

# **TRAINEE NUMBERS SURVEY**

**2005/2006**

## **SUMMARY**

- First year intake in 2005/2006 stands at just over 47,000. This represents a further rise on previous year's figures (2%)
- The composition of the top five occupations in terms of absolute numbers of starters are Wood Trades, Bricklayers, Technical Occupations, Plant Operatives and Painters - a slight change from last year
- Over half of all first year trainees are undertaking an S/NVQ Level 2 or Intermediate Construction Award
- The West Midlands has more starters than the other 10 regions/devolved administrations
- Just over half of all first year trainees undertaking craft training are work-based.
- Just under half of all S/NVQ Level 2 and 3 starters are following an Apprenticeship programme
- The breakdown of first year intake by age is fairly evenly split between those aged under 18 and Adults – 49% and 51% respectively.
- There are 1,193 female starters (3% of total)
- Ethnic minority starters account for 5% of the total, but there are strong geographical variations – rising to 32% in London.
- Across all construction courses covered by this survey there were 40% more applicants than starters – which equates to an average of just over 1.4 applicants for every available place.
- Scaffolding and Civil Engineering were the most over-subscribed courses, while Specialist Building Courses were the least so.
- Courses at S/NVQ Level 1 are the most oversubscribed, while S/NVQ Level 3 are the least so.
- The North West of England is the most oversubscribed region with 2 applicants for every place whereas Yorkshire & Humber is the least oversubscribed region with just 1.2 applicants for every place.
- The biggest shortfalls in work placements for those studying Construction Awards were in London, by contrast Yorkshire & Humber, had almost no disparity between work experience places require and achieved.
- 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 for Steel Erectors, Plant Mechanics, Glaziers, Floorers, Roofers, and Other Specialist Building Operatives.

## **INTRODUCTION**

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

CITB-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.

CITB-ConstructionSkills has the task of producing a forecast of skills demand in the industry, and estimating the likely future supply of trained workers. The starting point for these is an assessment of the levels of training within the industry. This is provided by CITB-ConstructionSkills' annual Trainee Numbers Survey, which measures the number of people entering construction training. **Section 1 – Construction Training 2005/2006** presents the data collected from colleges, private training providers and construction industry training centres across Great Britain. These include those coming through CITB-ConstructionSkills own managing agency and those entering other formal certificated training at craft and technical level.

**Section 2 – Forecasted Demand for Construction Training 2006-2010** analyses this training data alongside the projected demand for skilled construction workers over the forecast period 2006-2010, in order to assess the adequacy of current training provision in terms of quantity

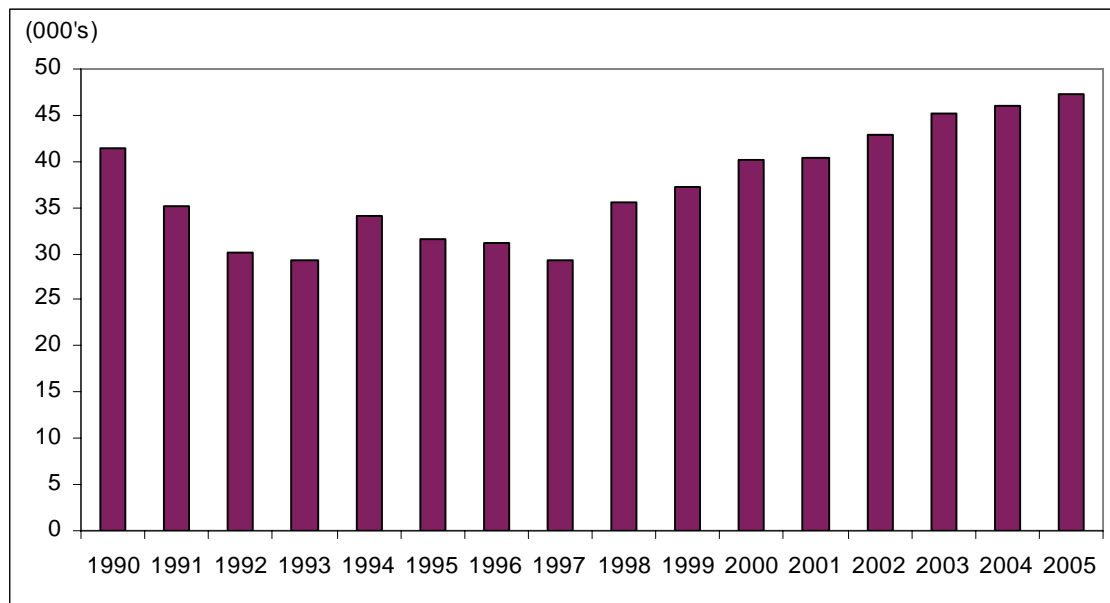
Finally, **Section 3 – Construction Training Capacity 2005/2006** summarises the findings of the capacity questions from the Trainee Numbers Survey which aimed to discover the total capacity for construction training that is currently available

## **SECTION 1 – CONSTRUCTION TRAINING 2005/2006**

### **The National Picture**

The number of first year trainees has increased slightly once again this year; a rise for the eighth year running. This is highlighted in Chart 1 below, which shows the trend of first year trainees over a fifteen-year period (1990 – 2005). As the chart shows, throughout much of the 1990's the numbers were around 30,000, down by around 10,000 on the pre-recession level of the late 1980's. It should be noted that during the '90s the industry underwent a prolonged period of low activity, with a contracting workforce, and low levels of recruitment. The years since 1998 have seen a recovery in the levels of training as the industry continues to grow.

Chart 1 - Numbers of First Year Trainees 1990-2005 (Great Britain: All Occupations)



Please note that due to changes made data collection during 2004/2005, the total first year intake displayed in the chart for years 1999 onwards does not include trainees undertaking a Mechanical Engineering course.

## Training by Occupation

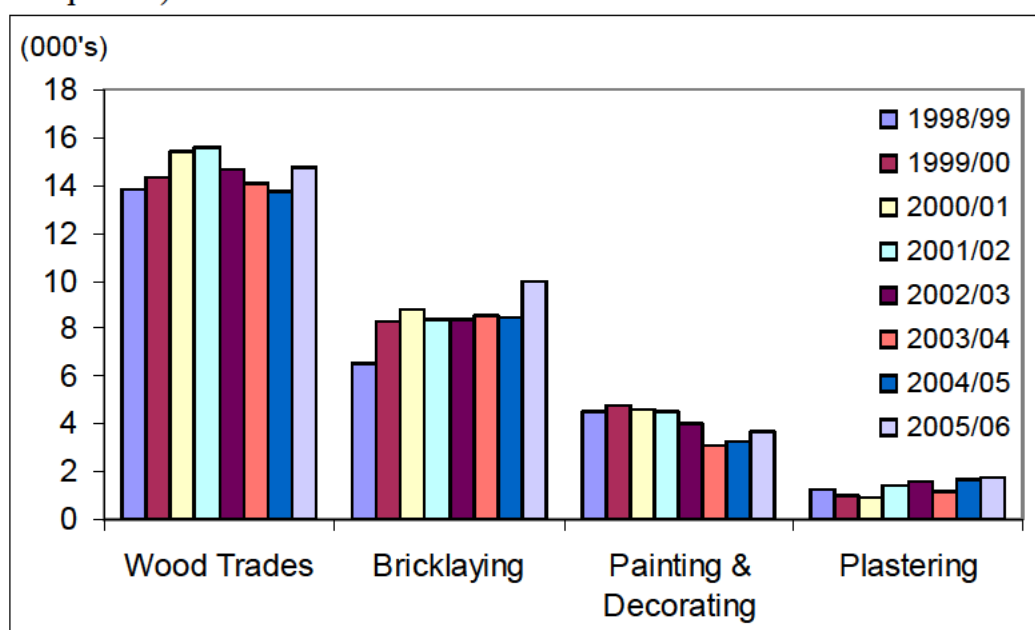
The overall first year intake in the academic year 2005/2006 is 47,188. The following table shows the breakdown for the 16 occupations covered by the survey.

Table 1 - Numbers of First Year Trainees 2005/2006(Great Britain)

Occupations	Under 18 years old		18 years old & Over		Total
	Male	Female	Male	Female	
Technical	1383	84	3596	462	5525
Wood Trades	9604	59	4985	137	14785
Bricklayers	6451	20	3468	20	9959
Painters	2147	153	1239	179	3718
Plasterers	980	10	745	11	1746
Roofers	350	1	467	0	818
Floorers	127	0	207	1	335
Glaziers	19	0	9	0	28
Other Specialist Building Operatives	207	1	708	0	916
Scaffolders	389	11	478	4	882
Plant Operatives	79	2	4662	17	4760
Plant Mechanics	91	0	82	0	173
Steel Erectors/Structural	17	0	51	0	68
Other Civil Engineering Operatives	697	7	2408	10	3122
General Operatives	138	4	43	0	185
Maintenance Workers	45	0	123	0	168
<b>Total</b>	<b>22,724</b>	<b>352</b>	<b>23,271</b>	<b>841</b>	<b>47,188</b>

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

Chart 2 - Number of First Year Trainees 1999-2005 (Great Britain: Building Craft Occupations)



As shown in the chart, the academic year 2005/2006 has witnessed an increase in each of the main trades, albeit only a very slight growth in new entrants starting Plastering courses. In comparison to previous years Wood Trades and Bricklaying dominate the first year training figures with 31% (14,785) and 21% (9,959) of the total respectively.

Out of the 16 occupations listed, 9 have more first year trainees this year than the previous year. These have been shaded in the table below.

Table 2 - Comparison of Number of First Year Trainees by Occupation in Academic Years 2005/2006, 2004/2005, 2003/2004, 2002/2003 and 2001/2002 (Great Britain)

<b>Occupations</b>	<b>2005/2006</b>	<b>2004/2005</b>	<b>2003/2004</b>	<b>2002/2003</b>	<b>2001/2002</b>
Wood Trades	14,785	13,719	14,097	14,690	15,604
Bricklayers	9,959	8,473	8,585	8,399	8,402
Technical	5,525	6,529	6,430	7,470	7,037
Plant Operatives	4,760	4,987	4,573	2,097	306
Painters	3,718	3,286	3,123	4,041	4,525
Other Civil Engineering Operatives	3,122	479	527	190	12
Plasterers	1,746	1,678	1,307	1,626	1,444
Other Specialist Building Operatives	916	442	480	636	147
Scaffolders	882	620	399	274	530
Roofers	818	958	714	356	409
Floorers	335	300	324	379	370
General Operatives	185	4,137	4,084	2,429	1,300
Plant Mechanics	173	197	204	214	205
Maintenance Workers	168	171	165	55	0
Steel Erectors/Structural	68	63	82	42	11
Glaziers	28	32	71	92	128
<b>Total</b>	<b>47,188</b>	<b>46,071</b>	<b>45,165</b>	<b>42,990</b>	<b>40,430</b>

Note: Shading denotes occupations with more first year trainees this year than previous year

The biggest increase this year has been the number of new entrants on Civil Engineering Operative courses. This has occurred due to changes in the way qualifications are recorded in the survey, it also explains the large decrease in the number entering General Operative training. Omitting these two occupations, the biggest growth has been in the number entering Bricklaying, which have risen by approximately 1,500 trainees, however as a proportion of last years total, the biggest increase of 42% has been in Scaffolding – which has been increasing steadily each year since 2002/2003.

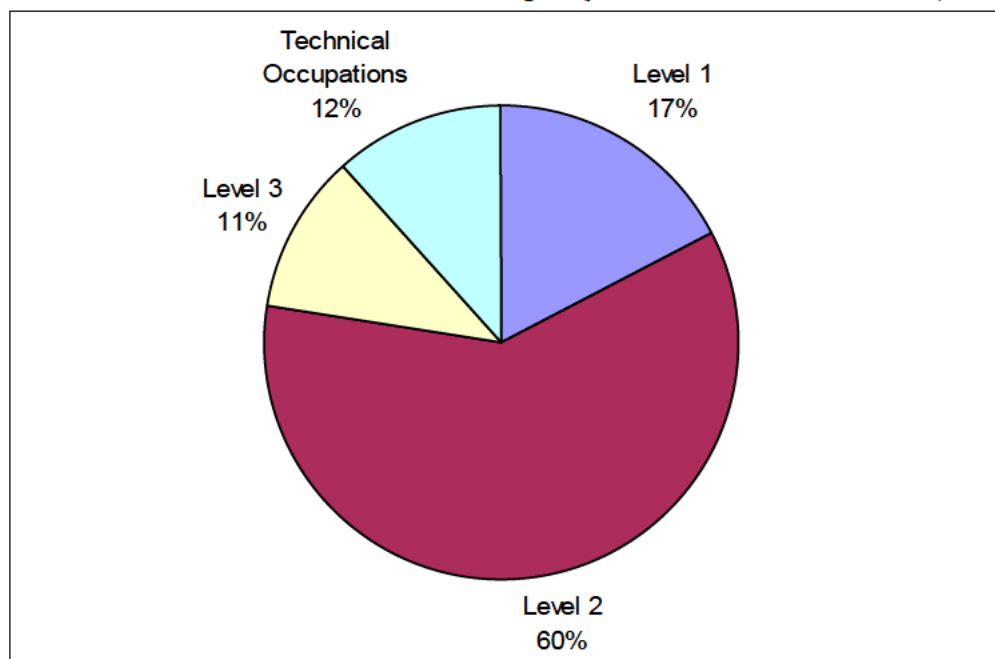
## Training by Qualification

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 & Higher Education Courses  
(National Certificate/Diploma & 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 below

Chart 3 - First Year Trainees Undertaking a Qualification in Each Level (Great Britain)



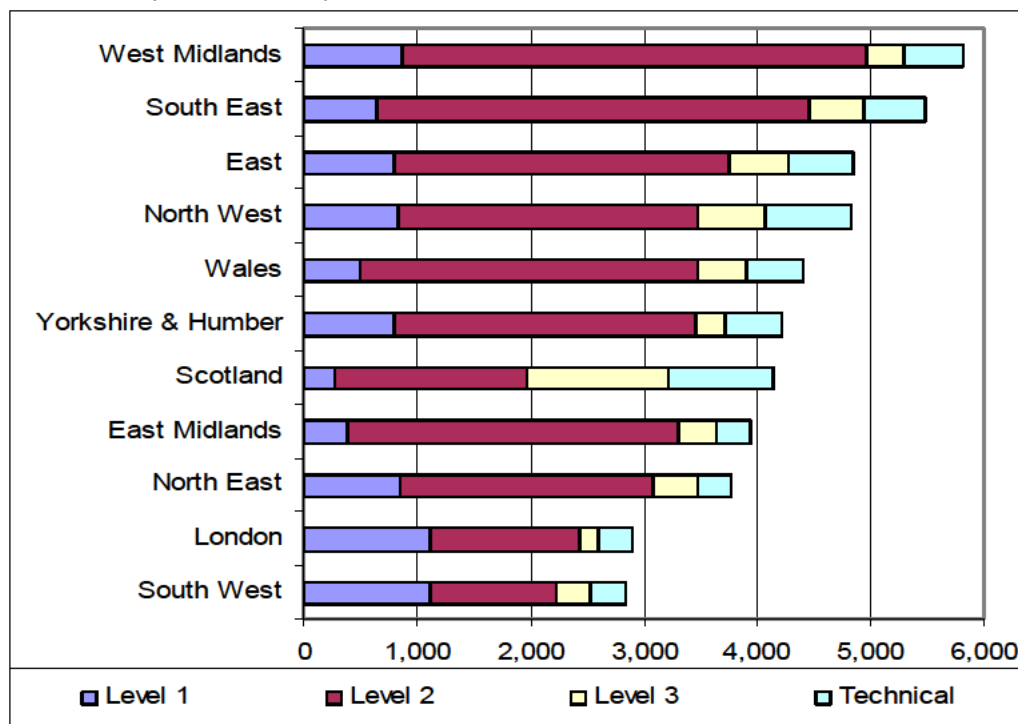
Within Great Britain, over half (60%) of the first year trainees are undertaking either an S/NVQ Level 2 or an Intermediate Construction Award. With the remaining 40% spread fairly evenly between the other 3 levels. These proportions are almost unchanged to those collected in last year's survey.

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

## 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, and in Scotland and Wales.

Chart 4 – First Year Trainees by Level of Qualification and Geographical Area: 2005/2006 (Great Britain)



See figure 1 in Appendix for a visual representation of the data.

The chart above highlights how Scotland differs to the other areas by having a much larger proportion of new entrants on an SVQ Level 3 qualification (30%) compared to all the other areas, which have an average of 9% undertaking a Level 3.

The explanation for this lies in the fact that in England and Wales, an NVQ Level 2 is regarded as the normal skill level for crafts people, whereas in Scotland an SVQ Level 3 is the expected level of skill required.

Chart 4 also shows that the West Midlands has the largest share of first year trainees at just under 6,000 while the South West has the smallest share at approximately 3,000 - accounting for 12% and 6% of the total number of trainees respectively.

In addition, the South West is showing a significant change in the trend this year by having exactly the same proportion of first years undertaking both Levels 1 & 2 (39%). The picture is similar in London, although there are still slightly more starters undertaking a Level 2. This is quite a departure from previous years when in each of the English Regions the majority of first year trainees were on Level 2 qualifications. An explanation for this change can be attributed to the increase in Construction Awards, especially Foundation Construction Awards which is expanded upon in the next section.



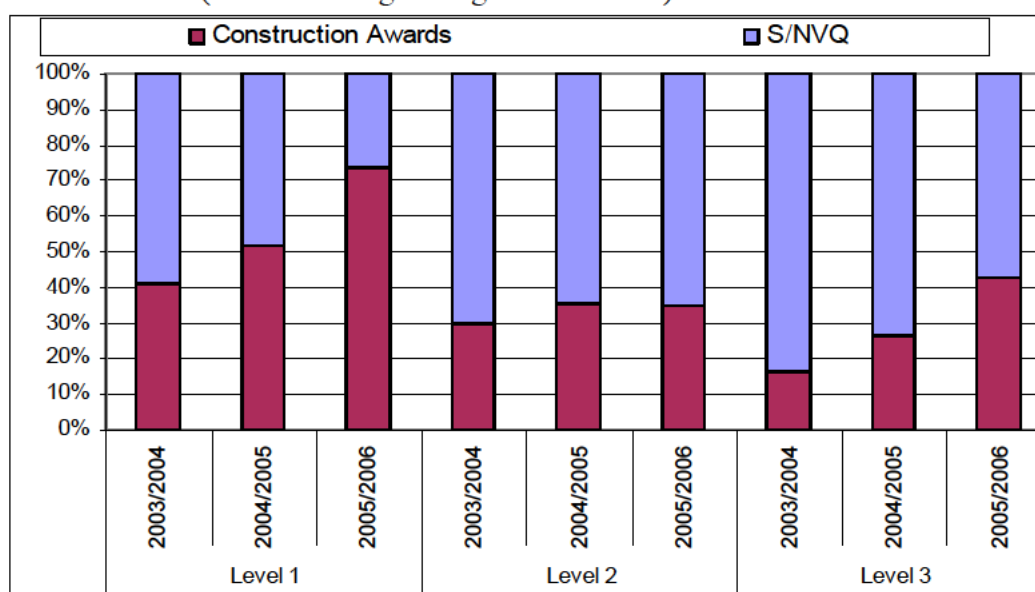
## Work Based Training

For the third 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 you can complete 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, inline with the S/NVQ system – Foundation (Level 1), Intermediate (Level 2) and Advanced (Level 3).

Of the 38,447 starters undertaking construction craft training in 2005/2006, 16,751 (44%) are studying for a Construction Award. In other words, 56% 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 two years – 13,569 (34%) and 11,840 (31%) respectively. Proportionately, as highlighted by Chart 5, an increase has occurred at Levels 1 and 3 again this year, whilst Level 2 has remained relatively static.

Chart 5 - Proportion of First Year Trainees split by Work Based Training 2003/2004 and 2005/2006 (Craft Training in England & Wales)



Please note that Construction Awards are not available in Scotland and therefore all data within this subsection 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, in a two-year period from 41% to 74%.

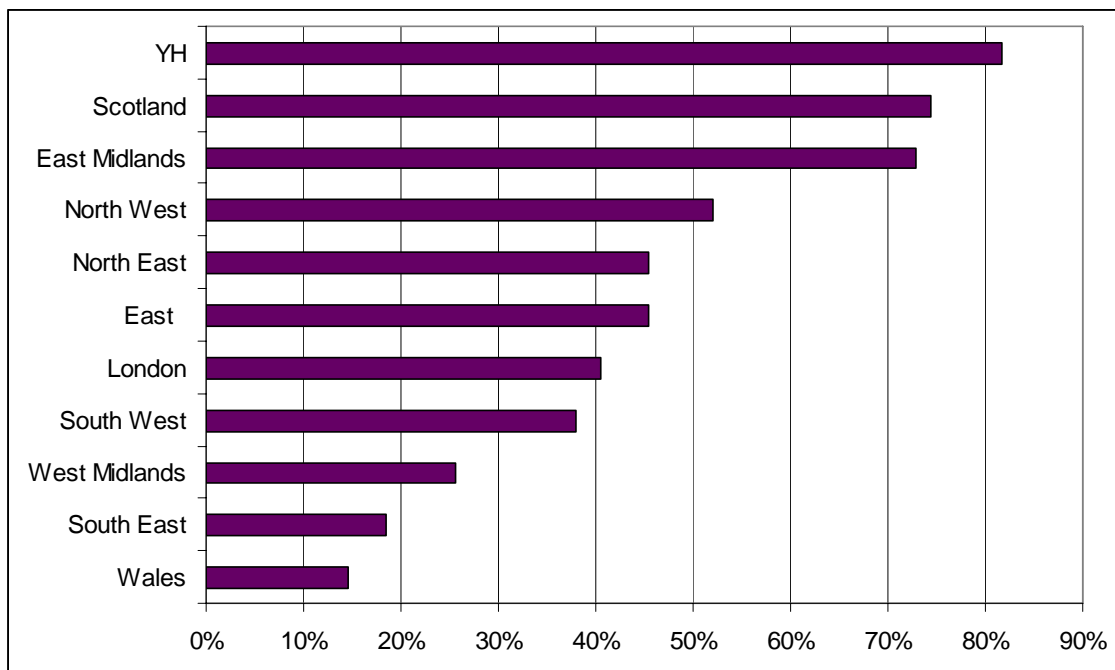
However, it should be noted that as this survey is undertaken at the beginning of the academic year, the numbers on Construction Awards will tend to decrease as the year progresses and more trainees are placed with employers. Thus trainees will move into the relevant NVQ Level qualification.

## Apprentices

Overall there are 10,308 first year trainees following an Apprenticeship programme (46% of the total number of S/NVQ Level 2 and 3 trainees). Of the total number of apprentices, 8,547 (83%) are undertaking a Level 2 qualification with the remaining 1,761 (17%) on a Level 3. However, as a proportion of the total number of starters undertaking each Level (22,540) the number of Apprentices account for 45% and 51% respectively.

The following chart shows the split by area between those following an apprenticeship programme at both Level 2 and 3. This highlights that Yorkshire & Humber have the largest proportion of first year trainees following an apprenticeship programme with 82% of all on both Levels 2 & 3, however the area with the largest absolute number of apprentices is Scotland (2,181) whom account for 74% of the total number of Scottish starters (Levels 2 & 3) and 21% of the total number of apprentices.

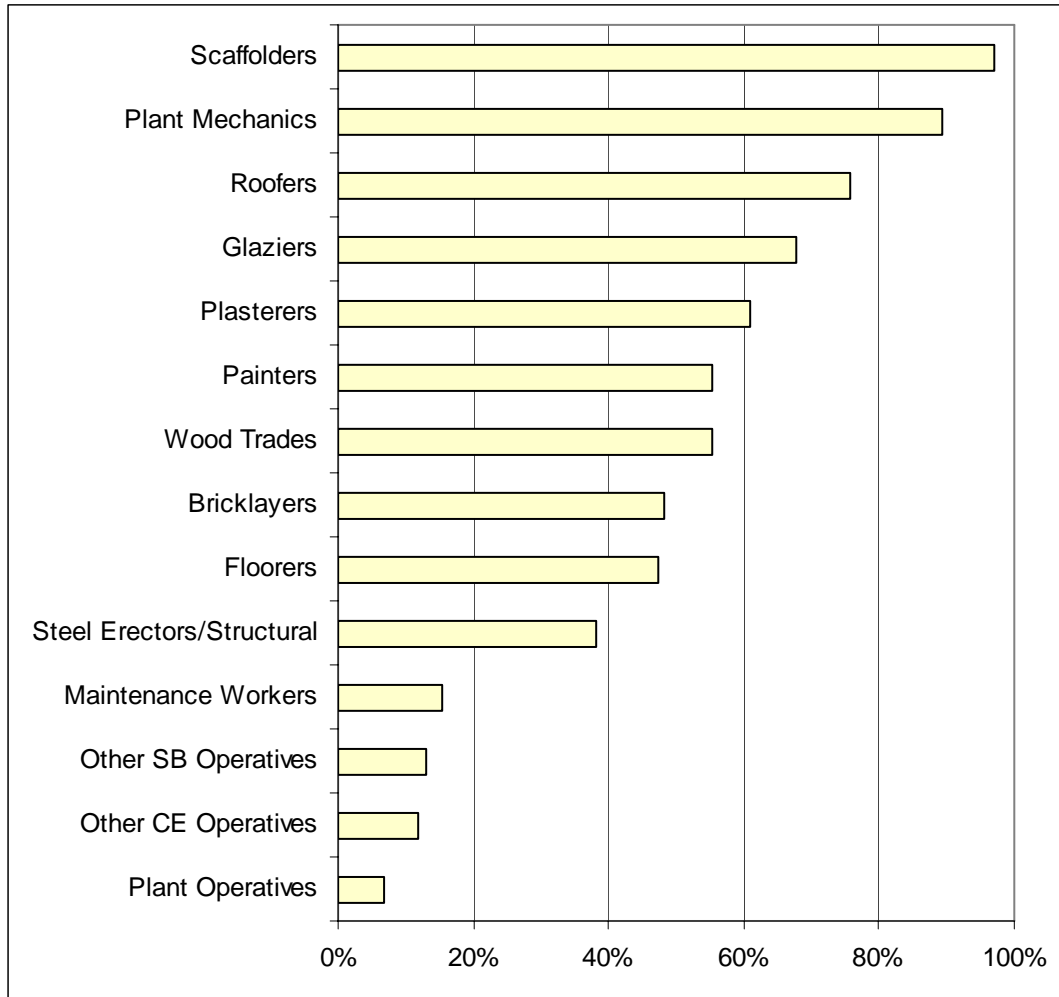
Chart 6 – Proportion of First Year Trainees following an Apprenticeship Programme by Area 2005/2006 (Total of S/NVQ Level 2 & Level 3)



\* Please note the chart above only refers to qualifications which are available at both S/NVQ Levels 2 and 3

Analysis by occupation show that nearly all Scaffolders (97%) are following an Apprenticeship programme compared to only 7% of Plant Operatives.

Chart 7 – Proportion of First Year Trainees following an Apprenticeship Programme by Occupation 2005/2006 (Total of S/NVQ Level 2 & Level 3)



\* Please note the chart above only refers to qualifications which are available at both S/NVQ Levels 2 and 3

The occupation with the largest absolute number of apprentices is Wood Trades (4,465), as would be expected given their dominance of the training figures (see Table 2). Overall, they account for 55% of the total number of first year trainees undertaking a Wood Trade occupation (Levels 2 & 3) and 43% of the total number of apprentices.

## First Year Trainees Characteristics

### Age

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

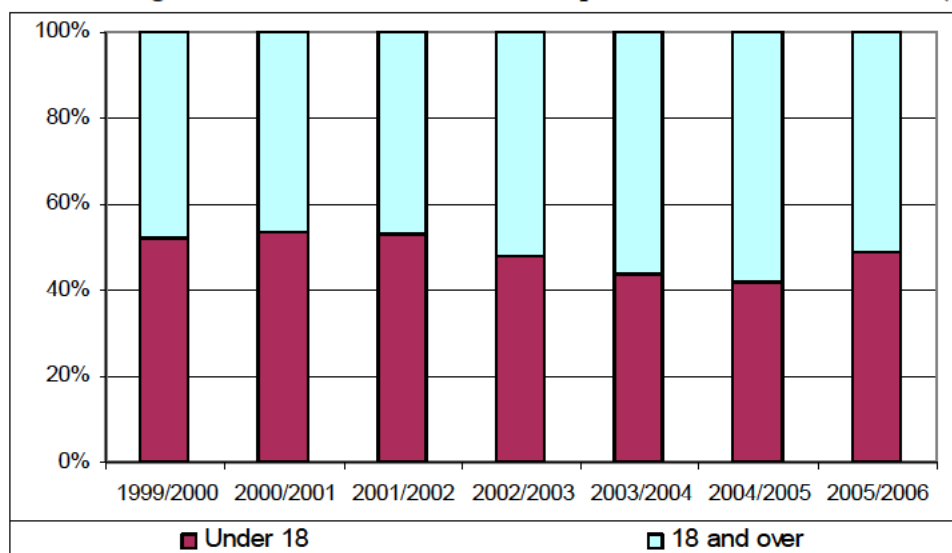
- Under 18 years old
- 18 years old & over.

Table 3 – Breakdown of First-Year Trainees by Age and Level of Qualification 2005/2006 (Great Britain)

	Under 18 years old	18 years old & Over	Total
Level 1	6,099 74%	2,124 26%	8,223
Level 2	13,531 48%	14,826 52%	28,357
Level 3	1,979 39%	3,104 61%	5,083
Technical Occupations	1,467 27%	4,058 73%	5,525
	23,076 49%	24,112 51%	47,188

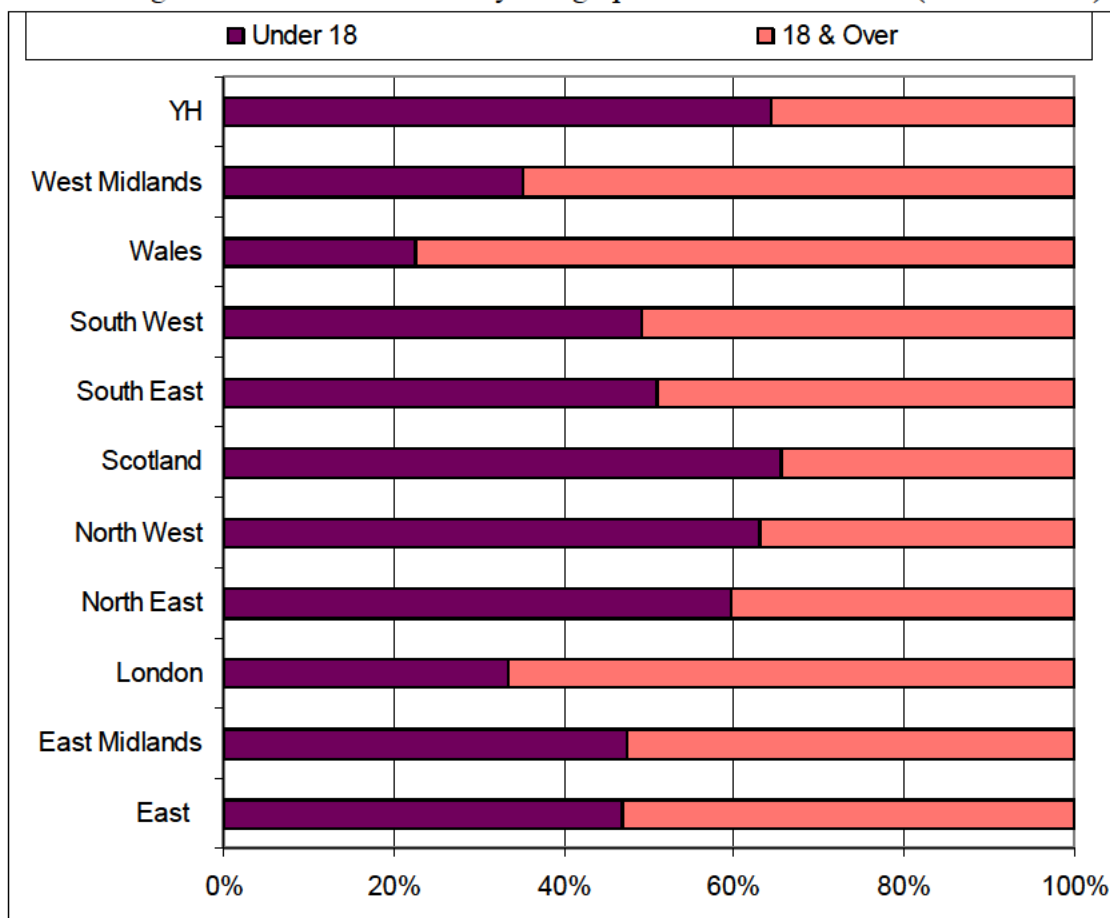
As would be expected, younger starters dominate in Level 1 qualifications and decrease as the level of qualification increases. Overall however, the breakdown of first year trainees by age is fairly evenly split, with there being slightly more adult trainees. This has been a fixed trend, as highlighted in Chart 8.

Chart 8 – Age of First Year Trainees as a Proportion of Total 1999-2005 (Great Britain)



Split by geographical area, the chart below shows that as a proportion of all starters in the area, Scotland has more under 18's, while Wales has the highest proportion of adults.

Chart 9 – Age of First Year Trainees by Geographical Area 2005/2006 (Great Britain)



### Gender

The number of first year trainees broken down by gender is shown below.

Table 4 - Number of First-Year Trainees broken down by Gender and Age 2005/2006 (Great Britain)

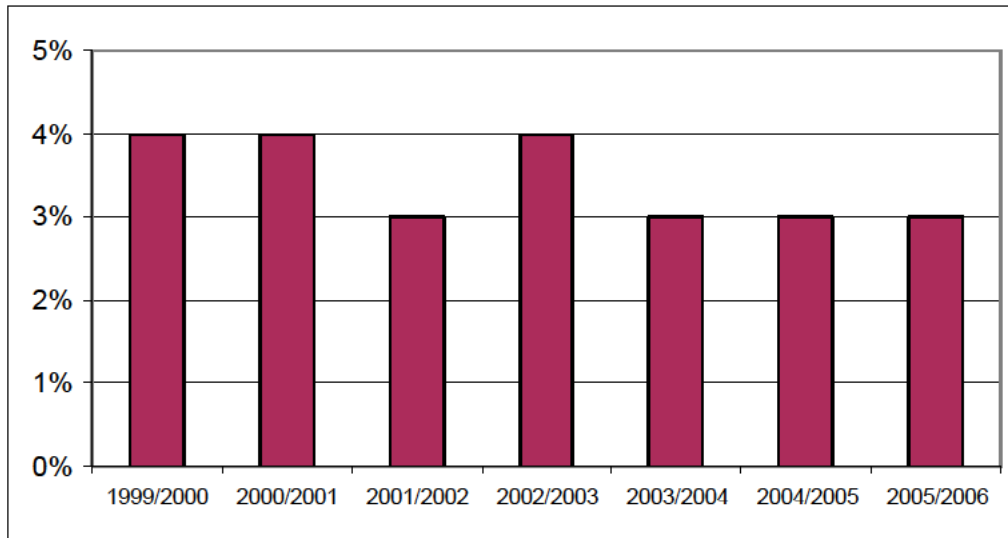
Under 18		18 & Over		Total	
Male	Female	Male	Female	Male	Female
22,724	352	23,271	841	45,995	1,193
(48%)	(1%)	(49%)	(2%)	(97%)	(3%)

As this table shows in the academic year 2005/2006 there were 1,193 (3%) female starters compared to 45,995 (97%) males. These proportions are exactly the same as the previous academic year, as highlighted in the following chart, 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 11% of employment in Great Britain<sup>1</sup>.

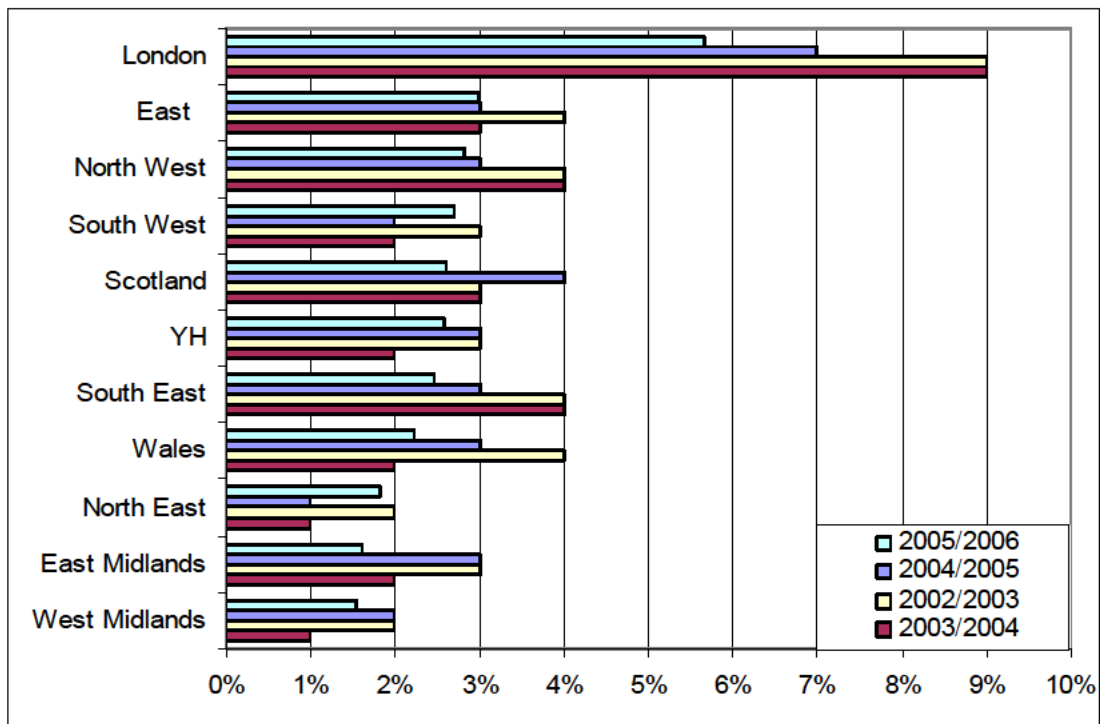
<sup>1</sup> Labour Force Survey Spring 2006

Chart 10 – Female First Year Trainees as a Proportion of the Total Number of First-Year Trainees 1999-2005(Great Britain)



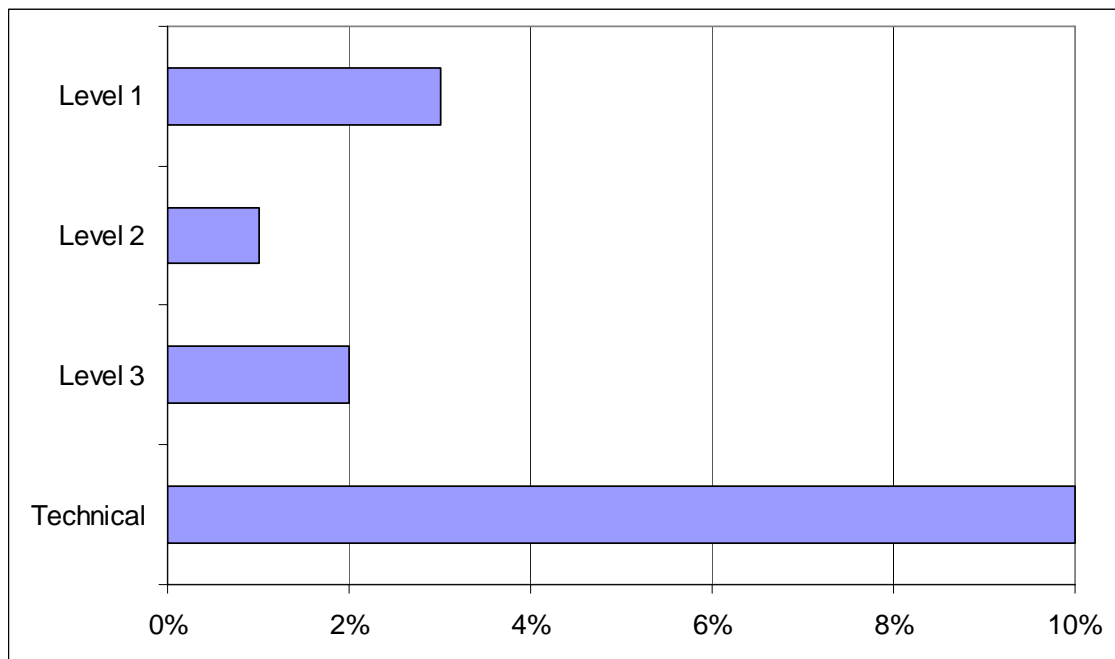
Analysis by geographical area, shows that in 2005/2006 London has both the highest number of female starters (164) and the highest proportion (6%), accounting for 14% of the overall number of female starts. Across the remaining areas of Great Britain, female first year trainees account for either 2% or 3% of their total number of all first-year trainees. Over the past four academic years, London has consistently had the highest number of female starters, as highlighted in following chart, which shows the four-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.

Chart 11 - Female First Year Trainees as Proportion of All Trainees by Geographical Area (Great Britain: four-year trend)



Female starts were more numerous in technical qualifications (546) accounting for 46% of the total number of female first year trainees in 2005/2006 (1,193). Analysis by qualification level also highlighted that female starters were far more likely to be studying for a technical qualification, compared to Level 1, 2 & 3, as shown in Chart 12. However as a proportion of the total number of starts by occupation, females were just as inclined towards painting & decorating courses (9%). These findings are consistent with the representation of females in the construction workforce. The Labour Force Survey (Spring 2006) shows that employment by occupation data illustrates that painting and decorating is the craft trade which has the highest representation of women.

Chart 12 – Female First Year Trainees as a Proportion of the Total Number of All First Year Trainees by Qualification Level 2005/2006 (Great Britain)



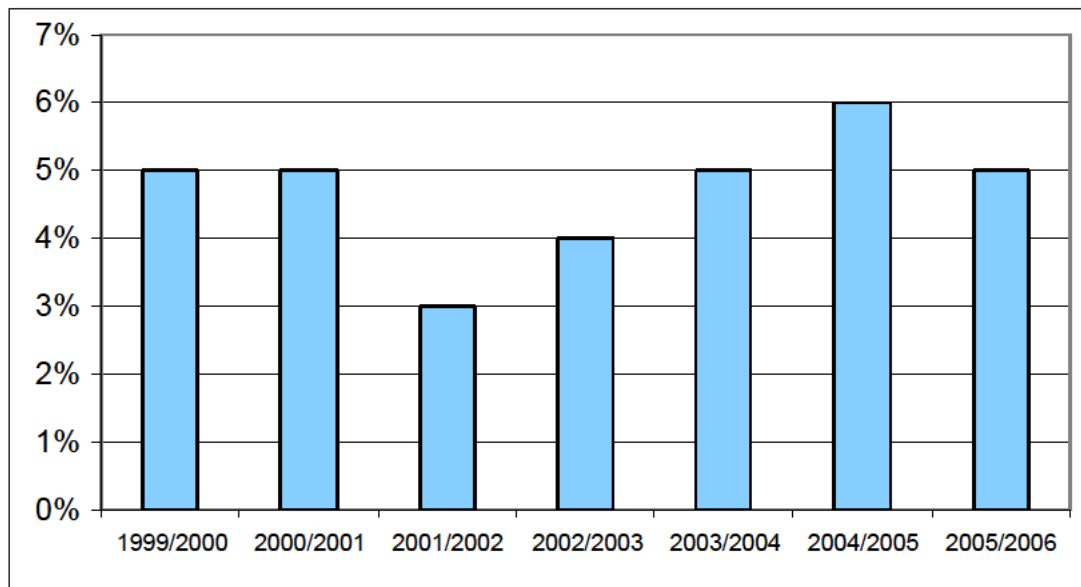
### Ethnic Minorities

The number of first year trainees who are from an ethnic minority stands at 2,564 in 2005/2006 or 5% of the total, higher than their representation within the construction workforce where they currently account for 3% of employment in Great Britain<sup>2</sup>.

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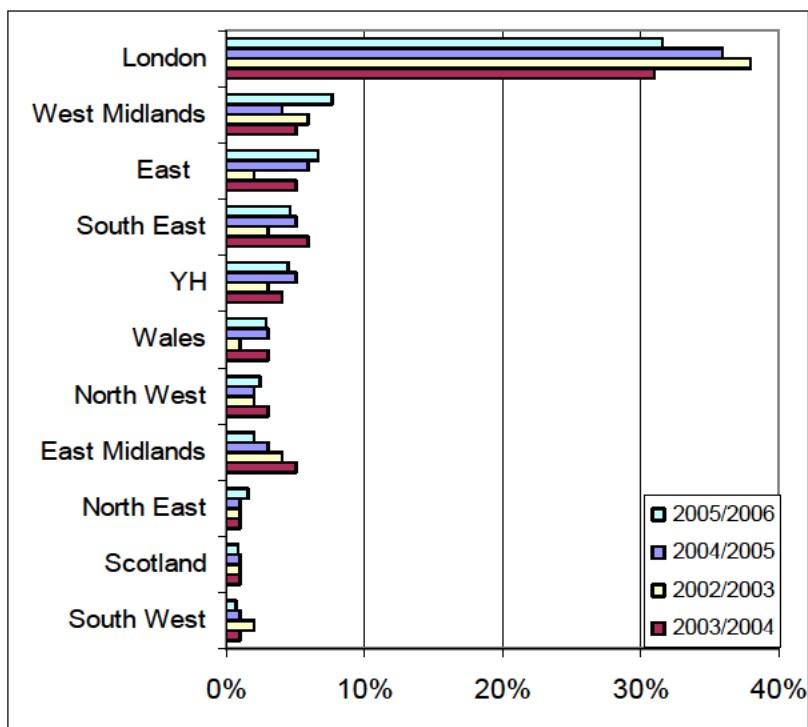
<sup>2</sup> Labour Force Survey Spring 2006

Chart 13 - Ethnic Minority First Year Trainees as a Proportion of All First Year Trainees 1999-2004 (Great Britain)



As with the number of female starters, London also has the highest number of ethnic minority starters. In fact, as Chart 14 shows, there is a large difference between the numbers 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 32% which is much higher than the other areas, where ethnic minority starters account for between 1% and 8%. This has been a consistent trend over the past three years, as highlighted in Chart 14.

Chart 14 - 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 CONSTRUCTION TRAINING 2006-2010**

CITB-ConstructionSkills publishes through the Construction Skills Network<sup>3</sup> 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 model, which is operated 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 2006-2010
	2006	2010		
East	90,680	109,300	21%	5,730
East Midlands	65,100	73,150	12%	3,030
London	97,370	109,720	13%	3,510
North East	48,540	52,190	8%	2,070
North West	102,430	108,870	6%	3,080
Scotland	98,020	106,670	9%	3,320
South East	104,130	119,920	15%	4,070
South West	89,660	94,040	5%	2,300
Wales	46,990	53,450	14%	3,110
West Midlands	82,530	89,450	8%	2,760
Yorkshire & Humber	80,540	86,420	7%	2,960
<b>Total (Great Britain)</b>	<b>905,990</b>	<b>1,003,180</b>	<b>11%</b>	<b>35,940</b>

Source: CITB-ConstructionSkills Employment Model, 2006

\* - This table is a subset of the table that appears in Blueprint for UK Construction Skills 2006-2010 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 data.*

<sup>3</sup> [www.constructionskills.net/research/constructionskillsnetwork](http://www.constructionskills.net/research/constructionskillsnetwork)

Table 6 - Requirement for skilled workers in the construction trades\*. (Great Britain.)

	Total Employment		Percentage Change	Average Annual Requirement 2006-2010
	2006	2010		
<b>Main Trades</b>				
Wood Trades	220,210	249,010	13%	10,400
Bricklayers	97,030	111,040	14%	4,510
Painters	130,820	140,240	7%	3,530
Plasterers	38,660	42,170	9%	1,650
<b>Main Trades Total</b>	<b>486,720</b>	<b>542,460</b>	<b>11%</b>	<b>20,090</b>
<b>Specialist Trades</b>				
Roofers	34,180	38,610	13%	1,720
Floorers	42,010	46,090	10%	1,560
Glaziers	35,550	37,410	5%	1,150
Other SB Operatives	44,930	49,950	11%	2,360
<b>Specialist Trades Total</b>	<b>156,670</b>	<b>172,060</b>	<b>10%</b>	<b>6,790</b>
<b>Civil Engineers</b>				
Scaffolders	17,530	19,650	12%	950
Plant Operatives	46,250	50,530	9%	1,740
Plant Mechanics/Fitters	21,400	23,130	8%	1,900
Steel Erectors/Structural	16,580	18,580	12%	1,190
Other CE Operatives	26,140	29,980	15%	1,460
<b>Civil Engineers Total</b>	<b>127,900</b>	<b>141,870</b>	<b>11%</b>	<b>7,240</b>
Maintenance Workers	128,010	137,350	7%	1,820
General Operatives	6,690	9,440	41%	-
<b>Total</b>	<b>905,990</b>	<b>1,003,180</b>	<b>11%</b>	<b>35,940</b>

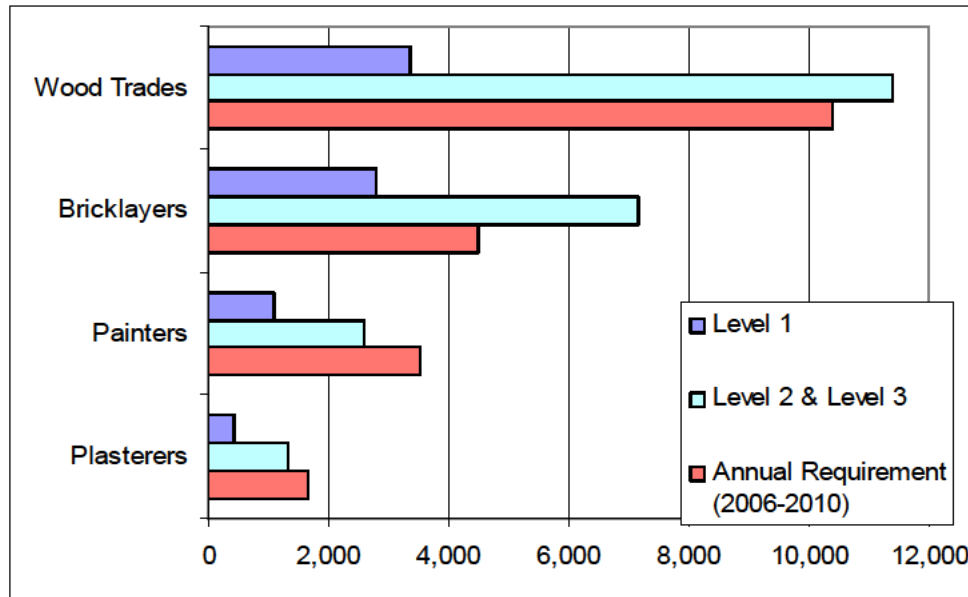
Source: CITB-ConstructionSkills Employment Model, 2006

\* - This table is a subset of the table that appears in Blueprint for UK Construction Skills 2006-2010 report. It covers only the skilled manual trades and excludes managers, clerical staff, technical staff and professional occupations.

The industry needs to recruit 36,000 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.

The following charts look at predicted demand for the different construction occupations, and how this compares with the amount of training currently taking place.

Chart 15 - Demand and Intake for Main Construction Trades 2005/2006 (Great Britain)



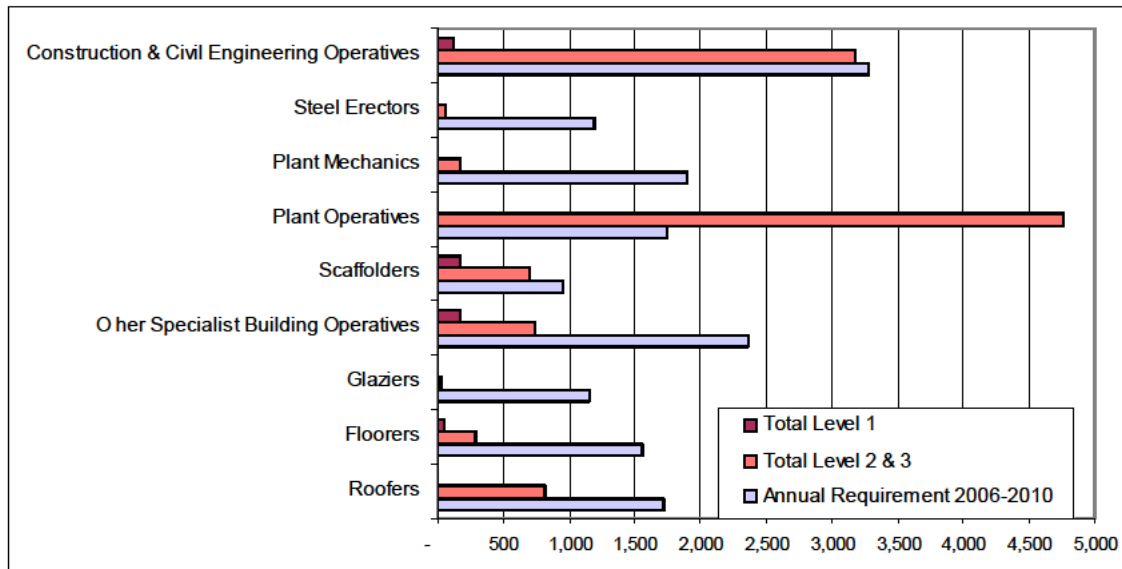
Source: CITB-Construction Skills Network Model 2006; CITB-ConstructionSkills Trainee Numbers Survey 2005/2006

In terms of the number of people starting training the main construction trades are relatively well catered for. Obviously these figures do not provide the whole story - not all trainees will work in construction (as defined by the Standard Industry Classification) and not all those who start will complete their course. However, in terms of absolute numbers the overall picture looks positive.

Whilst the number of recruits appears to be sufficient, a major cause for concern lies in the fact that they are not necessarily studying courses appropriate to the industry's skills demands. Twenty-five percent of new entrants into training in the main construction trades 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. Just over 40% 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 two-thirds of all training in the manual trades. Specialist Builders and Civil Engineers between them account for around a third of training, and as Chart 16 shows many of these occupations are training too few people to meet the demand for skilled workers.

Chart 16 - Demand and Intake for Specialist Construction Trades and Civil Engineers 2005/2006 (Great Britain)



Source: CITB-Construction Skills Network Model 2006; CITB-ConstructionSkills Trainee Numbers Survey 2005/2006

Of the occupations shown above only two are training sufficient first years to meet or exceed demand. Plant Operatives are most noticeable in that they appear to be training far too many operatives. It must be remembered, however, that 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 & Quarrying). When this is factored along with trainee drop-out it can be said that current training for Plant Operatives is sufficient to meet demand.

Likewise Scaffolding appears to be training sufficient workers to meet demand. Much of the provision though is made up by a few large providers; meaning that many employers will struggle to find suitable training locally.

Overall there are too few trainees starting courses to meet demand for Steel Erectors, Plant Mechanics, Glaziers, Floorers, Roofers, and Other Specialist Building Operatives (including Ceiling Fixers, Demolition Operatives, Steeplejacks etc.)

The shortfall is greatest amongst Glaziers, where formal training at Further Education colleges and private providers meets only 3% of the projected demand. The situation here is complicated by the fact that, in terms of construction occupations, glazing does not include installing sealed window units (this is outside the scope of CITB-ConstructionSkills) but does include installing single glass sheets to the external structure of a building. Obviously there is considerable in-house and manufacturer's training in this area as all providers who offer this course state that current capacity is sufficient to meet demand (see next section).

The amount of training is adequate for Construction and Civil Engineering Operatives, (although as the graph above shows there is little scope to allow for drop-out amongst trainees). Anecdotal evidence suggests that Civil Engineering Operatives are generally less well catered for than Construction Operatives, and as will be seen in the next section, places on Civil Engineering courses generally fall well short of the number of applicants for them.

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 the next section of this report.

### **SECTION 3 – CONSTRUCTION TRAINING CAPACITY 2005/2006**

So far this research has shown that, while training appears to be adequate to meet demand for skilled workers in the Main Trades, it is failing to meet demand for skilled workers in Specialist and Civil Engineering occupations. 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.

The following section summarise the findings of the capacity questions from the Trainee Numbers Survey. The results are based upon the responses of 90 colleges and Further Education training providers across Great Britain and applied to the overall results from the main survey.

#### **Capacity by Course**

Table 6, below, gives an indication of the total number of applicants for each of the courses covered in this survey.

The Main Trades, which as we have already seen are training sufficient people to meet demand, are oversubscribed by about 40%. This means that colleges and other training providers will be able to select the best candidates to fill the places that they have available.

Civil Engineering courses are oversubscribed by around 70% (although scaffolding accounts for much of this). This suggests that capacity restraints relate more to the physical space and cost of providing these courses - including employing lecturers.

Specialist Courses are 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 2005-06 (Great Britain)

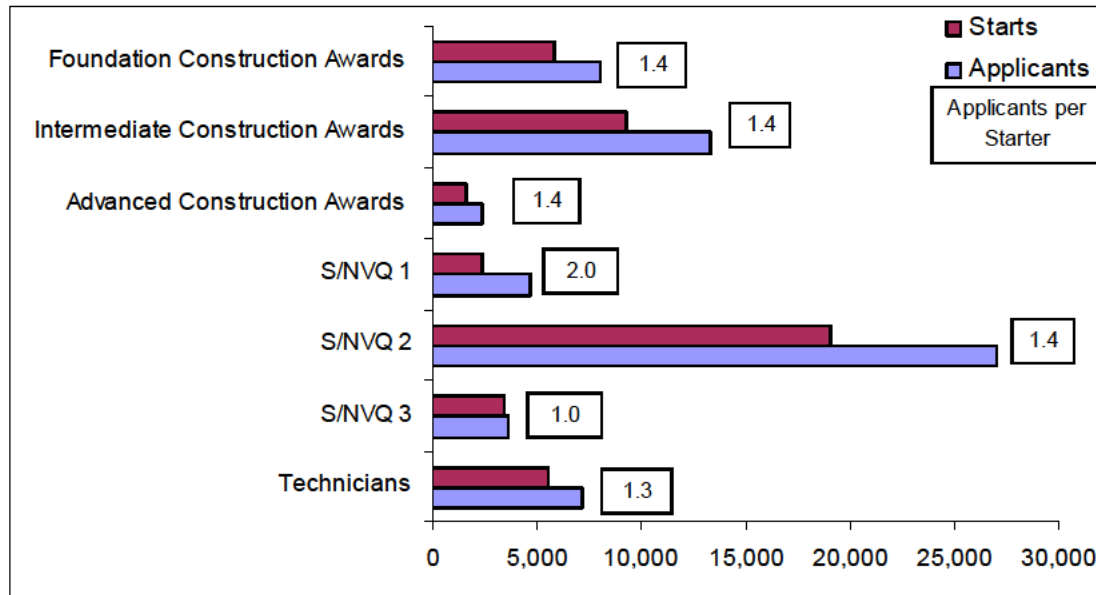
	<b>Applicants</b>	<b>Starts</b>	<b>Applicants per Starter</b>
Technical	7,197	5,525	1.3
Wood Trades	19,288	14,785	1.3
Bricklayers	13,767	9,959	1.4
Painters	4,635	3,718	1.2
Plasterers	3,294	1,746	1.9
<b><i>Main Trades Total</i></b>	<b><i>40,984</i></b>	<b><i>30,208</i></b>	<b><i>1.4</i></b>
Roofers	953	818	1.2
Floorers	335	335	1.0
Glaziers	28	28	1.0
Other Specialist Building Operatives	950	799	1.2
<b><i>Specialist Operatives Total</i></b>	<b><i>2,266</i></b>	<b><i>1,980</i></b>	<b><i>1.1</i></b>
Scaffolders	2,467	882	2.8
Plant Operatives	5,844	4,760	1.2
Plant Mechanics	173	173	1.0
Steel Erectors / Structural	68	68	1.0
Other Civil Engineering Operatives	6,604	3,222	2.0
<b><i>Civil Engineers Total</i></b>	<b><i>15,156</i></b>	<b><i>9,105</i></b>	<b><i>1.7</i></b>
General Operatives	232	202	1.1
Maintenance Workers	382	168	2.3
<b>Total</b>	<b>66,217</b>	<b>47,188</b>	<b>1.4</b>

Overall 40% of applicants were turned away from their first choice of course. This figure has increased considerably since the 2003/04 academic year when this research was first undertaken. Then just fewer than 75% of colleges expected their construction craft courses to be oversubscribed with around 21% of applicants turned away from their first choice of course due to lack of capacity.

## Capacity by Level of Qualification

The chart below shows the number of applicants and starters to construction courses in Great Britain by level of qualification. Courses at S/NVQ Level 1 are the most oversubscribed, while S/NVQ Level 3 are the least so.

Chart 17 – Training Capacity by Level of Qualification 2005/2006 (Great Britain)



Of the 66,217 applicants to construction courses, 12,695 (19%) were to Level 1 or Foundation Construction Award Courses. These levels account for around 17% of all starters. While these can be a useful entry point into construction training for some candidates, they are not seen by industry as representing sufficient competence to operate on site.

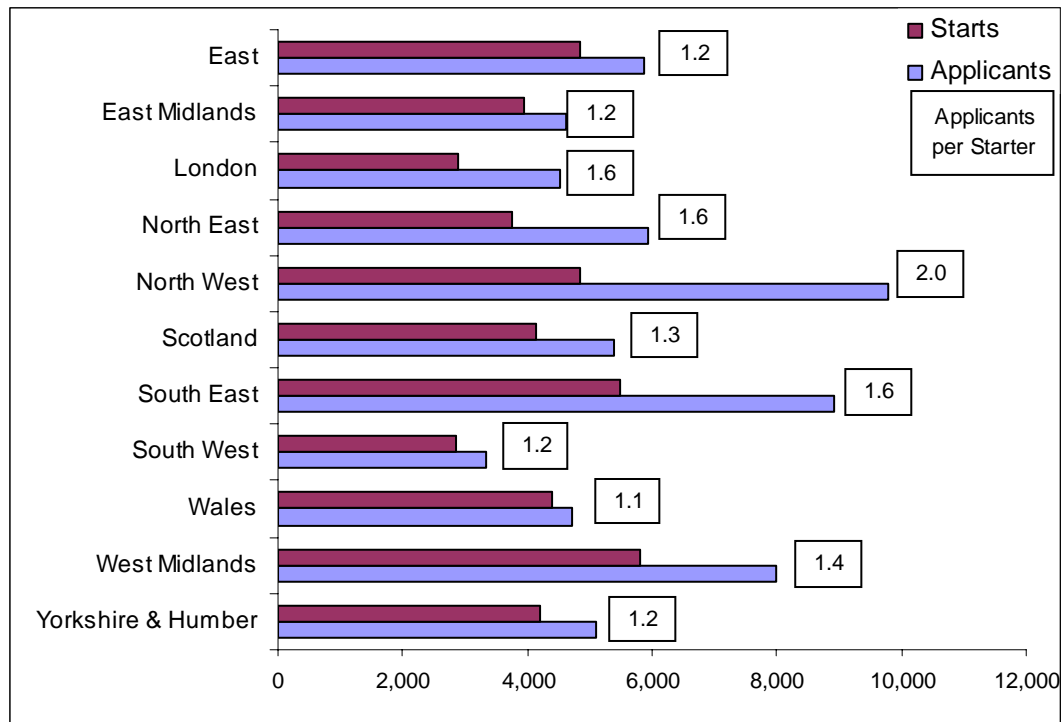
Just over 60% of all applicants (40,000) were to Level 2 courses (including Intermediate Construction Awards). There were around 28,000 starts at Level 2 courses, meaning that there were 1.4 applicants for every place.

Whilst Level 3 Courses had the fewest applicants and starters of all the courses covered by this survey (5,971 and 5,083 respectively) they were also the least oversubscribed with just under 1.2 applicants per place. Similarly, Technical Courses had a lower proportion of applicants to starters than either Level 1 or Level 2 S/NVQs, although at 1.3 this still represented around 30% of applicants having to be turned away due to lack of capacity.

## Capacity by Geographical Area

Looking at the capacity of training on a regional basis, the North West of England is the most oversubscribed with 2 applicants for every place at a construction training provider. Yorkshire & Humber is the least oversubscribed region with just 1.2 applicants for every place.

Chart 18 – Training Capacity by Geographical Area 2005/2006 (Great Britain)



See figure 3 in Appendix for a visual representation of the data.

Nationally Wales showed the least disparity between the number of applicants and starters with only 10% of applicants failing to find a training place; this compares to 45% in England - the most oversubscribed country. Scotland had 1.3 applicants per place, although the lack of Construction Awards here, meaning that those without a work placement in construction cannot apply for an SVQ, will have reduced the potential number of applicants somewhat.

### 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 site work element of NVQs.

The research asked respondents about the number of work placements that they required for trainees undertaking Construction Awards, in order to that they could move to a full NVQ qualification. Approximately one-third of those on Construction Awards required a work placement, and at the time of the research respondents only expected to achieve 58% of this target.

Table 7 below shows the shortfall in work experience placements by English Region and Wales.



Table 8 – Work Experience Placements by Area 2005/2006 (Great Britain)

	Number of Construction Awards	Work Experience Placements		Shortfall	Shortfall per 100 Places Required
		Required	Achieved		
London	2,612	460	145	315	69
North West	2,294	1143	415	728	64
South West	1,451	289	113	176	61
Wales	754	725	310	415	57
West Midlands	2,536	265	134	131	50
South East	1,706	820	455	365	45
North East	1,204	657	497	160	24
East Midlands	775	63	50	13	21
East	1,377	263	210	53	20
Yorkshire & Humber	2,042	983	962	21	2
<b>Total</b>	<b>16,751</b>	<b>5,669</b>	<b>3,290</b>	<b>2,379</b>	<b>42</b>

*Please note that Construction Awards are not available in Scotland and therefore all data within this subsection excludes Scottish trainee figures*

The biggest shortfalls were in London, the North West, and the South West where shortfalls in range from 61 to 69%. Yorkshire & Humber, by contrast, are in the unique position of having almost no disparity between work experience places require and achieved.

## 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 20,000 people into these trades and the annual in take from training alone is 30,000 - 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 industries changing needs.

The solution to any potential shortfall in training provision does not lie wholly in recruiting more apprentices, 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, 17% 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 40% of trainees 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. CITB-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 2005/2006 (Great Britain)

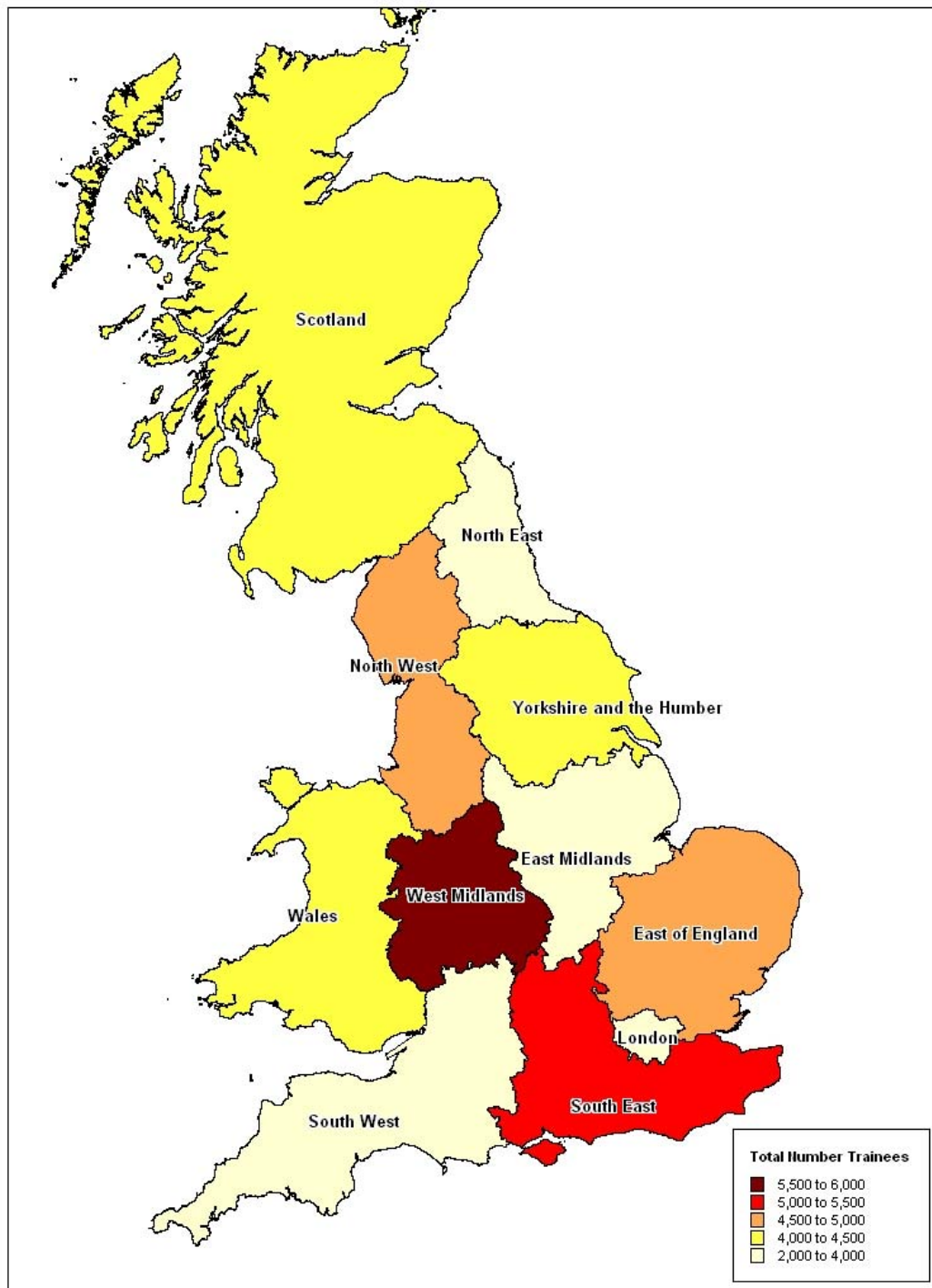


Figure 2 - Forecasted Annual Average Requirement for Skilled Workers by Geographical Area: 2006-2010 (Great Britain)

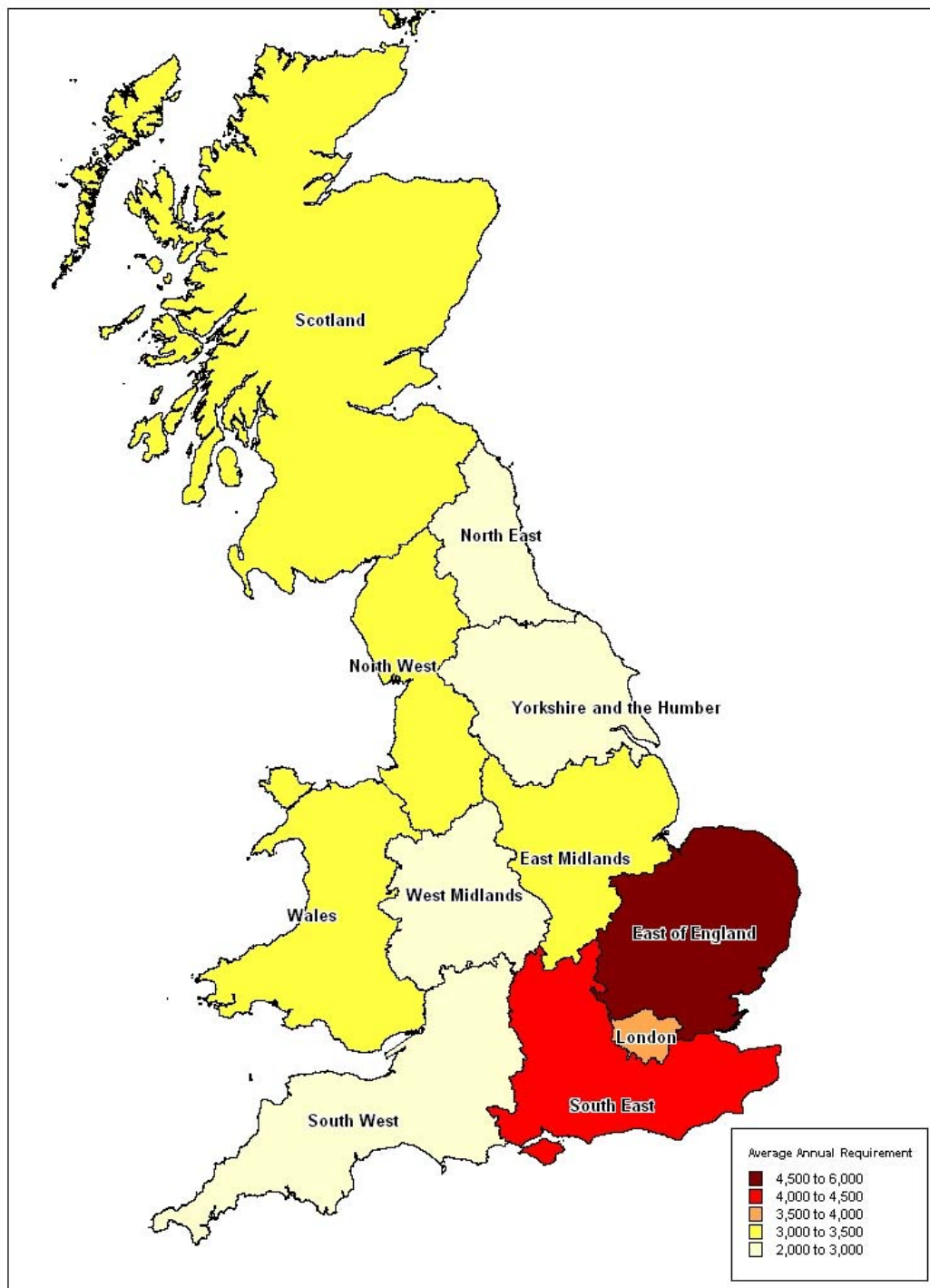


Figure 3 - Applicants to Construction Courses by Geographical Area 2005/06 (Great Britain)

