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Training and the Built Environment 2015

April 2015



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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 2014/15 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 2015–2019 analyses this training data alongside the Construction Skills Network (CSN) projected demand for skilled construction workers over the forecast period 2015–2019, in order to assess the adequacy of current training provision in terms of quantity.

Section 3: Construction Training Capacity 2014/15 summarises the findings of the capacity questions from the Trainee Numbers Survey, which aims to determine the total capacity for skilled manual trades training that is currently available.

Section 4: 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 2013/14.

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 2014/2015

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

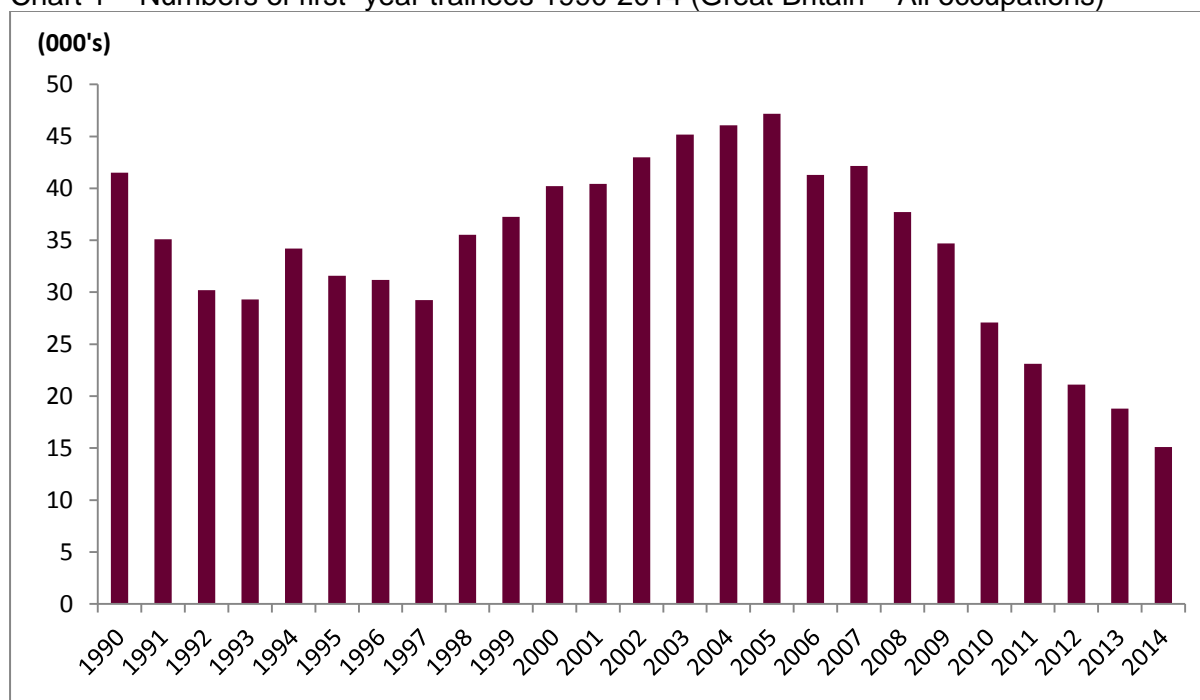
Chart 1 shows the number of first year trainees starting construction and built environment courses from 1990 – 2014. The number of first year trainees in 2014/2015 stood at just over 15,000, the lowest number recorded by the survey and continuing the downward trend witnesses each year since 2007.

The construction industry has been one of the main engines of economic growth during 2014, with an estimated expansion in the sector of around 5% in real terms, the best performance since 2010. Growth is projected to moderate to just below 3% a year on average during the 2015 to 2019 period, with all sectors expected to see some rise in activity.

The Construction Skills Network¹ (CSN) forecast predicts construction employment levels in 2019 are expected to reach 274,000 with all 28 occupational groups covered by the CSN expected to experience employment growth over the forecast period.

However despite this promising outlook and more optimism in the industry during the past couple of years there is no evidence that training has begun to recover.

Chart 1 – Numbers of first- year trainees 1990-2014 (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 See section 2 for explanation of CSN



1.2 Training by Occupation

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

In 2014/2015 there has been an increase in numbers in seven of the occupational groups, compared to eight which have seen a decline. This year, similar to last year, the biggest decreases can be seen in wood trades (-1,357), bricklayers (-949), and painting and decorating (-751). Increases can be seen in construction project managers (+241), scaffolders (+169) and roofers (+115), which differs from last year's results where the occupational groups with increases were building operatives and painting and decorating.

Table 1 - Trainee numbers 2014/2015 (Great Britain)

	Under 18		Over 18		Total
	Male	Female	Male	Female	
Senior executive & business process managers	0	0	<50	0	<50
Construction Trades Supervisors	<50	<50	105	<50	137
Construction Project Managers	117	<50	286	<50	422
Wood trades and interior fit-out	2,918	107	1,435	76	4,536
Bricklayers	1,527	<50	794	<50	2,364
Building envelope specialists	0	0	<50	0	<50
Painters and decorators	744	121	399	67	1,331
Plasterers and dry liners	535	<50	273	<50	833
Roofers	147	<50	180	<50	340
Floorers	82	<50	50	<50	138
Glaziers	<50	0	<50	0	<50
Specialist building operatives nec*	378	<50	438	<50	838
Scaffolders	73	0	305	<50	379
Plant operatives	<50	<50	460	<50	485
Plant mechanics/fitters	127	0	144	<50	272
Steel erectors/structural	0	0	<50	0	<50
Labourers nec*	<50	<50	0	0	<50
Plumbing and HVAC Trades	<50	<50	<50	0	63
Civil engineering operatives nec*	364	<50	317	<50	706
Civil engineers	141	<50	160	<50	346
Other construction professionals and technical staff	229	<50	409	<50	713
Architects	<50	<50	51	<50	111
Surveyors	0	<50	<50	<50	<50
Total	7541	363	5884	333	14121

*nec = not elsewhere classified

Notes: 1,046 trainees excluded as not able to map over to appropriate occupation. Only occupations with trainees starting a qualification are included.

Replicating 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 seven years.

Table 2 – Comparison of trainee numbers in the top ten occupational groups (by volume) 2012/2013 to 2014/2015 (Great Britain)

Occupations	2014/15	2013/14	2012/13
Wood trades and interior fit-out	4,536	5,893	6,725
Bricklayers	2,364	3,313	3,982
Painters and decorators	1,331	2,082	1,959
Specialist building operatives nec*	838	849	569
Plasterers and dry liners	833	1,389	1,964
Other construction professionals and technical staff	713	1,193	1,101
Civil engineering operatives nec*	706	1,454	1,583
Plant operatives	485	834	1,167
Construction Project Managers	422	181	181
Scaffolders	379	210	503

Although training in absolute numbers has declined (as highlighted in Table 2), Chart 2 shows the majority of occupational groups have retained their share of training over the last three years. The biggest changes have occurred in Plastering (a decline from 9% to 5%) and Construction Project Managers (an increase from 1% to 3%).

Chart 2- Proportion of all trainees by top ten occupation groups 2012/2013 to 2014/2015 (Great Britain)

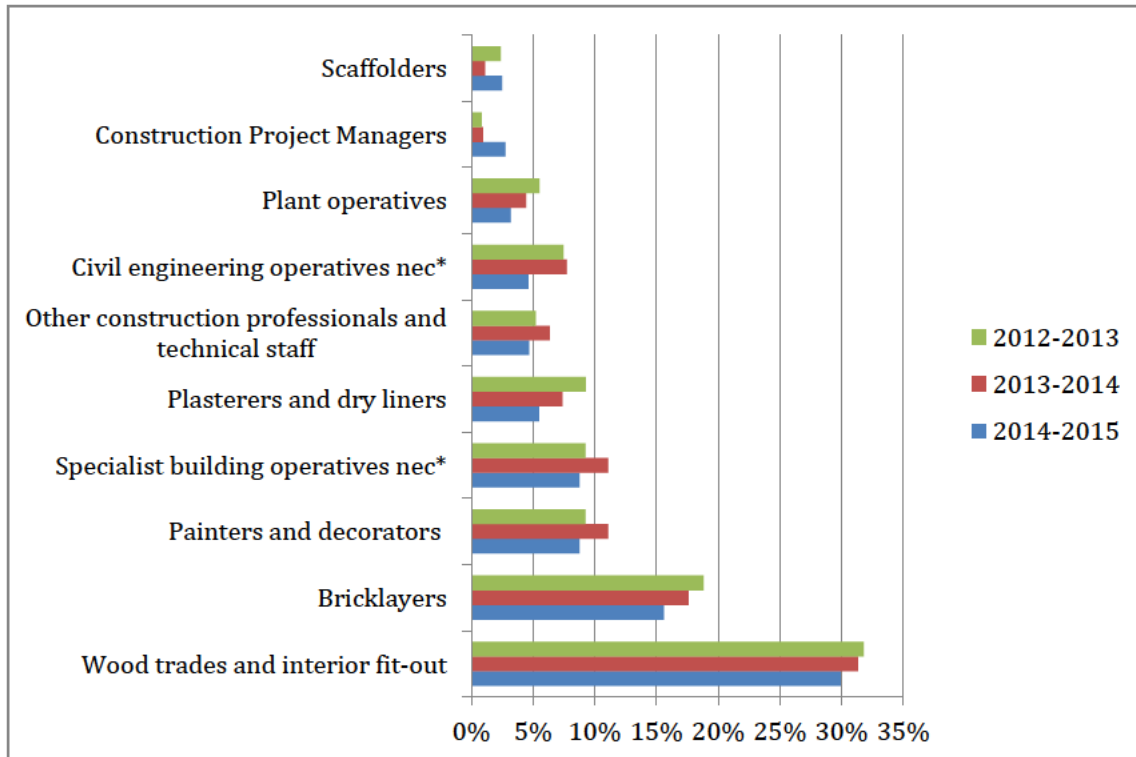
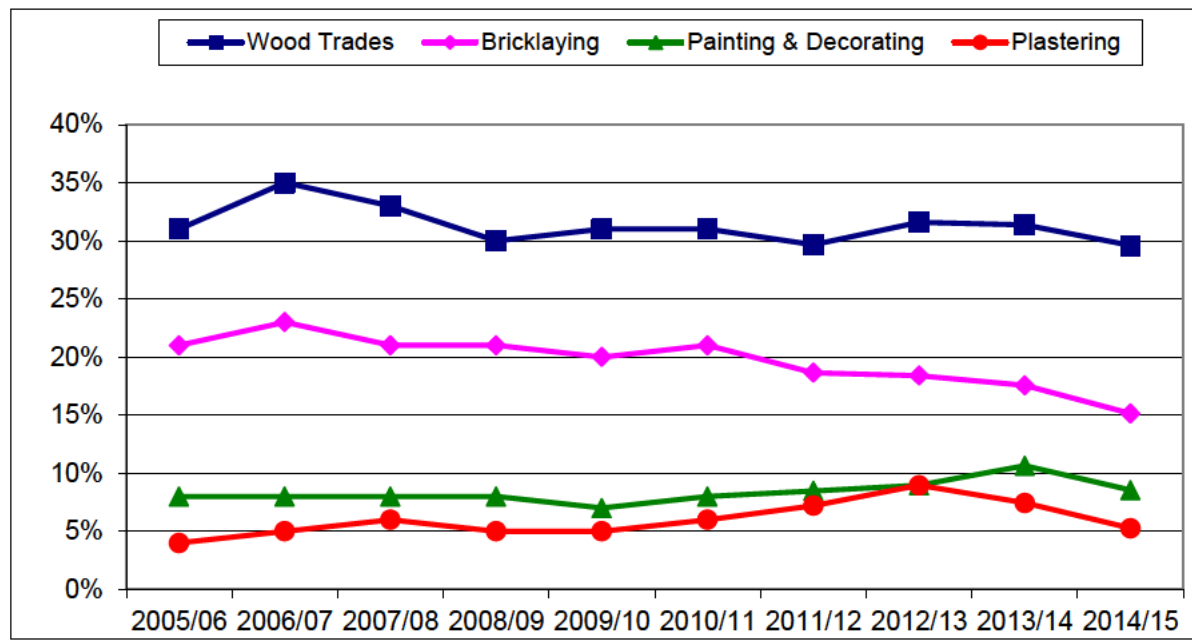




Chart 3 looks at the four main building craft occupations; wood trades, bricklaying, painting and decorating and plastering. The chart shows the proportion of all four occupational groups has remained broadly the same over a ten year period. In 2014/2015 there has been a slight decrease in training across all four occupational groups.

Each group has experienced some volatility, apart from Bricklaying, over the ten year period. The share of training for each group in 2014/2015 is similar to the share in 2005/2006, with the greatest change in Bricklaying decreasing from 21% to 15%. Painting and decorating is the occupational group with the most consistent proportions, up until 2012 and has been more volatile since.

Chart 3 – Proportion of all first-year trainees in the main Building Craft Occupations 2005-2014(Great Britain)



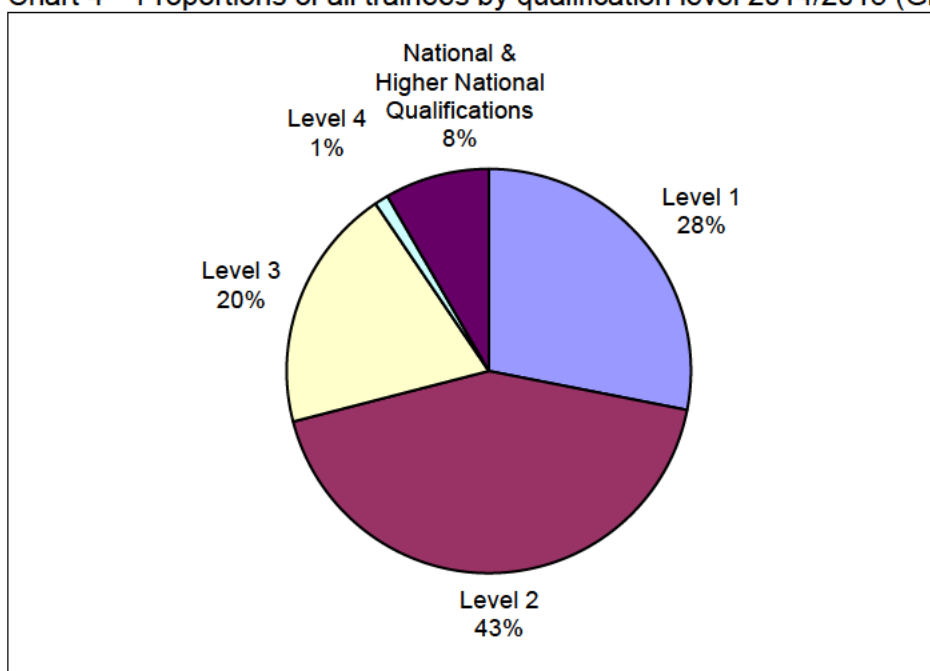
1.3 Training by qualification

This section analyses trainee numbers by qualification level. The levels of qualification are broken down into 5 categories:

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

Chart 4 shows that the highest proportion of trainees are undertaking a Level 2 qualification (43%), followed by around a quarter (28%) undertaking a level 1 qualification. The smallest proportion of trainees are undertaking Level 4 courses (1%).

Chart 4 – Proportions of all trainees by qualification level 2014/2015 (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 4 for more information.

Over the past five years the breakdown by qualification level has remained pretty static, with levels 1, 2 and 3 having the largest proportion of trainees undertaking those courses.



1.4 Geographical considerations

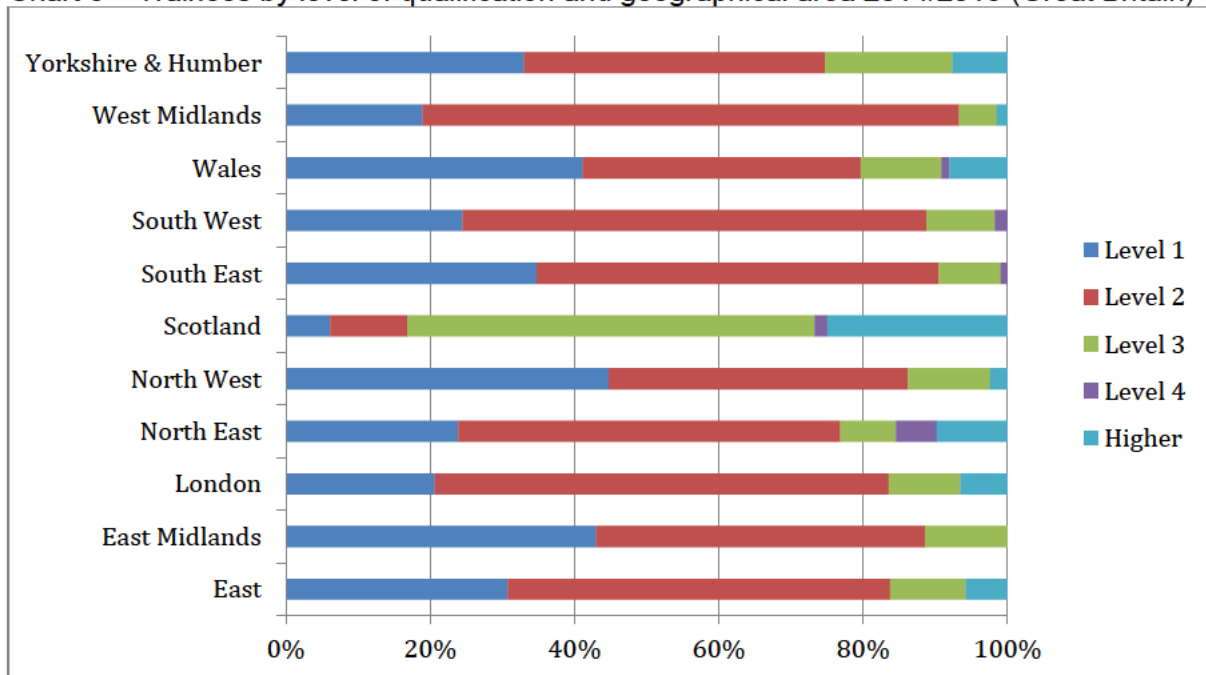
The responses from the survey are collected from training establishments across Great Britain. The data is then spilt into regions and devolved nation, and analysed by qualification level.

The highest proportion of overall trainees can be found in Scotland (19%) followed by the North West (14%) and the East (12%). Lower proportions of trainees are found in London (4%) and the South East (4%). Differing from recent years, the proportion of trainees in Yorkshire and Humber has decreased from 18% at its highest, to 7% in 2014/2015.

Between the regions and nations there are clear differences in the proportion of trainees at each qualification level. In England and Wales greater proportions of trainees are undertaking level 1 and level 2 qualifications (average 78%). Scotland has the highest share of trainees on level 3 courses at 56%.

Over the years qualification level and geographical profile has varied little.

Chart 5 – Trainees by level of qualification and geographical area 2014/2015 (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

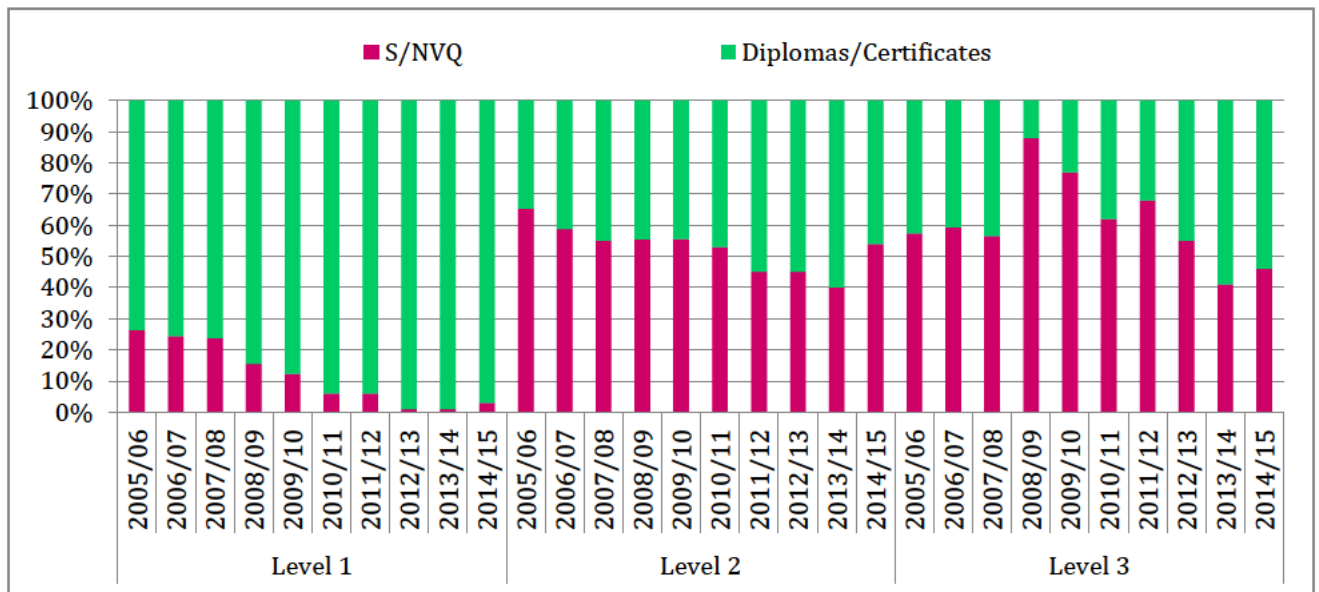
For construction craft occupations there are two types of qualification that can be undertaken; S/NVQ's and Diplomas², both are available at Levels 1, 2 and 3. The S/NVQ qualification requires on-site experience/assessment, whereas Diplomas are qualifications for craft occupations and can be completed part-time or full-time but do not require any proof of work undertaken on site.

In 2014/2015 there are 10,766 trainees in England and Wales undertaking construction craft training; with 35% undertaking an S/NVQ compared to 65% who are studying for a Diploma. Over the last decade the proportion of students enrolling on S/NVQ's has steeply declined, falling from 70% in 2003/2004.

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

As a share of training on each level, there are more trainees undertaking level 1 diploma's (97%) than level 2 (46%) and level 3 (54%). Trainees undertaking a level 1 diploma has increased over the decade from 74% in 2005/6. The data suggests that training on level 2 diploma's peaked last year (2013/14) at 60% and has now decreased to a figure more consistent with previous year, whereas training at level 3 has been more volatile.

Chart 6- Proportion of trainees split by work-based training 2005/2006 to 2014/2015 (construction craft training, England and Wales)



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

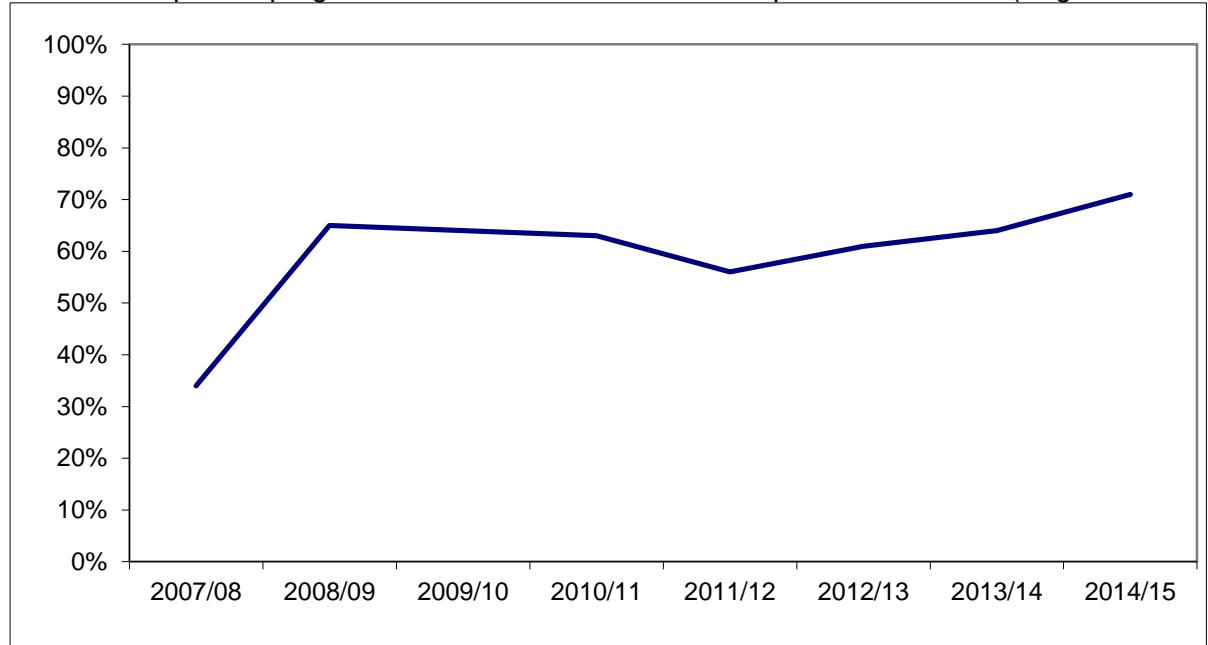
1.6 Trainee Progression

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 shows the percentage of trainees expected to progress onto a Level 2 qualification in 2014/15. This academic year, 71% of trainees are predicted to advance; the highest share recorded in the analysis.

Chart 7 – Expected progression of trainees from Level 1 Diploma 2007-2014 (England & Wales)

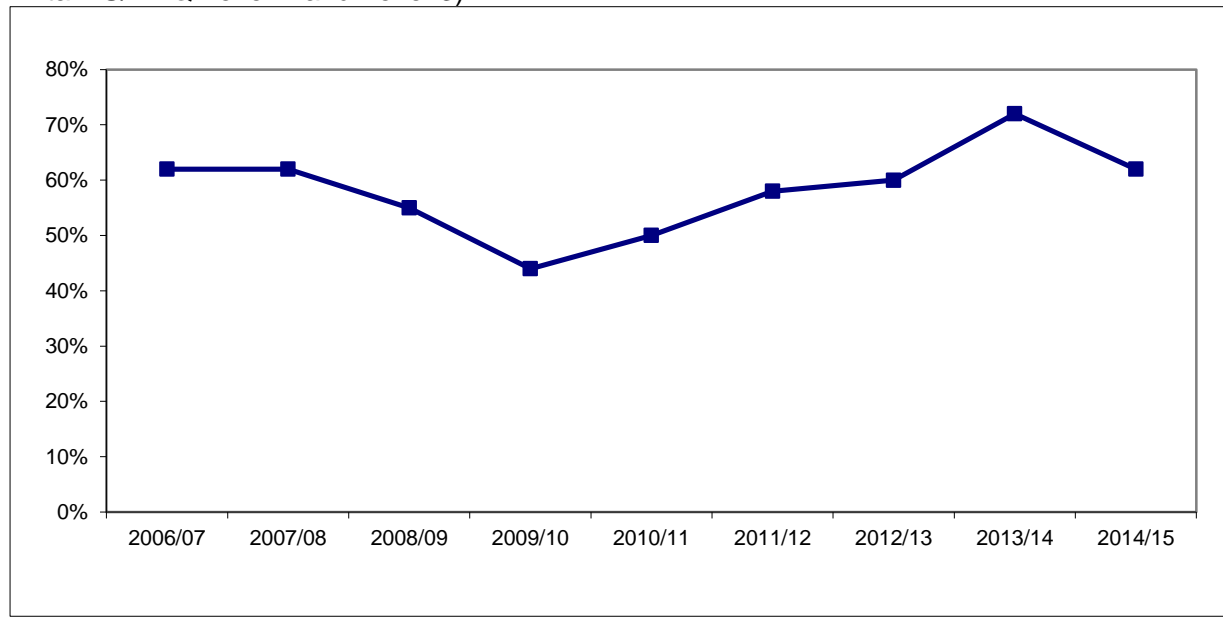


Note: Diplomas are not available in Scotland

1.7 Apprentices

The proportion of trainees that are following an apprentice programme has decreased slightly this year to 62%, from a peak of 72% in 2013/2014, although, the level of decline has been less steep for apprenticeships than for overall trainees.

Chart 8 – Proportion of trainees following an apprenticeship programme 2006-2014 (Great Britain S/NVQ Level 2 and Level 3)



In 2014/2015 there were 2,039 (69%) Level 2 apprentices and 918 (31%) level 3 apprentices, the shape of this has changed little since 2007.

Looking at geographical area and apprentice starts, there is a high level of diversity between the English regions and devolved nations. Chart 9 shows that Scotland has the highest number of absolute apprentices at 829 compared to Yorkshire and Humber which has the lowest at just 86 starts. Yorkshire and Humber also have the lowest proportion of trainees undertaking an apprenticeship (26%) compared to London which has the highest (98%).

In terms of overall share of apprentices, the regions/nations which have the majority are Scotland (28%) and the East (18%). This is the fourth year running that Scotland has held the highest share of overall apprentices.

Chart 9 - Number and proportion of trainees following an apprenticeship programme by area 2014/2015 (Great Britain: S/NVQ Level 2 and Level 3)

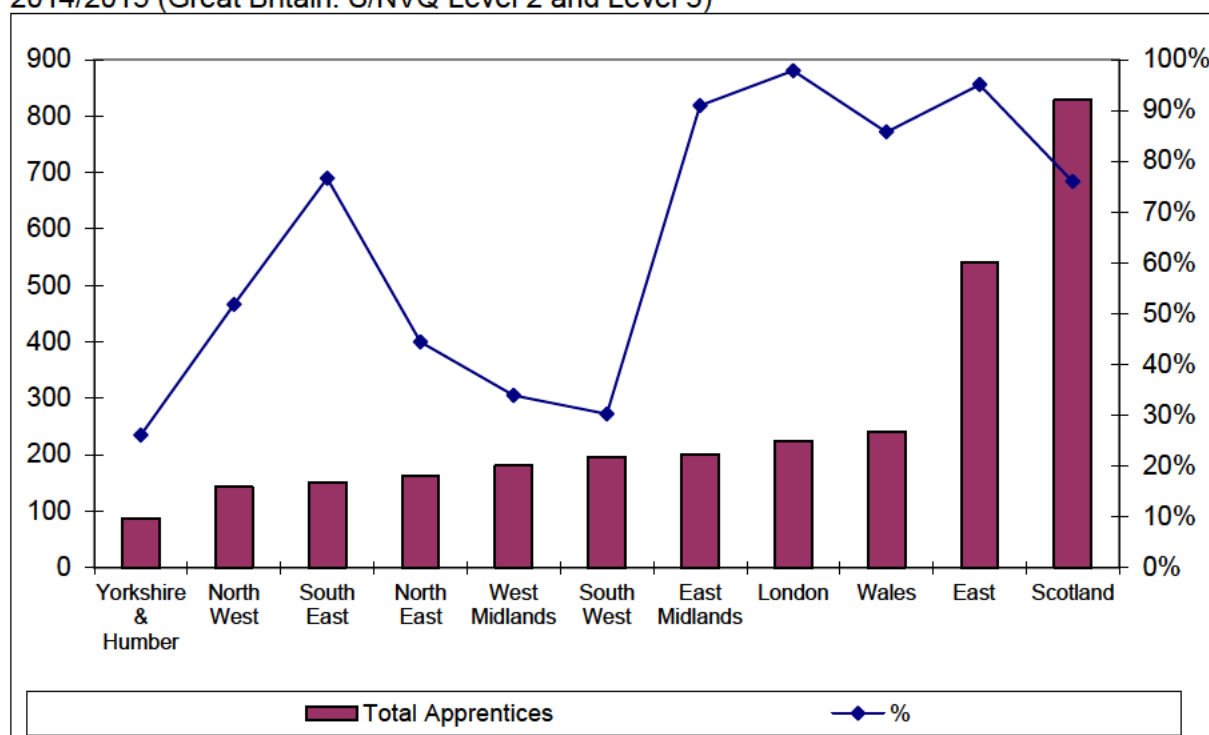
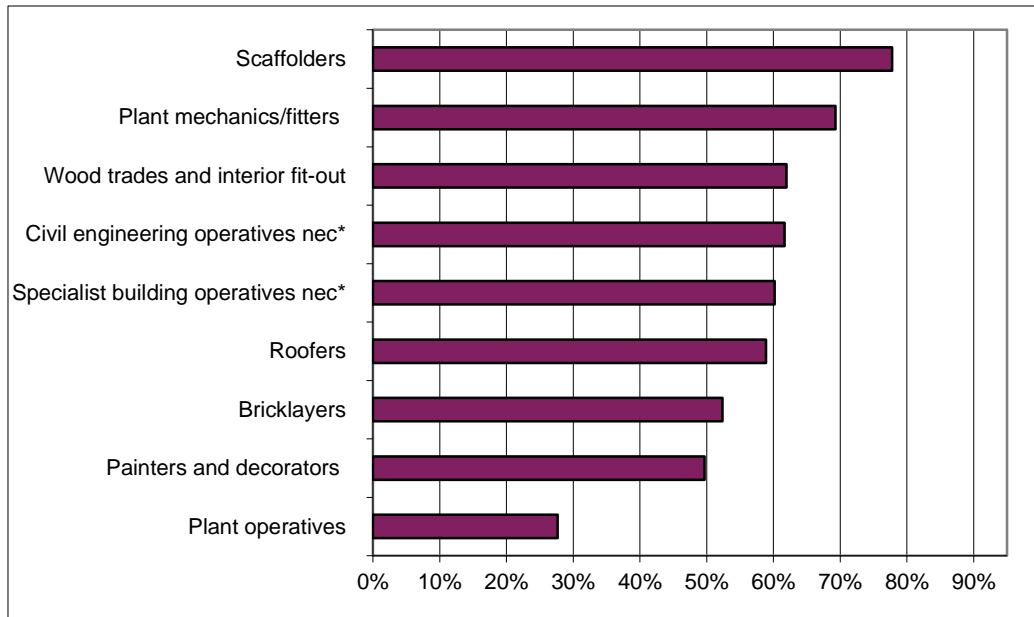


Chart 10 shows analysis of apprenticeship data by occupation. The highest share of apprentices can be found in Scaffolding (78%) and Plant mechanics (69%). This differs from previous years where the highest portions of apprentices could be found in Wood trades or Bricklaying.



Chart 10 - Proportion of trainees following an apprenticeship programme by occupation 2014/2015 (Great Britain: S/NVQ Level 2 and Level 3)



1.8 First-year trainee characteristics

The survey is interested in the characteristics of trainees therefore information is collected on age, gender and ethnicity.

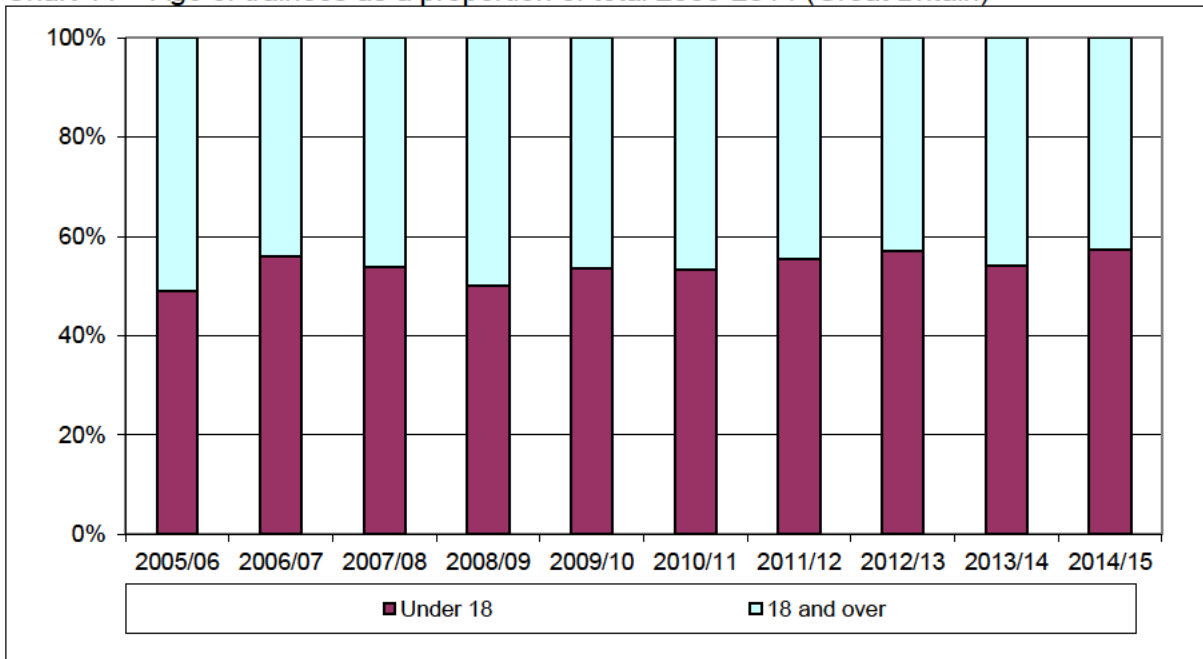
1.8.1 Age

The survey records the age of respondents and this is broken down into two broad categories:

- Under 18 years
- 18 years and over

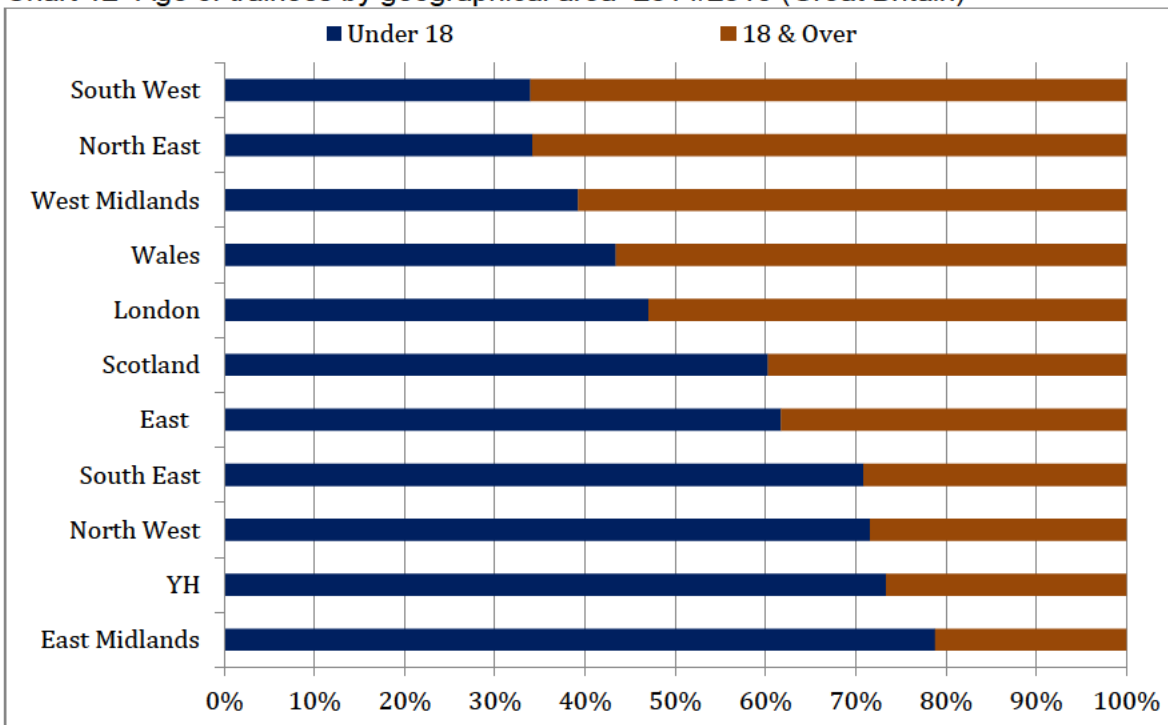
Chart 11 shows that over the last ten years the proportion of trainees that belong to both groups has remained fairly consistent, with trainees aged over 18 traditionally having a slightly smaller share of training. In 2014/2015 the proportion of under 18's stood at 57%, and the over 18's at 43%.

Chart 11 – Age of trainees as a proportion of total 2005-2014 (Great Britain)



Looking at age group and geographical area there are a number of differences between regions/nations within Great Britain. Similar to last year the East Midlands has the largest proportion of trainees aged under 18 (79% in 2014/75% in 2013), followed closely by Yorkshire and Humber (73%) and the North West (72%). The highest share of trainees over the age of 18 are in the North East and the South West (both 66%).

Chart 12- Age of trainees by geographical area -2014/2015 (Great Britain)





1.8.2 Gender

The survey also asks for a breakdown of trainee numbers by gender – which is shown in Table 3 along with the age categories.

Table 3 – Number of trainees broken down by gender and ages 2014/2015 (Great Britain)

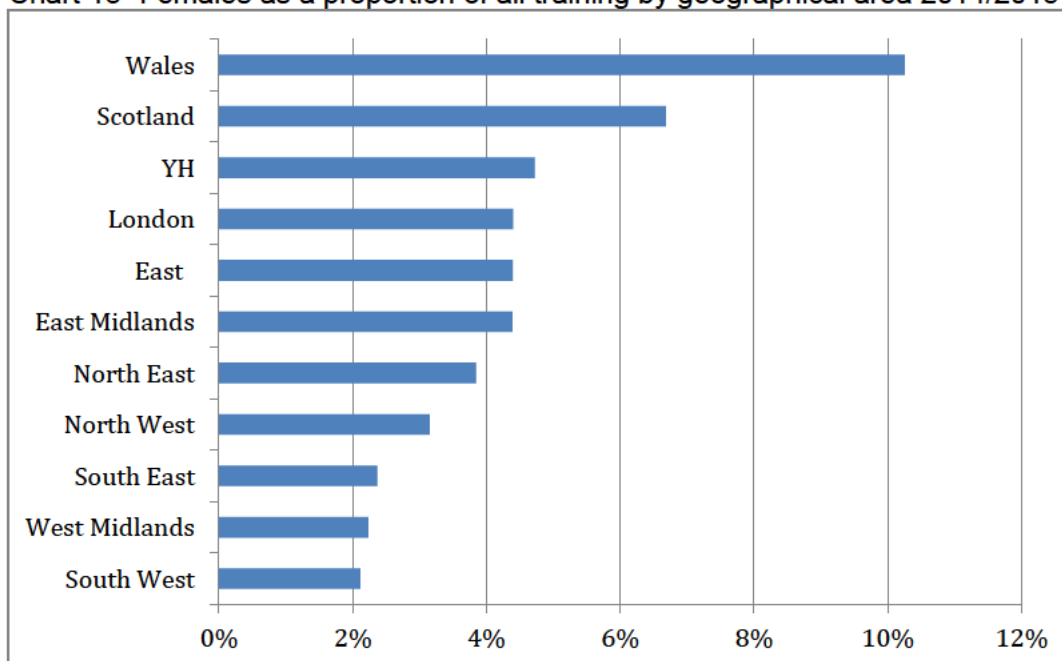
Under 18		18 & Over		Total	
Male	Female	Male	Female	Male	Female
8,281	405	6,131	350	14,412	755
55%	3%	40%	2%	95%	5%

In 2014/15 the proportion of female trainees has slightly increased on previous years (5% compared to an average of 4% in previous years).

The proportion of females starting construction courses is considerably lower than their representation within the construction workforce. Within Great Britain females account for 14% of employment. However, the majority are employed in non-manual trades (28%), and only 2% are employed in manual trades³.

When looking at analysis of gender and geographical area there are some significant differences. The highest proportion of female trainees can be found in Wales (10%), followed by Scotland (7%) compared to the South West which has the lowest proportion of all female trainees at only 2%.

Chart 13- Females as a proportion of all training by geographical area 2014/2015 (Great Britain)



When looking at occupations, the highest proportion of females are undertaking courses in “professional” (i.e. non-manual) occupations such as; surveyors (25%), architects (15%) and civil engineers (13%). Within the manual trades, the majority of females are starting painting and decorating courses (14%) which has the largest share of all female trainees at 27%, closely followed by wood trades at 26%.

³ Labour Force Survey, 4 quarter average to Spring 2014 (SOC2010) UK

These findings differ from those in the Labour Force Survey (Spring 2014) which found only 4% of painters and decorators were female. While this highlights the difference between females in training and their representation in the workforce in manual occupations in contrast there are similar proportions of females in professional occupations such as architects (18%) and civil engineers (15%) as in training.

1.8.3 Ethnicity

The number of trainees that come from a Black, Asian and minority ethnic (BAME) background in 2014/2015 stands at 844, this equates to 6% of all trainees.

Chart 14 – BAME trainees as a proportion of all trainees 2005-2014 (Great Britain)

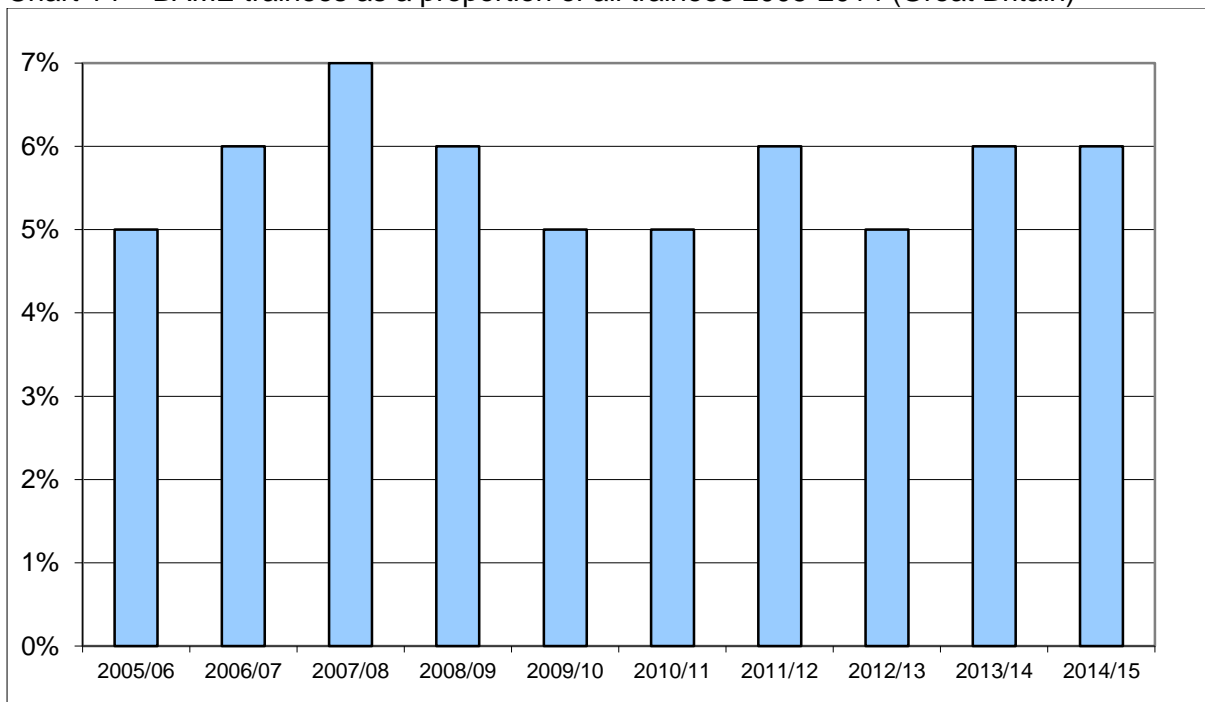
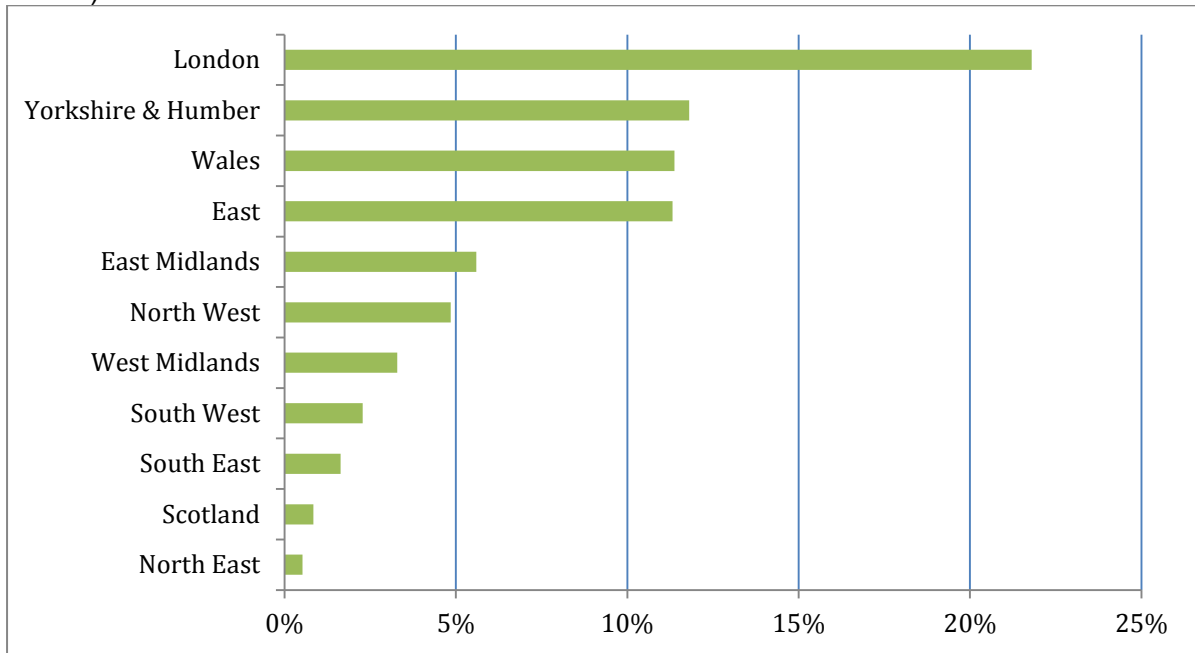


Chart 15 shows great variations between region and nation in terms of numbers of trainees from BAME backgrounds. In both the North East and Scotland BAME trainees account for only 1% of trainees. In contrast nearly a quarter (22%) of the trainees in London are from a BAME background.

The East has the highest share (23%) of all BAME trainees whereas the North East only has 1%.



Chart 15- BAME trainees as a proportion of all trainees by geographical area 2014/2015 (Great Britain)



Section 2: Forecast Demand for Craft and Technical Construction Training 2015-2019

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 Annual recruitment requirement (ARR) for 2015-2019 is forecast to be at 20,490 per year, this forecast is an increase from 2014-2018 where the ARR stood at 16,530. The East Midlands is forecasted the lowest recruitment requirement for 2015-2019, with the greatest demanding being in the North East.

Table 4 – Requirement for skilled manual trades by geographical area 2015-2019 (Great Britain)

	Total employment		Annual recruitment requirement**
	2015	2019	2015-2019
East	85,470	87,940	1,850
East Midlands	62,830	62,700	710
London	131,510	148,430	1,700
North East	37,140	39,330	1,660
North West	99,750	105,670	3,660
Scotland	72,070	70,440	1,430
South East	123,680	130,480	2,150
South West	94,740	99,060	1,950
Wales	47,430	51,580	2,190
West Midlands	66,560	71,540	1,540
Yorkshire & Humber	70,860	69,700	1,650
Total	892,040	936,870	20,490

Source: Construction Skills Network, 2015

Notes: Table 4 is a subset of the table that appears in Blueprint for UK Construction Skills 2015-2019 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

See figure 2 in Appendix for a visual representation of the total number of first-year trainees by geographical area.



Table 5 shows the number of new entrants that the industry needs to recruit each year from 2015-2019 in order to meet the projected demand for each occupation.

The majority of occupations have seen an increase in their ARR since last year. The occupations which have the largest increase in forecast are bricklayers (+1,200) and painters and decorators (+890). The group with the largest decrease is plant mechanics and fitters (-820). The overall increase in the projected ARR for the 2015 to 2019 period reflects the better prognosis for both output and employment across the construction industry.

Table 5 – Requirement for skilled manual trades in the construction trades 2015-2019 (Great Britain)

	Forecast		Annual recruitment requirement 2015-2019
	2015	2019	
Main trades			
Wood trades and interior fit-out	256,780	271,590	4,130
Bricklayers	66,640	71,250	2,770
Building envelope specialists	105,690	113,210	2,130
Painters and decorators	108,920	112,670	3,400
Plasterers and dry liners	46,090	46,700	1,270
Main trades total	584,120	615,420	13,700
Specialist building trades			
Roofers	44,840	47,290	1,280
Floorers	26,530	27,740	890
Glaziers	30,030	30,600	1,020
Specialist building operatives nec*	55,350	57,100	1,010
Specialist building trades total	156,750	162,730	4,200
Civil engineers			
Scaffolders	23,610	24,450	340
Plant operatives	41,950	44,970	290
Plant mechanics/fitters	38,760	39,890	990
Steel erectors/structural	24,720	26,360	690
Civil engineering operatives nec*	22,130	23,050	280
Civil engineers total	151,170	158,720	2,590
Total	892,040	936,870	20,490

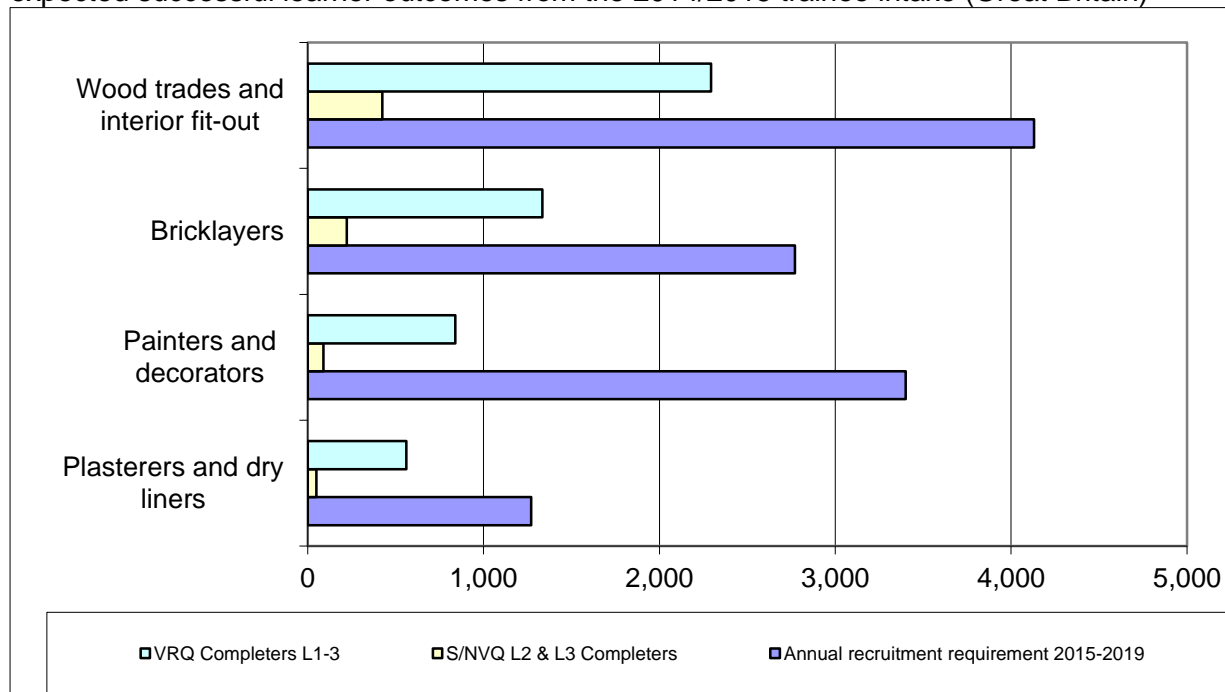
Source: Construction Skills Network, 2015

Notes: Table 5 is a subset of the table that appears in Blueprint for UK Construction Skills 2015-2019 report. It covers only the skilled manual trades and excludes managers, clerical staff, technical staff and professional occupations.

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Charts 16 and 17 compare the ARR for skilled manual trades against the expected number of successful completers from the 2014/2015 intake.

Chart 16 – Average recruitment requirement for main construction trades (2015-2019) and expected successful learner outcomes from the 2014/2015 trainee intake (Great Britain)



Source: Construction Skills Network 2015, CITB Trainee Numbers Survey 2014/2015; Data Service
 Note: S/NVQ level 1 is not shown in the chart due to low numbers.

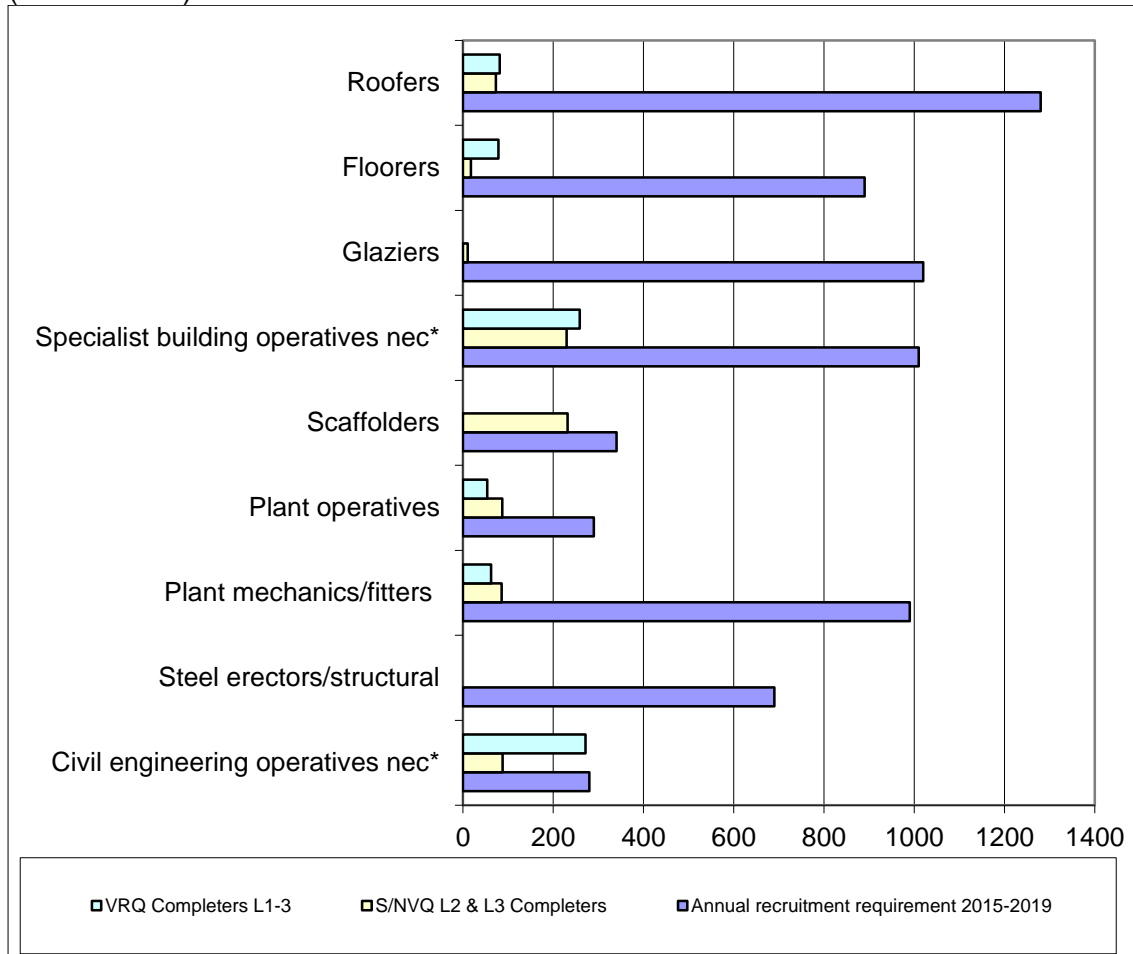
The bottom bar of the chart shows the average number of skilled workers that will be required to join the industry each year by occupation between 2015 and 2019. The remaining two bars show the expected number of completers across S/NVQ and VRQ qualifications at Levels 1, 2 and 3. S/NVQ Level 2 and Level 3 completers are assumed to have been trained to a level where their skills are considered acceptable to work productively in the industry.

Chart 15 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 quarter.

It is also clear from the chart that Vocational Related Qualifications (VRQ's) account 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 specialist construction trades and civil engineers (2015-2019) and expected successful learner outcomes from the 2014/2015 trainee intake (Great Britain)



Source: Construction Skills Network 2015, CITB Trainee Numbers Survey 2014/2015; Data Service
 Note: S/NVQ level 1 is not shown in the chart due to low numbers.

The situation regarding training in the specialist construction trades and civil engineering occupations is similar to that of the main trades. With the exception of Civil engineering operatives, current training levels are not sufficient to meet the predicted demand.

Both Glaziers and Steel erectors are of concern due to the survey recording very small numbers of trainees undertaking these occupations in recent years. Further investigation would be required to determine if this is representative and what the possible reasons for such low levels of trainees are.

Section 3: Construction Training Capacity 2014/2015

Prior to the recession the construction industry trained insufficient people to meet the demand for trained workers. The resultant shortfall was made up in various ways, for example by people working more hours, delaying retirement, or using skilled migrant workers. During the industry's downturn this survey continued to map capacity on an annual basis despite training capacity not being an issue. However, as the industry returns to growth, it has become important once again to look at the number of applicants to construction courses as a measure of interest in working in construction, and ultimately as a measure of the industry's ability to meet demand for skilled workers.

This section summarises the findings of the capacity questions from the Trainee Numbers Survey. The results are based upon the responses of 107 training providers across Great Britain and applied to the overall results from the main survey. The data covers the skilled manual trades only.

3.1 Applications by course

In 2014/2015 there were approximately 13,800 applicants for approximately 12,000 places on skilled manual trade construction courses, as shown in Table 6. Although this represents a significant decrease on last year's figures of just over 18,500 applicants and 15,000 starters; the ratio of applications per starters has remained the same at 1.2.

Table 6 – Applications and starters to skilled manual trade courses 2014/2015 (Great Britain)

	Applicants	Starts	<i>Applicants per starter</i>
Wood trades and interior fit-out	5,092	4,459	1.1
Bricklayers	2,675	2,270	1.2
Painters and decorators	1,463	1,275	1.1
Plasterers and dry Liners	1,151	886	1.3
Main trades total	10,381	8,890	1.2
Roofers	259	243	1.1
Floorers	145	141	1.0
Glaziers	13	13	1.0
Specialist building operatives nec*	795	569	1.4
Specialist building trades total	1,212	966	1.3
Scaffolders	269	269	1.0
Plant operatives	499	485	1.0
Plant mechanics/fitters	276	272	1.0
Steel erectors/structural	5	5	-
Civil engineering operatives nec*	1,246	1,005	1.2
Civil engineering trades	2,205	1,946	1.1
	13,798	11,802	1.2

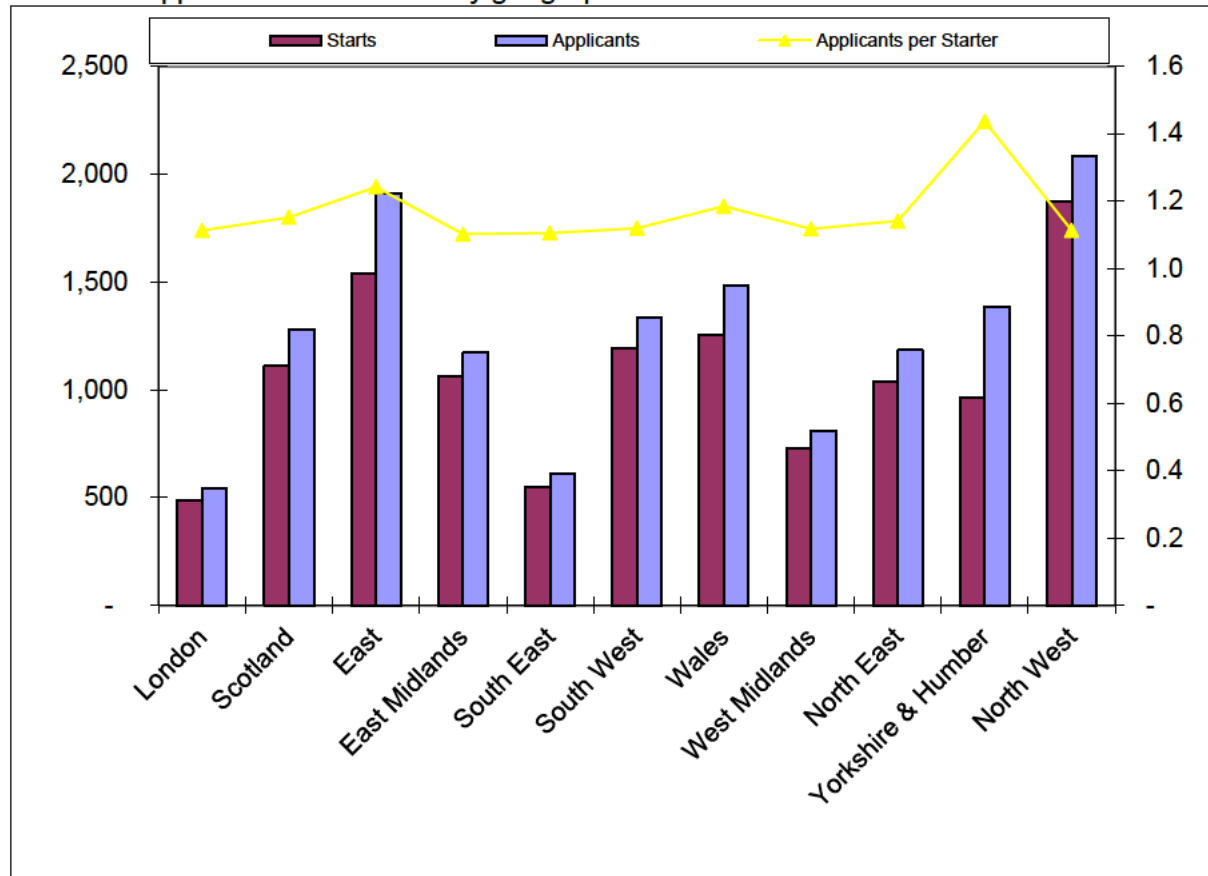
Also, table 6 shows the majority of specialist building and civil engineering trades have lower ratios of applicants per starter than the main trades, thus implying that the majority of applicants for these trades started a course. This trend has been consistent since 2009/2010.



3.2 Applicants by geographical area

Chart 18 shows the training capacity for the skilled manual trades by geographical area. The chart highlights there are clear differences in the number of starters, applicants and applicants per starter ratio.

Chart 18- Applicants and Starters by geographical area 2014/2015



Note: See figure 3 in Appendix for a visual representation of the total number of first-year trainees by geographical area.

The East and the North West have the highest number of applicants and starters and London has the least. When looking at the ratio of applicants to starters Yorkshire and Humber has the highest ratio at 1.6 meaning that this region has the most competition.

Section 4: Higher Education in the Built Environment

4.1 Student Enrolments on built environment courses

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

This section contains data from HESA on student enrolments on construction and the built environment courses in higher education. By combining the HESA data in this section with the data from Section 1 on the number of trainees starting construction related vocational training courses the report provides a complete picture of training in the built environment.

However, it should be noted that the HESA data reproduced here is for the academic year 2013/2014 while Trainee Numbers Survey figures refer to 2014/2015; 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 7 shows the starters on construction and the built environment courses at higher education institutions split by qualification level and subject area. There has been further decline in 2013/2014 in the numbers of students enrolling on built environment courses to just under 18,500, a significant decrease in the number of student recorded in 2009/2010 (28,000).

The majority of students are enrolling on first degree courses (59%), followed by post graduate degree courses (32%), a further 7% are undertaking other undergraduate courses and the other 3% are starting foundation courses. These proportions have remained fairly unchanged since 2009/2010.

Table 7 – Student enrolments on built environment courses by subject and qualification aim 2013/2014 (United Kingdom).

	Other Undergraduate	Foundation Degree	First Degree	Postgraduate Degree	Total
Civil engineering	316	140	3189	1192	4,837
Architecture	56	14	3526	2141	5,737
Building	831	276	2899	1012	5,019
Landscape design	44	23	144	127	337
Planning (urban, rural & regional)	15	26	744	1102	1,887
Others in architecture, building & planning	0	0	231	188	419
Totals	1,262	479	10,733	5,761	18,235

Source: HESA 2013/2014

The most popular courses in 2013/2014 were Architecture (31%) and Building (28%), this being a similar result to previous years.

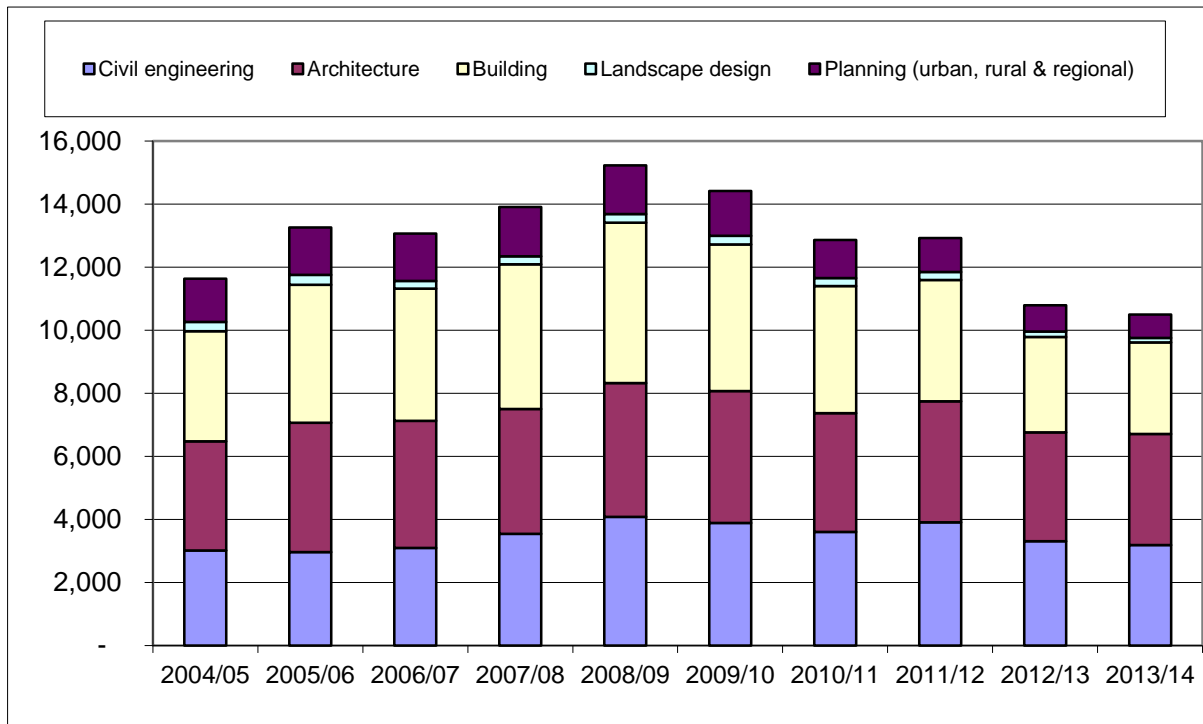
4.2 First Degree

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

Chart 19 shows the ten year trend for students starting construction and the built environment first degrees. During this time period the number of enrolments onto a first degree peaked in 2008/2009 with over 15,000 students. Enrolments have been declining since with the latest data (2013/14) of at just over 10,500 the lowest level recorded.



Chart 19 – Student enrolments on first degrees in built environment by subject 2004 – 2013 (United Kingdom)



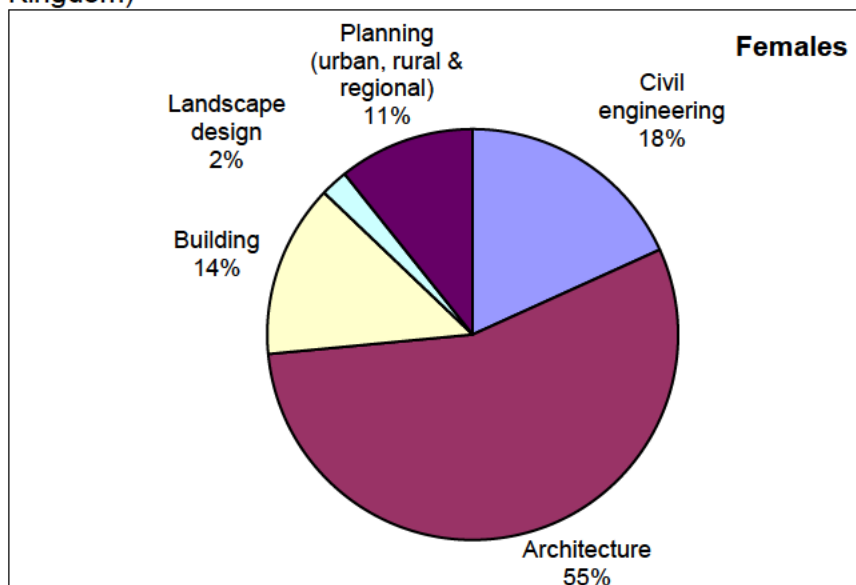
Source: HESA 2013/2014

Since the trebling of yearly university fees in 2012-2013, there has been a 17% decrease in enrolments onto first year undergraduate courses in the UK⁴. This may reflect the decline in numbers on built environment first degree courses over the last few years as show in chart 19.

Charts 20 and 21 show the proportions of males and females recorded for each of the degree subjects. The gender spilt for first degree students has remained at around one quarter female and three quarters male over the last decade. Since 2004/2005 the most popular course with females has been architecture, currently approximately half (55%) of females are undertaking this particular course. The most prevalent course for males over the past ten years has been Building which presently accounts for a third (32%) all male students. The proportions of both male and female students across all subjects has remained similar since 2004/2005.

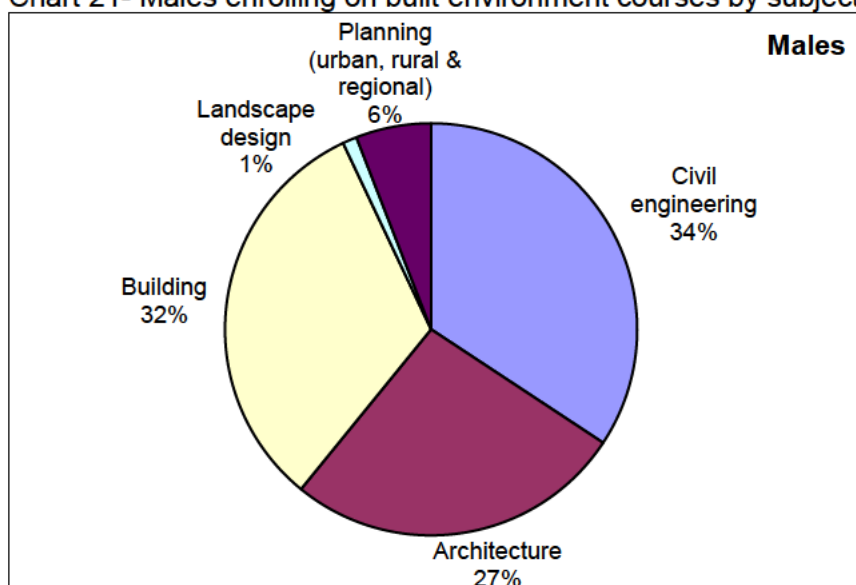
⁴ <http://www.bbc.co.uk/news/education-25761133>

Chart 20 – Females enrolling on built environment courses by subject 2013/2014 (United Kingdom)



Source: HESA 2013/2014

Chart 21- Males enrolling on built environment courses by subject 2013/2014 (United Kingdom)



Source: HESA 2013/2014

Analysis of the HESA data by ethnic origin shows a gradual increase in numbers of ethnic minority students enrolling on built environment first degrees over the last decade - from 15% in 2004/2005 to 26% in 2013/2014. Since 2009 the ethnic minority group Black or Black British – African has accounted for almost a quarter of all ethnic minorities.

The representation of both females and students from ethnic minorities is higher at degree level than it is in craft and technical training (see Section 1). The Trainee Numbers Survey reports that 5% of craft and technical trainees are female and 6% are from an ethnic minority, compared to 24% and 26% respectively at degree level.



Conclusion

The findings in this report paint a very similar picture to that described last year, with training across the built environment continuing to fall.

Evidence in past economic cycles has shown that training tends to lag rises in employment and output, with an upturn in training often occurring over the long-term due in part to the fragmented nature of the industry. This is certainly borne out by the survey findings, where there is no evidence of a resurgence in trainee numbers across Further Education (FE). New entrants onto built environment training, as measured by the Trainee Numbers Survey, now stands at the lowest level ever recorded. This may be due to both the depth of recovery across the industry and as a consequence, confidence in construction as a career. Recent CITB research⁵ reported that 84% of young people find construction unattractive, mainly because of negative perceptions - hard manual work, low pay and being unsuitable for those who are academically gifted - and partly because of a lack of knowledge about the industry.

Within FE there remains a continued trend towards diploma qualifications at the expense of NVQ's. Although despite falls in overall numbers there are signs of stability with 7 in 10 trainees expected to progress from a Level 1 Diploma to a Level 2. Additionally the take-up of apprentices has not declined as steeply as the fall in all training.

Higher Education (HE) has seen a slight fall which has been concentrated in "other undergraduate" qualifications and Foundation degrees. While first and post-graduate Degrees have remained relatively static. It has been argued, and could explain this finding, that a result of the ever-expanding full-time undergraduate higher education system — which will grow further when the cap on student numbers is lifted in 2015 — is the low number of students on vocational sub-degrees, especially part-time courses⁶.

Similar justification could be put forward for falls across FE, with a recent report from the National Audit Office reporting that recruiting students has been more difficult with a dip in the number of 16-to-18-year-olds and more competition from schools and universities⁷.

Data from the Construction Skills Network (CSN) suggests that employment in the industry will rise by an annual average of 1.1% between 2016 and 2020 with an average of 46,420 workers per year required to deliver the forecast growth and replace those leaving the industry. As shown in Section 2, entrants onto FE training across craft and technical occupations are insufficient to meet predicted demand over the current forecast period (2015-2019) and with an increase in employment forecast for 2016 to 2020; it is imperative that training begins to show signs of recovery next year to contribute towards meeting this demand.

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.

⁵ CITB internal research

⁶ <http://feweek.co.uk/2014/05/02/dr-cables-thoughtful-contribution-to-the/>

⁷ <http://www.bbc.co.uk/news/education-33595027>

Appendix

Figure 1 – First-year trainees by geographical area 2014/2015 (Great Britain)

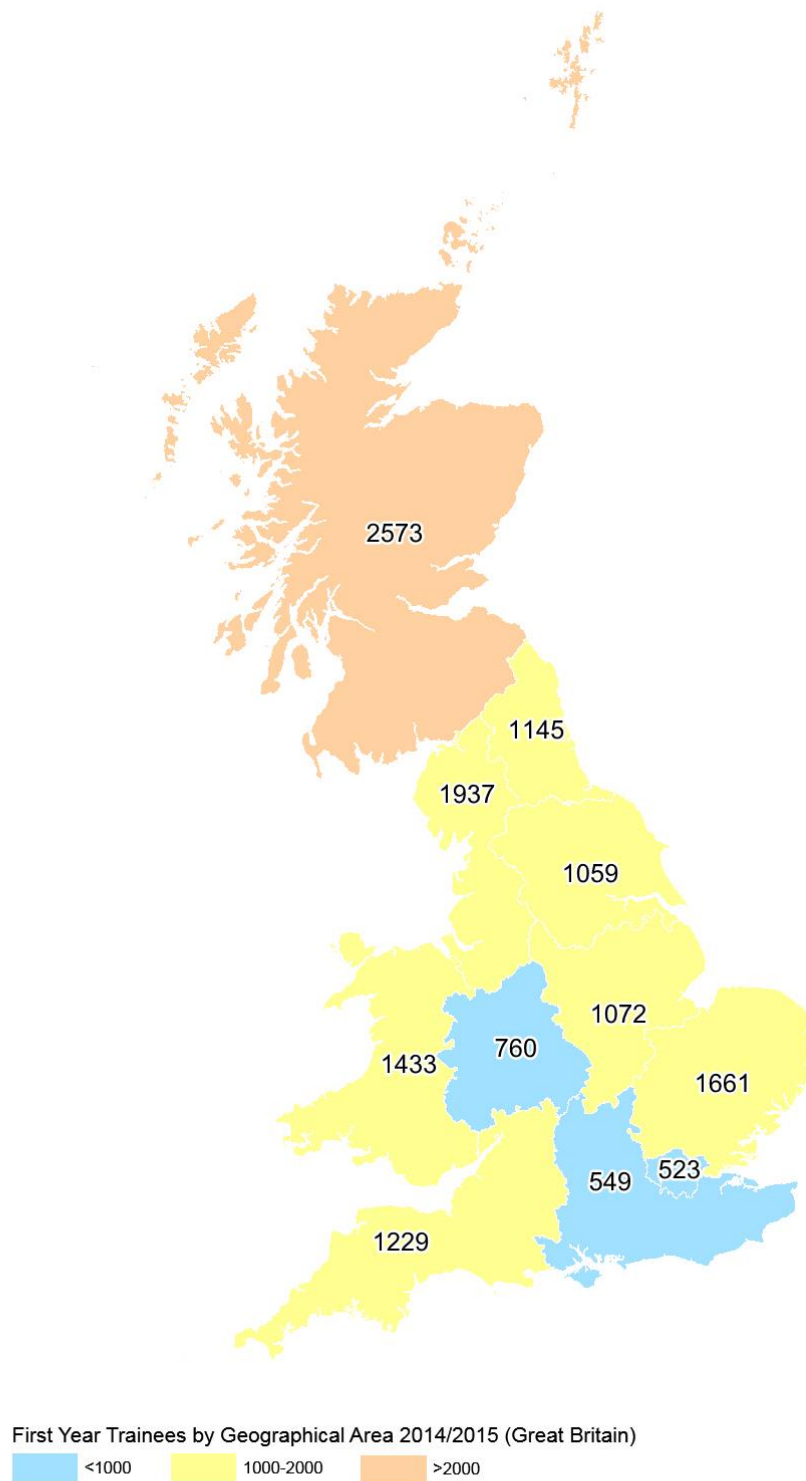




Figure 2 – Forecasted annual average requirement for skilled manual trade workers by geographical area 2015-2019 (Great Britain)

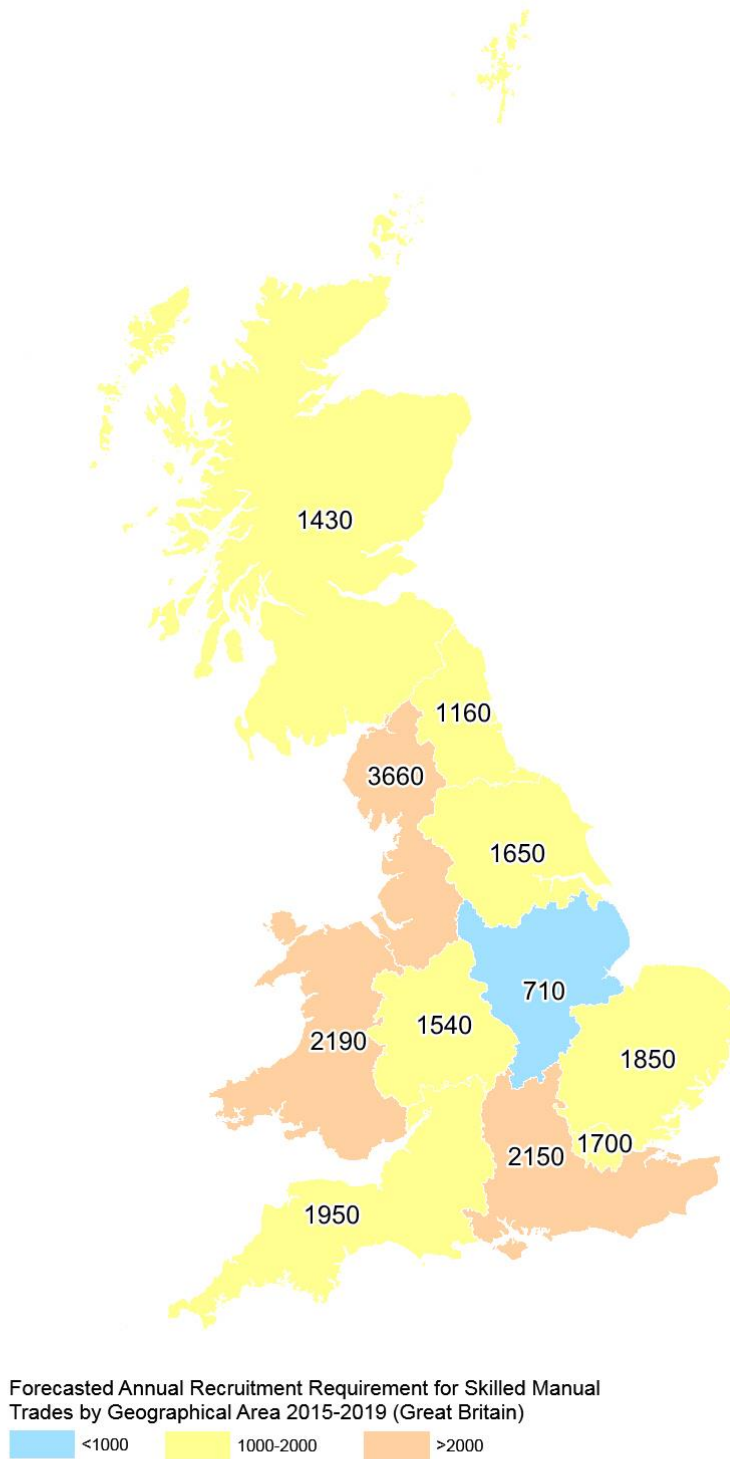


Figure 3 – Applicants to construction courses in the skilled manual trades by geographical area 2014/2015 (Great Britain)

