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INDUSTRY INSIGHTS

Construction Skills Network Forecasts 2016–2020

Yorkshire and Humber 2016–2020

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CONTENTS

TABLES AND CHARTS

CSN EXPLAINED

SECTION 1

SUMMARY – YORKSHIRE AND HUMBER

2.4%

The region's total construction output is forecast to grow by an annual average of 2.4% over the next five years. Construction employment is anticipated to increase by an average yearly rate of 0.8% and by 2020 it is likely to be around 202,480 approximately 93% its 2008 peak. At 1.6% of base 2016 employment, the annual recruitment requirement (ARR) ratio indicates that around 3,230 extra employees are required on an annual basis. Yorkshire and Humber's ARR is slightly below the UK rate of 1.7%.

Key Findings

The region is predicted to see an annual average increase of 2.4% in total construction output between 2016 and 2020, slightly below the UK rate of 2.5%.

The infrastructure sector is likely to be the best performing sector with an annual average rise of 7.1% over the next five years. Over the near term sizeable energy projects should keep output growth buoyant with double-digit expansion in 2016 and 2017. A more moderate increase is likely for 2018, but by this point the sector is predicted to reach a new high of £2.3bn. Post-2018 output is anticipated to decline as work on the ground begins to complete with no large schemes in the pipeline.

An average yearly rise of 4.9% is forecast for the commercial sector. One of the biggest projects about to commence is the regeneration of the area bounded by Pinstone Street and Furnival Gate in Sheffield. There are also other smaller projects that are scheduled to start over the next five years and this, alongside sustained improvements in the economy, will keep activity in the sector buoyant over the forecast period.

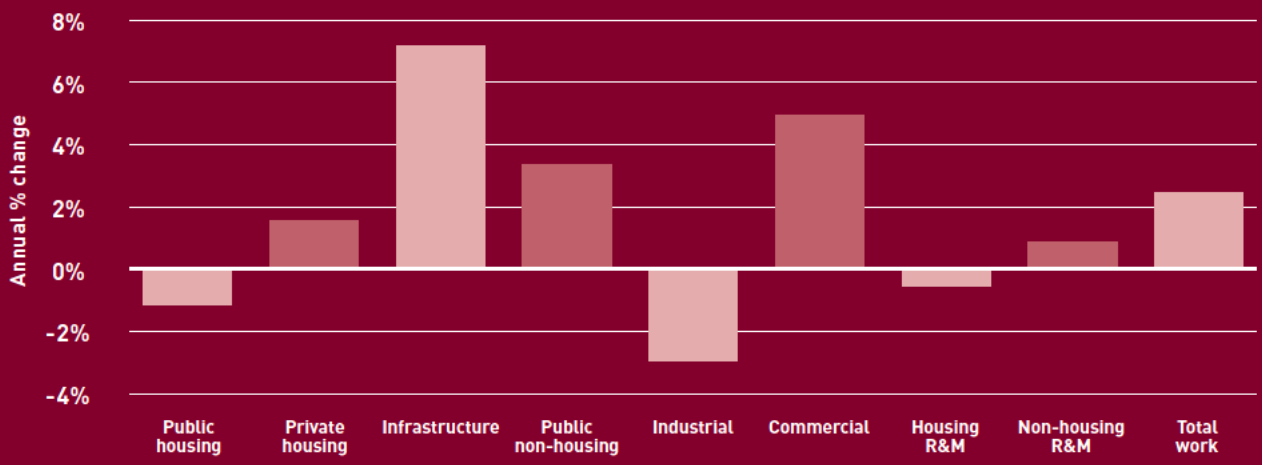
The public non-housing sector is predicted to experience average yearly growth of 3.3%. Work has returned in the education sub-sector with the University of Huddersfield and University of Lincoln both starting schemes last year. However, the sector still has a long way to go to make up ground recently lost and by 2020 public non-housing output is projected to only be around 36% of its 2010 peak.

Between 2015 and 2020 the private housing market is expected to experience an average yearly increase of 1.5%. However, growth could be stronger on the back of the Government's announcement made in the 2015 Autumn Statement that up to 400,000 'affordable' homes will be developed across the country by 2020.

Both the industrial and public housing sectors are anticipated to see annual average falls, of 3% and 1.2% respectively. The former is likely to experience moderate expansion in the near term, however as projects complete and with the lack of sizeable new ones in the pipeline, a decline in output is inevitable. The latter sector is predicted 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' balance sheets. This is likely to make them less attractive to investors and therefore they will struggle to build at the same rate as previously.

In 2015 the region accounted for around 8% of UK construction employment. Over the next five years construction employment is likely to rise by 0.8% per year on average in the region, slower than the national rate of 1.1%. At 3,230 extra employees required per year over the forecast period, the region's ARR is 1.6% of base 2016 employment, slightly lower than the UK rate of 1.7%.

ANNUAL AVERAGE CONSTRUCTION OUTPUT GROWTH 2016-2020 – YORKSHIRE AND HUMBER



Source: 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
UK	**2.5%**	**144,830**	**46,420**

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

> Construction output is forecast to grow by an annual average of 2.4% over the next five years.

SECTION 2

THE OUTLOOK FOR CONSTRUCTION IN YORKSHIRE AND HUMBER

2.1 Construction output in Yorkshire and Humber – overview

In 2014 total construction output rose for the second consecutive year, by 11% to £9.7bn, around 80% of its 2004 peak. Whilst the new work sector jumped by 12% to £6.2bn the repair and maintenance (R&M) sector went up by 9% to £3.5bn.

Public housing output experienced the greatest growth of 158% to £387m, a new high. Double-digit expansion of 32% and 29% was registered in the private housing (£1.6bn) and commercial (£2.1bn) sectors whilst the industrial sector saw the smallest rise of 6% to £321m. In contrast, the public non-housing sector posted the largest fall of 28% to £531m while the infrastructure sector declined by 16% to £1.2bn.

2.2 Industry structure

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

Overall the structure of the construction industry in Yorkshire and Humber is one of the most similar to the UK. It has a proportionally slightly larger new work market, accounting for 64% of total output in 2014, compared with 62% across the UK as a whole. The region's commercial sector is also somewhat more important (22% vs. 19%) compared with the UK, while less emphasis is placed on the public non-housing sector (5% vs. 8%). For all other sub sectors the difference in relative sizes was 2% or less.

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.

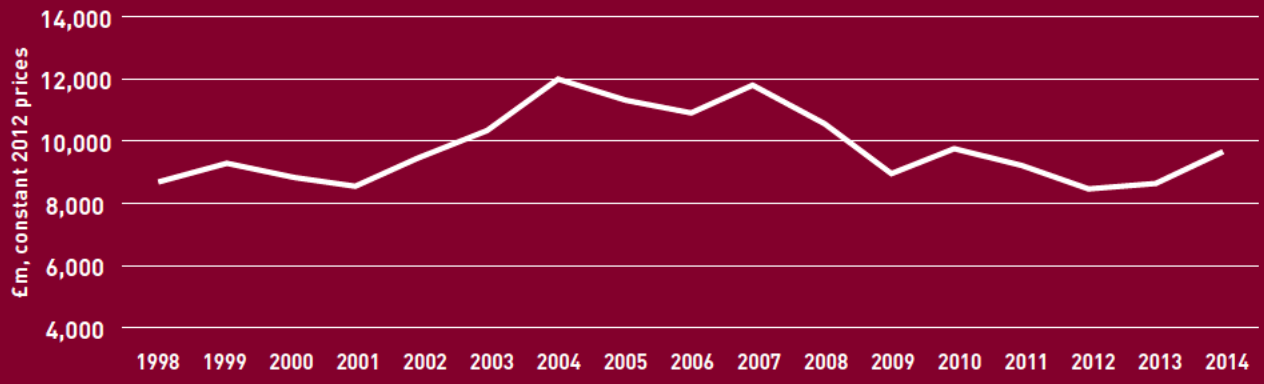
2.4 Economic structure

In 2014 gross value added (GVA) in Yorkshire and Humber increased for the second successive year, by 2.1% to £99.6bn (2012 prices). As a share of the UK, the region accounted for 7% of GVA.

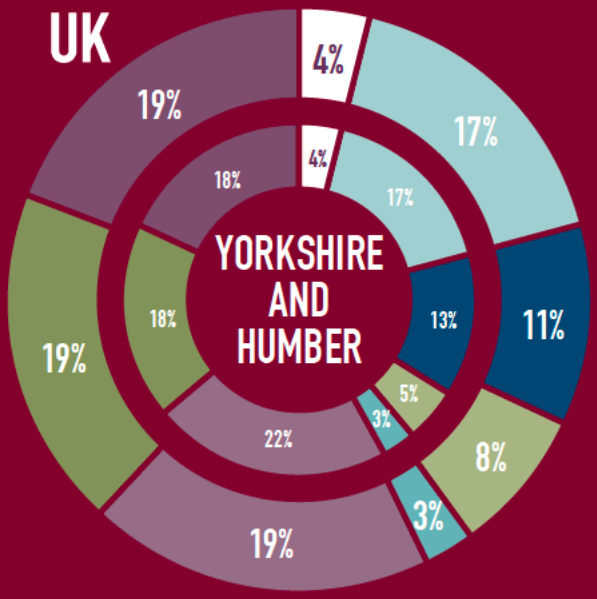
Professional and other private services was the largest sector, accounting for 24.5% of the region's GVA in 2014, whilst public services sector took the next biggest share, at 22.3%. The manufacturing and wholesale, and retail sectors were ranked third and fourth respectively while finance and insurance was the fifth largest market. Of the top five sectors, the professional and other private services market recorded the greatest growth of 5.9% in 2014 whilst the finance and insurance industry posted the largest fall of 5.4%.

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

CONSTRUCTION OUTPUT 1998–2014 – YORKSHIRE AND HUMBER



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



CONSTRUCTION INDUSTRY STRUCTURE 2014 – UK VS YORKSHIRE AND HUMBER

- Public housing
- Private housing
- Infrastructure
- Public non-housing
- Industrial
- Commercial
- Housing R&M
- Non-housing R&M

Source: ONS, Experian

ECONOMIC STRUCTURE – YORKSHIRE AND HUMBER (£ BILLION, 2012 PRICES)

Selected sectors	Actual	Forecast Annual % change, real terms					
	2014	2015	2016	2017	2018	2019	2020
Professional and other private services	24.4	3.1	2.7	2.6	2.7	2.5	2.3
Public services	22.2	0.8	0.0	-0.2	0.4	1.1	2.0
Manufacturing	13.1	-0.3	0.8	2.2	2.3	1.3	0.9
Wholesale and retail	12.8	4.5	2.6	2.2	2.3	2.1	2.2
Finance and insurance	4.6	1.2	3.3	3.6	3.1	2.9	2.7
Total Gross Value Added (GVA)	**99.6**	**2.3**	**1.9**	**2.0**	**2.1**	**2.0**	**2.1**

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

2.5 Forward looking economic indicators

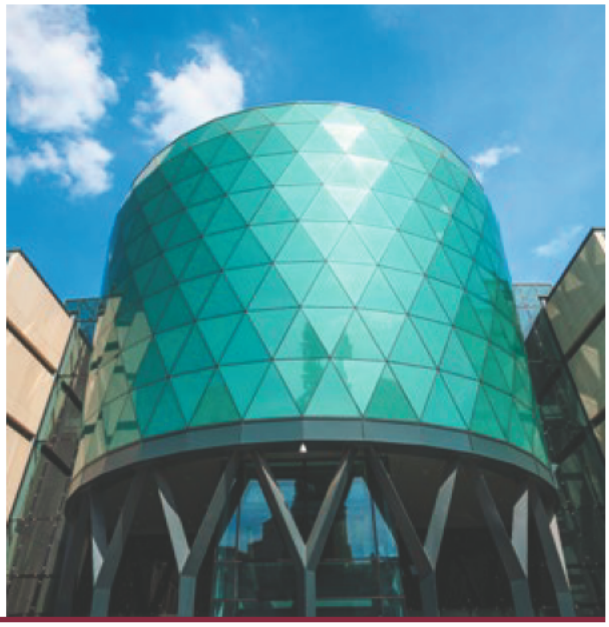
In the five years to 2020 the region's GVA is projected to grow at an average yearly rate of 2%, lower than the national average of 2.4%.

Of the top five sectors, the finance and insurance sector is expected to see the greatest annual average expansion of 3.1%. In contrast, public services is projected to experience lacklustre annual average increases of 0.7%. Growth in manufacturing output is also expected to be only moderate, at 1.5% a year on average and the combination of relatively low growth in this and the public services sector, which are over represented in the region compared with the UK as a whole, is the primary reason why GVA expansion is lower.

Real household disposable income is expected to rise by an annual average of 1.6% over the forecast period, lower than the UK rate of 1.9% whilst average yearly increases in household spending are also projected to be lower (1.9% vs. 2.2%).

In 2014 the region's working age population was around 3.3m, which accounted for 8% of the UK total. Over the forecast period, Yorkshire and Humber's working age population as a share of the total population is expected to remain around 62%.

The region's unemployment rate stood at 7.3% in 2014, higher than the corresponding UK rate of 6.2%. Yorkshire and Humber's unemployment rate is likely to see big falls over the short term and by 2020 it is projected to be around 5.3%.



2.6 New construction orders – overview

In 2014 new construction orders increased for the third consecutive year, by 2% to £4.4bn (current prices), around 62% of their 2007 peak. The industrial sector experienced the largest growth of 69% to £410m whilst an increase of 62% to £287m was recorded in the public housing sector. The private housing sector went up by 16% to £1.3bn while the public non-housing sector saw the smallest jump of 15% to £534m. The infrastructure sector registered the greatest decrease of 38% to £673m while the commercial sector saw a marginal fall of 1% to £1.2bn.

2.7 New construction orders – current situation

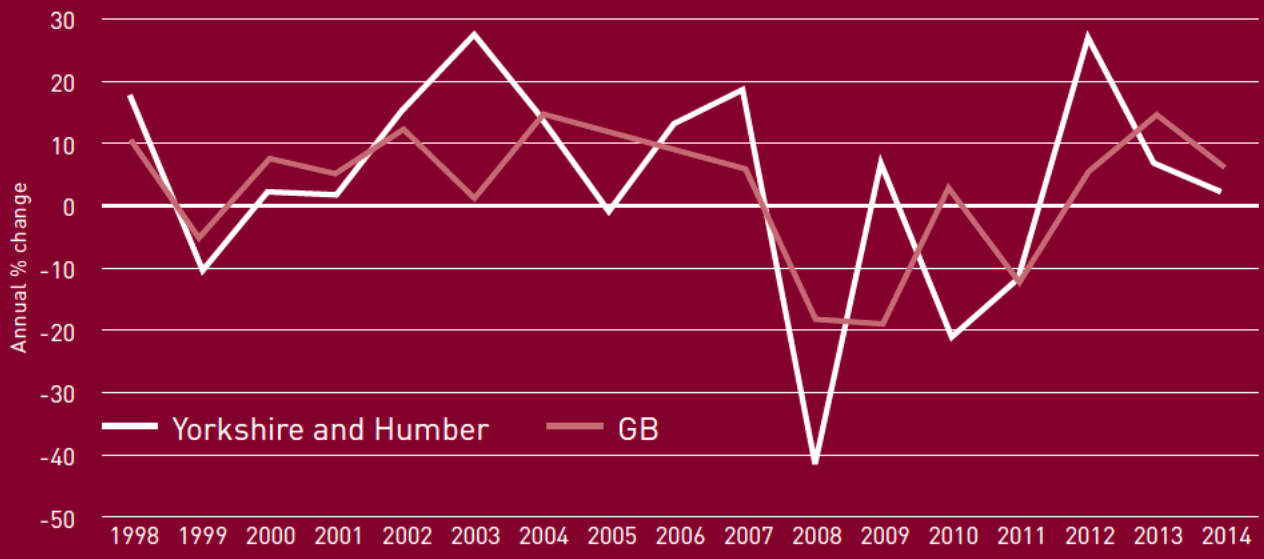
In the first six months of last year all new orders declined by 25% to £1.8bn compared with the same period a year earlier. Orders in the infrastructure sector registered the strongest increase of 89% to £206m whilst growth of 17% to £230m was seen in the industrial sector. The public housing sector posted the largest decrease of 83% to £41m while a double-digit drop of 57% to £373m was recorded in the commercial market. The private housing (£652m) and public non-housing (£259m) sectors experienced much smaller falls of 6% and 1% respectively.

ECONOMIC INDICATORS – YORKSHIRE AND HUMBER (£ BILLION, CURRENT PRICES – UNLESS OTHERWISE STATED)

Selected sectors	Actual	Forecast Annual % change, real terms					
	2014	2015	2016	2017	2018	2019	2020
Real household disposable income	79.3	3.1	1.4	1.8	1.9	1.2	1.7
Household spending	80.9	2.5	2.0	2.0	1.9	1.8	1.9
Working age population (000s and as % of all)	3,312	62.1	62.2	62.1	62.0	62.1	62.4
House prices (£)	174,000	3.1	2.7	2.9	2.4	2.4	2.9
LFS unemployment (millions)	0.24	-12.5	-10.2	-3.9	-1.5	-0.8	-0.6

Source: ONS, DCLG, Experian

NEW CONSTRUCTION ORDERS GROWTH 1998–2014 – YORKSHIRE AND HUMBER VS. GB



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

NEW WORK CONSTRUCTION ORDERS – YORKSHIRE AND HUMBER (£ MILLION, CURRENT PRICES)

	Actual	Annual % change				
	2014	2010	2011	2012	2013	2014
Public housing	287	38.6	13.4	-62.3	105.8	62.1
Private housing	1,261	41.2	5.9	15.7	44.2	16.4
Infrastructure	673	-68.2	16.3	242.1	-15.5	-38.4
Public non-housing	534	-29.0	-33.4	-11.0	-36.2	15.3
Industrial	410	-34.3	-27.8	212.2	-47.6	69.4
Commercial	1,234	12.4	-2.8	-25.2	80.8	-0.6
Total new work	**4,399**	**-21.6**	**-10.8**	**27.7**	**7.3**	**2.4**

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 half of 2015 output edged down by 2% to £4.8bn on an annual basis. The public housing sector saw the largest growth of 107% to £293m whilst expansion of 64% and 17% was also seen in the industrial (£229m) and private housing (£925m) markets respectively. In contrast, infrastructure (£660m) and public non-housing (£273m) output registered flat growth while the commercial sector posted the only decline of 30% to £808m.

For 2015 as a whole, the region's construction industry is estimated to see a marginal fall of 1% in output to £9.6bn (2012 prices).

Total construction output is expected to rise by an annual average of 5.3% over the next two years. Whilst the new work sector is forecast to experience average yearly growth of 8.3% the R&M sector is predicted to see marginal falls of 0.4% per annum.

The infrastructure sector is projected to see the largest annual average increases of 23.5%. The starts dates for the £750m Knottingley power station and the £1bn Thorpe Marsh power station projects have been delayed. The former is expected to see construction work start in April this year whilst the latter is likely to see work commence at the back end of 2016. Due to the significant value of these two schemes, strong growth is projected for both 2016 and 2017. Over the short term work is also likely to be carried out in other areas outside the energy sub-sector. For example the Government has brought forward the River Foss Flood Risk Management project just outside York. As part of this scheme up to 1,500 properties are set to benefit from protection from river flooding and surface water.

With annual average expansion of 6.1% the industrial sector is likely to see the second highest growth rate. The biggest scheme predicted to take place over the next two years is the £38m Pennine Foods Ltd factory project. The firm, based in Sheffield, has announced that they will be demolishing their current factory and replacing it with a new one, which is anticipated to finish by the end of 2017. It is now thought that most of the work on the proposed York Potash mine will be allocated to the mining sector not construction, apart from a few ancillary buildings. Therefore, this project has not been taken into account in the latest forecasts.

An average yearly rise of 5.7% is projected for the commercial sector. One of the largest projects that should take place over the short term is the £480m retail quarter which is set to transform the area around Pinstone Street, Barkers Pool and Moorhead in Sheffield City Centre. The development will cover space of around 900,000 square feet, of which around 200,000 square feet will be assigned to residential and new office space. Construction work should begin this year and by 2019 around 80% of the scheme should be complete. There are also other smaller projects that are predicted to take place such as Scunthorpe United's new 12,000-seater stadium. The £18m project includes the development of club and executive facilities, a gym, supporters' bar and office space. Further plans include a hotel and a multiuse indoor arena and community sports pitches. There will also be the option to incorporate indoor and outdoor bowling facilities. The new site which, will be located near the club's present Glanford Park ground, should be ready for the start of the 2016–17 season.

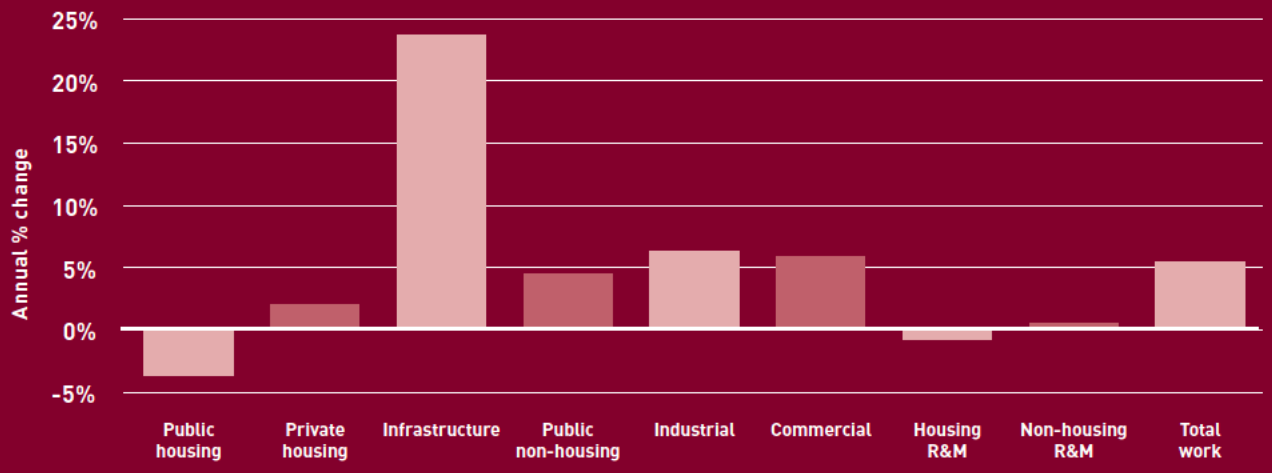
The public non-housing sector is anticipated to experience annual average growth of 4.3%. In 2015 work started on the University of Hull's new accommodation scheme. The £30m project is part of a wider investment programme that will see the redevelopment of the Brynmor Jones Library and the refurbishment of Middleton Hall. The new accommodation village will be available for first year undergraduate students and will replace the Needler Hall flats in Cottingham. Last year work also began on the University of Lincoln's new four-storey College of Science building at the Brayford campus. The building will include a 500-seat lecture theatre as well as teaching areas, laboratories, seminar rooms and office space.

CONSTRUCTION OUTPUT – YORKSHIRE AND HUMBER (£ MILLION, 2012 PRICES)

	Actual	Forecast annual % change			Annual average
	2014	2015	2016	2017	2016-2017
Public housing	387	9%	-10%	3%	-3.8%
Private housing	1,638	4%	1%	2%	1.8%
Infrastructure	1,223	15%	19%	28%	23.5%
Public non-housing	531	-15%	3%	5%	4.3%
Industrial	321	39%	7%	5%	6.1%
Commercial	2,102	-18%	8%	3%	5.7%
Total new work	**6,202**	**-1%**	**7%**	**10%**	**8.3%**
Housing R&M	1,747	-2%	-1%	-1%	-1.0%
Non-housing R&M	1,699	-2%	0%	0%	0.2%
Total R&M	**3,447**	**-2%**	**0%**	**-1%**	**-0.4%**
Total work	**9,648**	**-1%**	**5%**	**6%**	**5.3%**

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

ANNUAL AVERAGE CONSTRUCTION OUTPUT GROWTH 2016-2017 – YORKSHIRE AND HUMBER



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

> Construction employment is anticipated to increase by an average yearly rate of 0.8% and by 2020 it is likely to be around 202,480.

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

Overall, the region's annual average output growth over the next five years is projected to be 2.4%, slightly below the UK rate of 2.5%.

In the five years to 2020 Yorkshire and Humber's best performing sector is predicted to be the infrastructure sector with average yearly increases of 7.1%, higher than the UK rate of 6.1%. Due to the number and size of schemes ongoing in the short term, in 2018 infrastructure output is predicted to reach a new high of £2.3bn. However, as projects begin to complete and with no new large schemes in the pipeline, it is inevitable that the sector will start to shrink. Hence declines in output have been predicted for both 2019 and 2020.

The commercial sector is likely to see average expansion of 4.9% per annum, higher than the national rate of 3.4%. Good growth is not only expected in the short term but also in the long run as the strong growth rates for both the finance and insurance, and professional and other private services sectors keep demand for office premises high over the forecast period. Decent expansion in the wholesale and retail, and accommodation, food services and recreation sectors should also create demand for retail and leisure facilities. However, even with the projected growth rate, by 2020 output in the sector is anticipated to be still only 75% of its 2007 peak.

Annual average increases of 1.5% are forecast for the private housing sector, lower than the UK rate of 1.9%. Whilst there are a number of projects ongoing in the short term, demand for homes is likely to dampen once interest rates begin to rise in the third quarter of 2016. However, announcements made in the 2015 Autumn Statement could have a positive impact on these forecasts, which were locked prior to their release. The Government has indicated that it expects to see up to 400,000 'affordable' homes developed across the country by 2020. The question around this announcement is how much more does this entail above current build rates in each region? Nevertheless it could lead to extra homes being built in the region and therefore lead to higher growth in output than was previously expected.

The public housing sector is predicted to see average yearly declines of 1.2% over the next five years. 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 the Summer 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.

The industrial construction may benefit from the development of new distribution facilities along the A1 between Leeming Bar and Barton once the current upgrade is complete in mid-2017. However, over the whole of the forecast period industrial construction output is likely to decline by 3% a year on average.

2.10 Beyond 2020

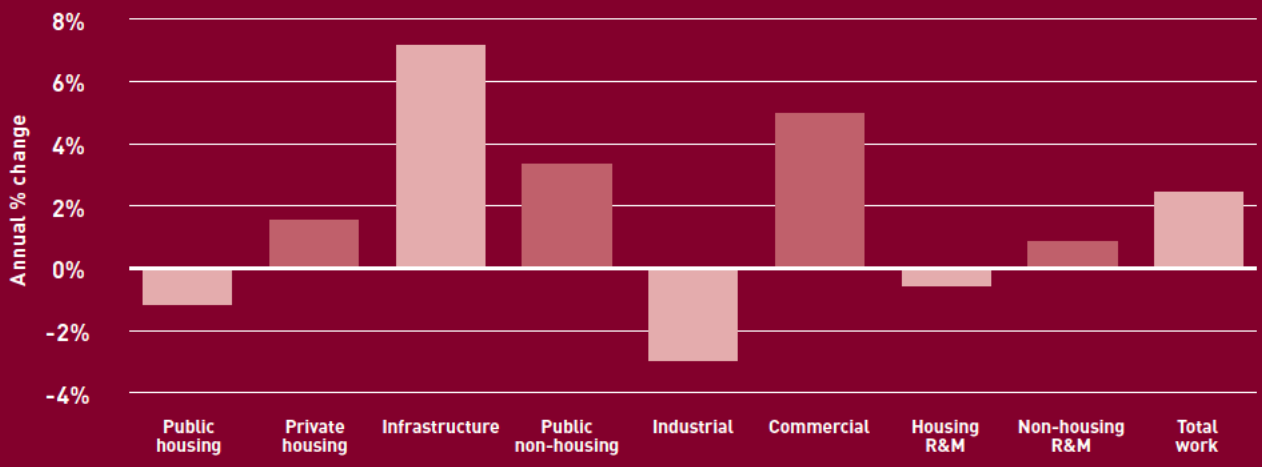
Major road transport is likely to be an area in which further work will take place post 2020. Highways England's 2015–2020 business plan identifies upgrade work that could be taken forward as part of A57/A628 Trans-Pennine Programme and the A61 dualling in the aftermath of feasibility studies. No dates are currently available for the start of any work on these schemes but they are likely to be post-2020.

CONSTRUCTION OUTPUT – YORKSHIRE AND HUMBER (£ MILLION, 2012 PRICES)

	Estimate	Forecast annual % change					Annual average
	2015	2016	2017	2018	2019	2020	2016-2020
Public housing	422	-10%	3%	11%	4%	-12%	-1.2%
Private housing	1,707	1%	2%	2%	1%	1%	1.5%
Infrastructure	1,409	19%	28%	6%	-10%	-4%	7.1%
Public non-housing	451	3%	5%	4%	-1%	5%	3.3%
Industrial	447	7%	5%	-25%	0%	2%	-3.0%
Commercial	1,732	8%	3%	6%	6%	1%	4.9%
Total new work	**6,168**	**7%**	**10%**	**3%**	**-1%**	**-1%**	**3.5%**
Housing R&M	1,712	-1%	-1%	-3%	1%	1%	-0.6%
Non-housing R&M	1,669	0%	0%	1%	1%	2%	0.8%
Total R&M	**3,381**	**0%**	**-1%**	**-1%**	**1%**	**1%**	**0.1%**
Total work	**9,549**	**5%**	**6%**	**2%**	**0%**	**0%**	**2.4%**

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

ANNUAL AVERAGE CONSTRUCTION OUTPUT GROWTH 2016-2020 – YORKSHIRE AND HUMBER



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

SECTION 3

CONSTRUCTION EMPLOYMENT FORECASTS FOR YORKSHIRE AND HUMBER

3.1 Total construction employment forecasts by occupation

The table presents actual construction employment (SICs 41-43, 71.1, and 74.9) in Yorkshire and Humber 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.

Construction employment in the region is forecast to grow by an annual average of 0.8% over the five years to 2020, less than the UK rate of 1.1%. This is partly due to where the growth is coming from. The differential in growth between the new work and R&M sectors in the UK is 2% a year on average, whereas it is 3.4% in Yorkshire and Humber. Therefore, relatively more of the region's growth is focused in the new work sector, which is less labour intensive than R&M.

In numbers terms, construction employment in the region is expected to reach around 202,500 in 2020, representing an increase of well over 8,000 in the workforce since 2015. However, this will still leave employment in 2020 7% lower than its peak in 2008. As is the case in many regions, most of the growth is focused in the early part of the forecast period, with employment peaking in 2018 and a slight decline thereafter.

Just under half of the occupations in the region are likely to see growth in the five years to 2020 with construction trades supervisors predicted to experience the largest average yearly increase of 4.3%, followed by plant operatives (4.1%) and scaffolders (3.8%). Overall growth is a little stronger for the professional and managerial categories than for the trades.

TOTAL EMPLOYMENT BY OCCUPATION – YORKSHIRE AND HUMBER

	Actual 2014	Estimate 2015	Forecast	
			2016	2020
Senior, executive, and business process managers	13,580	13,300	13,880	15,310
Construction project managers	3,270	3,210	3,330	3,580
Other construction process managers	14,330	14,140	14,710	16,000
Non-construction professional, technical, IT, and other office-based staff	23,880	25,320	26,050	27,860
Construction trades supervisors	3,850	3,980	4,200	4,910
Wood trades and interior fit-out	16,970	17,530	17,750	16,130
Bricklayers	5,980	5,720	5,770	5,170
Building envelope specialists	6,690	7,070	7,120	6,420
Painters and decorators	5,860	6,170	6,380	5,920
Plasterers	5,920	5,750	5,640	4,920
Roofers	5,530	5,290	5,310	4,860
Floorers	2,340	2,410	2,410	2,140
Glaziers	2,660	2,580	2,650	2,480
Specialist building operatives nec*	3,650	3,490	3,590	3,370
Scaffolders	2,270	2,410	2,550	2,900
Plant operatives	1,410	1,450	1,530	1,770
Plant mechanics/fitters	3,420	3,420	3,570	3,340
Steel erectors/structural fabrication	2,530	2,620	2,590	2,240
Labourers nec*	8,310	8,240	8,670	9,910
Electrical trades and installation	14,850	15,390	15,940	15,260
Plumbing and HVAC Trades	12,580	12,530	12,890	12,390
Logistics	1,170	1,110	1,130	1,110
Civil engineering operatives nec*	3,590	3,800	3,900	3,900
Non-construction operatives	3,850	4,070	4,180	4,420
Civil engineers	3,850	3,690	3,740	3,760
Other construction professionals and technical staff	12,950	13,110	13,740	15,200
Architects	600	570	580	560
Surveyors	5,390	5,700	5,980	6,650
Total (SIC 41-43)	**168,490**	**171,000**	**175,740**	**176,310**
Total (SIC 41-43, 71.1, 74.9)	**191,280**	**194,070**	**199,780**	**202,480**

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

3.2 Annual recruitment requirements (ARR) by occupation

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

Yorkshire and Humber's average ARR is projected at 3,230 for the five years to 2020 and represents 1.6% of base 2016 employment, slightly lower than the UK ratio of 1.7%.

The largest absolute requirement among trade occupations is for wood trades and interior fit-out (240), which represents 7% of the total ARR. However, in terms of a percentage of base 2016 employment, plant operatives (11%) and the logistics trade occupations (11%) are expected to be the most in demand.

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.

ANNUAL RECRUITMENT REQUIREMENT BY OCCUPATION – YORKSHIRE AND HUMBER

	2016-2020
Senior, executive, and business process managers	200
Construction project managers	-
Other construction process managers	<50
Non-construction professional, technical, IT and other office-based staff	1,550
Construction trades supervisors	100
Wood trades and interior fit-out	240
Bricklayers	50
Building envelope specialists	<50
Painters and decorators	<50
Plasterers	-
Roofers	220
Floorers	110
Glaziers	-
Specialist building operatives nec*	-
Scaffolders	70
Plant operatives	170
Plant mechanics/fitters	-
Steel erectors/structural fabrication	-
Labourers nec*	50
Electrical trades and installation	70
Plumbing and HVAC Trades	50
Logistics	120
Civil engineering operatives nec*	-
Civil engineers	100
Other construction professionals and technical staff	<50
Architects	-
Surveyors	<50
Total (SIC 41-43)	**3,100**
Total (SIC 41-43, 71.1, 74.9)	**3,230**

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.

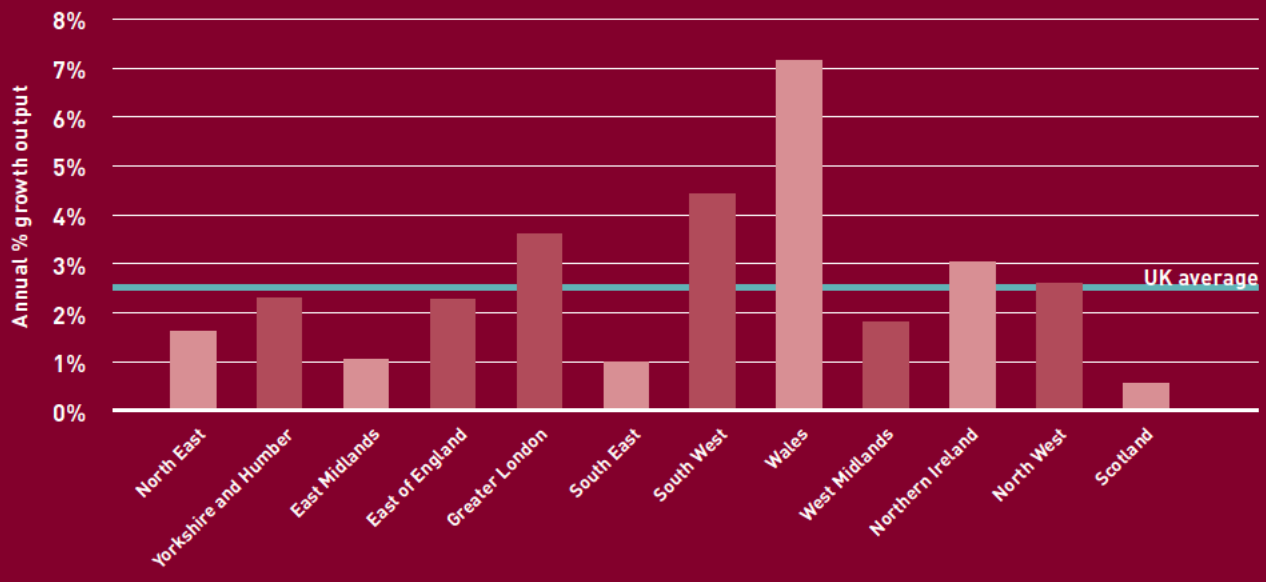
Northern Ireland is likely to be one of the faster growing regions in the five years to 2020, although construction output will be coming back from a very low base and there are concerns that current political uncertainties could delay the start of public projects.

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.

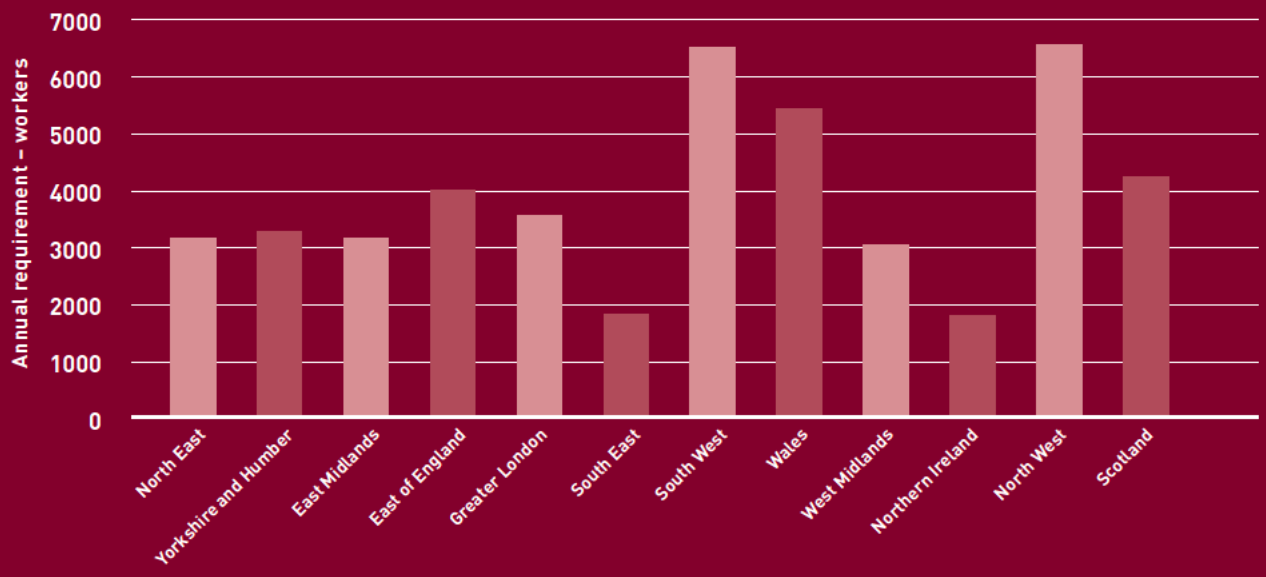
The pattern of ARR can look significantly different from the profile of output and employment, as some regions and devolved nations have historically strong net inflows and some suffer from large net outflows. The most extreme examples of this trend tend to be Greater London and Wales. London has a relatively 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

> At 1.6% of base 2016 employment, the ARR indicates that 3,230 extra employees will be required on an annual basis.

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:

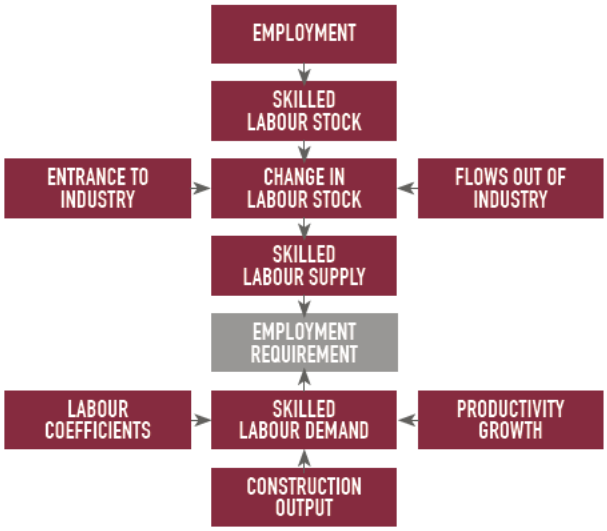
- Transfers to other industries
- International/domestic out migration
- Permanent retirements (including permanent sickness)
- Outflow to temporary sickness and home duties.

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[1]

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[1]

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.[2]

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.[3]

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 maanagers	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

Construction trades supervisors

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

Wood trades and interior fit-out

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

Bricklayers

Bricklayers and masons	5312

Building envelope specialists

Construction and building trades nec* (50%)	5319

Painters and decorators

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

Plasterers

Plasterers	5321

Roofers

Roofers, roof tilers and slaters	5313

Floorers

Floorers and wall tilers	5322

Glaziers

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

Specialist building operatives not elsewhere classified (nec*)

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

Scaffolders

Scaffolders, stagers and riggers	8141

Plant operatives

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

Plant mechanics/fitters

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

Steel erectors/structural fabrication

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

Labourers nec*

Elementary construction occupations (100%)	9120

Electrical trades and installation

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

Plumbing and heating, ventilation, and air conditioning trades

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

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

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**

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CITB is a partner in ConstructionSkills, the Sector Skills Council for the UK construction industry.