

Training and the Built Environment Report

2007

Introduction

As part of the Sector Skills Council for Construction, ConstructionSkills has the responsibility to ensure that the construction industry has the fully trained and skilled workforce that it needs.

ConstructionSkills' Sector Skills Agreement (2005) summarises the construction industry's skill needs, and the extent to which current training meets these needs. It identifies gaps and weaknesses in the current system, and sets out the actions that need to be taken with key partners and stakeholders in order to meet the challenges of improving performance and productivity.

The priorities can be grouped under three skills challenges:

- To improve the business performance of construction companies, particularly the 95% that employ fewer than five people.
- To improve the recruitment and retention of well-trained and qualified new entrants by creating a positive image of the industry and providing well-structured progression pathways into and through it.
- To achieve a fully qualified workforce at all stages of the construction process and throughout the supply chain.

This year ConstructionSkills has expanded the scope of its training research to incorporate data from the Higher Education Statistics Agency (HESA) on the number of starters onto built environment degree courses, in addition to vocational training data collected by the long running annual Trainee Numbers Survey. This now provides a complete picture of training in the built environment by presenting data from both further and higher education across Great Britain. To reflect these changes the report has been renamed **Training and the Built Environment Report**.

The main sections of the report are:

Section 1: Trainee Numbers Survey 2006/2007 presents the data collected from colleges, private training providers and construction industry training centres across Great Britain. 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 2007–2011 analyses this training data alongside the projected demand for skilled construction workers over the forecast period 2007–2011¹, in order to assess the adequacy of current training provision in terms of quantity.

Section 3: Construction Training Capacity 2006/2007 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 2005/2006 in addition to information on the destination of graduates who obtained a first degree in the built environment during 2005/2006.

¹ Blueprint for UK Construction Skills 2007-2011
http://www.constructionskills.net/pdf/research/outputs/UK_LMI.pdf

Summary

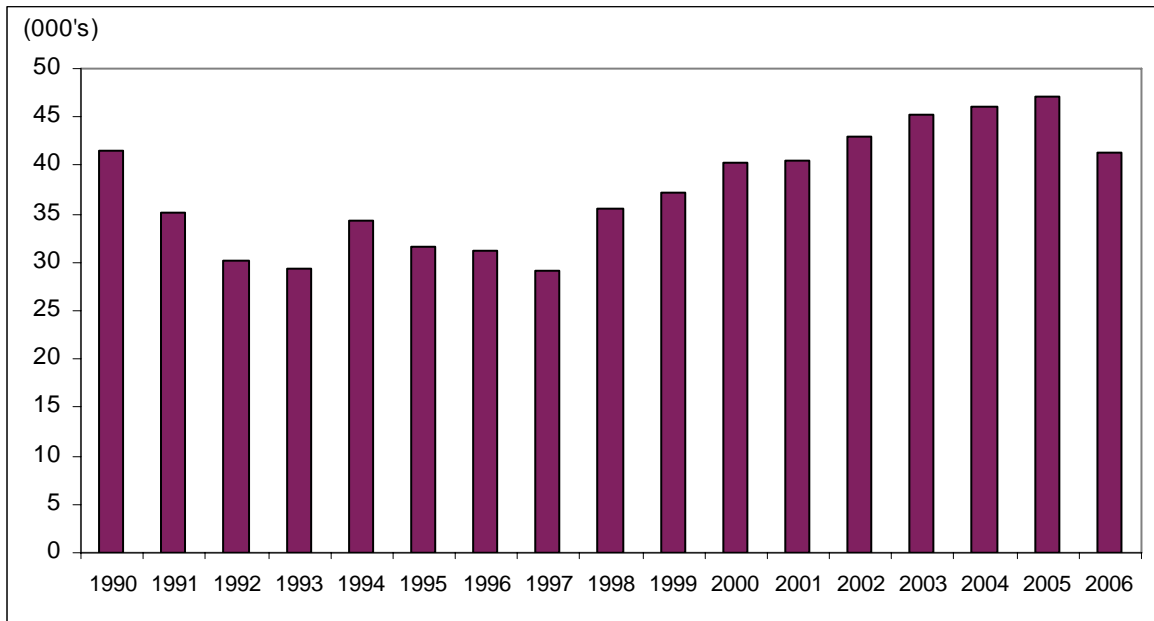
- First-year intake in 2006/2007 stands at just over 41,000. This represents a decrease on previous year's figures (12%).
- The composition of the top five occupations in terms of absolute numbers of starters are wood trades, bricklayers, technical occupations, painters and plant operatives – similar to last year.
- Half of all first-year trainees are undertaking an S/NVQ Level 2 or Intermediate Construction Award.
- Yorkshire and Humber has more starters than the other 10 regions/devolved administrations.
- Just over half of all first-year trainees undertaking craft training are work-based.
- Approximately two-thirds of all S/NVQ Level 2 and Level 3 starters are following an apprenticeship programme.
- The breakdown of first-year intake by age shows slightly more trainees aged under 18 years (56%), which has reversed the trend since 1999/2000.
- There are 1,259 female starters (3% of total).
- Ethnic minority starters account for 6% of the total, but there are strong geographical variations – rising to 43% in London.
- Across all construction courses there were 30% more applicants than starters – which equates to an average of just over 1.3 applicants for every available place.
- Plastering and dry lining were the most oversubscribed courses, while specialist building courses were the least oversubscribed.
- Courses at S/NVQ Level 1 are the most oversubscribed, while S/NVQ Level 3 are the least oversubscribed, this is unchanged from last year.
- There is considerable regional variation in the availability of work placements for trainees on Construction Awards
- Predicted demand compared to the amount of training taking place shows that the main construction trades are relatively well catered for. However, there are too few trainees to meet demand amongst the majority of specialist building and civil engineering trades.
- The number of students starting first degrees in the built environment increased to 13,260 in the academic year 2005/2006.
- Two-thirds of built environment graduates entered full-time work (including self-employment) during the first six months after graduation. Their occupation mapping closely to the subject of study.

Section 1: Trainee Numbers Survey 2006/2007

The national picture

The number of first-year trainees has decreased this year representing a significant reversal in the trend over recent years. Chart 1 depicts the number of first-year trainees over a sixteen-year period (1990–2006) and illustrates how, following a period of sustained growth, the numbers have fallen to a level comparable to the early 2000s.

Chart 1 – Numbers of first-year trainees 1990–2006 (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.

It is too early to state with any certainty whether the drop in applicants is temporary or the start of a more long-term decline. This decrease is explored further in Section 3: Construction Training Capacity 2006/2007.

Training by occupation

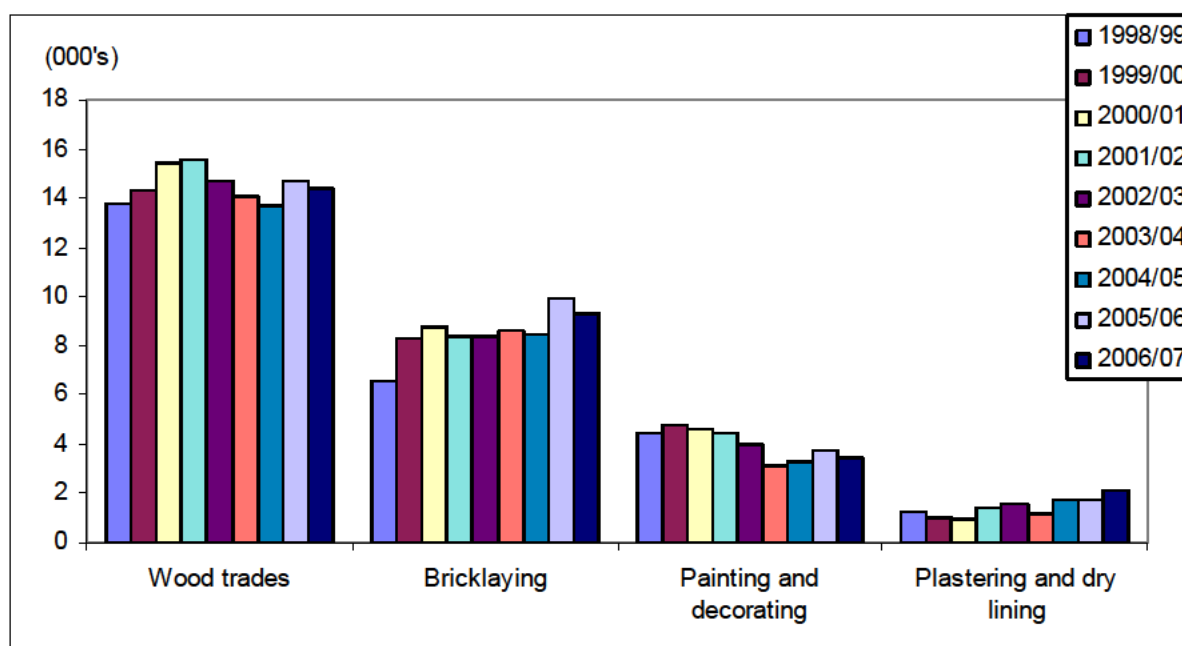
The overall first-year intake in the academic year 2006/2007 is 41,323. Table 1 shows the breakdown for the 16 occupations covered by the survey.

Table 1 – Numbers of first-year trainees 2006/2007 (Great Britain)

Occupations	Under 18		18 and over		Total
	Male	Female	Male	Female	
Technical	1,400	95	3,129	459	5,083
Wood trades	9,797	95	4,419	93	14,404
Bricklayers	6,470	38	2,801	29	9,338
Painters and decorators	2,114	175	967	195	3,451
Plasterers and dry liners	1,423	12	704	12	2,151
Roofers	234	0	317	2	553
Floorers	155	1	183	3	342
Glaziers	7	0	1	0	8
Specialist building operatives	124	0	478	3	605
Scaffolders	272	1	652	0	925
Plant operatives	63	0	2,822	14	2,899
Plant mechanics/fitters	131	0	196	4	331
Steel erectors/structural	0	0	5	0	5
Civil engineering operatives	536	26	624	1	1,187
Maintenance workers	12	1	28	0	41
	22,738	444	17,326	815	41,323

The nine-year trend in the number of first-year trainees entering building craft occupations is shown in Chart 2.

Chart 2 – Number of first-year trainees 1999–2006 (Great Britain: Building craft occupations)



As shown in Chart 2, the academic year 2006/2007 has witnessed a slight decrease in each of the main trades, except plastering and dry lining, which has seen a small growth in new entrants. In comparison to previous years, wood trades and bricklaying dominate the first-year training figures with 35% (14,404) and 23 (9,388) of the total respectively.

Out of the 15 occupations listed, only four have more first-year trainees this year than the previous year. These have been shaded in Table 2. The biggest increase has been the number of new entrants on plastering and dry lining courses, representing the highest number of starters on these courses since 1998/99² (see Chart 2).

Conversely the biggest decrease has been in civil engineering operative courses where the numbers have fallen by 76%.

Table 2 – Comparison of number of first-year trainees by occupation in academic years, five-year trend 2002/2003 to 2006/2007 (Great Britain)

Occupations	2006/2007	2005/2006	2004/2005	2003/2004	2002/2003
Wood trades	14,404	14,785	13,719	14,097	14,690
Bricklayers	9,338	9,959	8,473	8,585	8,399
Technical	5,083	5,525	6,529	6,430	7,470
Painters and decorators	3,451	3,718	3,286	3,123	4,041
Plant operatives	2,899	4,760	4,987	4,573	2,097
Plasterers and dry liners	2,151	1,746	1,678	1,307	1,626
Civil engineering operatives	1,187	3,424	4,616	4,611	2,619
Scaffolders	925	882	620	399	274
Specialist building operatives	605	799	442	480	636
Roofers	553	818	958	714	356
Floorers	342	335	300	324	379
Plant mechanics	331	173	197	204	214
Maintenance workers	41	168	171	165	55
Glaziers	8	28	32	71	92
Steel erectors/structural	5	68	63	82	42
Total	41,323	47,188	46,071	45,165	42,990

² Data is not available showing breakdown by occupation prior to 1998/99

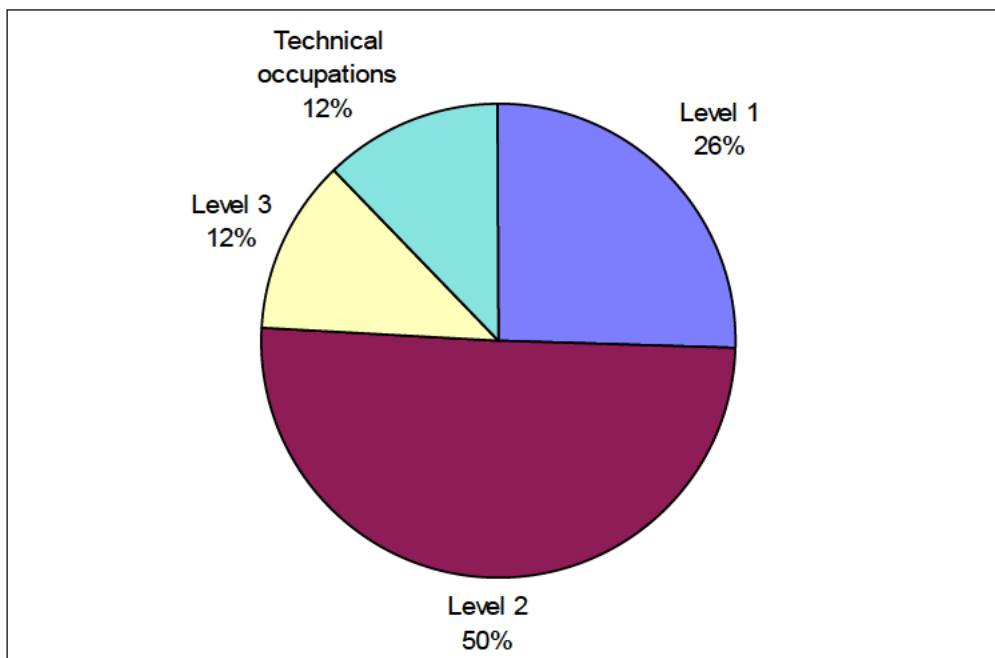
Training by qualification

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

- S/NVQ Level 1 or Foundation Construction Award
- S/NVQ Level 2 or Intermediate Construction Award
- S/NVQ Level 3 or Advanced Construction Award
- Further and Higher Education courses
(National Certificate/Diploma and Higher National Certificate/Diploma)

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 2006/2007 (Great Britain)



Within Great Britain, exactly half of the first-year trainees are undertaking either an S/NVQ Level 2 or Intermediate Construction Award, while a quarter (25%) are following an S/NVQ Level 1 or Foundation Construction Award. The remaining quarter are split between the other two levels.

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

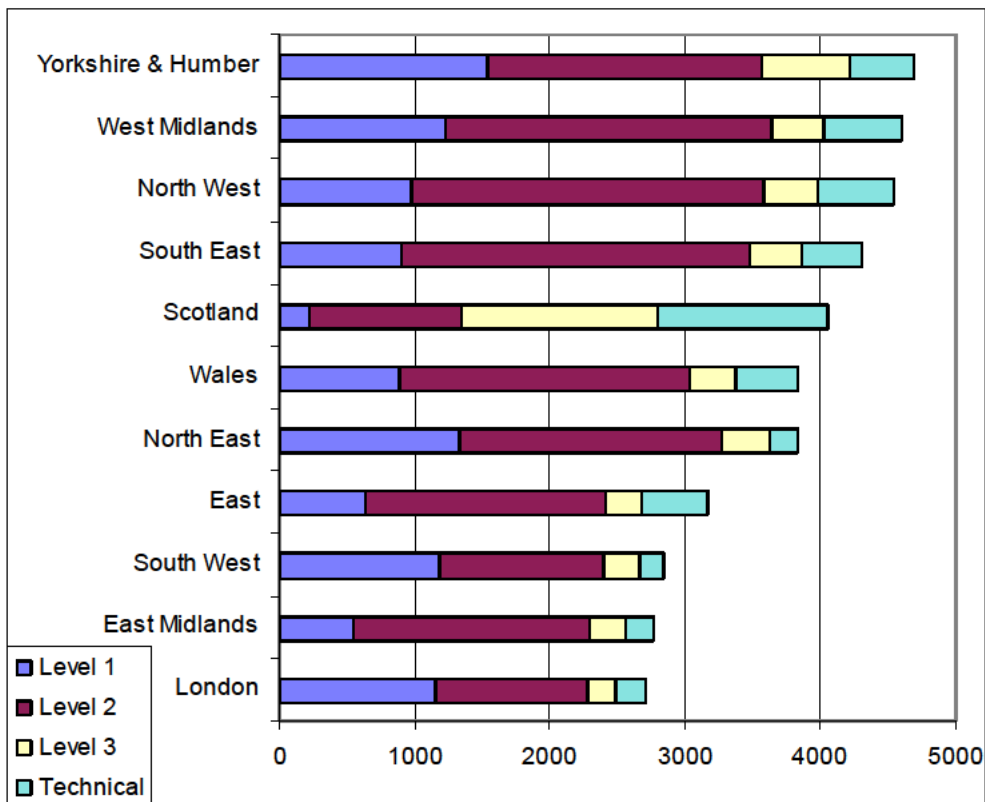
The dominance of Level 2 training in construction reflects the Leitch Review's observation that *'increasingly, Level 2 is the minimum platform of skills required for employment and business competitiveness, as global economic changes reduce the employment opportunities for the unskilled'*³

³ Leitch Review of Skills: Prosperity of all in the global economy – world class skills (December 2006) www.hm-treasury.gov.uk/leitch

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 4 – First-year trainees by level of qualification and geographical area: 2006/2007 (Great Britain)



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

Chart 4 above shows that Yorkshire and Humber has the largest share of first-year trainees at just over 5,500 while London has the smallest share at approximately 2,700 – accounting for 11% and 7% 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.

In addition, London and the South West share a significantly different trend to the national picture, by having exactly the same proportion of first-years undertaking both Level 1 and Level 2 qualifications – for Level 1 these figures are much higher than the average. Both areas also have an equivalent proportion of new entrants starting Level 3 and technical qualifications – all less than the average.

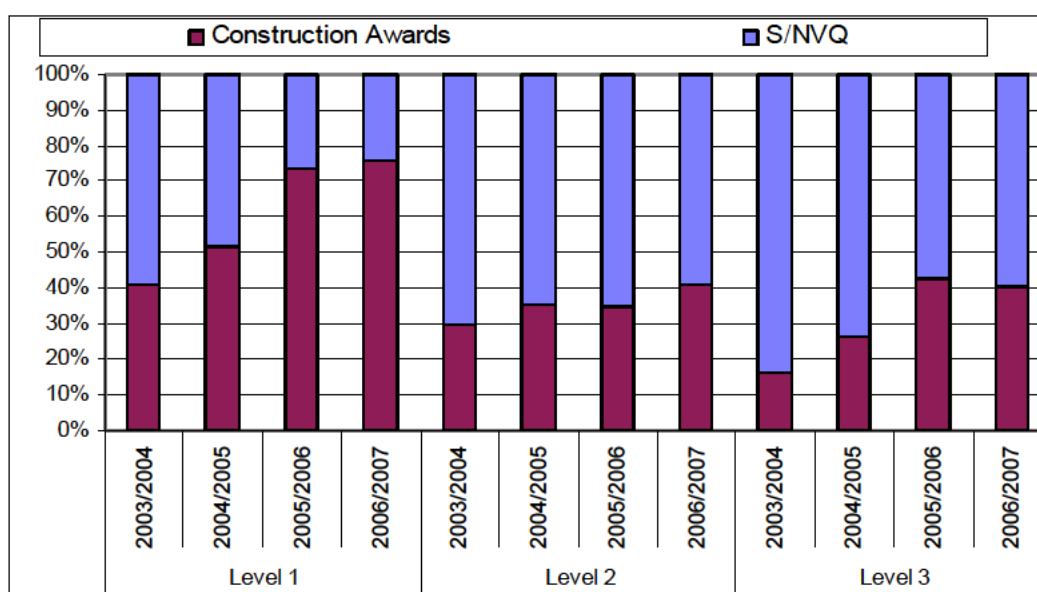
Work-based training

For the fourth year running, the survey is able to differentiate between those starters who are undertaking work-based training and those who are not. This is achieved by asking training providers how many first-year trainees were undertaking a Construction Award qualification.

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

Of the 33,446 starters undertaking construction craft training in England and Wales, 17,349 (52%) are studying for a Construction Award. In other words, 48% of first-year trainees are involved in work-based training. Both the number and proportion of starters undertaking a Construction Award represents a further increase on the previous three years – 16,751 (44%), 13,569 (38%) and 11,840 (30%) respectively. Proportionately, as highlighted by Chart 5, construction awards have remained relatively static across all levels.

Chart 5 – Proportion of first-year trainees split by work-based training 2003/2004 to 2006/2007 (Craft training in England and Wales)



Note: Construction Awards 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 at Level 1. This has increased quite substantially since 2003/4 from 41% to 76%.

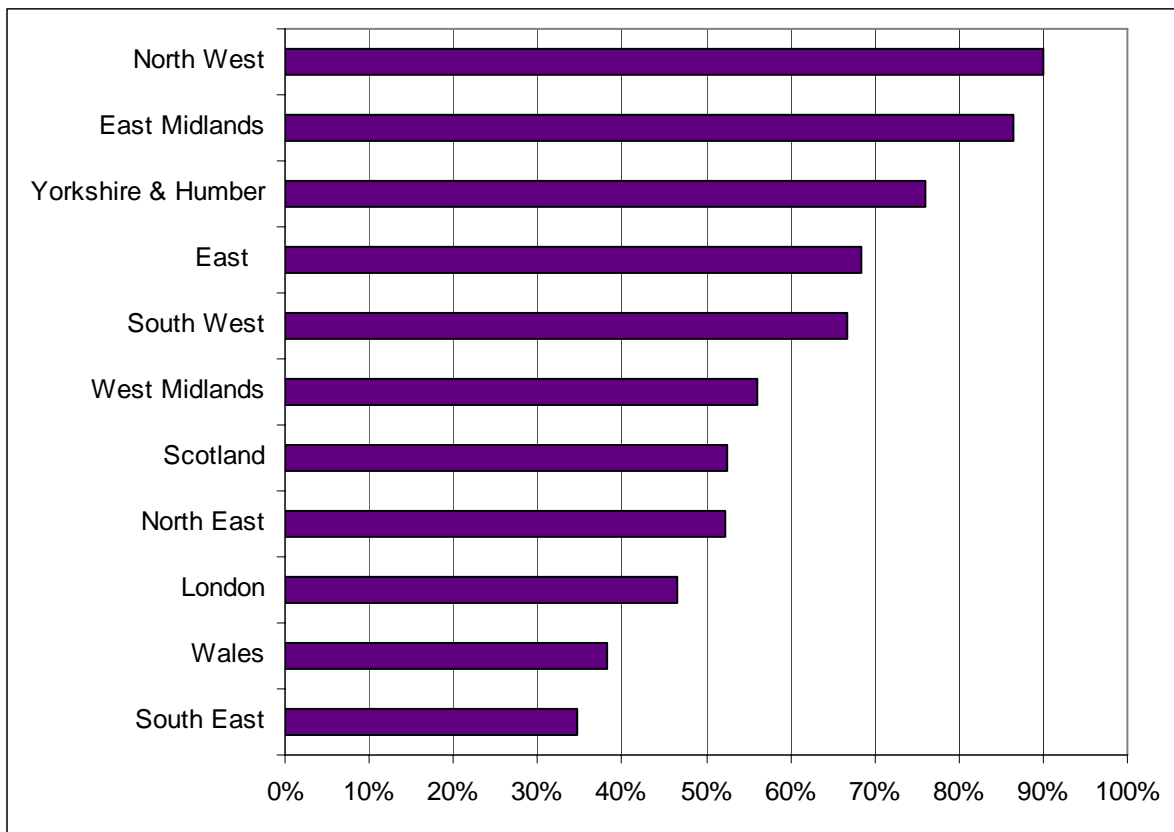
It should be noted that this survey is undertaken at the beginning of the academic year, therefore, the numbers on Construction Awards will tend to decrease as the year progresses and more trainees are placed with employers. Thus trainees will move into the relevant NVQ Level qualification.

Apprentices

Overall, there are 9,693 first-year trainees following an apprenticeship programme (60% of the total number of S/NVQ Level 2 and Level 3 trainees). Of the total number of apprentices, 7,677 (79%) are undertaking a Level 2 qualification with the remaining 2,016 (21%) on a Level 3. However, as a proportion of the combined total number of starters undertaking each level (16,148) the number of apprentices account for 61% and 57% respectively.

Chart 6 shows the split by area between those following an apprenticeship programme at both Level 2 and Level 3. This highlights that the North West has both the largest proportion of first-year trainees following an apprenticeship programme, with 90% on both Level 2 and Level 3 and the largest absolute number of apprentices (1,629), who account for 17% of the total number of apprentices.

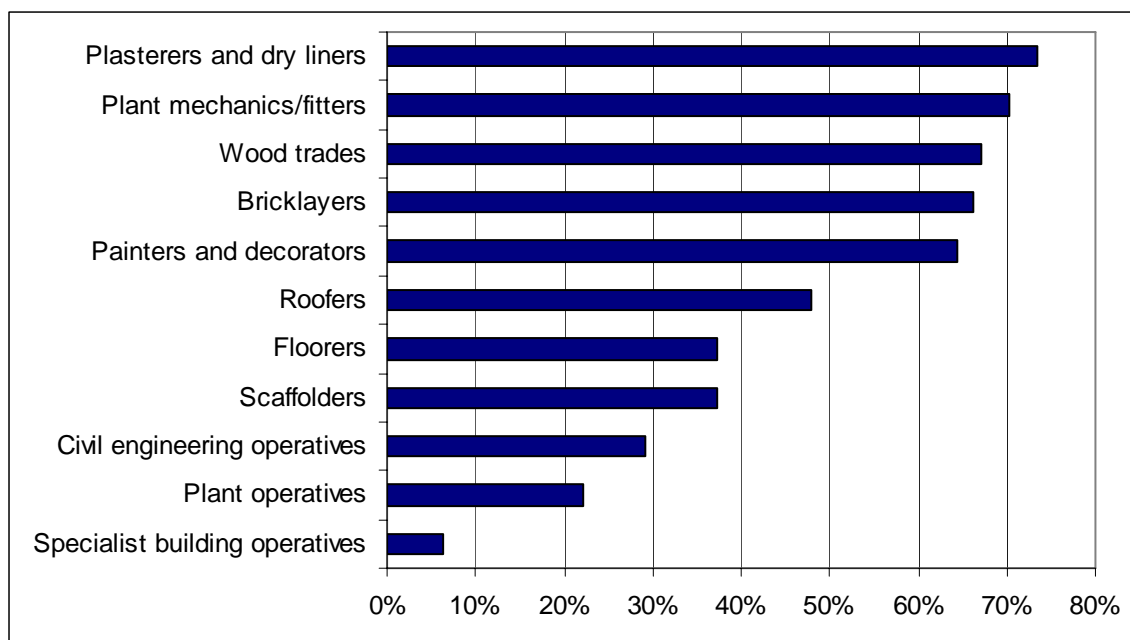
Chart 6 – Proportion of first-year trainees following an apprenticeship programme by area 2006/2007 (Total of S/NVQ Level 2 and Level 3)



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

Analysis by occupation shows that nearly three-quarters (73%) of plasterers and dry liners are following an apprenticeship programme compared to only 6% of specialist building operatives (see Chart 7).

Chart 7 – Proportion of first-year trainees following an apprenticeship programme by occupation 2006/2007 (Total of S/NVQ Level 2 and Level 3)



Note: Chart 7 only refers to qualifications that are available at both S/NVQ Level 2 and Level 3.

The occupation with the largest absolute number of apprentices is wood trades (4,654), as would be expected given their dominance of the training figures (see Table 2). Overall, they account for 67% of the total number of first-year trainees undertaking a wood trade occupation (Level 2 and Level 3), and 43% of the total number of apprentices.

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:

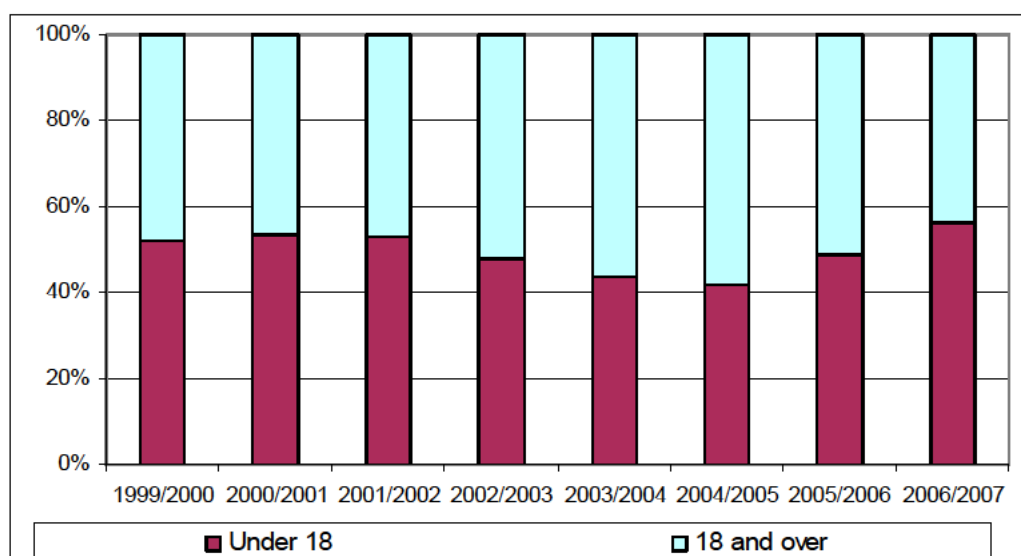
- Under 18 years
- 18 years and over.

Table 3 – Breakdown of first-year trainees by age and level of qualification 2006/2007 (Great Britain)

	Under 18 years	18 years and over	Total
Level 1	8,668 82%	1,929 18%	10,597
Level 2	10,831 52%	9,868 48%	20,699
Level 3	2,188 44%	2,756 56%	4,944
Technical occupations	1,495 29%	3,588 71%	5,083
	23,182 56%	18,141 44%	41,323

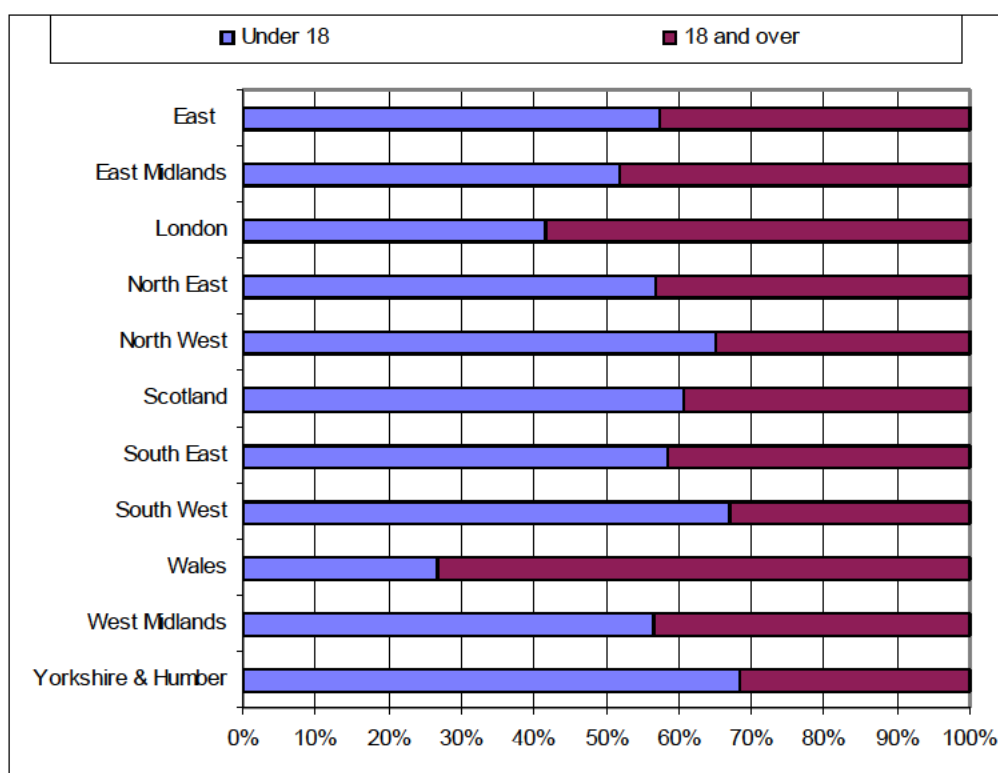
As would be expected, younger starters dominate in Level 1 qualifications and decrease as the level of qualification increases. Overall, the breakdown of first-year trainees by age shows slightly more trainees aged under 18 years (56%), which has reversed the trend since 1999/2000, of a higher proportion of adult trainees, as highlighted in Chart 8.

Chart 8 – Age of first-year trainees as a proportion of total 1999–2006 (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 Wales has the highest proportion of adults.

Chart 9 – Age of first-year trainees by geographical area 2006/2007 (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 2006/2007 (Great Britain)

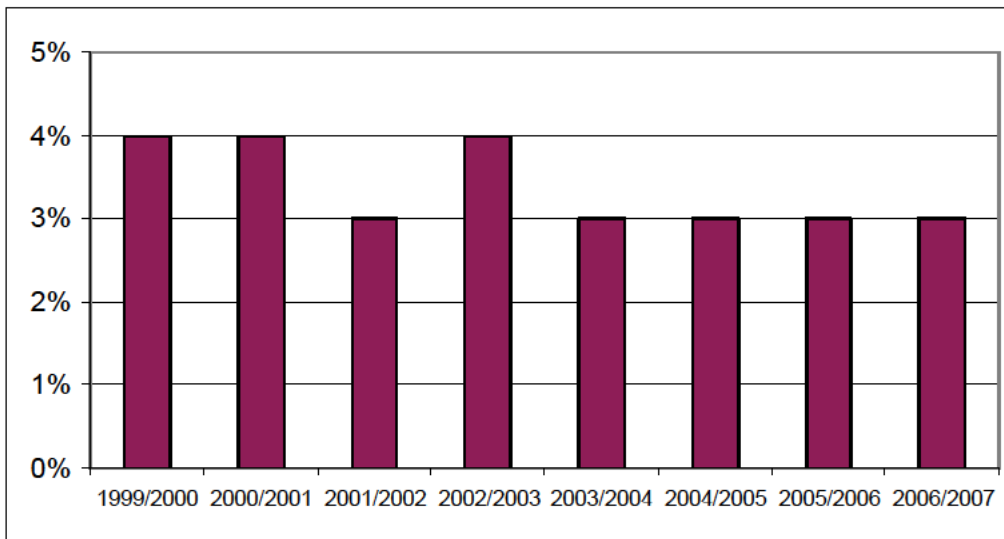
Under 18 years		18 years and over		Total	
Male	Female	Male	Female	Male	Female
22,738	444	17,326	815	40,064	1,259
(55%)	(1%)	(42%)	(2%)	(97%)	(3%)

Table 4 shows that in the academic year 2006/2007 there were 1,259 (3%) female starters compared to 40,064 (97%) males. These proportions are exactly the same as the previous academic year, 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 10% of employment in Great Britain⁴.

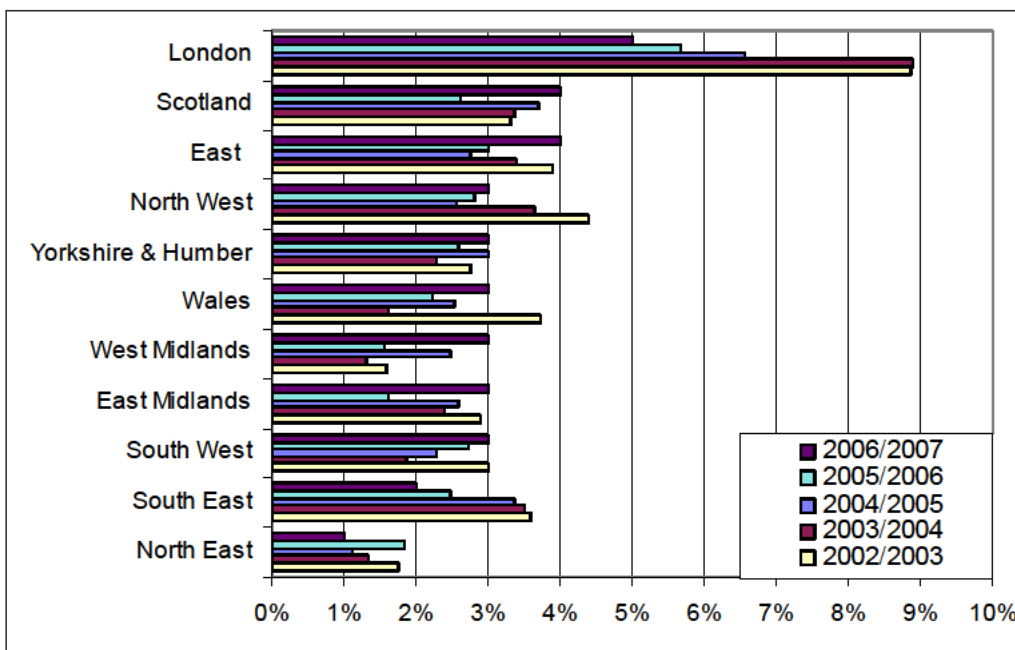
⁴ Labour Force Survey, Spring 2007 (SIC45) Great Britain

Chart 10 – Female first-year trainees as a proportion of the total number of first-year trainees 1999–2006 (Great Britain)



Analysis by geographical area, shows that in 2006/2007 Scotland has the highest absolute number (170) of female starters, accounting for 14% of the overall number of female starts. However as a proportion of trainees in the area, London has the highest share of females (5%). Over the past five academic years, London has consistently had the highest proportion of female starters, as highlighted in Chart 11, which shows the five-year trend of female first-years as a proportion of all first-year trainees in the geographical area, in descending order of this years' results. Across the remaining areas of Great Britain, the majority of areas are consistent with the average figure of 3% with notable exceptions – North East (1%) and South East (2%) while above average are the East and Scotland (both 4%).

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

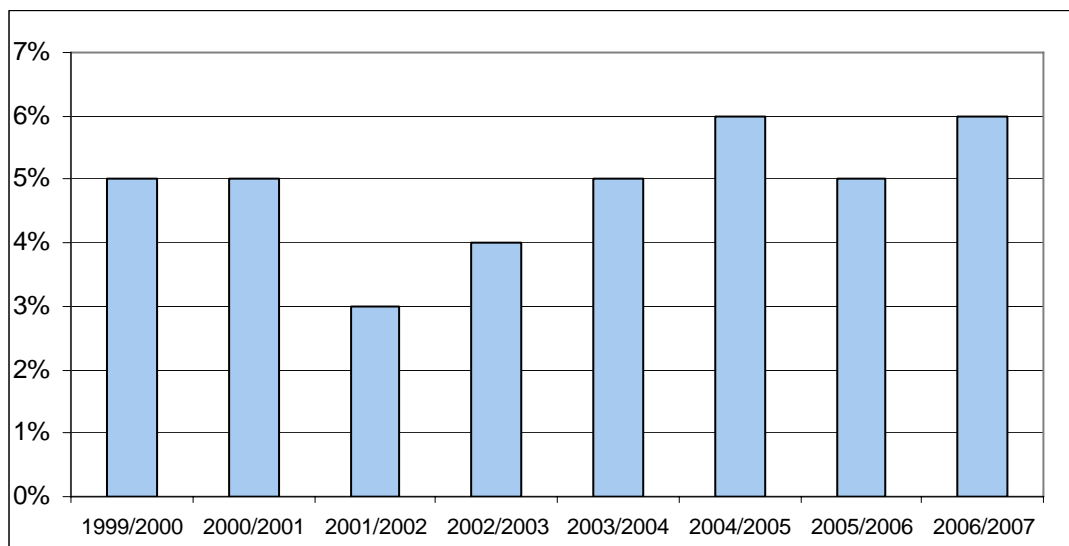


Analysis split between craft (S/NVQ Levels 1 to 3) and technical qualification levels highlighted that female starters were far more likely to be studying for a technical qualification – 11% of all technical trainees, compared to only 2% of all craft trainees, are female. However, within the craft occupations as a proportion of the total number of starters by occupation, females were just as inclined towards painting and decorating courses (11%). These findings are consistent with the representation of females in the construction workforce. The Labour Force Survey (Spring 2007) shows that employment by occupation data illustrates that painting and decorating is the craft trade which has the highest representation of women (3%)⁵.

Ethnic minorities

The number of first-year trainees who are from an ethnic minority stands at 2,661 in 2006/2007 or 6% of the total, higher than their representation within the construction workforce where they currently account for 4% of manual trades in Great Britain.

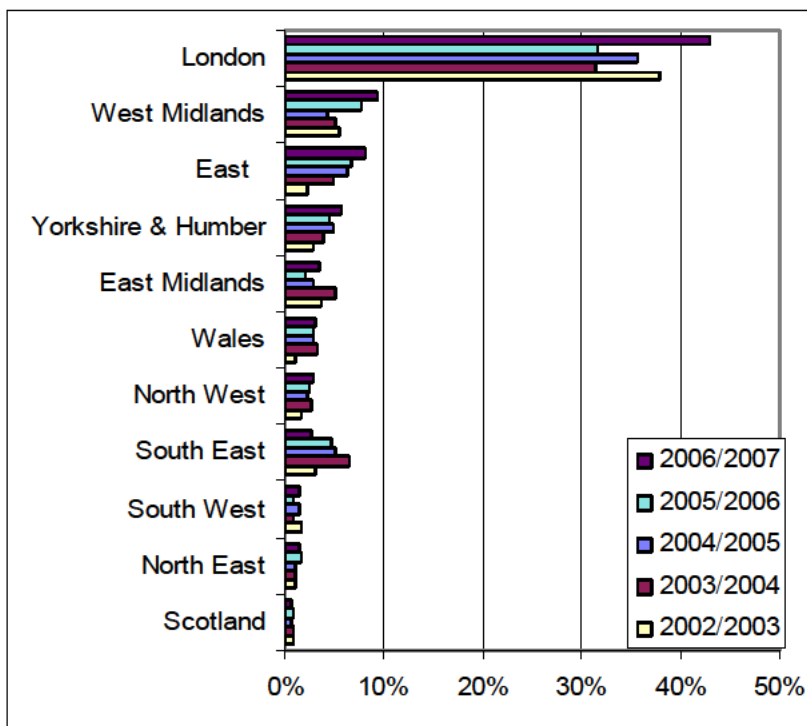
Chart 12 – Ethnic minority first-year trainees as a proportion of all first-year trainees 1999-2006 (Great Britain)



As with the number of female starters, London also 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 43%, 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 four years, as shown in Chart 13.

⁵ Labour Force Survey, Spring 2007 (SIC 45) Great Britain

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



Section 2: Forecasted Demand for Craft and Technical Construction Training 2007–2011

ConstructionSkills, through the Construction Skills Network⁶, 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 2007-2011
	2007	2010		
East	93,750	106,160	13%	4,320
East Midlands	64,860	71,690	11%	2,220
London	98,730	112,890	14%	4,500
North East	46,840	49,570	6%	1,550
North West	100,550	110,710	10%	3,420
Scotland	96,120	106,690	11%	3,560
South East	116,510	130,660	12%	5,270
South West	82,860	91,220	10%	2,770
Wales	42,700	46,910	10%	2,500
West Midlands	85,640	93,780	10%	2,650
Yorkshire & Humber	76,640	83,970	10%	2,470
Total (Great Britain)	905,200	1,004,250	11%	35,230

Source: ConstructionSkills Employment Model, 2007

Note: Table 5 is a subset of the table that appears in Blueprint for UK Construction Skills 2007-2011 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 forecasted annual average requirement for skilled workers by geographical area.

⁶ www.constructionskills.net/research/constructionskillsnetwork

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

	Total employment		Percentage change	Average annual requirement
	2007	2011		2007-2011
Main trades				
Wood trades	274,120	304,680	11%	11,940
Bricklayers	94,630	107,890	14%	4,830
Painters and decorators	140,290	158,900	13%	4,310
Plasterers and dry liners	40,770	44,060	8%	1,410
Main trades total	549,810	615,530	12%	22,490
Specialist building trades (SB)				
Roofers	40,240	44,410	10%	1,910
Floorers	42,070	46,250	10%	830
Glaziers	44,580	47,740	7%	1,120
Other SB operatives	57,600	63,370	10%	2,160
Specialist SB trades total	184,490	201,770	9%	6,020
Civil engineers (CE)				
Scaffolders	20,700	23,370	13%	1,180
Plant operatives	40,470	44,330	10%	1,470
Plant mechanics/fitters	22,260	23,640	6%	1,040
Steel erectors/structural	26,010	27,790	7%	940
Other CE operatives	61,460	67,820	10%	2,090
Civil engineers total	170,900	186,950	9%	6,720
Total	905,200	1,004,250	11%	35,230

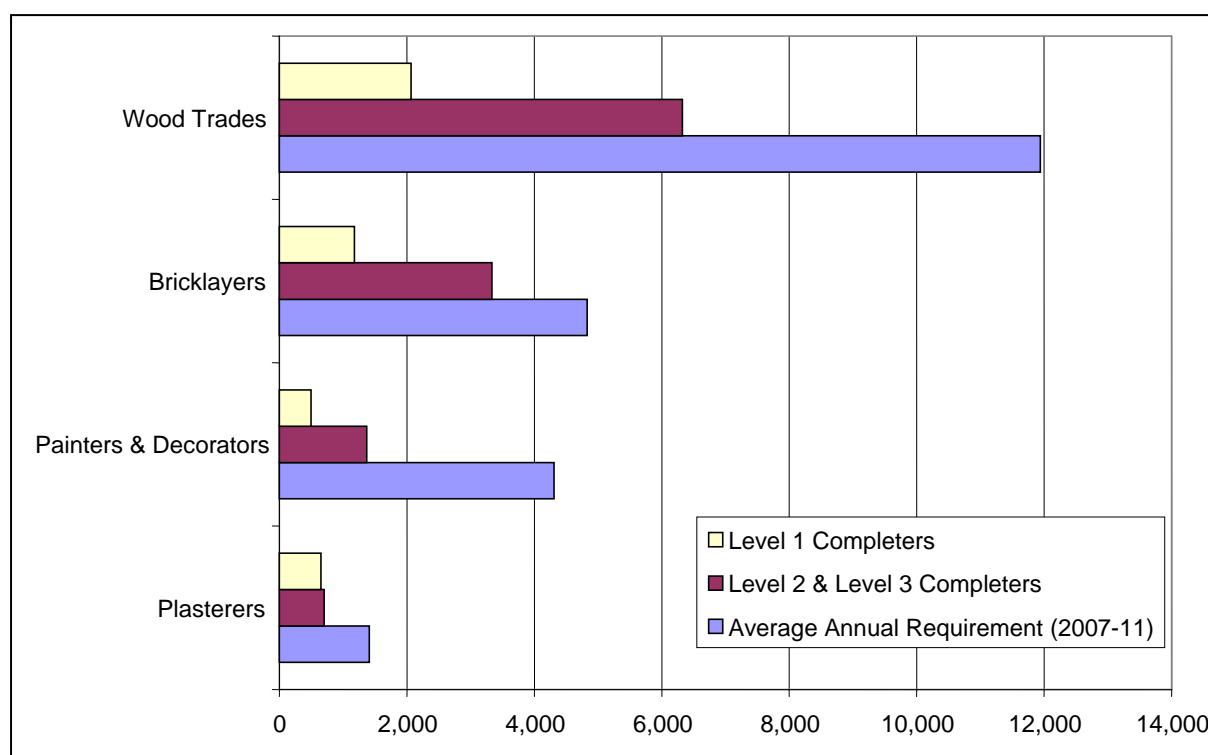
Source: ConstructionSkills Employment Model, 2007

Note: Table 6 is a subset of the table that appears in Blueprint for UK Construction Skills 2007–2011 report. It covers only the skilled manual trades and excludes managers, clerical staff, technical staff and professional occupations.

The industry needs to recruit nearly 35,250 new entrants annually over 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 look at predicted demand for the different construction occupations, and how this compares with the amount of training currently taking place.

Chart 14 – Average annual requirement for main construction trades (2007-2011) and expected successful learner outcomes (Construction Awards and S/NVQs) from the 2006/07 trainee intake. (Great Britain)



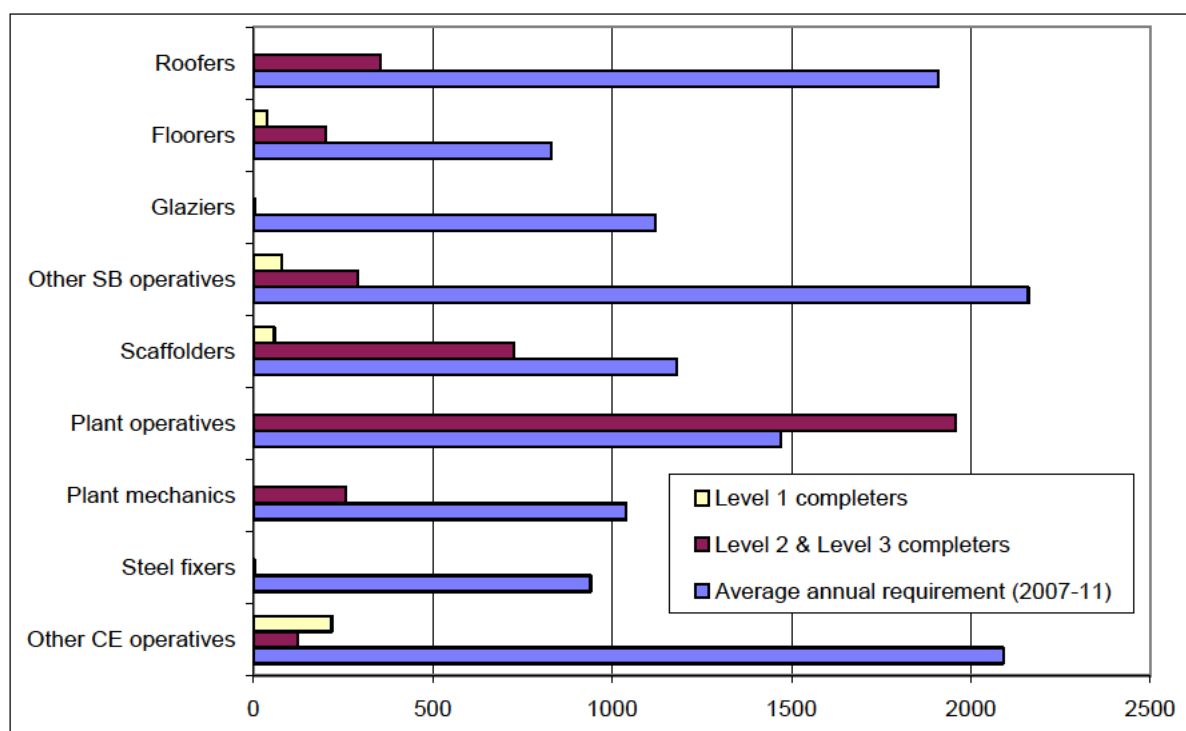
Source: Construction Skills Network Model 2007; ConstructionSkills Trainee Numbers Survey 2006/2007; Learning and Skills Council

The above graph compares the average annual requirement for skilled workers in the main trades, against the expected number of successful completers from the 2006/07 intake of trainees. The results show that, whilst there are expected to be sufficient bricklayers and plasterers leaving training providers, there will be a shortfall of some 30% in wood trades and 57% amongst painters and decorators that will need to be made up from elsewhere.

Another concern is the fact that trainees are not necessarily studying courses appropriate to the industry's skills demands. Twenty-five percent of new entrants training in the main construction trades are studying at Level 1, and whilst offering a useful entry into training, this does not in itself provide sufficient depth of experience to allow a new entrant or apprentice to work competently in the industry. Just under half (48%) of first-year trainees are studying for Construction Awards, which, unlike vocational qualifications, do not provide the work experience that is essential for a career in construction.

The main construction trades account for approximately 71% of all training in the manual trades. Specialist builders and civil engineers between them account for around 17% 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 – Demand and forecast completion for specialist construction trades and civil engineers 2006/2007 (Great Britain)



Note: SB = Specialist Building; CE = Civil Engineering

Source: Construction Skills Network Model 2007; ConstructionSkills Trainee Numbers Survey 2006/2007

Of the occupations shown above, only plant operatives are training sufficient people to meet demand. Even here, however, the picture is not as positive as it might appear. The demand figure for plant operatives represents construction only; approximately half of all trainee plant operatives will work outside of construction (e.g. agriculture, manufacturing, mining and quarrying). Taking this into account the current level of plant operative training is probably insufficient to meet demand.

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 training capacity is looked at in more detail in Section 3 of this report.

Section 3: Construction Training Capacity 2006/2007

So far this research has shown a slight shortfall in the amount of training taking place in the main trades, and a much greater shortfall in the provision of specialist and civil engineering training. This raises the question of whether there is any spare capacity within the Further Education system to train extra people to meet this shortfall in supply.

This section summarises the findings of the capacity questions from the Trainee Numbers Survey. The results are based upon the responses of 165 training and Higher Education providers across Great Britain and applied to the overall results from the main survey.

Capacity by course

Table 7 shows that there were over 54,000 applicants for the approximately 41,300 places on construction courses, or 1.3 applicants for every place. This is lower than the 1.4 applicants per place recorded in 2005/06, and represents a decline in the number of applicants of 18.5%.

It is too early to state with any certainty whether the drop in applicants is temporary or the start of a more long-term decline. One indicator may be that despite falls in the numbers of applicants and starters, the number of construction awards increased slightly this year compared to 2005/06. If this indicates an unwillingness of employers to take on apprentices, then we may be witnessing the start of a long term fall in the amount of construction training over the coming years.

This general decline has not affected the main construction trades significantly, where the number of applicants and starters are broadly similar to 2005/06 at 40,207 and 29,344 respectively.

The number of applicants for civil engineering places has dropped considerably this year when compared to 2005/06, although much of this decline is in scaffolding courses.

Specialist building courses are once again the least oversubscribed of all construction courses – suggesting that the shortfall in supply here is at least partly due to a lack of interest amongst young people in these occupations.

Table 7 – Applicants and starters to construction courses 2006/2007 (Great Britain)

Occupation	Applicants	Starters	Applicants per starter
Technical	6,224	5,083	1.2 (1.3)
Main trades			
Wood trades	18,825	14,404	1.3 (1.3)
Bricklayers	12,458	9,338	1.3 (1.4)
Painters and decorators	4,644	3,451	1.4 (1.2)
Plasterers and dry liners	4,280	2,151	2.0 (1.9)
Main trades total	40,207	29,344	1.4 (1.4)
Specialist building operatives			
Roofers	573	553	1.0 (1.2)
Floorers	403	342	1.2 (1.0)
Glaziers	8	8	1.0 (1.0)
Specialist building operatives	655	605	1.1 (1.2)
Specialist building operatives total	1,639	1,508	1.1(1.1)
Civil engineering operatives			
Scaffolders	1,134	925	1.2 (2.8)
Plant operatives	3,125	2,899	1.1 (1.2)
Plant mechanics/fitters	332	331	1.0 (1.0)
Steel erectors/structural	5	5	1.0 (1.0)
Civil engineering operatives	1,332	1,187	1.1 (2.0)
Civil engineering operatives total	5,928	5,347	1.1(1.7)
Maintenance workers	41	41	1.0 (1.1)
Total	54,038	41,323	1.3 (1.4)

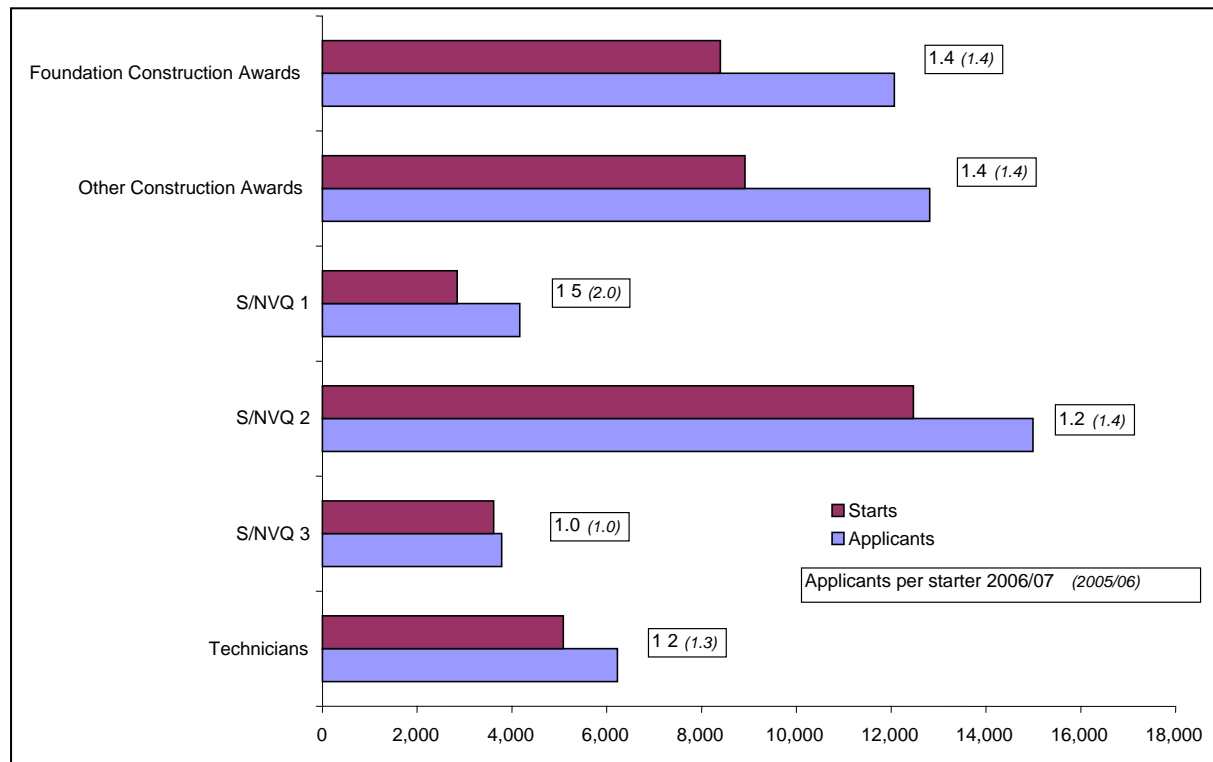
Figures in brackets show 2005/06 figure

Source: ConstructionSkills Trainee Numbers Survey

Capacity by level of qualification

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

Chart 16 – Training capacity by level of qualification 2006/2007 (Great Britain)



Figures in brackets show 2005/06 figure

Around 8% of all applicants and 7% of all starters on construction courses were at S/NVQ Level 1. While this can be a useful entry point into construction training for some candidates, it is not considered by industry to represent sufficient competence to operate on site. It is of concern to note, therefore, that Level 1 courses were the most oversubscribed of any level with 1.5 applicants for every place.

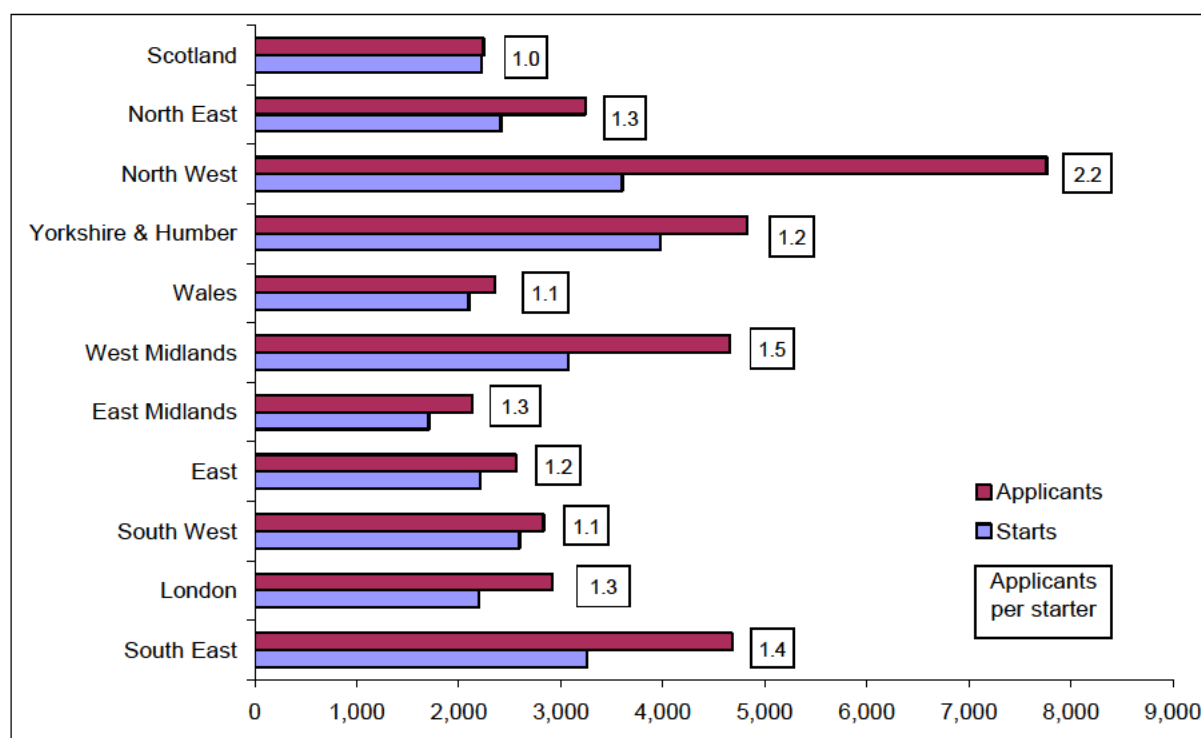
The majority of applicants (28%) and starters (30%) were to S/NVQ Level 2 courses, the minimum level of competence for working in the industry. The shortfall in places at this level was in the order of 20%, while Level 3 courses were the least oversubscribed with more or less equal numbers of applicants and starters.

Nearly half of all applicants (46%) and starters (42%) were on Construction Award courses (Foundation, Intermediate, and Advance). As already mentioned these lack the practical work experience of an S/NVQ and so can only offer at best a route into employment rather than full competence to work in the industry. To this end Programme-Led Apprenticeships were designed to provide the work experience that trainees need to achieve a full apprenticeship and complete their training (see page 23: Work experience placements).

Capacity by geographical area

Looking at the capacity of training in the main trades on a regional basis, the North West of England is the most oversubscribed, with over two applicants for every place at a construction training provider; this is unchanged since last year. The South West is the least oversubscribed region with just 1.1 applicants for every place.

Chart 17 – Applicants and starters (main trades) by geographical area 2006/2007



Source: ConstructionSkills Trainee Numbers Survey 2006/07

See figure 3 in Appendix for a visual representation of the total number of applicants to construction courses by geographical area.

Nationally, Scotland showed the least disparity between the number of applicants and starters with, in the main trades at least, nearly every applicant able to find a training place. This compares to 42% in England – the most oversubscribed country. Historically, Wales has demonstrated little problem finding training places for the majority of applicants, this continues with only 12% of applicants failing to find a training place in the main trades.

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.

The research asked respondents about the number of work placements that they required for trainees undertaking Construction Awards in order that they could move to a full NVQ qualification. Just over one-fifth (22%) of those on Construction Awards required a work placement, and at the time of the research respondents only expected to achieve 57% of this target.

Table 8 – Work experience placements by area 2006/2007 (England and Wales)

	Number of Construction Awards	Work Experience Placements		Shortfall	Expected Achievement Rate (%)
		Required	Achieved		
South East	1955	340	109	231	32 (55)
London	1827	272	90	182	33 (31)
Wales	1605	749	337	411	45 (43)
North East	1334	136	78	58	58 (76)
West Midlands	2475	144	88	56	61 (50)
East	1271	412	251	161	61 (80)
North West	2072	994	673	321	68 (36)
Yorkshire & Humber	1728	659	454	205	69 (98)
East Midlands	1798	24	19	5	79 (79)
South West	1284	118	97	21	82 (39)
Total	17,349	3,849	2,196	1,653	57 (58)

Figures in brackets show 2005/06 figure

Note: Construction Awards are not available in Scotland and therefore all data within this subsection excludes Scottish trainee figures.

Although there are more starters on Construction Awards in 2006/07 than in 2005/06 (17,349 compared to 16,751) the number of work placements required has fallen to 3,849 from 5,669 in 2005/06. Despite this the overall expected achievement rate is similar in 2006/07 at 57%.

There is considerable regional variation in the availability of work placements for trainees on Construction Awards, as well as annual variation within regions. For example the South West, where in 2005/06 the expectation was that only 39% of required work placements would be achieved, should succeed in finding 82% of required work placements in 2006/07. Yorkshire and Humber meanwhile, which in 2005/06 achieved nearly all the work placements required, would only achieve 69% of placements in 2006/07.

Section 4: Higher Education in the Built Environment

Student enrolments on built environment degree courses

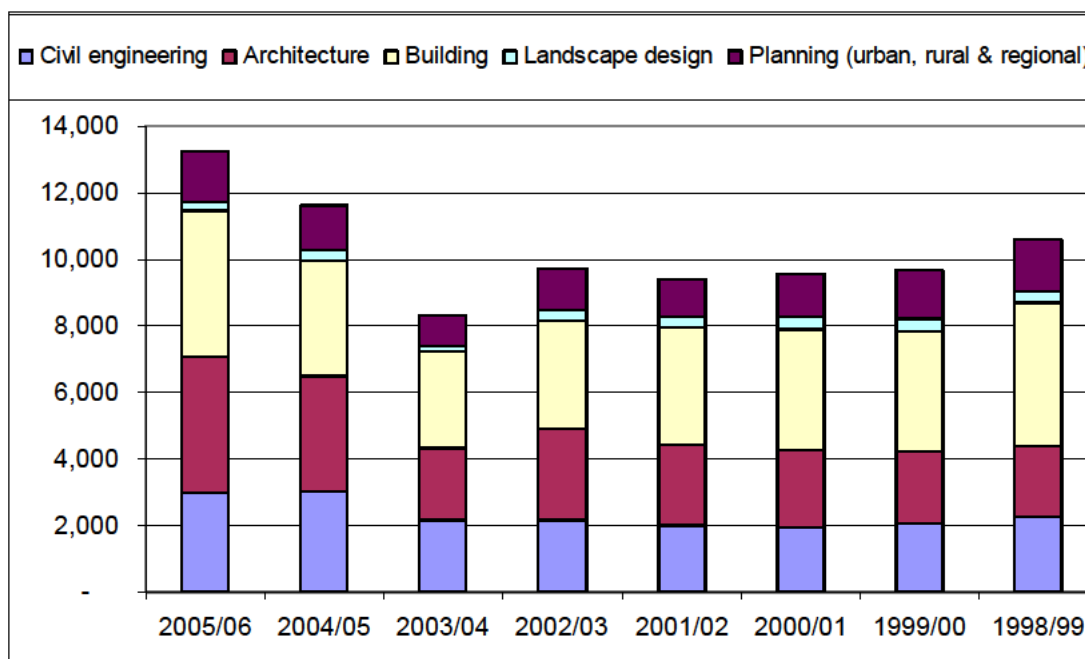
The Higher Education Statistics Agency (HESA) is the official agency for the collection, analysis and dissemination of quantitative information about higher education.⁷

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 degree courses. Thus providing a complete picture of training in the built environment by presenting data from both further and higher education.

However, it should be noted that the HESA data reproduced here is for the academic year 2005/2006 while Trainee Numbers Survey figures refer to 2006/2007, hence direct comparison is not advisable.

Chart 18 shows the eight 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. However, following a decrease in 2003/04 the numbers increased significantly the following year (by 40%) and have continued this rise in 2005/06 to a high of 13,260. With the exception of civil engineering, which remained constant at 3,000 enrolments, the remaining built environment degrees courses all witnessed an increase in 2005/06.

Chart 18 – Student enrolments on built environment courses by subject 2005/2006 (United Kingdom)



⁷ For more information see www.hesa.ac.uk

The gender split of undergraduates remained unchanged between the academic years 2004/05 to 2005/06 at approximately 25% female and 75% male. By subject, Architecture was most popular for females, accounting for just under half (44%) of all female students whereas Building degrees had the highest proportion of males at approximately a third (36%).

Chart 19 – Females enrolling on built environment courses by subject 2005/2006 (United Kingdom)

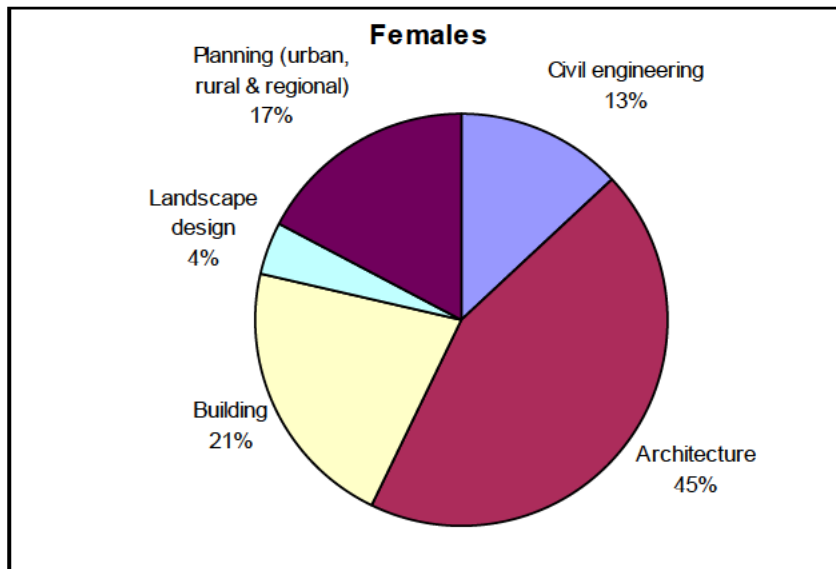
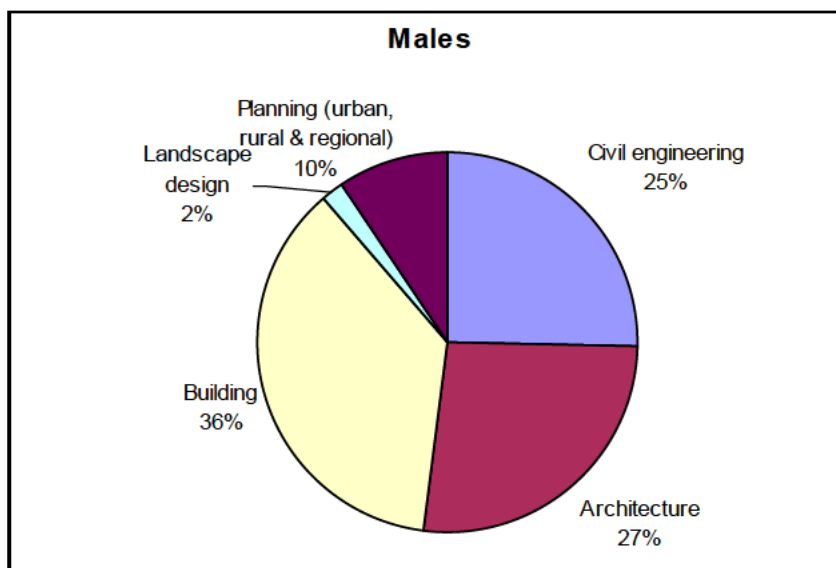


Chart 20 – Males enrolling on built environment courses by subject 2005/2006 (United Kingdom)



The ethnicity of undergraduates has also remained constant in the years 2004/05 to 2005/06 with the largest majority (80%) classified as white and 15% from an ethnic minority (the remaining 5% are unknown). The largest ethnic minority group are classified as 'Asian or Asian British – Indian' who account for approximately a quarter (25%) 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 15% 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 11% of technical students culminating in 25% of undergraduates.

Destinations of leavers from built environment degree courses

HESA also collects data on the destination of leavers from higher education. The following looks at graduates who obtained a first degree in the built environment during the academic year 2005/06.

Two-thirds (66%) entered full-time paid work (including self-employment) during the first six months after graduation. A further 15% were combining work with further study whilst 9% progressed to further study only.

The occupation of those entering work mapped closely to the subject of study for graduates of Architecture, Civil Engineering and Building degrees.

The situation for graduates from Landscape Design and Planning (urban, rural and regional) degrees was slightly different. Landscape Designers were just as likely to find work outside the construction sector (39%) than within it, with 35% beginning work as Landscape Architects. Whereas Planning graduates were the most likely (44%) to start work in another sector. A much smaller proportion started work within the construction industry as either Town Planners (11%) or General Practice Surveyors (10%).

Conclusion

This report compares the amount of training currently taking place with the predicted demand for the different construction occupations in both the main and specialist trades. In terms of the actual number of people starting training, the four main construction trades of bricklaying, woodworking, painting and plastering are not suffering from an impending skills shortage. Our forecasting models show an annual requirement of 22,000 people into these trades, and the annual in-take from training alone is 29,000 – although not all these will necessarily work in construction or complete their courses.

The same data when applied to the specialist and civil engineering trades does indicate that some UK-wide skills shortages are starting to develop among certain occupations. The picture is different depending on the nature of construction demand and training supply in each region, but the main reasons behind the shortfall are usually the same: availability of provision, cost of provision, and a time lag in developing new courses to meet the industry's changing needs.

The solution to any potential shortfall in training provision does not lie wholly in recruiting more new entrants, as it is unlikely that colleges could cope with any large increase. Instead, it will be important to ensure that the training that is available is fit for purpose and meets the needs of employers, thereby encouraging more employers to provide work experience places and to offer project-based or private training to their existing workforce.

Skills gaps

A major cause for concern is that students are not necessarily studying courses appropriate to the industry's skills demands. This may lead to associated skills gaps in the future. The data shows that around 60% of starters are studying at S/NVQ Level 2 or above – a level that is widely accepted to be the industry standard for new entrants. However, 26% are studying at Level 1, which, whilst offering a useful entry into training, does not in itself provide sufficient depth of experience to allow a new entrant or apprentice to work competently in the industry. In addition, of the starters undertaking craft training, half (52%) are studying for Construction Awards, which do not provide the work experience that is essential for a career in construction.

Short- and long-term training consequences of skills gaps

It is possible for firms to have no apparent, short-term problems with respect to skills gaps or shortages, whilst the industry stores up long-term skills problems for the future. Long-term problems can accrue because the trend for newly qualified workers adding to the overall stock is insufficient to sustain the level of human capital that is actually required to prevent skills shortages in the future.

The key to combating skills gaps is to address the quality, level and relevance of the training being received by both the new and experienced workforce. At present there are too many non-certificated training courses that do not meet the needs of employers, apprentices, or the existing workforce. ConstructionSkills' key initiative in this regard is the development of the Construction Qualifications Strategy (CQS). The development and implementation of the CQS will ensure a well-planned and structured approach to the development of fit for purpose qualifications. The CQS is currently reaching completion. It offers a blueprint to draw together a coherent set of guidelines, principles, priorities and actions to avoid skills gaps in the future.

Appendix

Figure 1 – First-year trainees by geographical area 2006/2007 (Great Britain)

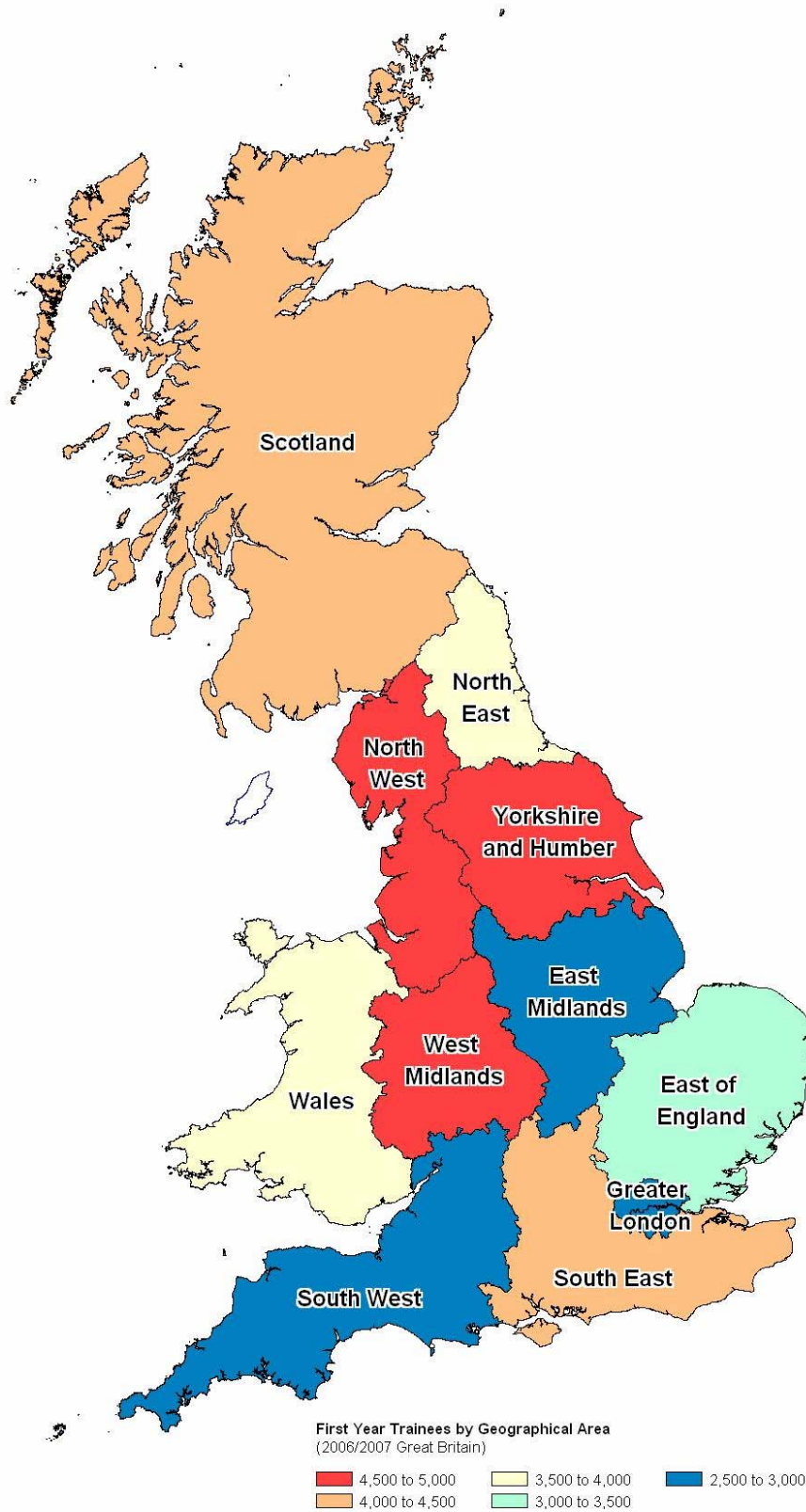


Figure 2 – Forecasted annual average requirement for skilled workers by geographical area 2007-2011 (Great Britain)

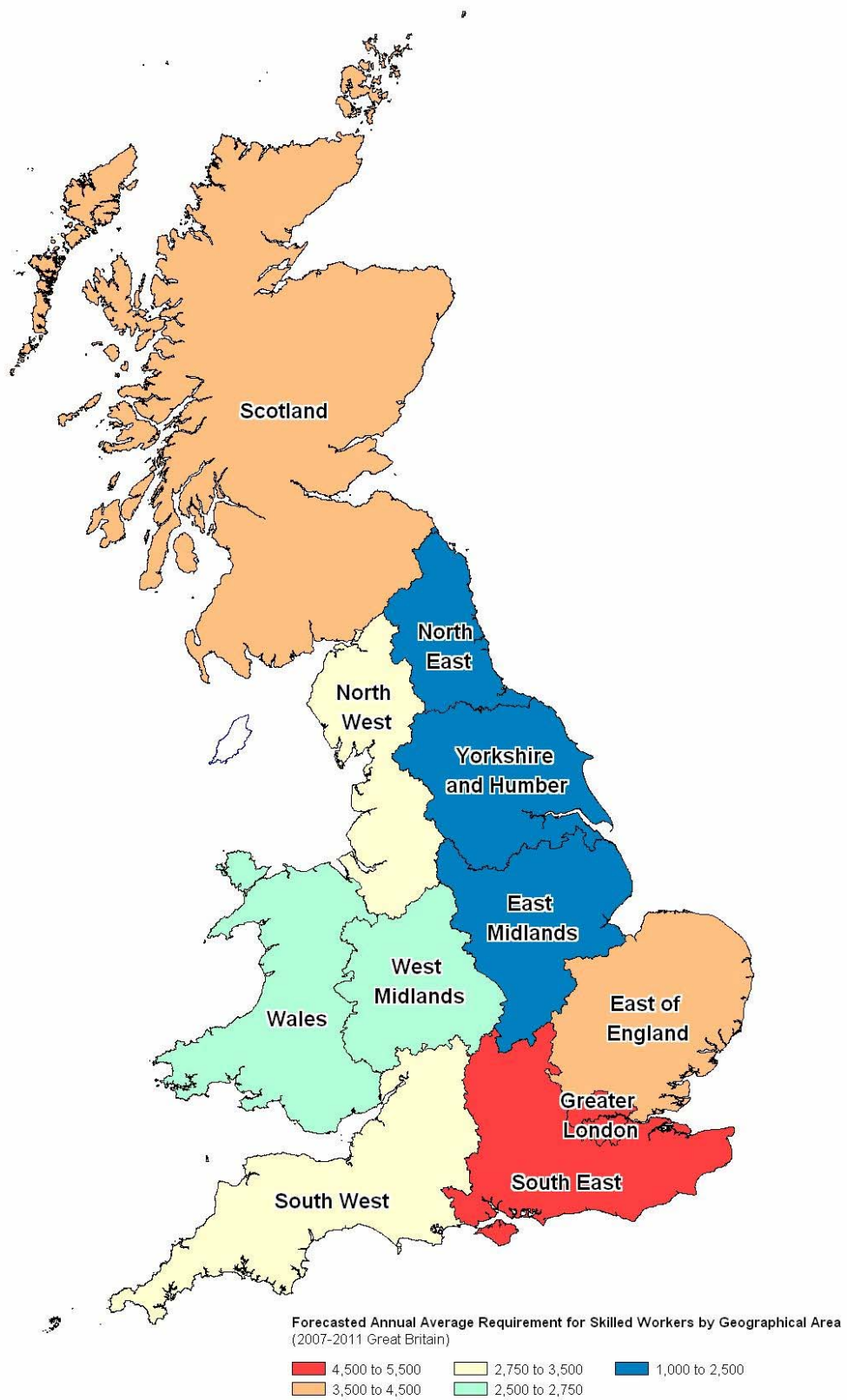


Figure 3 – Applicants to construction courses by geographical area 2006/2007 (Great Britain)

