Workforce Mobility and Skills in the Construction Sector in the UK and Republic of Ireland

Overall Report

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1 Background, Objectives and Methodology

1.1 Introduction

ConstructionSkills commissioned BMRB to undertake a survey of construction workers to provide reliable data on the nature of the workforce in the UK and the Republic of Ireland (ROI) with regard to their competence/qualification levels and the extent of occupational and geographic mobility within the workforce. This report presents the overall findings of the survey and the findings by nation/region are reported in detail in 13 region specific reports.

A separate technical appendix is available, which includes a full technical report and a copy of the questionnaire used.

Where available, results from the 2007 survey have been compared with those from similar previous research conducted by IFF Research in 2004¹.

1.2 Key objectives of the research

ConstructionSkills like other Sector Skills Councils, needs to understand its workforce in terms of skill levels, labour mobility and reasons for entering and leaving the workforce. In the construction industry the need for such market intelligence presents particular problems, due to the project-based nature of much employment, the geographical mobility required by the industry, high levels of self-employment, and the presence of multiple contractors in individual construction workplaces.

ConstructionSkills consequently faces a number of significant challenges in delivering its obligations to ensure that the training and learning infrastructures meet the needs of the industry, as reflected in the Sector Skills Agreement. Data from the workforce is clearly crucial in monitoring progress towards objectives, and in helping to shape policy and priorities for the future. To this end, the key objectives of the research were:

- to examine the qualification and skill levels of the construction workforce in the UK and ROI
- to identify, quantify and analyse the extent to which the workforce in each nation/region is constituted of workers originating or leaving in other parts of the UK/ROI (or further afield), and general mobility and travel to work
- to examine the nature of the mobile workforce/'imported' workforce in terms of their occupations and their competence/qualification levels
- examine the scale and extent of occupational mobility within the construction workforce to see how workers in construction occupations change or keep their occupations over time, both within construction and as they move out of the industry,

¹ Comparative findings should be treated as indicative only due to key differences in the types of sites visited in 2004 and 2007. The profile of sites visited showing differences by size and category are included in the technical report.

and related to this the extent to which managers have received training specifically to enhance their managerial skills

• to contribute to developing better methodologies for understanding and modelling the labour market impacts of the workforce mobility.

The focus for the survey was on site-based manual occupations, thus excluding associated clerical and sales occupations and professions such as architects, surveyors and engineers.

1.3 Methodology

The key elements of the research approach were as follows:

1.3.1 Desk research

Prior to undertaking primary research a period of exploratory desk-based research was undertaken to examine the scope of information currently available; to identify other surveys and consultations to ascertain what can be learnt from these, and to ensure that any subsequent fieldwork was relevant and informed. The conclusions drawn from the desk research exercise were:

- there are studies covering similar issues to this study, however the target respondents of these studies tended to be employers
- the Labour Force Survey (LFS) is conducted among workers and covers similar issues as this study, however it is not specific to the construction industry
- there is little reliable information on the mobility of workers. The only exception is the LFS but it does not cover certain issues relevant to the construction workforce such as temporary accommodation, or where workers received training
- the desk research confirmed the need for detailed information from construction workers and for more information on workforce mobility in the UK and ROI.

A copy of the presentation summarising the desk research exercise can be found in the technical appendix.

1.3.2 Sampling

For the UK sample a list of current construction projects over £250,000 in value was drawn from Glenigan, an Emap service detailing current and forthcoming construction projects in the UK.

From the projects identified as being eligible for inclusion in the survey (the steps taken to select eligible records from Glenigan are detailed in the technical report), a stratified random sample of 99 postcode districts (e.g. NR2) was drawn to produce a representative sample of locations across the UK. For each selected district six eligible projects were identified. Projects were selected on the basis of value, 35% of sites with a value of less than £1 million and 65% of sites with a value of more than £1 million. In 2004, the survey focused on sites

valued at over £1 million and the sampling process aimed to ensure a mix of sites by stage of development (first six months, midway, last six months). In 2007 the requirement was to also sample sites under £1 million, so this criterion needed to be reconsidered in that light. The 2004 definition of stage of development clearly assumed quite large, lengthy projects, appropriate for sites with minimum value of £1 million. With the introduction of smaller sites, some would be completely finished in six months. Therefore it was decided that an appropriate alternative definition would be to select according to value.

Quotas were set on the target number of sites for each region and by value. The target sample profile is described in the technical report.

Glenigan details UK-based projects only; therefore an alternative sample source was required for the ROI element of the research. The most appropriate route to the construction workforce in ROI was found to be through interviewing Safe Pass² awareness training attendees. Safe Pass is a one day safety awareness programme aimed at all who work on construction sites.

1.3.3 Telephone survey

A telephone willingness stage was conducted in order to recruit construction projects selected from Glenigan to take part in the research. Interviewers were instructed to identify the best person to speak to about arranging a visit to the construction site and to collect some headline information about the site. Full details of the information collected and number of interviews achieved is included in the technical report.

1.3.4 Site visits

Once permission had been sought to interview at the particular site, the information was forwarded to a local face-to-face interviewer who contacted the site representative to arrange a date to visit. Interviews with construction workers were then conducted face to face-on-site. Interviewing normally took place in a canteen or site office during workers' break periods. In around one in ten cases interviewers were only able to visit the site if they supplied their own personal protective equipment.

A selection of interviewers' experiences of contacting and visiting sites is shown in the technical report.

1.3.5 ROI fieldwork

Safe Pass courses run throughout the year across ROI with on average 20 people attending each session. Interviewers attended 21 sessions in a range of locations across ROI. Two interviewers visited each session at the start of the day and distributed questionnaires to all eligible attendees who agreed to complete a questionnaire. Course attendees completed their own questionnaire and interviewers were on hand to answer any queries that arose. In total 256 questionnaires were completed.

² The Safe Pass Health and Safety Awareness Training Programme is a one-day programme run by Floras Ásana Saothair (FÁS), the Republic of Ireland's national training and employment authority. Safe Pass aims to ensure that all construction workers in Ireland have a basic knowledge of health and safety. This is to enable them to work on construction sites without being a risk to themselves or others who might be affected by their actions.

1.3.6 Challenges

Given the complex nature of this research project a number of challenges arose during the life of the project. Each issue is discussed in detail in the technical report.

1.4 Details of sites covered in the research

The following table shows the split by nation/region both in terms of the number of sites covered and the number of interviews achieved. At the analysis stage, weighting was applied to the data to ensure each nation/region was represented in its correct proportions based on the relative size of the construction workforce. Labour Force Survey figures were used for UK regions/areas, (average profiles from the period October 2006 – June 2007) and for ROI, figures were supplied from the Central Office Statistics (average profile from April 2006 – March 2007). The resulting weighted profile is shown in the right hand column of table 1.1.

Table 1.1 Interviewing by nation/region					
	Number of sites Number of interviews				
Overall	312	3,877	100		
East Midlands	27	304	7		
East of England	24	314	10		
London	21	355	9		
North East	32	427	4		
North West	26	342	9		
Northern Ireland	23	263	3		
Republic of Ireland	20	256	11		
Scotland	21	240	8		
South East	26	331	12		
South West	24	255	8		
Wales	21	293	5		
West Midland	24	262	7		
Yorkshire and Humber	23	235	8		

The figures show that on average 12 workers were interviewed per site (the minimum limit set when arranging a site visit was 10 workers).

Table 1.2 Sites covered by number of workers on site			
	Number of sites (UK)		
Total	292		
10	9		
11–25	154		
26–50	85		
51–99	24		
100–199	20		

Table 1.2 shows that the majority of sites visited had fewer than 50 workers on site.

Figures from the site managers interviewed at the telephone fieldwork stage indicated that there were 10,846 workers across the 292 sites visited in the UK. Using this figure it would appear that around 35% of the potential workforce took part in the research, however it should be noted that there were instances where on the day the site was visited fewer workers were present than indicated by the site manager when first contacted. This was due to a number of factors, for example the site may have entered into another phase of the project by the time the interviewer was able to visit the site.

The proportion of workers interviewed varied greatly, at some sites we interviewed all workers present, on other sites particularly where interviewing only occurred during short break times, only a small proportion of workers were interviewed.

Table 1.3 shows the profile of the sites in our sample by the type of work being undertaken and then the number of interviews carried out. The bulk of the sites were housing (mainly new housing) projects.

Table 1.3 Sites covered by type of activity				
Number of sites (UK only) Number of inter				
Total	292	3,402		
New housing	172	2,182		
Public non-housing	67	517		
Private commercial	26	345		
Infrastructure	12	129		
Private industrial	15	229		

1.5 Structure of the report

The report is structured as follows:

Chapter 1	Background, Objectives and Methodology
Chapter 2	Management Summary
Chapter 3	Profile, Work Status and Work Histories of the Construction Workforce
Chapter 4	Qualification and Skills
Chapter 5	Mobility
Chapter 6	Sub-sector and Sector Mobility

A separate technical report has been produced.

1.6 Notes on tables

Where respondents can give multiple responses to a question, the sum of the individual responses may be greater than 100 per cent.

Also the percentages in the tables do not always sum to 100 per cent due to rounding, and where percentages in the text differ to the sum of percentages in the tables, this too will be due to rounding.

An asterisk (*) in a table signifies a percentage that is greater than 0 but less than 0.5.

A dash (-) signifies a cell where data has not been included due to too small a base size.

N/A in a table signifies where we are unable to make a comparison with previous years as either the question wasn't asked or the data wasn't available.

With the exception of base totals the figures referred to are weighted.

The report contains some tables showing findings based on relatively small numbers of respondents (less than 70). Such low base sizes carry a greater risk of these figures being unrepresentative of the population in question and should therefore be treated as indicative only. Consistent with the 2004 report, only results based on 15 workers or more have been referenced in either tables or the text.

2 Management Summary

ConstructionSkills commissioned BMRB to undertake a survey of construction workers to provide reliable data on the nature of the workforce in the United Kingdom (UK) and the Republic of Ireland (ROI) with regard to their competence/qualification levels and the extent of occupational and geographic mobility within the workforce. The survey consisted of interviews with 3,621 interviews with construction workers employed across 292 sites in Great Britain and 256 interviews with Safe Pass attendees in the Republic of Ireland. Interviewing took place from February to July 2007.

Where available, results from the 2007 survey have been compared with those from similar previous research conducted by IFF Research in 2004³.

2.1 The profile of the workforce

A wide range of occupations was covered in the research, with just five making up more than 5% of the overall sample: labourer/general operatives (17%), carpenters/joiners (14%), bricklayers (13%), plant/machine operatives (13%) and electricians (7%).

A considerable proportion of workers appear to follow the pattern of starting out in the industry in unskilled positions before progressing to more skilled work. For example, those aged 16–24 and migrant workers (23% and 31% respectively) were more likely than average to say they were labourers/operatives.

Around three in five (64%) of workers interviewed were employed directly by a company. Three in ten (29%) were self-employed and just five per cent worked for an agency.

The level of self-employment varied by occupation, it was particularly high among plasterers/dry-liners, bricklayers and roofers among whom around half were self-employed. There were also wide variations by nation/region, from only 10% self-employed in the North East to over half in London.

There were notable differences between UK/ROI nationals and migrant workers in relation to work status. Migrant workers were more likely to be self–employed (35% compared with 28% of UK/ROI nationals) and more likely to work for an agency (11% compared with 4% of UK/ROI nationals).

Agencies appear to be used mainly for labouring/general operative positions (14% of labourers are employed by an agency and account for 53% of all agency workers interviewed).

³ Comparative findings should be treated as indicative only due to key differences in the types of sites visited in 2004 and 2007. The profile of sites visited showing differences by size and category are included in the technical report.

2.2 Qualifications and skills

Overall, nearly seven in ten (68%) workers said they held a skill card or certificate of some description, which is an encouraging increase compared with the proportion who said they held a skill card or certificate in 2004 (57%).

There were wide variations by nation/region in the uptake of skill cards/certificates. Workers interviewed in Northern Ireland, Wales, East of England, West Midlands and the North West were among those most likely to hold a skill card/certificate while take up of skill cards/certificates appears to have been slower among workers in the North East, Yorkshire and Humber, East Midlands and Scotland. Given that a third of workers interviewed in the Republic of Ireland had had less than a year's experience in the construction industry (compared with 11% overall) it is perhaps not surprising to find that workers in the Republic of Ireland reported the lowest level of take up with just 42% saying they held a skill card/certificate of some sort.

Table 2.1 Whether have a skill card/certificate by occupation				
High likelihood		Low likelihood		
2007	2004	2007	2004	
Steel Erectors/Riggers (86%)	Plant/Machine Operatives (89%)	Painter/Decorators (53%)	Labourer/General Operatives (37%)	
Plant/Machine Operatives (81%)	Banksmen (86%)	Labourer/General Operatives (57%)	Plasterers (40%)	
Banksmen (81%)	Scaffolders (82%)	Roofers (62%)	Bricklayers (44%)	
Supervisors (81%)	Steel Erectors/Riggers (79%)	Bricklayers (62%)	Technical (45%)	
Scaffolders (79%)	Welders (73%)	Carpenters/Joiners (66%)	Painter/Decorators (47%)	

The occupations most likely to have workers who hold skills cards/certificates were similar in both surveys, with four out of the top five from the 2004 survey included in the top five for the 2007 survey.

Half the workforce (48%) has a qualification relevant to construction. There was again wide variation by occupation:

Table 2.2 Whether have construction qualifications					
High like	lihood	Low likelihood			
2007	2004	2007	2004		
Bricklayers (73%)	Electricians (80%)	Labourers/General Operatives (19%)	Labourers/General Operatives (16%)		
Managers (73%)	Welders (78%)	Roofers (29%)	Floorers (21%)		
Electricians (70%)	Plumbers (75%)	Plant/Machine Operatives (37%)	Groundworkers (28%)		
Carpenters/Joiners (65%)	Managers (74%)	Banksmen (37%)	Glaziers (33%)		
Plumbers (64%)	Carpenters/Joiners (70%)	Plasterers/Dry-liners (41%)	Roofers (38%)		

Three of the five occupations with the highest proportion of qualified workers in 2004 have remained in the top five for the 2007 survey (managers, electricians, carpenters/joiners).

Results varied little among workers aged 25+ and after five or more years in construction, implying that if a worker doesn't obtain a qualification early on their career they are unlikely to do so later on.

One in six of the workforce (17%) said they were working towards a construction qualification. Predictably this was much higher among younger workers (47% of 16–19 year olds) and those who had been working in the industry for less than five years (32%). Over half of those working towards a qualification (56%) did not already have a construction qualification, representing 8% of the total workforce.

A summary of the qualification status of workers is shown in the following table, combining the results for qualifications held/working towards and skill cards/certificates held:

Table 2.3 Qualification status			
2007 %		2004 %	
Hold a formal construction qualification or a skills card/certificate or working towards a qualification	82	79	
Hold a formal construction qualification or a skills card/certificate	78	75	
Hold a skills card/certificate	68	57	
Hold a skills card/certificate but no other construction qualification	33	24	
Working towards a qualification	17	13	

The proportion of workers with a formal qualification or skills card or working towards a qualification is similar to the results in 2004, while the proportion of workers with a skill card/certificate has increased considerably.

Just under a fifth of workers (18%) said they had supervisory or managerial duties on site. Just over half (53%) of those with managerial and supervisory duties had received training designed to improve skill in this area. Those who had received some training were most likely to have undertaken in-house training rather than anything that was part of any accredited, industry recognised programme.

Part of the training and upskilling of workers can happen from a demand-led angle, though the potential appears to be limited.

Just 13% of workers thought they needed more training or qualifications to do their current job (workers with no qualifications and not working towards any were no more likely than average to feel the need for more training or qualifications).

All workers were also asked whether they felt they needed training in basic skills. Overall, one in five (21%) expressed a need for such training. Those with no construction qualification were more likely to identify this need (24% versus 17% with a construction qualification) as were those who were relatively new to the industry (40% of workers with less than a year's experience) and related to this, if they were under 25 (30% aged 16–24).

Another source of demand-led training comes from those wishing to change occupation within the sector and anticipating the need for re-training. Overall, 14% of workers said they want to change the work they do and the vast majority of these (80%) say that to achieve this aim they will need further training and qualifications. This represents 12% of all workers interviewed.

2.3 Mobility

The extent to which workforces are drawn from people indigenous to each nation/region varies widely. London and the South East stand out as being the largest net 'importers' of construction workers on this measure. Only a third of workers in London and half of workers in the South East originally came from the respective regions. London imports its workforce from a broad spread of regions/areas, notably 22% of workers are from outside the UK and ROI.

By contrast, the nation/regions with the most insular or self-contained workforces are Northern Ireland, the North East and Scotland with at least eight in ten workers in each originally from that nation/region.

Overall 8% of workers interviewed were originally from outside the UK and ROI. The most common countries of origin were Poland (3%), Lithuania (1%), Romania (1%) and Africa (1%).

There was wide variation as to whether workers in the nation/region had their permanent residence within that nation/region. Sites in Northern Ireland, Scotland and the North East are most likely to draw workers from residences in the same nation/region. In each case over nine in ten workers have their permanent address in that nation/region. Sites in London and the South East are least likely to draw workers from the same region, only 68% of workers on sites in these regions have a permanent address there.

Overall, the construction workforce is relatively mobile, just over half of workers (54%) said they'd worked on sites outside the current nation/region and for one in five, half or less of their time had been spent working on sites in their current nation/region. Those currently working in Scotland and in Northern Ireland were particularly likely to have spent all their time in construction within the nation/region (68% and 64% respectively). By contrast, in London and the East Midlands around a quarter had spent all their time on sites within the region (28% and 26% respectively).

Overall 7% of workers interviewed were based at a temporary address to get to work. Workers employed on a temporary basis were more likely to say they were living at a temporary address (12% of temporary workers versus 6% of permanent workers), as were workers who haven't been in the industry long (18% of those with less than a year's experience versus 6% of those with five or more year experience).

The mean average distance travelled to work (each way) was 24 miles and the median average was 18 miles. A quarter of workers (24%) reported travelling less than five miles with three in five (64%) travelling less than 25 miles. One in ten were travelling over fifty miles each way to work. Workers in the Republic of Ireland, Scotland and the South West were most likely to report that they travel five miles or less. One in ten workers reported travelling over 50 miles to work, such long journeys were most prevalent in the East of England and the South East.

3 Profile, Work Status and Work Histories of the Construction Workforce

In this chapter we look at the demographic details of the construction workers interviewed in terms of age, ethnicity and gender. We also look at the proportion working directly for a company, self-employed or for an agency, and the extent to which they are working on a permanent or temporary basis. We also look at the occupational profile of the sample and examine career histories in terms of how many years they have worked in construction and the previous roles workers have had within the sector.

3.1 Demographic profile of the sample

The following table shows the demographic profile of our sample of construction workers and compares this to the profile in 2004; the Construction workforce in the UK, and the overall UK workforce (source: Labour Force Survey, Spring 2007).

	All respondents 2007 %	All respondents 2004 %	Construction workforce† %	UK workforce %
Age: 16–19	8	21	5	4
20–24	16	21	10	9
25–34	25	27	21	22
35–44	25	26	26	26
45–54	16	16	21	23
55+	10	9	17	17
Ethnicity: White	96	97	96	91
Black	2	2	1	2
Asian	1	1	2	4
Other	1	*	1	3
Gender: Male	99	99	90	54
Female	*	1	10	46

†These figures are for construction occupations defined by SIC 45

There is a broad spread of construction workers by age, with approximately one in four (24%) under 25 and a further one in four (26%) aged 45 plus.

While in many industries there is a concern about an ageing workforce and the potential loss of skills, the construction industry has a much younger profile than the UK average, as would be expected given the physical nature of the work.

Predictably the workforce interviewed was very male dominated. In total, only 17 female workers were interviewed, representing just 0.4% of the total sample. The spread by occupation among these female workers was relatively broad: four working as labourers/operatives constituted the most in any one occupation.

Workers of black/minority ethnic (BME) origin comprised three per cent of all workers interviewed. This varied by nation/region from 10% in London to no BME workers interviewed in Scotland and Northern Ireland. Despite the highest incidence of BME construction workers being in London, they are still very under-represented here compared with the proportion of the resident population aged 16–80 who are from BME groups (data from the Labour Force survey (Spring 2007) indicates that 33% of adult London residents are from BME groups). The results are summarised by nation/region in the following table.

Table 3.2 Proportion of construction workforce of BME origin				
	% of construction workforce BME (2007)	% of construction workforce BME (2004)	% of nation/region's resident population aged 16-80 BME†	
Overall	3	3	9	
London	10	11	33	
West Midlands	7	4	12	
Yorkshire and Humber	4	1	7	
South East	3	1	6	
East of England	3	3	6	
East Midlands	2	2	7	
South West	2	1	3	
Republic of Ireland	1	N/A	3++	
North West	1	1	7	
Wales	1	1	3	
North East	*	1	3	
Scotland	0	1	3	
Northern Ireland	0	1	1	
Base: All respondents (2007: 3,877; 2004: 8,436) +LFS spring 2007, ++Census 2006.				

3.2 Work status

Around three in five (64%) of workers interviewed were employed directly by a company. Three in ten (29%) were self-employed and just five per cent worked for an agency. As interviews were conducted at Safe Pass training sessions in ROI rather than on construction sites, a small proportion of respondents attending those sessions were unemployed (and actively seeking work) at the time of the interview (7% of those interviewed in ROI, 1% of all workers interviewed).

There continues to be a notable effect on the level of self-employment by how long people have worked in the industry. The incidence of self-employment rises from around one in five (19%) among people with one to two years experience to around one in three (32%) among people with five or more years experience (in 2004 the figures were 25% and 39% respectively). Those relatively new to the industry (less than one year's experience) were more likely to work for an agency (11%) than people with over five year's experience (4%). This is summarised in the following table.

Table 3.3 Work status						
			١	ears working in construction		
	All (2007) (%	All (2004) %	<1 year %	1–2 %	3–4 %	5+ %
Employed by a company	64	58	66	71	68	63
Self-employed	29	35	15	19	27	32
Work for an agency	5	7	11	7	3	4
Unemployed (all ROI)	1	N/A	4	1	1	*
Base: All respondents (2007: 3,877; 2004:	8,436)					

Self-employment was slightly higher than average among those aged 25–44 (33%), among older workers the level of self-employment was similar to average (29% of 45–59 years old and 25% of 60+ year olds).

There were notable differences between UK/ROI nationals and migrant workers in relation to work status. Migrant workers were more likely to be self-employed (35% compared with 28% of UK/ROI nationals) and more likely to work for an agency (11% compared with 4% of UK/ROI nationals).

Looking at variation in the level of self-employment by nation/region, London (55%), the South East (40%) and the South West (37%) had particularly high levels of self-employment and it was much lower in the North East (10%) and Scotland (13%). Work status by nation/region is summarised in chart 3.1.



There were also wide differences in the likelihood of being self-employed by occupation, as summarised in the following table.

Table 3.4 Level of self-employment by occupation				
Hig	High			
2007	2004	2007	2004	
Plasterers/Dry-liners (48%)	Dry-liners (64%)	Civil Engineering Operatives (3%)	Managers (13%)	
Bricklayers (48%)	Bricklayers (67%)	Managers (10%)	Technical (15%)	
Roofers (47%)	Glaziers (60%)	Scaffolders (16%)	Plant/Machine Operatives (17%)	
Carpenters/Joiners (43%)	Carpenters/Joiners (53%)	Labourers/General Operatives (17%)	Scaffolders (19%)	
Steel Erectors/Riggers (42%)	Roofers (52%)	Plant/Machine Operatives (19%)	Pipe Fitters (19%)	

The results in 2007 are similar to those in 2004 with plasterers/dry-liners and bricklayers most likely to be self-employed.

Agency workers accounted for 5% of the total sample. Agencies appear to be used mainly for labouring/general operative positions (14% of labourers are employed by an agency and account for 53% of all agency workers interviewed).

3.3 Occupational profile

Results showing how workers classified their current role or occupation are shown in table 3.5, which lists those occupations mentioned by 1% or more of the sample. Later in the report differences are discussed by occupation, not all occupations shown are used in those discussions as bases less than 70 are too low to be reliable. The results are compared with those from 2004 in the third column, and the final column on the table show comparative UK data from the Labour Force Survey (Spring 2007) looking at occupations covering Standard Industrial Classification 45. A direct comparison is not always possible due to some of the specific occupations reported in the research being covered by more generic occupational titles in the LFS.

The results indicate that many workers follow the pattern of starting out in the industry in unskilled positions before progressing to more skilled work, for example those aged 16–24 and migrant workers (23% and 31% respectively) were more likely than average to say they were labourers/operatives.

	Survey data		LFS data for SIC 45 occupations (2.316m)
	2007 % (No.)	2004 % (No.)	Spring 2007
Labourer/General Operative	17 (674)	16 (1,303)	3.1
Carpenter/Joiner	14 (559)	13 (1,056)	10.2
Plant/Machine Operative	13 (502)	7 (545)	0.1
Bricklayer	13 (536)	10 (866)	3.9
Electrician	7 (247)	7 (638)	6.8
Plumber	5 (183)	4 (337)	7.1
Supervisor	5 (192)	3 (302)	Not specifically show on LFS
Plasterer/Dry-liner	5 (190)	2 (182)	2.4
Roofer	4 (133)	2 (206)	2.6
Scaffolder	3 (112)	4 (369)	1.4
Manager	3 (111)	2 (149)	Not specifically show on LFS
Pipe Fitter	3 (102)	4 (298)	0.3
Painter/Decorator	2 (97)	3 (282)	5.5
Banksman/Banksperson	2 (81)	1 (96)	Not specifically show on LFS
Steel Erector/Rigger	2 (75)	3 (223)	0.3%
Civil Engineering Operative	2 (75)	N/A	Not specifically show on LFS
Technical	1 (38)	2 (162)	Not specifically show on LFS
Floorer	1 (41)	1 (97)	1.7
Glazier	1 (32)	1 (71)	1.2
Welder	1 (32)	1 (115)	0.5
Ceiling Fixer	1 (27)	N/A	Not specifically show on LFS
Mechanical Fitter	* (16)	N/A	Not specifically show on LFS
Specialist Building Operative	(16)	N/A	Not specifically show on LFS

3.4 Work histories

One of the key aims of the survey was to look at the paths by which the construction industry gains new recruits, and also the extent to which workers are entering the industry for short periods, doing other work and then coming back to construction. A similar area of interest at occupational level is the extent to which people progress from one occupation to another within the industry.

This section looks at:

- how many years workers have been in the industry
- whether they started their working life in other careers
- whether since starting in construction they have worked in other jobs
- occupational switching within the workforce.

3.4.1 Time in the industry

The length of time spent working in construction ranges from one in ten (11%) of new entrants who have worked in the industry for less than a year, to three in ten (27%) who have worked in the industry for over 20 years. Table 3.6 summarises findings showing cumulative proportions.

Table 3.6 Years spent working in construction (cumulative)			
	2007 %	2004 %	
Less than 6 months	5	5	
A year or less	11	8	
2 years or less	17	15	
5 years or less	33	25	
10 years or less	50	39	
20 years or less	71	65	
More than 20 years	27	35	
Base: All respondents (2007: 3,87	7; 2004: 8,436)		

Migrant workers were much more likely than average to be relatively new to the industry (33% had up to one year's construction experience).

As 16–24 year olds and migrant workers were more likely than average to be labourer/general operatives (see section 3.3), it is not surprising to find that workers in this role were much more likely to be recent recruits to the industry (21% had worked in the sector for a year or less). However, there were still a considerable proportion of labourers/general

operatives who had worked in the industry for many years (13% had worked in construction for over 20 years).

3.4.2 Employment Pre-construction

Around two in five workers (38%) ended up in the construction industry after starting their working life in another field. Predictably this was higher for agency workers (54%) and, by occupation, for banksmen (57%), labour/operatives (53%) and plant/machine operatives (48%). Certain trades such as bricklaying and carpentry/joinery are more likely to attract workers straight after leaving education, as only around a fifth of workers with these occupations had started out working in another field.

Those who had worked in other fields before starting their construction careers were asked what their previous job had been. A diverse range of jobs was mentioned. In a large number of cases these were jobs where construction seems like the natural progression (or indeed were construction jobs but in other sectors). Table 3.7 shows jobs that were mentioned by at least 4% of this group (respondents described their previous job and this was assigned a three digit Standard Occupational Classification).

Table 3.7 Previous job prior to working in Construction			
	2007 %	2004 %	
Elementary process plant occupations	6	2	
Metal machining, fitting and instrument making trades	6	N/A	
Plant machine operatives	6	1	
Sales assistants/retail cashiers	5	2	
Food preparation trades	5	2	
Vehicle trades	4	N/A	
Agricultural trades	4	3	
Protective service occupations	4	N/A	
Elementary goods storage occupations	4	N/A	

Of those who did not start in construction, the vast majority (79%) had worked only in construction since joining the industry, and a further 6% had only worked in this sector though had had spells of being out of work. Overall, 13% had dipped in and out of the construction sector since their first construction job. This was most likely among labourers/general operatives (19%), banksmen (18%) and plant/machine operatives (17%), indicating that this dipping in and out of the industry is more common among the relatively unskilled occupations.

The pattern among this group was their taking jobs unrelated to construction. A wide range of jobs was mentioned with the most common being, transport/driver operatives (10%), elementary goods storage occupations (9%) and elementary process plant occupations (7%).

3.4.3 Occupation switching and progression

An area of particular interest in the research was the extent of switching between occupations within construction. To this end workers were asked if they had always worked in their current role/occupation and if not, what their previous occupation had been.

Three out of five workers (60%) said that they had always worked in the same occupational area as their current job (72% in 2004). Predictably this was highest among 16–19 year olds (71%) and levelled out for workers aged 20+ (59% of 20–24 year olds, 58% of 25–44 year olds, 61% of 45+ year olds).

There were wide variations in the proportion of workers who had changed construction roles by their current occupation. The following table shows this, with the left hand side containing occupations more likely than average to have come to their current position via other roles and the right hand side showing those most likely to have stayed in the one role throughout their careers.

Table 3.8 Whether had other construction roles by current occupation			
More likely to have	More likely to have had other roles		had other roles
2007	2004	2007	2004
Managers (63%)	Managers (64%)	Plumbers (25%)	Electricians (9%)
Bankspeople (58%)	Bankspeople (61%)	Carpenters/Joiners (23%)	Plumbers (16%)
Plant/Machine Operatives (49%)	Supervisors (57%)	Electricians (23%)	Painters/Decorators (17%)
Supervisors (47%)	Glaziers (50%)	Bricklayers (30%)	Carpenters/Joiners (18%)
Labour/General Operatives (44%)	Plant/Machine Operatives (46%)	Painters/Decorators (35%)	Plasterers (19%)

One of the main areas of interest is the switching behaviour between occupations. Table 3.9 shows the occupations where workers were most likely to have previously worked in other construction occupations. Their current occupation appears as columns and is crossed against previous occupations. It should be noted that some respondents gave the same occupation for their previous positions as their current one. This is explained by the fact that the categorisations of occupations used are fairly broad and cover more than one potential role.

		Current C			cupation		
Previous occupation	All switching construction occupations (1,353) %	Bricklayer	Carpenter/ Joiner	Labourer	Pipe Fitter	Plant/ Machine Operative	Supervisor
Labourer/General Operative	34	40	19	44	39	43	23
Carpenter/Joiner	16	11	47	10	15	9	22
Bricklayer	13	43	9	14	12	10	15
Plant/Machine Operative	16	14	6	17	14	38	20
Roofer	11	13	13	14	-	11	10
Plasterer/Dry-liner	10	10	12	11	9	5	8
Painter/Decorator	8	10	7	8	3	7	4
Plumber	8	3	8	5	24	8	10
Banksman	6	4	9	5	11	8	15
Electrician	5	5	3	7	6	2	4
Scaffolder	5	5	3	4	7	8	5

Overall it can be seen that workers were most likely to have switched from the relatively unskilled position of labourer/general operative (34%), indicating that many workers follow the pattern of starting out in the industry in unskilled positions before progressing to more skilled work.

Some patterns within occupation can be seen on table 3.9:

- supervisors appear to come from a wide range of occupations indicating they move upwards from whatever occupation they are working in
- plant/machine operatives who had switched from other occupations were very likely to have been labourers/general operatives (43%)
- bricklayers were likely to have been labourers/general operatives (40%).

Table 3.9 illustrated findings among those occupations where a relatively large number of respondents (at least 100) had switched roles to enter that occupation. Table 3.10 shows the findings among some occupations where somewhat fewer had switched into that occupation (the number who had switched into that occupation is shown in the left hand column in brackets), hence the results need to be treated with some caution. Relatively skilled occupations are shown where there were at least 25 switching into that occupation, and list

the previous occupations mentioned by 10% or more of those that had switched into their current role.

Table 3.10 Other occupational switching patterns				
Current occupation	Main previous occupations among 'switchers'			
Manager (69)	Carpenter/Joiner (31%), Labourer/General Operative (15%), Bricklayer (14%)			
Plasterer/Dry-liner (64)	Labourer/General Operative (34%), Carpenter/Joiner (24%), Roofer (10%), Painter/Decorator (10%)			
Electrician (52)	Labourer/General Operative (28%)			
Roofer (59)	Labourer/General Operative (21%), Carpenter/Joiner (18%), Plasterer/Dry-liner (11%), Plumber 10%			
Banksmen (45)	Labourer/General Operative (51%), Plant/Machine Operative (24%), Carpenter/Joiner (17%), Supervisor (15%), Pipe Fitter (12%), Bricklayer (11%)			

4 Qualifications and Skills

A key objective of this research was to measure the competence/qualification levels of the construction workforce and to see how this varied by region and occupation. A number of questions were asked to ascertain this:

- whether any construction skill certificate or card was held and if so, which and, in the case of construction skills certification scheme (CSCS) and construction skills register (CSR) cards, to what level
- what formal qualifications relevant to the construction industry they held or were working towards, if any
- those with managerial or supervisory duties were asked about any training specifically designed to improve their managerial or supervisory skills or knowledge.

We also asked workers to assess their own skills, including basic skills and whether they felt they needed more training to do their current job.

Where possible results are compared with the findings from the research conducted in 2004.

4.1 Construction Skill cards and certificates

There is a general move in the industry for all persons working on, or visiting construction sites to have a construction skill card or certificate. Already, many sites won't let workers on without an appropriate card to prove their skills. And this is set to increase as the industry-wide deadline approaches for a fully qualified workforce by 2010.

Overall nearly seven in ten (68%) workers said they held a skill card or certificate of some description, which is an encouraging increase compared with the proportion who said they held a skill card or certificate in 2004 (57%).

The figures varied widely by a number of factors. Table 4.1 shows how possession of a skill card/certificate varied by region.

	2007 %	2004 %
к	68	57
orthern Ireland	84	64
lales	82	54
ast of England	81	65
/est Midlands	79	63
orth West	75	66
ondon	72	55
uth East	71	42
outh West	70	55
orth East	<mark>68</mark>	60
orkshire and Humber	66	61
ast Midlands	<mark>60</mark>	54
otland	59	59
public of Ireland	42	N/A

Similar to the findings in 2004, workers interviewed in Northern Ireland, East of England, West Midlands and the North West were among those most likely to hold a skill card/certificate. Interestingly the results in 2007 showed that workers in Wales were far more likely to say they had a skill card/certificate than in 2004 (82% compared with 54% respectively). Workers in London, South East and South West regions were also much more likely to report they held skill/cards certificates than in 2004, with the level of cards held at around seven in ten of workers in these regions. Take up of skill cards/certificates appears to have been slower among workers in the North East, Yorkshire and Humber, East Midlands and Scotland, with comparatively small increases in the level of take up reported since 2004. Given that a third of workers interviewed in the Republic of Ireland had had less than a year's experience in the construction industry (compared with 11% overall) it is perhaps not surprising to find that workers in the Republic of Ireland reported the lowest level of take up with just 42% saying they a skill card/certificate of some sort.

Table 4.2 Whether have a skill card/certificate by other variables		
	2007 %	2004 %
Overall	68	57
<1 year in construction	39	17
1–2 years	60	42
3–4 years	65	N/A
5+ years	75	N/A
16–19	43	N/A
20–24	62	N/A
25–44	73	62
45+	72	62
Employed directly	70	63
Self-employed	69	51
Agency worker	62	46
UK/ROI national	70	N/A
Migrant worker	49	N/A
Base: All respondents (2007: 3,87	7; 2004: 8,436)	

Table 4.2 shows differences by other key variables.

Predictably those with less than a year's experience in the industry (39%), 16–19 year olds (43%) and migrant workers (49%) were much less likely than average to have a skills card or certificate. Interestingly self-employed workers were as likely as workers employed directly to say they held a skills card/certificate (69% versus 70% respectively).

The main differences by occupations are shown in the following table which lists occupations with the highest and lowest penetrations from the 2004 and the 2007 survey.

Table 4.3 Whether have a sk	ill card/certificate by occupa	ation	
High like	High likelihood		elihood
2007	2004	2007	2004
Steel Erectors/Riggers (86%)	Plant Machine Operatives (89%)	Painters/Decorators (53%)	Labourer/General Operative (37%)
Plant/Machine Operatives (81%)	Banksmen (86%)	Labourer/General Operative (57%)	Plasterers (40%)
Banksmen (81%)	Scaffolders (82%)	Roofers (62%)	Bricklayers (44%)
Supervisors (81%)	Steel Erectors/Riggers (79%)	Bricklayers (62%)	Technical (45%)
Scaffolders (79%)	Welders (73%)	Carpenters/Joiners (66%)	Painters/Decorators (47%)

The occupations most likely to have workers who hold skills cards/certificates were similar in both surveys, with four out of the top five from the 2004 survey included in the top five for the 2007 survey (steel erectors/riggers, plant machine operatives, scaffolders and banksmen). Occupations where penetration of skills cards was lowest were also similar across the two surveys (painter/decorators, labourer/general operatives and bricklayers).

These results are encouraging as they indicate that the proportion of workers with skills cards/certificates has risen across all trades, for example painter/decorators were least likely to say they held a skills card/certificate, yet over half (53%) said that they did have a skills card/certificate of some sort.

Table 4.4 shows the main types of skill cards/certificates held. The results are based on all respondents, not just those saying they had a card/certificate. A number of other types of skill cards were mentioned by workers, though typically fewer than 50 respondents. These included, Basic Construction Skills Certification Scheme Award (33), Engineering Services SKILLcard (25), Joint Industry Board Card (JIB) (19), Advanced Construction Skills Certification Scheme (13), Engineering Construction Industry (ECIAS) Card (8), International Powered Access Federation (IPAF) Card (5), ACE (4), and Prefabricated Access Suppliers' and Manufacturers' Association (PASMA) Card (3).

	2007	2004
	%	%
CSCS (Construction Skills Certification Scheme) (GB) or CSR (Northern Ireland)	55	41
CPCS (Construction Plant Competence Scheme)	10	5
Safe Pass	5	N/A
CISRS (Construction Industry Scaffolders Record Scheme)	2	N/A
CORGI (Council of Registered Gas Installers)	2	N/A
CTA (Certificate of Training Achievement)	2	4
No cards held/not sure	32	42

Take up of CSCS (CSR in Northern Ireland) is highest in Northern Ireland (79%), then Wales (71%), the East of England (70%) and the West Midlands (68%) and lowest in Yorkshire and the Humber (47%) and the East Midlands (48%). As CSCS operates in Great Britain and CSR operates in Northern Ireland it is not surprising to find that just two per cent of workers interviewed in the Republic of Ireland held either card. Workers in ROI were most likely to say they held a Safe Pass card (36%).

Uptake of CSCS/CSR card was highest among steel erectors/riggers (82%), managers (69%), pipe fitters (67%) and supervisors (66%).

Workers who said they had a CSCS or CSR skill card were also asked its colour/level. Around one in five workers (21%) said they had a green, general site workers card and a quarter (25%) said they had a blue, NVQ/SVQ Level 2 card. Despite saying they held a CSCS or CSR card one in five (20%) weren't sure what colour or level it was. Table 4.5 shows these results along with those reported in 2004.

Table 4.5 Type of CSCS/CSR card		
	2007 %	2004 %
Red (trainee)	6	4
Green (construction site operative card for general site workers)	21	30
Blue (skilled/NVQ/SVQ Level 2)	25	15
Gold (supervisor/NVQ/SVQ Level 3)	16	19
Platinum (manager/NVQ/SVQ Level 4)	3	2
Black (NVQ/SVQ Level 5)	1	1
Experienced worker card for unqualified but competent workers	1	N/A
Other answers	7	4
Don't know	20	25
Base: All holding a CSCS or CSR card (2007: 2,253; 2004: 2,982)		

Chart 4.1 shows the 2007 results.



Workers who had a CSCS (ROI) card were asked its colour, chart 4.2 shows the results.



4.2 Construction qualifications held

Workers were also asked what other formal qualifications relevant to construction they held (excluding first aid certificates). As a relatively high proportion (8% overall) did not give an answer to this question, results in this section are based on those who gave an answer. Half of workers (48%) who gave an answer had such a qualification which is the same as the proportion reported in the 2004 survey.

As with skill cards/certificates, there were predictable differences by age and length of time worked in the industry, these are shown in table 4.6.

	2007 %	2004 %
Overall	48	50
<1 year in construction	15	13
1–2 years	30	26
3-4 years	39	N/A
5+ years	57	N/A
1 6–19	30	N/A
20–24	40	N/A
25-44	54	54
45+	50	57
Employed directly	48	49
Self-employed	54	54
Agency worker	30	43

Results varied little among workers aged 25+ and after five or more years in construction, implying that if a worker doesn't obtain a qualification early on in their career they are unlikely to do so later on.

Reflecting the results from the 2004 survey, self-employed workers (54%) were most likely, and agency workers (30%) were least likely, to say they had a formal qualification.

As with skill cards/certificates, there was wide variation by occupation in the proportion of workers with a construction qualification. This is summarised in table 4.7, showing the five occupations with highest proportions of workers with a qualification and the five occupations with lowest relative proportions.

Table 4.7 Whether have construction qualifications				
High likelihood		Low likelihood		
2007	2004	2007	2004	
Bricklayers (73%)	Electricians (80%)	Labourers/General Operatives (19%)	Labourers/General Operatives (16%)	
Managers (73%)	Welders (78%)	Roofers (29%)	Floorers (21%)	
Electricians (70%)	Plumbers (75%)	Plant/Machine Operatives (37%)	Groundworkers (28%)	
Carpenters/Joiners (65%)	Managers (74%)	Banksmen (37%)	Glaziers (33%)	
Plumbers (64%)	Carpenters/Joiners (70%)	Plasterers/Dry-liners (41%)	Roofers (38%)	

Three of the five occupations with the highest proportion of qualified workers in 2004 have remained in the top five for the 2007 survey (managers, electricians, carpenters/joiners). Looking at the occupations that had the lowest proportion of workers with a qualification, labourers/general operatives were again found to be least likely to have a construction qualification.

Workers who said they had a construction qualification were asked what type of qualification they held. Where more than one response was given the highest qualification was recorded. Half of workers (51%) had an NVQ/SVQ and a third (34%) had a City and Guilds qualification. The results in 2004 indicated there was a switch towards NVQs/SVQs away from City and Guilds qualifications. This is borne out by the results for 2007, as the proportion of workers with an NVQ/SVQ increased by 26 percentage points while the proportion of workers with a City and Guilds decreased by 12 percentage points (table 4.8).

Table 4.8 Main type of highest qualification held				
	2007 %	2004 %		
NVQ/SVQ	51	25		
City and Guilds	34	46		
Construction Award	2	7		
Apprenticeship	4	6		
HNC/HND/BTEC higher	1	3		
Degree	1	2		
Base: All with a qualification (2007: 1,825; 2004: 4,240)				

All workers with a qualification were asked where it had been attained. For the majority of workers this had been in the region they were working. However there were signs of mobility with some regions showing a greater degree of in-flow of workers than others. The results are summarised in table 4.9.
	% answering within current region 2007	% answering within current region 2004	Higher than average mentions for other regions
Northern Ireland	94	88	
North East	90	92	
Wales	87	78	
Scotland	84	90	
West Midlands	83	75	East Midlands 9%
Yorkshire and Humber	81	84	
East Midlands	78	68	
North West	77	79	West Midlands 14%
South West	71	79	
East of England	71	62	London 11%
South East	66	N/A	London 10%, East 8%
Republic of Ireland	65	N/A	Poland 13%
London	56	N/A	South East 24%, East 10%

Northern Ireland (94%) and the North East (90%) have the most self-contained workforce in terms of having the highest proportion of workers who attained their construction qualification in that region. In contrast London and the South East appear to be net gainers, London has just over two-fifths (44%) and the South East has a third (34%) of their workforces with qualifications that were gained outside the region. London gains mainly from the South East and East. For example, while a quarter of the qualified workforce (24%) in London gained their qualifications in the South East, only 10% of those working in the South East got their qualifications in London.

4.3 Working towards construction qualifications

One in six of the workforce (17%) said they were working towards a construction qualification (13% in 2004). Predictably this was much higher among younger workers and those who had been working in the industry for less than five years. Looking at the results by occupation, the only group significantly more likely than average to say they were working towards a qualification was electricians (31%).

Table 4.10 Working towards a construction specific qualification					
	2007 %	2004 %			
Overall	17	13			
<1 year in construction	28	27			
1–2 years	32	37			
3–4 years	36	N/A			
5+ years	11	N/A			
16–19	47	N//A			
20–24	27	N/A			
25+	12	9			
Base: All respondents (2007: 3,877; 2004: 8,436)					

Just under half of 16–19 year olds (47%) were working towards a qualification, dropping to three in ten (27%) among 20–24 year olds.

Over half of those working towards a qualification (56%) did not already have a construction qualification, representing 8% of the total workforce.

In terms of the type of qualifications being worked towards, NVQs/SVQs were the most likely qualification being worked towards, mentioned by 61% of workers. Just 7% were working towards a City and Guilds qualification and 6% were on an apprenticeship scheme.

4.4 Managerial qualifications

A further area of investigation in relation to training and qualifications was to look at the extent to which workers with managerial or supervisory duties have had training specifically designed to improve their managerial and supervisory skills.

Just under a fifth of workers (18%) said they had supervisory or managerial duties on site. Predictably nearly all said their job title was a manager or supervisor indicating this was the case, though the figure was also higher in some trades including civil engineering operatives (40%) and banksmen (26%). Time worked in the industry was also a key indicator, nearly a quarter (23%) of those with five or more years experience had managerial or supervisory duties on site compared with just 5% among those working in construction for less than five years.

Just over half (53%) of those with managerial and supervisory duties had received training designed to improve skill in this area. This was higher among managers (87%), but supervisors (54%) were no more likely than average to have received training to improve these skills.

Those who had received some training were most likely to have undertaken in-house training rather than anything that was part of any accredited, industry recognised programme. The types of training undertaken are shown in table 4.11.

	2007 %	2004
None/can't remember	47	60
None/can tremember	47	00
In-house training	31	23
Chargehand and Team Leader Training	10	3
SMSTS (Site Manager Safety Training Scheme)	8	6
Site Safety Supervisors Course (for CSR)	7	N/A
Assessor and Verifier Training	5	1
Project Management Short Courses	3	2
Civil Engineering Site Managers Scheme	3	1
IOSH (Institute of Occupational Safety and Health)	3	N/A
IOSH Managing Safely for Construction Managers	3	N/A
Managing Safely in the Construction Industry (for CSR)	3	N/A
CITB training	3	N/A
Supervisory Management Training and Development	2	3
CIOB Site Management Education and Training Scheme (SMETS)	2	2
CIOB Site Supervisor (First Line Supervisor – FLS)	2	2
CSCS Training	1	N/A
Institute of Supervision and Management Workshops	1	1
IOSH Safely for Senior Executives	1	N/A
NVQ/SVQ Level 4 in Construction Site Management	1	N/A
Safety for Senior Executives (for CSR)	1	N/A

4.5 Summary of qualification and skills card status

Table 4.12 summarises the results from the 2004 and 2007 surveys regarding qualifications and skill cards/certificates attained and working towards.

Table 4.12 Qualification status						
	2007 %	2004 %				
Hold a formal construction qualification or a skills card/certificate or working towards a qualification	82	79				
Hold a formal construction qualification or a skills card/certificate	78	75				
Hold a skills card/certificate	68	57				
Hold a skills card/certificate but no other construction qualification	33	24				
Working towards a qualification	17	13				
Base: All respondents (2007: 3,877; 2004: 8,436)						

In summary, the proportion of workers with a formal qualification or skills card or working towards a qualification is similar to the results in 2004 at around eight in ten workers (82%), while the proportion of workers with a skills card/certificate has increased to around seven in ten workers (68%).

4.6 Competence/qualification level of the construction workforce

Using the responses given by workers for qualifications and skill cards/certificates held and managerial training undertaken, the highest competence/qualification levels have been derived for each worker. The definitions for each level are largely the same as those used in the 2004 survey⁴ (the technical report shows the definitions of each level).

Just under one in ten of the workforce (8%) has no competence/qualification level (i.e. no qualification or management training or skill cards/certificates held). Six in ten workers are qualified to level 1 or 2 (15% have a level 1 and 45% have a level 2), leaving one in three (32%) qualified to level 3 or higher.

The results are shown overall and by occupation (where base size allows) in chart 4.3.

⁴ In 2004 CSCS and CSR green cards were classified as Level 2, in 2007 they were classified as Level 1.



Results varied considerably by occupation. Pipe fitters and bricklayers were least likely to have no competence/qualification level (2% and 4% respectively) and labourers and roofers were most likely to have no competence/qualification level (13% and 14% respectively). Competence/qualification levels were highest among managers (57% had level 4 or 5 qualifications; 74% had a level 3 or above) and supervisors (47% had a level 3 or above), closely followed by electricians (46%), plumbers (45%), bricklayers (44%) and carpenters (42% had a level 3 or above).

Clearly workers who are relatively new to the industry are less likely to have a competence/qualification level than more experienced workers; a quarter (26%) of workers who have worked in construction for up to a year had no competence/qualification level, this compares with 5% of those with five or more years experience.

In terms of regional differences, chart 4.4 shows the variations. The results for ROI show that half of workers interviewed (49%) had no competence/qualification level. This finding should not be treated as representative of construction workers in ROI as it is likely to be due to the profile of workers interviewed (Safe Pass course attendees). Excluding ROI, Scotland has the highest proportion of workers (11%) without a competence/qualification level, while the North East, Wales, North West and West Midlands have workforces with the highest proportion of competence/qualification levels. Scotland and the East of England have the highest



proportion qualified to level 3 or above (49% and 46% respectively), followed by Wales and Yorkshire and Humber (41% in each case).

4.7 Self assessment of skill level

Workers' own perceptions as to whether they had all the skills they need to do their current job were ascertained after they were asked about the various qualifications they held or were working towards.

Three quarters of workers (76%) believe they have all the skills they require for their current job, with just 13% saying they need more training or qualifications and 8% just needing more experience.

Younger workers were the most likely to say they needed more training and qualifications (35% of 16–19 year olds) and more experience (21% of 16–19 year olds). Given the correlation between time in the industry and self-employment (described in section 3.2), it is not surprising to find that self-employed workers were more likely than average to say they had all the skills to do their current job (83%).

Workers from outside the UK/ROI were more likely to want more experience (22% compared with 7% of UK/ROI nationals) but no more likely than average to feel they needed more training or qualifications.

Table 4.13 Self assessment of	of skill level and 1 2007 %	2004 %	rrent job No skill card/ qualification/ nor working towards any %	No qualification/ working towards one %	
Have all the skills needed for current job	76	83	71	46	
Need more training or qualifications	13	10	11	35	
Need more experience	8	5	13	17	
Don't know	3	2	5	2	
Base: All respondents (2007: 3,877; 2004: 8,436)					

Workers with no skill cards or qualifications and not working towards any qualifications were no more likely than average to see the need for more training or qualifications. Predictably, workers with no qualifications who were working towards a qualification were more likely to express the need for more training and experience, however 46% still felt that they had all the skills needed for their job.

Workers in the following occupations were more likely than average to say they needed more training or qualifications: managers (26%), plumbers (23%), civil engineering operatives (19%) and electricians (17%).

All workers were also asked whether they felt they needed training in basic skills. Overall, one in five (21%) expressed a need for such training. This is considerably higher than the proportion expressing a need for basic training in the 2004 survey, however caution should be taken when comparing these results as the question was asked in a different way in the 2007 survey (a copy of the questionnaire is in the technical report).

Several factors appeared to impact on whether workers felt they needed some basic training. They were more likely to identify this need if they didn't already have a construction qualification (24% versus 17% with a construction qualification), if they were relatively new to the industry (40% of workers with less than a year's experience) or related to this, if they were under 25 (30% aged 16–24). Half of workers (51%) in the Republic of Ireland felt they needed basic training to help with their work, this is surprisingly high and may be due to the fact that the sample for ROI comprised of Safe Pass attendees. Looking at the need for basic training by other regions, Yorkshire and Humber (32%), the East of England (25%) and London (24%) had the highest proportions of workers expressing a need for such training.

Table 4.14 Need for training in basic skills						
2007 %	2004 %	All identifying a need %				
21	4	100				
12	2	58				
12	1 (oral communication)	57				
10	2	49				
10	* (numeracy)	48				
	2007 % 21 12 12 10	2007 2004 % % 21 4 12 2 12 1 (oral communication) 10 2				

The other means by which increased training may arise from a demand-led worker angle is from those wishing to change occupation within the sector and anticipating their need for retraining. Overall 14% say they want to change the work they do (15% in 2004) and the vast majority of these (80%) say that to achieve this aim they will need further training and qualifications. This represents 12% of all workers interviewed.

As expected, the desire for a change of role was particularly apparent among less skilled workers, particularly labourers/general operatives (28%) and civil engineering operatives (24%). The most common roles workers would like to switch to are the more skilled occupations, the top three being, managerial positions (23%), supervisors (12%) and bricklaying (11%). Better pay was the key motive for change, mentioned by over half of workers (56%) wanting to change roles.

5 Mobility

A key aim of the survey is to gain an understanding of geographic mobility of construction workers and to try to get a measure of which regions are net 'importers' and which are net 'exporters'. Another aim is to identify which types of workers (for example, by occupation and competence/qualification level) are particularly likely to be mobile. The results from this analysis clearly have a bearing on training planning, provision and investment.

What constitutes a mobile worker is not straightforward. Potentially it includes those who live outside a region and travel in on a daily basis, those who live in temporary accommodation while working but whose permanent address is outside the region, those who have moved to the area on a semi-permanent basis, as well as those who received their construction training elsewhere but have now moved to the region on a permanent basis. Hence for the survey a number of questions were asked covering these issues. These were:

- where respondents were from originally
- whether they travel from their permanent address or a temporary address (and if temporary why they work in the current region)
- the proportion of their time working in construction which has been on sites within the region where they are currently working
- the miles they travel to get to the site each day
- whether when they finish this site they expect to get a job which allows them to commute on a daily basis from their permanent address.

These areas are discussed in turn. In the last section we also look at how long workers are typically based at an individual site to give some idea of the frequency of moving between sites. Clearly workers may have spent their whole working life in one region and therefore appear relatively immobile, but if they move site frequently, providing training to these workers could be problematic.

5.1 Worker origin

Workers were asked where they were from originally. As a measure of mobility clearly this is very broad, since people may have moved to a region on a permanent basis and done so many years ago for reasons other than their work. That said, there are still some interesting differences between regions as far as importing and exporting workers is concerned, which are shown in table 5.1.

Table 5.1 Where from originally/international and inter-region movement													
		Where currently working											
Where from originally	NI %	NE %	Scot %	Wales %	NW %	Y&H %	WM %	ROI %	EM %	SW %	EE %	SE %	Lon %
Northern Ireland	92	*	-	2	1	-	*	*	1	*	1	1	1
North East	*	84	4	1	*	5	2	*	1	1	1	1	1
Scotland	1	1	84	*	*	1	1	*	1	1	-	*	1
Wales	-	*	-	79	3	1	1	-	2	5	*	2	1
North West	*	1	4	2	74	5	2	-	2	8	1	1	1
Yorkshire and Humber	*	4	2	-	4	74	2	1	9	3	1	1	1
West Midlands	*	-	1	1	11	-	70	-	7	7	1	3	*
Republic of Ireland	2	*	-	1	1	2	5	67	2	2	5	5	5
East Midlands	*	*	*	1	1	6	7	-	65	4	2	2	1
South West	-	1	-	7	-	*	3	-	1	60	2	4	*
East of England	1	4	-	-	*	3	1	*	2	2	57	7	9
South East	-	1	-	1	*	1	1	*	2	8	6	49	15
London	-	*	1	1	*	*	1	*	1	3	13	12	33
Outside UK and ROI	2	1	2	4	-	1	3	29	2	1	8	8	22

London and the South East stand out as being the largest net 'importers' of construction workers on this measure. Only a third of workers (33%) in London and half of workers (49%) in the South East originally came from the respective regions. London imports its workforce from a broad spread of regions/areas, notably 22% of workers are from outside the UK and ROI. In the South East and East, there is clearly a substantial crossover with the London workforce, with 12% of workers in the South East and 13% of workers in the East originally from London.

By contrast, the nation/regions with the most insular or self-contained workforces are Northern Ireland, the North East and Scotland with at least eight in ten workers in each originally from that nation/region. The main patterns of mobility between regions/areas, on this measure of where people said they were from originally, appear to be:

- a relatively high proportion in Wales having come originally from the South West (7%)
- a relatively high proportion in the North West from the West Midlands (11%)
- some movement between Yorkshire and Humberside and the East Midlands in both directions
- cross-over between the East and the West Midlands (7% each way)
- a relatively high proportion in the South West having come originally from the North West (8%), West Midlands (7%), the South East (8%)
- as mentioned some cross-over between London, the South East and East
- a relatively high proportion of workers (29%) in the Republic of Ireland having come originally from outside the UK/ROI. This could be due to the profile of respondents who took part in the ROI survey (via Safe Pass courses).

Overall 8% of workers interviewed were originally from outside the UK and ROI. The most common countries of origin were Poland (3%), Lithuania (1%), Romania (1%) and Africa (1%).

Overall 85% said they had lived in the UK/ROI all their life. Predictably London has the lowest proportion of workers who said they had lived there all their life at just 63%, while in the North East 96% of workers have lived there all their life.

5.2 Location of workplace, current and permanent residence

Respondents were all asked where they were living to get to their current place of work, whether this was their permanent address and, if not, where their permanent address was. Table 5.2 presents results showing:

- the percentage of workers whose **permanent** residence is in the same nation/region as their current work
- the percentage of workers currently living in the same nation/region while as their current work.

In each instance the corresponding percentages resident in different regions are shown to the left and the percentages resident in neighbouring regions to the right. The results from the 2004 survey are also included for comparison.

		Regio	n of perm	anent resi	dence			Re	gion of cu	rrent reside	ence	
Region of establishment		different /region		n same /region	neight	rom ouring regions		different /region		n same /region	neighb	rom ouring regions
	2007	2004	2007	2004	2007	2004	2007	2004	2007	2004	2007	2004
Northern Ireland	1	0.5	99	99.5	-	-	0.5	0 .5	99.5	99.5	-	-
Scotland	8	2	92	98	4	1	1	1	99	99	-	1
North East	9	5	91	95	6	4	8	4	92	96	5	3
West Midlands	13	11	87	89	10	10	7	10	93	90	7	9
Wales	13	10	87	90	7	5	12	8	88	92	7	4
Yorkshire and Humber	16	12	84	88	15	10	12	8	88	92	11	8
East of England	20	32	80	68	17	27	18	30	82	70	15	28
North West	12	19	82	81	15	17	18	13	82	87	15	12
South West	22	13	78	87	13	8	17	8	83	92	11	5
East Midlands	23	25	77	75	20	18	22	20	78	80	20	16
London	32	43	68	57	30	25	30	29	70	71	30	26
South East	32	27	68	73	24	23	31	21	69	79	25	21

It is evident that the majority of construction workers across all regions/areas have residences (both permanent and current) in the same nation/region as their work. The likelihood varies somewhat in that sites in Northern Ireland, Scotland and the North East (i.e. the most peripheral parts of the UK) are most likely to draw workers from residences in the same nation/region, in each case over nine in ten workers in these regions have their permanent address in that nation/region.

Sites in London and the South East are least likely to draw workers from the same region, only 68% of workers on sites in these regions have a permanent address in that region. A third of workers (32%) on sites in London and the South East have a permanent residence outside the region they work in. However the majority reside in neighbouring regions, so journeys may well be over short distances only, and reflect more general commuting patterns across regional boundaries.

Table 5.3 shows the percentage of construction workers working outside the nation/region where they have a permanent residence (left side of the table) and then the percentage working outside the nation/region where they are currently resident (again the results from the 2004 survey are shown for comparison). For example, three in ten (31%) of those with a permanent address in the West Midlands were working outside the region.

Region	Permanent 2007 %	Permanent 2004 %	Current 2007 %	Current 2004 %
West Midlands	31	27	29	22
London	30	35	32	30
East Midlands	28	43	25	38
East of England	28	29	27	27
South East	20	12	17	11
Yorkshire and Humber	18	22	13	15
North East	16	21	1	2
Wales	16	18	14	8
South West	15	27	11	21
North West	9	15	6	6
Northern Ireland	4	2	3	-
Scotland	1	8	*	2
All	18	21	15	16

Overall 18% of respondents are working outside the nation/region where they have their permanent address and 15% are working outside the nation/region of their current residence. This varied widely by nation/region, and not surprisingly the more geographically isolated areas of Scotland and Northern Ireland had very few workers who live there while working outside the geographical area. As would be expected, the proportions working outside their geographical area of current residence are smaller than those working outside the nation/region where they have their permanent residence (i.e. in most cases the reason for their being based at a temporary address is to be close to work, though clearly in some cases being close to work can still entail cross-region travel).

The areas with the greatest percentage of permanent and current residents working outside the regions are London and the West Midlands – with around three in ten residents working outside their respective regions. This is not surprising as both areas are central 'hubs' with strong links out of their areas to other parts of the country.

5.3 Temporary accommodation

While clearly not everyone based in temporary accommodation will necessarily be 'imported' workers (some may also have a permanent address within the nation/region), this group is a proxy for the highly mobile workforce and as such constitutes another measure of mobility.

Overall 7% of workers interviewed were based at a temporary address to get to work. It's not surprising to find that workers employed on a temporary basis were more likely to say they were living at a temporary address (12% of temporary workers versus 6% of permanent workers), perhaps linked with this finding is that workers who haven't been in the industry long were also more likely to be living at temporary addresses (18% of those with less than a year's experience versus 6% of those with five or more year experience). Nearly a quarter of workers (23%) interviewed in the Republic of Ireland reported living in temporary accommodation, this is particularly high and is likely to be due to the type of workers interviewed (Safe Pass attendees).

5.4 Proportion of career spent in current location

Workers were asked what proportion of the time they had worked in construction in the UK/ROI had been spent on sites in the nation/region where they were currently working. Just over half of workers (54%) said they'd worked on sites outside the current nation/region, emphasising a relatively high degree of mobility in the industry. Overall one in five (20%) said they had spent half or less of their time in construction working on sites in their current nation/region.

Table 5.4 Proportion of construction career spent in current nation/region						
	2007 %	2004 %	Work for a national employer %	Commute from temporary address %		
All of it	43	41	33	19		
Most of it	33	37	36	17		
Around half	9	10	12	13		
Small proportion	8	11	14	27		
Only this job	3	N/A	4	13		
Don't know	3	N/A	2	8		
Base: All respondents (2007: 3,877; 2004: 8,436)						

The patterns on mobility discussed already in this chapter, particularly on where workers say they were from, are repeated on this measure of mobility. Those currently working in Scotland and in Northern Ireland were particularly likely to have spent all their time in construction within the nation/region (68% and 64% respectively). By contrast, in London and the East Midlands, around a quarter had spent all their time on sites within the region (28% and 26% respectively).

Those working for national employers were somewhat more likely to be mobile and to have worked in other regions/areas, which no doubt reflects the fact that they will often be sent where the work is. And predictably, workers based at a temporary address have spent significant periods of their working careers outside the nation/region where they were based at the time of interview.

Mobility defined in these terms also varied by occupation. Labourers (52%), plant/machine operatives (48%) and bricklayers (47%) were most likely to have spent all their construction careers in their current nation/region. Whereas steel erectors/riggers (79%) were most likely to have spent time during their career on sites outside their current nation/region.

5.5 Travel to work distances

The mean average number of miles travelled to work (each way) was 24 miles (23 miles in 2004) and the median average was 18 miles (15 miles in 2004).

A quarter of workers (24%) reported travelling less than five miles with three in five (64%) travelling less than 25 miles. One in ten (10%) were travelling over fifty miles each way to work.

Table 5.5 shows the travel to work distances to workplaces by nation/region. Regions/areas are shown in descending order based on the proportion travelling less than five miles.

Table 5.5 Distance travelled by region of establishment							
Site nation/region	<5 miles %	<10 miles %	<25 miles %	>50 miles %	>100 miles %		
Republic of Ireland	50	59	82	5	1		
Scotland	35	49	80	3	-		
South West	33	45	64	11	1		
London	25	39	71	12	1		
West Midlands	25	47	76	5	1		
Yorkshire and Humber	23	38	62	8	1		
North West	20	35	62	8	1		
South East	16	24	52	15	1		
East Midlands	15	29	54	6	1		
East of England	15	23	46	24	3		
North East	14	27	66	7	2		
Northern Ireland	14	29	65	6	-		
Wales	10	19	55	9	1		
All	24	37	64	10	1		
Base: All respondents (200	7: 3,877; 2004: 8,43	36)	-	-	-		

Workers in the Republic of Ireland, Scotland and the South West were most likely to report that they travel five miles or less. The Republic of Ireland figure is partly explained by the respondent profile, a significant proportion were from Poland and reported living in temporary accommodation. Such workers tend to travel much shorter distances as they are based in temporary digs near to site. Just under two in five (37%) of all journeys to work are less than 10 miles in length. At a regional level there is a range from 59% of journeys being less than 10 miles in the Republic of Ireland, compared with only 19% in Wales.

One in ten workers reported travelling over 50 miles to work; such long journeys were most prevalent in the East of England and the South East.

There were wide variations in the average travel distance to work by occupation. The lowest average distance travelled was among labourers and plumbers (19 miles and 20 miles respectively). By contrast, banksmen and supervisors had much higher than average travel to work distances (37 miles and 32 miles respectively).

5.6 Reasons for working outside 'local' area

All those working at a site which they could not commute to on a daily basis from their permanent address (236 respondents) were asked what had made them decide to work on this site. The main reasons given were:

- employer sent me here (44%)
- construction work is better paid in this nation/region (22%)
- there are more jobs in this nation/region (15%)
- family reasons (11%).

5.7 Current site duration and likely location of future sites

Workers were asked how long they expect in total to work at the current site. Table 5.6 shows results among all workers (for 2007 and 2004).

Table 5.6 Total length of time expect to work at site						
	2007 %	2004 %				
<1 month	11	13				
1–3 months	20	17				
>3 up to 6 months	16	17				
>6 months up to a year	17	18				
More than a year	20	9				
Don't know	17	25				
Base: All respondents (2007: 3,877; 2004: 8,436)						

From a training perspective, these figures clearly highlight the difficulty that the construction industry faces in providing site-based training. Only around two in five workers (37%)

expected be on site for more than six months and one in five (20%) expected their work on site to last over a year. A further 17% were uncertain as to how long they'd be on site for.

Looking at variation by occupation, predictably it tended to be trades whose work is undertaken at specific times in a project who expect the shortest duration on site: Electricians (62%), dry-liners (57%) and roofers (56%) were most likely to expect to be employed at the site for six months or less.

All workers were asked if they anticipated that their next job would allow them to commute from their permanent address on a daily basis. Eight in ten (81%) did, and 4% did not, leaving 15% saying they didn't know or that it depended, for example, on where they were sent by their employer.

6 Sub-sector and Sector Mobility

This chapter focuses on the issue of sub-sector mobility, i.e. the extent to which workers switch between different types of project and how this varies by type of worker. It will also look at the extent to which workers think they will leave the industry altogether.

6.1 Sub-sector mobility

All workers were asked whether they had spent significant parts of their construction career on any of the following types of project: new housing; housing repair and maintenance; commercial work such as shops, offices, pubs etc.; private industrial such as warehousing, land reclamation etc.; public non-housing such as schools, landscaping etc and infrastructure such as road, tunnel etc. Results are summarised in table 6.1⁵

Table 6.1 Type of projects spent significant periods of construction career on				
	2007 %			
New housing	73			
Public non-housing	44			
Commercial work	43			
Housing repair and maintenance	38			
Private industrial	33			
Infrastructure	21			
One type of project only	34			
Two types of project only	19			
Three types of project only	15			
Four types of project only	12			
Five types of project only	11			
Worked on all six types of project	6			
Base: All respondents (2007: 3,877; 2004: 8,436)				

Most workers (73%) had spent significant periods of their career working on new housing projects while only 38% had spent time working on housing repair, 33% on private industrial and 21% on infrastructure projects. The majority of workers had spent significant parts of their career across different types of project, only a third (34%) had worked within one type of subsector only.

⁵ Results are not directly comparable with 2004 on this measure as a different number and definition of types of projects was used in 2004.

Variations by occupation are shown in the table below ranked according to whether they have worked in five or six of the sub-sectors. It should be noted that respondents were not asked for the other sub-sectors worked in for significant periods while in their current occupation; hence the work in other sub-sectors could have been while in other roles.

Table 6.2 Working in other sub-sectors by occupation						
	Number of sectors worked in					
	1 %	2 %	3 %	4 %	5 or 6 %	
Manager	27	10	18	15	26	
Painter/Decorator	31	9	20	12	26	
Bricklayer	36	17	13	11	22	
Supervisor	23	23	16	14	22	
All	34	19	15	12	17	
Carpenter/Joiner	33	20	15	17	14	
Labourer/Operative	42	21	12	8	12	
Roofer	36	23	19	9	11	
Banksman/Banksperson	57	5	11	11	10	
Civil Engineering Operative	51	14	12	12	1	
Base: All respondents 3,877	·				-	

Managers and painters/decorators were most likely to work across five or six sub-sectors (26% respectively); however they were just as likely to say they had only worked in one sector. Banksmen and civil engineering operatives were most likely to say they had only worked in one sector (57% and 51% respectively) and were unlikely to have worked in five or six sectors (10% and 1%).

Results vary predictably by age and length of time in the industry. Just over half of 16–19 year olds (52%) for example, had worked in only one sub-sector, this falls to 41% among 20–24 year olds, and then stabilises at around one in three for each of the following bands: 25–44s, 45–59s and 60+.

6.2 Leaving the industry

A final measure of mobility is the anticipated outflow from the workforce i.e. those leaving the industry. The results for workers aged below 60 are shown in table 6.3.

	2007 %	2004 %	< 1 year in construction %	
Definitely will	44	45	29	
Very likely	32	32	25	
Quite I kely	10	12	15	
Quite unlikely	2	2	2	
Very unlikely	2	2	5	
Definitely will not	2	3	6	
Hope to be retired	2	N/A	1	
Don't know	6	3	16	

Six per cent of workers aged below 60 think it is unlikely they will be working in the industry in five years' time. With over three quarters saying it is definite (44%) or very likely (32%). These results are very similar to those from the 2004 survey and therefore present a relatively stable picture in terms of intent to stay working in the industry.

Predictably those new to the industry (with less than one year's experience) were more uncertain than average, 16% were unsure and a further 13% felt that they definitely wouldn't be working in construction in the next five years or that it was unlikely.

Labourers/general operatives (40%), and civil engineering operatives (35%) were less committed to stay than the average worker, still at least a third thought it definite they would continue in construction. This compares to managers (56%), supervisors (52%) and plumbers (49%) where around half said it was definite that they would still be working in construction in five year's time.