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Training and the Built Environment 2016

Introduction

CITB is the Industry Training Board and a partner in the Sector Skills Council for the construction industry in England, Scotland and Wales. It's our job to work with industry to encourage training, which helps build a safe, professional and fully qualified workforce.

The support and funding we provide helps companies to improve skills, increase their competitiveness and respond to challenges such as the low carbon agenda, reducing costs on site and recruiting the best talent for their sector.

The construction Industry is facing its biggest challenge since the industrial revolution.

The UK infrastructure plan, a housing boom and the importance of developing new ways of working and embracing new technologies, are combining to create demand for more skills, new skills and higher level skills.

CITB is here to support the construction industry in navigating these challenges by:

- understanding how future conditions could impact on its needs
- helping industry to access the products and services it needs
- providing the right financial support
- creating the right environment for industry through influencing, facilitating and collaborating

We have consulted and listened to Industry to organise our activity to address their priorities.

These strategic priorities are:

Strategic Leadership

Identifying current and emerging skills needs and providing intelligence on skills gaps to make sure communities deliver the skills that are needed, supported by CITB funding and investments.

Image and Recruitment

To engage with education and improve the image and culture of construction and provide engaging and accessible information to those who want to join the industry.

Industry Engagement

Listening to employers to shape the support that we can provide and delivering skills solutions to help build capability, and increase the competitive edge of businesses, both large and small.

Training and Development
Using our industry intelligence to identify ways to increase work readiness and ensure that we have the right training provision and qualifications that professionalise the workforce and deliver the skills industry needs now, and in the future.

Charitable Trading

Delivering a portfolio of products and services not provided by the market that meets industry's skills needs.

Running the Business
Transforming our operating model so that we're more effective, accurately represent our industry and work smarter and faster to address industry change.
Building Partnerships charts how, building upon our 50 year track record of working successfully in partnership with Industry and governments, we will deliver to these Strategic Priorities in 2015-2017.

Research provides facts about the industry. These details then form the building blocks for change and improvements in performance for those who use and work in construction. CITB undertakes a regular programme of research that aims to identify the skills needed to improve the construction industry's competitiveness.

As part of the research programme, the **Training and the Built Environment Report** provides a picture of training in the built environment.

The main sections of the report are:

Section 1: CITB Trainee Numbers Survey 2015/16 presents data collected on a voluntary basis from colleges, private training providers and construction industry training centres across Great Britain on the number of people entering construction training. These include those coming through CITB's own managing agency and those entering other formal certificated training at craft and technical level.

Section 2: Forecasted Demand for Craft and Technical Construction Training

2016–2020 analyses this training data alongside the Construction Skills Network (CSN) projected demand for skilled construction workers over the forecast period 2016–2020, in order to assess the adequacy of current training provision in terms of quantity.

Section 3: Higher Education in the Built Environment presents data from the Higher Education Statistics Authority (HESA) on student enrolments on construction and the built environment degree courses in the academic year 2014/15.

Section 4: Conclusion

Hereafter where reference is made to trainees or apprentices these are all individuals who are undertaking their first year of training courses in construction and the built environment only.

Section 1: CITB Trainee Numbers Survey 2015/2016

The Trainee Numbers Survey is conducted annually by CITB. The survey collects data from construction training providers across Great Britain on the number of first year construction and the built environment trainees by qualification and qualification level.

1.1 The National Picture

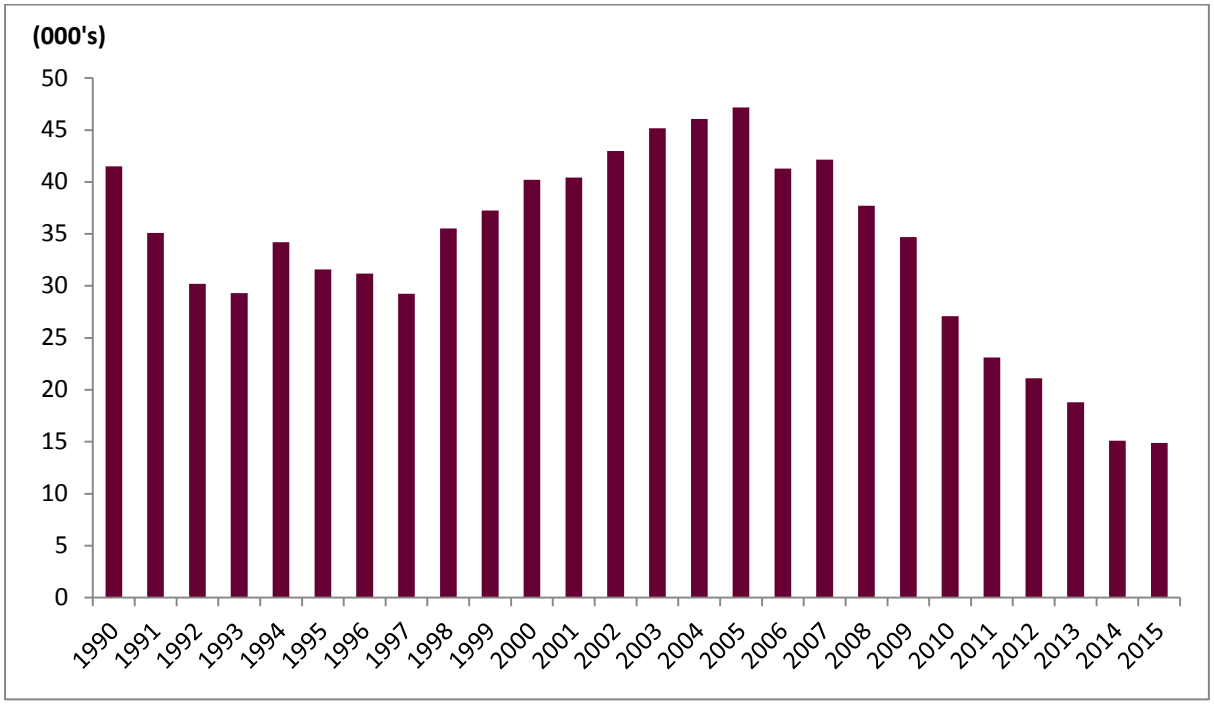
Chart 1 shows the number of first year trainees starting construction and built environment courses over the last quarter of a century (1990-2015). The number of first year trainees in 2015/16 stood at 14,900 a slight decrease on last years recorded number of just over 15,000. Since 2007, the numbers of first year trainees enrolling on courses has been falling, up until the last two years where numbers have remained relatively consistent.

Following the EU referendum this year the resulting uncertainty may have implications for the construction industry. Construction employment has been stronger than expected in the first half of the year, but is expected to weaken in the second half. The Construction Skills Network (CSN) revised forecast, predicts over the next five years 157,000 new workers will be needed in order to meet construction employment demand. The leading trades which are needed to make this demand are; wood trades and interior fit out, electrical trades and instillation, and other construction professional and technical staff[1].

In past economic cycles evidence showed how training tends to lag rises in employment and output, upturns in training are usually witnessed over the long-term due to the fragmented nature of the industry, which can is highlighted in Chart 1 with a delay in the recovery in training following the recession of the early 1990's.With the future political landscape in the UK uncertain due to Brexit, and other reform based policies ongoing in the Further Education (FE) sector such as Area reviews and the Farmer review, the outlook and impact this could have for training is somewhat unknown.

[1] Brexit Construction Skills Network report, available at: http://www.citb.co.uk/documents/research/csn%202016-2020/csn-report-october-2016.pdf

Chart 1 – Numbers of first-year trainees 1990-2015 (Great Britain: All occupations)



Notes: Due to changes made to data collection during 2004/2005, the total first-year intake displayed in the chart for years 1999 onwards does not include trainees undertaking a mechanical engineering course.

Since 2010 some additional clarification instructions were added to the questionnaire in an effort to ensure that training undertaken by the existing workforce (such as upskilling via Train to Gain) is excluded from this survey.

1.2 Training by Occupation

This section of the report translates data from the survey into occupational groups used by the CSN, allowing us to look at the potential supply of trainees by occupational groups enabling comparison with the CSN employment forecast (section 2).

In 2015/2016 there has been an increase in numbers in eight of the occupational groups, while eight have witnessed a decrease. The largest decreases can be found in specialist building operatives nec* (-614), construction project managers (-287) and wood trades (-175). Wood trades has been declining year on year since 2008/2009, although it still remains the largest occupational groups in total numbers. Occupational groups that have had increases are civil engineering operatives nec* (+455), bricklayers (+245) and plasterers and dry liners (+236).

Table 1 – Trainee numbers 2015/2016 (Great Britain)

	Under 18		Over 18		
	Male	Female	Male	Female	Total
Senior executive & business process managers	0	0	0	0	**<50**
Construction trades supervisors	0	0	56	<50	**56**
Construction project managers	<50	0	135	<50	**135**
Wood trades and interior fit-out	2,654	125	1,448	134	**4,361**
Bricklayers	1,747	<50	862	<50	**2,609**
Building envelope specialists	76	0	<50	0	**76**
Painters and decorators	690	154	296	81	**1,221**
Plasterers and dry liners	644	<50	348	77	**1,069**
Roofers	97	0	101	0	**198**
Floorers	74	<50	77	<50	**151**
Glaziers	<50	0	<50	0	**<50**
Specialist building operatives nec*	128	<50	96	<50	**224**
Scaffolders	110	0	299	<50	**409**
Plant operatives	106	0	414	<50	**520**
Plant mechanics/fitters	130	0	103	<50	**233**
Steel erectors/structural	0	0	<50	0	**<50**
Labourers nec*	<50	0	<50	0	**<50**
Plumbing and HVAC trades	<50	0	<50	0	**<50**
Civil engineering operatives nec*	649	<50	512	<50	**1161**
Civil engineers	84	<50	142	<18	**226**
Other construction professionals and technical staff	146	<50	690	<50	**836**
Architects	<50	<50	239	<50	**239**
Surveyors	<50	<50	79	<50	**<50**
Total	**7,908**	**414**	**6,078**	**505**	**14,905**

*nec = not elsewhere classified

Notes: 693 trainees are excluded as unable to map over to appropriate occupation. Only occupations with trainees starting a qualification are included.

In line with previous year's results Wood trades and Bricklayers still remain the largest occupational groups in terms of overall training, but have been declining over the last eight years. In recent years the actual numbers training in Painting and decorating has declined from 2,082 in 2013/2014 to 1,221 in 2015/2016.

Table 2 – Comparison of trainee numbers in the top ten occupational groups (by volume) 2013/2014 to 2015/2016 (Great Britain)

Occupations	2015-16	2014-2015	2013-2014
Wood trades and interior fit-out	4,361	4,536	5,893
Bricklayers	2,644	2,364	3,313
Painters and decorators	1,221	1,331	2,082
Specialist building operatives nec*	226	838	849
Plasterers and dry liners	1,083	833	1,389
Other construction professionals and technical staff	894	713	1,193
Civil engineering operatives nec*	1,244	706	1,454
Plant operatives	524	485	834
Construction project managers	165	422	181
Scaffolders	410	379	210

Over the last three years the majority of occupational groups have retained their share of training as shown in Chart 2. This year's share is similar to that of the results in 2013/2014. As would be expected due to the large drop in training discussed above, the largest decline was for Specialist building operatives nec* (a decline from 11% to 2% over the 3 year period). Slight increases can be found in Civil engineering operatives nec* (8% to 9%) and Scaffolding (1% to 3%).

Chart 2 – Proportion of all trainees by top ten occupation groups 2013/2014 to 2015/2016 (Great Britain)

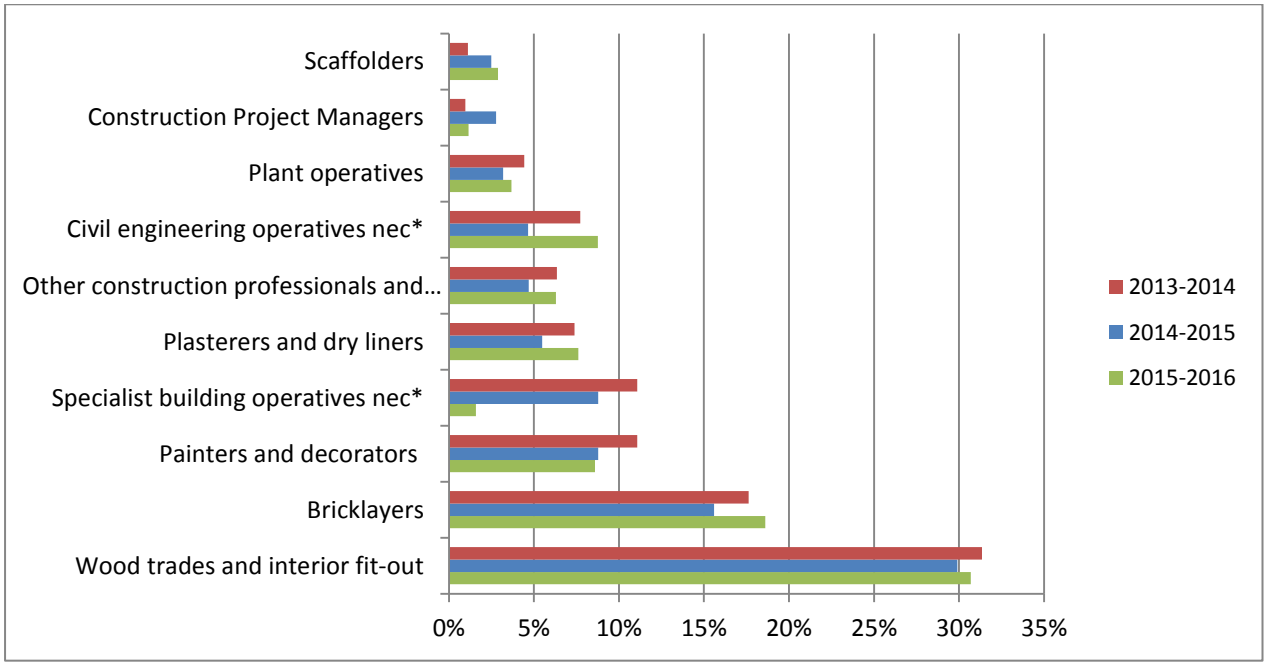
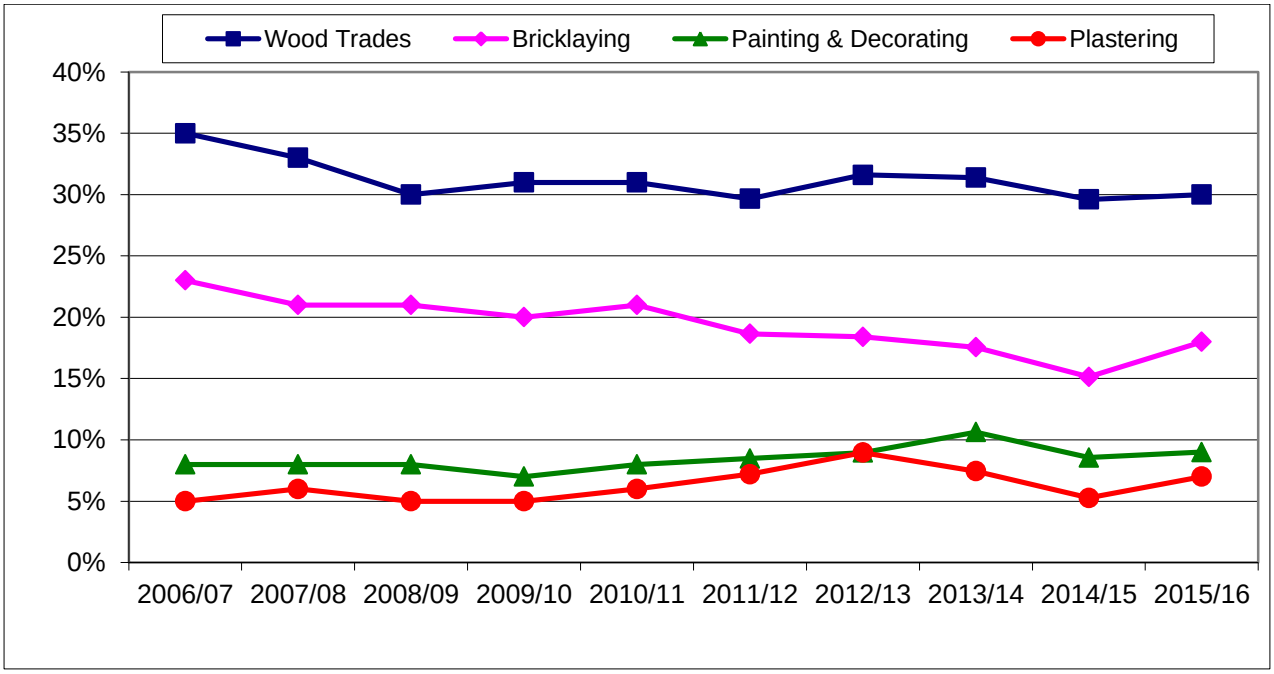


Chart 3 looks at the four main building craft occupations: Wood trades, Bricklaying, Painting and decorating and Plastering over a ten year period. The chart shows the proportion of all four occupational groups has remained broadly the same over the last decade. In 2015/2016 there has been an increase in training in two of the occupation groups; Bricklaying and Plastering.

Over the decade, the occupational group that has had the most consistent proportions is Painting and decorating. The share of training for each group in 2015/2016 is similar to the share witnessed in 2011/2012,with decreases only occurring in Bricklaying and Painting and decorating (-1%). All groups, apart from Painting and decorating has experienced some volatility over the ten year period, with Wood trades being the most inconsistent.

Chart 3 – Proportion of all first-year trainees in the main Building Craft Occupation 2006-2015 (Great Britain)



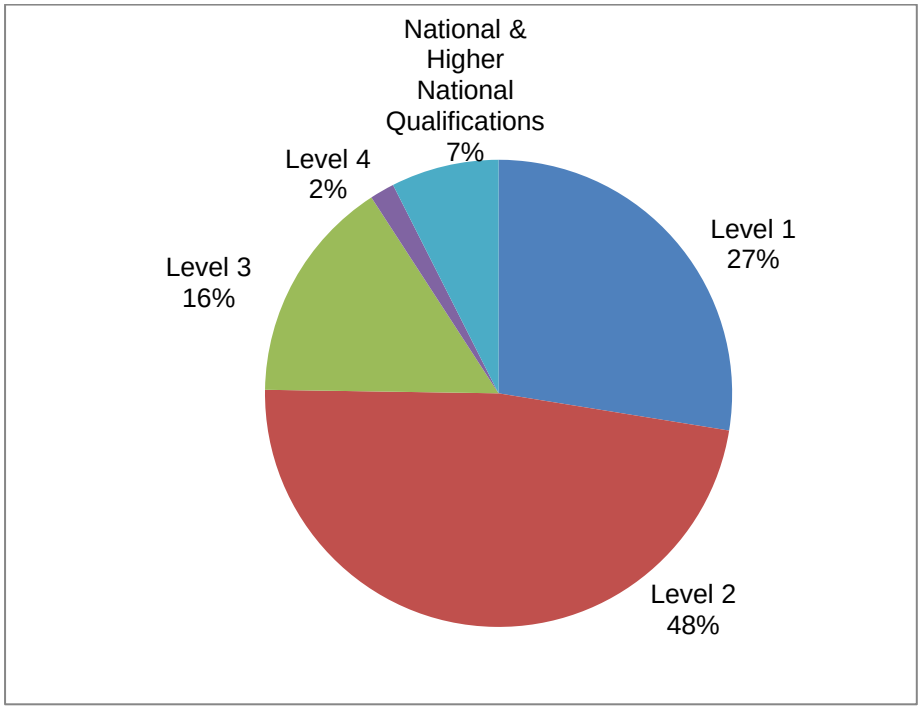
1.3 Training by Qualification

The survey analyses trainee numbers by qualification level. The levels of qualification are spilt down into 5 categories:

- Level 1
- Level 2
- Level 3
- Level 4
- National and Higher Qualifications

Chart 4 indicates the highest proportion of trainees are undertaking Level 2 qualifications (48%), followed by 27% taking a Level 1 qualification. The smallest proportion of trainees are undertaking a Level 4 course which stands at 2%.

Chart 4 – Proportions of all trainees by qualification level 2015/16 (Great Britain)



Note: please note that the Trainee Numbers Survey collects data from the Further Education sector and higher level qualifications are also provided by Higher Education institutions. See Section 3 for more information.

The breakdown of trainees by qualification level has remained fairly static over the last seven years, with Levels 1,2 and 3 having the largest proportion of trainees undertaking those courses.

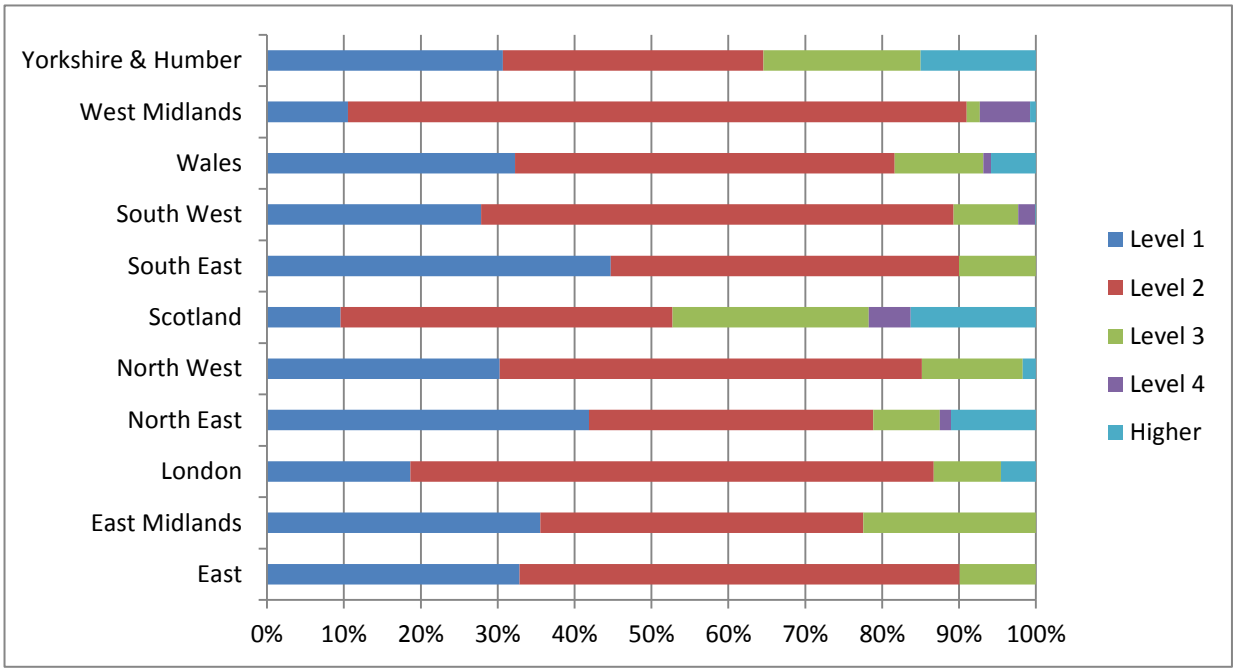
1.4 Geographical considerations

The survey responses are collected from training establishments across Great Britain. The data is split into regions and devolved nations, then further analysed by qualification level.

The highest proportion of overall trainees can be found in Scotland and Wales (18%) and in Yorkshire and Humber (16%). In the South East (3%) and in London and the West Midlands (4%), lower proportions of trainees are found. Over the last six years, London has typically had the lowest proportion of trainees, in 2011/12 overall trainees in that area stood at just 2%.

The geographical profile of qualification levels has varied little over the years with England and Wales traditionally having a higher share of trainees undertaking level 1 and level 2 qualifications (83%), compared to Scotland which has consistently had a higher share of training in higher qualifications; particularly at level 3.

Chart 5 – Trainees by level of qualification and geographical area 2015/2016 (Great Britain)



Note: See figure 1 in Appendix for a visual representation of the total number of first-year trainees by geographical area.

1.5 Qualification Type

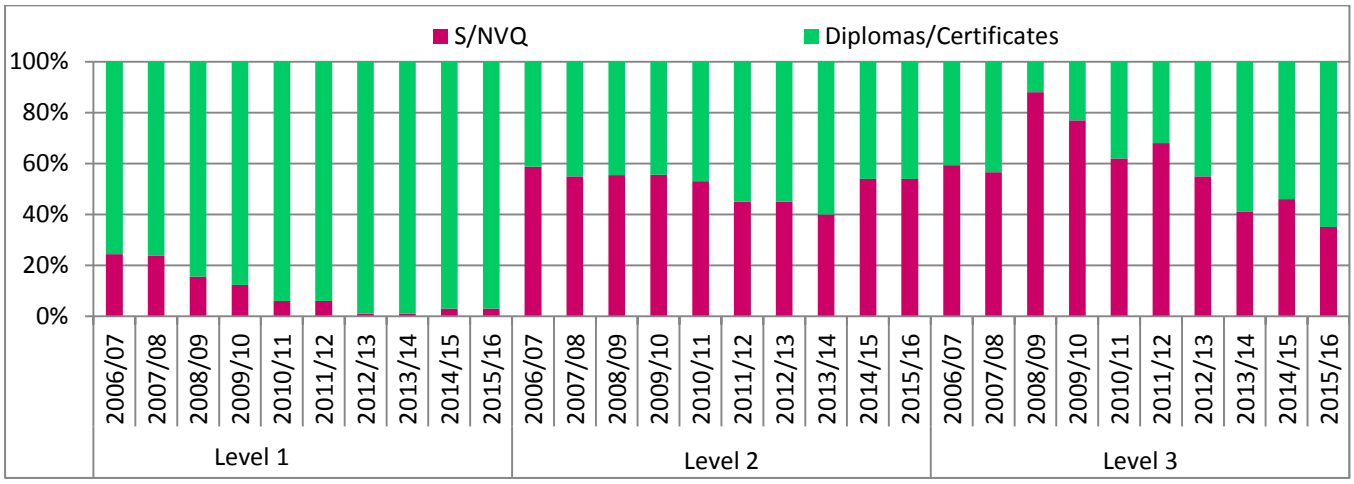
For construction craft occupations there are two types of qualification that can be undertaken; S/NVQ's and Diplomas[2], both are available at Levels 1, 2 and 3. The S/NVQ qualification requires on-site experience/assessment, whereas Diplomas are qualifications for craft occupations and can be completed part-time or full-time but do not require any proof of work undertaken on site.

In 2015/2016 there are 11,468 trainees in England and Wales undertaking construction craft training; 37% are undertaking an S/NVQ compared to 63% who are enrolled on a diploma. The proportion of students undertaking diplomas has increased since 2003/2004 where enrolment stood at 30%, showing a rise in these types of qualification which has more than doubled.

As a share of training on each level, the highest proportion of trainees are undertaking level 1 diplomas (97%), followed by level 2 (46%) and level 3 (44%). Since 2003/04 the proportion of trainees undertaking a level one diploma increased to a peak of 99% in 2012/13, since then it has plateaued at 97%. Training on level 2 diplomas has remained the same as last year's proportion at 46%, whereas training on level 3 diplomas has increased from last year (+11%).

[2] All data for work based training excludes Scotland's trainee figures as Diplomas are not available in Scotland.

Chart 6 - Proportion of trainees split by work-based training 2006/2007 to 2015/2016 (Construction craft training, England and Wales)



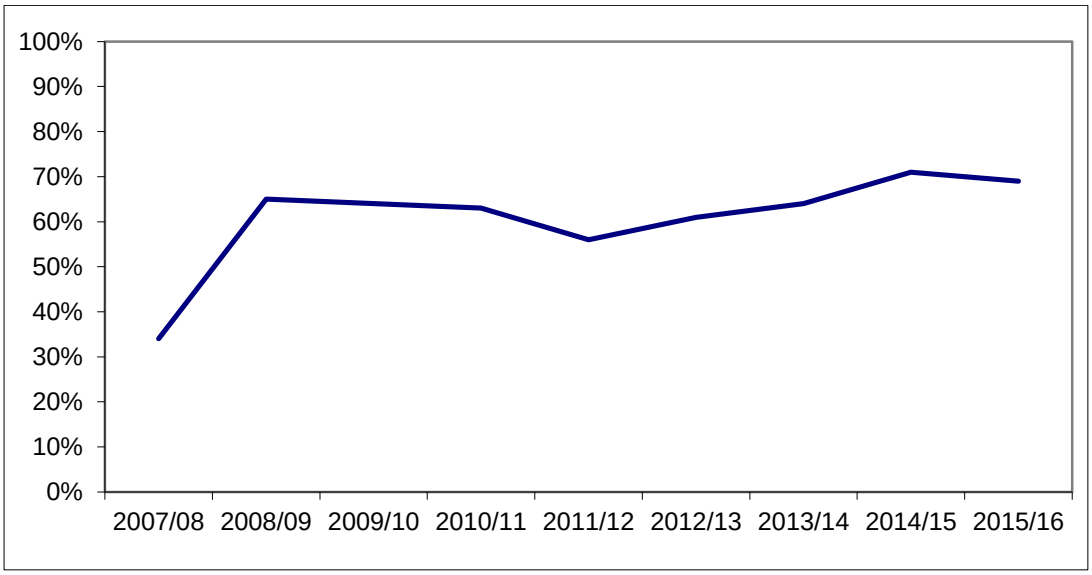
NB. This survey is always undertaken at the beginning of the academic year, therefore numbers on Diplomas/Certificates may decrease as the year progresses and more trainees are placed with employers and move from a Diploma or Certificate into the relevant NVQ Level qualification.

1.6 Trainee Progression

Initially the survey had sought to analyse the progression of trainees measuring how many had undertaken a Level 1 qualification (both S/NVQ'S and Diplomas) and were expected to progress onto a Level 2 qualification. However, over the last five years the progression data received for the number of trainees undertaking a Level 1 S/NVQ has decreased to such an extent that it is no longer robust enough for meaningful analysis. Therefore the following section only includes trainees who are on a Level 1 Diploma qualification.

Chart 7 illustrates that the percentage of trainees expected to progress to a Level 2 qualification in 2015/2016 is 69%, which is a slight decrease on last year's results (71%), however, these proportions of trainee progression are some of the highest recorded by the survey. The lowest proportion of trainees expected to progress was recorded in 2011/12. The average over the last ten years for progression stands at 61%.

Chart 7 – Expected progression of trainees from Level 1 Diploma 2007-2015 (England & Wales)



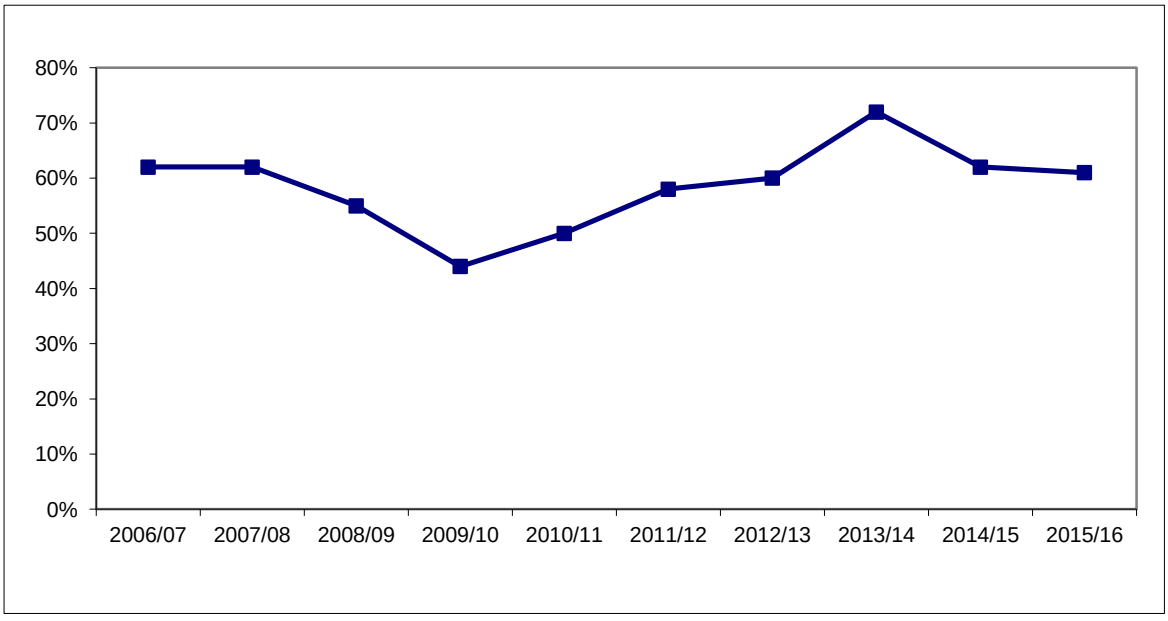
Note: Diplomas/Certificates are not available in Scotland

1.7 Apprentices

The proportion of trainees that are following an apprenticeship programme has remained relatively unchanged since last year's results (61% in 2015/16 and 62% in 2014/2015).

In 2015/2016 there were 2,013 (69%) level 2 apprentices and 916 (31%) individuals on level 3 apprenticeships. The profile of the share of apprenticeships has changed little since 2007.

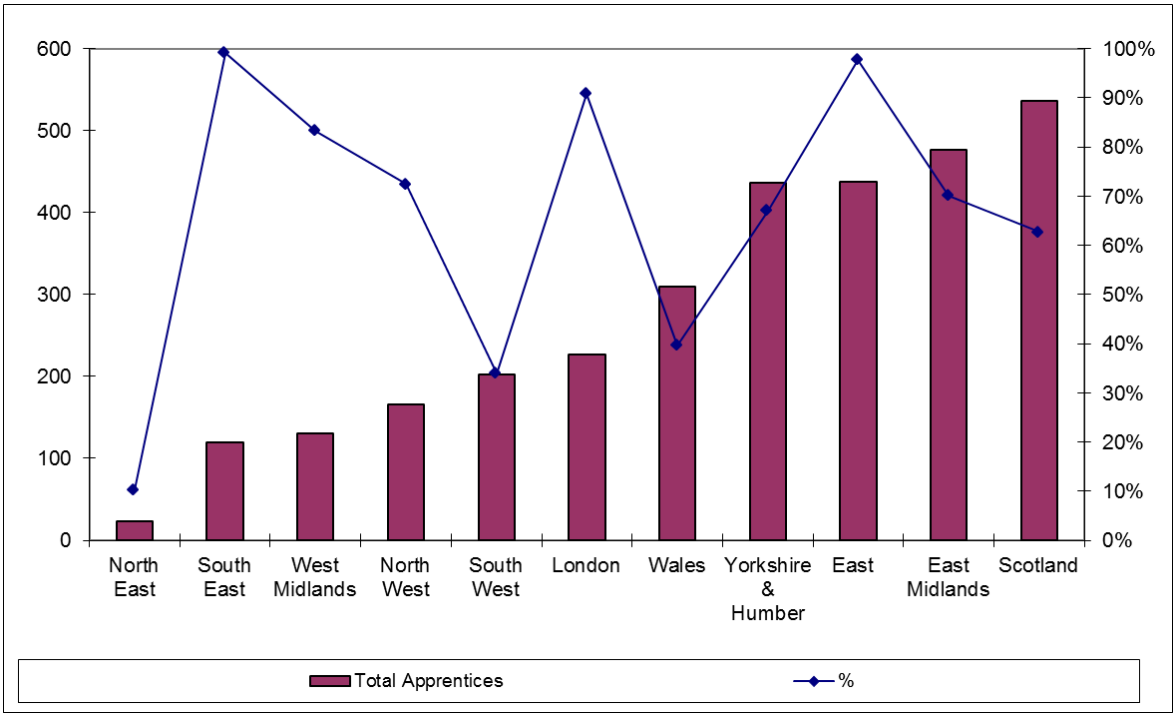
Chart 8 – Proportion of trainees following an apprenticeship programme 2006-2015 (Great Britain S/NVQ Level 2 and Level 3)



When looking at geographical area and apprentice starts, there is clear diversity between the English regions and devolved nations as shown in Chart 9. Scotland has the highest number of absolute trainees undertaking an apprenticeship which stands at 536, compared to just 23 apprenticeship starts in the North East. The North East also has the lowest proportion of trainees undertaking an apprenticeship (10%) compared to the South East which is the highest at 99%.[3]

In terms of overall share of apprentices, the regions/nations which have the majority are Scotland (17%), followed by East Midlands (16%), the East and Yorkshire and Humber(14%). Over the last 5 years Scotland has held the highest share of overall apprentices.

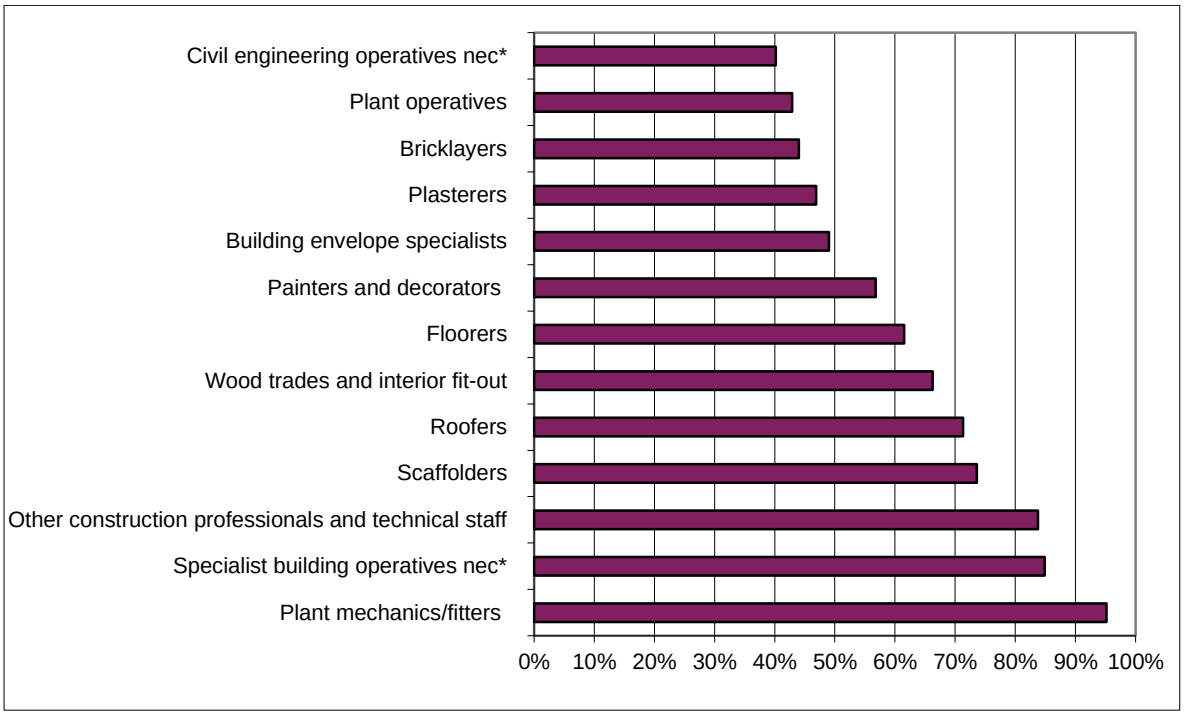
Chart 9 – Number and proportion of trainees following an apprenticeship programme by area 2015/2016 (Great Britain: S/NVQ Level 2 and Level 3)



Note – caution low base sizes

Chart 10 shows analysis of apprenticeships by occupation. The highest share of apprentices can be found in Plant mechanics/fitters (95%) , which has witnessed a further increase on last year's proportion by (+26%). High proportions of apprentices can also be found in Specialists building operatives nec* (85%) and Other construction professional and technical staff (84%). In previous years, proportions of apprentices on Bricklaying courses has been considerably higher from a peak of 83% to 2013/2014 to only 44% in 2015/2016, this pattern can also be found in Wood trades (92% in 2013/2014 to 66% in 2015/2016).

Chart 10 – Proportion of trainees following an apprenticeship programme by occupation 2015/2016 (Great Britain: S/NVQ Level 2 and Level 3)



1.8 First-year trainee characteristics

The survey collects information on age, gender and ethnicity to build a picture of the characteristics of trainees.

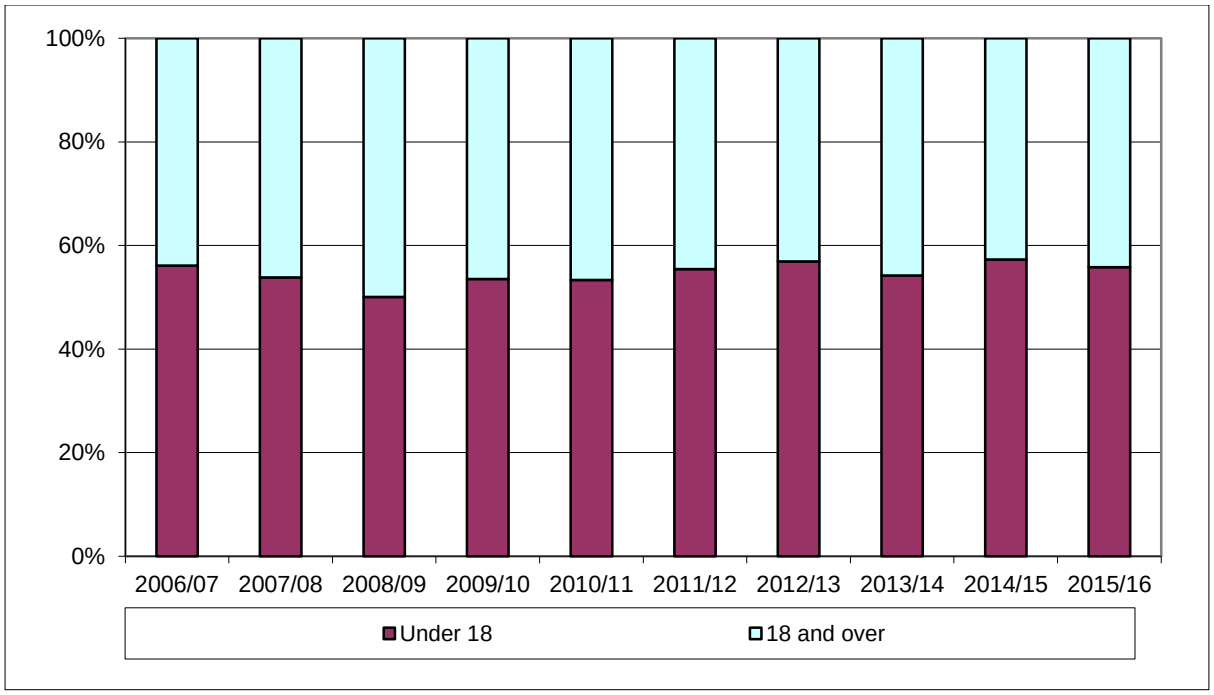
1.8.1 Age

The survey records the age of respondents and this is split into two categories:

- Under 18 years
- 18 years and over

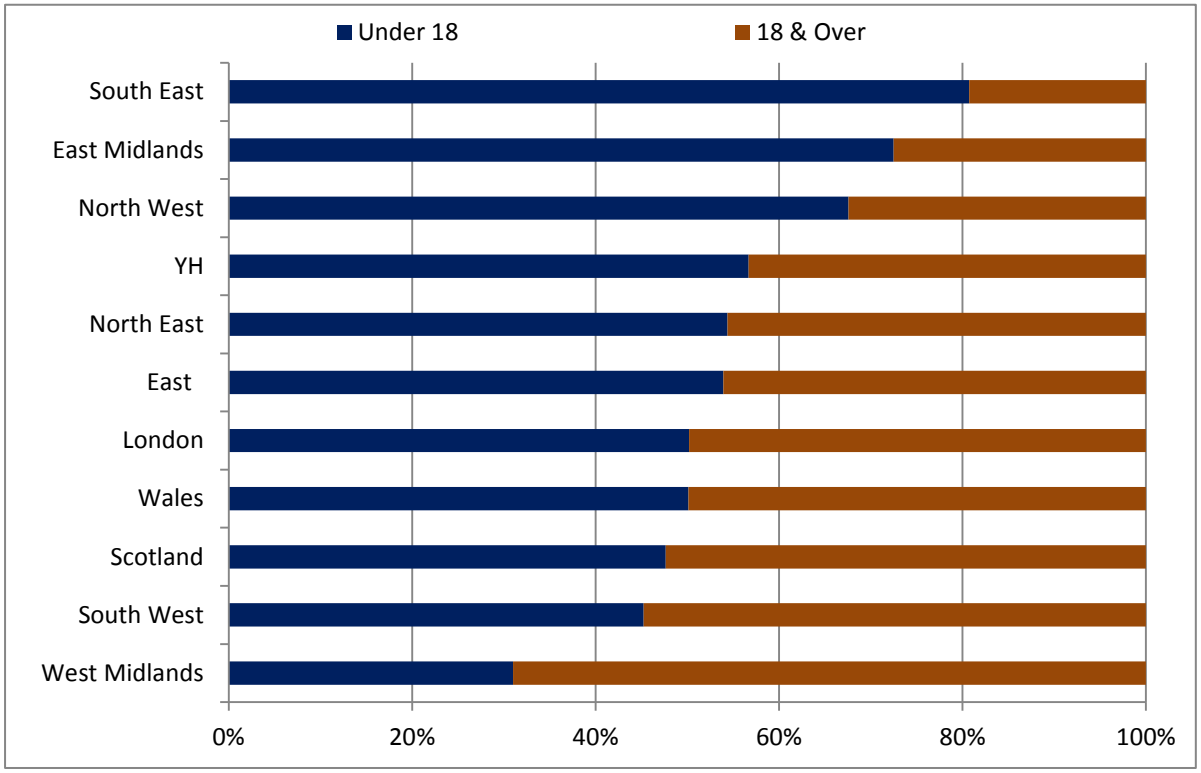
Chart 11 shows the proportion of trainees belonging to both groups has remained fairly consistent over the ten year period, with trainees under the age of 18 usually having the larger share of training. In 2015/16 the proportion of under 18's was 56%, compared to the proportion of over 18's at 44%.

Chart 11 – Age of trainees as a proportion of total 2006-2016 (Great Britain)



There are stark differences between age group and regions/nations within Great Britain. This year the South East has the largest proportion of trainees aged under 18 (81%), followed by East Midlands (72%) and the North West (68%). The areas which have the highest share of trainees over the age of 18 are the West Midlands (69%) and the South West (55%).

Chart 12 – Age of trainees by Geographical area 2015/2016 (Great Britain)



1.8.2 Gender

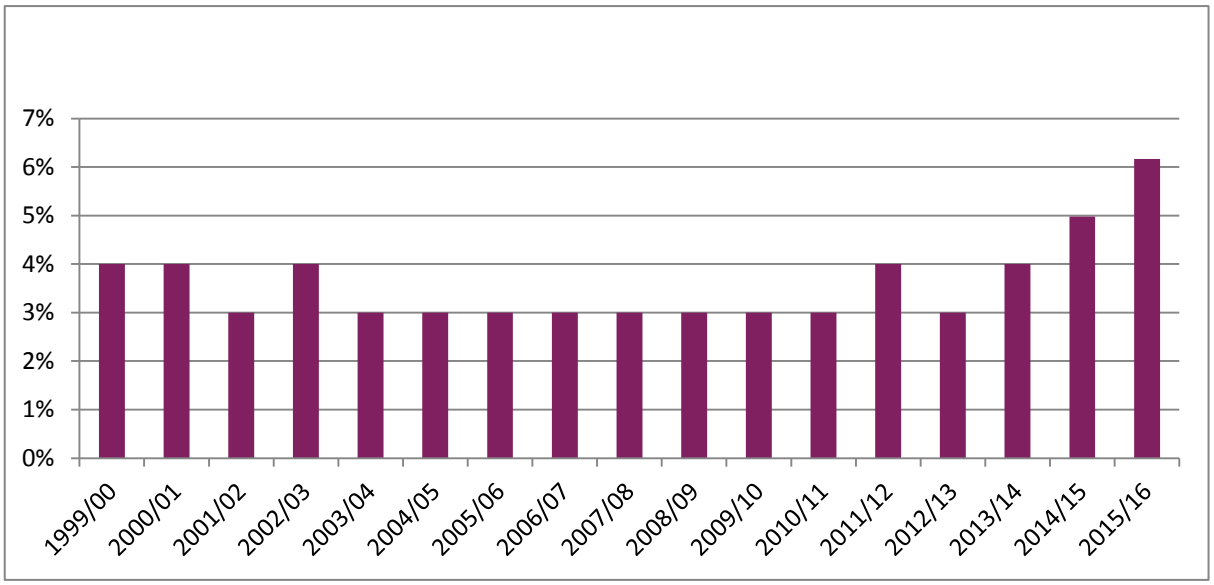
The survey asks for a breakdown of trainee numbers by gender and age which is show in Table 3.

Table 3 – Number of trainees broken down by gender and ages 2015/2016 (Great Britain)

Under 18		18 & Over		Total	
Male	**Female**	**Male**	**Female**	**Male**	**Female**
7,908	414	6,078	505	13,986	919
53%	3%	41%	3%	94%	6%

In 2015/16 the proportion of female trainee's has had a further increase on previous years (6% compared to an average of 4% in previous years), which is the highest proportion recorded in the survey. Chart 13 shows proportions of females enrolling on construction courses since 1990. Between 2003/2004 and 2010/2011 the proportions of females on construction courses remained static at 3%, then rose in 2011/2012 to 4%. Since 2013/2014 there has been an increase of female's year on year.

Chart 13- Proportion of females on construction courses 1990-2015 (Great Britain: all occupations)

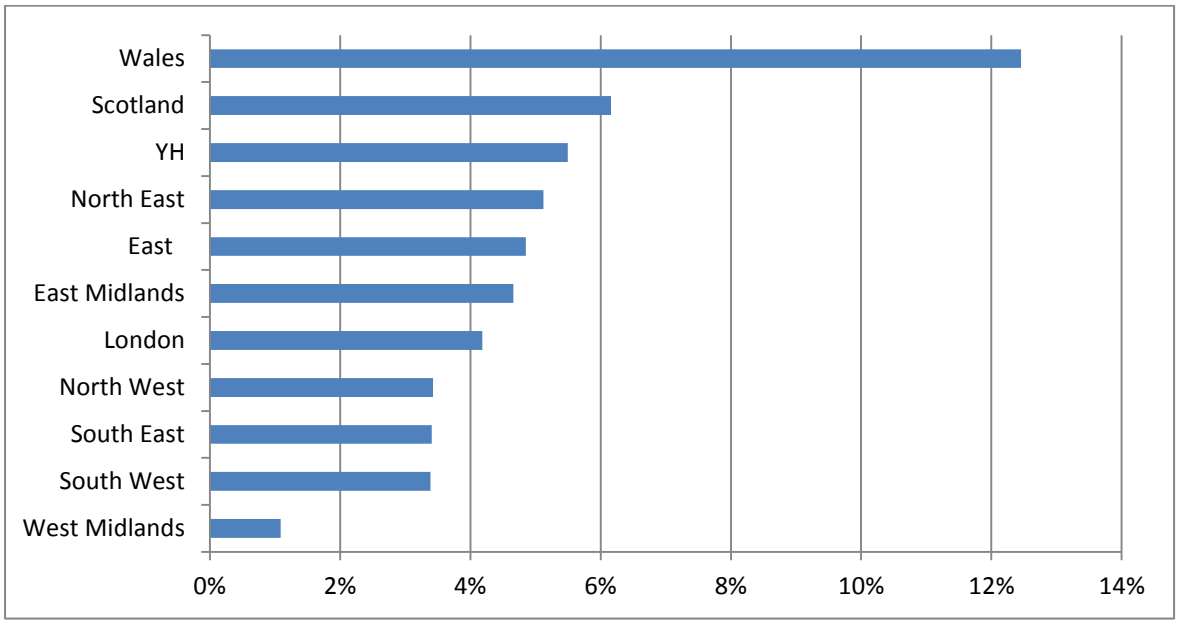


Analysis of the distribution of females and geographical area reveals some significant differences. The highest proportion of female trainees can be found in Wales (12%, followed by Scotland (5%) opposed to only 1% of female trainees in the West Midlands.

When looking at gender and occupation, the highest proportion of females can be found taking courses in "professional" occupations (i.e non-manual) such as; architects (14%), surveyors (12%), and civil engineers (11%). The proportion of females undertaking surveying has more than halved since last year (25% in 2014/2015). Moving onto manual trades, female trainees are more likely to be on painting and decorating courses (19%),

which replicates previous year's analysis. As a share of all female trainees, over half are either undertaking wood trades (30%) or painting and decorating (27%) courses.

Chart 14 – Females as a proportion of all training by geographical area 2015/2016 (Great Britain)



1.8.3 Ethnicity

In 2015/16 the number of trainees that come from a Black, Asian and minority ethnic (BAME) background stands at 891, which equates to 6% of all trainees. The ten year average for trainees with a BAME background stands at 5.8%.

Chart 15 – BAME trainees as a proportion of all trainees 2006-2015 (Great Britain)

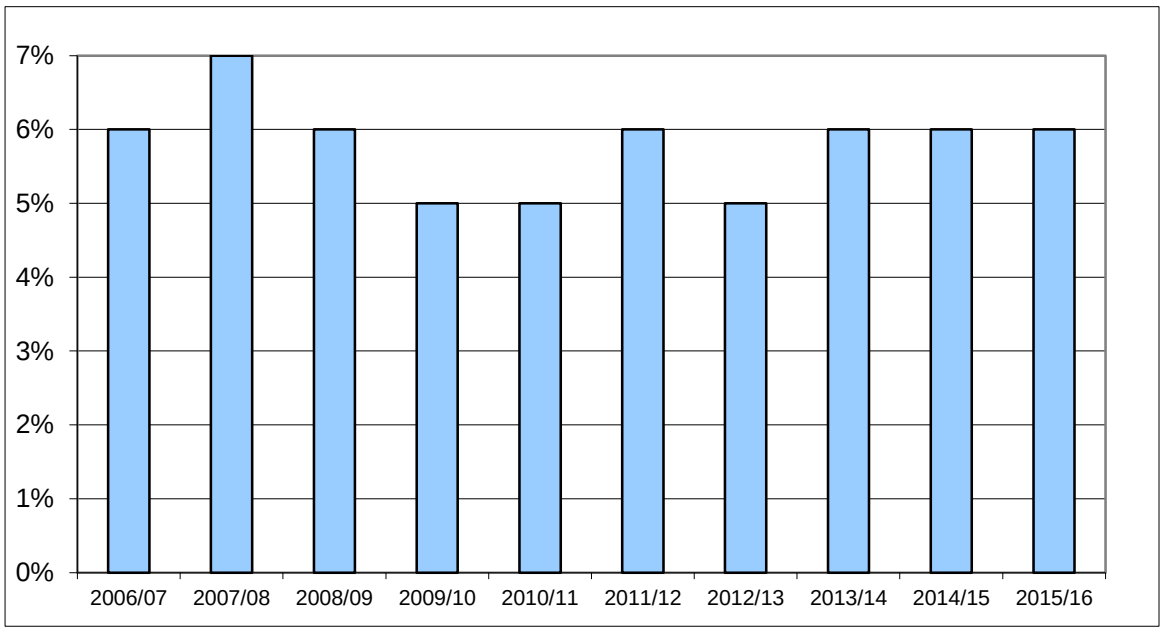
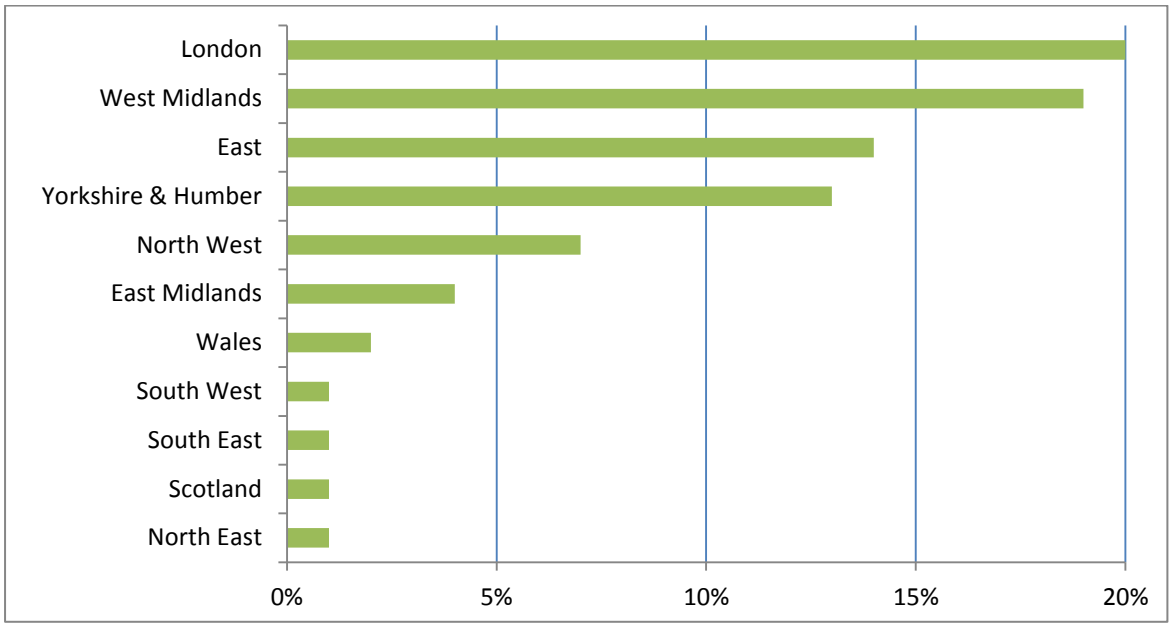


Chart 16 shows large differences between region and nation and proportions of trainees from BAME backgrounds. The highest proportion of BAME trainees are in London (20%) and the West Midlands (19%), opposed to 1% in the South West, South East, Scotland and the North East.

Yorkshire and Humber has the highest (36%) share of all BAME trainees compared to the North East with only 1%.

Chart 16- BAME trainees as a proportion of all trainees by geographical area 2015/2016 (Great Britain)



Section 2: Forecast Demand for Craft and Technical Construction Training 2016-2020

CITB, through the Construction Skills Network publishes a forecast of the likely demand for skilled workers over the next five years. The forecast, which is made in partnership with Experian, uses data derived from foreseeable economic and industrial factors on employment. A subset of the current published forecast is reproduced in the following two tables: Table 4 (by geographical area) and Table 5 (by construction trades).

Table 4 shows the requirement for skilled manual trades by area for Great Britain. The total annual recruitment requirement (ARR) for 2016-2020 is forecast to be at 19,670 per year, a decrease from the forecast in 2015-2019 which stood at 20,490 (-820). The lowest recruitment requirement can be found in Scotland (620), and he highest can be found in the North West with 4,610.

Table 4 – Requirement for skilled manual trades by geographical area 2016-2020 (Great Britain)

	Total employment		Average annual requirement
	2016	2020	2016-2020
East	86,000	85,400	1,420
East Midlands	62,330	59,230	640
London	132,020	138,410	2,590
North East	36,570	35,730	1,240
North West	100,980	107,620	4,610
Scotland	75,540	69,680	620
South East	127,160	122,030	910
South West	98,240	104,700	2,090
Wales	49,840	55,010	2,700
West Midlands	70,100	73,040	1,990
Yorkshire & Humber	70,760	65,560	860
Total	**909,540**	**916,410**	**19,670**

Source: Construction Skills Network, 2016

Notes: Table 4 is a subset of the table that appears in Blueprint for UK Construction Skills 2016-2020 report. It covers only the skilled manual trades and excludes managers, clerical staff, technical staff and professional occupations.
**The Annual Recruitment Requirement (ARR) is a gross requirement that takes into account workforce flows into and out of construction, due to such factors such as movements between industries, migration, sickness, and retirement; it does not include the flow from training. 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.
ARR <50 excluded from analysis

Table 5 illustrates the number of new entrants the industry needs to recruit each year from 2016-2020 in order to meet the projected demand for each occupation. By looking at the projected demand, and the amount of training taking place in the industry, it is possible to access the adequacy of current training provision in terms of quantity.

The 2016-2020 forecast shows the majority of occupations have seen an increase in their ARR. The largest decreases are in painting and decorating (-1,350) and specialist building operatives nec (-240). Increases can be found in occupations such as plastering (+170), floorers (+170), glaziers (+160) and plant operatives (+120).

Chart 5 –Requirement for skilled manual trades in the construction trades 2016-2020 (Great Britain)

	Employment forecast		Average Annual Requirement
	2016	2020	2016-2020
Main trades			
Wood trades and interior fit-out	264,220	267,820	4,150
Bricklayers	69,270	71,120	2,600
Building envelope specialists	105,340	107,320	2,460
Painters and decorators	110,690	109,290	2,050
Plasterers and dry Liners	47,180	46,080	1,440
Main trades total	**596,700**	**601,630**	**12,700**
Specialist building trades			
Roofers	44,840	45,230	1,270
Floorers	26,550	26,350	1,060
Glaziers	29,960	29,190	1,180
Specialist building operatives nec*	57,470	56,610	770
Specialist building trades total	**158,820**	**157,380**	**4,280**
Civil engineers			
Scaffolders	23,970	24,530	300
Plant operatives	42,290	44,430	410
Plant mechanics/fitters	39,170	38,610	1,010
Steel erectors/structural	26,140	26,670	750
Civil engineering operatives nec*	22,450	23,160	220
Civil engineers total	**154,020**	**157,400**	**2,690**
Total	**909,540**	**916,410**	**19,670**

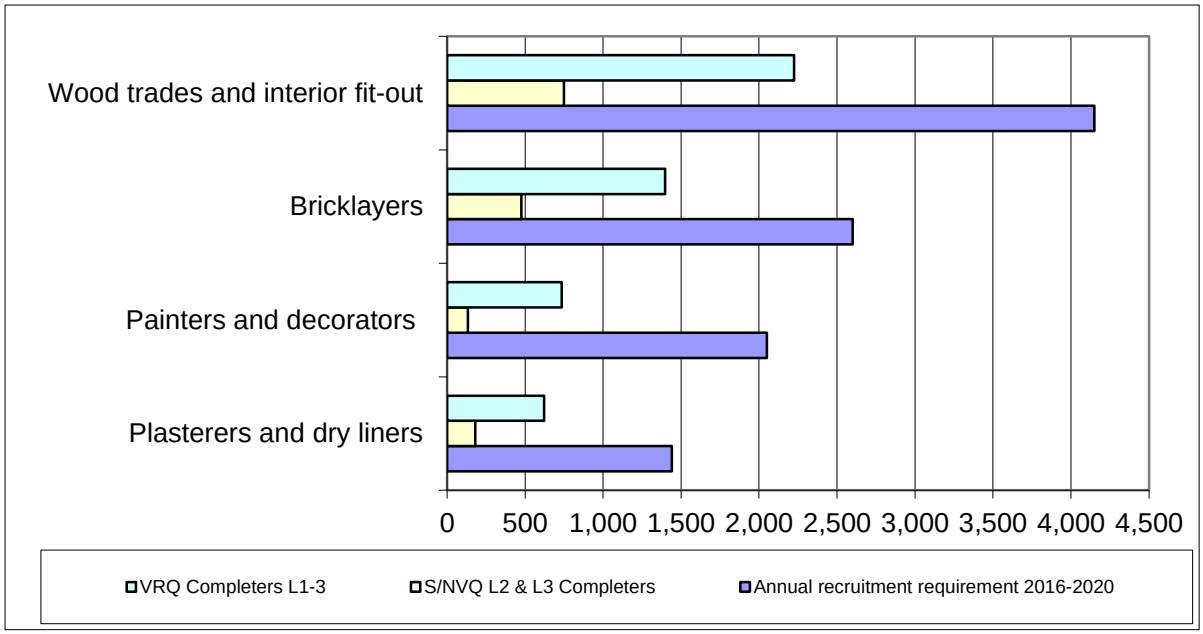
Charts 17 and 18 compare the ARR for skilled manual trades against the expected number of successful completers from the 2015/2016 intake.

The bottom bar of the chart shows the average number of skilled workers that will be required to join the industry each year by occupation between 2016 and 2020. The remaining two bars show the expected number of completers across S/NVQ and VRQ qualifications at Levels 1, 2 and 3. S/NVQ Level 2 and Level 3 completers are assumed to have been trained to a level where their skills are considered acceptable to work productively in the industry.

Chart 17 clearly shows that the number of trainees expected to complete Level 2 and Level 3 S/NVQ qualifications are insufficient to meet the predicted demand in all four occupational groups. Indeed the proportion of the demand met by those completing these qualifications in the four occupations is less than a fifth.

Additionally, it is clear from the chart that Vocational Related Qualifications (VRQ's) accounts for the majority of supply. It should be noted that whilst the industry does not consider individuals who have completed this type of training as sufficiently competent they do provide a route into training giving employers some flexibility for making up the short fall in the future. However, it would appear that the amount of training being undertaken across both levels is insufficient to meet the predicted demand over the next five years for each occupation.

Chart 17 – Average recruitment requirement for main construction trades (2016-2020) and expected successful leaner outcomes from the 2014/2015 trainee intake (Great Britain)

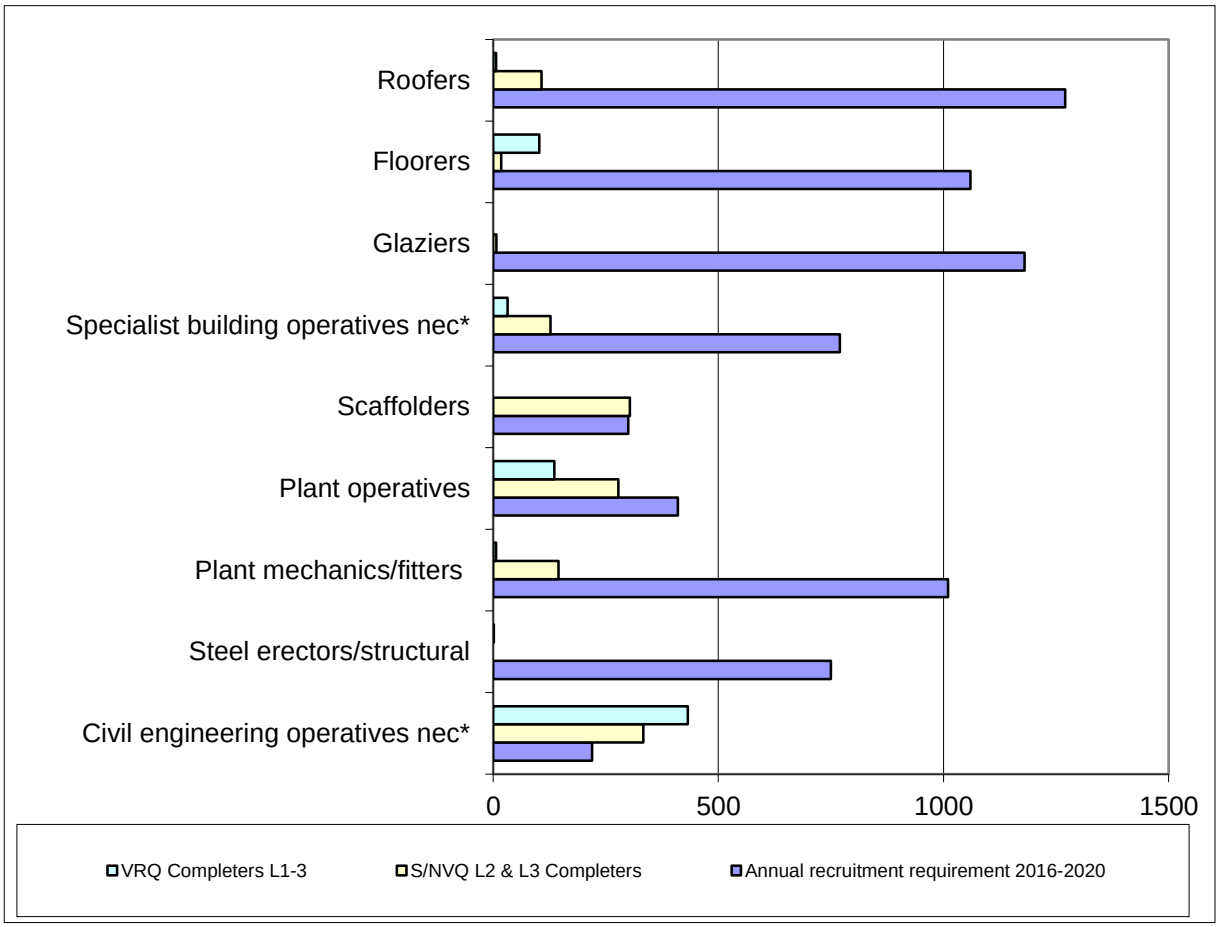


Source: Construction Skills Network 2016, CITB Trainee Numbers Survey 2015/2016; Data Service Note: S/NVQlevel 1 is not shown in the chart due to low numbers.

With the exception of Civil engineering operatives and Scaffolders, all current training levels are not sufficient to meet the predicated demand.

Replicating last year's results both glaziers and steel erectors are of concern due to the survey recording very small numbers of trainees undertaking these occupations in the last few years. Further analysis would need to be undertaken to determine if this is representative and what possible reasons for such low levels of trainees are.

Chart 18 – Average recruitment requirement for specialist construction trades and civil engineers (2016-2020) and expected successful learner outcomes from 2016/2020 trainee intake (Great Britain)



Source: Construction Skills Network 2016, CITB Trainee Numbers Survey 2015/2016; Data Service Note: S/NVQ level 1 is not shown in the chart due to low numbers.

Section 3: Higher Education in the Built Environment

3.1 Student Enrolments on built environment courses

This section contains data from HESA[4] on student enrolments on construction and the built environment courses in higher education. HESA data is published at least one academic year later it is collected, for instance the latest data reproduced here refers to the academic year 2014/2015. Therefore it is not possible to provide a complete picture of training for the current academic year as the FE data collected in the Trainee Numbers Survey figures refer to 2015/2016; hence direct comparison is not advisable. Additionally HESA data covers the UK whereas the Trainee Numbers Survey is a measure of Further Education training across Great Britain.

Table 6 shows the starters on construction and the built environment courses at higher education institutions split by qualification level and subject area. There has been an increase in the numbers of students enrolling on built environment courses in 2014/2015 to just under 20,000 compared to 2013/2014 where the number of enrolments stood at under 18,500. However, the most recent figure is significantly lower than the 28,000 students recorded in 2009/2010.

The majority of enrolments are in first degree courses (55%), followed by 31% on postgraduate degree courses,12% taking other undergraduate courses, and 2% enrolling on foundation degrees. These proportions have remained relatively similar over the last 5 years.

Table 6 – Student enrolments on built environment course by subject and qualification aim 2014/2015 (United Kingdom)

2014/2015	Qualification Aim				
	Other Undergraduate	**Foundation Degree**	**First Degree**	**Postgraduate Degree**	**Total**
Civil engineering	696	148	3204	1232	5,280
Architecture	502	12	3684	2266	6,464
Building	1000	251	3018	1155	5,424
Landscape design	84	10	157	143	394
Planning (urban, rural & regional)	48	20	650	1126	1,844
Others in architecture, building & planning	34	0	194	172	400
Totals	**2,364**	**441**	**10,907**	**6,094**	**19,806**

The most popular courses overall were Architecture (31%) ,Building (28%) and Civil engineering (27%).

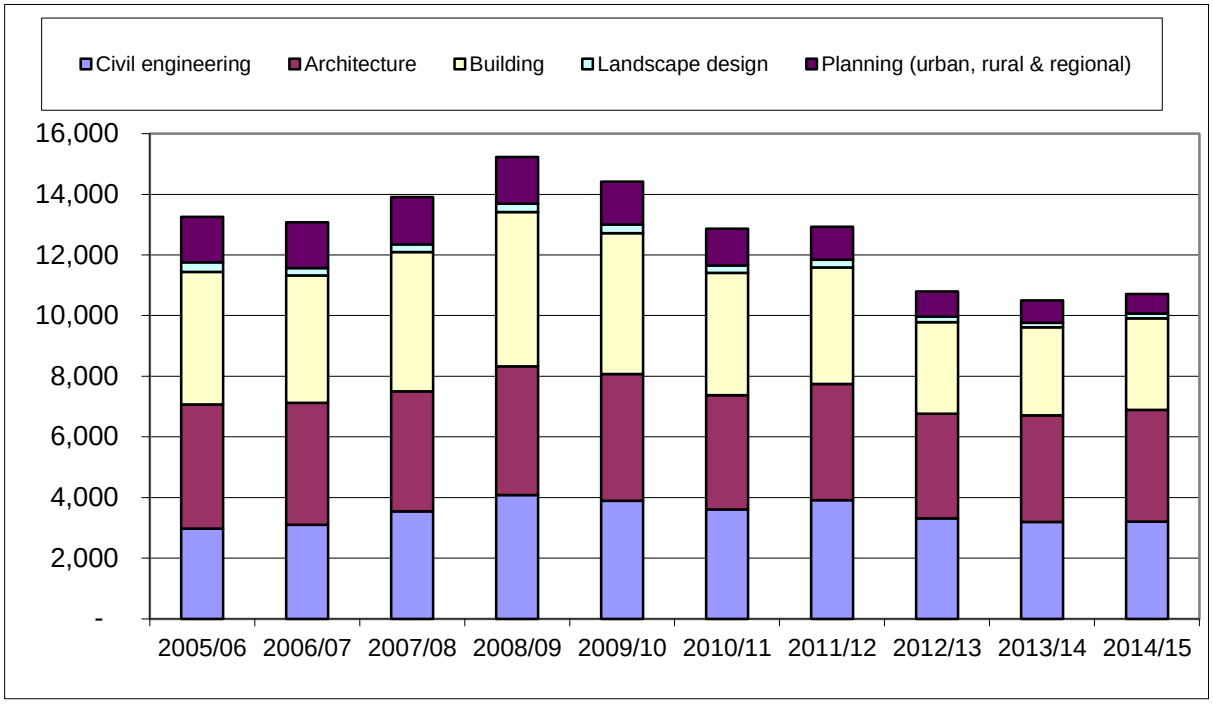
3.2 First Degree

As First Degrees represent the largest share of higher education starters (in the HESA data) they are examined in more detail here.

[4]The Higher Education Statistics Agency (HESA) is the official agency for the collection, analysis and dissemination of quantitative information about higher education.

Chart 19 shows the ten year trend for students starting construction and the built environment first degrees. Over the last decade enrolments peaked in 2008/2009 with just over 15,000 students. Since this peak, enrolments declined year on year to 10,500 in 2013/14. There has been a slight increase in 2014/2015 to 10,700 students in line with the findings for all enrolments.

Chart 19 - Student enrolments on first degrees in built environment by subject 2005 – 2014 (United Kingdom)



Note: minus 400 students undertaking others in architecture, building and planning (first degree only)

It has been reported that following the vote to leave the European Union (EU), there has been an 11% rise in individuals applying to undertake university courses from European countries this year. This increase, it is reported, is due to anxieties around student loans being cut for EU students after Brexit[5]. In upcoming years it will be interesting to see if this rise is found in built environment first degree courses.

Charts 20 and 21 show the proportions of males and females recorded for each of the degree subjects. This year the gender spilt has differed from previous years. The proportions of females undertaking first year degrees has increased this year to 26% (the highest proportion recorded), from a ten year average of 24%.This year the Trainee Numbers Survey has witnessed an overall rise in females undertaking construction courses, which is replicated in the HESA data at first degree level.

When looking at degree subjects, architecture has been the most popular subject with females over the last eleven years, with over half taking this subject (60%). For males, courses in civil engineering (36%), building (27%) and architecture (31%) have the highest proportions of individuals enrolling. The data suggests that women are greater drawn to one

[5]http://www.telegraph.co.uk/education/2016/08/18/rise-in-eu-students-applying-to-british-universities-ahead-of-br/

built environment subject, whereas for males the spilt is more evenly spread across the three main subjects.

Chart 20 – Females enrolling on built environment courses by subject 2014/2015 (United Kingdom)

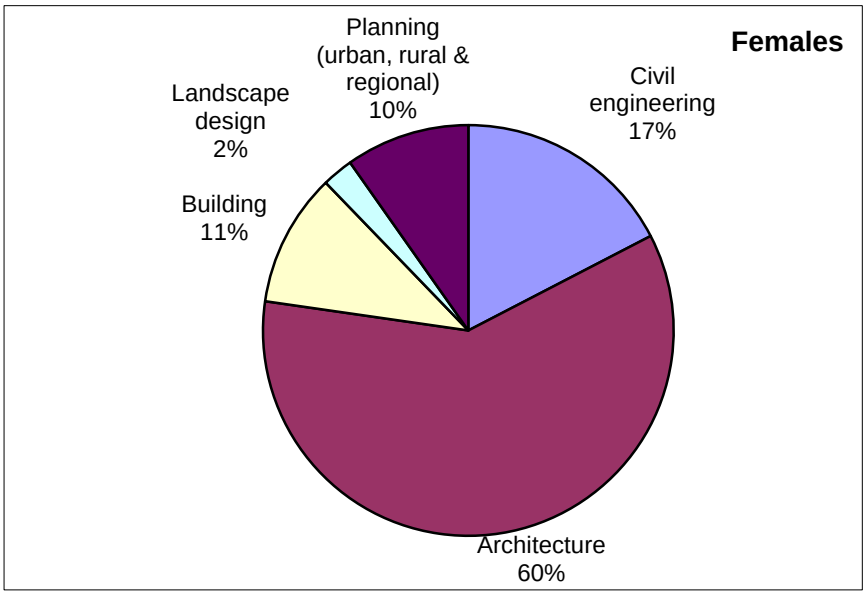
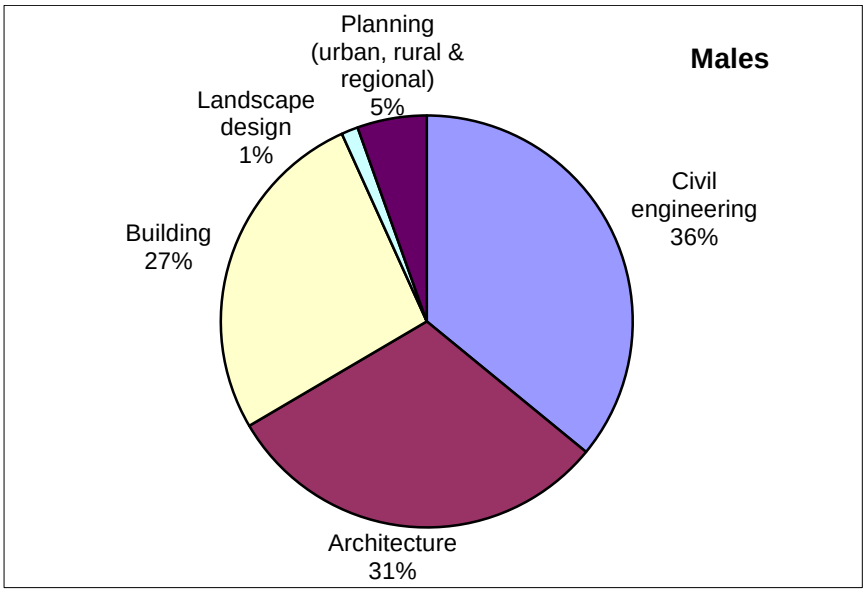


Chart 21 - Males enrolling on built environment courses by subject 2014/2015 (United Kingdom)



HESA also collects data on ethnic origin. Over the last eleven years there has been a steady increase in numbers of ethnic minorities undertaking built environment first degrees, from 15% in 2004/2005 to 28% in 2014/2015. This year the ethnic minority groups Black or Black British – African and Other (including mixed) account for nearly half of all ethnic minorities.

The representation of both females and students from ethnic minorities is higher at degree level that it is at craft and technical training (see Section 1). The trainee numbers survey reports that 6% of craft and technical trainees are female and the same percentage (6%) are from an ethnic minority background, compared to 26% and 28% and respectively at degree level.

Section 4: Conclusion

Training and education in the construction and built environment has witnessed differing outcomes for the Further Education (FE) and Higher Education (HE) sectors using the latest datasets available. Within FE the drop in starts has lessened, while in HE there has been an increase in starts. Based on past economic cycles and the inclination for training to lag growth, it could indicate a more promising outlook for training in the next few years; particularly within the FE sector.

In FE, diploma qualifications are still the preferred route as opposed to N/SVQ's. As discussed earlier, diplomas do not require proof of on-site experience, whereas S/NVQ's do. This could be particularly detrimental for employers when recruiting, as a recent CITB research found 68% of construction employers see relevant work experience as 'significant' or 'critical' when seeking potential recruits[6]. The take up of apprenticeships has remained fairly consistent in line with last year's results, which also replicates the overall findings at FE.

Higher Education (HE) has seen a slight increase in numbers of applications, which has almost entirely been due to a 187% rise in "other undergraduate" courses. Suggested growth in post-graduate studies is due to increased funding from universities[7].

Interestingly there has been a rise in females undertaking both FE and HE courses. This could indicate changes are starting to appear within the culture of the industry.

The vote to leave the European union (EU) may potentially have an impact on the numbers entering construction training and education. This is more likely to affect those who are wanting to peruse studies in HE due to funding being cut for EU students. This could work in the favour of UK students, as there will be less competition for university places. Furthermore, without free-movement there are anxieties around a lack of direct access to a skilled workforce.

While the Trainee Numbers Survey does not provide a complete census of construction training within the further education sector, it is a valuable indicator of the wider situation.

[6] Internal CITB Research
[7] http://blog.hefce.ac.uk/2016/07/21/on-the-up-more-people-are-returning-to-postgraduate-research/

Appendix

Figure 1 – First-year trainees by geographical area 2015/2016 (Great Britain)

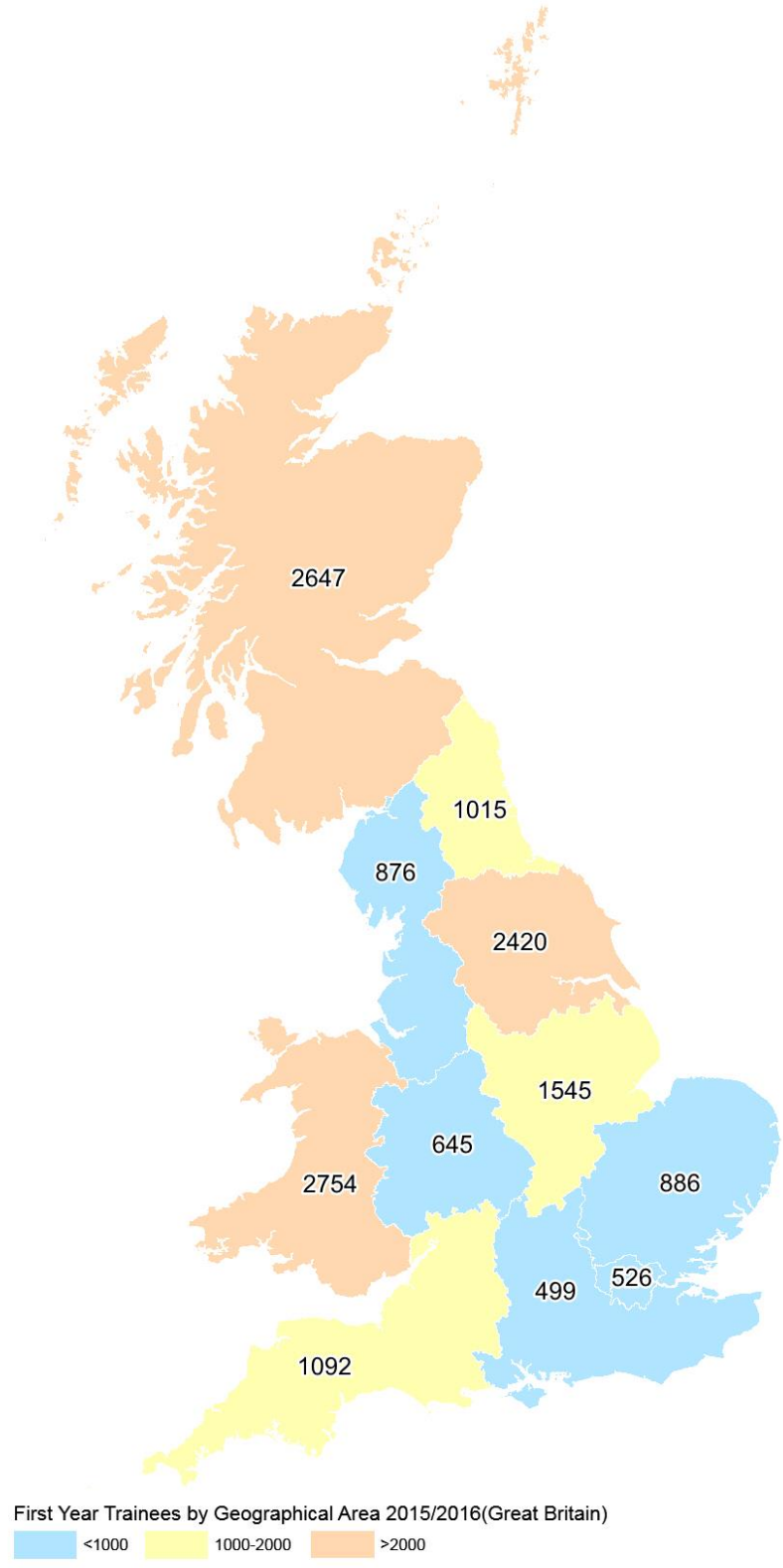
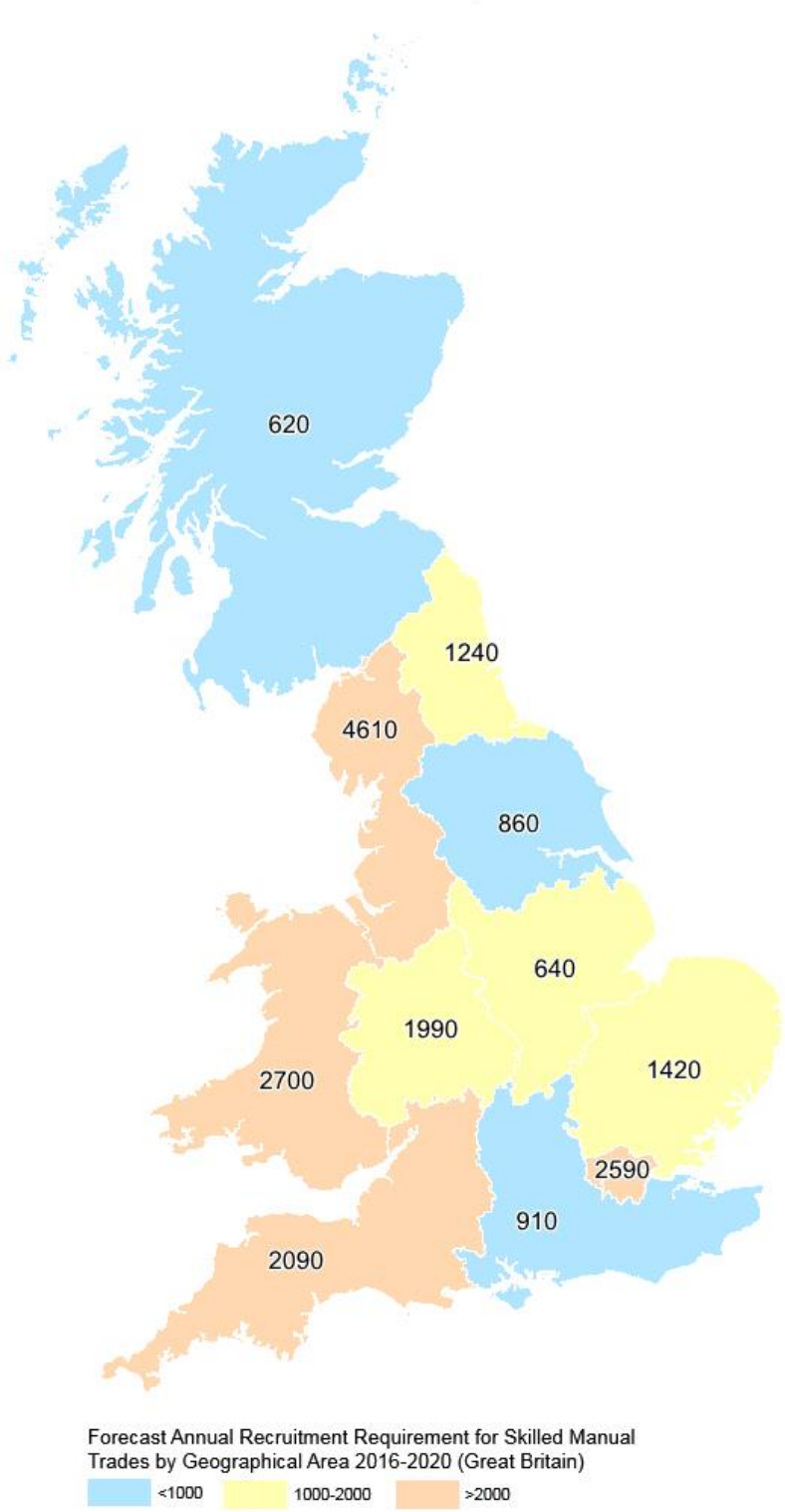


Figure 2 – Forecasted annual average requirement for skilled manual trade workers by geographical area 2016-2020 (Great Britain)



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