

Training and the Built Environment Report 2009

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:

**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.

Improving business performance

- Increasing the number of companies investing in training.
- Developing management and leadership skills.
- Supporting lifelong learning in construction.
- Developing skills for sustainability.

Qualifying the existing workforce

- Intensifying and widening the industry's Qualifying the Workforce initiative.
- Developing flexible training structures for specialist occupations.
- Assisting the effective integration of migrant workers.

Recruiting qualified new entrants

- Improving understanding of career opportunities in construction.
- Increasing apprenticeship completions and widening opportunities for on-site practice.
- Ensuring that the construction industry workforce better reflects 'UK plc' population.
- Increasing applications for construction-related degree courses.

Improving the infrastructure in support of these priorities

- Improving intelligence on skills for the future.
- Further developing qualifications and progression routes to meet industry needs.

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 2008/2009 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 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 2009–2013 analyses this training data alongside the projected demand for skilled construction workers over the forecast period 2009–2013^a, in order to assess the adequacy of current training provision in terms of quantity.

Section 3: Construction Training Capacity 2008/2009 summarises the findings of the capacity questions from the Trainee Numbers Survey, which aimed to discover the total capacity for craft and technical construction 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 2007/2008.

^a Construction Skills Network, Blueprint for UK Construction Skills 2009 to 2013
http://www.cskills.org/uploads/Copy_of_UK_2009-13_tcm17-13718.pdf

Summary

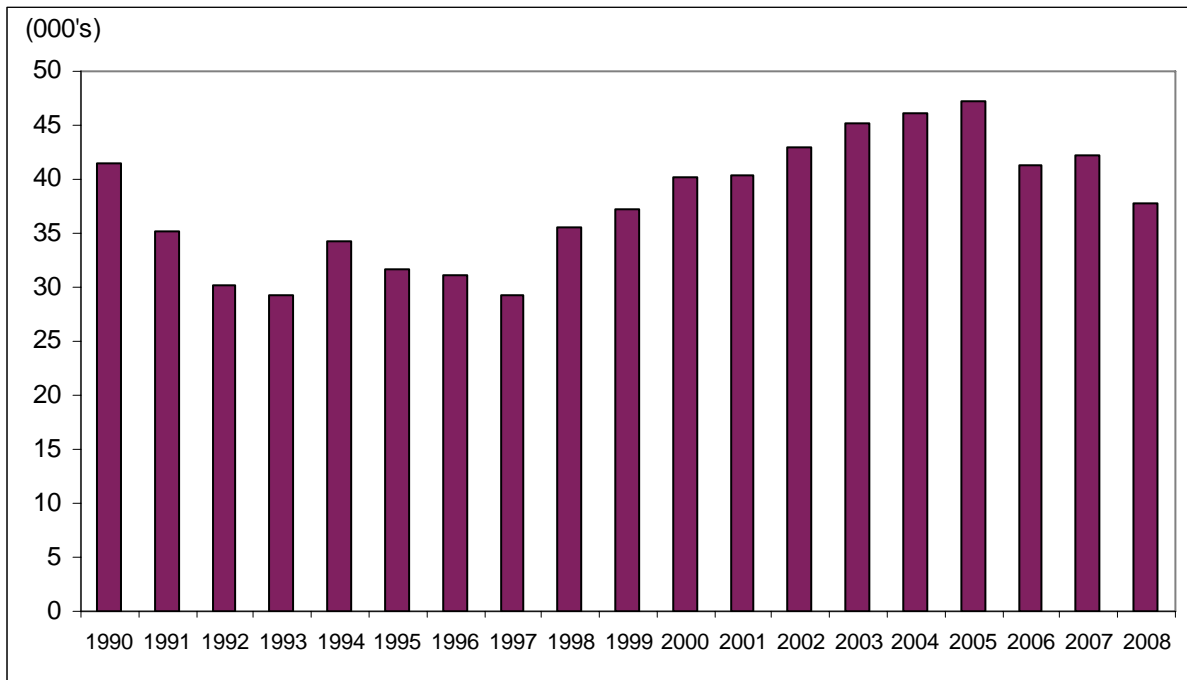
- First-year intake in 2008/2009 stands at just over 37,500. This represents a decrease on previous year's figures (11%), to the lowest level in the past decade.
- The composition of the top five occupations in terms of absolute numbers of starters are wood trades, bricklayers, plant operatives, technical occupations and painters – comparable to last year.
- Half of all first-year trainees are undertaking a Level 2 qualification.
- The North West has more starters than the other 10 regions/devolved administrations.
- Just under half of all first-year trainees undertaking craft training are work-based.
- Approximately 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 it is split 50/50 between trainees aged under 18 years and adult trainees.
- There are 1,149 female starters (3% of total).
- Ethnic minority starters account for 6% of the total, but there are strong geographical variations – rising to 38% in London.
- Predicted demand compared to the amount of training taking place shows that whilst there are expected to be sufficient bricklayers and wood trades leaving training providers, there will be a shortfall in plasterers and painting and decorating.
- Across all construction courses there are 25% more applicants than starters – which equates to an average of 1.2 applicants for every available place – slightly lower than last year (1.3)
- Bricklaying is the most oversubscribed courses.
- Foundation Construction Awards/Level 1 Diplomas are the most oversubscribed, while S/NVQ Level 1 and Level 3 are the least oversubscribed.
- There is considerable regional variation in the availability of work placements for trainees on Construction Awards
- The number of students starting a built environment course across the higher education sector stood at approximately 28,500 in the academic year 2007/2008, of which half (50%) were studying towards a first degree

Section 1: Trainee Numbers Survey 2008/2009

The national picture

The number of first-year trainees has decreased this year to just over 37,500, the lowest level over the past decade as depicted in Chart 1.

Chart 1 – Numbers of first-year trainees 1990–2008 (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.

The fall in training is indicative of the economic downturn. Chart 1 highlights how the recession of the early 1990s affected training in the construction industry as it underwent a prolonged period of low activity with a contracting workforce and low levels of recruitment. This years decline in training numbers (-11%) is very similar to the fall between 1990 and 1991 (-15%), therefore further falls in training can not be ruled out.

Training by occupation

The overall first-year intake in the academic year 2008/2009 is 37,714. Table 1 shows the breakdown for the 15 occupations covered by the survey.

Table 1 – Numbers of first-year trainees 2008/2009 (Great Britain)

Occupations	Under 18		18 and over		Total
	Male	Female	Male	Female	
Technical	1,359	93	2,470	332	4,254
Wood trades	7,520	75	3,804	92	11,491
Bricklayers	5,297	<50	2,370	70	7,778
Painters and decorators	1,656	201	978	171	3,006
Plasterers and dry liners	1,115	<50	833	<50	1,979
Roofers	125	0	165	0	290
Floorers	165	<50	315	<50	493
Glaziers	<50	0	<50	0	<50
Specialist building operatives	65	0	374	<50	441
Scaffolders	87	<50	591	0	681
Plant operatives	214	0	4,238	<50	4,461
Plant mechanics/fitters	179	0	325	<50	505
Steel erectors/structural	0	0	<50	0	<50
Civil engineering operatives	637	<50	1,596	<50	2,248
Maintenance workers	<50	0	<50	0	<50
	18,432	440	18,133	709	37,714

Table 2 lists the occupations in descending order, in terms of absolute number of starters for 2008/2009 shown over a five year period. Of these occupations, only three – Technical, civil engineering operatives and floorers - have more first-year trainees this year than the previous year, these have been shaded. The biggest increase is the number of new entrants on technical occupation courses. Conversely the biggest decrease has been in wood trade courses, where the numbers have decreased significantly to their lowest level over the five years, although they are still the largest occupational group.

Table 2 – Comparison of number of first-year trainees by occupation 2004/2005 to 2008/2009 (Great Britain)

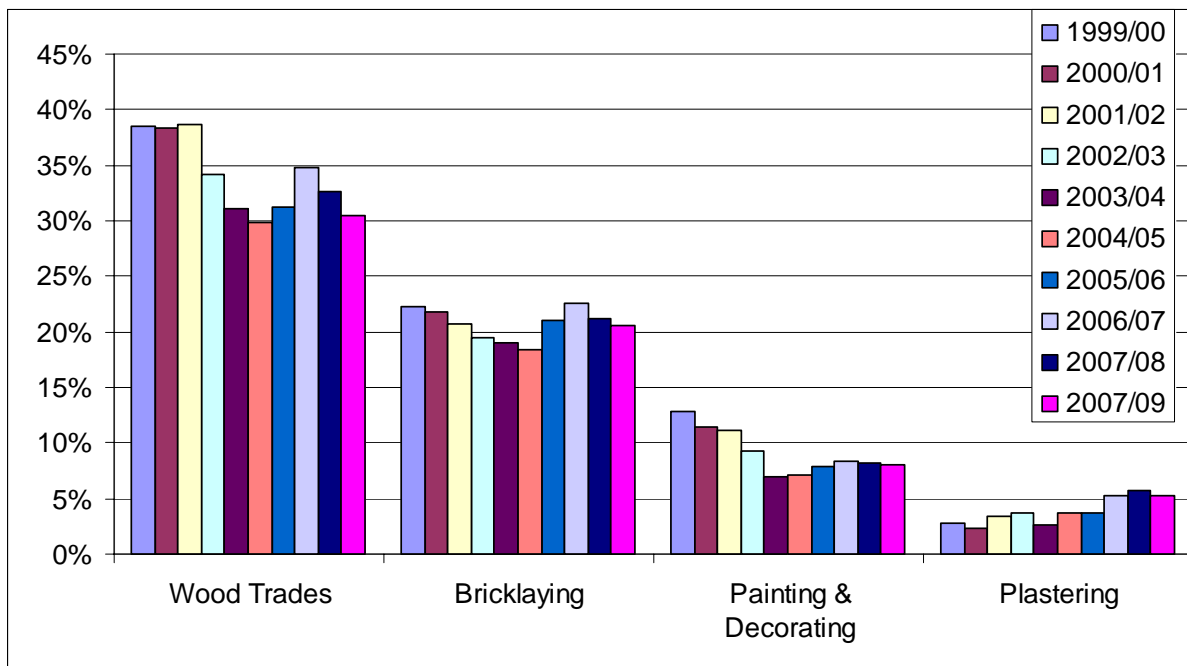
Occupations	2008/2009	2007/2008	2006/2007	2005/2006	2004/2005
Wood trades	11,491	13,743	14,404	14,785	13,719
Bricklayers & Building Envelope Specialists	7,778	8,949	9,338	9,959	8,473
Plant operatives	4,461	4,746	2,899	4,760	4,987
Technical	4,254	3,899	5,083	5,525	6,529
Painters and decorators	3,006	3,453	3,451	3,718	3,286
Civil engineering operatives	2,248	2,062	1,187	3,424	4,616
Plasterers and dry liners	1,979	2,407	2,151	1,746	1,678
Scaffolders	681	1,055	925	882	620
Plant mechanics/fitters	505	511	331	173	197
Floorers	493	442	553	818	958
Specialist building operatives	441	451	605	799	442
Roofers	290	394	342	335	300

Note: Table 2 only shows occupations with 50 or more starters in 2008/2009

The composition of the top five occupations in terms of size has remained unchanged between 2007/2008 and 2008/2009 – Wood Trades; Bricklayers & Building Envelope Specialists; Plant Operatives; Technical and Painters & Decorators.

Chart 2 looks specifically at the building craft occupations and the proportion they represent of all first-year trainees over a ten year period – 1999/2000 to 2008/2009. As mentioned above, Wood Trades and Bricklaying still dominate the first year training figures with 30% and 21% of the total training figure, respectively. However, as shown in Table 2 the four main building craft occupations have all witnessed a decrease in new starts this year.

Chart 2 – Proportion of first-year trainees 1999–2008 (Great Britain: Building craft occupations)



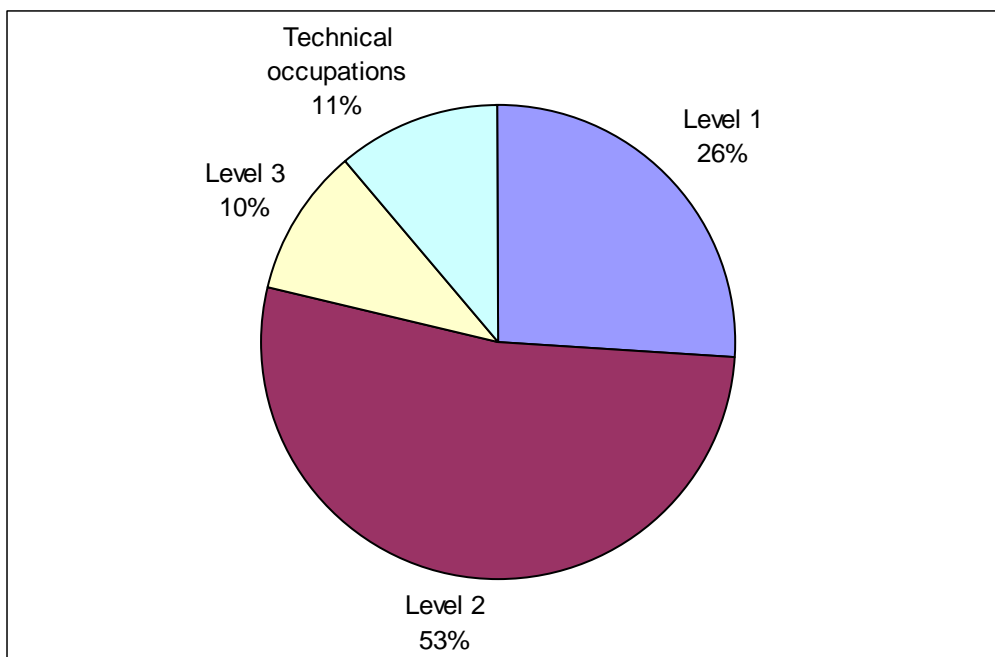
Training by qualification

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

- Level 1^b
- Level 2^c
- Level 3^d
- Technical occupations^e

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 2008/2009 (Great Britain)



Within Great Britain, just over half (53%) of the first-year trainees are undertaking a Level 2 qualification, while approximately a quarter (26%) are following an Level 1 course. The remaining trainees are new entrants on a higher level qualification. These proportions are very similar to the last academic year.

Please note that the Trainee Numbers Survey collects data from the Further Education sector and technical courses are also provided by Higher Education Institutions. See Section 4 for more information.

This pattern is consistent across the majority of Regional Development Areas of England and Wales, but there are notable differences in the East Midlands, London and Scotland. These are explored further in the section entitled Geographical considerations.

^b S/NVQ Level 1; Foundation Construction Award/Certificate or Level 1 Diploma

^c S/NVQ Level 2; Intermediate Construction Award/Certificate or Level 2 Diploma

^d S/NVQ Level 3; Advanced Construction Award/Certificate or Level 3 Diploma

^e Further and Higher Education courses (National Certificate/Diploma and Higher National Certificate/Diploma)

Trainee Progression

In order to gain an insight into the movement of trainees from Level 1 qualifications, the survey acquires data on the expected progression of trainees from both S/NVQ Level 1 and Foundation Construction Award/Level 1 Diplomas.

Across Great Britain, approximately three-quarters (76%) of S/NVQ Level 1 trainees were expected to progress to a higher level qualification. This is very similar to the proportion reported last year (74%) and shows a degree of consistency.

Just over two-thirds (65%) undertaking a Foundation Construction Award/Level 1 Diploma in England and Wales were predicted to progress to the Intermediate level during this academic year (2008/2009), this is nearly double the proportion predicted to progress last year (34%).

It is certainly encouraging that such a high proportion of both S/NVQ Level 1 and Foundation Construction Award/Level 1 Diploma trainees are likely to advance to a higher level qualification (seemingly a Level 2). This suggests that Level 1 qualifications provide the appropriate skills and knowledge to enable trainees progression to a Level 2, which as stated in the Leitch Review are *'the minimum platform of skills required for employment and business competitiveness, as global economic changes reduce the employment opportunities for the unskilled'*^f

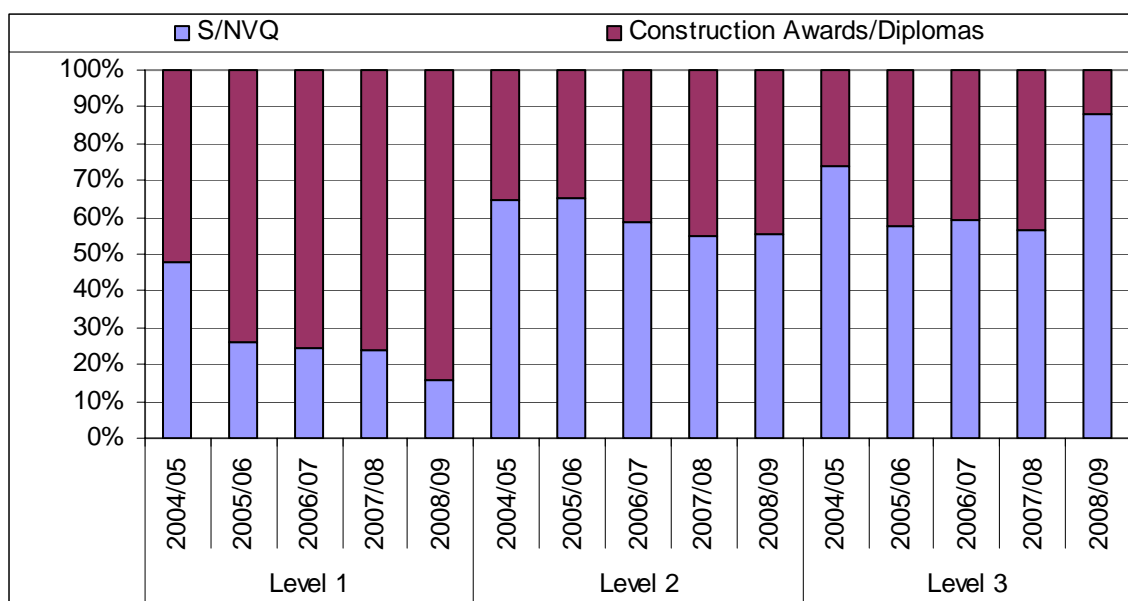
^f Leitch Review of Skills: Prosperity of all in the global economy – world class skills (December 2006) www.hm-treasury.gov.uk/leitch

Mode of Study

Construction Awards/Diplomas 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 Construction Awards/Diplomas in-line with the S/NVQ system – Foundation (Level 1), Intermediate (Level 2) and Advanced (Level 3).

Of the 33,538 starters undertaking construction craft training in England and Wales, 17,597 (52%) are studying for a Construction Award/Diploma. In other words, **48% of first-year craft trainees are involved in work-based training**. This year the number and proportion of starters undertaking a Construction Award/Diploma had decreased slightly.

Chart 4 – Proportion of first-year trainees split by work-based training 2003/2004 to 2008/2009 (Craft training in England and Wales)



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

As a proportion of starters in each level, there are more undertaking a Foundation Construction Award/Level 1 Diploma. This has increased quite substantially since 2004/05 and now stands at 84% of all starters on a level 1 qualification. While the share on a level 2 has remained broadly static, there has been a significant decrease at level 3 to a low of 12% this year.

It should be noted that this survey is undertaken at the beginning of the academic year, therefore, the numbers on Construction Awards/Diplomas will tend to decrease as the year progresses and more trainees are placed with employers. Thus trainees will move into the relevant NVQ Level qualification. In addition, as mentioned Training by Qualification training providers foresee two thirds of their Foundation Construction Award/Level 1 Diploma trainees advancing to an Intermediate Construction Award/Level 2 Diploma during this academic year (2008/2009).

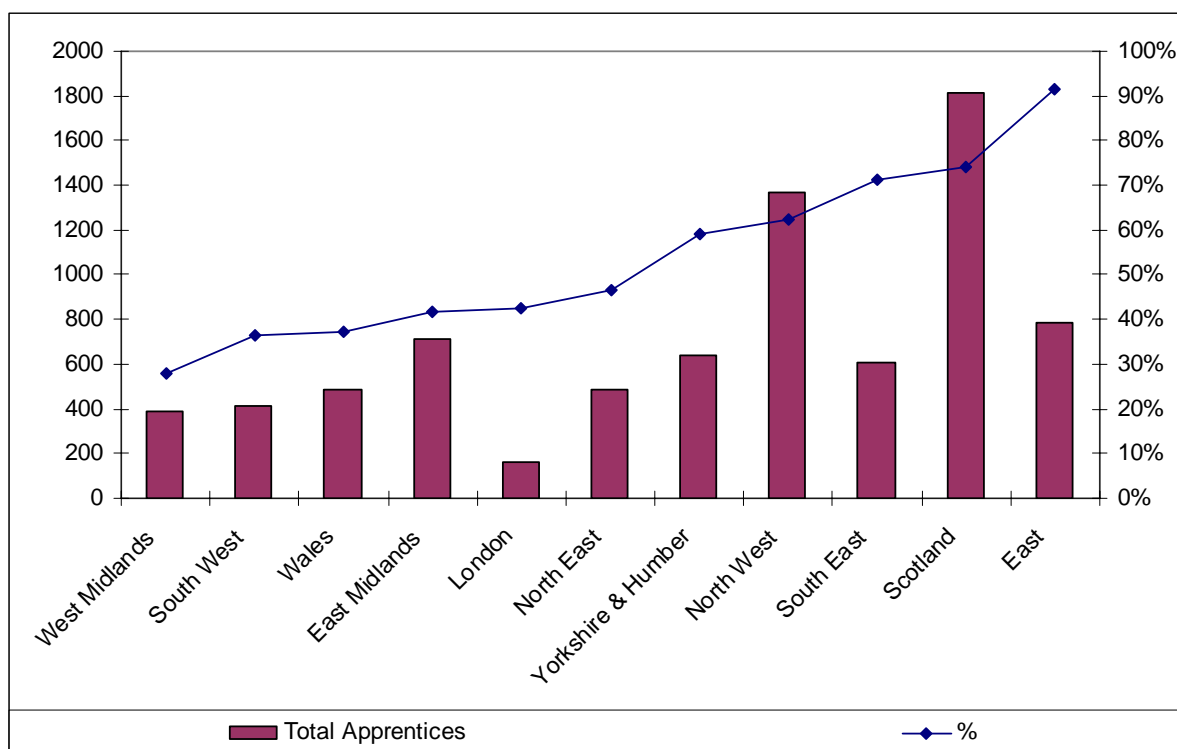
Apprentices

Overall, there are 7,862 first-year trainees following an apprenticeship programme (55% of the total number of S/NVQ Level 2 and Level 3 trainees).

Of the total number of apprentices, 5,447 (69%) are undertaking a Level 2 qualification with the remaining 2,415 (31%) on a Level 3. These shares are exactly the same as last year. However, as a proportion of the total number of starters undertaking each level 50% of Level 2 trainees are following an apprenticeship programme which increases to 72% of all Level 3 trainees.

Chart 5 shows the absolute number of trainees following an apprenticeship programme and their share of all craft training at both Level 2 and Level 3. This highlights that while Scotland has the largest number of apprentices (1,813) who account for 18% of all apprentices, the East has the highest proportion of Level 2 and Level 3 first-year trainees following an apprenticeship programme (91%).

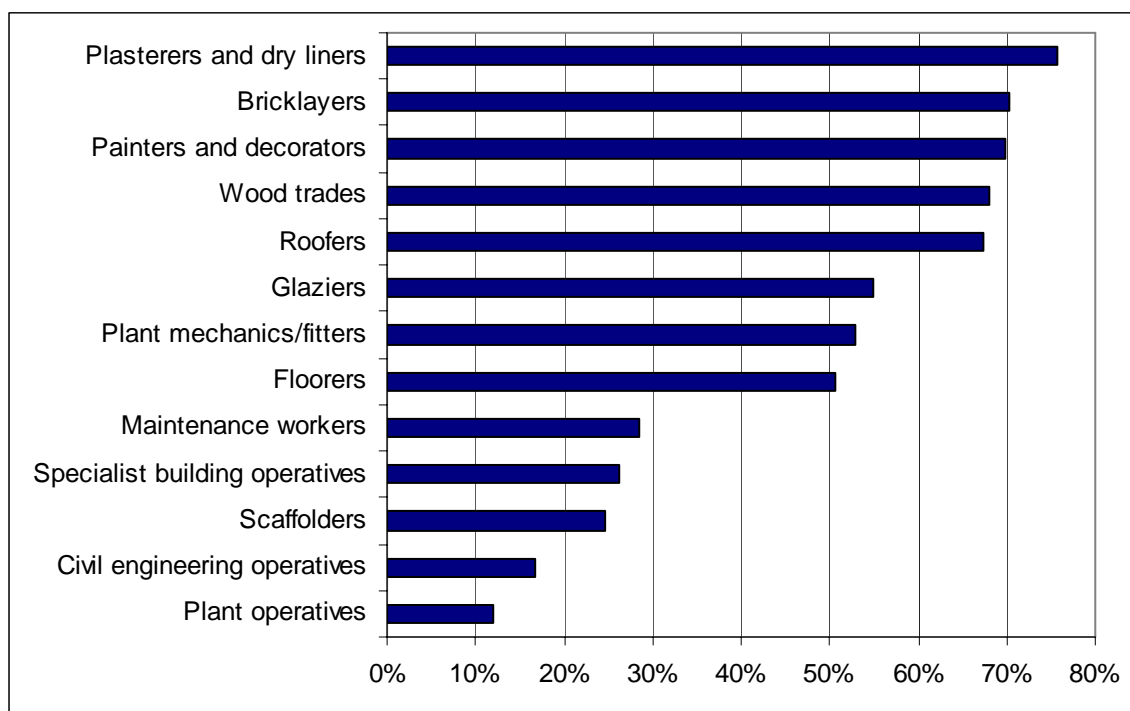
Chart 5 – Number and proportion of first-year trainees following an apprenticeship programme by area 2008/2009 (Total of S/NVQ Level 2 and Level 3)



Note: Chart 5 only refers to qualifications which are available at S/NVQ Level 2 and Level 3.

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 85% of all apprentices (see Chart 6). This has consistently been the trend, since 2005/06 they have represented over 80% of all apprentices.

Chart 6 – Proportion of first-year trainees following an apprenticeship programme by occupation 2008/2009 (Total of S/NVQ Level 2 and Level 3)



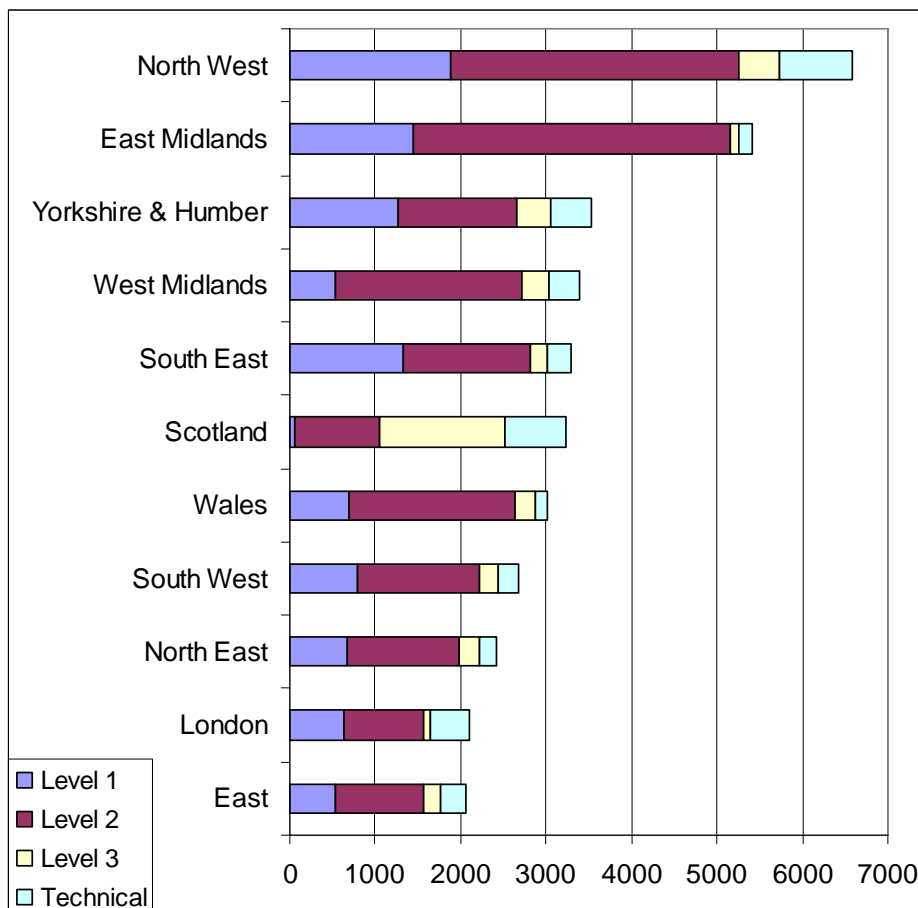
Note: Chart 6 only refers to qualifications that are available at both S/NVQ Level 2 and Level 3.

Unsurprisingly, the occupation with the largest absolute number of apprentices is wood trades (3,528), as would be expected given their dominance of the training figures (see Table 2). Although, as shown in Chart 6, plastering and drylining have the greatest share of trainees undertaking an apprenticeship programme (76%).

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 Regional Development Agency (RDA) area in England, Scotland and Wales.

Chart 7 – First-year trainees by level of qualification and geographical area: 2008/2009 (Great Britain)



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

Chart 7 above shows that the North West has the largest share of first-year trainees at approximately 6,500 while the East has the smallest share at just over 2,000 – accounting for 14% and 5% of the total number of trainees respectively.

Chart 4 also highlights how Scotland differs to the other areas by having the smallest share of trainees on an SVQ Level 1 and SVQ Level 2 but the largest share undertaking the higher level qualifications.

Conversely the East Midlands only has 5% of its trainees undertaking the higher level qualifications, while two thirds are starting on a Level 2 – the highest proportion across all areas. The South East meanwhile has a much higher than average intake onto Level 1 qualifications at 40%.

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:

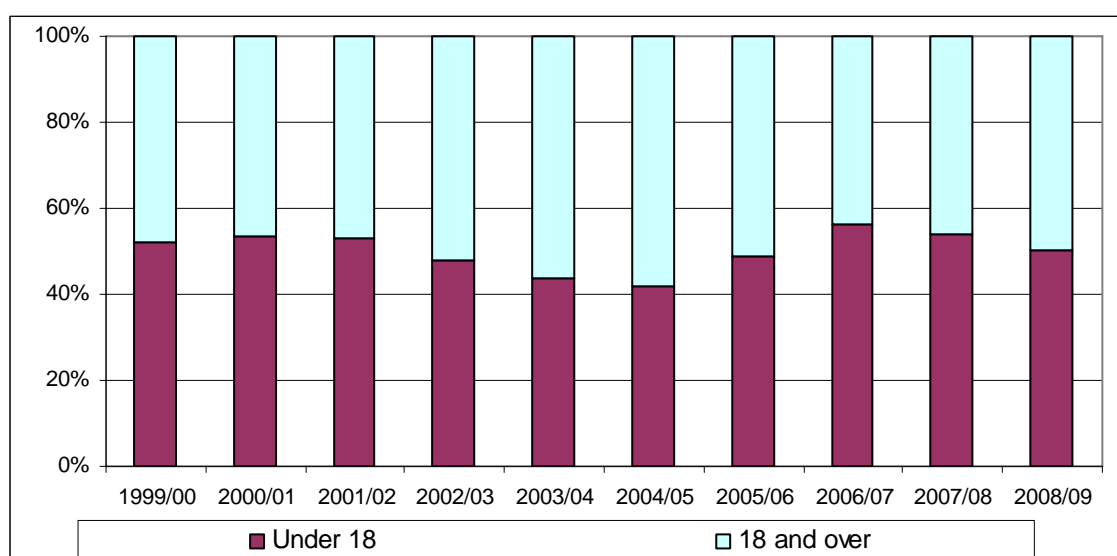
- Under 18 years
- 18 years and over.

Table 3 – Breakdown of first-year trainees by age and level of qualification 2008/2009 (Great Britain)

	Under 18 years	18 years and over	Total
Level 1	7787 79%	2041 21%	9828
Level 2	8417 42%	11395 58%	19812
Level 3	1216 31%	2682 69%	3898
Technical Occupations	1452 35%	2724 65%	4176
	18872 50%	18842 50%	37714

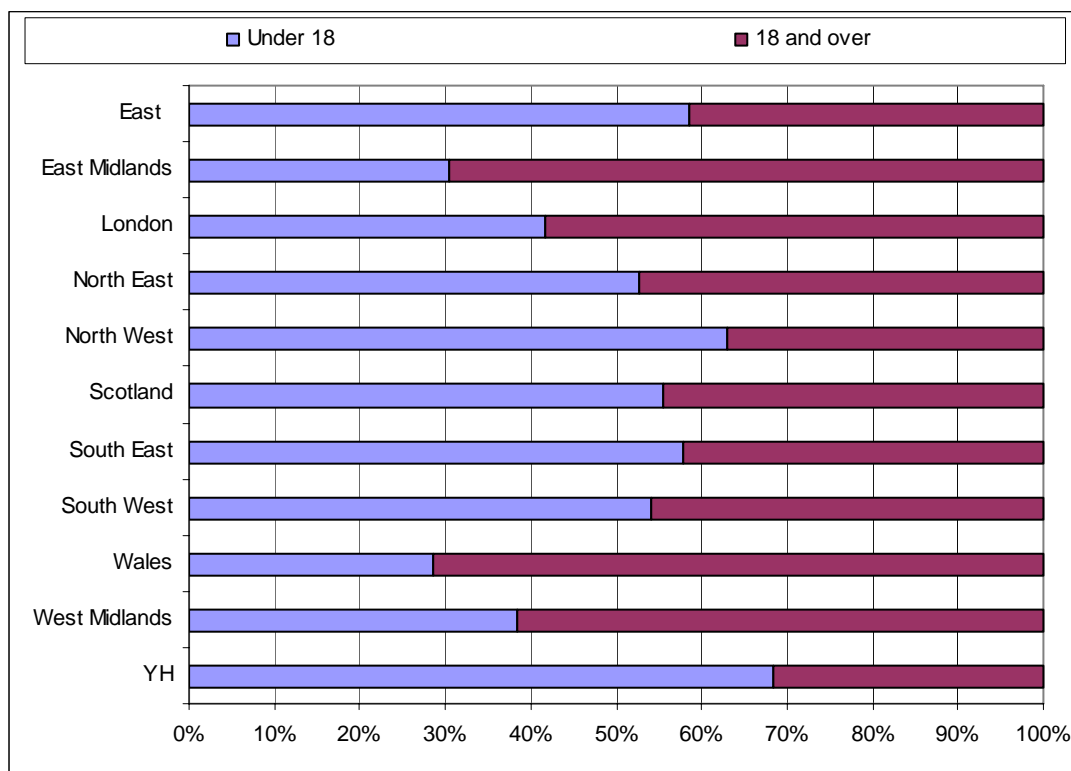
As would be expected, younger starters dominate in Level 1 qualifications and decrease as the level of qualification increases. Overall, the breakdown of first-year trainees by age shows that it is split exactly in half. Over the past ten years the split between trainees aged under 18 years and those aged 18 and over has been fairly consistent, as highlighted in Chart 8.

Chart 8 – Age of first-year trainees as a proportion of total 1999–2008 (Great Britain)



Split by geographical area, Chart 9 shows that as a proportion of all starters in the area, Yorkshire and Humber has more under-18s, while both the East Midlands and Wales has the highest proportion of adults, accounting for nearly three-quarters of their trainees.

Chart 9 – Age of first-year trainees by geographical area 2008/2009 (Great Britain)



Gender

The number of first-year trainees broken down by gender is shown in Table 4.

Table 4 – Number of first-year trainees broken down by gender and age 2008/2009 (Great Britain)

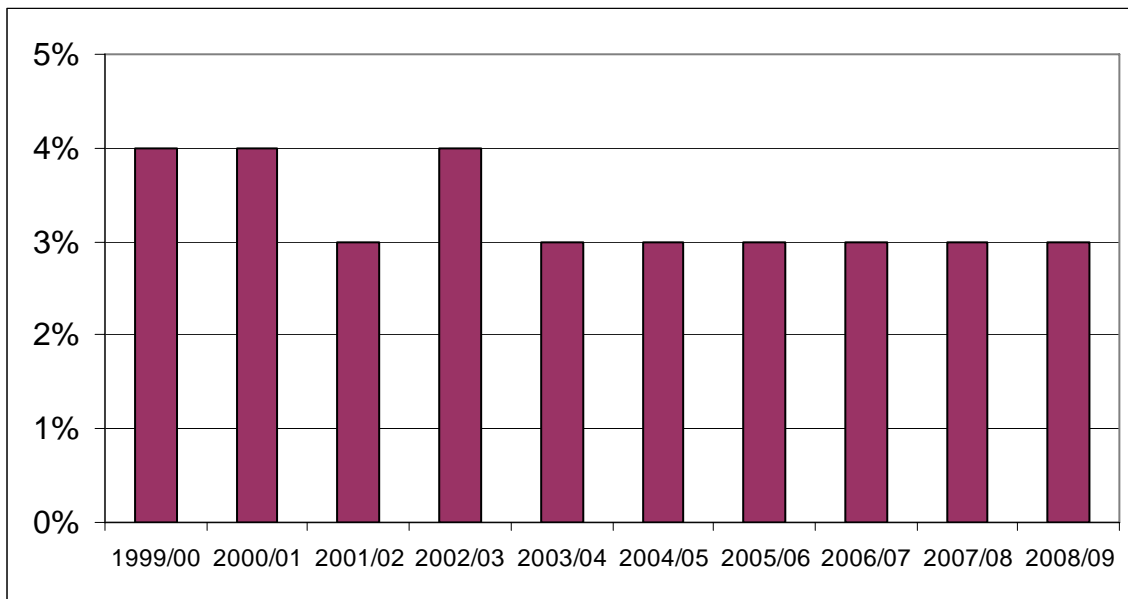
Under 18 years		18 years and over		Total	
Male	Female	Male	Female	Male	Female
18,432	440	18,133	709	36,565	1,149
49%	1%	48%	2%	97%	3%

Table 4 shows that in the academic year 2008/2009 there were 1,149 (3%) female starters compared to 36,565 (97%) males. These proportions are exactly the same as the previous six academic years, as depicted in Chart 10, 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 9% of employment in Great Britain⁹.

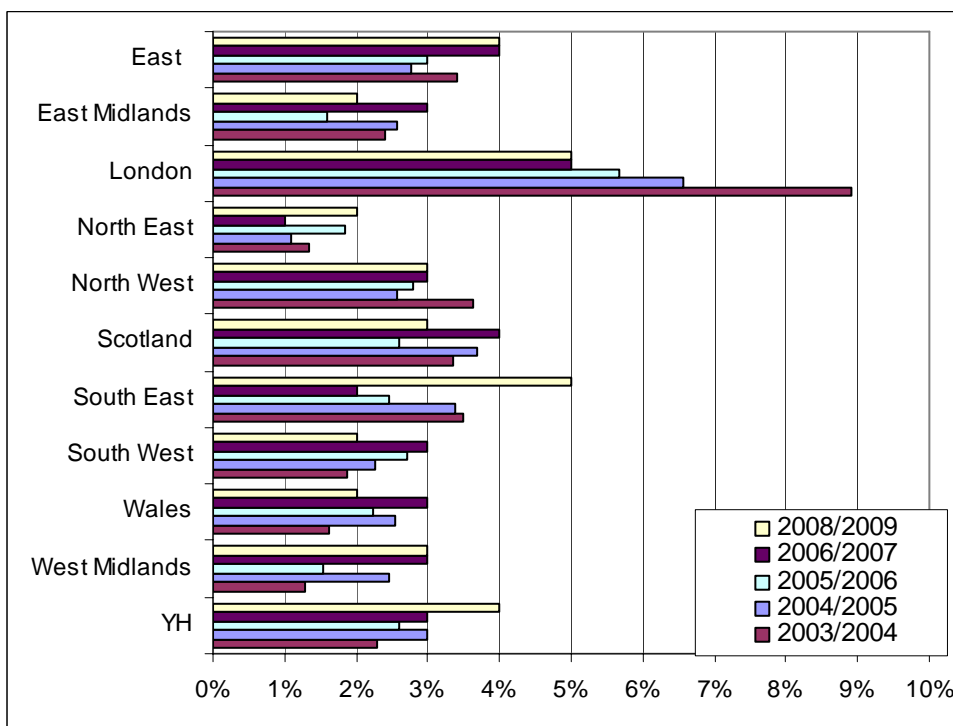
⁹ Labour Force Survey, Spring 2008 (SIC45) Great Britain

Chart 10 – Female first-year trainees as a proportion of the total number of first-year trainees 1999–2008(Great Britain)



Analysis by geographical area shows that in 2008/2009 the North West has the highest absolute number (198) of female starters, accounting for 17% of the overall number of female starts. London and the South East both have the highest share of females (5%) as a proportion of trainees in the area. As highlighted in Chart 11, London has consistently had the highest proportion of female starters, although this has decreased over the past five years from a high of 9%, while the South East has significantly increased their share. Across the remaining areas of Great Britain, the majority of areas are consistent with the average figure of 3%.

Chart 11 – Female first-year trainees as proportion of all trainees by geographical area (Great Britain: Five-year trend)

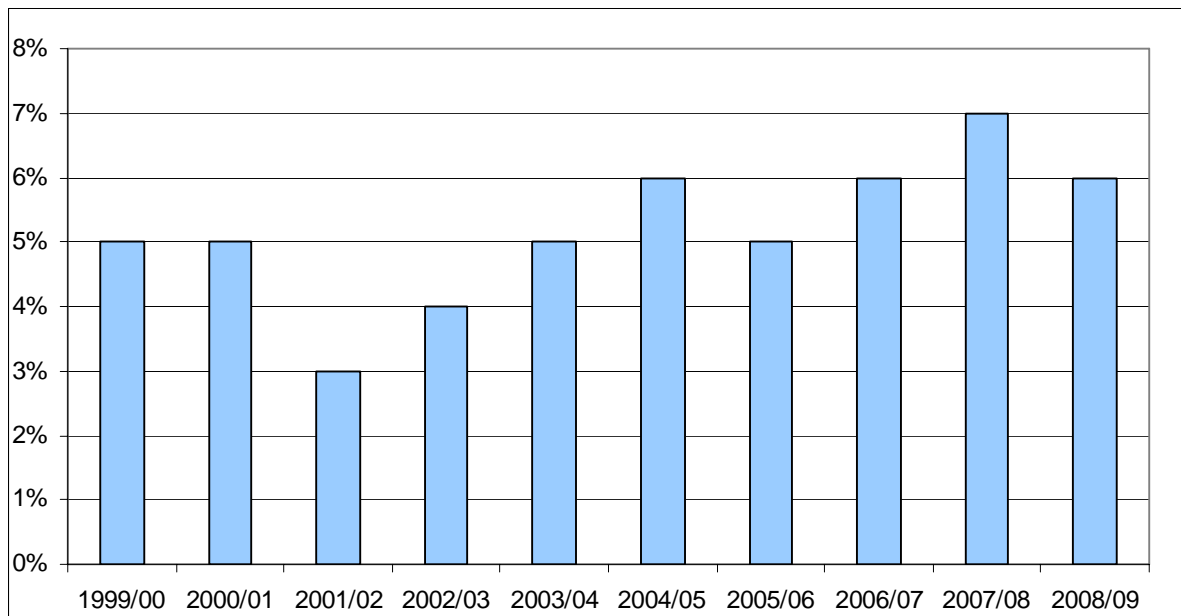


Analysis split between craft (S/NVQ Levels 1 to 3) and technical qualification levels highlighted that female starters were far more likely to be studying for a technical qualification – 10% of all technical trainees, compared to only 2% of all craft trainees, who are female. However, within the craft occupations as a proportion of the total number of starters by occupation, 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 2008) employment by occupation data illustrates that painting and decorating is the craft trade which has the highest representation of women (2%)^h.

Ethnic minorities

The number of first-year trainees who are from an ethnic minority stands at 2,435 in 2008/2009 or 6% of the total. During the past ten years the share of ethnic minorities in construction training has been fairly consistent y data – averaging 5%. Proportionally this is considerably higher than within the construction workforce, where they currently account for 3%.

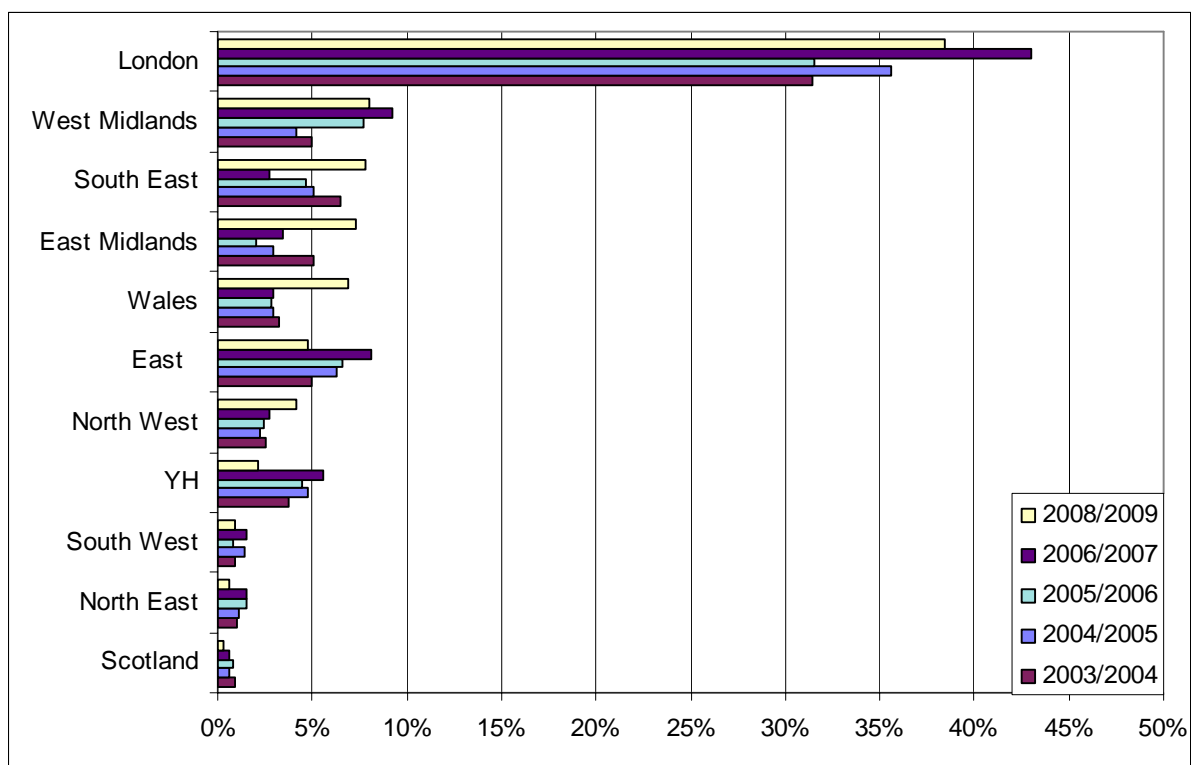
Chart 12 – Ethnic minority first-year trainees as a proportion of all first-year trainees 1999-2008 (Great Britain)



London has the highest proportion of ethnic minority starters. In fact, as Chart 13 shows, there is a large disparity between the share of ethnic minority first-year trainees in London compared to those in the other areas across Great Britain. As a proportion of all first-year trainees in London, those from an ethnic minority account for 38%, which is much higher than the other areas, where ethnic minority starters account for less than 10%. This has been a consistent trend over the past five years, as shown in Chart 13.

^h Labour Force Survey, Spring 2008 (SIC 45) Great Britain

Chart 13 – Ethnic minority first-year trainees as proportion of all first-year trainees by geographical area (Great Britain: Five-year trend)



Section 2: Forecasted Demand for Craft and Technical Construction Training 2009–2013

ConstructionSkills, through the Construction Skills Networkⁱ, 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. The current published forecasts are reproduced in the following two tables: Table 5 (by geographical area) and Table 6 (by construction trades).

Table 5 – Requirement for skilled workers by geographical area (Great Britain)

	Total employment		Percentage Change	Average annual requirement
	2009	2013	2009-2013	2009-2013
East	83,280	83,990	1%	1,370
East Midlands	51,800	53,760	4%	880
London	104,930	106,360	1%	3,520
North East	50,860	52,910	4%	980
North West	95,140	96,090	1%	2,540
Scotland	95,290	96,430	1%	2,550
South East	126,520	129,270	2%	2,290
South West	83,060	81,940	-1%	550
Wales	46,880	48,200	3%	1,240
West Midlands	73,730	73,560	0%	1,640
Yorkshire & Humber	77,650	77,730	0%	570
Total	889,140	900,240	1%	18,130

Source: ConstructionSkills Employment Model, 2009

Note: Table 5 is a subset of the table that appears in Blueprint for UK Construction Skills 2009-2013 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.

ⁱ Construction Skills Network, Blueprint for UK Construction Skills 2009 to 2013
http://www.cskills.org/uploads/Copy_of_UK_2009-13_tcm17-13718.pdf

Table 6 – Requirement for skilled workers in the construction trades (Great Britain)

	Total employment		Percentage change	Average annual requirement
	2009	2013		2009-2013
Main trades				
Wood trades	270,540	274,460	1%	4,220
Bricklayers	83,150	85,620	3%	2,290
Painters and decorators	132,350	129,670	-2%	2,770
Plasterers and dry liners	45,560	48,910	7%	1,410
Main trades total	531,600	538,660	1%	10,690
Specialist building trades (SB)				
Roofers	44,660	44,770	0%	430
Floorers	37,650	38,510	2%	520
Glaziers	40,750	42,270	4%	1,170
Other SB operatives	53,950	55,430	3%	900
Specialist SB trades total	177,010	180,980	2%	3,020
Civil engineers (CE)				
Scaffolders	23,980	25,470	6%	830
Plant operatives	43,930	42,570	-3%	1,250
Plant mechanics/fitters	26,340	27,060	3%	830
Steel erectors/structural	27,940	28,690	3%	850
Other CE operatives	58,340	56,810	-3%	660
Civil engineers total	180,530	180,600	0%	4,420
Total	889,140	900,240	1%	18,130

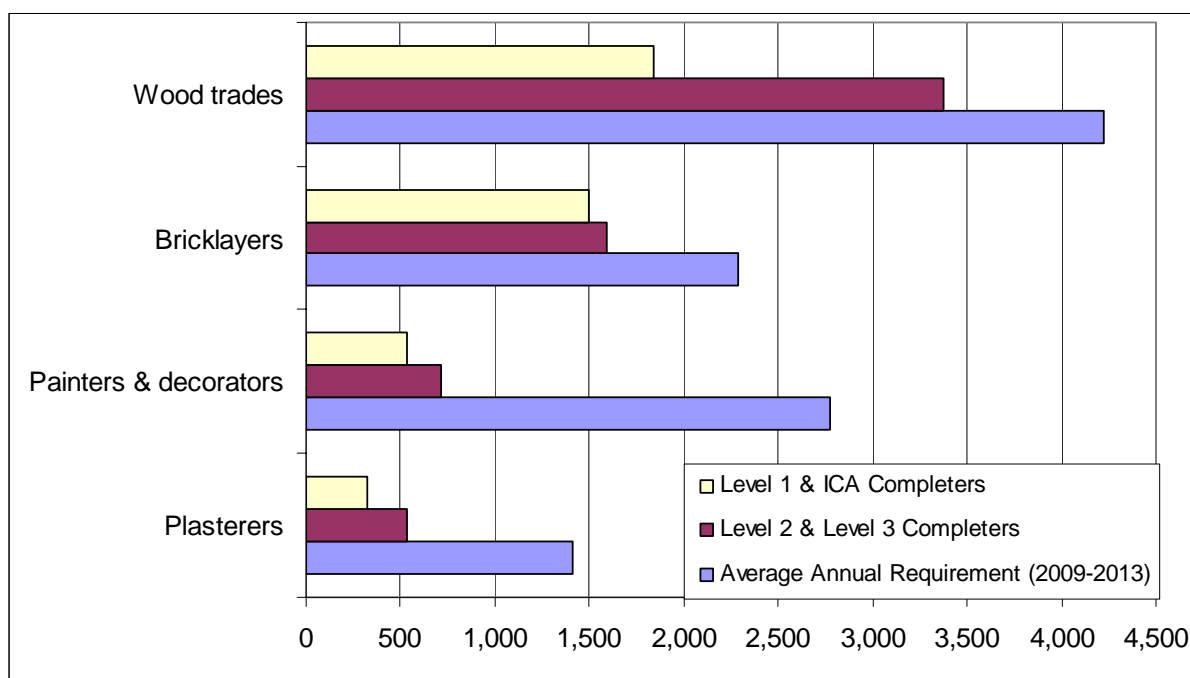
Source: ConstructionSkills Employment Model, 2009

Note: Table 6 is a subset of the table that appears in Blueprint for UK Construction Skills 2009–2013 report. It covers only the skilled manual trades and excludes managers, clerical staff, technical staff and professional occupations.

The industry needs to recruit over 18,000 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 14 and 15 compare the average annual requirement for skilled workers against the expected number of successful completers from the 2008/09 intake of trainees.

Chart 14 – Average annual requirement for main construction trades (2009-2013) and expected successful learner outcomes from the 2008/09 trainee intake. (Great Britain)



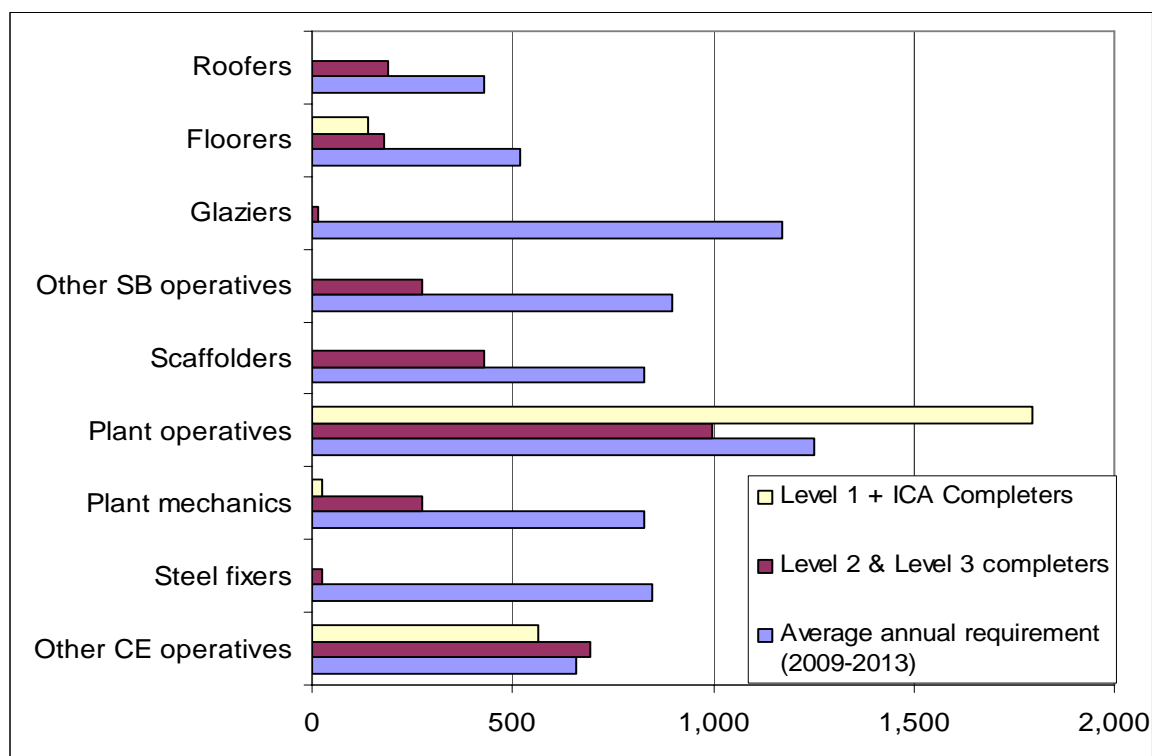
Source: Construction Skills Network Model 2009; ConstructionSkills Trainee Numbers Survey 2008/2009; Learning and Skills Council

The bottom bar shows the average number of skilled workers that will be required to join the industry each year between 2009 and 2013 – much reduced from previous year’s forecasts although still in positive territory as new workers will always be required to replace those who retire. The middle bar shows the expected number of completers at S/NVQ Levels 2 and 3 – these are the trainees who 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 level 2 and level 3 trainees to meet demand. This suggests the possibility that firms may have cut back on training too far to meet future demand – especially in painting and decorating and plastering.

The top bar of chart 14 gives the expected number of completers at S/NVQ level 1 and for the Intermediate Construction Award. Both these qualifications are not considered sufficient to meet the needs of the industry, however, both provide a route into training, giving employers some flexibility in making up the short-fall in future years. It must be stressed though that in both painting and decorating and plastering total training levels (Level 1 & ICA plus Levels 2 and 3) are insufficient to meet forecast demand for skilled workers.

The main construction trades account for two-thirds of all manual occupation training while specialist builders and civil engineers between them account for around 25% of training, and as Chart 15 shows, many of these occupations are training too few people to meet the demand for skilled workers.

Chart 15 – Average annual requirement for specialist construction trades and civil engineers (2009-2013) and expected successful learner outcomes from the 2008/09 trainee intake. (Great Britain)



Source: Construction Skills Network Model 2009; ConstructionSkills Trainee Numbers Survey 2008/2009

Specialist and Civil Engineering trades are expected to have mixed success in training sufficient people to meet forecast demand. The broadly defined 'Other Civil Engineering Occupations' which covers drilling, tunnelling and piling operatives; road construction operatives; track workers etc. is training sufficient people to Level 2 and 3 to meet demand for skilled workers. Indeed, they are training more than is required meaning that those studying toward an ICA in these occupations may find themselves unable to find employment at the end of their course.

Whilst Plant Operatives would appear to be training far too many people (with the inclusion of Level 1 and ICA completers), 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). Taking this into account plant operative training meets, but does not exceed, the demand for trained workers.

Of the remaining occupations, scaffolding has the smallest gap between supply and demand. A few large providers make up much of the provision though meaning that many employers will struggle to find suitable training locally. The shortfall is greatest amongst steel fixers and glaziers, where formal training at Further Education colleges and private providers meets less than 1% of the projected demand.

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.

The reasons behind this are threefold:

- 1 Cost of provision: specialist and civil engineering training is generally more expensive to offer than that of the main trades.
- 2 Availability of provision: the high wages currently available in the industry make it difficult to recruit experienced tutors.
- 3 Innovation: as manufacturers launch new products, for which new skills are required, there is a time lag during which these skills are not included in vocational qualifications.

This shortfall in new entrants to construction is looked at in more detail in Section 3 of this report.

Section 3: Construction Training Capacity 2008/2009

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, or delaying retirement, or more recently by 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 (as seen in some migrant workers returning home), 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 over 125 training providers across Great Britain and applied to the overall results from the main survey.

Applicants by course

Table 7 shows that in 2008/2009 there were nearly 47,000 applicants (2007/2008 = 55,000) for approximately 37,700 places (2007/2008 = 42,000) on construction courses, or 1.2 applicants for every place (2007/2008 = 1.3). This is lower than the 1.4 applicants per place recorded in 2005/06, and represents a decline in the number of applicants of 29% over that time.

The shortfall in training amongst specialist and civil engineering occupations can be seen by the fact that almost every applicant to these courses found a placement, 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 can be seen that there are still 1.3 applicants per place, although this is lower than the 1.4 applicants per place seen in 2007/2008.

Table 7 – Applicants and starters to construction courses 2008/2009 (Great Britain)

Occupations	Applicants	Starts	Applicants per starter
Technical	5,334	4,254	1.3 (1.2)
Wood trades	15,096	11,459	1.3 (1.3)
Bricklayers	10,768	7,778	1.4 (1.4)
Painters	3,569	3,038	1.2 (1.3)
Plasterers	2,637	1,979	1.3 (1.3)
Main Trades Total	32,070	24,254	1.3 (1.4)
Roofers	302	290	1.0 (1.0)
Floorers	514	493	1.0 (1.0)
Glaziers	20	20	1.0 (1.0)
Other specialist building operatives	441	441	1.0 (1.1)
Specialist Operatives Total	1,277	1,244	1.0 (1.1)
Scaffolders	707	681	1.0 (1.0)
Plant operatives	4,560	4,461	1.0 (1.0)
Plant mechanics	509	505	1.0 (1.0)
Steel erectors/structural	39	39	1.0 (1.0)
Other civil engineering operatives	2,399	2,248	1.1 (2.1)
Civil Eng. Operatives Total	8,214	7,934	1.0 (1.3)
Maintenance workers	28	28	10 (1.0)
Total	46,923	37,714	1.2 (1.3)

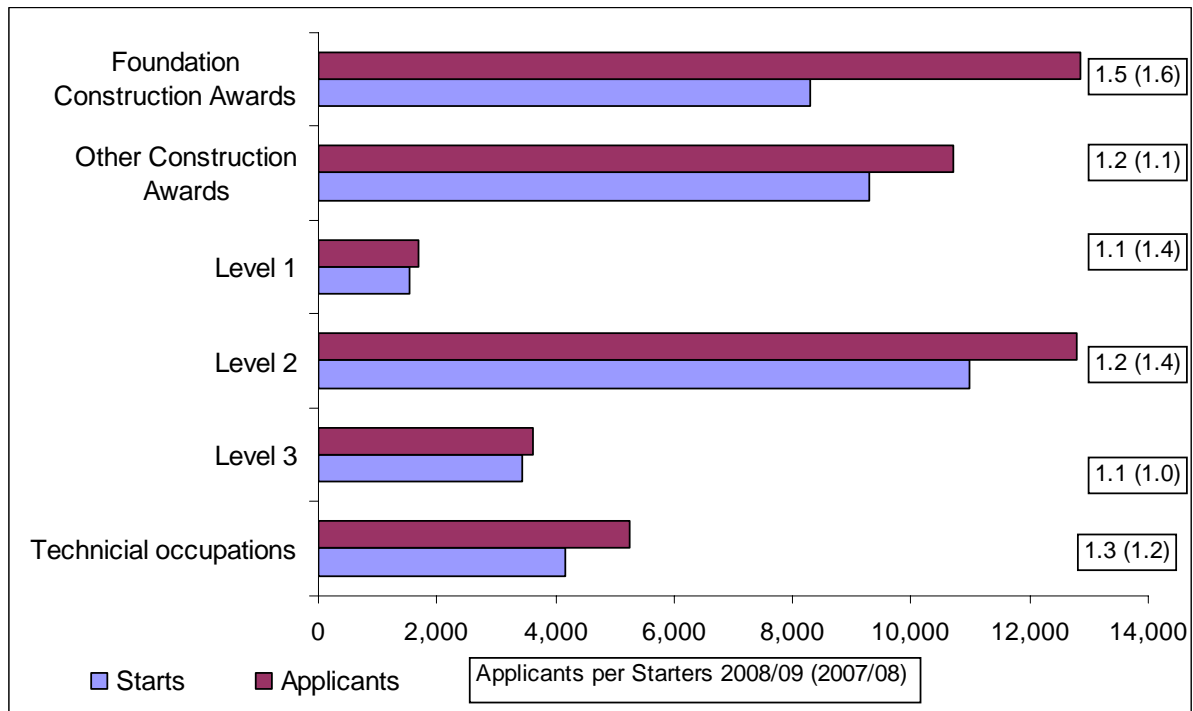
Source: ConstructionSkills Trainee Numbers Survey.

Figures in brackets show 2007/08 figures

Applicants by level of qualification

Chart 16 shows the number of applicants and starters to construction courses in Great Britain by level of qualification. Foundation Construction Awards are proportionally the most oversubscribed, while those at S/NVQ Levels 1 and 3 are the least oversubscribed.

Chart 16 - Training capacity by level of qualification 2008/2009 (Great Britain)



Source: ConstructionSkills Trainee Numbers Survey 2008/09

There has been a decline in the number of applicants and starters across all levels of qualification, suggesting that fewer young people see construction as a viable career choice for the foreseeable future. It is, however, positive to note that the vast majority of applicants to vocational qualifications (S/NVQ Levels 1 to 3) were successful in finding a place at a training provider.

The majority of applicants (29%) and starters (27%) were to S/NVQ Level 2 courses. The shortfall in available places at this level was in the order of 16% (considerably lower than the 37% seen in 2007/08), while Level 3 courses continue to be the least oversubscribed with more or less equal numbers of applicants and starters.

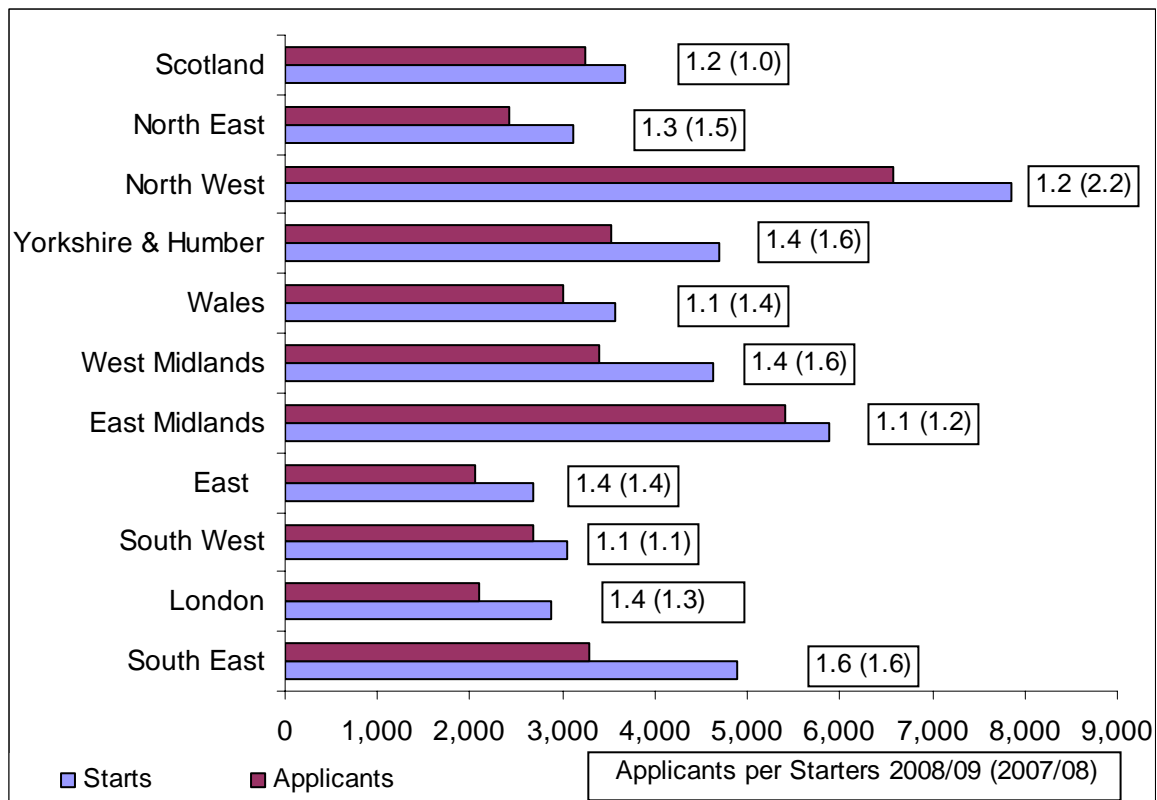
Half of all applicants and 47% of all starters (2007/08 = 46%) were on Construction Award courses (Foundation, Intermediate, and Advanced). Around half of these people will already work in the construction industry and are seeking to gain a recognised qualification to prove their skills, but as already mentioned for the others the lack of practical work experience on these courses mean that as best they can only offer a route into further training rather than full competence to work in the industry.

The decline in applicants to full-time construction award courses suggests that in addition to employers being unwilling to recruit apprentices; young people themselves are unwilling to commit to undertake full-time training in construction given the current economic downturn and redundancies

Applicants by geographical area

Looking at training capacity in the main trades on a geographical basis, the South East is once again the most oversubscribed area, with 1.6 applicants for every place at a construction-training provider. The North West has shown the greatest change over the previous year with the proportion of applicants to starters declining from 2.2 applicants per place to 1.2. The South West is once again the least oversubscribed region with just 1.1 applicants for every place.

Chart 17 – Applicants and Starters by geographical area 2008/2009



Source: ConstructionSkills Trainee Numbers Survey 2008/09

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

Work experience placements

To achieve an S/NVQ, trainees need to demonstrate competence in the workplace and, therefore, need either an employer or a work placement. In England and Wales, if trainees are unable or do not need to find a work placement, then their route into training is via the Construction Award, which does not include the work-based site element of NVQs, although for those wishing to make a career in construction they will need an additional period of site experience (via a Programme-Led Apprenticeship) to convert this to a full NVQ

The research asked respondents about the number of work placements that they required for trainees undertaking an Intermediate Construction Award (the standard route into a Programme-Led Apprenticeship), so that they could move to a full NVQ Level 2 qualification if required.

Of the nearly 8,000 students studying for an Intermediate Construction Award in England, nearly half already worked in the industry. Of the remainder only 2,422 actually required a work placement of which only 749 (38%) were expected to be achieved while the student was studying at college.

Interestingly this could be a positive sign, in that these students will be in a strong position to move to a Programme-Led Apprenticeship when the economic environment improves and employers begin to recruit apprentices in greater numbers than today.

Table 8 – Intermediate Construction Award (ICA) work experience placements by area 2008/2009 (England)

	Number of ICAs (England)	% Already in industry	Work Experience Placements		% Shortfall
			Required	Achieved	
East Midlands	2,081	78%	285	33	88%
London	605	10%	317	136	57%
East	331	29%	190	52	73%
Yorkshire & Humber	619	22%	113	5	96%
South West	510	23%	318	111	13%
North West	1,599	44%	731	214	71%
West Midlands	1,028	72%	175	91	48%
South East	757	28%	173	70	60%
North East	458	59%	120	38	68%
Total	7,988	49%	2,422	749	62%

Nearly all parts of England expect to see a shortfall of over 50% in the number of work placements that are achieved (peaking at 96% in Yorkshire & Humber where only 5 of the 113 work placements required will be found while the student is at college). Only the West Midlands with a shortfall of 48% and the South West with a shortfall of 13% expect to find the majority of work placements they require.

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.^j

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 2007/2008 while Trainee Numbers Survey figures refer to 2008/2009; hence direct comparison is not advisable.

Table 9 shows the number of starters at higher education institutions split by qualification aim and subject area. Overall there were 28,520 students of which half (50%) were studying towards a first degree with a further quarter (24%) beginning a post graduate degree and just under a quarter (22%) starting on other undergraduate courses. The remaining 4% commenced a Foundation degree.

Table 9 – Student enrolments on built environment courses by subject and qualification aim 2007/2008 (United Kingdom)

	Other Undergraduate	Foundation Degree	First Degree	Postgraduate Degree
Civil engineering	1,046	249	3,547	1,424
Architecture	955	52	3,957	1,497
Building	3,072	618	4,588	1,438
Landscape design	156	39	257	188
Planning (urban, rural & regional)	454	238	1,558	2,191
Others in architecture, building & planning	461	0	305	233
	6,144	1,196	14,212	6,971

A building course was the most popular choice for students accounting for a third (34%) of the overall total. This pattern was consistent across all the undergraduate qualifications, whereas at Postgraduate level Planning courses had the largest share of starters.

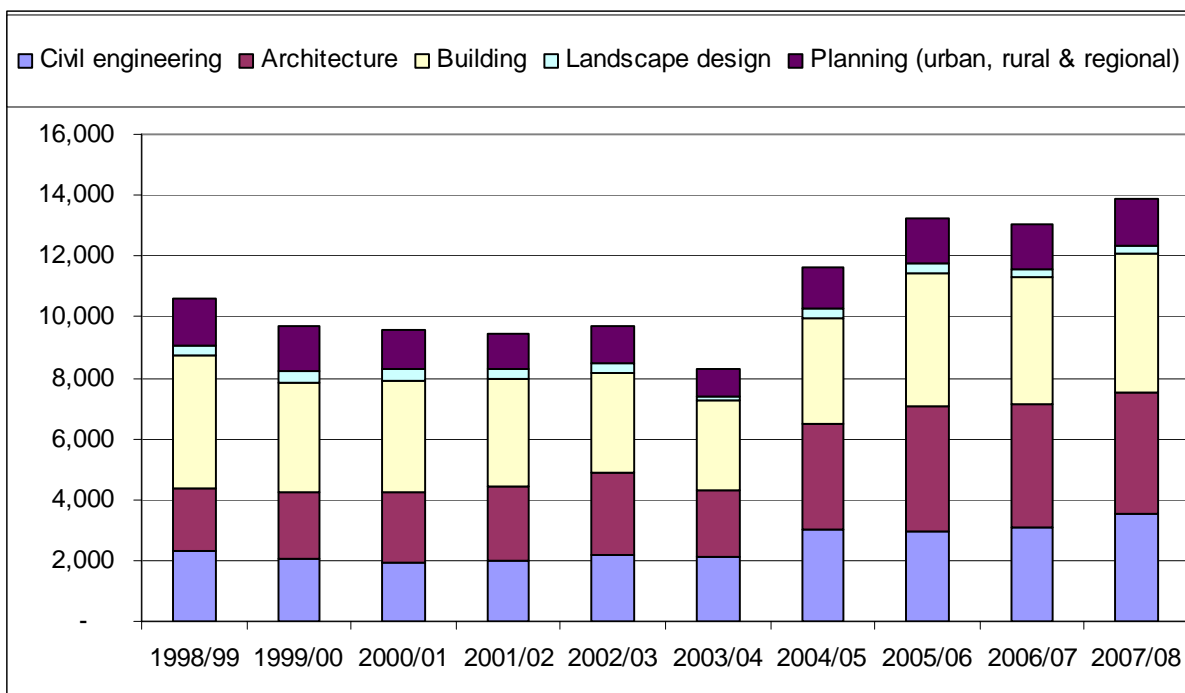
^j For more information see www.hesa.ac.uk

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 1998/99 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. They now stand at just under 14,000 – their highest level during the past decade.

Chart 18 – Student enrolments on built environment courses by subject 2007/2008 (United Kingdom)



The gender split of first degree starters remained unchanged between the academic years 2004/05 to 2007/08 at roughly a quarter female to three-quarters male. By subject, Architecture was most popular for females, accounting for 44% of all female students whereas Building degrees had the highest proportion of males at approximately a third (37%).

Chart 19 – Females enrolling on built environment courses by subject 2007/2008 (United Kingdom)

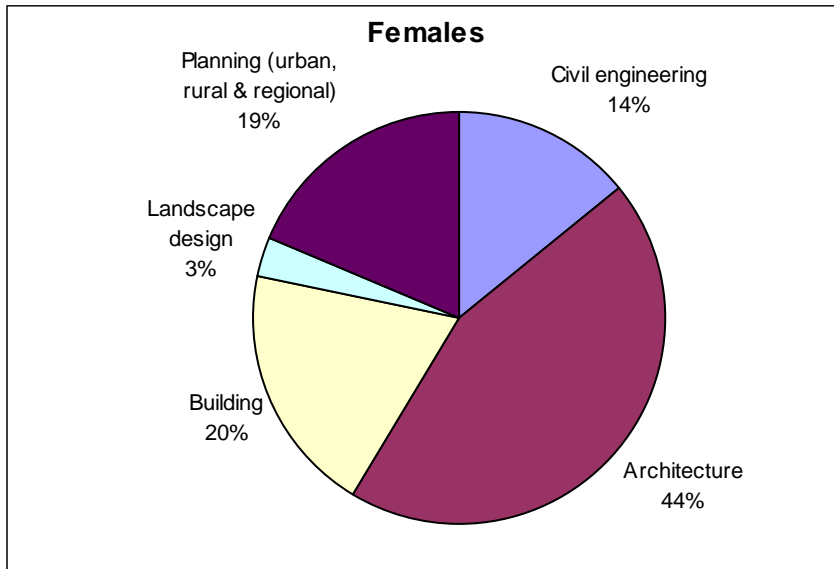
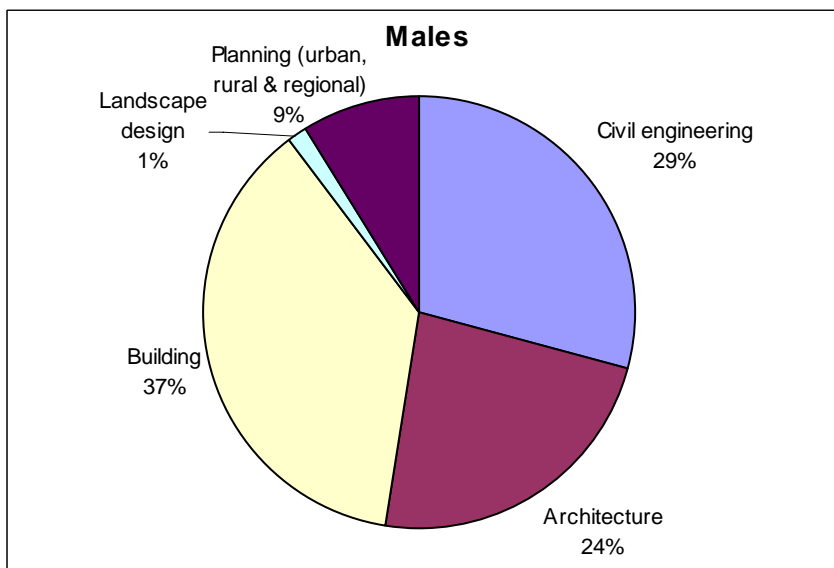


Chart 20 – Males enrolling on built environment courses by subject 2007/2008 (United Kingdom)



The ethnicity of undergraduates has also remained constant in the years 2004/05 to 2007/08 with the largest majority (80%) classified as white and 17% from an ethnic minority (the remaining 3% are unknown). The largest ethnic minority group are classified as 'Asian or Asian British – Indian' who account for approximately a fifth (22%) of all ethnic minorities.

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 6% are from an ethnic minority, compared to 25% and 17% respectively at degree level. In regard to females, the evidence suggests that their proportion increases in-line with the level of qualification – rising from 2% of craft trainees to 10% of technical students culminating in 25% of undergraduates.

Conclusion

This report measures the number of new entrants onto construction training across the Built Environment. Unfortunately it is not possible to provide a full picture for the academic year 2008/2009 as the latest available higher education data is for the previous academic year (2007/2008). Therefore the following discussion concentrates on the training being undertaken at further education.

The fall in vocational training is indicative of the economic downturn as witnessed in the previous recession (early 1990s) when the construction industry underwent a prolonged period of low activity with a contracting workforce and low levels of recruitment. It is too early to state with any certainty whether the economic slow down, will continue to have an adverse effect on training, but based on previous economic cycles further falls in new entrants cannot be ruled out.

Recent economic forecasts predict that workloads will not recover until 2011^k, although it will be a further decade until they return to their 2007 peak^l. However there are a considerable number of major projects that will continue in the short-term which are dependant upon the government delivering to its public spending commitments. Infrastructure continues to be the sector with the brightest prospects over the medium term, with projected output growth of 6.8% per year. There are a significant number of large projects either on site or in the pipeline and funding for other projects has actually been brought forward by the government in an attempt to stimulate the economy.

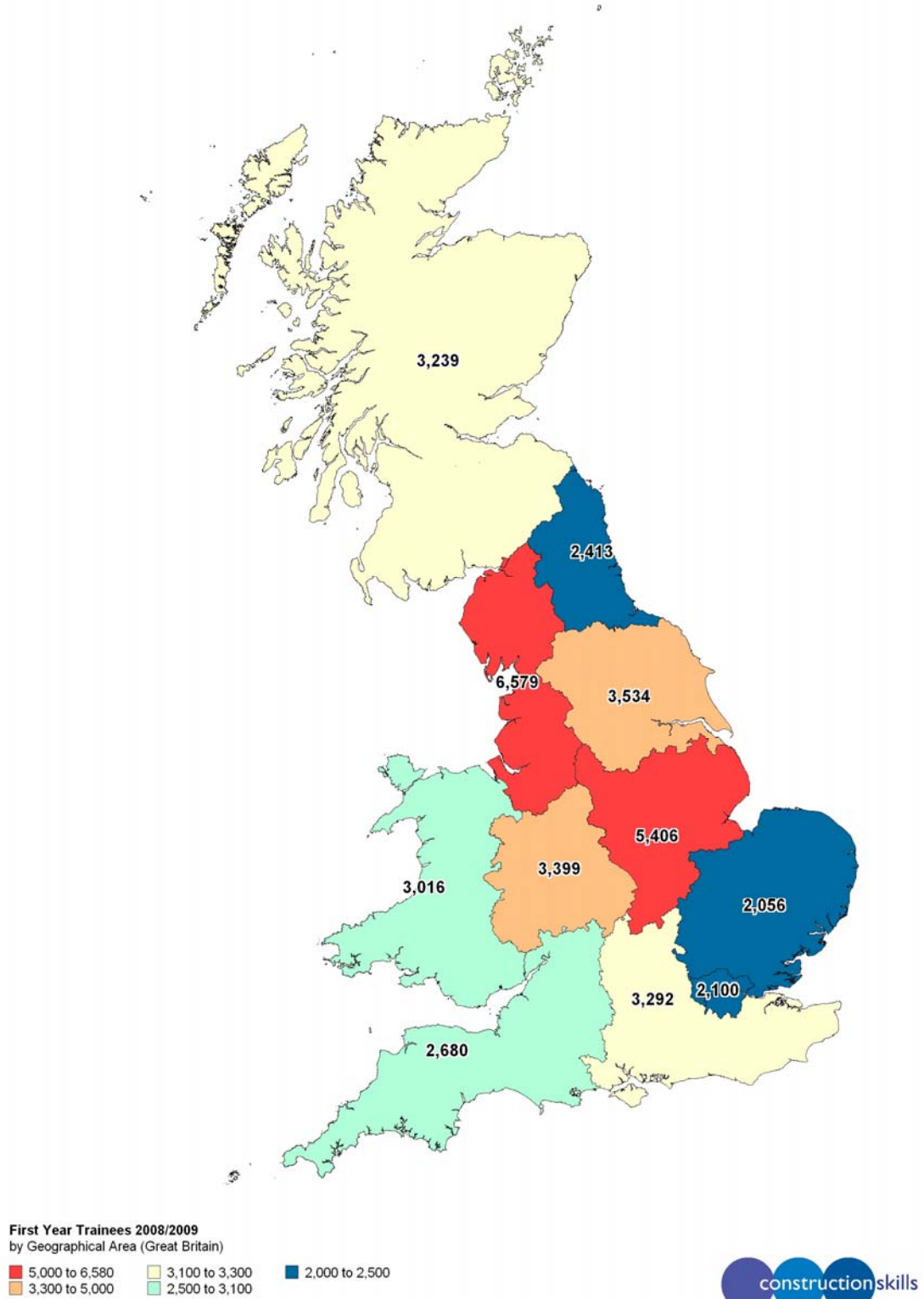
Therefore the construction industry still requires thousands of new staff to enter the industry each year due to an ageing workforce and fewer young people entering the industry. It is imperative that the industry continues to train to ensure there are enough skilled and qualified workers to deliver the huge programme of planned investment that the country needs to remain competitive.

^k Construction Skills Network, Blueprint for UK Construction Skills 2009-2013

^l Construction Products Association, Construction Industry Forecasts 2009-1013

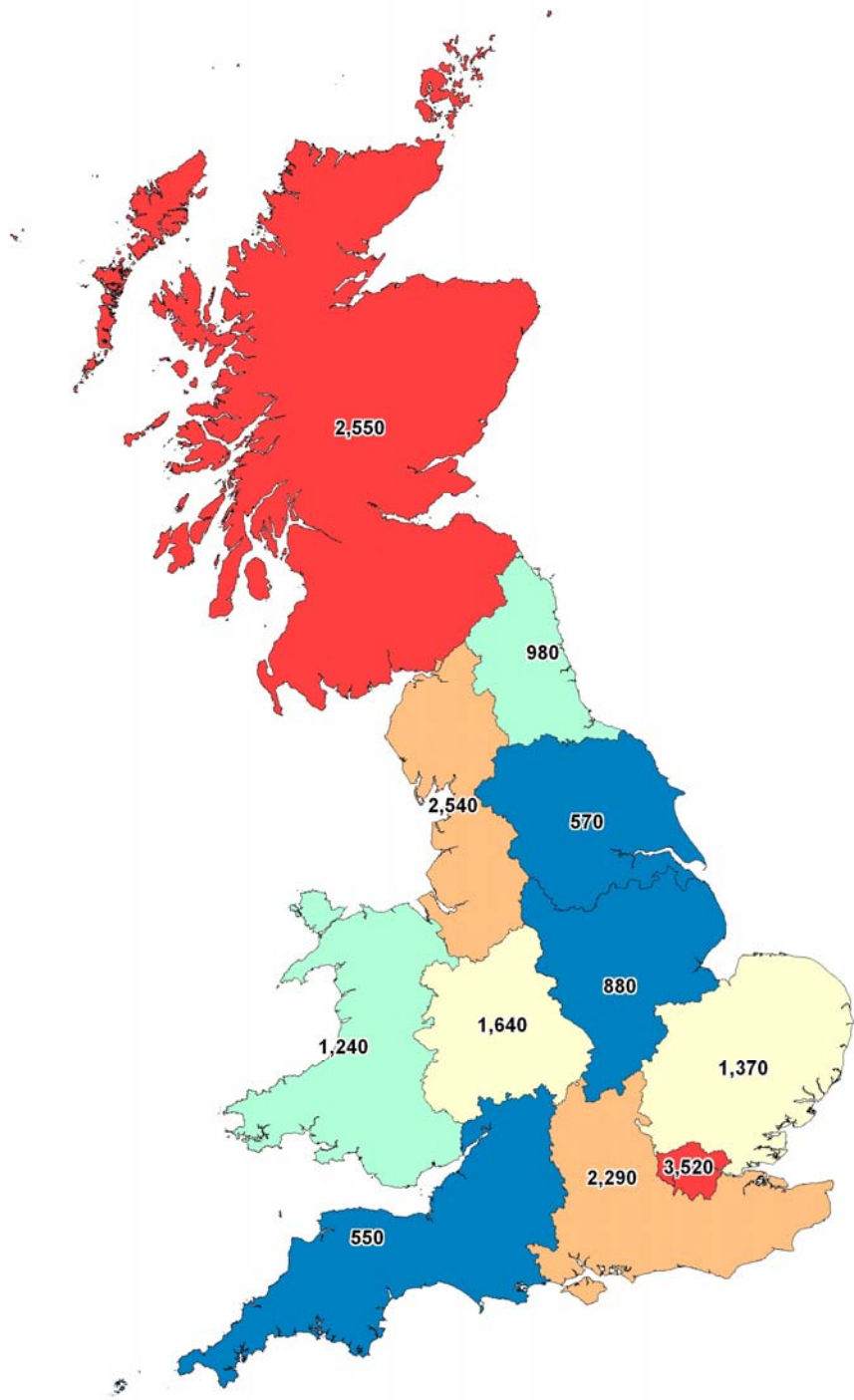
Appendix

Figure 1 – First-year trainees by geographical area 2008/2009 (Great Britain)



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Figure 2 – Forecasted annual average requirement for skilled workers by geographical area 2009-2013 (Great Britain)



Forecasted Annual Average Requirement for Skilled Workers by Geographical Area 2009-2013 (Great Britain)

- 2,550 to 3,520 ■ 1,300 to 2,000 ■ 550 to 900
- 2,000 to 2,550 ■ 900 to 1,300



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Figure 3 – Applicants to construction courses in the main trades by geographical area 2008/2009 (Great Britain)

