

**SKILLS ISSUES IN THE CONSTRUCTION SECTOR
IN BOURNEMOUTH, DORSET, POOLE, AND
SOMERSET**

**A report to
LSC Bournemouth, Dorset and Poole**

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1. Introduction

1. BMG Research has been commissioned by LSC Bournemouth, Dorset and Poole to assist the LSC to develop its policies and programmes in respect of eight local sectors. These are....
 - Health
 - Engineering
 - Construction
 - Hospitality
 - Retail
 - Financial services
 - Childcare
 - Social care
2. These sectors are regarded as current priorities for the LSC on a number of grounds. They each employ significant numbers of people in Bournemouth, Dorset, Poole, and Somerset. Several of them have significant local focus (in the sense of employing above-UK average proportions of the workforce in the local area). They have an importance to local economies which extends beyond direct employment – generating wealth externally to the local area which is ‘imported’ into the local area for distribution as local incomes and wages, supporting or linking with other key activities, or providing fundamental services (in house building or social welfare, for example) which are essential underpinnings of an effective society and economy. There is also significant prima facie evidence to suggest that these sub-sectors face a substantial challenge to maintain the flow of labour and skills which they need to secure an optimal level of efficiency. This is not to say, of course, that other local sectors do not have these properties. But, with limited resource, the LSC’s intent is to seek progress in *some* sectors rather than dissipate resources too widely. Attention will turn to other areas of the economy in due course.
3. The essence of each study is broadly to undertake a desk review of available information on the sector which describes each local sector, recognises how the sector is developing and the challenges each sector faces, considers how this change process affects skills needs and supply, and, thus, identifies a set of ‘skills issues’ on which the LSC and its partners may focus with recommendations for appropriate action.
4. This report is the output of a study of the *construction sector*. Because of the recent re-configuration of LSC activity in the South West Region, the study, whilst originally commissioned by the local LSC for Bournemouth, Dorset and Poole, now reports and applies to the new LSC sub-region which combines *Bournemouth, Dorset, Poole and Somerset*. For convenience we will refer to this new operating area as ‘the BDPS area’ in the remainder of this report.
5. The report’s chapters consider:
 - The structure and character of sector delivery in the BDPS area.
 - Key skills and labour demand indicators.
 - Skills supply into the sector.

- Skills issues and recommendations.
6. The assistance of the ConstructionSkills SSC (particularly in the person of Roger Stone, the SSC's Regional Strategy Officer) in the preparation of this report is gratefully acknowledged. Report contents and conclusions remain, of course, the responsibility of the report's authors.

2. Construction sector employment in Bournemouth, Dorset, Poole, and Somerset

Defining the sector

7. In terms of Standard Industrial Classification (SIC), the construction sector has traditionally been defined for general purposes as including the categories of:
 - 45.1 Site preparation
 - 45.2 Building of complete constructions or parts thereof; civil engineering
 - 45.31 Installation of electrical wiring and fittings
 - 45.32 Insulation work activities
 - 45.33 Plumbing
 - 45.34 Other building installation
 - 45.4 Building completion
 - 45.5 Renting of construction or demolition equipment with operator
 - 74.2 Architectural and engineering activities and related technical consultancy
8. However, an historical division has existed within the sector between construction companies in general building and civil engineering which were within the CITB construction industry levy system and plumbing and electrical installation businesses which were not. This division has been formally perpetuated with the advent of the Sector Skills Councils (SSCs), such that categories 45.31 (electrical installation) and 45.33 (plumbing) have been defined as 'building services engineering' and have become the responsibility of the SummitSkills SSC whilst the remainder of the SIC groups above are the responsibility of ConstructionSkills, the SSC for 'construction'.
9. This partitioning of activity introduces some complexity into statistical analysis, since some statistics use the traditional definition of construction, whilst other statistics may sometimes use the SSC-territory definition. And the SSC sector definitions are concerned primarily with the definition of establishments or employers rather than of employees or occupations. Thus, a general building company (SIC 45.2) is in 'construction', whilst, say, an electrical contractor (45.31) or a plumbing business (45.33) is in 'building services engineering'. But, of course, many general building companies will employ electricians or plumbers.

Employment in the sector

10. This definitional issue causes some uncertainty in estimates of *employment* in the sector at sub-regional level. But there are other uncertainties. The industry's workforce is extremely *mobile* with workers frequently crossing sub-regional (and regional) boundaries in both directions to work on major contracts. And there is a high volume of *self-employment* in the sector. This has been estimated variously at between around 30% and 50% of the total sector workforce. However, self-employed workers (some of whom may be in the 'grey economy') are difficult to count with any great accuracy. There is additional complexity as to whether architects and technical engineers are included in the estimates.

11. The total number of workers is, therefore, *variously* estimated:

Table 1: Estimates of the construction sector workforce in Bournemouth, Dorset, Poole and Somerset

Source of estimate	Date	Estimate	Comment
Annual Business Inquiry, ONS	2004	25,473	This is the latest official estimate of people who are employed in the ConstructionSkills SSC sector in the BDPS area (ie. excluding plumbing and electrical installation). It excludes self-employed people (not counted by the ABI) and counts only people <i>employed</i> by businesses based in the BDPS area.
Working Futures II Forecasting model, operated by IER and Cambridge Econometrics on behalf of the LSC	2006 estimate	37,765	This model uses a blend of Annual Business Inquiry data and self-employed estimates as the base for a forecast for ConstructionSkills SSC sector employment. Adding in SummitSkills employment (estimate 8,412) would give total employment for a 'combined' sector of 46,177.
ConstructionSkills SSC employment model (with Experian)	2004 model 2006 model	33,396 (architects and technical engineers not considered) 47,790 (excluding architects and technical engineers) 54,920 (including architects and technical engineers)	The model <i>includes</i> occupations (plumbers and electricians) for which SummitSkills has responsibility when employed in plumbing and electrical companies. The model includes an estimate for self-employment. It will be noted that the underlying estimate (excluding architects and technical engineers) has risen very substantially between the 2004 and 2006 models, to a degree which cannot be explained by real growth in employment in the sector.

12. Overall, it seems likely that employment in the BDPS area in construction (broad definition, covering both ConstructionSkills and SummitSkills territories and including self-employment) is likely to be of around 50,000-52,000. This estimate may be broken down in broad terms as:

Table 2: Estimated distribution of broad construction sector employment in the BDPS area

Employed in ConstructionSkills building/civil engineering companies	c. 25,000
Employed in SummitSkills plumbing/electrical companies	c. 6,000
Self-employed in ConstructionSkills area of activity (bricklayers, carpenters, etc.)	c. 17,000
Self-employed in SummitSkills area of activity (plumbers, electricians)	c. 4,000

Note: Assumes ABI estimate of *employed* 'ConstructionSkills' employment of around 25,000 is broadly accurate; assumes Working Futures II (2005) broad estimate of around 6,000+ workers in plumbing/electrical installation is broadly accurate; assumes a 40% self-employment rate in both areas of activity (source: The South West Construction Industry, 2003-2007, ConstructionSkills) is broadly accurate.

13. However, the various statistical sources are used in the course of the report to make different points as the sources best allow.
14. Firstly, therefore, the Annual Business Inquiry data – on people *employed* in the ConstructionSkills sector area of activity (ie. excluding 'SummitSkills' workers and self-employed workers) – is examined.
15. A first table distributes this employment by sub-sectors, the two Unitary Authorities and the Counties of Dorset and Somerset:

Table 3: Distribution of construction sector employment in the BDPS area

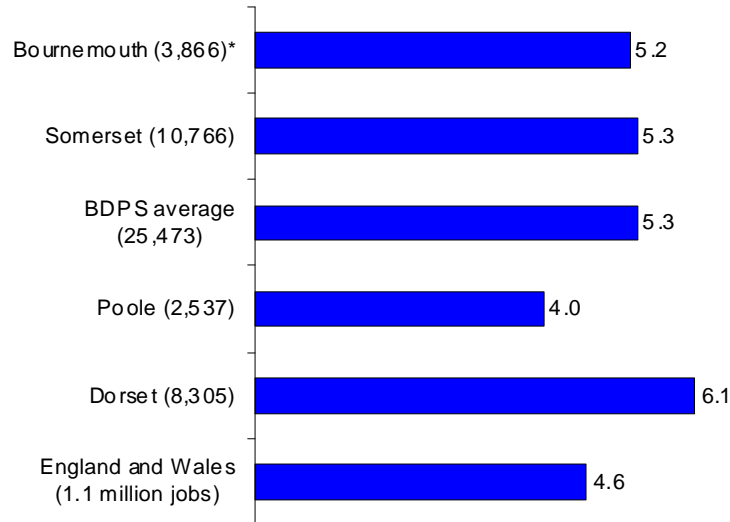
	Bournemouth	Dorset	Poole	Somerset	Total
Site preparation	10	84	27	117	238
General building and civil engineering	2,477	5,200	1,356	4,999	14,032
Completion of buildings	777	1,384	576	2,457	5,194
Renting of equipment with operator	2	151	31	115	299
Buildings-related consultancy	363	1,253	441	2,854	4,911
Insulation work	117	18	20	16	171
Other building activity	119	215	86	207	627
Total	3,866	8,305	2,537	10,766	25,473

Source: Annual Business Inquiry, 2004

16. It can be seen that the greater volume of employment is in general building, completion of buildings, and civil engineering companies, but also that there is significant employment in the various types of architectural, engineering, and technical consultancy related to the construction sector.
17. A geographical distribution of construction-sector employment in relation to County/UA populations in the BDPS area shows that construction sector

employment is slightly more frequent (in proportional terms) in the BDPS area than nationally:

Figure 1: Percentage of all employment in each County/Unitary Authority which is in the construction sector

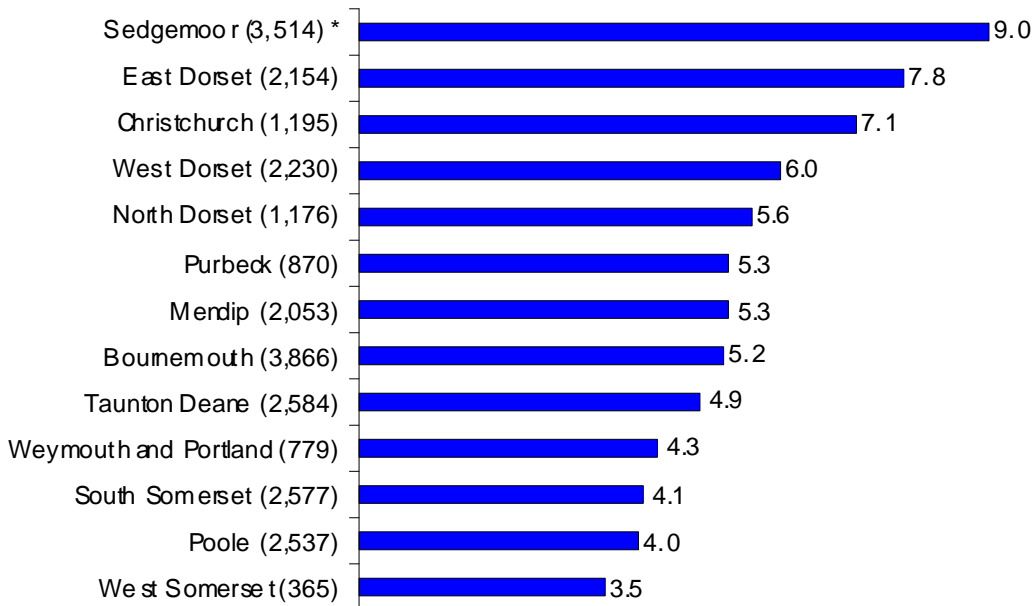


Source: ABI 2004

* Actual numbers of construction jobs

18. At a more detail spatial level, it can be seen that the percentage of construction jobs in local economies varies but within a reasonably narrow range (from 3.5% in West Somerset to 9.0% in Sedgemoor). However, it should be recalled that construction employment is quite mobile. As large contracts start and finish, local volumes and proportions of employment at any one point in time may vary:

Figure 2: Percentage of all employment in each District/Unitary Authority which is in the construction sector



Source: ABI 2004

* Actual numbers of construction jobs in brackets

19. The Annual Business Inquiry also estimates that there are 6,052 *establishments* in the construction sector (SSC definition) in the BDPS area. The average size of construction companies can, therefore, be seen to be very small – an average only of 4.2 employees per establishment. In total, only 361 construction employing establishments (around 6%) employ more than 10 people.
20. If *self-employment* is counted into the calculation, then ‘fragmentation’ is even more pronounced – three-quarters of the total workforce is self-employed or working for companies employing fewer than 50 people. This level of fragmentation in the construction sector can be seen both as a strength and a weakness. On the positive side, it is likely that it has the flexibility to deal with the highly variable workloads linked to changes in economic cycles. On the negative side, the extensive use of sub-contracts has brought contractual relationships to the fore and hindered team-working, supply chain integration and strategic management. In skill terms, it makes the sector extremely difficult to deal with from an interventionist point of view – very small and dispersed units of employment are usually quite difficult to attract into co-ordinated or strategic ventures.
21. And building-in self-employment and SummitSkills activity (as in Table 2) emphasises that, as a generality, construction employment is more significant to the local economy than simply the ConstructionSkills SSC employed workforce (of 25,473 people) would suggest. At 50,000 people, the wider construction sector accounts for around 1 in 10 of all employment (around 480,000 BDPS residents aged 16 to retirement age are in employment in all sectors).

Other employment characteristics

22. Women account for approximately 10% of the total employment in the industry, but only around 1%-2% of manual employment and 31% of non-manual employment. This makes the manual portion of the sector amongst the most gender imbalanced in the UK economy.
23. The proportion of ethnic minorities in construction employment has shown positive growth. However, the 3% working in construction (nationally) is still significantly lower than the 8% present in the total working population. For ethnic minorities, the representation at professional level is higher than that for manual workers.
24. The use of in-migrant labour to supplement the construction industry’s domestic workforce is also significant. A recent CITB-ConstructionSkills study, ‘Workforce Mobility and Skills in the UK Construction Sector’ supports this assumption. It notes that there is much anecdotal evidence of the increasing use of migrant workers in areas of the UK, but also comments that there is a general paucity of data within the official statistics. The data that does exist tends to represent legal migrant workers and not those who have entered the country illegally. However, a recent survey undertaken for ConstructionSkills (Employer Attitudes to Learning and Training, ConstructionSkills, 2005) indicates that 4% of employers had taken on non-UK passport holders in the last 12 months. 26% of companies employing non-UK citizens expected this proportion to grow.

Trend in employment

25. Nationally, the construction sector stabilised during the 1990s in the sense that the booms and busts of previous decades, leading to pronounced peaks and troughs in job numbers, were avoided. Employment rose steadily through the decade, growth which continued into this century. Between 1998 and 2004, excluding self-employment, construction sector employment in England

(ConstructionSkills definition) rose from 740,000 to 773,000, a rise of 4%-5% in the six year period (Annual Business Inquiry).

26. In the BDPS area, too, the latest figures from the Annual Business Inquiry show significant growth over the recent period:

Table 4: Change in construction sector employment (ConstructionSkills SSC definition), BDPS area 1998-2004

	Bournemouth	Dorset	Poole	Somerset	Total
1998	3,049	5,920	1,958	8,272	19,197
2001	2,728	7,807	2,770	6,303	19,608
2004	3,866	8,305	2,537	10,766	25,473

Source: Annual Business Inquiry, 1998, 2001 and 2004

27. Thus, overall, there was growth of around 33% between 1998 and 2004. Growth was strongest and most consistent in Dorset County but Bournemouth, Poole and Somerset also show higher figures for 2004 than for 1998. Some of this growth may be a little uncertain. The ABI is a sample survey and some of the apparent growth *may* be due to sampling variation. Further, it could result from self-employed workers (not counted by the ABI) moving into direct employment within businesses. Thus, the number of construction companies in the BDPS area (ABI 2004) rose from 6,025 in 1998 to 7,368 in 2004. In this period the average size of company (number of employees) rose from 3.9 to 4.2 employees – a trend which could be consistent with some movement from self-employment to employment. However, the growth in average size is not large and the data overall is generally consistent with a national picture of growth. It seems safe to assume that there has been a real and significant rise in the number of people working in the construction sector in the BDPS area in recent years.
28. The *national forecast* is that employment in the sector will continue to grow. In its Sector Skills Agreement, the ConstructionSkills SSC offers three scenarios for employment growth between 2004 and 2008. These are a low growth scenario of 1.3% annual growth, a high growth scenario of 3.3% annual growth, and the scenario which it considers most likely, of 2.3% annual growth.
29. A more recent *regional forecast* for the South West (CITB – ConstructionSkills Employment Model, 2006) is more cautious but still suggests that total construction sector employment will grow by 4.4% in the period 2006 to 2010 (an annual rate of growth of just over 1%).
30. *Locally*, the *forecast* for construction sector employment in the BDPS area (Working Futures II, 2004-2014, Institute of Employment Research, Sector Skills Development Agency, January 2006) is even more cautious. This forecast suggests *broad stability* in overall employment levels in the BDPS area to 2010, with only slight growth thereafter.

Summary: construction sector employment

31. Pinning down the construction sector in statistical terms is not straightforward. The division of broad construction sector employment between two Sector Skills Councils with interests in the construction industry makes for some complexity.

And the large element of self-employment in the sector makes it difficult to calculate exactly the total number of people who work in the sector. However, the best estimate is that around 50,000 people or 1 in 10 of the total workforce of the BDPS area work in construction as broadly defined, either on employed or self-employed terms.

32. Overall, construction sector employment/self-employment has grown by around 6%-8% at national level in the last 5 or 6 years. Some local figures (from the Annual Business Inquiry) suggest faster growth in the BDPS area for the ConstructionSkills SSC employed element of the workforce. These latter figures may exaggerate overall growth but it seems safe to say that, in employment terms at least, the sector has showed considerable buoyancy in recent years.
33. Few women are employed in the sector and those that are employed are mostly employed in clerical jobs. The proportion of people with ethnic minority backgrounds who work in the industry, though growing, remains well below their proportion in the workforce as a whole. Overall, the construction sector continues to draw very substantially on a white, male workforce. The use of migrant labour, mostly from Eastern Europe, has not been clearly identified though anecdote suggests that it is significant and growing.
34. Forecasts for the future are, of course, necessarily uncertain. The industry is highly sensitive to economic conditions and confidence amongst domestic and business consumers of construction sector outputs. The forecast at national level is for continued moderate growth in employment. Regionally and locally the forecasts are more modest and imply that overall employment change may not be great in the BDPS area.

3. Key sector drivers

Introduction

35. The previous chapter of this report observed that employment in the sector has risen in recent years and *may* rise moderately in future. However, employment levels are just one output of more fundamental drivers which determine the sector's progress.
36. The ConstructionSkills SSC has undertaken research (The Sector Skills Agreement for Construction, England, 2005-2010, ConstructionSkills, 2005) which suggests that there are five key drivers which will determine the future size, employment levels and skill needs of the industry. These are:
 - Key economic factors
 - Pressure to improve performance
 - Innovation and technology
 - Sustainability
 - Legislation
37. Taking each in turn:

The economy

38. This is the prime driver for change. Demand for good quality housing, hospitals, schools, commercial premises, roads and infrastructure drives the sector.
39. Between 1999 and 2005, the annual value of new orders in the South West region showed year-on-year growth in four years (1999, 2000, 2002, and 2004). Year-on-year stability was achieved in 2001 and 2005 with only 2003 showing decline. Overall, the annual value of new construction orders rose from £2.1 billion in 1999 to £3.5 billion in 2005. There was, however, considerable volatility within this overall pattern with none of the industry's markets (in housing, infrastructure, industrial and commercial buildings, and repair and maintenance) showing either consistent growth or consistent decline.
40. More importantly, however, the current *forecast* for future output in the South West (Experian, for ConstructionSkills SSC) is positive, with annual rises of between 1% and 3% predicted for each year from 2006 to 2010. The total value of regional output is expected to rise from £7.4 billion in 2006 to £7.9 billion in 2010.

Pressure to improve performance

41. The Egan Review, 'Rethinking Construction', concluded that whilst there are many high performing companies, the industry as a whole needed to improve its performance significantly in such areas as safety, productivity and customer satisfaction. The review criticised the industry's disconnected project process – with a lack of integration between design, implementation, specialist suppliers and component producers. Achieving value was also being hampered by a lack of client involvement and a higher education system focussed on single discipline professional qualifications.

42. Some major initiatives have been instigated to meet the Egan challenges and have been successful in a limited number of best practice companies. However, there is still much to do to achieve a broader and sustainable impact. It is anticipated that there will be major implications for managers in the supply chain, as they adapt their skills set to embrace the whole construction cycle and a partnering culture.
43. The industry's performance is measured with respect to headline Key Performance Indicators, developed by the DTI and Construction Excellence. Whilst the industry shows improvement over time in most key performance indicators, in absolute terms there is an apparent under-performance, especially when compared with other sectors. For example, figures for 2003 suggested that:
 - 48% of projects exceed their design budget.
 - 26% of projects exceed their construction budget.
 - 50% of projects exceed their overall budget.
44. Overall, the evidence suggests that, *in part*, the construction industry suffers from a 'low performance equilibrium'. Bodies like ConstructionSkills, Construction Excellence and the Strategic Forum for Construction are all calling for and working towards improvement.

Innovation and new technology

45. Innovation and technology drive skills change because they make new processes and products available to the sector. These require either a modification to existing skills or the creation of new skills.
46. Some parts of the sector are highly responsive to technological change. However, diffusion throughout the industry tends to be slow and the widespread uptake of new technologies and process innovations has been gradual, despite a compelling case for industry-wide change.
47. Much of the construction industry uses building techniques that are based on traditional methods and materials that have remained fundamentally unchanged. The need for change is recognised as that...
 - To improve the performance of the industry.
 - To integrate the construction industry supply chain.
 - To address external pressures on the workforce including skill shortages, demographics and legislation.
 - To introduce new management styles that deal with external pressures and accommodate the workforce of the future.
48. It is acknowledged that innovation, and technological change, is occurring in the industry with regard to the following:
 - Design and build methods
 - Construction products
 - Business management

Sustainability

49. The construction industry has a major impact on the environment; globally it accounts for:
- 10% of worldwide economic activity.
 - 40% of the world's mineral based materials.
 - 40% of energy use.
 - 17% of fresh water use.
50. The impact of the Government's UK Sustainable Development Strategy, the Government's role as a client, and other major initiatives are all driving the industry to build in a more sustainable way. These all need to be factored into future industry development. The Government's own drive for sustainable development is slowly taking hold in the minds of the consumer, the requirements of clients and the practices of some of the larger industry players.
51. Making sustainability a reality will require everyone in the supply chain to know what their role is and to have the skills and knowledge to do it. The sustainability agenda in itself is a driving force for technological change and innovation. The development of new products and processes now take into account environmental impact, durability and performance, in addition to the more established concerns of aesthetics, workability and cost.
52. In early 2004, CITB-ConstructionSkills commissioned research to identify key drivers, barriers, practice and change required for sustainable development to take a firm hold in construction. The research concluded that, though there are structural barriers to change, sustainability is enforced by legislation and the industry will be forced to act.

Legislation

53. The construction industry is under legislative pressure from all levels of governance: European, UK, regional and local. The policy priorities that are likely to have the most impact on the industry are broadly summarised as:
- The focus on improving public services;
 - The introduction of procurement frameworks and achieving best value;
 - Employment legislation, such as the working time directive and health and safety;
 - Procurement directives and laws relating to open tendering;
 - Sustainability and environmental impact.

Impacts on skills and training

54. Clearly, much of the construction industry's outputs, particularly amongst small companies developing domestic buildings and renovations, will remain dependent on traditional skills and practices but the pressures outlined above are real ones which will increasingly impinge on the industry. It is not easy to draw lines from all the developments which drive change in the sector through to their implications for workforce skills, training and development, but *some* of these can

be identified. The following table sets out some 'change factors' and links them to workforce consequences:

Table 5: Linkages between construction sector change and workforce skill and development needs

Traditional roles and characteristics	Drivers of change	New roles and characteristics	Implications for training and development
Strong employment focus on traditional craft skills, e.g. plastering, carpentry, bricklaying	Move towards repair and maintenance and more flexible working Increased competition and focus on quality	Requires multi-skilling at the lower levels Greater specialism at the higher levels of craft work	Training should cut across traditional craft demarcations in order to provide more general transferable skills It may be difficult to find trainers with adequate specialist knowledge
Labour intensive processes	Introduction of new materials and working practice, e.g. growth in pre-fabrication	Demand for curtain wallers, cladders, assembly and alignment skills, etc.	Training needs some focus on the newly emerging skill requirements
Often limited numeracy and literacy skills	Increased levels of IT, and machinery and other 'technical' process options	So called 'intelligent buildings', hand held power tools, CAD (computer aided design) – increased technical knowledge is required across all functions	There will be an increasing demand for mechanical and electrical engineers. Professionals should be equipped with relevant IT skills Lack of literacy and numeracy should be addressed
Much self-regulated or unregulated activity	Greater regulation in the industry	Knowledge of health and safety required; 'Skill Card' schemes	The former is becoming a statutory requirement for all employers. The latter needs wider accreditation of existing skills/OSAT
More vertically-integrated larger firms than now	Increase in sub-contracting – large projects often only have a small team from the main contractor or even a single representative	Increased demand for middle management skills for on-site supervisors	Need for time management, communication and project management

Summary: key sector drivers

55. This chapter has briefly summarised the key factors which drive employment and skills demand in the sector.
56. The most important of these is simply the level of activity in the wider economy which drives construction activity of particular types in particular locations. Important components of this include private investment in housing and commercial developments and public investment in transport infrastructure and public buildings. As Chapter 2 showed, the overall effect in recent years has been positive for the industry and employment in the industry rose steadily. The forecast is uncertain but, generally, employment growth is expected to be slower in the immediate future as economic growth forecasts moderate and as public expenditure comes to the end of a phase of fast growth.
57. Beyond the overarching economic factor, the industry recognises a need to improve quality and productivity, to embrace innovation in materials, technology and workforce organisation, to respond to public and government requirements

for the environmental sustainability of construction outputs, and to operate within an increasingly regulated environment.

58. The impacts of these changes are not immediately felt on the whole of the industry simultaneously or with equal force. Many traditional builders, particularly smaller ones, will continue to rely on traditional materials and fairly simple technologies. However, it is anticipated that, over time, the need for new skills, new combinations of skills, and new ways of managing skill inputs will percolate downwards through the industry even to the many small contractors.

4. Demand for labour and skills in Bournemouth, Dorset, Poole and Somerset

Introduction

59. Thus far, we have reflected on the size of the construction sector in the BDPS area, on the trend in employment, and on the major factors which drive both the overall level of employment and the changing nature of skills required in the industry.
60. In this chapter, the nature of labour and skills demand in the sub-region is considered in more detail.

Occupational structure

61. At the simplest level, 'labour demand' can be considered just as the necessity to fill the 50,000-52,000 or so jobs which are offered by the sector (in its wider definition) in the BDPS area. However, the nature of those jobs can be more clearly understood by reference to their occupational structure.
62. It is not possible to quantify the occupational structure for the BDPS area in *exact* terms, since no data source is available for this purpose. However, projecting the occupational structure of employment for the region on to the local workforce total produces an estimate of the local occupational structure which is not too far away from the actual one. This technique is used by Experian in generating an occupational structure (for the Construction Skills Network Model, 2006) and produces results as below:

Table 6: Estimated occupational structure in the BDPS area, 2006

	Number ⁽¹⁾	%
Managers	3,680	7.7
Clerical	4,390	9.2
Professionals	2,430	5.1
Technicians	720	1.5
Carpenters & Joiners	4,680	9.8
Bricklayers	3,330	7.0
Painters & Decorators	2,850	6.0
Plasterers	630	1.3
Roofers	880	1.9
Floorers	730	1.5
Glaziers	740	1.5
Other SB Operatives ⁽²⁾	680	1.4
Scaffolders	230	0.5
Plant Operatives	1,600	3.3
Plant Mechanics/Fitters	400	0.8
Steel Erectors/Structural	110	0.2
Other CE Operatives ⁽³⁾	380	0.8
General Operatives	4,410	9.2
Maintenance Workers	<20	-
Electricians	3,550	7.4
Plumbers	3,860	8.1
Non-construction Operatives	7,530	16.0
Total	47,790 ⁽⁴⁾	100.0

Sources: (1) ConstructionSkills Network Model, 2006

(2) Specialist building

(3) Civil engineering

(4) Includes estimate for self-employed

Notes: Numbers are rounded to the nearest ten

63. This data suggests that, as would be expected, the major demand in the sector is for a range of key *craft* occupations. Overall, skilled trades occupations account for around 21,500 jobs or 45% of all employment in the sector, with wood trades, bricklayers, electricians and plumbers being the largest occupations amongst these jobs.

Occupational change

64. It is anticipated that, whatever the scale of absolute change in the number of people employed in the sector, there will be some shift in the occupational balance within the sector.

65. Occupations which are expected to grow (Working Futures II, 2004-2014, Institute of Employment Research, Sector Skills Development Agency, January 2006) in number (and as a proportion of the workforce) over the next 5 years in the BDPS area (2006 to 2011) include:
- Managers (growth of +350 between 2006 and 2011)
 - Professionals (+250)
 - Craft trades (+700)
66. Occupations which are expected to decline in number over the same period include:
- Low-skilled staff (-550)
 - Administrative and clerical (-500)
67. These changes are *forecasts* and cannot, of course, be relied on as specific numbers. However, they reflect the general trend which is anticipated to favour higher skill levels in the industry at the expense of low skilled jobs, whilst the further penetration of IT into the sector is expected to reduce the number of routine administrative and clerical jobs.

Replacement demand

68. However, much the most significant factor generating demand for new skills and labour, much more significant than change in overall employment levels or in the balance of occupations in the sector, is the replacement of workers who leave the sector either to retire or to take up alternative work in other sectors. The retirement issue is an important one for an industry which has the highest proportion of workers aged 45 and over, and the lowest proportion of those aged 18 and under, of any major sector in the UK. The average age of skilled trades workers in the South West is estimated to be around 47 years.
69. The calculation of the effects of replacement demand at local level is not a precise process. It depends on quite complex, usually unknown factors including the age profile of different occupational groups and the availability and attractiveness of alternative employment.
70. However, if expected *regional* rates of replacement are projected on to local figures for employment, the resulting statistics are likely to give a reasonable impression of the broad scale of recruitment required to meet labour and skill needs in the immediate future.
71. Thus, the following table shows ConstructionSkills Network Model forecasts for total recruitment need, taking into account both expected changes in absolute volume of employment and the need to replace staff who leave, for the BDPS area:

Table 7: Projected recruitment need in the construction sector in the BDPS area 2006-2010 by occupation

	Average Annual Requirement (2006-2010)	Cumulative Requirement (2006-2010)
Managers	80	320
Clerical	160	640
Professionals	15	60
Technicians	30	120
Carpenters & Joiners	160	640
Bricklayers	130	520
Painters & Decorators	60	240
Plasterers	15	60
Roofers	3	120
Floorers	15	60
Glaziers	15	60
Other SB Operatives ⁽¹⁾	15	60
Scaffolders	15	60
Plant Operatives	50	200
Plant Mechanics/Fitters	30	120
Steel Erectors/Structural	30	120
Other CE Operatives ⁽²⁾	15	60
General Operatives	30	120
Maintenance Workers	15	60
Electricians	60	240
Plumbers	50	200
Non-construction Operatives	15	60
Total	1,035	4,140

Source: CITB-Construction Skills Employment Model, 2006

Notes: (1) Specialist Building.
(2) Civil Engineering. Numbers are rounded to the nearest ten

72. This analysis suggests that the industry in the BDPS area needs at least 1,000 new recruits each year in order to meet absolute changes in employment for different occupations and to fill gaps left by those who retire or leave.
73. This need is spread across a wide range of occupations but is numerically most significant in relation to the craft groups which employ most people – wood trades and bricklayers, for example. It should, however, also be recognised that the analysis somewhat simplifies the actual character of demand in so far as it analyses demand in terms of single industry trades. Many smaller firms will seek staff who are multi-skilled and able to offer a mix of craft skills to a reasonable level of proficiency.

Summary: demand for labour and skills

74. The level of demand for labour and skills is mainly generated not by changes in absolute employment numbers in the sector but by needs to replace people who leave the industry or retire.

75. Overall, it is estimated that around a thousand recruits per year will be needed by the industry in the BDPS area in the foreseeable future. These recruits will be spread across all occupational grades in the industry in approximate proportions to the numbers employed in each occupational category.

5. Supply of labour and skills

Introduction

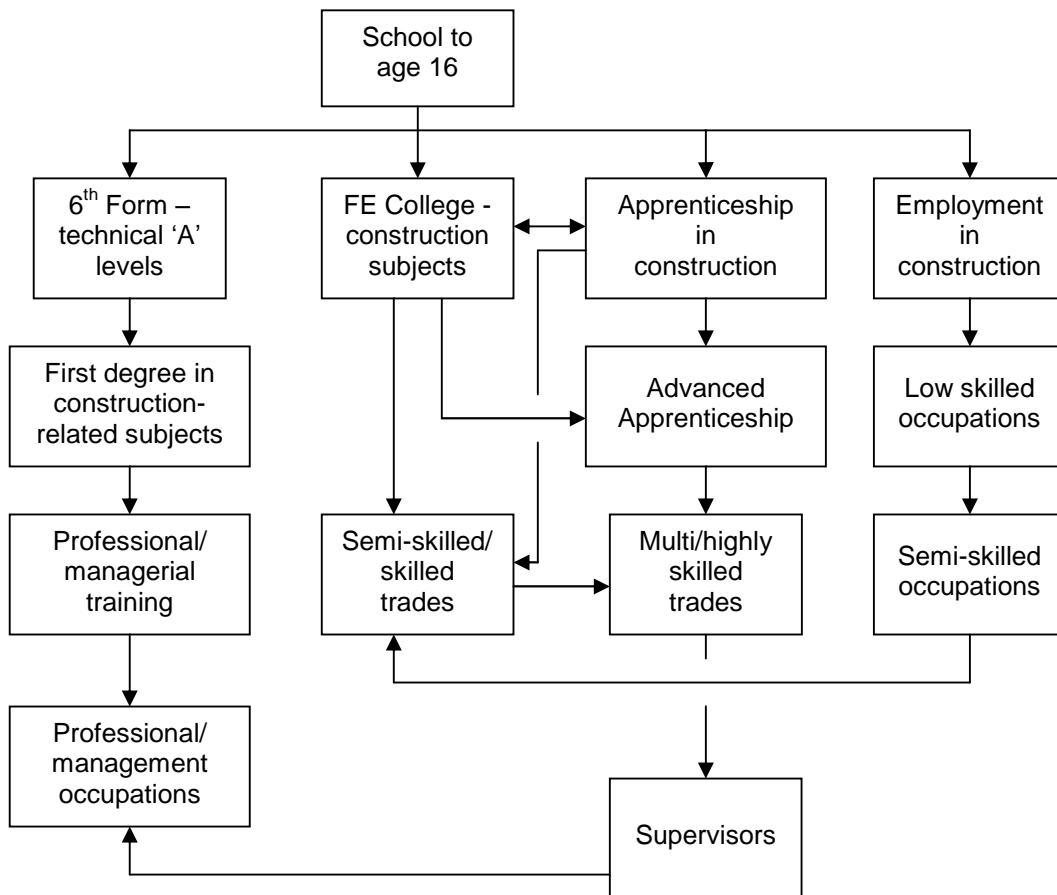
76. Previous sections of this report have considered labour and skills demand – the numbers of people with particular abilities – which the construction sector in the BDPS area needs, now and in the near future, to offer its services at an efficient level.
77. This chapter moves on to consider the ability of the local area to supply those requirements.

The national supply picture

78. The construction sector has two main sources of acquiring the labour and skills it needs.
- Younger entrants recruited via educational institutions or Apprenticeship and entrants, both younger and older, who enter the workforce whether formally qualified or not.
 - The training and qualification of existing workers.

New entrants

79. Routes to entry into the sector are quite varied and complex. However, the main routes of entry and progression can be summarised as:



80. The main points of this route map are:
- Entry to professional and managerial occupations is, as in other sectors, quickest and most certain via the Higher Education route. However, many proprietors of micro-businesses in the sector (and some larger ones) achieve 'managerial' status as owner/proprietors through the skilled trades route, not via Higher Education or management training.
 - Entry to employment via FE College construction courses or Apprenticeship is likely to lead to semi-skilled or skilled work with subsequent experience allowing the individual to develop full trade status.
 - This process is likely to be shortened if the individual moves from FE or Apprenticeship into an Advance Apprenticeship.
 - For those who enter the sector as an employee without training, the route to status above that of unskilled or low-skilled labourer is uncertain. It depends on chance and natural aptitude as to whether the individual progresses, through informal or formal training and experience, to higher levels of employment in the sector.
81. It is estimated, however, that, nationally, only around a quarter of all those who enter the sector do so through the educational/training branches of the chart above.
82. Employer views on new entrants were examined in the 2005 National Employer Skills Survey. The table below shows construction sector managers' views of the entrants they recruited in the year prior to the survey. It can be seen that construction sector managers had an overall view of 16 year old and 17/18 year old entrants which was more negative than average for *all* sectors. Across all three groups there was higher than average concern about entrants' lack of technical and job-specific skills (of course, reflecting the industry's dependence on such skills) and, with the two younger groups, concern about recruits' level of motivation and work-ethic.

Table 8: Recruitment of young labour market entrants in England

	All sectors %	Construction %
Recruited 16 year old school leavers	7	7
Recruited 17-18 year old school/College leavers	11	8
Recruited young new graduates	9	6
16 year olds were badly prepared for work	31	33
<i>Why?</i>		
Lack of motivation	13	19
Lack of technical or job-specific skills	10	15
Poor numeracy	11	17
17-18 year olds were badly prepared for work	24	28
<i>Why?</i>		
Lack of work experience	14	19
Poor work ethic	13	17
Lack of technical or job-specific skills	12	16
New graduates were badly prepared for work	12	12
<i>Why?</i>		
Lack of technical or job-specific skills	18	40
Lack of initiative	3	7

Source: NESS05

Further Education and Apprenticeship: national picture

83. In *national* terms, it is suggested (Trainee Numbers Survey 2004/2005, CITB-ConstructionSkills, 2005) that around 49,000-50,000 trainees start construction courses at Levels 1-3 and H/ND or H/NC each year (a number which has been stable in the recent period but which has risen from around 30,000 in 1997/98).
84. With respect to this training a number of observations can be made drawing on ConstructionSkills publications as the source:
 - There is concern about the volume of entrants to Level 1 courses. Approximately one-third of all new GB entrants are on Level 1 courses. The high uptake of Level 1 courses presents a particular concern given that training capacity is at a premium and the minimum industry requirement is Level 2.
 - The low demands placed on trainees by Level 1 vocational courses is a significant criticism that can be levelled at all FE courses but at construction training in particular. Level 1 VQs do not meet the minimum requirements that the construction industry expects of its new entrants. The ConstructionSkills SSC takes the view that it would be desirable to focus limited resources towards Level 2 and 3 courses, and reduce or abandon Level 1 VQs altogether.

- The proportion of female first year trainees is still very low, at just 3% (a figure unchanged between 2002 and 2005). There are many possible reasons for this, not least the traditional view of construction as being a male preserve. A report by the Equal Opportunities Commission in 2004 (Plugging Britain's skills gaps: challenging gender separation in training and work, EOC, 2004) found that the Apprenticeship system reinforces and perpetuates gender stereotypes, rather than being a catalyst for challenging occupational segregation.
 - The number of ethnic minority trainees starting construction courses in FE is more promising, accounting for 5% of total starts in 2003/04 (up from just 3% in 2001/02). The proportion is still much lower than that achieved in the HE sector. (Given the low proportion of ethnic minority people in the BDPS population, this may be a less significant issue than in areas of the country which have high ethnic minority populations.)
85. However, statistics on volumes of training are only put into context by considering the adequacy and sufficiency of those volumes. In respect of craft-level training, anecdotal evidence continues to suggest that the education and training system is struggling to meet the demand for training from the construction industry. In 2003, CITB undertook research (reported in ConstructionSkills Foresight Report 2003, ConstructionSkills, 2004) designed to measure the difference between the demand for college places and their availability in order to argue the case more strongly for increased funding for construction training. The research confirmed that shortage of capacity was already a serious problem for plumbing and related trades, and was also a significant and growing restraint on the amount of training in construction craft occupations.
86. Around 75% of colleges expected their construction craft courses to be oversubscribed in the 2003/04 academic year. Of these, nearly a quarter said that they would probably have to turn away between 10% and 20% of applicants due to a lack of facilities or a shortage of instructors. 12% of oversubscribed colleges said that they would have to turn away over half of all applicants for construction courses as a result of limited capacity.
87. Many colleges were able to respond to this increase in applicants by providing more training places but the research showed that this would not be sufficient to keep pace with the demand. Collectively, colleges reported that they would provide around 18% more places on construction courses in 2003/04 compared with the previous year. However, they expected applications to increase by around 22% for 2003/04, with the rise among those aged 19 years and over being 25%.
88. The problem was not simply one of lack of space. Many colleges reported difficulties in retaining staff, particularly when instructors' pay is low in comparison with rates in the industry. The problem was further compounded by the relative expense of running construction courses in comparison with other Further Education courses, particularly given the large numbers of adults wishing to retrain who do not receive Apprenticeship funding.
89. Nor was it only colleges that were struggling to find places for potential trainees. There was a lack of understanding amongst employers of the contribution they have to make to vocational training. In order to qualify for an NVQ, the students need to have gained work experience in the industry, which for many, means

finding an employer willing to offer them a work placement. Around three-quarters of colleges stated that some of their trainees would face difficulties in achieving this. The scale of the problem varied, but around two-thirds of colleges expected that 10% or more of their students would not find a work placement during their training, with around 15% of colleges saying that over half their students would fail in this.

90. There are also concerns about the quality of provision. Overall, inspection grades (Adult Learning Inspectorate) in construction subjects in 2002/03 (no more recent overall analysis is available) were noticeably lower than the average for all subject areas:

Table 9: Inspection grades awarded to FE courses by sector; England

	Grades 1 & 2	Grade 3	Grades 4 & 5
Average (rounded)	50%	40%	10%
Construction	32%	51%	17%

Source: Adult Learning Inspectorate

91. Thus, 50% of courses across all sectors were rated as being outstanding or good. Construction is at the bottom of a table for all subjects for both low attainment of grades 1-2 and high attainment of grades 4-5 (see summary point 2 in paragraph 134 for a comment on local inspection grades).
92. In addition, there are also problems relating to how construction courses prepare new entrants for the workplace. In response to the unwillingness of some employers, as above, to offer work-placements to Apprentices, colleges are increasingly offering Construction Certificates as opposed to full vocational qualification, but these lack the inclusion of work experience. Work experience was introduced into vocational qualifications in response to employer's criticisms of qualified but inexperienced new entrants. The ConstructionSkills SSC remains concerned, however, that construction training remains too strongly biased to 'academic' full-time courses undertaken off-site. The SSC would wish to see much more day-release provision delivered to workers/trainees who are simultaneously working on site. The SSC takes the view that a significant proportion of full-time trainees do not go onto enter the industry; whereas those who train whilst actually working in the industry are much more likely to make a long-term contribution.

Higher Education provision: national picture

93. In respect of HE provision, there was a decline in the number of starters on building courses from 10,630 in 1998/99 to 9,720 in 2002/03 (source, HESA). This latest figure was a 3% increase on the year before. However, the decline was not uniform across all years and courses. Building showed the steepest declines in student numbers, while over the same period, architecture showed consistent increases. More recent data on applications to universities and colleges suggests that the increase in under-graduate starts which was observed in 2002/03 has continued.
94. Higher Education generally is seen as successful in targeting minority groups for recruitment. Despite this, the proportion of women in Built Environment higher education is still low. Just under 25% of all Built Environment undergraduates are women, although the proportion varies from 40% on landscape design

courses to 12.5% for Building and Civil Engineering courses. The number of women starting Built Environment courses has remained more or less static over the four years for which figures are available (1998/99-2002/03). However, when set against the general decline in Built Environment under-graduates, this represents an increase in their proportion of total students.

95. The number of Black and Asian students on Built Environment courses is increasing, which, when set against a decline in overall numbers of students, represents a sharp increase in the proportion of ethnic minority students overall. Just under 13% of students are from an ethnic minority background, ranging from 17% on architectural courses to 5% on Landscape Design.

Workforce development: national picture

96. It was noted above that only around a quarter of recruits have entered the workforce via the educational/Apprenticeship routes. The sector continues to recruit many staff who have either never worked in the industry and enter without much or any relevant qualification, and other staff who may have worked for previous periods in the industry but have since left to try other forms of employment.
97. Given this situation it is important that construction sector employers give considerable attention to employee training and development.
98. However, the National Employer Skills Survey for 2005 ('NESS05') contains some fairly negative or, at best, ambivalent messages at national level (see later for local equivalents):

Table 10: Training indicators: the national construction sector, 2005

	Average: % all sectors	% Construction sector (ConstructionSkills SSC)
Has a business plan	55	43
Has a training plan	45	32
Has a training budget	33	22
Any of the above	66	55
None of staff have a formal job description	25	34
Formally assesses skill gaps	55	44
None of staff have an annual performance review	41	53
Have funded staff training in last 12 months	65	58
None of training supplied is for health and safety or induction	35	30
Average expenditure per training establishment	£3,265	£2,792
Training establishment used FE Colleges	28	32
Dissatisfied with FE College provision (users)	7	11
Don't use FE Colleges because courses not relevant (non-users)	42	48

Source: NESS05

99. This data shows that, compared with the all-economy average, the construction sector is less likely to have an infrastructure for training, a lower proportion of firms train, and the average spend per establishment is below average. (With respect to one of the 'infrastructure' indicators – possession of a training plan – it should be noted that the ConstructionSkills SSC has recently adopted a specific target to increase the number of sector businesses with such plans. Given progress towards this target, the proportion of sector firms with a training plan, currently 32%, will be expected to rise.) It can also be seen that those establishments which do train are slightly more likely to use the FE sector but are also more likely to express dissatisfaction with what they received. Also, those firms which trained staff but don't use FE to do so are also more likely than average to say that FE courses are not relevant to their needs.
100. Much of this may not be particularly significant. The lesser likelihood of having a training infrastructure and of offering training to staff is typical of small firms, and, as Chapter 2 showed, the sector is mostly made up of small firms. The particular concern is that the construction sector, compared with other 'small firm' sectors such as hospitality or retail, is much more dependent on a significant base of quite high-level craft skills.
101. The second major aspect of workforce development is the linked initiatives with regard to the Construction Skills Certification Scheme (CSCS) and On-site Assessment and Training (OSAT).
102. CSCS aims to register every competent construction employee within the UK. The scheme is designed to assure clients that operatives' skills have been validated against national standards and that they have the required knowledge to operate safely on site.
103. The card scheme has grown rapidly from 134,000 at the start of 2001 to 600,000 at the start of 2004 (CITB-ConstructionSkills, CSCS Statistics, 2004). This rapid growth in overall numbers is partly made up of affiliations to and amalgamations with other existing card schemes, such as the CPCS (Construction Plant Certification Scheme) and also includes the introduction of management cards under industry accreditation.
104. However, the original component of the Scheme has grown steadily from 1999, when there were 112,000 cardholders to 240,000 at the end of 2003. However, only 20% of the eligible workforce held CSCS cards at the end of 2003.
105. There is a view that upskilling and qualification of the workforce is likely to occur as a result of *worker-led* demand, as opposed to that created by employers, or clients. However, the results of the Workforce Mobility and Skills study of the Construction Sector in London and the South East suggest that this is unlikely. The study has been extended to the whole of the UK (Workforce Mobility and Skills in the UK Construction Sector, IFF with University of Warwick, CITB-ConstructionSkills, 2005) and has produced findings which support current strategy towards qualifying the workforce. Results of the study show that:
- 12% of workers are working towards a qualification but most of these already have at least one. Those without an existing qualification represent 4% of the overall workforce, leaving a large proportion unqualified.
 - Relatively few workers (12%) think they need more training to be able to do their current job. The figure was no higher (11%) among those with no qualifications or skill cards, who

might be deemed most in need of further training or qualifications.

- More than half (54%) of those who had been in the industry less than a year felt they had all the skills needed for their current job.

106. These findings suggest that increasing the qualification levels of the overall construction workforce by any significant degree will require initiatives targeting *supply chains* rather more than individuals. (Note: This is a principle objective of ConstructionSkills SSC's 'Constructive.....' series which is discussed in more detail in later sections of this report.)
107. To meet this challenge, CITB developed the On-Site Assessment and Training (OSAT) programme. The aim of OSAT is to assess workers for NVQs in the workplace, based on their experience and ability to do the job. OSAT aims to turn existing skills and experience into a nationally-recognised qualification.
108. Having attained qualifications through OSAT, workers will also be eligible for a CSCS card. The whole process is carried out whilst the workforce is on site, so that workers don't have to take time off to go to College. Typically, the whole process takes four or five visits over a period of less than six months. It is available for most occupations in construction. To May 2004, there had been 74,700 OSAT registrations, which resulted in 26,300 NVQ achievements. Forecasts put the potential size of the OSAT market at between about 250,000 and 500,000 people.

The local supply picture

109. Local labour and skills supply depends on broadly two factors. Firstly, the general availability of labour and, secondly, the scale and success of mechanisms to generate relevant skills.

Broad labour supply: local picture

110. Thus, a first issue concerns the availability of labour in general. Of course, the construction sector is in competition with other sectors for the supply of labour – particularly at lower levels and for generic skills which are readily transferable between sectors. The question is one of whether the local labour market is 'tight' (ie. fairly competitive for labour or skills) or not.
111. There are a number of indicators of 'tightness'.
112. Firstly, the working age employment rate in Dorset and Poole is higher than in England and the SW as a whole though Bournemouth has a lower rate than both. Since 2001/02, the rate has grown in Dorset, but fallen in Poole and in Bournemouth. The national rate has remained static, and the SW rate has fallen slightly:

Table 11: Employment rates in Bournemouth, Dorset and Poole

Percentage of working age population	Jun 01-May 02	Jun 04-May 05	% point change
Dorset	79.4	80.9	+1.5
Bournemouth	73.0	68.1	-4.9
Poole	80.3	77.2	-3.1
South West	78.9	78.8	-0.1
England	75.1	75.1	0

Source: ONS Quarterly Labour Force Survey 4th quarter average May 05

113. Thus, although there has been some slackening, local employment rates in Dorset and Poole (though not Bournemouth) remain higher than national levels – suggesting that the number of people available to enter the labour market is lesser than elsewhere.
114. Secondly, the latest annual unemployment rates are 3.9% for Bournemouth, 2.4% for Dorset and 2.3% for Poole (SW: 3.6%, Eng: 4.7%). Bournemouth’s 12-month average claimant count rate of 1.7% is higher than the South West average of 1.4%. The rates for Dorset (0.9%) and Poole (1.0%) are below. All are less than the England rate (2.4%). Again, therefore, labour market tightness is evident. Unemployment rates (though recently moving upwards) remain very low in historical terms and local unemployment may be reduced to the minimum of people in ‘transitional’ unemployment – between jobs – or who are difficult to employ because of low abilities and/or low motivation.
115. If these factors suggest that local labour supply is constricted, then data on *house price* data emphasises the difficulty for prospective applicants for lower paid/lower skilled occupations to move into the area.
116. Thus, in Q3 of 2005, the average house price in Poole (£254,959) was the highest (out of 15) among SW county and unitary authorities, and was 29.3% above the English average (£197,201). (SW: £202,396). Dorset had the third highest average house price in the region (£230,261), and Bournemouth the ninth highest (£196,367).
117. More particularly, lower quartile housing affordability ratios show that lower quartile house prices are approximately 9.1 times lower quartile resident earnings in Bournemouth, and 9.6 times in Poole (SW: 8.5, England 6.8). For Dorset districts, ratios range from 9.2 (Weymouth and Portland) to 11.9 (Christchurch). The latter is the highest lower quartile ratio of any local authority in the South West. (*House Prices: OPDM Mean House Prices Q3 2005 (provisional)/Affordability: HM Land Registry house prices Q1-Q2 2005/ONS Annual Survey of Hours and Earnings 2005.*)
118. Data on *Somerset* is less comprehensive but it can be noted that:
- Somerset’s economic activity rate (81.6) remains higher than that of the South West (80.8) or the UK (78.1).
 - Unemployment (claimant count) is lower in Somerset (1.4) than the South West average (1.7) or the UK average (2.6).

- House prices are below the average for England and Wales. However, because of relatively lower wages, their affordability is also less than average.

119. Overall, these statistics suggest that the labour market for 'generic' staff, particularly for those at lower skill levels, is competitive in the BDPS area. The construction sector will retain its capacity to recruit and retain such staff only so far as its wages and conditions of service retain their relative attractiveness. The statistics also suggest that migrant workers (from abroad or other parts of the UK) who seek to move into the local area to take up construction sector jobs are likely to face significant housing problems (except for those in higher level posts).

Workforce development mechanisms: local picture

120. The major contributions to local supply of skills derive from two sources: the supply of new entrants to the sector via Further Education and Work Based Learning; and the upskilling of the workforce by employers (sometimes using FE and WBL as the means to that end).

Work-based learning (WBL)

121. Statistics for WBL participation in the BDPS area show that 1083 Apprentices learned in construction in 2004/05. These were distributed by age and gender as:

Table 12: Age and gender of construction apprentices in the BDPS area, 2004/05

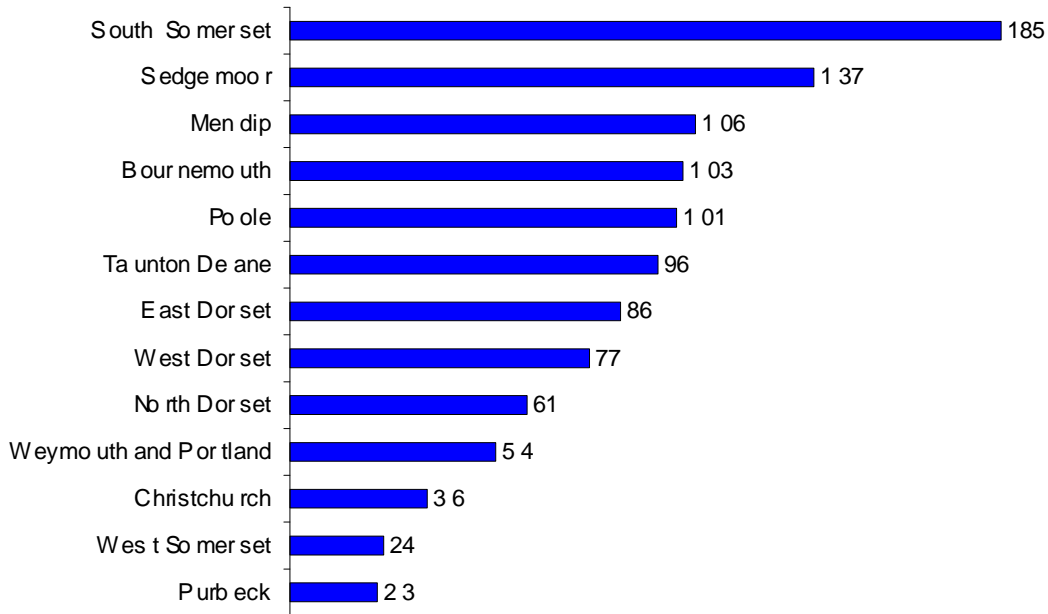
	F	M	Total
16-18 years	5	848	853
19-20 years	1	139	140
21-24 years	1	93	94
Total	7	1,080	1,087

Source: ILR 2004/05

122. It can be seen that the structure of apprenticeship is strongly biased to *male* placements.

123. Locationally, Apprentices were resident in all BDPS Districts/UAs with the greater numbers in South Somerset, Sedgemoor, Mendip, Bournemouth, and Poole. Broadly speaking, larger Districts/UAs have more construction Apprentices than smaller ones:

Figure 3: Numbers of construction Apprentices per District/UA, 2004/05



Source: ILR 2004/05

124. The majority of Apprenticeships (652 cases; 60%) were at Foundation level, Level 2, rather than at Advanced level, Level 3 (433; 40%).
125. 342 Apprentices *ended* a Level 2 Apprenticeship and 211 *ended* a Level 3 Apprenticeship in 2004/05. Success rates were moderate (whilst still being amongst the best in England). Statistics for the most recent year (2005/06) show that achievement rates have substantially improved:

Table 13: Success rates in construction Apprenticeship in the BDPS area, 2004/05 and 2005/06

	2004/05		2005/06	
	Some achievement	Full framework completion	Some achievement	Full framework completion
Advanced Apprenticeship	59%	37%	75%	68%
Apprenticeship	50%	35%	64%	51%

Source: ILR 2004/05 and 2005/06

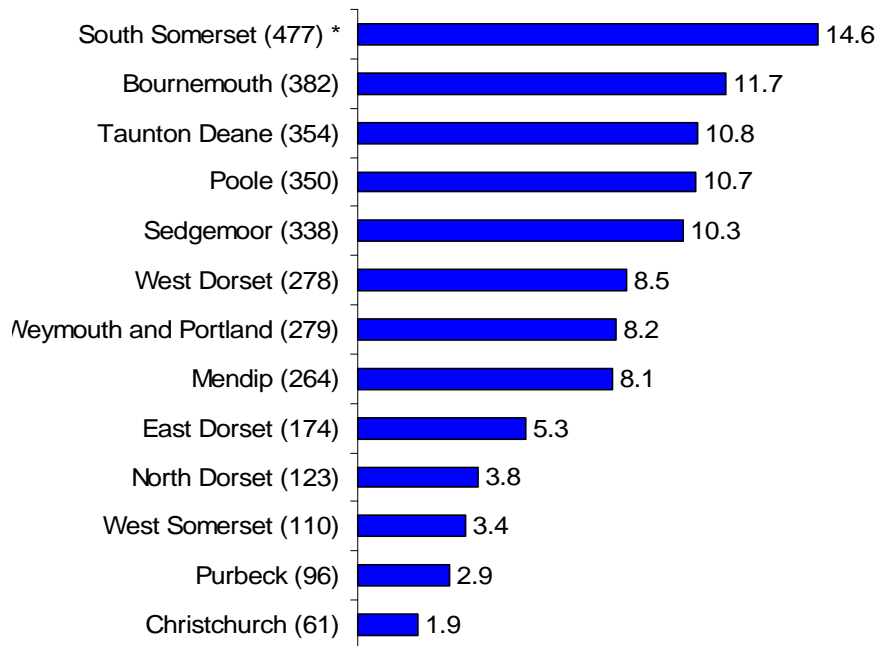
Further Education

126. In total, 3,277 learning aims in construction were pursued by people resident in the BDPS area in Further Education during 2004/05. Of these:
 - 673 (21%) were aged 16-18, 1,943 (79%) were aged 19 or over.

- 3,194 (98%) were male and 83 (2%) were female.
- 576 (18%) were studying at Level 1/entry level, 1,342 (41%) were studying at Level 2, 605 (19%) were studying at Level 3 and 33 (1%) were studying at Level 4.

127. Learning aims were pursued by residents of different Districts/UAs as:

Figure 4: Percentages of learning aims pursued by residents of different Districts/ UAs, 2004/05



* Actual numbers of construction jobs in brackets
Source: ILR 2004/05

128. The learning aims pursued by *16-18 year old learners* can be seen in the following table:

Table 14: Learning aims of 16-18 year old residents in the BDPS area in Further Education, 2004/05

	No.	%
BTEC National Diploma in Civil Engineering	2	0.3
BTEC National Diploma in Construction	52	7.7
Certificate in Basic Plumbing Studies	58	8.6
Certificate in Electrical Installation Theory and Practice Part Two	2	0.3
Certificate in Electrical Installation Theory Part Two	4	0.6
Certificate in Heating and Ventilation Installation	17	2.5
Certificate in Knowledge of Electrical Installation Engineering	2	0.3
CG 2360-05 Electrical Installation Part 1 (Theory)	19	2.8
CG 6055 Leadworkers Certificate	1	0.1
CG 6081 Basic Bricklaying Skills	2	0.3
CG 6091 Basic Painting and Decorating Skills	20	3
CG 6117 Construction Materials Distribution Certificate	1	0.1
Construction Award	93	13.8
Conversion from Industrial Masted (below 5 tonnes)	7	1
Conversion from Rough Terrain Masted	7	1
Foundation Construction Award	194	28.8
Intermediate Construction Award	1	0.1
NVQ in Decorative Occupations (Construction)	3	0.4
NVQ in Engineering Installation and Commissioning	1	0.1
NVQ in Fenestration Installation and Surveying	2	0.3
NVQ in Floor Covering (Construction)	1	0.1
NVQ in Mechanical Engineering Services - Plumbing	11	1.6
NVQ in Mechanical Engineering Services (Plumbing)	2	0.3
NVQ in Mechanical Engineering Services: Heating and Ventilating - Installation	6	0.9
NVQ in Roofing Occupations	1	0.1
NVQ in Stonemasonry	13	1.9
NVQ in Trowel Occupations (Construction)	49	7.3
NVQ in Wall and Floor Tiling	1	0.1
NVQ in Wood Occupations (Construction)	67	10
Total	673	100

Source: ILR 2004/05

129. It can be seen that learning aims pursued by 16-18 year old learners were weighted towards the Construction Awards which accounted for over 4 out of 10 learning aims.

Table 15: Learning aims of adult residents (19 years and above) in the BDPS area in Further Education, 2004/05

	No.	%
Core Domestic Gas Safety	114	4.4
Advanced Construction Award	6	0.2
Advanced Domestic/Light Commercial Oil Storage Tank Installation Course and Assessment	59	2.3
Assisted Private Study Course in Asphalt Technology (Foundation)	1	0
Assisted Private Study Course in Asphalt Technology (Intermediate)	1	0
Assisted Private Study Course in Asphalt Technology (Professional)	1	0
British Institute of Facilities Management Examination Part I	1	0
British Institute of Facilities Management Examination Part II	1	0
BTEC National Award in Construction	22	0.8
BTEC National Certificate in Building Services Engineering	4	0.2
BTEC National Certificate in Civil Engineering	11	0.4
BTEC National Certificate in Construction	12	0.5
BTEC National Diploma in Construction	11	0.4
Catering Appliance Group 3 (Natural Gas)	4	0.2
Catering F.D. Burners (Natural Gas)	4	0.2
Certificate in Basic Plumbing Studies	202	7.8
Certificate in Communications Cabling	2	0.1
Certificate in Dry Stone Walling	1	0
Certificate in Electrical Installation Theory and Practice Part Two	81	3.1
Certificate in Electrical Installation Theory Part One	23	0.9
Certificate in Electrical Installation Theory Part Two	58	2.2
Certificate in Energy Efficiency for Domestic Heating	10	0.4
Certificate in Heating and Ventilation Installation	50	1.9
Certificate in Knowledge of Electrical Installation Engineering	9	0.3
Certificate in Plumbing Studies	7	0.3
Certificate in Site Management	15	0.6
Certificate in Small Commercial Refrigeration and Air Conditioning Systems	11	0.4
CG 2360-05 Electrical Installation Part 1 (Theory)	72	2.8
CG 2360-07 Electrical Installation Part 2 (Theory)	3	0.1
CG 2391 Inspection Testing and Certification of Electrical Installation	229	8.8
CG 2400 Design Erection and Verification of Electrical Installations	1	0
CG 6032-01 Sanitary Accommodation Installation Maintenance and Design (Client Specific Scheme)	4	0.2
CG 6033-03 Highway Inspection and Monitoring (Client Specific Scheme)	6	0.2

CG 6055 Leadworkers Certificate	2	0.1
CG 6081 Basic Bricklaying Skills	57	2.2
CG 6101 Basic Plastering Skills	1	0
CG 6117 Construction Materials Distribution Certificate	1	0
CG 6156 Street Works Excavations and Reinstatement	14	0.5
Changeover Core Domestic Gas Safety Assessment	31	1.2
Changeover Domestic Appliances to Catering Appliances	1	0
Changeover Domestic Catering	1	0
Changeover Natural Gas to LPG Safety Permanent Dwellings	2	0.1
Commercial Laundry Appliances	1	0
Construction Award	58	2.2
Conversion from Industrial Masted (below 5 tonnes)	2	0.1
Core Domestic Gas Safety Assessment Criteria	1	0
Diploma in Site Management	5	0.2
Direct Fired Heating Appliances	6	0.2
Direct Membership Examination	3	0.1
Domestic Gas Central Heating Boilers and Circulators	5	0.2
Domestic Gas Cooking Appliances	129	5
Domestic Gas Ducted Air Heaters	2	0.1
Domestic Gas Fired Central Heating Boilers	79	3
Domestic Gas Fired Central Heating/Hot Water Boilers & Circulators not exceeding 70kw	2	0.1
Domestic Gas Fired Ducted Air Heaters	9	0.3
Domestic Gas Fires and Wall Heaters	49	1.9
Domestic Gas Instantaneous Water Heating Appliances	8	0.3
Domestic Gas Laundry Appliances	1	0
Domestic Gas Meters	2	0.1
Domestic Gas Range Cookers and Range Cooker/Boiler Appliances	4	0.2
Domestic Gas Water and Heater Appliances	30	1.2
Domestic Light/Commercial Oil Firing Commissioning and Servicing Short Course & Assessment	2	0.1
Domestic Open/Balanced and Fan Assisted Flued Gas Fires and Wall Heaters	1	0
Domestic/Light/Commercial Oil Firing System Installation Course Assessment with Energy Efficiency Module	55	2.1
Dump Truck (Articulated Chassis over 15 tonnes) (assessment and refresher) 1 machine	3	0.1
Excavator 180 above 5 tonnes (assessment and refresher) 1 machine - 1 day	2	0.1
Excavator 180 above 5 tonnes 2 machines - 5 day	1	0
Excavator 360 above 10 tonnes (Tracked) (assessment and refresher) 1 machine	2	0.1
Excavator 360 below 10 tonnes (Tracked) 1 machine - 2 day	2	0.1

Excavator 360 below 10 tonnes (Tracked) 2 machines - 5 day	1	0
First Fix Commercial Appliances	6	0.2
Fish and Chip Ranges (Natural Gas)	1	0
Forward Tipping Dumpers (Wheeled) (assessment and refresher) 2 machines	1	0
Forward Tipping Dumpers (Wheeled) 1 machine	6	0.2
Forward Tipping Dumpers (Wheeled) 2 machines	2	0.1
Foundation Construction Award	62	2.4
Gas Fired Hot Water Boiler	4	0.2
Higher Certificate in Managing Supported and Sheltered Housing	1	0
Indirect Fired Heating Appliances	9	0.3
Install Exchange Service Repair Breakdown and Commission Closed Flue Gas Fires	4	0.2
Intermediate Construction Award	2	0.1
Introduction to Plumbing	1	0
L P Diaphragm & RPD Meters	1	0
Limited Scope Operative Installation First Fix Commercial Pipe Work	2	0.1
Lorry Loader (Clamshell Bucket) (assessment only) 1 machine	1	0
LP Vessel Pipework of more than 0.1m cubed	2	0.1
MEWP (Boom - Self Propelled) (assessment and refresher) 2 machines	2	0.1
MEWP (Boom - Self Propelled) 1 machine	2	0.1
Mobile Lane Closures (12C)	1	0
National Certificate in Tenant Participation	1	0
NVQ in Accessing Operations and Rigging (Construction)	9	0.3
NVQ in Applied Waterproof Membranes	1	0
NVQ in Construction and Civil Engineering Services	81	3.1
NVQ in Construction and Civil Engineering Services (Road Building)	8	0.3
NVQ in Construction Site Management	8	0.3
NVQ in Construction Site Supervision	7	0.3
NVQ in Decorative Occupations (Construction)	32	1.2
NVQ in Domestic Natural Gas Installation and Maintenance (ACS)	6	0.2
NVQ in Engineering Installation and Commissioning	15	0.6
NVQ in Fenestration Installation and Surveying	76	2.9
NVQ in Floor Covering (Construction)	3	0.1
NVQ in Gas Services Installation	1	0
NVQ in Glazing Installation and Maintenance	2	0.1
NVQ in Interior Systems	5	0.2
NVQ in Mechanical Engineering Services - Heating and Ventilating Installation	8	0.3

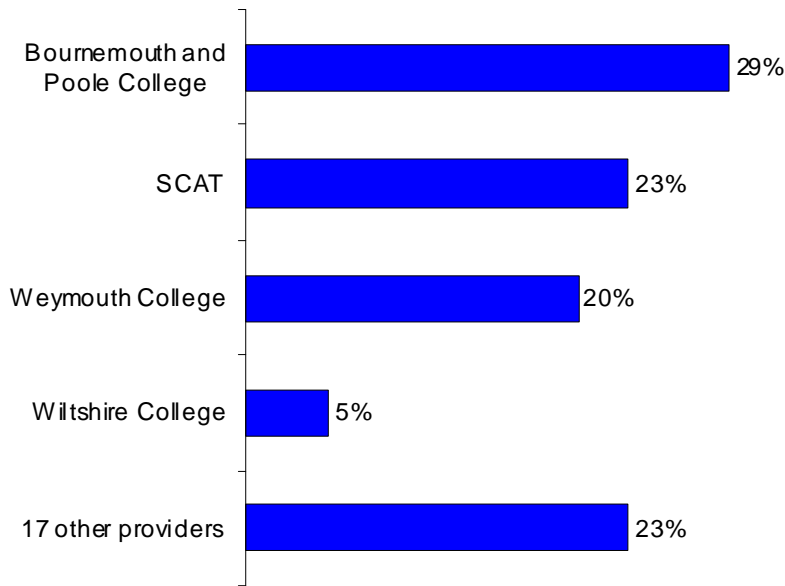
NVQ in Mechanical Engineering Services - Plumbing	11	0.4
NVQ in Mechanical Engineering Services - Plumbing (Domestic)	3	0.1
NVQ in Mechanical Engineering Services - Refrigeration and Air Conditioning	9	0.3
NVQ in Mechanical Engineering Services (Plumbing)	6	0.2
NVQ in Mechanical Engineering Services: Heating and Ventilating - Installation	45	1.7
NVQ in Plant Maintenance	1	0
NVQ in Plastering (Construction)	8	0.3
NVQ in Production of Glass Supporting Fabrications	4	0.2
NVQ in Roof Sheeting and Cladding	8	0.3
NVQ in Roof Slating and Tiling	5	0.2
NVQ in Stonemasonry	17	0.7
NVQ in Thatching (Construction)	3	0.1
NVQ in Trowel Occupations (Construction)	112	4.3
NVQ in Wood Machining (Construction)	8	0.3
NVQ in Wood Occupations (Construction)	166	6.4
Overhead Radiant Heaters	3	0.1
Pipe Installation less than 75 mbar (Natural Gas)	8	0.3
Pressure Jet Appliances	58	2.2
Sit-in All Terrain Vehicles	2	0.1
Site Management Safety Training Certificate	25	1
Test and Purge - UP/1	7	0.3
Test and Purge - UP/1A	12	0.5
Testing and Purging Commercial Installation Pipe Work Exceeding IM3 in Volume up to 7 Bar Operating Pressure NG and 2 Bar LPG	1	0
Unvented Domestic Hot Water Systems	3	0.1
Unvented Hot Water Storage Systems	1	0
Unvented Hot Water Storage Systems (Install/Commission/Service)	80	3.1
Vaporising Appliances	13	0.5
Water Regulations	1	0
Total	2604	100

Source: ILR 2004/05

130. It can be seen that construction learning aims for 19+ students were widely spread but relatively few, about a quarter, were concerned with NVQs in basic building trades.

131. The main providers of this learning for 16-18 year olds were:

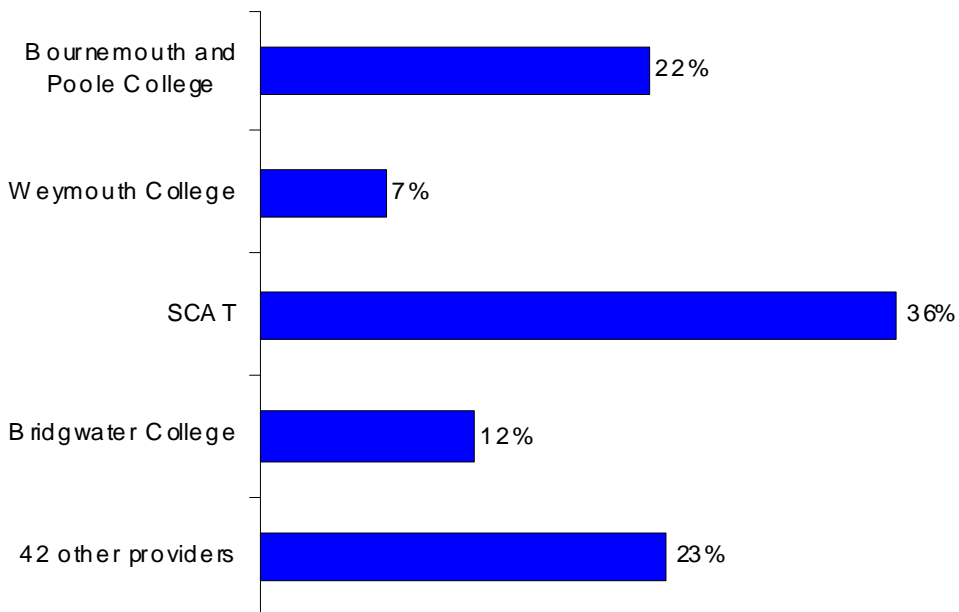
Figure 5: Main FE providers of construction training for 16-18 year olds, 2004/05



Source: ILR 2004/05

132. The main providers of construction learning for those aged 19 and over were:

Figure 6: Main FE providers of construction training for 19+ year olds, 2004/05



Source: ILR 2004/05

133. Amongst learning aims pursued by 16-18 year old students, 31% failed to gain any achievement from their study whilst 69% either had achieved their learning aim or were continuing study towards it. The equivalent figures in respect of learning aims pursued by those aged 19 and over were 14% and 86%.

Observations on local WBL/FE provision

134. A number of summary observations can be made on the analysis of WBL and FE participation in the BDPS area as set out in previous paragraphs:

- In respect of WBL, analysis shows that moderate (but comparatively good) local rates of achievement in 2004/05 rose significantly in 2005/06.
- With respect to FE provision a first concern may be that there is no formal measure of its quality. The most recent inspection reports for Bournemouth and Poole and Weymouth Colleges (2003 and 2004 respectively) did not include construction. However, concern may be somewhat mitigated by informal advice from the ConstructionSkills SSC that both Colleges, in their view, offer high-quality provision and are active in seeking to take construction training forward. The third largest FE provider, Somerset College of Arts and Technology (SCAT) was inspected in May 2003 and received a 'Good' (Grade 2) assessment in construction as did Bridgwater College for its construction provision when inspected in 2002.
- A second issue may be the significant proportion of training which is at entry level/Level 1 or is unclassified by level (short course provision) and that only a fifth of provision is at Level 3. Given that the industry is believed to require increasing proportions of higher-skilled recruits, there may be a need to move the profile of 'levels' upwards.
- Thirdly, from an examination of the study areas of 19+ students, it is noticeable that a significant proportion of the total is concerned with heating, ventilation, refrigeration and gas appliance installations and safety. Whilst these are, of course, essential subjects and may reflect both regulatory frameworks and market demand, it appears that below 60% of learning aims are in pursuit of the 'mainstream' or basic crafts of brickwork, plumbing, woodworking, electrical installation, and so on. For example, only 8 individuals were identified as pursuing a learning aim specifically in plastering, only 6 in roofing, and only one in floor and wall tiling. 'Demand' estimates, mainly related to the replacement needs in particular craft occupations, were set out in an earlier chapter. If these are anything like accurate, it does not seem that the pattern of learning is closely related to those needs.

Employer training: local picture

135. The second dimension of local supply of skills into the construction sector concerns the efforts of local employers to upskill the workforce. Data at local level is available from the National Employer Skills Survey. However, this data is not hugely reliable because it is based on modest samples of respondents. A regional analysis (South West Region) is, therefore, used as a proxy. The table below sets out a number of key indicators:

Table 16: Employer training indicators: construction sector in the BDPS area (SW Region data used as proxy), 2003 and 2005

	Construction sector in SW Region 2003 (%)	Construction sector in SW Region 2005 (%)	All-sector average for SW Region 2005 (%)
Has a business plan	38	47	55
Has a training plan	30	36	44
Has a training budget	24	24	32
Any of the above	N/A	58	67
None of staff have a formal job description	37	26	30
Formally assess skill gaps	35	55	46
None of staff have an annual performance review	50	54	42
Have funded staff training in last 12 months	52	53	65
None of training supplied is for health and safety or induction	N/A	15	22
Average expenditure per training establishment	N/A	£2,498	£2,661
Training establishments used FE Colleges	31	39	30
% of those dissatisfied with FE provision	N/A	21	8
Don't use FE Colleges because courses not relevant (non-user)	N/A	53	47

Source: NESS03 and NESS05

136. Broadly, this data suggests that the construction sector has made some progress in the last 2 years or so. Thus, more firms report that they undertake formal planning of business generally and training specifically, more firms provide formal job descriptions and more firms which train use FE Colleges to do so. (It may be noted that an Employer Training Pilot running in Devon and Cornwall in the period between the two surveys may have been partly responsible for such improvements.)
137. However, the actual proportion of firms supplying training has not increased significantly and, when the indicators are compared between the construction sector and the average for the whole economy, the construction sector appears to some disadvantage on a number of them – particularly on the key variable of the proportion of firms which actually supply staff training. It is also noticeable that, though more construction firms use FE provision than average, considerably more of them are dissatisfied with this provision.
138. Thus, although some positive change is apparent in the sector, it appears that construction sector managers have not yet accepted a need to train staff as frequently as in other sectors.
139. To some degree, as we noted earlier, this comparison is slightly artificial. Construction sector firms are more often small than is the case for the economy

as a whole, and small firms *generally*, not just in construction, are less likely to have infrastructures for training and to actually train staff. It is also the case that averages used as benchmarks for the various indicators are weighted upwards by high positive figures for the public sector. The private sector, of which construction is, of course, a part, is *in general* less likely to offer training.

140. Nonetheless, with significant pressure on skills supply and being unusually dependent on trade skills to deliver its outputs to time and quality, it is, perhaps, counterproductive for the industry and its customers that the proportion of employers willing to train staff has not advanced in recent years.

Summary: supply of labour and skills

141. A review of labour and skills supply at *national* level raises a number of key points:

- Only a quarter of recruits into the industry are estimated to enter through formal training and educational routes.
- The number of construction trainees (in FE/WBL) appears to have stabilised after some years in growth.
- Stabilisation appears to have occurred at least partially because of lack of capacity in FE institutions (space and staff) and because of the reluctance of employers to host Apprenticeships.
- The average inspection ratings of FE College construction courses are below the average ratings for all subjects.
- The number of students undertaking construction-related courses at HE level also appears to have stabilised (and may be increasing) after a period of decline.
- Employers in the construction sector remain less likely to have an infrastructure for training and to train staff than is average for employers in the economy as a whole.
- The Construction Skills Certification Scheme and On-Site Assessment and Training have advanced. The numbers of Skill Card holders and of accredited staff have risen markedly.

142. At *local* level:

- Construction has to compete for entrants and for people with generic skills in a fairly tight labour market. Though there may have been some slackening in recent months, unemployment remains low. House prices in the BDPS area are high in relation to lower income levels and the ability to attract in-migrant labour is restricted by this factor.
- Apprenticeship programmes had 1,087 participants in 2004/05. In that year, figures for completion suggested that not much more than half of these completed their full programme. However, completion and achievement rates have risen significantly in 2005/06.
- Bournemouth and Poole, Weymouth, and Bridgwater Colleges, together with the Somerset College of Arts and

Technology, are the main BDPS area providers of construction training and education.

- Around 3,277 'learning aims' in construction were pursued in FE in the most recent period (2004/05).
- The highest proportion of 'learning aims' was pursued at Level 2 but a fifth trained at entry level or Level 1 – a level which may make little contribution to rising skill needs in the sector.
- Examination of subjects of construction learning within the FE sector suggests that a considerable volume of learning is not directed to the basic or core trades on which recruitment pressure is anticipated. There appears to be little specific training in some trades (such as roofing, floor laying or plastering).
- The proportion of construction industry employers displaying some positive training-related behaviours (such as having training plans and giving staff formal job descriptions) appears to have increased but the actual proportion which train has not advanced significantly in the past two years or so.
- More construction firms which train used FE Colleges in 2005 than did so in 2003 (and the sector uses FE provision more than average). However, dissatisfaction with provision (expressed by a fifth of FE users) is also high.

143. Thus, an analysis of labour and skills supply at both national and local levels suggests that it may have some limitations. The next chapter of this report examines the extent to which supply of labour and skills meets demand.

6. The balance between demand and supply

144. The key question in respect of the demand and supply of skills is, basically, does skills supply currently meet the needs of the industry, and will it do so in future.
145. One method of assessing this would be to consider the demand for skills and set it against an account of supply. In essence, demand was identified in Chapter 4 when it was suggested that around 1000 recruits per year are needed in the BDPS area to maintain an adequate workforce. And in Chapter 5, the outputs of the training system in terms of numbers of trainees in Work Based Learning and of 'learning aims' in FE were described. However, any attempt to match these two analyses against each other in a statistical sense is not possible. The problem has several angles:
- Firstly, data on demand is unreliable. Forecasting models cannot predict the future with any great precision; and the smaller the area to which they are applied, the less precise they become. Projecting regional forecasts which may vary locally in unknown ways onto a sub-region (as the Experian/Construction Skills model does) cannot allow truly reliable estimates of local need, especially when the estimates are broken down into occupations.
 - More significantly, secondly, data on supply is hard to interpret. It is not known, for example, which trades WBL trainees are training in, nor what level of employability they reach, particularly amongst the substantial proportion of trainees who do not complete the full framework. FE data is also imprecise in that it deals with 'learning aims' rather than numbers of individuals (some of whom may pursue more than one aim) and again it is not clear how many trainees proceed to full qualification and are delivered into the workforce on an annual basis.
 - Thirdly, and perhaps of particular importance, the construction industry is a mobile one. Contractors move from site to site at regular and frequent intervals. Cross-boundary flows by workers and teams of workers are considerable but largely unknown. Large regional or national projects will draw workers out of the BDPS area whilst large projects in the area will draw them in. The idea of a local workforce for a local industry is less true of construction than for most other sectors.
 - Fourthly, the rate at which ex-workers in the industry return to it in times of labour shortage, attracted by rising wage levels, is not known, though the ConstructionSkills SSC believes that only a quarter of entrants enter through formal training/educational routes. It is possible that part of demand is met simply by workers who have moved into other work being attracted back on site.
 - Fifthly, we have noted that a significant proportion of employers in the sector train their staff (around 52% in the most recent estimate). Over a third of these use FE. What the remainder do is largely unknown. Some of the training may not be productivity-related at all. Health and Safety training, for example, and induction training, though essential, don't necessarily improve the overall level of skills employed in construction activity as such. But amongst the

remainder must be a significant amount of training which formally or informally improves worker performance. But the scale or nature of that improvement and its contribution to the overall skills equilibrium in the sector is not measurable.

- Sixthly, whilst people train towards and achieve qualifications, the quality of that training and the worth of the qualification is variable. We noted that a fifth of construction employers who used FE were dissatisfied with it. We also noted that no inspection data was available in respect of the two major FE construction training providers in the BDPS area. Simply, we do not know how much of the training which WBL/FE delivers is regarded as adequate by the industry but it seems unlikely that all of it is.

146. Generally, therefore, *inferences* can be drawn from an examination of demand and supply. Some of these have been set out in previous chapters and will be extended in the final chapter of this report. However, a formal statistical account of the skills equilibrium, one which says, for example, that the area will need x bricklayers per year and is generating y bricklayers per year, cannot reliably or meaningfully be computed.

147. In order to comment on the skills equilibrium, therefore, we need to rely on evidence of *disequilibrium* – that is, of skills shortage and skills gaps. The following table uses data from National Employer Skills Surveys to generate some broad indicators of such difficulties. South West regional data is used as a proxy for the BDPS area (to avoid the problem of small sample bases):

Table 17: Indicators of labour and skills deficiencies, South West Region, 2003 and 2005; percentages of establishments

	2003		2005	
	All sectors	Construction	All sectors	Construction
Have at least one vacancy	21	12	17	14
Have at least one vacancy which is hard-to-fill	10	8	7	8
Have a skill shortage vacancy	5	5	4	5
Have a skills gap	23	13	15	13

Source: NESS03 and NESS05

148. What the data suggests is that skills deficiencies in the construction sector have largely remained constant, whilst those in the broader economy have fallen significantly. In some respects, the construction sector has an apparent advantage – fewer firms have skill gaps and fewer have vacancies. However, as we have noted, the construction sector is largely comprised of very small firms which are intrinsically less likely to have vacancies and skill gaps simply because they have fewer staff. Even so, the level of firms with hard-to-fill and skill shortage vacancies is above the all-economy level, whereas in 2003 the level was lower. It seems that where some slowing of the economy has generally mitigated skills problems, it has not done so for the construction sector.

149. It is also apparent that the distribution of skill difficulties is markedly different for the construction sector:

Table 18: Indicators of skills difficulties; percentages of all difficulties associated with different occupational groups, South West Region, 2005

	% of vacancies		% of skill shortage vacancies		% of staff not fully proficient	
	All sectors	Construction	All sectors	Construction	All sectors	Construction
Managerial	5	2	4	2	11	20
Professional	7	22	9	15	8	7
Technical	16	8	13	11	3	6
Clerical	12	5	8	2	11	14
Skilled trades	10	44	26	63	9	34
Personal service staff	9	0	11	0	6	0
Sales staff	16	1	9	1	25	5
Operatives	11	4	13	7	7	1
Elementary staff	15	14	7	0	21	13
	100	100	100	100	100	100

Source: NESS05

150. Thus, much higher proportions of skills difficulty in the construction sector are associated with skilled trades occupations and, to a lesser degree, with professional staff. With skills shortage vacancies, nearly two-thirds are associated with skilled trades occupations. The survey also observed a significantly higher level of difficulty in obtaining recruits with the right motivations, work ethic, and reliability in the construction sector than did employers in other sectors (21% of 'skills' found difficult to obtain were put into this category by construction employers, compared to an average of 6% for all sectors).

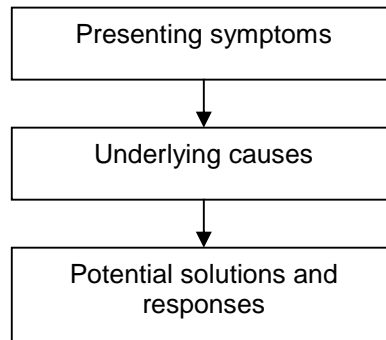
Summary: the balance between demand and supply

151. Generally, the construction sector does not have a level of skills deficiencies which is clearly distinguished from that of the general economy. What is apparent, however, is that:
- The level of skills deficiencies has not reduced in the recent period, whereas the economy on average has seen marked reductions.
 - The sector's skills deficiencies are particularly concentrated, with intermediate skilled trades occupations accounting for a large proportion of difficulties.

7. Skills issues

Introduction

152. Previous chapters have analysed skills demand and supply in the construction sector with as much currency and specificity to the BDPS area as sometimes limited statistics allow. That analysis allows a range of issues to emerge for consideration by the LSC and its partners.
153. Our perception of 'skills issues' is that they can be considered within a framework as:



Presenting symptoms

154. The 'presenting symptoms' are quite simple. They are those of skill shortages and skill gaps in the sector. These vary in intensity in particular localities and as particular major projects arise and then are completed. However, on balance, survey evidence suggests that they have remained fairly stable in the last two or three years (as measured by the National Employer Skills Surveys of 2003 and 2005) though skills shortage and gaps declined in the economy as a whole over the same period. There is a particular concern that these difficulties will surface with some intensity as construction projects related to Olympic sailing facilities at Weymouth come on stream.
155. However, these skill problems are essentially a manifestation of underlying failures in the historic ability of the sector to recruit or develop skills in sufficient volumes or to the required levels.

Underlying causes

156. Research and analysis suggests that the underlying causes of the situation are as set out below:
- *Outflow of workers.* The sector's workforce is, on average, older than other sector workforces. Much work in the sector is of an arduous and physical nature. The propensity for loss of staff through natural or premature retirement is high, therefore.
 - *A narrow recruitment base.* The sector has not attracted female staff into the sector's major occupational area and has not attracted a due proportion of ethnic minority recruits other than into some higher level professional jobs.
 - *Competitive labour market.* Employment opportunities have been strong in recent years. Other occupations appear

more attractive to young people. The industry has a tradition of being the last resort for the less able and committed. This factor may have changed as wage rates have improved and the '£60,000 plumber' has had press prominence. However, this change may not be strong or sustained. Recent survey evidence in 2005 (from the National Employer Skills Survey, as reported in Table 8) suggests that construction sector employers may still be less likely to see their young recruits as committed and with a strong work ethic than are employers on average.

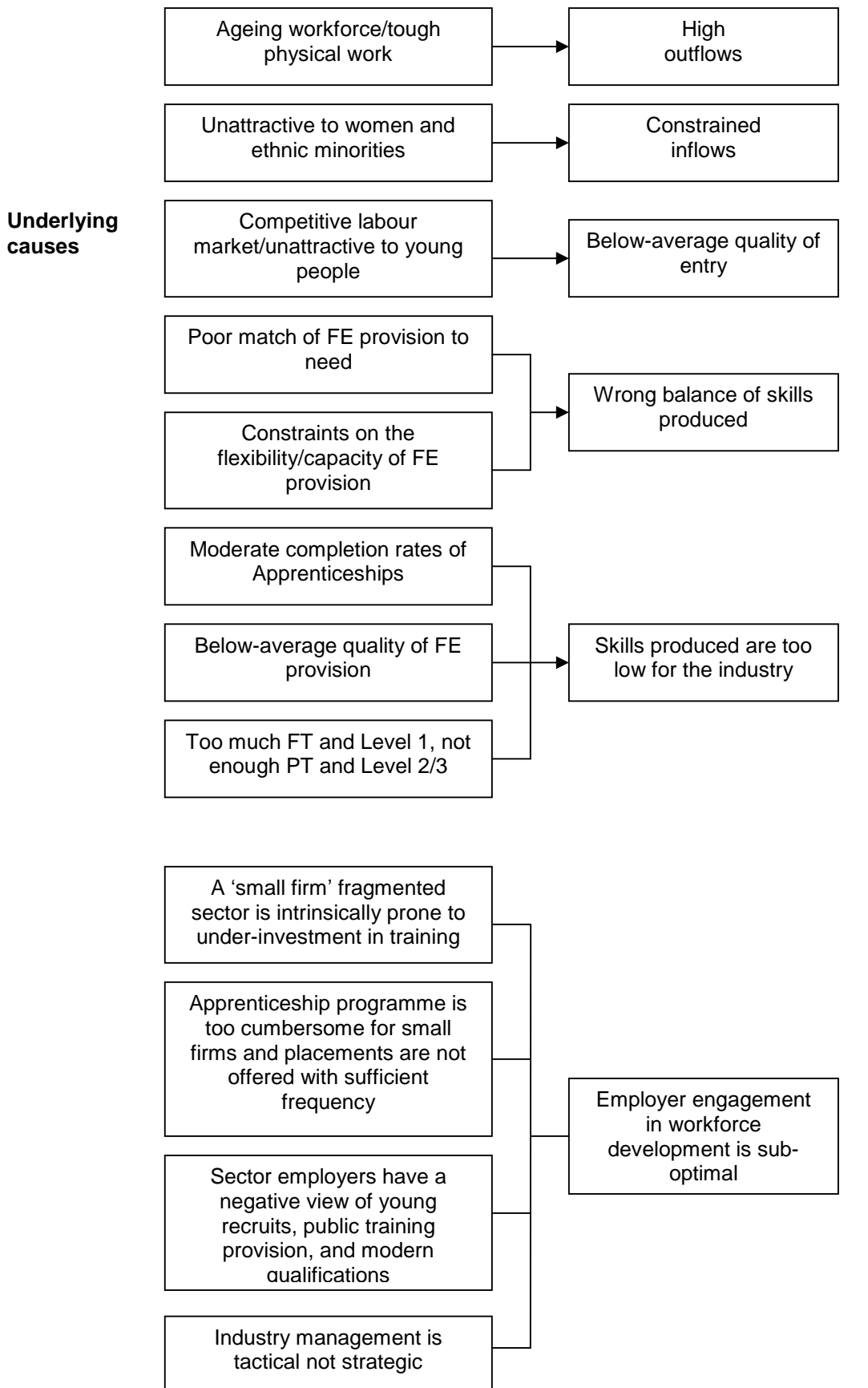
- *The wrong balance of skills is produced in Further Education.* There may be two factors here:
 - The labour market does not effectively signal what it needs to students and trainees. FE Colleges, which are essentially student demand-led, offer courses which they can fill. We noted that the provision being delivered by local Colleges (as identified by the ILR) does not, superficially at least, match that which CITB-ConstructionSkills Forecasts of replacement would require.
 - FE provision is not sufficiently flexible in its response to what is needed. It is fixed by the nature of its physical structure and by the lecturing staff it can afford and can attract. Some courses, therefore, hit capacity limits which FE finds difficult to overcome.
- *The preparation of trainees by publicly-funded training systems, FE and WBL is not optimal:*
 - The report has noted that full Apprenticeship frameworks are completed only in around half of cases.
 - There is no recent inspection evidence as to the quality of local FE provision, but generally (at national level) construction provision gets significantly lower grades than average and construction sector employers have an above-average likelihood of reporting (a) that 17-18 recruits lack job-specific skills and (b) that they are dissatisfied with the FE provision they use.
 - Too *much* provision in FE is at Level 1, a level which does not produce skills which are useable on-site and/or delivered in full-time courses.
 - Too *little* provision in FE is at Levels 2 and 3 and delivered on the day release basis which ensures that skills learned in College are used in real working situations and are gained by those who already have a place in, and commitment to, the industry.
- *The level of employer participation in workforce development is lower than that which the sector needs.* Recent survey evidence suggests that the proportion of firms which supply training to their staff is below the average for all sectors and has not increased in recent years. There are several strands of thought as to why this is so, including:

- The sector is comprised of small firms which *typically*, not just in construction, tend to train less than larger ones. Generally, the potential for 'market failure' and disengagement is greater in 'small firm' sectors. The sub-contract system, whereby large firms may do little more than co-ordinate contracts, may sometimes allow those firms to shuffle off training responsibilities to small firms which are, as above, ill-prepared to accept that responsibility.
- The Apprenticeship programme is too burdensome and bureaucratic for many small firms to take on. Simply, tradesmen in small firms find it quicker and simpler to do the job themselves, under sharp commercial pressure on costs and quality, than to show Apprentices how to do it. Apprenticeship is also frequently too costly for small firms which are unwilling to pay for the work-based element of the trainee's development (and may see the trainee fail to complete or move to another employer).
- As above, firms may have a poor opinion of the quality of young people entering the sector and the training and qualifications they receive. Many older people in the industry (and there are many) see modern training and qualifications as inferior to traditional models and are, therefore, reluctant to commit resources to training.
- Management and leadership in the sector is weak. Again, as a correlate of the small firm character of the sector, managers are frequently proprietors of small businesses who have achieved sole employer or proprietor status from a background of skilled work. They have seldom had management training themselves and take a heavily tactical view of business rather than a strategic one. They are resistant to industry initiatives (sometimes actively hostile to them) and a training response effectively has to be driven (by levy and regulation, see below) rather than being seen as a commercially valuable activity.

157. To this point, therefore, a 'skills issues' analysis can be summarised as:

Presenting problems

Skill shortages and skill gaps



Potential responses and solutions

158. The potential responses to, and solutions of, the range of underlying problems set out above can be categorised under three broad headings:
- Market responses/solutions
 - Demand-side responses/solutions
 - Supply-side responses/solutions

Market responses/solutions

159. Essentially, the market response to the underlying skill shortages (apart from workforce development) are:
- *Mobility.* The sector has one of the most mobile workforces of any. Essentially, a significant part of the workforce follows work on major house building or infrastructure projects, either commuting long distances or staying in temporary accommodation (contractors are said to be one of the major mainstays of the pub B&B industry!).
 - *Compromising on delivery times and quality.* Key Performance Indicators for the sector suggest that only around three-quarters of clients are fully satisfied with the construction product they receive and only around 6 out of 10 projects run to time.
 - *Use of in-migrant labour.* Recent years have seen an influx of construction workers from the newly-expanded European Union. The use of such workers is not accurately known at national or local level. However, such workers are clearly seen by the industry as a cost-effective means of circumventing shortages of skills in the domestic workforce.

Demand-side responses/solutions

160. In construction, perhaps more so than in any other sector, there is a wide range of interventions or opportunities for interventions which seek to improve employer engagement in workforce development. These include:
- *The Construction Levy.* The levy system in construction is one of the few remaining training levies in the UK economy. Employers in the sectors have consistently supported statutory underpinning for their training arrangements. They argue that the nature of their industries mean that individual employers are unable or unwilling to accept the responsibility of training their own employees. They believe that a national pool of labour, collectively funded by all employers, is the only way the industry's skill needs can be met. Formal consultation on proposals for the renewal of the levy statute took place in the summer of 2005. These proposals were supported by the industry's main employer organisations, who represent over 50% of leviable employers. The CITB rates for 2006 are 0.5% of the total of an employer's payroll for direct employees and 1.5% of net payments for labour-only services for construction sites. There is no ceiling to the amount of levy paid by an employer. The proposals are expected to raise £145-£150 million in the financial year ended 31st December 2006. Despite this very significant

and almost unique arrangement, the ConstructionSkills SSC national Sector Skills Agreement gives relatively little prominence to the Levy, merely suggesting that an 'Increase in the number of companies paying CITB Levy' would be a 'success criterion' of its broad objective to increase the number of companies investing in training. However, the Levy system is not without its limits. Obviously it is constrained in the amount of training which it can support and small firms in the industry are frequently concerned that the Levy will be applied to them (even though their turnover is below the threshold at which Levy becomes payable). Generally, it appears that though the Levy system has underpinned much training in the sector for many years, no major extension can be envisaged. To raise training levels significantly will need alternative approaches.

- *Regulation.* Regulation (on waste management, health and safety, and so on) is a major driver of training in the sector. However, its nature is largely centrally-driven at national level and is not, therefore, open to local influence. Moreover, regulatory training, though essential, is not actually aimed at productivity per se. Its contribution to the skills base in *construction* activities is low.
- *'Skills Cards'/OSAT.* Of more significance is the movement within the industry to certify staff via the Construction Skills Certification Scheme (CSCS) and On-Site Assessment Training. This has clearly advanced the numbers of construction staff who have at least NVQ Level 2 certification. And accreditation to Level 2 may stimulate those who are accredited to pursue further development. The OSAT process is, therefore, formally supported by the LSC. However, a number of observations might be made on these developments. Firstly, there is inevitably a certain wastage in the system as workers leave the industry. Secondly, there has been only limited 'policing' of the card system. Many companies do not actually check systematically whether workers hold a 'card' and many find ways of circumventing the system when pressure on delivery is intense. Thirdly, the OSAT process partially depends for its effectiveness on the availability of high quality assessors. The supply of such assessors cannot always be guaranteed. Fourthly, the amount of training which is required to get experienced workers to the point where they can be accredited at Level 2 is variable. Some may require considerable development whilst others may need very little. In that sense, whilst assessment makes a strong contribution to the development of a qualified workforce, it cannot be assumed that every Level 2 accreditation has actually taken skill levels upwards by a significant amount. Despite the significant numbers involved, skill shortages and gaps in the industry are *not* reported as decreasing.
- *Supply chain initiatives.* Given the fragmented nature of the sector, there is likely to be clear advantage in developing linkages (between major employers and their sub-contractors and between major and their suppliers) which enforce or encourage training activity and certification of skills. This type of initiative is well-advanced at sub-regional level in the South West Region. The 'Constructive' series of initiatives driven by the ConstructionSkills SSC aims to work with local

contractors to establish a qualified workforce that can compete for contracts within the region that specify a 'carded' supply chain and to encourage and facilitate local people into local jobs. Each sub-regional partnership has membership from CITB-ConstructionSkills, SWRDA, the local LSC, JobCentre Plus, FE/HE, Business Link, Councils and the industry. The series targets all current and future major build projects in the South West and the repair and maintenance supply chains. The supply chains of all major South West County Councils are linked to the series. Plans are also in progress to link Constructive with Constructing Excellence South West on a future project that will foster best practice, local procurement and skills training. Constructive SW is unique to the South West and has gained status as a CE demonstration of 'Best Practice'.

- *Encouraging more employers to offer Apprenticeship placements.* A clear blockage on the path to more qualified people entering the sector via the Apprenticeship route is the shortage of employers willing to offer work experience to trainees. The ConstructionSkills SSC (national Sector Skills Agreement) sees the solution in the development and uses of a 'programme-led pathway' (PLP) whereby major contractors and house builders set up agreements with sub-contractors to offer apprentices work experience on major building projects. Those long-term, large-scale building projects could offer training opportunities for hundreds of new entrants. They note, however, that funding needs to be found to cover the employer's costs of on-site mentorship, supervision and assessment in order to guarantee the hundreds of new apprenticeship places this route could create. In the South West, the number of PLP Apprentices this year is 100 with 1,000 expected next year. However, this number still falls well short of the 6,000 or so Apprentices which the ConstructionSkills SSC believe would be optimal. Unblocking full-time provision in favour of more day-release provision is believed to be key to generating higher Apprentice numbers.
- *Using brokerage services to encourage more employers into workforce development.* As in other sectors, a major difficulty in selling the training message is that employers are not responsive to simple exhortation. It is now widely recognised that much closer engagement than simple promotional methods are required. 'Brokerage' – the use of intermediaries to identify needs and solutions and establish linkages between employers and providers – is the perceived solution. The ConstructionSkills SSC describes the need as a 'one stop shop' approach to training advice that is simple to access and offers consistent guidance to construction employers. Construction is the only sector which, via CITB, currently funds its own brokers ('Company Development Advisors' or CDAs). It is envisaged that these specialist brokers will work in partnership with the more 'generalist' Train to Gain brokers. The use of brokerages may also offer an important input not just into workforce training but into the management and leadership development which the industry requires. To some degree, this latter is currently met by the ConstructionSkills SSC's 'Constructive Management' initiative but it may be that a widening brokerage effort will identify new demands.

- *Basic skills.* Given an entry to the industry which has traditionally been at the lower end of the educational spectrum, it is not surprising that the sector's workforce does not always have the degree of literacy and numeracy which underpin the development of higher and rising skill levels. Recent surveys have showed that construction employers remain concerned that young entrants lack adequate standards. The question is of how available resources – for example, from the LSC's Skills for Life programme – can be brought to bear. It is evident (from research related to the Skills for Life programme) that there is considerable consumer resistance to basic skills messages. Given the fragmented character of the construction sector, engaging employers and employees in literacy, numeracy and other employability skills training is likely to be arduous.

Supply-side responses/solutions

161. As on the demand-side, there is wider scope for interventions and intervention opportunities to improve the flow of skills into the industry. These include:

- *Image and information initiatives* which seek to improve the way in which the sector is perceived by parents, young people and those who advise young people on career choice. Generally, the objective is to raise the profile of construction as a professional career choice rather than as a fall-back for the less able.
- *Improving foundation education.* The basic problem is two-fold. Firstly, it is perceived that some educational characteristics of young people, particularly their abilities in maths, are not adequate as a foundation for technical-level or graduate-level study in construction subjects. Secondly, it is perceived that the preparedness of young people for the sector in terms of their willingness to work in difficult on-site conditions and poor weather, to travel significant distances, and to maintain a level of commitment is often too low. The industry seeks better teaching of some core foundation subjects and sufficient liaison with education institutions to ensure that young people become aware of the requirements of construction sector work before they formally commit to full training in relevant skills.
- *Diversity initiatives* which seek to improve the level of entry to the sector by women and ethnic minorities. The Constructive series of partnerships have undertaken some work to encourage women into the industry and claim some success (however, notwithstanding these positive initiatives, as we have noted, the employment of women on-site remains very low).
- *Improving FE's offer to the sector.* Issues here are those of *capacity, course relevance* and *quality*. Barriers to development include those of:
 - *Information:* It is not easy to discern exactly what industry needs are at local level and to be certain that developments in particular directions would meet with sufficient employer response to justify developments in particular directions. Very close consultation between institutions and the sector is required.

- *Funding:* FE institutions, of course, require to make careful commercial judgements in partnership with the LSC, as to what funding can be made available for expansion in particular curricular areas. In particular, the industry would like a significant shift from funding of full-time courses to funding of part-time, day-release provision.
- *Staffing:* There are particular difficulties in securing high quality teaching staff in competition with the industry itself when teaching salaries are not competitive.

However, if progress is sought in this area, key developments may be driven by Centre of Vocational Excellence and Skills Academy concepts.

- *Maintaining good Apprenticeship completion rates.* Improvement to the preparedness of young people as they enter the sector (as above) may be significant to the improvement of Apprenticeship completion rates. Other factors may include the selection of Apprentices, the variety and quality of placements, and the mentoring and monitoring of progress. The CITB already has minimum standards for acceptance on the industry's Apprenticeship programme and employs managers to encourage completion. Even though Bournemouth, Dorset and Poole was one of the best performing local LSC areas in 2004/05 in terms of construction sector Apprenticeship completion rates, and those rates rose further in 2005/06, there is a need to ensure that improvement is maintained.
- *Ensuring that migrant labour meets national standards.* We have noted that migrant labour may already constitute a source of skills which to some extent makes up for deficiencies in domestic skills supply. However, to integrate migrant labour effectively and in a way which meets site health and safety requirements, may require ESOL services to enable an adequate level of understanding of health and safety and other regulations governing construction and installations.

162. Thus, a framework which describes the main ways by which the industry and external agencies can and do respond to the skills issues affecting the construction sector can be summarised:

Market responses and solutions	<ul style="list-style-type: none">- Use of labour which is mobile between different regions/sub-regions of UK- Compromise on delivery and quality- Use of in-migrant labour, mainly from Eastern Europe
Demand-side responses and solutions (directed to employers)	<ul style="list-style-type: none">- The industry Levy system- Regulation-driven training- 'Skill Cards' and OSAT- Supply chain initiatives- Encouraging the offer of Apprenticeship placements by employers- Brokerage, Train to Gain, and liP- Basic skills initiatives
Supply-side responses and solutions (directed to individuals)	<ul style="list-style-type: none">- Image and information- Improving foundation skills- Diversity initiatives- Improving FE's offer to the sector- Improving Apprenticeship completion- ESOL for migrant workers

8. A programme for the LSC?

163. In the previous chapter a wide range of 'issues' with respect to construction sector skills was identified. It is also apparent that there are already many responses to those issues.
164. The sector has a SSC, the ConstructionSkills SSC, with regional representation which is amongst the most active, dynamic and well-resourced. The 'CITB' element within the sector administers the industry training levy which grants a significant volume of training. The Skillcard/OSAT programme drives qualification of workers forward as do the numerous regulatory regimes. 'Constructive....' partnerships have been established within each sub-region and are using the supply chains attached to major projects to drive qualification and training down the sub-contract networks. The SSC makes significant efforts to promote the industry to young people, parents, advisors and teachers.
165. The area has a number of Colleges offering training provision. We have no formal inspection evidence on some of these Colleges but the ConstructionSkills SSC reports them as having the intention and potential capacity to contribute positively to future skills development in construction skills. Two Somerset Colleges received good ratings for their construction provision but the reports are somewhat dated.
166. Where does this leave the local LSC role?
167. Of course, the local LSC has to make a judgement of how much resource and effort it wishes to direct towards the construction sector. The sector has been identified as a 'priority sector' but, of course, the LSC has other priority sectors. With limited resources – for FE funding, Apprenticeship, Train to Gain, and so on – the LSC cannot necessarily give the sector as much support as the LSC and the sector itself would wish. However, recognising that general and perhaps obvious point, a series of LSC contributions can be suggested:
- Firstly, a technical contribution could be made by the LSC and the Colleges it funds. The ConstructionSkills SSC has one of the most sophisticated demand-side forecasting models. The outputs (predictions of recruitment needs) are necessarily best estimates rather than concrete predictions which are guaranteed to come about. Nevertheless, they give a reasonably good guide to the type and scale of recruitment and training need. *On the 'supply-side', data is much weaker.* Earlier we reported such information (from the ILR) as is available on WBL and FE training of BDPS area residents. However, this data is generated by a data system (the ILR) which is geared more to management of funding than to strategic skills planning. It is virtually impossible to discern from the system, with any confidence, exactly how many people, with what skills, the WBL/FE providers are delivering into the local labour market each year. It would be extremely helpful for skills planning purposes if the LSC and its partners could develop a (simpler?) parallel system which, in construction certainly, and probably in other sectors, generated this information.
 - Secondly, the local LSC is part of the Constructive Dorset and Constructive Somerset partnerships. These partnerships are effective in bringing together the SSC, major employers and local authorities in order, principally, to exploit

the power of major customers and lead contractors over a fragmented network of sub-contractors and to drive best practice downwards. It is important that the LSC continues to *put its weight behind these partnerships*. It is also important that it is represented at a senior level by individuals who have the necessary knowledge of LSC strategic and policy developments and the power to make decisions on behalf of the local LSC.

- Thirdly, there is a distinct issue concerning the FE provision which the LSC funds. This is that the LSC is able to fund full-time provision for young people which leads to a first Level 2 qualification and includes several formal requirements including key skills and technical certificates but does not require significant on-site work experience. What it cannot fund is *day-release training for inexperienced adults* already working on-site or seeking to enter the industry. The sector would greatly value the availability of this second form of training and funding. The question (perhaps a regional/national one) is whether the LSC can find funding sources [including, perhaps, a (necessarily limited) input from Train to Gain] which can make a significant contribution to this very genuine need.
- Fourthly, it has been noted above that *self-employed individuals ('sole traders')* form a high proportion of the sector workforce. However, this segment goes unconsidered and unsupported when it comes to public programmes of training and funding. The LSC might seek to work with ConstructionSkills SSC to find innovative ways in which this segment of the workforce can not only be pressured into qualifications and training (by regulation, Card schemes, and supply chains) but can be encouraged and assisted in that direction.
- Fifthly, there is a related issue concerning *the balance and quality of FE provision*. Components of this issue are:
 - What FE Colleges produce (in terms of qualifications, levels, and mode of training) is what the LSC is willing and able to fund. This is strongly related to individual demand for courses. There is little evidence that the overall output is clearly what an objective demand analysis (as to what the industry will require over the foreseeable future) would prescribe.
 - From an employer point of view, too much provision is inflexible. It is provided in modes and at times which the Colleges find convenient not in modes and at times which the industry requires. Bureaucracy, too, is a significant barrier to employer participation: 'You have to do x and y even when what you want is only z'.
 - Some provision and course content is not seen as site-relevant and the content of some NVQs is not clearly relevant to industry needs.
 - A problem with the quality of teachers is recognised, given that some teaching salaries are not competitive with on-site rates and teachers are recognised as being in short supply.

Overall, it would be helpful if the LSC and LSC-funded construction departments in local Colleges could, in close collaboration with the sector itself, review these issues in some depth. The key objective, in parallel with consideration of the funding issue, would be to extend the degree to which *flexibility* and *industry-relevance* configure FE provision. With regard to the last point above (teacher shortage and quality) it is noted that the industry has a significant number of 50+ leavers, some of whom might be successfully converted into good instructors and mentors if, say, ESF funding were available for this purpose.

- Sixthly, alongside the issues raised above, it is evident that, though local completion rates are relatively high and improving, there may still be scope to *raise the proportion of Apprentices and Advanced Apprentices who complete the full framework*. And there is a need to assist the ConstructionSkills SSC in its endeavours to encourage more employers to offer Apprenticeship placements. In the former case, continued careful selection and mentoring of Apprentices may be helpful. In the second case, simplifying the bureaucracy attached to taking on an Apprentice might help.
- Seventhly, the report has noted that *in-migrant workers* (mainly from Eastern Europe) are increasingly used by employers to fill skill gaps. ConstructionSkills SSC reports that, whereas the first and still the most significant impacts were seen in the South East, the employment of migrant workers is evident in the South West too. Statistics are not available as to how many people are concerned. There is clearly some ambivalence as to the extent to which the phenomenon is beneficial (useful to skills supply but perhaps suppressing domestic training levels). However, the migration is legal and there is an economic logic for it at the present time (of relative industry buoyancy). From an industry point of view, understanding English is an important contribution not simply to general on-site communications but to communicating Health and Safety standards. The question for the LSC is of the contribution it wishes to make in funding ESOL provision and marketing that provision to relevant groups of workers.
- Finally, the LSC is, of course, aware that *the Olympics* in 2012 will generate significant construction sector activity in and around Weymouth, to which, ideally, the local sector would make a significant contribution. It is our understanding that detailed plans for development and its skills implications are in preparation (involving the County Council, the SW Skills Observatory, and ConstructionSkills SSC) but are not yet available. The LSC will, of course, wish to be advised of the labour and skills implications of Olympic developments and, where it can, respond in ways which allow local residents and local businesses to avail of construction sector employment and business opportunities.

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