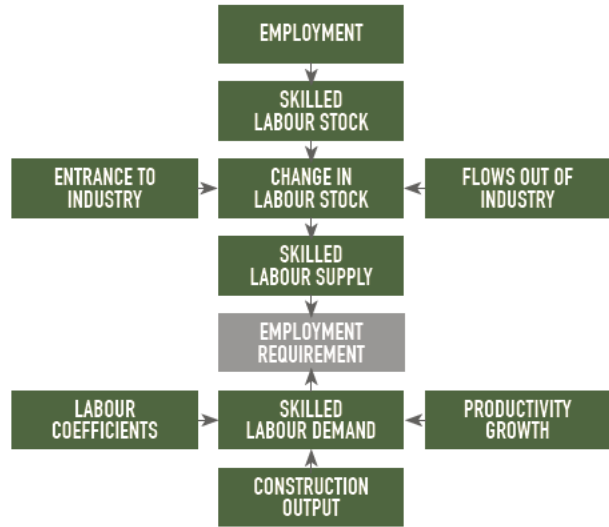
- Transfers to other industries
- International/domestic out migration
- Permanent retirements (including permanent sickness)
- Outflow to temporary sickness and home duties.

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.





## SECTION 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 that collects information on employment, unemployment, flows between sectors and training. Information is collected from around 53,000 households each quarter (the sample totals more than 100,000 people).

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

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

**Nec** – not elsewhere classified, used as a reference in LFS data.

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

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

**Productivity** – output per employee.

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

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

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



## SECTION 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 summarises the SIC codes (2007) covered by ConstructionSkills:

| 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 |

\*The Building Futures Group has a peripheral interest in SIC 71.1.





## 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 SummitSkills across SIC 43.21 and SIC 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.





## SECTION 4

# DEFINITIONS: TYPES AND EXAMPLES OF CONSTRUCTION WORK

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

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

### **Private sector housing**

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

### **Infrastructure – public and private**

#### **Water**

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

#### **Sewerage**

Sewage disposal works, laying of sewers and surface drains.

#### **Electricity**

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

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

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

#### **Railways**

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

#### **Harbours**

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

#### **Roads**

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

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

#### **Factories and warehouses**

Publicly owned factories, warehouses, skill centres.

#### **Oil, steel, coal**

Now restricted to remedial works for public sector residual bodies.

#### **Schools, colleges, universities**

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

#### **Health**

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

#### **Offices**

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

#### **Entertainment**

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

#### **Garages**

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

#### **Shops**

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

#### **Agriculture**

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

#### **Miscellaneous**

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



### Private industrial work

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

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

#### Schools and universities

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

#### Health

Private hospitals, nursing homes, clinics.

#### Offices

Office buildings, banks.

#### Entertainment

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

#### Garages

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

#### Shops

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

#### Agriculture

All buildings and work on farms, horticultural establishments.

#### Miscellaneous

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

### New work

#### New housing

Construction of new houses, flats, bungalows only.

#### All other types of work

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

### Repair and maintenance

#### Housing

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

#### All other sectors:

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

- 1 Where contracts for the construction or improvement of non-residential buildings used for public service provision, such as hospitals, are awarded by private sector holders of contracts awarded under the Private Finance Initiative, the work is classified as 'private commercial'.
- 2 Contractors reporting work may not always be aware of the distinction between improvement or renovation work and repair and maintenance work in the non-residential sectors.
- 3 Except where stated, mixed development schemes are classified to whichever sector provides the largest share of finance.



## SECTION 5

# OCCUPATIONAL GROUPS

### Occupational group

Description, SOC (2010) reference.

#### Senior, executive, and business process managers

|   |      |
|---|------|
| Chief executives and senior officials                   | 1115 |
| Financial managers and directors                        | 1131 |
| Marketing and sales directors                           | 1132 |
| Purchasing managers and directors                       | 1133 |
| Human resource managers and directors                   | 1135 |
| Property, housing and estate managers                   | 1251 |
| Information technology and telecommunications directors | 1136 |
| Research and development managers                       | 2150 |
| Managers and directors in storage and warehousing       | 1162 |
| Managers and proprietors in other services nec*         | 1259 |
| Functional managers and directors nec*                  | 1139 |
| IT specialist managers                                  | 2133 |
| IT project and programme managers                       | 2134 |
| Financial accounts managers                             | 3538 |
| Sales accounts and business development managers        | 3545 |

#### Construction project managers

|   |      |
|---|------|
| Construction project managers and related professionals | 2436 |
|---|------|

#### Other construction process managers

|  |      |
|--|------|
| Production managers and directors in manufacturing     | 1121 |
| Production managers and directors in construction      | 1122 |
| Managers and directors in transport and distribution   | 1161 |
| Waste disposal and environmental services managers     | 1255 |
| Health and safety officers                             | 3567 |
| Conservation and environmental associate professionals | 3550 |

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

|  |      |
|--|------|
| IT operations technicians  | 3131 |
| IT user support technicians                                      | 3132 |
| Finance and investment analysts and advisers                     | 3534 |
| Taxation experts   | 3535 |
| Financial and accounting technicians                             | 3537 |
| Vocational and industrial trainers and instructors,              | 3563 |
| Business and related associate professionals nec*                | 3539 |
| Legal associate professionals                                    | 3520 |
| Inspectors of standards and regulations                          | 3565 |
| Programmers and software development professionals               | 2136 |
| Information technology and telecommunications professionals nec* | 2139 |
| Estate agents and auctioneers                                    | 3544 |
| Solicitors   | 2413 |
| Legal professionals nec*   | 2419 |
| Chartered and certified accountants                              | 2421 |
| Business and financial project management professionals          | 2424 |
| Management consultants and business analysts                     | 2423 |
| Receptionists  | 4216 |
| Typists and related keyboard occupations                         | 4217 |
| Business sales executives  | 3542 |
| Bookkeepers, payroll managers and wages clerks                   | 4122 |
| Records clerks and assistants                                    | 4131 |
| Stock control clerks and assistants                              | 4133 |
| Telephonists   | 7213 |
| Communication operators  | 7214 |
| Personal assistants and other secretaries                        | 4215 |
| Sales and retail assistants                                      | 7111 |
| Telephone salespersons   | 7113 |
| Buyers and procurement officers                                  | 3541 |
| Human resources and industrial relations officers                | 3562 |
| Credit controllers   | 4121 |
| Company secretaries  | 4214 |
| Sales related occupations nec*                                   | 7129 |
| Call and contact centre occupations                              | 7211 |



|   |      |
|---|------|
| Customer service occupations nec*                           | 7219 |
| Elementary administration occupations nec*                  | 9219 |
| Chemical scientists   | 2111 |
| Biological scientists and biochemists                       | 2112 |
| Physical scientists   | 2113 |
| Laboratory technicians                                      | 3111 |
| Graphic designers   | 3421 |
| Environmental health professionals                          | 2463 |
| IT business analysts, architects and systems designers      | 2135 |
| Conservation professionals                                  | 2141 |
| Environment professionals                                   | 2142 |
| Actuaries, economists and statisticians                     | 2425 |
| Business and related research professionals                 | 2426 |
| Finance officers  | 4124 |
| Financial administrative occupations nec*                   | 4129 |
| Human resources administrative occupations                  | 4138 |
| Sales administrators  | 4151 |
| Other administrative occupations nec*                       | 4159 |
| Office supervisors  | 4162 |
| Sales supervisors   | 7130 |
| Customer service managers and supervisors                   | 7220 |
| Office managers   | 4161 |
| <b>Construction trades supervisors</b>                      |      |
| Skilled metal, electrical and electronic trades supervisors | 5250 |
| Construction and building trades supervisors                | 5330 |
| <b>Wood trades and interior fit-out</b>                     |      |
| Carpenters and joiners                                      | 5315 |
| Paper and wood machine operatives                           | 8121 |
| Furniture makers and other craft woodworkers                | 5442 |
| Construction and building trades nec* (25%)                 | 5319 |
| <b>Bricklayers</b>  |      |
| Bricklayers and masons                                      | 5312 |
| <b>Building envelope specialists</b>                        |      |
| Construction and building trades nec* (50%)                 | 5319 |
| <b>Painters and decorators</b>                              |      |
| Painters and decorators                                     | 5323 |
| Construction and building trades nec* (5%)                  | 5319 |
| <b>Plasterers</b>   |      |
| Plasterers  | 5321 |
| <b>Roofers</b>  |      |
| Roofers, roof tilers and slaters                            | 5313 |
| <b>Floorers</b>   |      |
| Floorers and wall tilers                                    | 5322 |

|   |      |
|---|------|
| <b>Glaziers</b>   |      |
| Glaziers, window fabricators and fitters                              | 5316 |
| Construction and building trades nec* (5%)                            | 5319 |
| <b>Specialist building operatives not elsewhere classified (nec*)</b> |      |
| Construction operatives nec* (100%)                                   | 8149 |
| Construction and building trades nec* (5%)                            | 5319 |
| Industrial cleaning process occupations                               | 9132 |
| Other skilled trades nec*   | 5449 |
| <b>Scaffolders</b>  |      |
| Scaffolders, staggers and riggers                                     | 8141 |
| <b>Plant operatives</b>   |      |
| Crane drivers   | 8221 |
| Plant and machine operatives nec*                                     | 8129 |
| Fork-lift truck drivers   | 8222 |
| Mobile machine drivers and operatives nec*                            | 8229 |
| <b>Plant mechanics/fitters</b>  |      |
| Metalworking production and maintenance fitters                       | 5223 |
| Precision instrument makers and repairers                             | 5224 |
| Vehicle technicians, mechanics and electricians                       | 5231 |
| Elementary process plant occupations nec*                             | 9139 |
| Tool makers, tool fitters and markers-out                             | 5222 |
| Vehicle body builders and repairers                                   | 5232 |
| <b>Steel erectors/structural fabrication</b>                          |      |
| Steel erectors  | 5311 |
| Welding trades  | 5215 |
| Metal plate workers and riveters                                      | 5214 |
| Construction and building trades nec* (5%)                            | 5319 |
| Smiths and forge workers  | 5211 |
| Metal machining setters and setter-operators                          | 5221 |
| <b>Labourers nec*</b>   |      |
| Elementary construction occupations (100%)                            | 9120 |
| <b>Electrical trades and installation</b>                             |      |
| Electricians and electrical fitters                                   | 5241 |
| Electrical and electronic trades nec*                                 | 5249 |
| Telecommunications engineers  | 5242 |
| <b>Plumbing and heating, ventilation, and air conditioning trades</b> |      |
| Plumbers and heating and ventilating engineers                        | 5314 |
| Pipe fitters  | 5216 |
| Construction and building trades nec* (5%)                            | 5319 |
| Air-conditioning and refrigeration engineers                          | 5225 |

\*Not elsewhere classified



**Logistics**

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

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

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

**Non-construction operatives**

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

**Civil engineers**

|                 |      |
|-----------------|------|
| Civil engineers | 2121 |
|-----------------|------|

**Other construction professionals and technical staff**

|  |      |
|--|------|
| Mechanical engineers                                 | 2122 |
| Electrical engineers                                 | 2123 |
| Design and development engineers                     | 2126 |
| Production and process engineers                     | 2127 |
| Quality control and planning engineers               | 2461 |
| Engineering professionals nec*                       | 2129 |
| Electrical and electronics technicians               | 3112 |
| Engineering technicians                              | 3113 |
| Building and civil engineering technicians           | 3114 |
| Science, engineering and production technicians nec* | 3119 |
| Architectural and town planning technicians*         | 3121 |
| Draughtspersons                                      | 3122 |
| Quality assurance technicians                        | 3115 |
| Town planning officers                               | 2432 |
| Electronics engineers                                | 2124 |
| Chartered architectural technologists                | 2435 |
| Estimators, valuers and assessors                    | 3531 |
| Planning, process and production technicians         | 3116 |

**Architects**

|            |      |
|------------|------|
| Architects | 2431 |
|------------|------|

**Surveyors**

|                     |      |
|---------------------|------|
| Quantity surveyors  | 2433 |
| Chartered surveyors | 2434 |

*\*Not elsewhere classified*





## SECTION 6

# CSN WEBSITE AND CONTACT DETAILS

## The CSN website [citb.co.uk/csn](http://citb.co.uk/csn)

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

The main UK report, along with the 12 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 that are likely to be the strongest drivers of output growth in each region and devolved nation
- Track the macro economy
- Understand how economic events impact on regional and devolved nations' economic performance
- Highlight trends across the industry such as national and regional shifts in demand
- Plan ahead and address the skills needs of a traditionally mobile workforce
- Understand the levels of qualified and competent new entrants required to enter the workforce.

The website also contains information about:

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

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

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

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

CSN members therefore have:

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

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

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

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

### Contact details

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

**For more information about the  
Construction Skills Network, contact:  
Martin Turner  
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0300 456 7640  
research.team@citb.co.uk**

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