Training and the Built Environment Report

2011

Introduction

ConstructionSkills, the Sector Skills Council for the construction industry, is a partnership that delivers truly UK-wide policies and strategies that take account of the full breadth of the industry and its training, education and development needs. ConstructionSkills mission for the industry is to ensure **'right skills, right place, right time' to achieve a fully skilled and professional UK construction industry, working safely and delivering value.**

To achieve this, ConstructionSkills, need to deliver the Sector Skills Agreement (SSA) that has been developed and agreed with stakeholders across government, industry and education. It covers four key skills challenges, each of which has a number of priorities.

Attracting and Retaining Talent
➢ Promoting careers in construction. ➢ Supporting vocational and sector specific qualifications in schools, colleges and universities. ➢ Encouraging recruitment from a more diverse pool of talent. ➢ Assisting retention by providing employers and employees with appropriate support.
Developing Talent
➢ Promoting lifelong learning as an aid to achieving qualifications, career progression and continuous professional development. ➢ Improving health and safety knowledge and behaviours. ➢ Support evolving professional and specialist skills needs associated with sustainability, low carbon building and innovative construction.
Improving Business Performance
➢ Increasing employer investment in training and development to improve productivity. ➢ Increasing the uptake of skills brokerage, business support services and skills funding packages. ➢ Improving supervisory, management and leadership skills. ➢ Promoting integration and collaborative working in the industry. ➢ Encouraging clients to invest in the construction skills base through best practice procurement.
Strengthening the Skills Infrastructure across Nations
➢ Developing project based training across the nations in support of major construction projects. ➢ Implementing the Construction Qualifications Strategy to ensure qualifications meet the needs of employers and learners. ➢ Providing authoritative national and regional labour market intelligence. ➢ Responding to the specific needs of the construction industry in the nations and regions. ➢ Influencing skills and training policies and funding to ensure that they are fit for purpose for the construction industry. ➢ Collaborating with employers and their representative bodies, professional institutions, trade unions, delivery partners and other Sector Skills Councils to develop an integrated approach.

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. ConstructionSkills undertake 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 complete picture of training in the built environment.

The main sections of the report are:

Section 1: Trainee Numbers Survey 2010/2011 presents data collected 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-ConstructionSkills' 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 2011–2015 analyses this training data alongside the projected demand for skilled construction workers over the forecast period 2011–2015[a], in order to assess the adequacy of current training provision in terms of quantity.

Section 3: Construction Training Capacity 2010/2011 summarises the findings of the capacity questions from the Trainee Numbers Survey, which aimed to discover the total capacity for skilled manual trades training that is currently available.

Section 4: Higher Education in the Built Environment presents data from HESA on student enrolments on built environment degree courses in the academic year 2009/2010.

[a] Construction Skills Network, Blueprint for UK Construction Skills 2011 to 2015 http://www.cskills.org/uploads/csn20011-2015uk_tcm17-24498.pdf

Summary

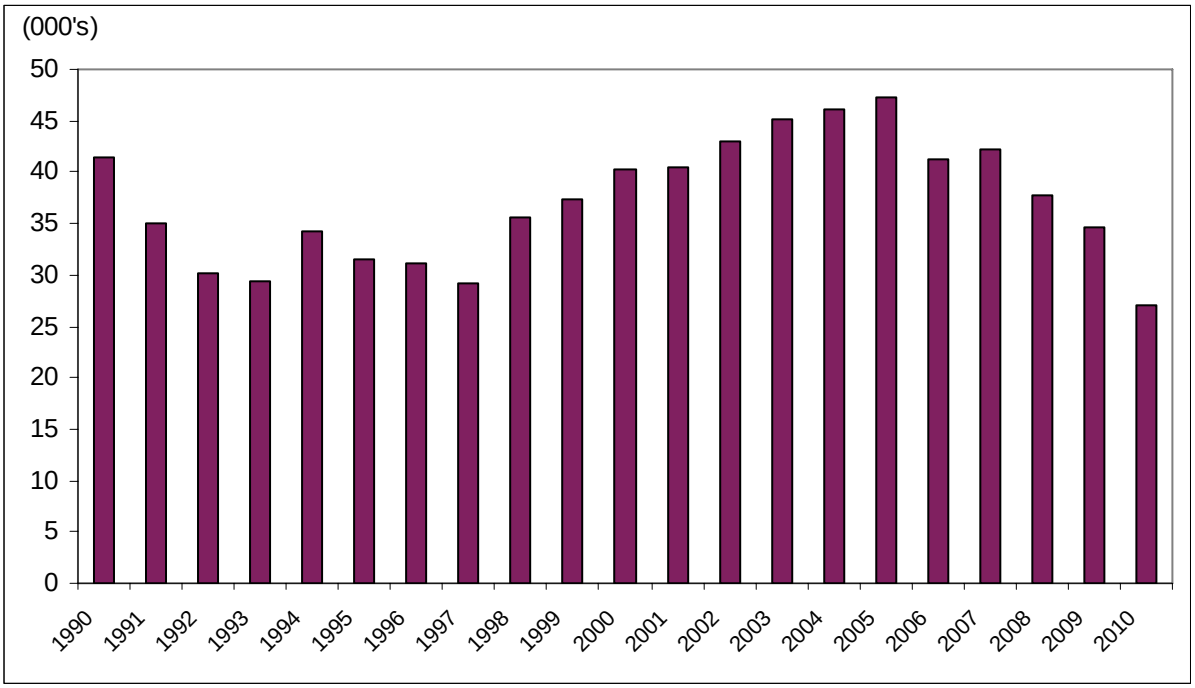
- First-year intake in 2010/2011 stands at just over 27,000; a further decrease on previous year's figures to the lowest level over the past two decades.
- The top two occupations in terms of absolute numbers of starters are wood trades and bricklayers - comparable to previous four years.
- Half of all first-year trainees are undertaking a Level 2 qualification.
- Yorkshire & Humber has more starters than the other regions/devolved administrations.
- Nearly two-fifths of all first-year trainees undertaking craft training are work-based.
- Half of all S/NVQ Level 2 and Level 3 starters are following an apprenticeship programme.
- The breakdown of first-year intake by age shows that there a slightly more trainees aged under 18 years and adult trainees.
- There are 933 female starters (3% of total).
- Ethnic minority starters account for 5% of the total, but there are strong geographical variations – rising to 33% in London.
- Predicted demand compared to the amount of training taking place shows that whilst there is expected to be an over supply of bricklayers, plasters and civil engineering operatives leaving training providers.
- Across the skilled manual trades there are 39% more applicants than starters – which equates to an average of 1.4 applicants for every available place
- Wood trades and flooring are the most oversubscribed courses.
- The number of students starting a built environment course across the higher education sector stood at 28,000 in the academic year 2009/2010, of which half (52%) were studying towards a first degree
- Overall a building course was the most popular choice for students accounting for a third (32%) of the total number of starts.
- The representation of both females and students from ethnic minorities is higher at degree level than it is at craft and technical training. 3% of craft and technical trainees are female and 5% are from an ethnic minority, compared to 24% and 20% respectively at degree level.

Section 1: Trainee Numbers Survey 2010/2011

The national picture

The number of first-year trainees has decreased this year to just over 27,000, a further decrease on the previous year and the lowest level over the past two decade as depicted in Chart 1. However, it should be noted that this year the survey has sought to exclude training which is being undertaken by the existing construction workforce, (i.e. upskilling via the Train to Grain route), and this has undoubtedly impacted on the number of starters. Although it is difficult to ascertain how much this change in methodology has affected the training figures; as the fall in numbers is also indicative of the economic downturn. As highlighted in Chart 1 training suffered during the recession of the early 1990s, and the current fall in training appears to be replicating this decrease.

Chart 1 – Numbers of first-year trainees 1990–2010 (Great Britain: All occupations)



Note: 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.

Training by occupation

The overall first-year intake in the academic year 2010/2011 is 27,184. Table 1 shows the breakdown for the 19 occupations covered by the survey.

Table 1 – Numbers of first-year trainees 2010/2011 (Great Britain)

	Under 18		18 & Over		
Occupation	**Male**	**Female**	**Male**	**Female**	**Total**
Construction managers	*<50*	*0*	*272*	*<50*	***299***
Wood trades and interior fit-out	*5595*	*59*	*2662*	*<50*	***8357***
Bricklayers and building envelope specialists	*4159*	*<50*	*1497*	*<50*	***5712***
Painters and decorators	*1263*	*155*	*722*	*112*	***2252***
Plasterers and dry liners	*1031*	*<50*	*640*	*<50*	***1710***
Roofers	*101*	*0*	*108*	*0*	***209***
Floorers	*142*	*0*	*170*	*<50*	***316***
Glaziers	*<50*	*0*	*<50*	*0*	***<50***
Specialist building operatives nec*	*197*	*<50*	*160*	*<50*	***376***
Scaffolders	*79*	*0*	*449*	*0*	***528***
Plant operatives	*<50*	*<50*	*1854*	*<50*	***1905***
Plant mechanics/fitters	*140*	*<50*	*146*	*<50*	***294***
Steel erectors/structural	*0*	*0*	*<50*	*0*	***<50***
Logistics	*0*	*0*	*<50*	*0*	***<50***
Civil engineering operatives nec*	*761*	*<50*	*1004*	*<50*	***1814***
Civil engineers	*<50*	*<50*	*318*	*<50*	***406***
Other construction professionals/technical staff	*499*	*<50*	*1711*	*180*	***2420***
Architects	*<50*	*<50*	*211*	*<50*	***286***
Surveyors	*<50*	*51*	*162*	*<50*	***248***
	14102	**407**	**12136**	**539**	**27184**

Note: The occupational groups were extended in 2009/2010 to bring them in-line with the occupations used in the Construction Skills Network. Please see Section 2 for more information on the Construction Skills Network.
*nec = not elsewhere classified

Table 2 lists the top ten occupations in descending order, in terms of absolute number of starters for 2010/2011 shown over a five year period. Of these occupations only scaffolders and civil engineering operatives have more first-year trainees this year than the previous year, increasing by 5% and 6% respectively. The decrease in plant operatives may be attributed to the concerted effort to exclude training being undertaken by the current workforce as described above. Additionally the number of specialist building operatives has also decreased, following a huge increase in training starts in the previous academic year. The latest data shows that specialist building operative starts have returned to a figure comparable to the years prior to 2009/2010.

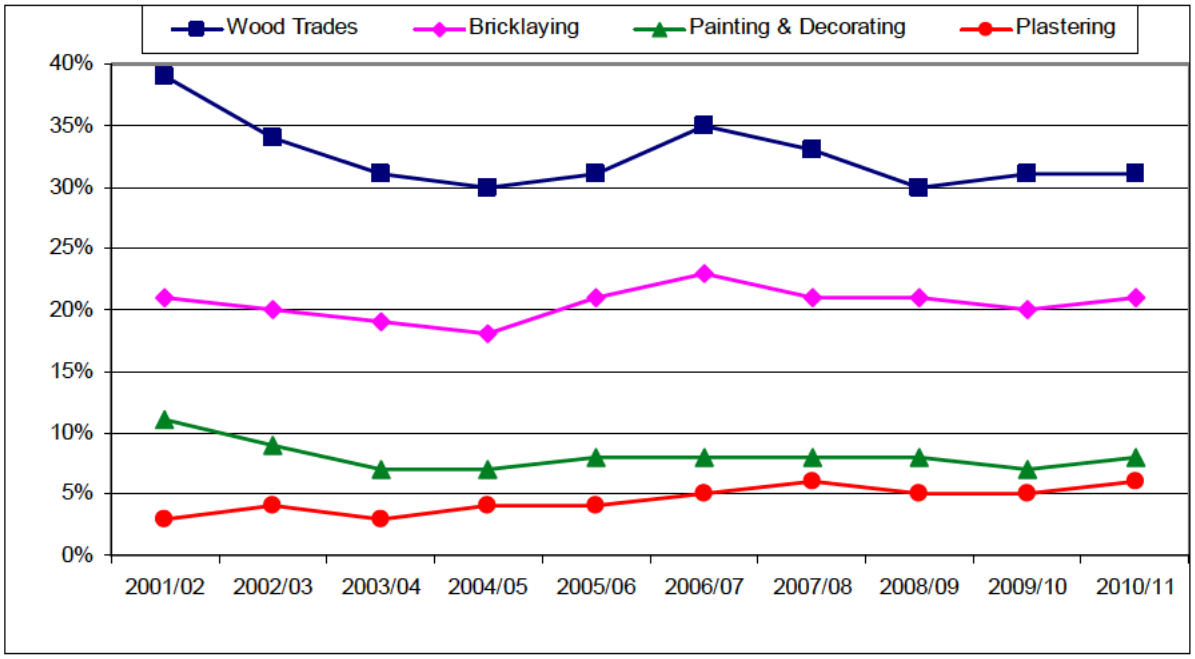
Table 2 – Comparison of number of first-year trainees by occupation 2006/2007 to 2010/2011 (Great Britain)

Occupations	2010//2011	2009/2010	2008/2009	2007/2008	2006/2007
Wood trades	8,357	10,758	11,491	13,743	14,404
Bricklayers & Building Envelope Specialists	5,712	7,168	7,778	8,949	9,338
Construction managers, professionals & technical staff	3,553	4,057	4,254	3,899	5,083
Painters and decorators	2,252	2,428	3,006	3,453	3,451
Civil engineering operatives	1,920	1,809	2,248	2,062	1,187
Plant operatives	1,905	3,847	4,461	4,746	2,899
Plasterers and dry liners	1,710	1,940	1,979	2,407	2,151
Scaffolders	528	502	681	1,055	925
Specialist building operatives	376	1,110	441	451	605
Floorers	316	324	493	442	342

Since 2006/2007 wood trades and bricklayers have ranked as the first and second largest occupational groups respectively, each year. Construction managers, professionals & technical staff and painters & decorators have also consistently been within the top five places over the time-frame.

Chart 2 looks specifically at the building craft occupations and the proportion they represent of all first-year trainees over a ten year period – 2001/2002 to 2010/2011. As mentioned above, Wood Trades and Bricklaying still dominate the first year training figures with 31% and 21% of the total training figure, respectively. Chart 2 shows that the proportional share of the four main building craft occupations have remained relatively static in the past two years, despite a fall in numbers starting training.

Chart 2 – Proportion of first-year trainees 2001–2010 (Great Britain: Building craft occupations)



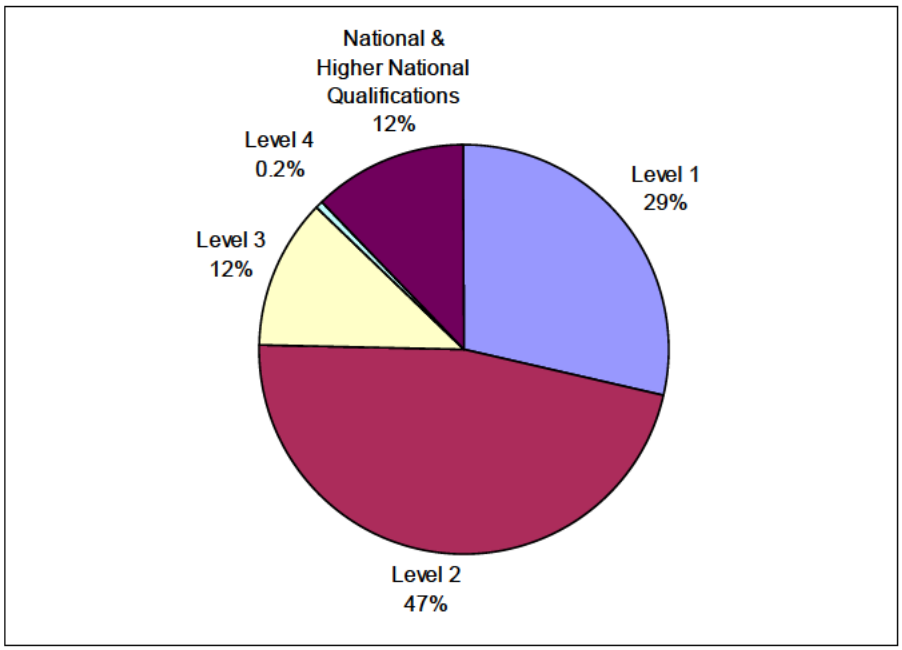
Training by qualification

Data is collected on trainees starting construction qualifications in each of the following levels:

- Level 1[b]
- Level 2[c]
- Level 3[d]
- Level 4[e]
- National & Higher National Qualifications[f]

The percentage of first-year trainees on a qualification, within each of these levels, for the whole of Great Britain is shown in Chart 3.

Chart 3 – First-year trainees undertaking a qualification in each level 2010/2011 (Great Britain)



Across Great Britain, approximately half (47%) of the first-year trainees are undertaking a Level 2 qualification, while over a quarter (29%) are following a Level 1 course, with the remaining trainees starting qualifications at Level 3 and above. The biggest change to the composition of starts has been a two-fold increase in entrants onto National and Higher National qualifications from 6% in 2009/2010.

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.

This pattern is consistent across the majority of English Government Office Regions and in Wales, but there are notable differences in the South East, London and Scotland. These are explored further in the next section entitled Geographical considerations.

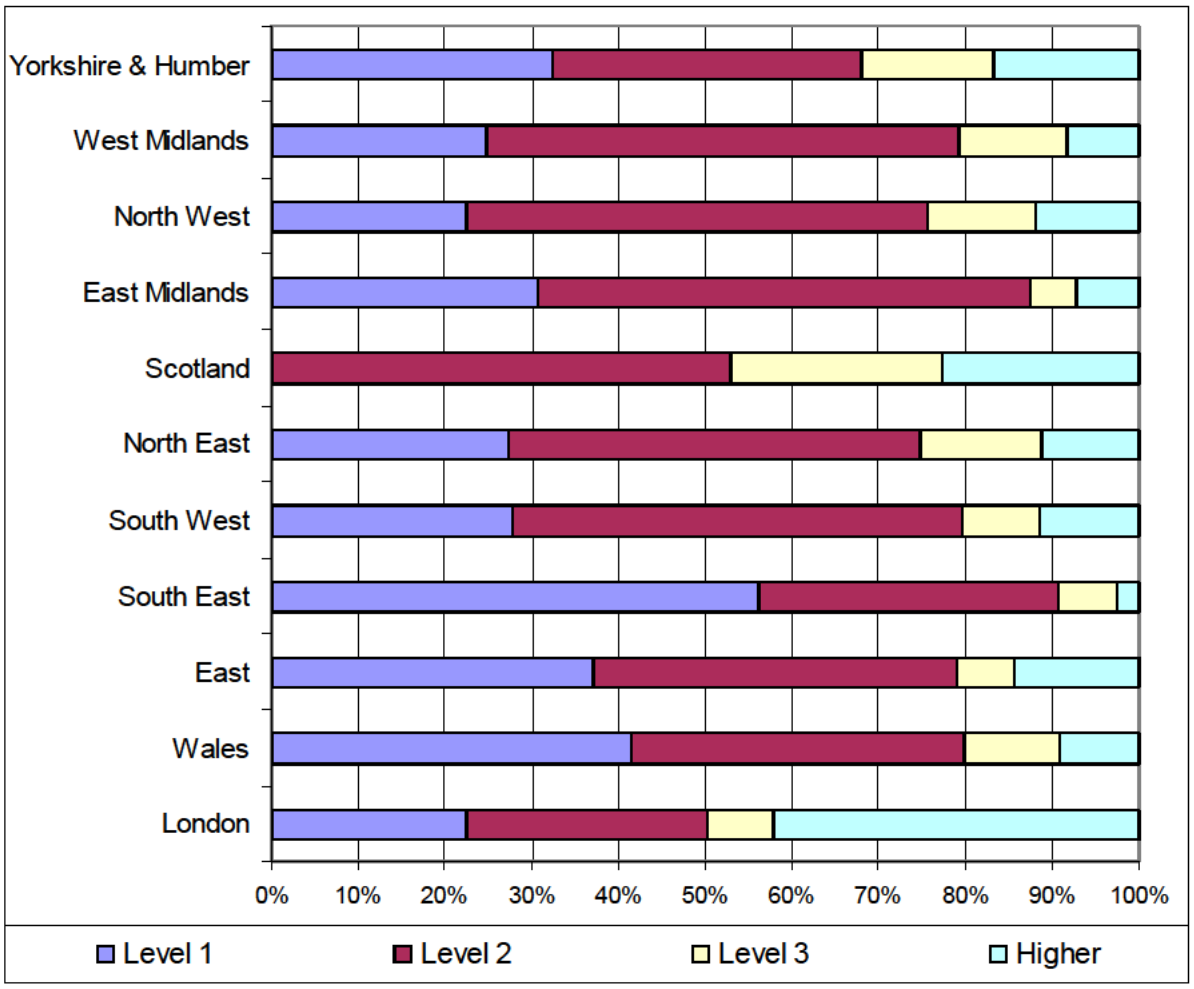
[b] S/NVQ Level 1; Foundation Construction Award/Certificate or Level 1 Diploma; equivalent VRQ courses
[c] S/NVQ Level 2; Intermediate Construction Award/Certificate or Level 2 Diploma; equivalent VRQ courses
[d] S/NVQ Level 3; Advanced Construction Award/Certificate or Level 3 Diploma; equivalent VRQ courses
[e] S/NVQ Level 4; equivalent VRQ courses
[f] National Certificate/Diploma; Higher National Certificate/Diploma

Geographical considerations

As mentioned at the beginning of the report, the number of first-year trainees is collected from colleges, private training providers and construction industry training centres across Great Britain. This data is then analysed by the numbers in the training establishments within each Government Office Region (GOR) in England, Scotland and Wales.

Yorkshire and Humber has the largest share of first-year trainees while London has the smallest proportion – accounting for 16% and 2% of the total number of trainees respectively.

Chart 4– First-year trainees by level of qualification and geographical area: 2010/2011 (Great Britain)



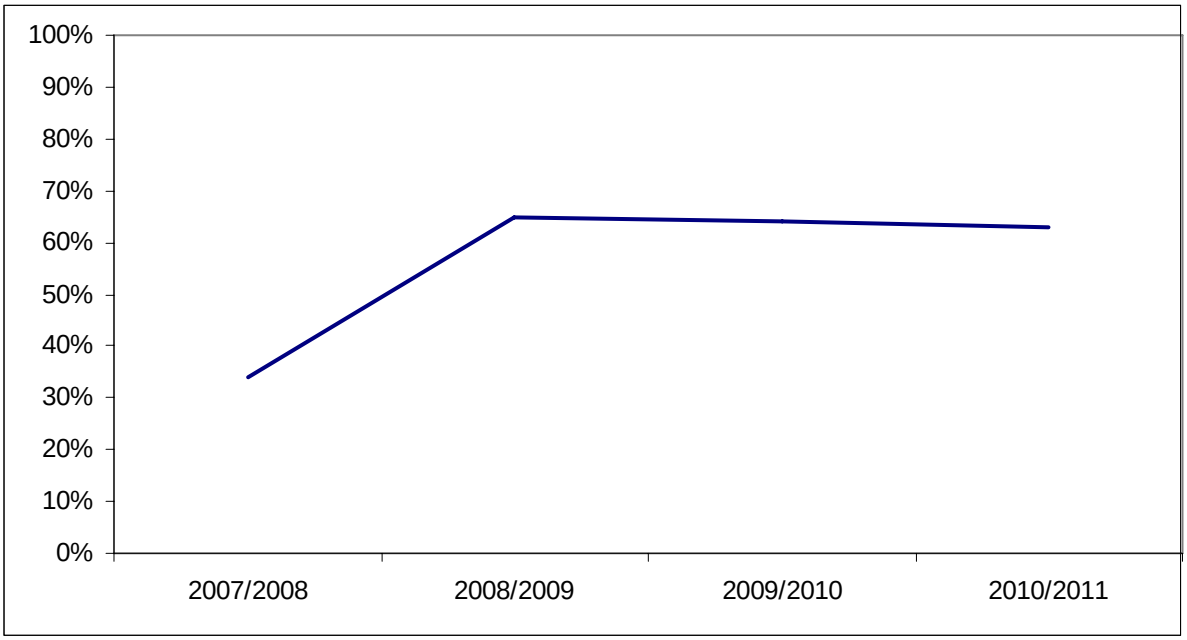
See figure 1 in Appendix for a visual representation of the total number of first-year trainees by geographical area.

Chart 4 highlights how Scotland has a completely different qualification structure when compared to other areas across Great Britain – most notably having no Level 1 qualifications and a quarter of training at Level 3. Whilst the majority of English Regions and Wales are very similar to the national pattern; exceptions are the South East with over half (56%) starting a Level 1 qualification and conversely London with nearly half (42%) on higher level courses

Trainee Progression

In order to gain an insight into the movement of trainees from Level 1 qualifications, the survey previously acquired data on the expected progression of trainees from both S/NVQ Level 1 and Level 1 Diploma/ Foundation Construction Awards. However this year the number of trainees starting S/NVQ Level 1 has decreased to such an extent that data is only available showing the progression of Level 1 Diploma/Foundation Construction Award starters.

Chart 5 – Expected progression of trainees from a Level 1 Diploma/Foundation Construction Awards 2007-2010 (England & Wales)



Note: Diplomas/Construction Awards are not available in Scotland.

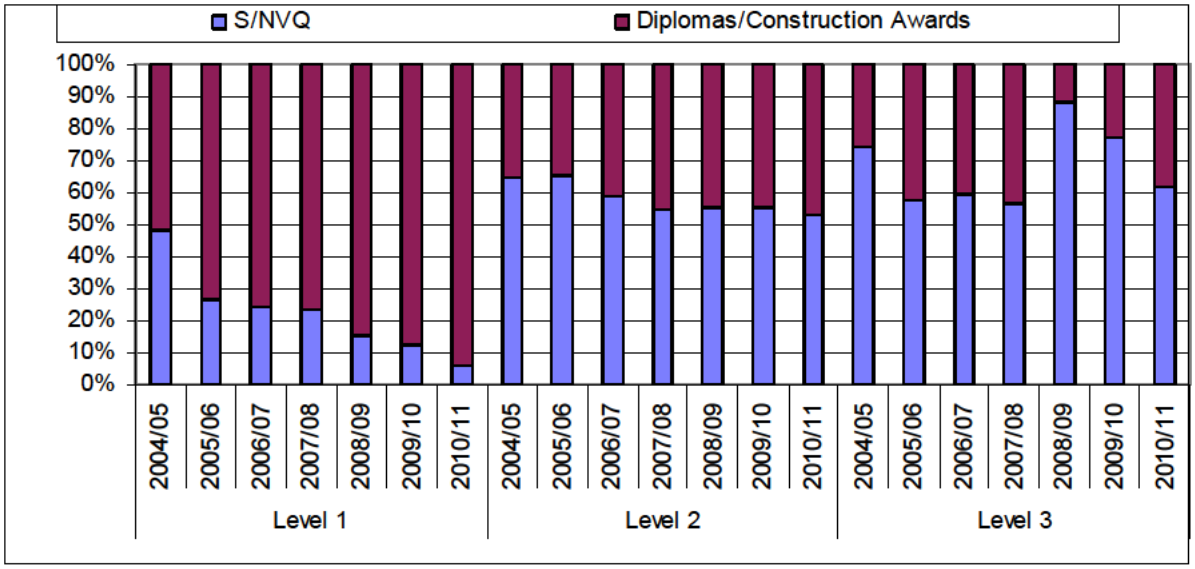
Approximately two-thirds (63%) undertaking a Level 1 Diploma/Foundation Construction Award in England and Wales were predicted to progress to the Intermediate level during this academic year (2010/2011), this proportion has been consistent over the past three years, following a dramatic increase in 2007/2008 (34%).

Mode of Study

Diplomas/Construction Awards are qualifications for craft occupations that can be completed part-time or full-time, but they do not include any proof of work undertaken on site, as opposed to the S/NVQ framework, which requires on-site experience/assessment. There are three levels of Diplomas/Construction Awards in-line with the NVQ system – Foundation (Level 1), Intermediate (Level 2) and Advanced (Level 3).

Of the 21,892 starters undertaking construction craft training in England and Wales, 13,707 (63%) are studying for a Diploma/Construction Award. In other words, **only 37% of first-year craft trainees are involved in work-based training**. This year the proportion of starters undertaking a Diploma/Construction Award has increased to its highest level over the 8 year period in which this data has been collected.

Chart 6 – Proportion of first-year trainees split by work-based training 2004/2005 to 2010/2011 (Craft training in England and Wales)



Note: Diplomas/Construction Awards are not available in Scotland, therefore all data for work-based training excludes Scottish trainee figures.

As a proportion of starters in each level, there are more undertaking a Level 1 Diploma/ Foundation Construction Award. This has increased substantially since 2004/05 and now stands at 94% of all starters on a Level 1 qualification, as mentioned previously this year the survey has seen a considerable decrease in starters on NVQ Level 1 qualifications. While the share on a Level 2 has remained broadly static, conversely over the past few years the proportion of starters on a Level 3 has been very sporadic.

It should be noted that this survey is undertaken at the beginning of the academic year, therefore, the numbers on Diplomas/Construction Awards may decrease as the year progresses and more trainees are placed with employers. Thus trainees will move into the relevant NVQ Level qualification.

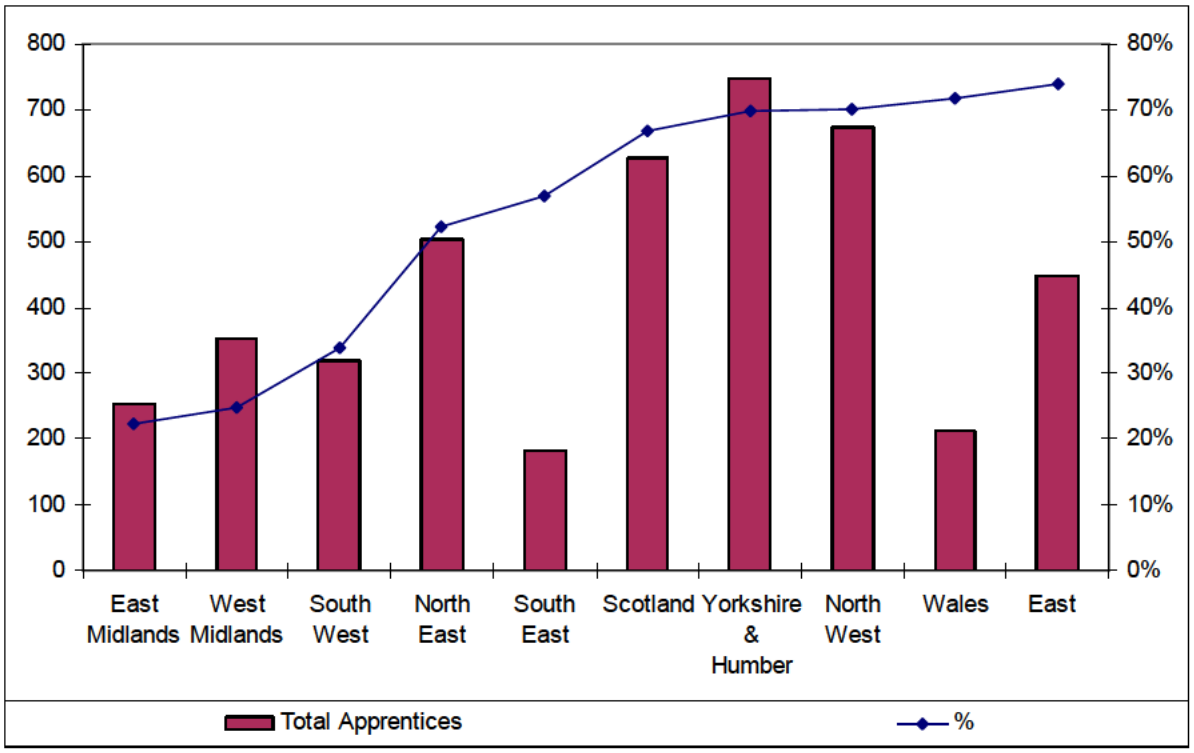
Apprentices

Overall, there are 4,348 first-year trainees following an apprenticeship programme (50% of the total number of S/NVQ Level 2 and Level 3 trainees).

Of the total number of apprentices, 2,989 (69%) are undertaking a Level 2 qualification with the remaining 1,359 (31%) on a Level 3. These shares are very similar to the previous academic year (72% and 28% respectively). However, as a proportion of the total number of starters undertaking each level, 46% of Level 2 trainees are following an apprenticeship programme which increases to 61% of all Level 3 trainees.

Chart 7 shows the absolute number of trainees following an apprenticeship programme and their share of all craft training at both S/NVQ Level 2 and Level 3. This highlights that while the Yorkshire & Humber has the largest number of apprentices (747) who account for 13% of all apprentices, the East has the highest proportion of Level 2 and Level 3 first-year trainees following an apprenticeship programme (74%).

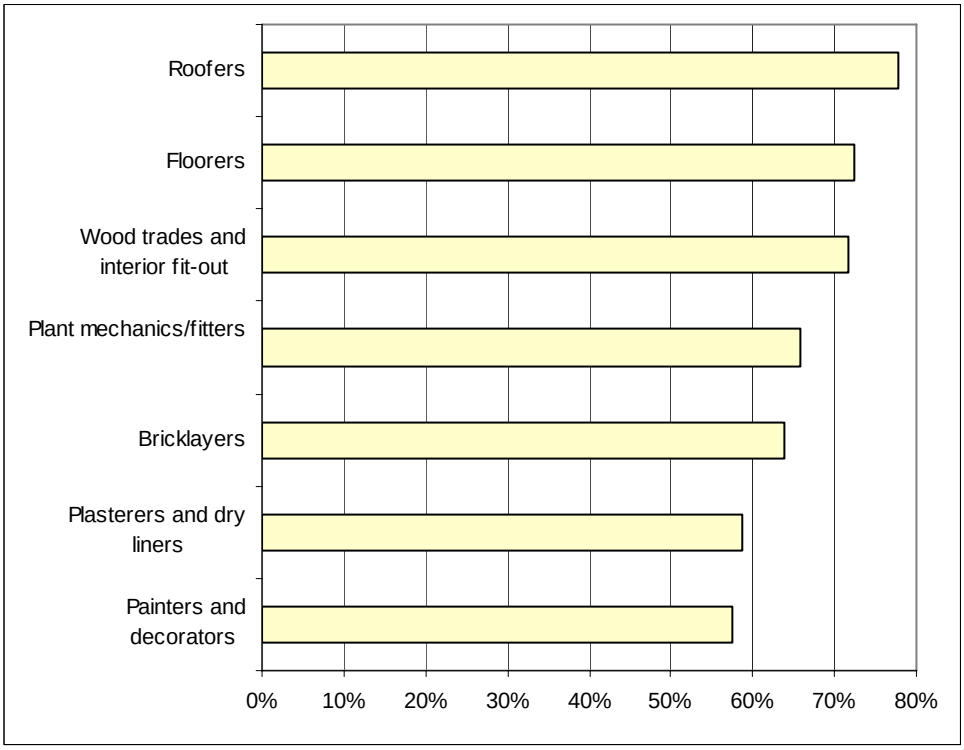
Chart 7 – Number and proportion of first-year trainees following an apprenticeship programme by area 2010/2011 (Great Britain: S/NVQ Level 2 and Level 3)



Note: Chart 7 only refers to qualifications which are available at S/NVQ Level 2 and Level 3. London had been excluded from the chart due to very small base sizes.

Analysis by occupation shows that apprentices are more likely to be found in the building craft trades (Plastering and dry lining, Bricklaying, Painting & decorating and Wood trades) accounting for 92% of all apprentices (see Chart 8). This has consistently been the trend, since 2005/06 they have represented over 80% of all apprentices.

Chart 8 – Proportion of first-year trainees following an apprenticeship programme by occupation 2010/2011 (Great Britain: S/NVQ Level 2 and Level 3)

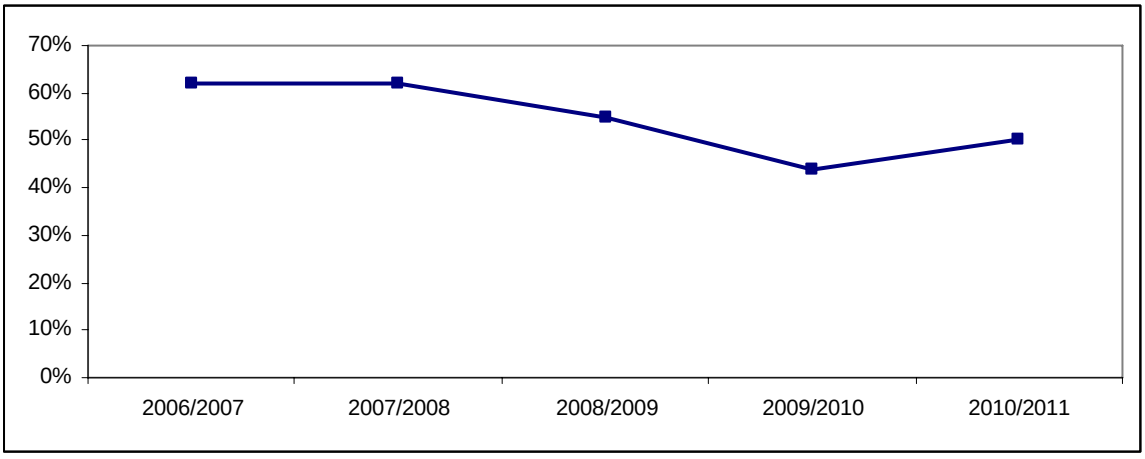


Note: Chart 8 only refers to qualifications that are available at both S/NVQ Level 2 and Level 3.

Unsurprisingly, the occupation with the largest absolute number of apprentices is wood trades (2,059), as would be expected given their dominance of the training figures (see Table 2). Although, as shown in Chart 8, roofers have the greatest share of trainees undertaking an apprenticeship programme (78%).

The share of trainees starting an apprenticeship programme has increased slightly this year, to a figure comparable to 2008/2009. As Chart 9 below shows however, this is some way below the levels reported between 2006 and 2008; when around six in ten starters on a S/NVQ Level 2 and 3 were apprentices.

Chart 9– Proportion of first-year trainees following an apprenticeship programme 2006-2010 (Great Britain S/NVQ Level 2 and Level 3)



First-year trainee characteristics

In addition to collecting data on the type of training new entrants start each academic year, the Trainee Numbers Survey also captures first-year trainee characteristics as defined by their age, gender and ethnic minority.

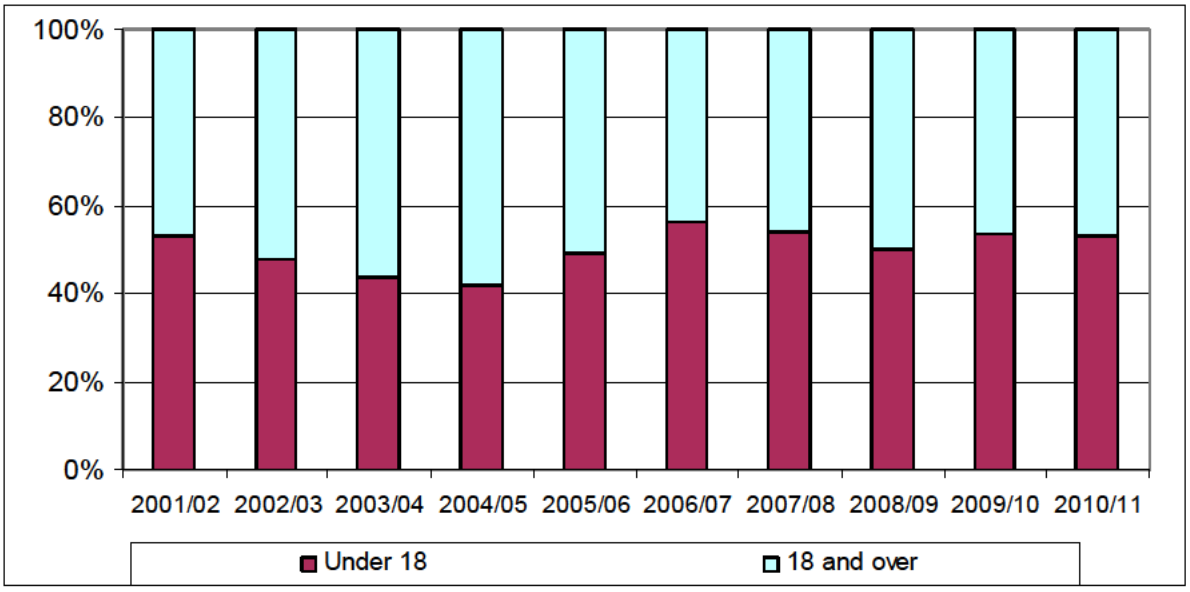
Age

The survey asks respondents to breakdown the number of starters undertaking each qualification into two, broad age categories:

- Under 18 years
- 18 years and over.

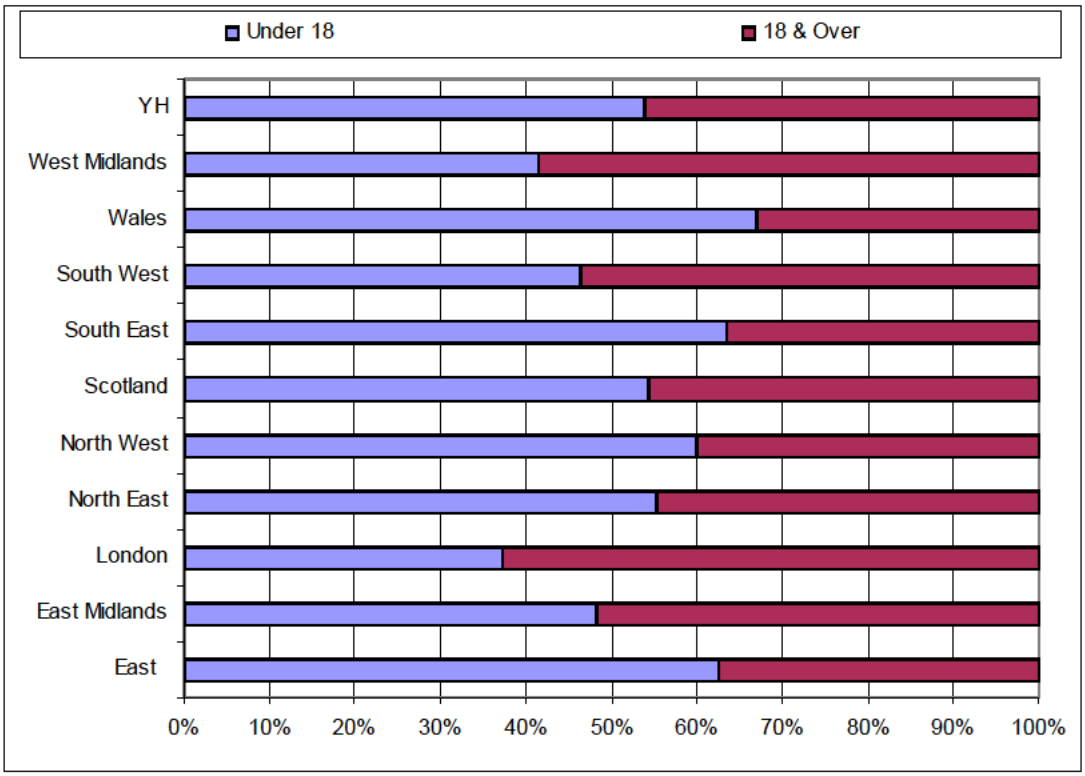
In 2010/2011 there were slightly more starters aged under 18 years (53%). However as highlighted in Chart 10 the breakdown of first-year trainees by age over the past decade has been fairly consistent with a 50/50 split.

Chart 10 - Age of first-year trainees as a proportion of total 2001–2010 (Great Britain)



Split by geographical area, Chart 11 shows that as a proportion of all starters in the area, the East, Wales, the South East and the North West all have at least 60% of starters aged under-18 years, while London has the highest proportion of adults, accounting for three in five (63%) of their trainees.

Chart 11 – Age of first-year trainees by geographical area 2010/2011 (Great Britain)



Gender

The number of first-year trainees broken down by gender is shown in Table 3.

Table 3 – Number of first-year trainees broken down by gender and age 2010/2011 (Great Britain)

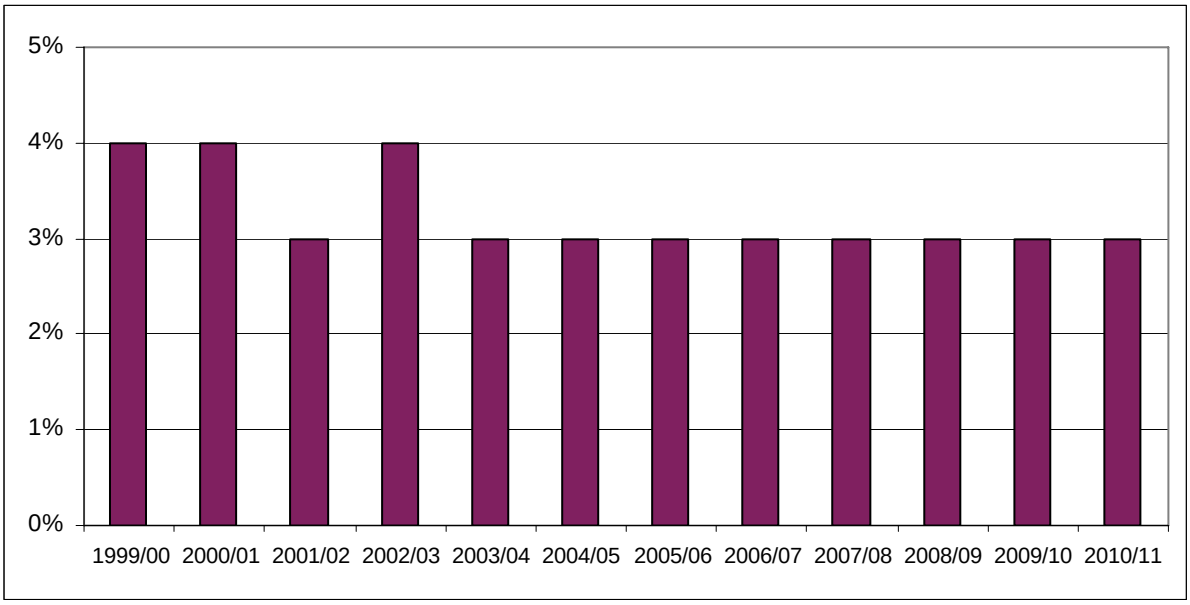
Under 18 years		18 years and over		Total	
Male	Female	Male	Female	Male	Female
14,102	407	12,136	539	26,238	946
52%	1%	45%	2%	97%	3%

Table 3 shows that in the academic year 2010/2011 there were 946 (3%) female starters compared to 26,238 (97%) males. These proportional splits have remained unchanged since 2003/2004, as depicted in Chart 12, which also shows how the share of female starters has remained between 3% or 4% since 1999/2000.

The proportion of women entering construction training is lower than their representation within the construction workforce where they currently account for 10% of employment in Great Britain[g]. However, the majority of these women are working in non-manual trades (92%). Currently only 1% of the manual construction workforce is women compared to 28% of the non-manual workforce.

[g] Labour Force Survey, 4 quarter average to Spring 2010 (SIC45) Great Britain

Chart 12 – Female first-year trainees as a proportion of the total number of first-year trainees 1999–2010(Great Britain)



Analysis by geographical area found that in 2010/2011 Yorkshire and Humber and Scotland had the highest absolute number of female starters (with 163 and 158 respectively), both accounting for 17% each of the overall number of female starts. As a proportion of trainees in the area, London and Scotland both had a higher than average share of females (10% and 7% respectively). Across the remaining areas of Great Britain, the majority are consistent with the average figure of 3%. London has consistently had the highest proportion of female starters over the past nine years.

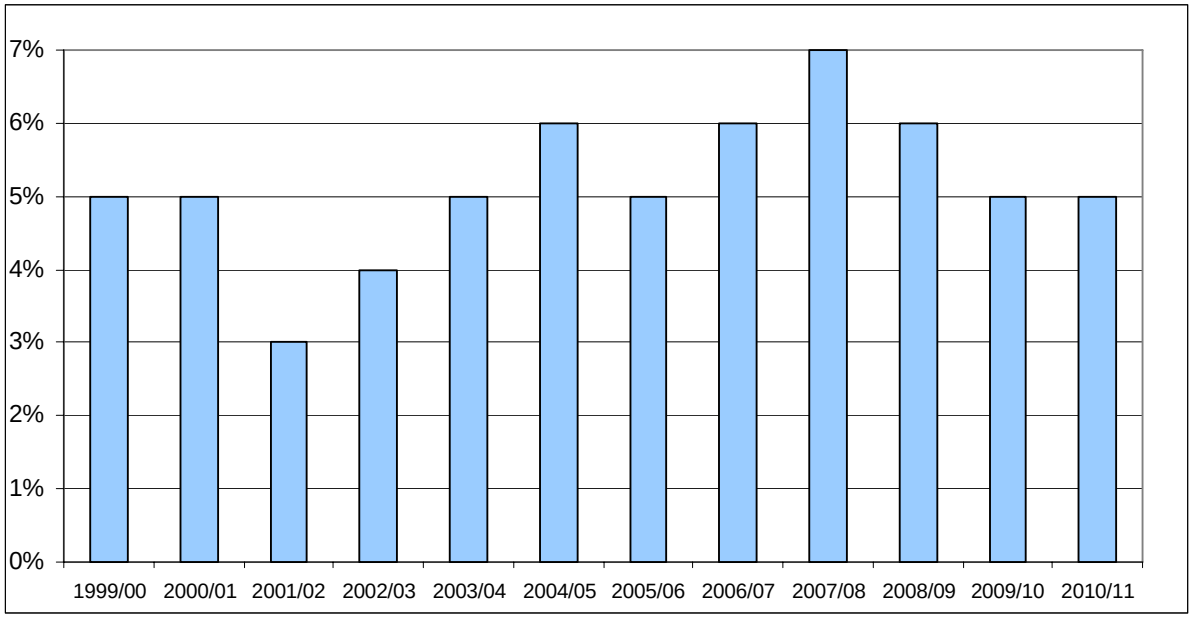
Analysis by occupation illustrates that female starters were far more likely to be studying towards a professional occupation. Females represented 11% of all starters on a professional qualification, ranging from 11% of Civil Engineers to 34% of all Surveying trainees. Within the craft trades, females were more likely to be on painting and decorating courses (12%). These findings are consistent with the representation of females in the construction workforce. The Labour Force Survey (Spring 2010) employment by occupation data illustrates that painting and decorating is the craft trade which has the highest representation of women (3%), it also highlights that females are more likely to be employed in a professional occupation, for example 12% of building and civil engineering technicians are women [h]

[h] Labour Force Survey, 4 quarter average Spring 2010 Great Britain

Ethnic minorities

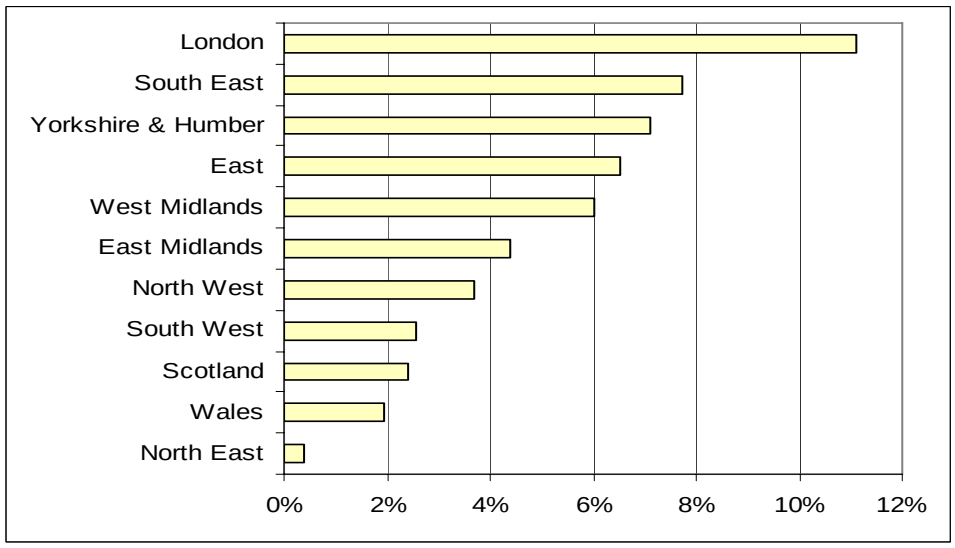
The number of first-year trainees who are from an ethnic minority stands at 1,292 in 2010/2011 or 5% of the total. During the past ten years the share of ethnic minorities in construction training has been fairly consistent – averaging 5%. This is identical to their representation within the construction workforce.[i]

Chart 13 – Ethnic minority first-year trainees as a proportion of all first-year trainees 2000-2010 (Great Britain)



There is considerable disparity between the share of ethnic minority first-year trainees by geographical area, as shown in Chart 14. London has the highest proportion of ethnic minority starters accounting for 11% of all new entrants in the region; this has been a consistent trend over the past decade.

Chart 14 – Ethnic minority first-year trainees as proportion of all first-year trainees by geographical area (Great Britain)



[i] Labour Force Survey, 4 quarter average Spring 2010

Section 2: Forecasted Demand for Craft and Technical Construction Training 2011–2015

ConstructionSkills, through the Construction Skills Network[j], publishes a forecast of the likely demand for skilled construction workers over the next five years – the longest period over which such a forecast can reasonably be made. 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 forecasts is reproduced in the following two tables: Table 4 (by geographical area) and Table 5 (by construction trades).

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

	Total employment		Average annual requirement
	2011	2015	2011-2015
East	86,600	96,980	2,510
East Midlands	62,140	66,890	1,750
London	106,980	114,670	2,300
North East	38,610	42,380	1,470
North West	92,220	95,720	3,180
Scotland	88,760	96,240	2,550
South East	126,250	136,860	2,910
South West	74,750	80,750	1,580
Wales	46,350	48,880	1,980
West Midlands	76,010	81,830	700
Yorkshire & Humber	86,100	92,720	1,630
Total	**884,770**	**953,920**	**22,560**

Source: ConstructionSkills Employment Model, 2011

Note: Table 4 is a subset of the table that appears in Blueprint for UK Construction Skills 2011-2015 report. It covers only the skilled manual trades and excludes managers, clerical staff, technical staff and professional occupations.

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

[j] Construction Skills Network, Blueprint for UK Construction Skills 2011 to 2015 http://www.cskills.org/uploads/csn20011-2015uk_tcm17-24498.pdf

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

	Employment forecast		Average annual requirement 2011-2015
	2011	2015	
Main trades			
Wood trades and interior fit-out	253,830	272,990	5,920
Bricklayers	62,000	64,820	2,060
Building envelope specialists	90,690	97,060	1,610
Painters and decorators	114,820	122,990	3,440
Plasterers and dry liners	46,530	51,340	1,130
Main trades total	**567,870**	**609,200**	**14,160**
Specialist building trades			
Roofers	38,410	41,420	480
Floorers	31,650	32,970	1,430
Glaziers	26,590	28,570	1,150
Specialist building operatives nec*	48,650	52,720	1,230
Specialist building trades total	**145,300**	**155,680**	**4,290**
Civil engineers			
Scaffolders	17,790	20,160	470
Plant operatives	38,600	42,040	1,490
Plant mechanics/fitters	37,690	39,910	930
Steel erectors/structural	28,870	31,480	840
Civil engineering operatives nec*	48,650	55,450	380
Civil engineers total	**171,600**	**189,040**	**4,110**
Total	**884,770**	**953,920**	**22,560**

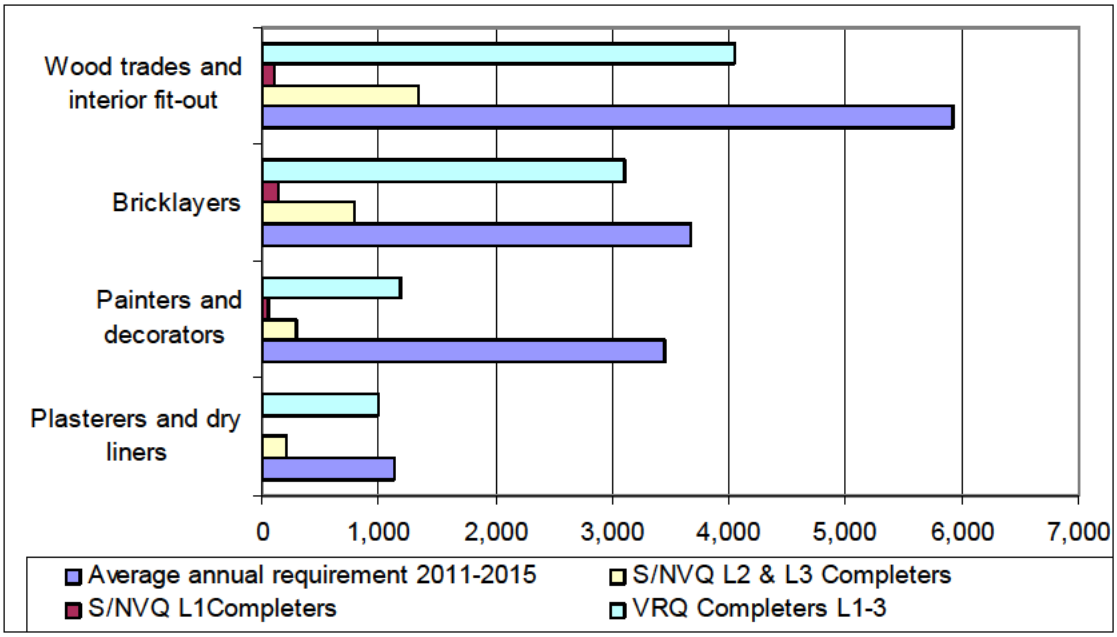
Source: ConstructionSkills Employment Model, 2011

Note: Table 5 is a subset of the table that appears in Blueprint for UK Construction Skills 20112015 report. It covers only the skilled manual trades and excludes managers, clerical staff, technical staff and professional occupations.

The industry needs to recruit 22,500 new entrants annually in each of the next five years in order to meet demand for the occupations listed above. By analysing this projected demand, alongside the amount of training taking place in the industry, it is possible to assess the adequacy of current training provision in terms of quantity.

Charts 15 and 16 compare the average annual requirement for skilled manual trades against the expected number of successful completers from the 2010/11 intake of trainees.

Chart 15 – Average annual requirement for main construction trades (2011-2015) and expected successful learner outcomes from the 2010/11 trainee intake. (Great Britain)



Source: Construction Skills Network Model 2011 ConstructionSkills Trainee Numbers Survey 2010/2011; Data Service 2009/2010

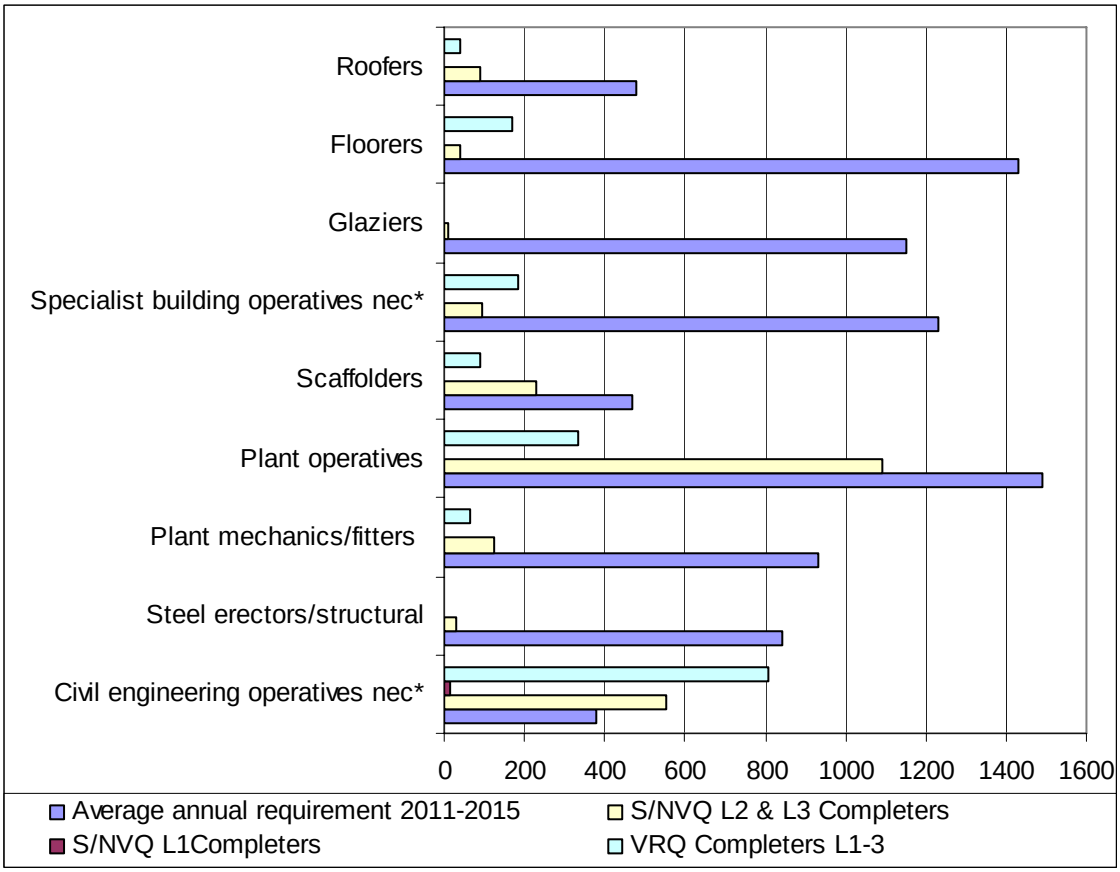
The bottom bar of the chart shows the average number of skilled workers that will be required to join the industry each year between 2011 and 2015. The remaining three bars show the expected number of completers across both S/NVQ and VRQ qualifications at Levels 1, 2 and 3. S/NVQ Level 2 and Level 3 completers are assumed to have been trained to a level where their skills are considered acceptable to work productively in the industry. As can be seen, none of the main trades are forecast to train sufficient S/NVQ Level 2 and Level 3 trainees to meet demand. Even with the addition of the S/NVQ Level 1 completers, whom are not considered sufficiently trained to meet the needs of the industry, demand is still not being met via the S/NVQ route.

The top bar of Chart 14 gives the expected number of completers on a Vocational Related Qualifications (VRQs), akin to S/NVQ Level 1 qualifications these are not considered sufficient to meet the needs of the industry, but do, in conjunction with S/NVQ Level 1 qualifications, provide a route into training which gives employers some flexibility in making up the short-fall in future years.

The inclusion of VRQs in this analysis is staggering, as it highlights the considerable amount of VRQ training being undertaken within the main trades. Their inclusion with S/NVQs in both plastering and wood trades shows an oversupply. Only painting and decorating does not show sufficient training currently being undertaken across all qualification levels to meet demand over the next five years.

The main construction trades account for approximately three-quarters (76%) of all manual occupation training compared to specialist builders and civil engineers who between them account for around a quarter (24%), and as Chart 16 shows, there is a considerable disparity between the supply and demand for skilled workers within these specialist and civil engineering trades.

Chart 16 – Average annual requirement for specialist construction trades and civil engineers (2011-2015) and expected successful learner outcomes from the 2010/11 trainee intake. (Great Britain)



Source: Construction Skills Network Model 2011 ConstructionSkills Trainee Numbers Survey 2010/2011; Data Service 2009/2010

Currently only civil engineering and plant operatives are training sufficient people to meet forecasted demand – in fact there appears to be a large over-supply of training within the civil engineering occupation group with the majority undertaking training via the VRQ route. Although plant operatives would appear to be training enough people to meet demand (96%), the average annual requirement figure represents the demand for skilled plant operatives in construction only; whereas approximately half of those currently in training will enter employment in another industry (e.g. agriculture, manufacturing, mining and quarrying).

Even with the combination of all types and levels of qualifications the other civil engineering and specialist trades are not training enough people to meet demand. The shortfall is greatest amongst steel erectors and glaziers, where formal training at Further Education colleges and private providers meets only 4% and 1% respectively.

The shortage of training places in civil engineering and specialist trades is exacerbated by the fact that there is little training available for these trades outside of the National Construction College and a very small number of specialist training centres.

Section 3: Construction Training Capacity 2010/2011

In recent years the construction industry has trained insufficient people to meet the demand for trained workers. The resultant shortfall has been made up in various ways, for example by people working more hours, delaying retirement, or using skilled migrant workers. The current decline in construction employment has meant that the shortfall in construction training is less of an issue in the short-term in the main trades, although it is still a very real problem in the specialist and civil engineering occupations. While training capacity is not at present a limit to training, it is still informative 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 when the economic circumstances improve.

This section summarises the findings of the capacity questions from the Trainee Numbers Survey. The results are based upon the responses of 139 training providers across Great Britain and applied to the overall results from the main survey. The data covers the skilled manual trades only.

Applicants by course

Table 6 shows that in 2010/2011 there were nearly 33,000 applicants for approximately 23,500 places on construction courses in the skilled manual trades, or 1.4 applicants for every place. This is slightly higher than the 1.3 applicants per place recorded in 2009/10, although the total number of applicants has declined by 16% between the past two academic years; replicating the overall decline in starters as discussed earlier.

Table 6 – Applicants and starters to skilled manual trade courses 2010/2011 (Great Britain)

Occupations	Applicants	Starters	*Applicants per starter*
Wood trades and interior fit-out	12,964	8,304	*1.6*
Bricklayers	8,072	5,712	*1.4*
Painters and decorators	3,072	2,262	*1.4*
Plasterers and dry liners	2,542	1,700	*1.5*
Main Trades Total	**26,650**	**17,978**	***1.5***
Roofers	**337**	**245**	*1.4*
Floorers	**507**	**319**	*1.6*
Glaziers	**12**	**12**	*1.0*
Specialist building operatives nec*	**246**	**232**	*1.1*
Specialist Operatives Total	**1,102**	**808**	***1.4***
Scaffolders	**530**	**528**	*1.0*
Plant operatives	**1,958**	**1,925**	*1.0*
Plant mechanics/fitters	**293**	**291**	*1.0*
Steel erectors/structural	**39**	**39**	*1.0*
Civil engineering operatives nec*	**2,167**	**1,941**	*1.1*
Civil Engineering Operatives Total	**4,987**	**4,724**	***1.1***
	32,739	**23,510**	***1.4***

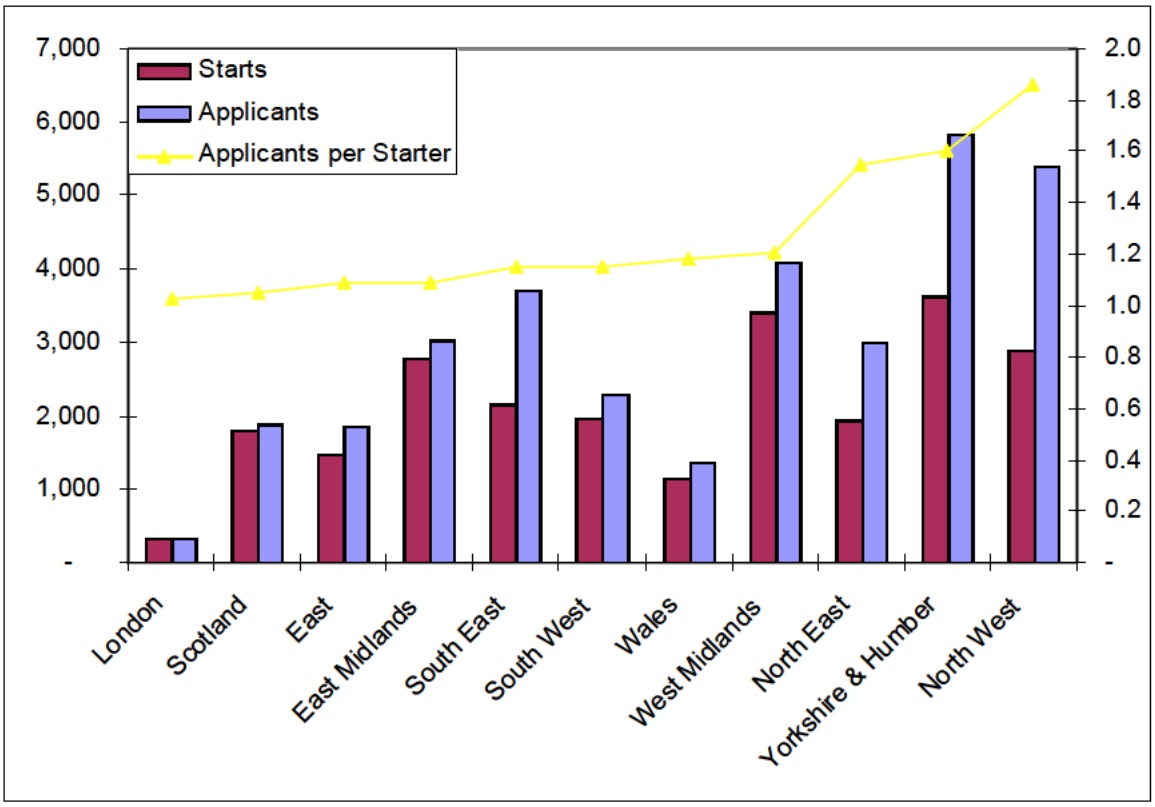
Source: ConstructionSkills Trainee Numbers Survey 2010/2011

The shortfall in training amongst specialist and civil engineering occupations can be seen by the fact that most applicants (with the exception of roofers and floorers) started a course, meaning that for those who can find a work placement, now is a good time to train in these occupations. The fact that training is more robust amongst the main trades is emphasised by their applicant per starter ratio – especially in wood trades with 1.6 applicants per place.

Applicants by geographical area

Looking at training capacity in the skilled manual trades (as highlighted in Table 6) on a geographical basis, shows the North West as the most oversubscribed area, with 1.9 applicants for every place at a construction-training provider. Conversely all starters in London were successful in finding a place at a training provider.

Chart 17 – Applicants and Starters by geographical area 2010/2011



Source: ConstructionSkills Trainee Numbers Survey 2010/2011

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

Section 4: Higher Education in the Built Environment

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.[k]

Akin to information collected by the Trainee Numbers Survey showing starters on construction related vocational training courses (see Section 1), it is also possible to obtain data from HESA on student enrolments on built environment courses at higher education. Thus providing 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 2009/2010 while Trainee Numbers Survey figures refer to 2010/2011; hence direct comparison is not advisable. Additionally the HESA data covers the UK whereas the Trainee Numbers Survey is a measure of FE training across Great Britain.

Table 7 shows the number of starters at higher education institutions split by qualification aim and subject area. Overall there were 28,000 students of which half (52%) were studying towards a first degree with a further quarter (26%) beginning a post graduate degree. The remaining students were either starting on other undergraduate courses (16%) or commenced a foundation degree (6%).

Table 7 – Student enrolments on built environment courses by subject and qualification aim 2009/2010 (United Kingdom)

	Other Undergraduate	Foundation Degree	First Degree	Postgraduate Degree
Civil engineering	841	334	3,887	1,703
Architecture	745	79	4,184	1,962
Building	2,219	843	4,652	1,207
Landscape design	215	80	279	220
Planning (urban, rural & regional)	486	226	1,418	1,855
Others in architecture, building & planning	124	2	244	265
	4,630	**1,564**	**14,664**	**7,212**

Overall a building course was the most popular choice for students accounting for a third (32%) of the total number of starts. This pattern was consistent across all the undergraduate qualifications, whereas at Postgraduate level courses in Architecture had the largest share of starters (27%).

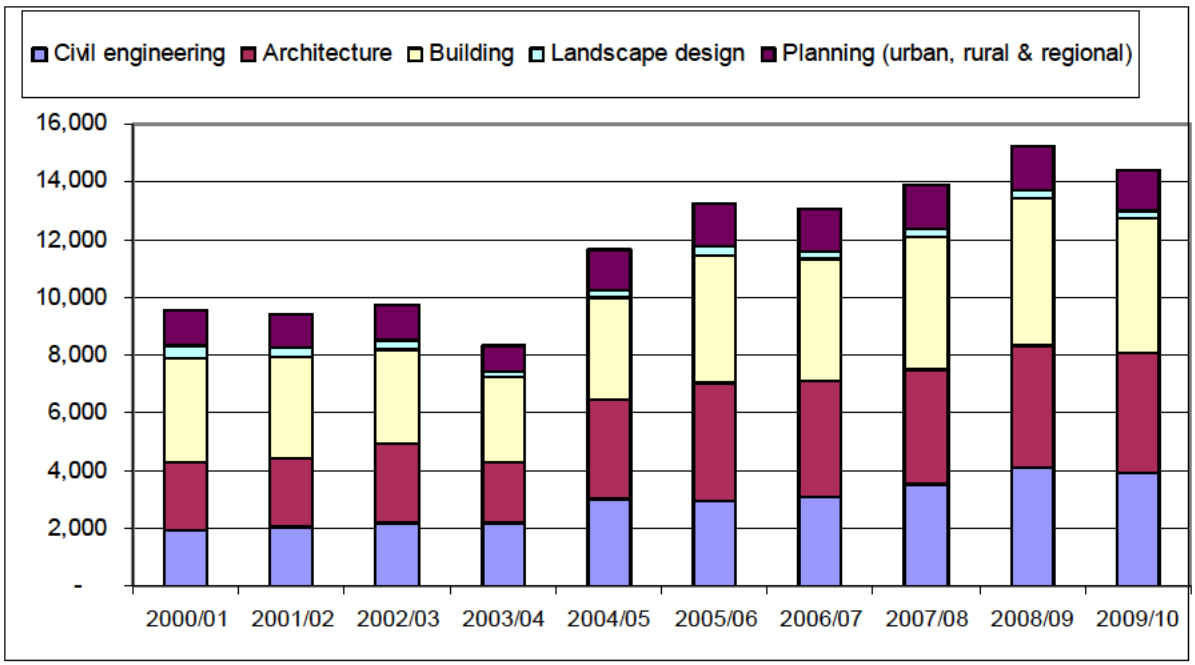
[k] For more information see www.hesa.ac.uk

First Degree

This section looks in more detail at First Degrees as these represent the largest share of higher education starters.

Chart 18 shows the ten year trend of students starting built environment first degrees. As it highlights, the total number of undergraduates was fairly stable between 2000/01 and 2002/03 at around 10,000. Following a decrease in 2003/04 the numbers increased significantly the following year (by 40%) and continued this rise in 2005/06 to a high of 13,260, decreasing slightly (1%) in 2006/07 to 13,072. Following a peak last year to just over 15,000 they now stand at nearly 14,500.

Chart 18 – Student enrolments on first degrees in built environment by subject 2009/2010 (United Kingdom)



The gender split of first degree starters remained unchanged over the six year period to 2009/2010 at roughly a quarter (24%) female to three-quarters male. By subject, Architecture was most popular for females, accounting for 45% of all female students whereas Building degrees had the highest proportion of males at just over a third (38%).

Chart 19 – Females enrolling on built environment courses by subject 2009/2010 (United Kingdom)

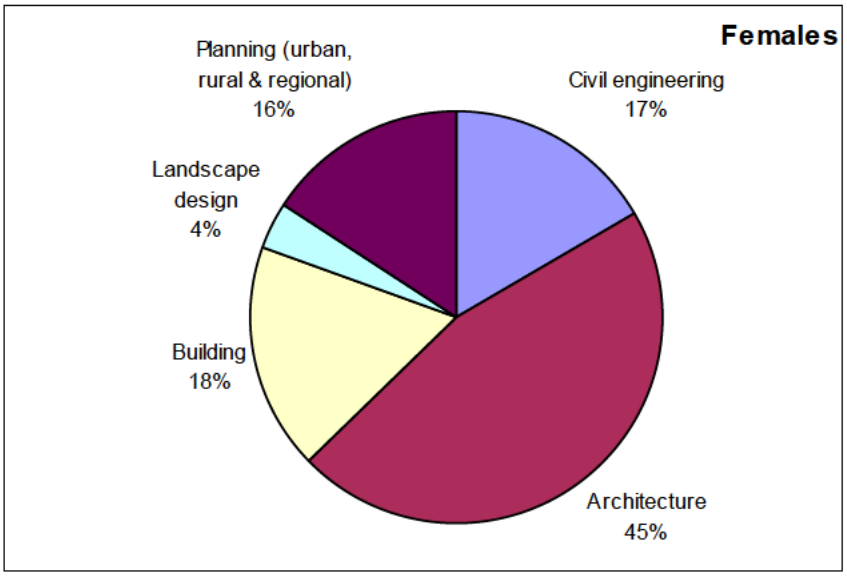
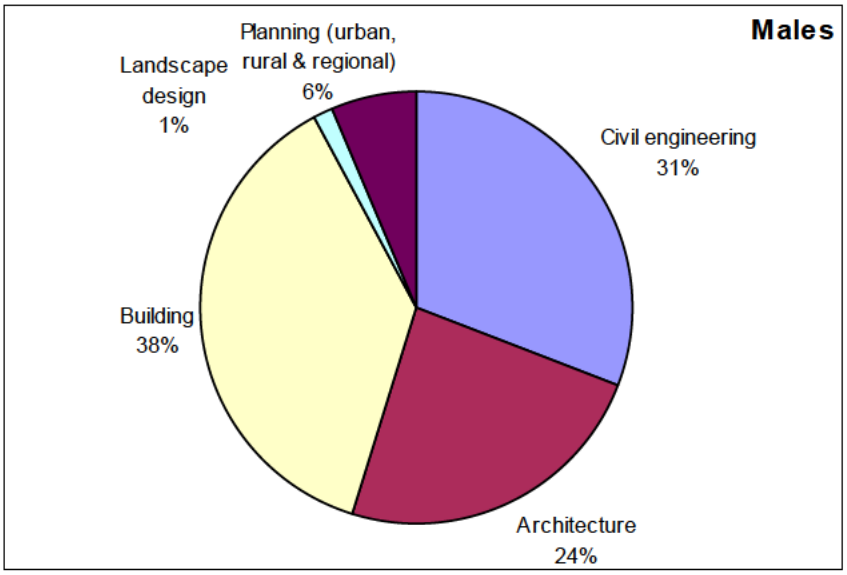


Chart 20 – Males enrolling on built environment courses by subject 2009/2010 (United Kingdom)



The ethnicity of undergraduates has also remained constant in the past six years with the largest majority (78%) classified as white and 20% from an ethnic minority (the remaining 2% are unknown). The largest ethnic minority groups - who account for a quarter of all ethnic minorities - are classified as Black or Black British – African (23%).

The representation of both females and students from ethnic minorities is higher at degree level than it is at craft and technical training (see Section 1). The Trainee Numbers Survey reports that 3% of craft and technical trainees are female and 5% are from an ethnic minority, compared to 24% and 20% respectively at degree level.

Conclusion

Construction training within the further education sector has fallen for the third consecutive year and now stands at its lowest level over the past two decades. Despite changes to the survey methodology introduced this year (2010/2011) which sought to ensure the exclusion of training being undertaken by the existing workforce (i.e. Train to Gain) the decrease is more likely to be a response to the continued economic uncertainty, and is undoubtedly replicating the decline in training witnessed during the recession of the early 1990s.

On the other hand, built environment courses in higher education do not appear to have been affected. Although enrolments decreased slightly in 2009/2010; they are still higher than the years prior to 2008/2009. However, changes and cuts in funding for Higher Education potentially means fewer university students and the impact of this will become more apparent in future years.

Conversely the Government's renewed interest in apprenticeships has resulted in an increased commitment and investment to support both youth and adult recruitment. Given the importance and relevance of Apprenticeships to the sector, this is a welcome boost for those occupations that primarily rely on them. Despite falls in overall training, apprentices have actually increased in 2010/2011 and their share of training appears to be much more stable probably a reflection of the contracted nature of apprenticeship training.

The economic climate is the most significant driver behind this trend for lower levels of all training. The ConstructionSkills' Employer Panel from November 2010 found that 27% of companies have reduced the amount of training they conduct as a result of the economic downturn, 20% have changed the way they deliver training and 18% have reduced next year's training budget. Demand, however, for apprenticeships remain relatively high, with two thirds of employees agreeing that there are more people who want to become apprentices than there are positions available; the constraint being the lack of placements with firms.

It is this lack of placements which has changed the composition of further education training in recent years, with a massive shift in qualifications being undertaken. Overall 63% of all starters on construction craft training are studying for a Diploma/Construction Award. These qualifications do not require any proof of work undertaken on site, as opposed to the S/NVQ framework, which requires on-site experience/assessment.

The latest construction forecasts[I] predict that the industry faces a tough year in 2011 with employment levels likely to drop by up to 76,000 before the sector returns to growth. Despite the industry performing better than expected in 2010; the sector is expected to contract by 1% during 2011. The initial decline will be followed by a period of stabilisation and sustained recovery with output growing steadily between 2013 and 2015 – expanding by an average of 1% across the whole forecast period.

By the end of the five-year cycle, output is predicted to be 6.2% above forecasted levels for 2011. This will mean a total of more than 200,000 new workers will be needed to complete planned projects, with an average annual recruitment requirement of 43,000. Therefore it is imperative that the industry continues to train to ensure there are enough skilled and qualified workers.

Whilst 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.

[I] Construction Skills Network, Blueprint for UK Construction Skills 2011 to 2015

Appendix

Figure 1 – First-year trainees by geographical area 2010/2011 (Great Britain)

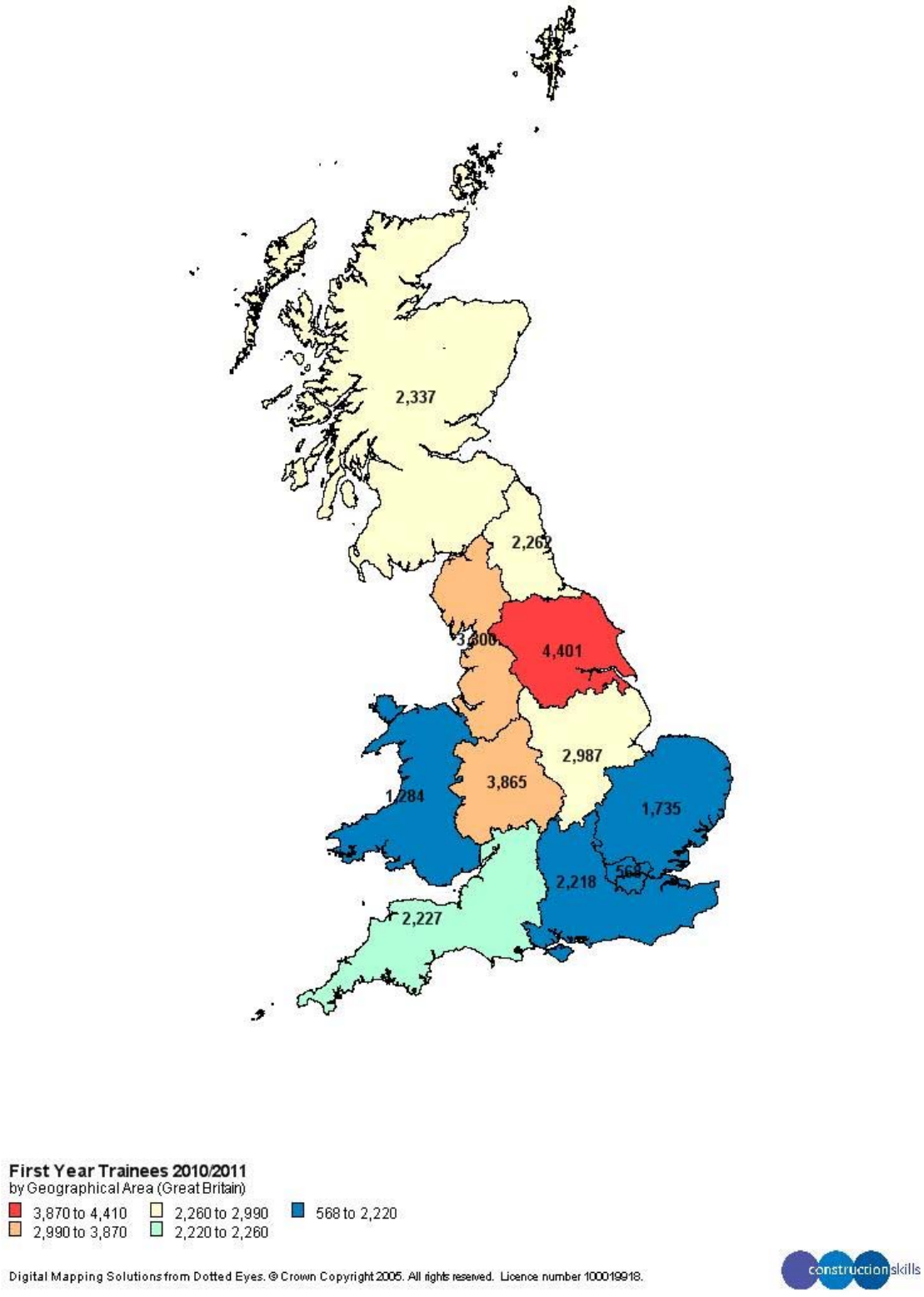


Figure 2 – Forecasted annual average requirement for skilled manual trade workers by geographical area 2011-2015 (Great Britain)

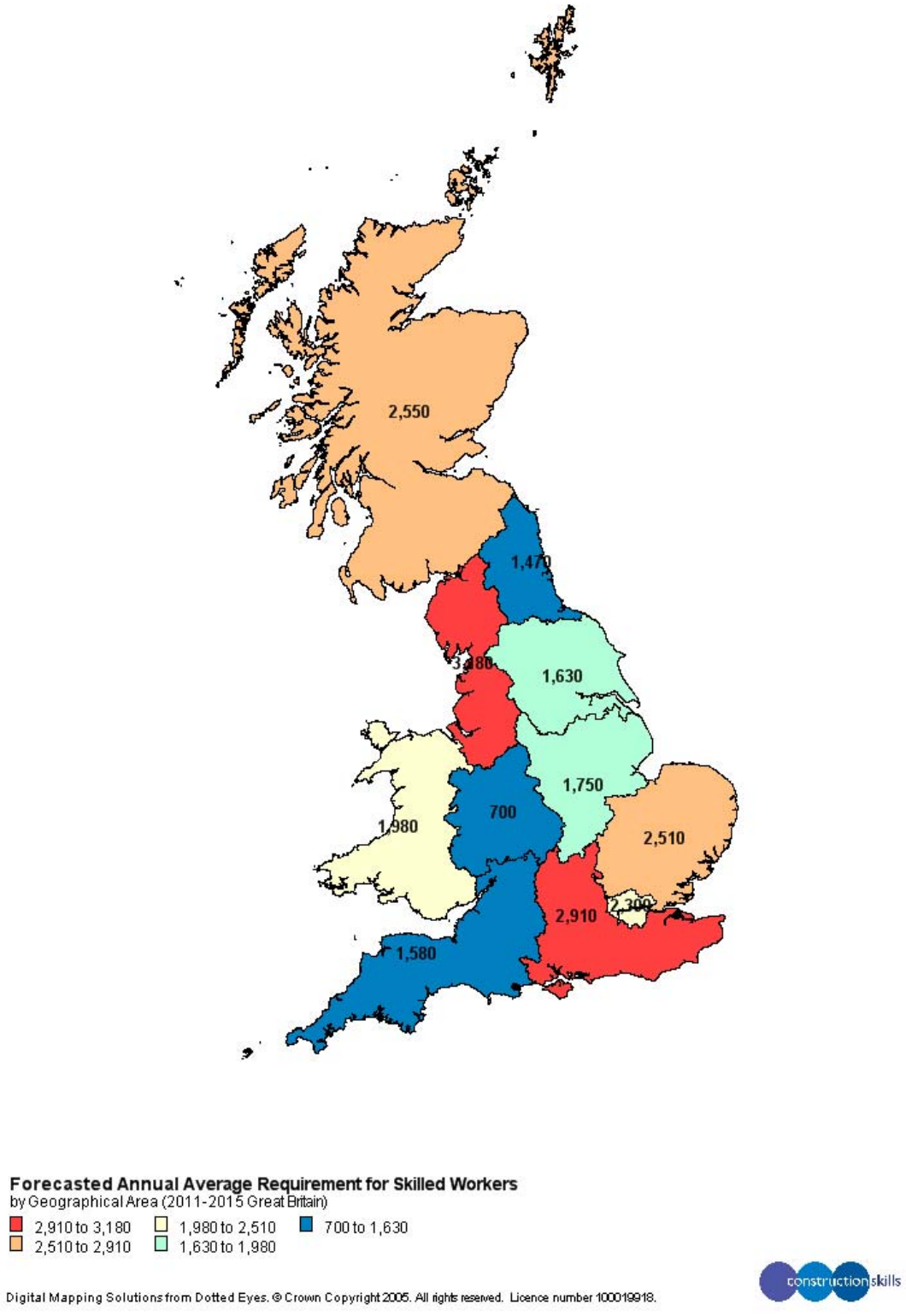


Figure 3 – Applicants to construction courses in the skilled manual trades by geographical area 2010/2011 (Great Britain)