

# THE UK CONSTRUCTION INDUSTRY: A REVIEW OF BLACK COUNTRY SKILLS DEMAND

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The economic impact of the early 1990s recession on UK's constructors (employers) is still lingering, this is because, the industry has not recovered fully from its' loss of invaluable manpower during recession. Workforce is currently overstressed, there is high claimant rate – unemployment driven, skills gap amid overall peaking of construction output. This sub-regional trend is broadly reflected at both regional and national levels. This paper is aimed at identifying the demand for construction skills, education and training in the Black Country; to identify the future and current needs of employers and explore innovative ways of addressing the issues. The views of a representative sample of agencies and companies was surveyed; the survey tool – a semi structured questionnaire was administered via face-to-face interviews. The completed questionnaires were coded and analysed using Statistical Package for the Social Sciences. Workforce is aging, the expected dominance of SMEs is revealed; there is little or no training for Curtain Walling, Carpet, Hard and Soft Flooring including Tiles, Prefabrication and Cladding. 19% of contractors are concerned that they wouldn't be able to achieve business aims because of skills shortage; sub-regional skills shortage is real and will hamper regional and national competitiveness if not seriously addressed now.

Keywords: black country, demand, skills shortage.

## INTRODUCTION AND BACKGROUND

This paper is aimed at investigating the demand for construction and building services skills, education and training in the Black Country as well as exploring innovative ways of addressing the defined issues. In particular, the paper surveys the views of a representative sample of sub-regional agencies and companies selected from the construction and building services sector. This sample was drawn initially by a specially convened Project Steering Group, encompassing representatives from a wide range of agencies and companies across the sector, with additions being made on an iterative basis as opportunities and new contacts arose. This action research approach should comparably foster a holistic review of Black Country skills demand (Ejohwomu *et al.*, 2005a).

The survey tool was piloted via face-to-face interviews to ensure better understanding and full detailed responses. Though not representative of all construction related agencies / companies in the Black Country, the focused nature of those interviewed - as well as the manner in which this was done – largely ensures that the findings reported here provide an in-depth and highly indicative picture of the views held across the Black Country. Respondents were encouraged to elaborate upon their responses whenever possible, this being reflected in a number of direct quotations.

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The piloting of the survey tool in this way also provided the basis for ensuring its veracity and robustness in relation to future iterations, which adopt a larger scale postal / telephone approach (more appropriate for the more structured element of the survey). The questions encompassed the range of issues pertinent to the research, incorporating a number of specific sectors:

- questions relating to nature of businesses e.g. activities and personnel;
- questions relating to key challenges to their businesses;
- questions relating to issues of recruitment and training; and
- questions relating to future directions and issues.

The completed questionnaires were coded and analysed using the Statistical Package for the Social Sciences (Kvanli *et al.*, 2003). Narrative based responses were incorporated into a separate word document for the purpose of analysis. The remainder of the report is structured as follows: section 2 – looks at the ‘state’ of UK’s construction industry – disequilibrium in the supply and demand for construction of building services skills is traced to early recession; the peculiarities of the Black Country sub-region are conversed in section 3. Section 4 discusses and presents survey findings and a conclusion is arrived at in section 5 of the report.

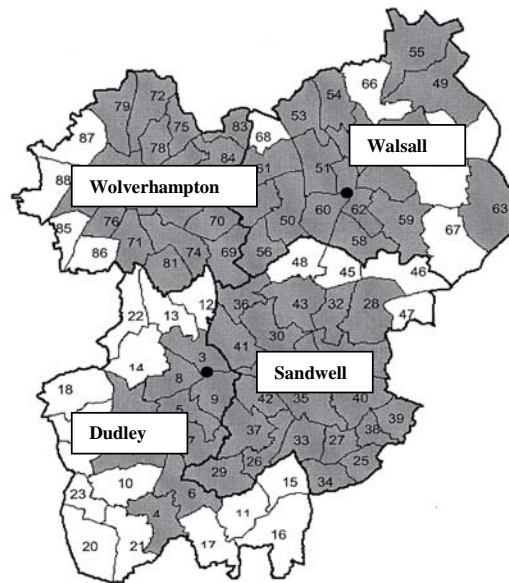
## **THE ‘STATE’ OF UK’S CONSTRUCTION INDUSTRY**

The construction and building services sector makes a significant contribution to the UK’s overall Gross Domestic Product (GDP). The industry provides a tenth of the UK’s GDP, employs 1.5 million and generates approximately £65 billion of work each year (Morton, 2002; Anumba *et al.*, 2004; Dti, 2005; Ejohwomu *et al.*, 2006). However, because growth rate in the sector has been outstanding, and a stronger growth rate is currently being predicted for 2007, after output fell in 2005 for the first time in 11 years (Construction News, 2006). The perception of the current industry forecast is that there will be severe shortage of skills decline in labour productivity and threat to global competitiveness – a gap which is rooted in early recessions (Churchill, 1998; Ejohwomu *et al.*, 2005b and 2006).

## **WHY BLACK COUNTRY?**

The incessant dissemination of aggregated information in the UK construction sector is believed to be partly responsible for the sectors lingering ‘state of flux’ – plethora of qualification, data paucity and skills mismatch. By empirically ascertaining national, regional and sub-regional variations in the supply of and demand for construction skills (ECOTEC, 2003); the peculiarity of any constituent part of the UK, if diagnosed, could serve as a basis for accepting and implementing contemporary philosophies e.g. ‘Accelerating Change’ and ‘Sustainable Skills’ (Latham 1994; Egan, 2004).

The Black Country, which is the laboratory for this study is a constituent part of the UK. It is a sub-region in West Midlands located to the north-east of Birmingham encompassing the four boroughs of Dudley, Sandwell, Walsall and Wolverhampton.



**Figure 3.1:** Map showing the four boroughs that constitute the Black Country

This sub-region dominated the manufacturing era but a decline in its' manufacturing activities, has in recent times led to some evidently peculiar sub-regional characteristics (CITB, 2003). Overall unemployment is higher at 5.2% than the regional average of 3.9% or the national average of 3.3%. The Institute of Employment Research prediction is that construction in the Black Country will decline at 0.6% per year compared with a national average of 0.1%. A relatively high proportion of the population is in families reliant on income support 32% for the Black Country as against 27% for the West Midlands region and 24% nationally. The prospects for the sub-region's future are currently limited by low rates of business start-ups with annual VAT registrations per 1000 population running at 83% of the national average, and relatively low levels of educational attainment - GCSE A<sup>+</sup> C passes at 87% of the national average, and working age population with at least NVQ level 4 qualifications at 69% of the national average (Ejohwomu *et al.*, 2005).

## FINDINGS AND DISCUSSIONS

Introduction: the main findings are outlined below and are collated under the chief themes attributed within the questionnaire structure. Using methods identified above the representative of a total of 43 companies were interviewed, these being selected upon their ability to provide the required level of detail in respect to questions asked (most commonly they were individuals who were charged with dealing with personnel issues within their company).

### Activity grouping of respondents

The 43 respondents represented a broad spread of businesses across the four boroughs in terms of both size and activities. Table 1 below summarizes the number of businesses within the sample engaged with specific activities. However, it is worth noting that some of the businesses undertake more than one area of construction and building services business activity.

Within the sample there was limited evidence of specialization, with majority engaged in at least two of the defined activities. Overall, the responses of interviewees

indicated that amongst the 43 respondents there was a relatively even spread in relation to the importance of each borough for respective businesses (e.g., as ‘most important’: 15 for Walsall; 13 for Wolverhampton; 13 for Sandwell; and 13 for Dudley), reflecting the overall geographic spread of the sample.

**Table 1:** Aggregated Totals of Activities

New built commercial	21
New built housing	20
Housing refurbishment	26
Civil engineering	11
Steel fabrication	7
Other	10

### Workforce characteristics in the black country

The characteristic nature of any workforce arguably remains a deterministic factor strategizing current and future supply and demand for manpower. Table 4.2 is a summary of the workforce characteristics in the Black Country.

**Table 2:** Workforce Characteristics Within Sample

Age Range	% Employed	% Skilled	% Ethnic Minority	% Male	% Female
18 and Below	7	1	3	7.5	7
Between 19 – 25}	11.5	7	2	10	20
Between 26 – 35}	17	11	24	16.5	20
Between 36 – 45}	15	14	20	14.5	21
Between 46 – 50}	14.5	15	25	14.5	14
Above 50}	35	52	26	37	18

From Table 2 above it is quite apparent that the existing workforce is aging, though considerably skilled. Majority of the skilled workforce are aged over 50yrs. 77% are skilled while only 11% of those aged between 26yrs – 35yrs are skilled. Inferring that the Black Country construction and building services industry might need to rely on either migrant skilled workforce or ‘informal’ labour market if it is to satisfy current and future demand. With only 7% of the workforce aged below 18, the immediate question would be how to replace the older workers with so few new entrants. This would need to be improved upon for the Black Country to become a sustainable community of construction and building services manpower. The average number of women considered to be working in the sector is reasonably higher than what is obtained nationally. This may reflect the inclusion of all workers including office based assistants while that of national figures are fully construction site based.

### Training protocols

The responses of respondents to questions relating to ‘training protocol’ have been summarized in percentage terms and in a descending hierarchy below (most respondents had someone responsible for training and development at director level).

- 58% of respondents had someone responsible for training at director level.
- 51% had someone responsible for training and development below director level.

- 47% had regular review process for evaluating the effectiveness of training and development, and a regular and formal appraisal system covering all staff.
- 40% of respondent had a formal training and development process that is linked to the business plan.
- 38% were equipped with a training and development plan.

Implementation of national directives (e.g. on the CSCS scheme) is seen by the respondents as being unduly bureaucratic deterring participation in such schemes. There is a clear need for local ownership of national directives for any effective employment. It is not yet evident from the literature as to what the exact benchmark is for measuring training or rating training protocol. But if the percentage aggregation above is a true reflection of Black Country construction and building services businesses, then the sub-region has significant scope for improving its construction skill through inculcation of appropriate training and development strategies.

### **Perception of importance of training in the construction sector**

Different skill sets require different training period. Also, this may be dependent on the level of skill possessed by the trainee. A perception of importance of training in construction and building services trades will likely influence the quality and quantity of Black Country training provision. Table 3 below is an aggregate representation of survey responses across all businesses.

Table 3 shows the aggregates responses across all business within the sample in relation to the importance attributed to the need for additional types of training. Overall, respondents have indicated that it is important to provide additional training for the trades highlighted below and the corresponding level of importance as assigned by respondents have been ranked in a descending order (most important being cladding system works, painting and decorating, and woodworks, joinery and carpentry): cladding system works, painting and decorating, and woodworks, joinery and carpentry; mechanical services and plumbing, and multi-skilling; heating and ventilation, prefabrication of building component works, construction and equipment operators, cement masons, concrete finishers, segmental pavers, brick masons; ground engineering, carpet, floor, and tile installers, structural reinforcing and curtain walling.

### **How difficult is skill acquisition in a trade?**

It is evident from literature that the construction and building services industry is being faced with the issue of skills mismatch and retention difficulties at level 1. With the very high retention difficulties, it becomes necessary to determine the relative levels of difficulties with regards to skill acquisition. Results are as illustrated in Table 4 below.

The following were deduced in relation to difficulty and easy of acquiring specific skills for the purpose of developing their businesses over the course of the next five years:

Multi-skilling: 35% of respondents said it was 'very difficult' acquiring skills in this area. 40% said 'difficult' while 5% of respondent said it was 'easy' to acquire.

Woodworks, joinery and carpentry: 29% said it was 'very difficult' acquiring this skill, 35% said difficult while 6% said it was 'easy' to acquire.

Modular building works: 13% of respondents said it was 'very difficult' to acquire as against 80% saying it was okay.

The overall perception of respondents was that it was generally ‘okay’ for them to acquire skills for the purpose of developing their business over the course of the next 5 years.

**Table 3:** Shows the Aggregate Responses Across all Businesses Within the Sample (\* No response)

	Very Little Importance	Little Importance	Important	Very Important	Extremely Important	Average
Multi-skilling	*	1	8	5	4	5
Brickmasons, blockmasons, and stonemasons	*	*	6	4	6	4
Cement masons, concrete finishers, segmental pavers, and terrazzo skilled works	*	*	6	3	4	4
Ground Engineering Works	*	1	8	1	3	3
Carpet, floor, and tile installers and finishers	*	1	8	2	2	3
Construction and equipment operators	*	1	8	4	2	4
Wood works, Joinery, and Carpentry	*	*	5	7	6	6
Painting and Decorating	*	*	10	4	4	6
Structural and reinforcing iron metal	*	*	7	1	2	3
Curtain Walling	*	*	7	1	2	3
Modular Building Works	*	*	7	1	3	3
Cladding System Works	*	*	9	*	3	6
Prefabrication of Building Components Works	*	*	9	1	2	4
Heating and Ventilation	*	*	5	2	6	4
Mechanical Services and Plumbing	*	*	7	5	5	5
Other	*	*	5	5	3	4

**Table 4:** Respondents Aggregate Score on Ease and Difficulty of Skill Acquisition (\* Indicates no response)

	Very Difficult	Difficult	OK	Easy	Very Easy
Multi-skilling	7	8	2	1	2
Brickmasons, blockmasons, and stonemasons	3	3	5	1	8
Cement masons, concrete finishers, segmental pavers, and terrazzo skilled works	2	5	6	1	*
Ground Engineering Works	*	4	7	1	*
Carpet, floor, and tile installers and finishers	*	2	8	1	*
Construction and equipment operators	*	2	10	1	*
Wood works, Joinery, and Carpentry	5	6	5	1	*
Painting and Decorating	1	4	6	1	*
Structural and reinforcing iron metal	*	1	6	*	*
Curtain Walling	*	1	5		*
Modular Building Works	1		7	*	*
Cladding System Works	*	2	5	1	*
Prefabrication of Building Components Works	1	2	5	*	*
Heating and Ventilation	3	4	6	1	*
Mechanical Services and Plumbing	4	4	4	1	*
Others (please specify)	4	1	2	*	*
Total	31	49	88	11	2

Although, the general consensus was that multi-skilling is the most difficult skill to acquire, closely followed by woodworks, joinery and carpentry, in-depth interviews with respondents however revealed that respondents did not experience much difficulty sourcing for specialist sub-contractors who were skilled in the trades listed below. This assertion can be attributed to the characteristic sub-contracting nature of the industry. But interviewees were of the opinion that there where little or no provision for the following skills (trades) by current training providers in the sub-region regardless of their significance to current and future developments: ground engineering; curtain walling; modular building walls; structural and reinforced iron metal; cladding system work.

### **Experiences of apprenticeship schemes**

Respondents were also asked to describe their general experiences of apprenticeship in more detail, with the following case studies emerging:

**Case Study 1:** ‘[it’s a] scheme [run] through JTL. They select, we interview and we employ. JTL pay us for college fees but it is an expensive scheme. CITB used a different scheme, the more you trained the more you got. We were happy with that. With JTL it’s a scheme which suits the industry but doesn’t necessarily suit the employer’.

**Case Study 2:** ‘[Our] apprentice goes to college at Walsall and I am pleased with him so far. I would not take on anyone else at the moment due to the size of the company. I am concerned that it costs me £135 per week and on that he goes to college for two days effectively’.

**Case Study 3:** ‘Following national press coverage regarding plumbers alleged salaries we have no problems with recruits. We do have problems with the quality of applicants and that placements are only made pro rata to employment’.

**Case Study 4:** ‘[we find it] difficult finding them meaningful work once their apprenticeship ends at Bradley Lane. So may have to work at other locations outside the Black Country’.

**Case Study 5:** ‘[it’s] difficult to find full spectrum of work to satisfy the NVQ scheme. Colleges do not really want to be involved because it’s too costly for them. On-site assessments can be difficult to do. Most colleges are full - no further training places. We need more financial support from Government to encourage employees to take on more apprentices’.

### **Meeting future challenges**

Respondents have identified the following to be what they thought was needed in order to meet future challenges: all types construction skills (multi-skilling); contract management; craft skills – need for more training – support for industry as a whole; electrical skills; building construction; every sort of tradesman, electricians, bricklayers and plasterers in particular; identifying where staffing can be resourced from; management courses.

### **Predicted changes in skills demand**

To enable Black Country construction and building services sector supply side (training providers) accommodate current and future technological changes there should be a fair way of understanding and predicting changes in skill needs. Table 5 is an aggregate response to future skills demand.

**Table 5:** Shows Aggregate Responses in % Terms in Relation to Future Trades

<b>Trade Area</b>	<b>Predicted % Change</b>
Trowel trades and plastering	24
Painting and decorating	22
Wood trades, carpentry and joinery	21
Mechanical services and plumbing	19
Others	16
Prefabrication and building	15
Construction and equipment operations	13
Curtain walling	12
Carpet floor and tile installers	12
Heating and ventilation	12
OCN construction	11
Ground engineering	9

In relation to area of specialty respondents were of the opinion (speculative judgment) that the number of employees currently working in trowel trades, plastering and brickwork would likely increase by 24% over the next 5yrs (see Table 4.5). If this were so then it would be normal to infer that there will be increased demand for this type of skill set and there would be need for training providers to take cognisance, for efficiency and optimization of scarce resources. As well as being able to match supply to demand, and with the ranking of the responses in a descending order both entrant trainees and recruitment agencies would be in a ‘fairly good’ position to make the future labour market a demand driven one: trowel trades and plastering; painting and decorating; wood trades, carpentry and joinery; mechanical services and plumbing; others; prefabrication and building; construction and equipment operations; heating and ventilation, curtain walling and carpet, floor and tile installers; OCN construction; ground engineering.

Judging by this ranking, it is apparent that a few ground engineering activities will be carried out in the area of road construction, excavation, tunnelling, etc. in the next 5 years. Hence, most of the on-going and perceived regeneration works would come under housing refurbishment and there will be little works in the areas of ground engineering. It is pertinent to note that the forecast has been limited to the next 5 years only. But because the projected changes might be completely different if the survey of this same sample is conducted in another 5 years some caution should be applied to this interpretation.

**A summary of skill challenges to the construction sector**

The following were identified by respondents as what they perceived to be the main challenges facing their businesses: dealing with demand with a lack of capacity and skilled / qualified labour; engaging with training bodies to ensure appropriate skills are being taught and to specialist level; uncertainty caused by need to keep up to date and adhere to new legislative requirements / frameworks in relation to health and safety and other labour laws, impinging upon ability to be competitive within market places; getting sites through the planning process; lack of skilled tradesmen. It is most significant that 19% of the respondents indicated the feeling that they would be unable to meet the challenges that they defined for themselves because of inadequate skill supply.



## **CONCLUSION**

Owing to the research method employed in the operationalization survey instruments and construct validity; the findings of this paper are as follows:

- the survey of construction and building services companies in the sub-region reveals the expected dominance of SMEs and an aged workforce;
- the SME construction and building services companies in the sub-region are non-specialist with most engaged in at least two areas of activities across all the boroughs of the sub-region fairly evenly;
- 58% of Black Country constructors have someone in charge of training at director level and that they consider the main challenges of their business to be how to get enough skilled operatives to do the job and engaging with training providers meaningfully to obtain these in sufficient quantities;
- 19% of contractors in the sub-region are concerned that they would not be able to achieve their business aims because of skills shortage;
- skills shortage in the Black Country is real and will hamper the sustainability of a construction community;
- overall, the ability to empirically quantify demand remains fundamental to the conceptualization and modelling of supply and demand issues and strategies – final phase of an on-going investigation into manpower modelling.

Although the findings of this report can be associated with that of semblance regions; this findings should serve as a benchmark for conceptualizing realistic labour market skill supply and demand issues and sustainable strategies.

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