



Assessing workforce mobility and skills in UK engineering construction

The key findings



Profile of the workforce

- There is a broad spread of ages across the sample interviewed for the survey. One in six workers is under 25, while one in ten is over 55. Compared to workforces at non-engineering sites, the engineering construction industry has an older profile (see table 1).
- 73% of workers questioned said they were employed permanently, while 21% said they were working on a temporary basis (the remaining 6% worked on some other basis or were unsure). These figures are similar to the construction industry as a whole.
- The survey showed a broad spread in the demographics of the workforce. Female workers made up a very small proportion of the workforce, only 1% in fact.

TABLE 1

Demographic profile of the ECITB sample compared with the UK construction/engineering construction average

	Engineering Construction (642) %	Construction (7,794) %
AGE:		
Under 25	16	21
25-34	25	28
35-44	25	27
45-54	23	15
55+	10	9
ETHNICITY:		
White	98	97
Non-white	2	3
GENDER:		
Male	99	99
Female	1	1

Work status of the workforce

- The vast majority (83%) of engineering construction workers were employed directly by a company, a much higher proportion than construction workers as a whole (see table 2). One in eight (12%) engineering construction workers were self-employed and the remainder (4%) worked for an agency.
- Just over a third (36%) of engineering construction workers started their career working in a non-construction field.
- After starting work in construction/engineering construction, the majority (83%) worked continuously in the sector. A further 5% had also worked exclusively in the sector but had taken time out of work. This shows a high degree of loyalty to the sector, although one in ten workers had dipped in and out of the industry since their first job in engineering construction.
- The majority of workers (70%) have always worked in the same occupational area as their current job, which suggests people tend to stick with their chosen career path. Overall, 29% had switched roles at some point. Workers most likely to switch roles were plant/machine operators (53%) and those in technical positions, such as surveyors and maintenance technicians (41%).

THE SURVEY SHOWED A BROAD SPREAD IN THE DEMOGRAPHICS OF THE WORKFORCE.

TABLE 2

Table 2: Work status

	Construction		Engineering Construction			
	UK total (7,794)	ECITB total (642)	Years working in construction			
			< 1 (46)	1-2 (27)	2- 5 (56)	> 5 (513)
Base:						
	%	%	%	%	%	%
Employed by a company	55	83	61	62	79	87
Self employed	37	12	18	29	5	12
Work for an agency	7	4	20	-	16	1



Qualifications and skills

- Two-thirds (65%) of engineering construction workers had a skills card or certificate, as opposed to 57% of the construction workforce as a whole. This shows that engineering construction tends to adhere to more stringent work practices.
- 62% of engineering construction workers also held other formal qualifications, which is a much higher proportion than amongst construction site workers in general (49%).
- Age was not really an indicator of qualifications held - for instance, while under 25's were less likely to have a qualification, the over 55's were no more likely to have one than those aged 25 to 34. Years working in the industry was a better guide of who might hold qualifications:
 - 23% of those with less than one year's experience
 - 47% of those with 1 to 2 years' experience
 - 57% of those with 2 to 10 years' experience
 - 68% of those with over 10 years' experience
- Workers who were directly employed were more likely to have construction-related qualifications than the self-employed (64% v 54%).
- 11% of engineering construction workers were working towards a qualification. This is slightly fewer than construction workers in general (13%), but probably reflects the fact that they were more likely to already have a qualification.
- There are more people working towards a qualification amongst those under 25 (22%) as well as those new to the industry:

• Worked in construction for less than a year	21%
• Worked in construction 1-2 years (NB a relatively low base of 27 respondents)	33%
• Worked in the industry 2-10 years	15%
• Worked in the industry > 10 years	7%
- Most of those working towards a qualification already have one. In fact, those who don't but are studying represents just 1.5% of the workforce. (If skills cards and certificates are not included, then the total of those working towards a qualification who don't already have one rises to 3%.)
- One in five workers had supervisory or managerial duties where they worked. Only 54% had ever received any training to improve their managerial skills. This implies that a significant amount of supervision and management is being carried out by staff with no formal training.
- Most workers believe they have all the skills they need for their job. Only 13% see a need for more training or qualifications. Younger workers were more likely to believe they needed more training (28% of those who had been in the industry less than a year and 22% of those with 1-2 years' experience).
- Engineering construction workers tend to be more qualified than construction workers. 41% have at least level 3, compared to 28% at non-engineering sites. Around 1 in 6 have no qualification at all. This is highest among labourers and general operatives (40%). Nearly all scaffolders, pipe fitters and welders have some form of qualification.
- 18% said they wanted to change the kind of work they do, with 5% undecided. Almost three-quarters of these say they'll need further training to achieve this. That makes 13% of all engineering construction workers interviewed.
- The main reason people gave for wanting to change their work is pay (43%), while another 30% wanted more interesting work. A further 24% said they just wanted a change. Others were looking for less physical work (16%), more responsibility (12%) and more suitable hours or conditions (10%).
- Nearly half the workers expected to be on site for more than six months (45%), while 37% were unsure how long the duration on site would be. This would make on-site training difficult for some workers.

ENGINEERING CONSTRUCTION WORKERS TEND TO BE MORE QUALIFIED THAN CONSTRUCTION WORKERS.



Mobility

- Engineering construction workers were less likely to come from the regions where they were working (62% as opposed to 67% of workers on other construction sites).
- 23% of engineering construction workers were based at temporary addresses to get to work, compared to 7% among other construction workers.
- The engineering construction workforce is a mobile one. Only a third of engineering construction workers (35%) had spent all their career in the region where they were currently working. Therefore 65% have worked in various other regions across the UK. For a further 30%, half or less of their career had been spent in this region (as opposed to 20% of construction workers as a whole - see table 3).
- On average engineering construction workers travel 18 miles to work each way. Below the UK average, this figure probably illustrates the fact that many live in temporary accommodation. There are large variations around this figure, with 60% travelling less than 15 miles and 6% travelling over 50 miles.
- Another indication of mobility is the number of workers expecting to leave the industry. Nearly one in ten (9%) of those under 60 think it's unlikely they'll be working in the industry in 5 years' time. On the other hand, nearly three-quarters say it's definite or highly likely they'll stay in the industry (35% and 36% respectively). This shows a relatively stable situation, though of course external factors may affect the final picture.

TABLE 3

Proportion of construction career spent in current region		
	Engineering Construction (642) %	Construction (7,794) %
BASE: all		
All of it	35	41
Most of it	34	37
Around half	11	9
Small proportion	19	11

TABLE 4

Likelihood of working in construction in 5 years' time		
	Engineering Construction (611) %	Construction (7,678) %
BASE: all aged under 60		
Definitely will	35	44
Very likely	36	31
Quite likely	13	11
Quite unlikely	3	2
Very unlikely	3	2
Definitely will not	3	3
Don't know	5	3

NEARLY THREE QUARTERS OF ENGINEERING CONSTRUCTION WORKERS SAY ITS DEFINITE OR HIGHLY LIKELY THEY'LL STAY IN THE INDUSTRY.



Aims of the report

Until recently there has been little reliable data on qualification levels and occupational and geographic mobility within the engineering construction industry. To remedy this, Construction Skills (formerly CITB), the Engineering Construction Industry Training Board (ECITB) and the Department of Trade and Industry (DTI) asked IFF Research, with the assistance of Warwick University, to carry out a survey across the industry, looking particularly at the following:

- The qualification and skill levels across the workforce
- The extent to which regional workforces are made up of workers from other parts of the UK, and the resulting travel issues
- The occupations and qualifications of these mobile workers
- The extent to which workers switched between different occupations and the amount of training managers received to enhance their skills.

THIS BROCHURE REPORTS ON THE FINDINGS OF THE SURVEY UNDERTAKEN DURING 2004.



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