

1. Context

This paper is one of a series that outline workforce dynamics and skills and training issues in key sectors in Kent and Medway and across the South East as a whole. The series sets out:

- The demographic and skill profile of the workforce in each sector
- The likely demand for and supply of new skills and workers, now and in the future
- The current and potential offer to the sector from the Learning and Skills Council

In addition, an overview paper provides a review of skills needs and intelligence across the whole of the economy, including cross-sector skills issues.

For the purposes of this paper, the construction and building services² sector includes architectural design, civil engineering and public works, the construction and refurbishment of domestic and commercial properties and installation work, including plumbing and electrical wiring (see Appendix I).

Where appropriate, analysis in the paper distinguishes between the two broad industry groups of construction and building services. These analytical groups are broadly reflective of types of employers represented by *ConstructionSkills* and *SummitSkills*:

Construction (*ConstructionSkills*) – *site preparation, building of complete constructions/civil engineering, building installation and completion, renting of construction or demolition equipment and architectural and engineering activities.*

Building services (*SummitSkills*) – *installation of electrical wiring and fittings, plumbing and repair of electrical household goods.*

In this report the building services sector has been defined as described above but the Sector Skills Development Agency (SSDA) defines the sector as covering; electro-technical, heating, ventilating, air conditioning and refrigeration and plumbing industries³

The data presented in this paper is for Kent and Medway unless otherwise indicated.

Economic context

The sector is a significant component of both the South East and Kent and Medway economies. Its estimated output (Gross Value Added) is worth £1.6 billion in Kent and Medway alone, some 8% of the sub-region's total output.⁴

The sector directly employs around 39,000 people in Kent and Medway; although the large proportion of self-employed people working in the sector (an estimated 30,000) almost doubles the size of the total workforce (see Section 2, p3).

Key drivers of change in the sector include consumer confidence and the economic cycle, public investment and planning, and technological advances in construction methods.

Construction and building services employment tends to follow a cyclical trend, reflecting the overall economic cycle and changes in consumer confidence. Recent employment trends within the sector have been quite volatile (See Section 3, pp8-9). However, this may reflect greater mobility of workers in and out of self-employment and across geographical areas.

ConstructionSkills suggest that the 'boom and bust' cycle of the sector in the UK may be replaced by a period of continued growth as a result of both economic stability and substantial public investment plans in new construction projects.⁵

The population of the South East of England grew by 6.5% in the last ten years, increasing the severity of housing shortages. Regional Planning Guidance for the South East (RPG9) supports the development of 5,700 new dwellings per annum in Kent and Medway, a total of 85,500 between 2001 and 2016.⁶

In '*Sustainable Communities: building for the future*', national Government identified Ashford and the Thames Gateway as two areas for significant housing developments to meet wider demand from London and the South East.⁷

In addition, the Thames Gateway Plan outlines a wide range of regeneration projects for North Kent (Kent Thameside). Projects include a major housing and commercial property development in the Ebbsfleet Valley, around the new international station on the Channel Tunnel Rail Link, the redevelopment of Chatham docks, a second Swale crossing, a relief road for Sittingbourne and improvements to the A2.

Other infrastructure projects planned in Kent and Medway include town centre re-developments in Chatham, Folkestone, Ramsgate and Margate and the planned refurbishment of the Port of Dover.⁸

Many construction and building services firms work nationally and therefore projects taking place across the South East are also likely to have an impact on the demand for skills, including the development of a new terminal at Heathrow airport, and the widening of the M25 motorway which are currently at their final stages. Other projects include the redevelopment of Hastings and Bexhill in neighbouring East Sussex.⁹

In the medium term the use of new construction methods will have a significant impact on the skills required by workers in the sector. Although evidence suggests that the take-up of these methods has been limited to date, likely changes include moves towards new materials such as fibre-reinforced plastics, specialist adhesives, resin based

² Throughout this report, 'the sector', refers to both construction and building services.

³ Some elements of the SummitSkills footprint cannot be separated from ConstructionSkills in official datasets and these definitions are based on SIC code footprints suggested by the SSDA.

⁴ National Statistics 2005 Region in Figures (GVA 2002). Second Edition 2006

⁵ www.constructionskills.net/ourprogress/southeast/theevidence/ accessed 06/02/2006

⁶ Kent and Medway Structure Plan: Deposit Plan, 2003.

⁷ SEERA: South East Regional Housing Strategy 2004/05 to 2005/06,

⁸ Kent and Medway Structure Plan: Deposit Plan, 2003.

⁹ Action for Skills, South East, CITB-ConstructionSkills, 2004.

cements, solar glazing and fibre optics and new ways of ways of working such as offsite prefabrication.¹⁰

Policy Context

The construction and building services sector is one of five regional priority sectors identified by the Regional Skills Partnership and this status has been confirmed by the recently revised *South East Sector Prioritisation Framework* (see Section 4). The Framework also suggests that the sector is of particular importance to the Kent and Medway economy. The sector has therefore been the focus of significant developments in learning provision (see Section 5).

The sector is represented nationally by two Sector Skills Councils: *ConstructionSkills* and *SummitSkills*. Sector Skills Councils (SSCs) are responsible for articulating the demand for skills from employers and helping to broker appropriate solutions, including the design of new qualifications and standards where appropriate. Recently, SSCs have been asked to broker Sector Skills Agreements (SSAs) with learning providers and funding bodies to ensure that the supply of skills meets employer needs.

ConstructionSkills was one of the first SSCs to publish their Sector Skills Agreement. The SSA has three main priorities:

Figure 1.1 ConstructionSkills SSA Priorities

1. To **improve business performance** for construction companies, particularly those employing fewer than five people
2. To **achieve a fully qualified workforce** at all stages of the construction process
3. To **improve recruitment and retention** of new entrants by creating a positive image for the industry and improving progression pathways into and through the sector.

Source: Sector Skills Agreement for Construction – England.

Further details of the SSA and the LSC's contribution to the agreement are outlined in Section 5.

SummitSkills are currently working with SEEDA to develop a regional strategy to underpin their forthcoming Sector Skills Agreement (due in April 2007). Key elements of *SummitSkills* current national objectives are outlined in Figure 1.2.

Figure 1.2 Key SummitSkills Objectives

- **Improve projections of future skill requirements:** undertaking an extensive employer survey and working on an Olympic Skills Agreement for the 2012 London Olympics.
- **Support recruitment into the sector:** working with public agencies to ensure their procurement activities include skills development as a contractual obligation.
- **Define and improve progression routes:** support the development of occupational standards and qualifications up to Level 5.
- **Encourage alternative recruitment streams:** through representation to minority business groups.
- **Respond swiftly to technological changes:** holding regular meetings with key manufacturers.
- **Ensure adequate learning provision:** working with Centres of Vocational Excellence (CoVEs) to ensure that key lectureship posts are filled.

Source: *SummitSkills* Annual Report 2004.

¹⁰ ESAN Partnership, 2005 'Construction skills in the transmanche region.' Step Ahead Research and Marc Gilles et Associés. Second Edition 2006

2. Sector Profile

Regional Overview

There are around 354,000 construction and building service workers in the South East of England. Around 203,000 people are directly employed by one of the region's 47,800 construction and building services business establishments and a further 150,500 workers are estimated to be self-employed (43% of the overall workforce).

The sector accounts for around 6% of all employees in the South East. Across the region the highest concentrations of construction and business services employment can be found in Surrey and Kent and Medway.

Some 94% of construction and building services business establishments in the region are micro-businesses, employing between 1-10 people. The importance of micro and small businesses is also reflected in the high proportion of employees found in establishments of this type (67%).

Employment in the sector is predominantly male and full-time - 79% of the workforce is male and 89% work on a full-time basis. The workforce has an older than average age profile, with around 22% of workers being over the age of 55 and just 9% aged between 16 and 24.

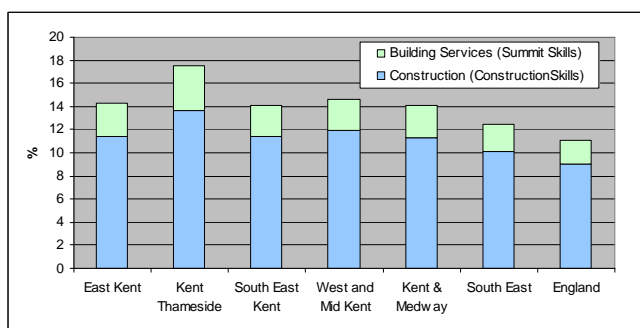
Kent and Medway Overview

There are around **9,400 construction and building services business establishments in Kent and Medway**, accounting for around 14% of the total business base in the area. This is slightly higher than the proportion found regionally (13%) or nationally (11%).

Around 94% of construction and building services establishments in Kent and Medway are micro-businesses employing between 1 and 10 people. The proportion of micro-businesses in the sector is significantly higher than the all industry average (85%).

The sector accounts for between 14% and 18% of business establishments across each of the four LSC partnership planning¹¹ areas in Kent and Medway (Figure 2.1). Construction and building services are particularly important within the Kent Thameside and Medway area, where the sector accounts for around 18% of business establishments.

Figure 2.1: Business establishments by area



Source: ONS Annual Business Inquiry 2004. Note figures do not include the self-employed.

¹¹ East Kent (Canterbury, Swale and Thanet); South East Kent (Ashford, Dover and Shepway); Kent Thameside and Medway (Dartford, Gravesham and Medway); West and Mid-Kent (Maidstone, Sevenoaks, Tonbridge and Malling and Tunbridge Wells)
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Numerically, the West and Mid Kent area has the greatest number of construction and building services establishments (3,400 or 37% of all construction and building services businesses in Kent and Medway). The Kent Thameside and Medway area accounts for 26% of the sectors establishments in Kent and Medway. *This is likely to reflect current major construction and building services projects in the area (see Section 1).*

Figure 2.2 shows that the *building services (SummitSkills)* sub-sector is smaller than the *construction (ConstructionSkills)* sub-sector.

Figure 2.2: Establishments by sub-sector

	% of Total business establishments		
	Kent and Medway	South East	England
Construction (ConstructionSkills)	11	10	9
Building Services (SummitSkills)	3	2	2

Source: ONS Annual Business Inquiry 2004. Note figures do not include the self-employed.

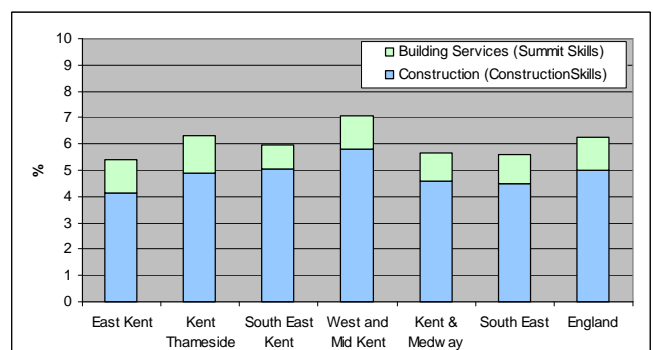
Employment

The Annual Business Inquiry (ABI) suggests there are **around 39,000 construction and building services employees in Kent and Medway**, accounting for 6% of total employment. This in line with the proportion employed in the sector regionally and nationally (6%).

It should be noted that the ABI does not include self-employed people. The Labour Force Survey (LFS), which does include the self-employed but cannot provide detailed local data, suggests that there may be **an additional 30,000 self-employed people** working in construction and building services in Kent and Medway.

Figure 2.3 shows that construction and building services accounts for between 5% and 7% of employment in each of the four LSC partnership planning areas. The proportion of construction and building services employment is greatest in the West and Mid Kent area.

Figure 2.3 Construction and building services employment by area



Source: ONS Annual Business Inquiry 2004. Note figures do not include the self-employed.

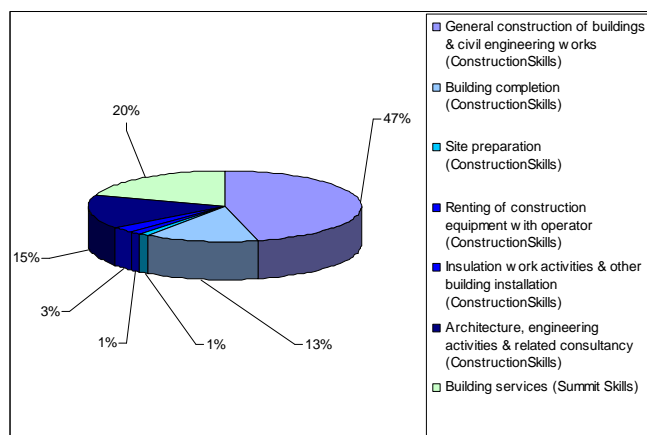
Numerically, West and Mid Kent¹² account for the greatest number of employees in the sector (38% or 14,900), followed by Kent Thameside and Medway (25% or 9,900). There is a particularly high number of construction and building services workers in the districts of Maidstone and Medway (together accounting for 26% of employment or 10,200 employees).

Micro and small businesses account for a higher proportion of employment in the sector in Kent and Medway (72%) than regionally or nationally (67% and 62% respectively). Furthermore, they account for a significantly higher proportion than the all industry average for Kent and Medway (51%).

Owners and managers of small and micro-businesses are often difficult to engage in workforce development initiatives. For many the difficulty is as much to do with providing cover for people engaged in learning and replacing lost income as the direct cost of training.

Figure 2.4 shows that approximately 80% or 31,300 construction employees work within the *construction (ConstructionSkills)* sub-sector. This is in line with the regional and national picture.

Figure 2.4: Employment by sub-sector



Source: ONS Annual Business Inquiry 2004. Note figures do not include the self-employed.

Looking at the sector in more detail, Figure 2.5 shows that 34% (13,400 employees) of construction employees work in general construction of buildings. Businesses in this category provide a complete service and may compete for work with more specialised businesses from across the construction sector.

Architectural, engineering and technical consultancy also accounts for a significant proportion of construction and building services employment (15% or 6,000 people), followed by those working in the installation of electrical wiring and fittings sub-sector (12% or 4,700 people).

Figure 2.5: Employees by minor sub-sector

Minor Sub-Sector	% of Construction employees	No of employees
Construction (ConstructionSkills)		
General construction of buildings and civil engineering works	34	13,400
Architecture, engineering and related consultancy	15	6,000
Other construction work involving special trades	6	2,200
Joinery installation	5	1,800
Construction of highways, roads, airfields and sports facilities	4	1,500
Other building completion	4	1,400
Painting and glazing	4	1,400
Other building installation	2	900
Erection of roof covering and frames	2	800
Demolition and wrecking of buildings; earth moving	1	500
Floor or wall covering	1	400
Renting of construction equipment with operator	1	400
Insulation work activities	1	300
Plastering	1	300
Total for sub-sector	80	31,300
Building Services (SummitSkills)		
Installation of electrical wiring and fittings	12	4,700
Plumbing	7	2,700
Repair of electrical household goods	1	300
Total for sub-sector	20	7,700

Source: ONS Annual Business Inquiry 2004. Note Construction of water projects and test drilling and boring has been omitted due to small numbers. Figures do not include the self-employed.

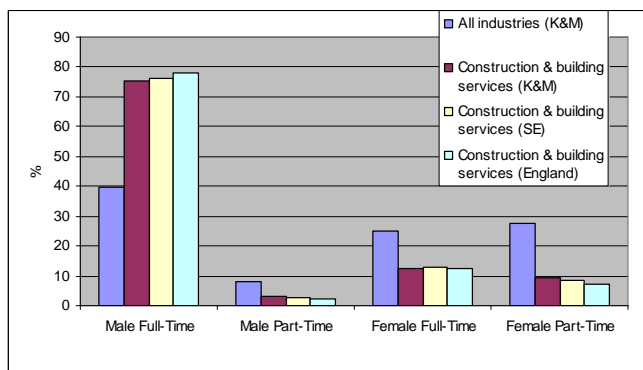
The current workforce

The sector is heavily reliant upon male labour. Around **78% of sector employees (30,500) are male**, compared with 48% in all industries. Employment in the sector at a regional and national level is also predominantly male (79% and 80% respectively).

Only 12% of employees (around 4,800) work part-time, compared with around 36% in all industries. *The relative lack of part-time and flexible working opportunities could be one barrier to engaging more women in the construction and building services workforce.*

¹² The West and Mid Kent planning area accounts for the greatest number of employees as it has a greater geographic area. Second Edition 2006

Figure 2.6: Gender and employment status



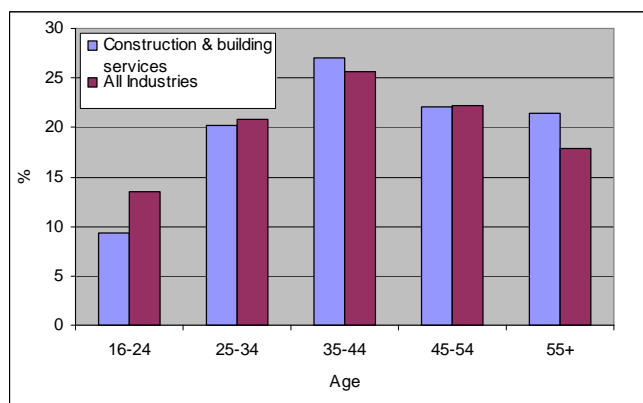
Source: ONS Annual Business Inquiry 2004. Note figures do not include the self-employed.

Analysis reveals that female employment is slightly more common in *construction (ConstructionSkills)* where 22% are female compared with 19% in *building services (SummitSkills)*. The proportion of female employment is much higher within the repair of electrical household goods and architectural and engineering activities (48% and 45% respectively).

At a national level, ethnic minority communities account for around 9% of the sector’s workforce, compared with 13% across all industries. Census 2001 data reveals that there are a smaller proportion of people from ethnic minority backgrounds in Kent and Medway than in England as a whole (6% compared with 13%). We estimate that there are around 3,000 people from ethnic minority backgrounds working in the construction and building services sector in Kent and Medway (between 4 and 5% of the workforce).

The **construction and building services workforce has an older age profile than the economy as a whole** (Figure 2.7). Just 9% of workers in the sector are aged between 16 and 24 compared with 14% across all industries. The proportion of young people employed in the sector is in line with regional figures but lower than England as a whole (12%).

Figure 2.7: Workforce Age Profile



Source: Labour Force Survey Spring 2005. Inferred data. Note figures include the self-employed.

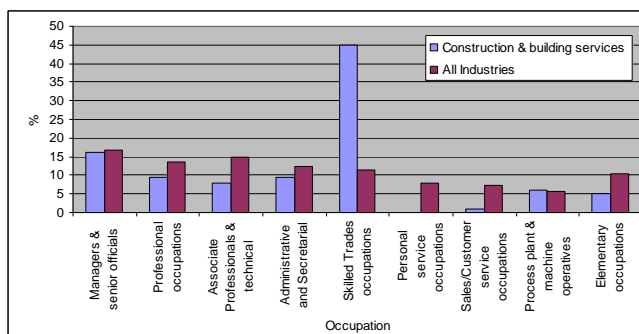
Currently, around 14,800 people, or 22% of the workforce, are aged 55 or over (compared with 18% across all industries). Again this is in line with the regional average, but higher than the proportion found nationally (18%). The

recruitment of young people remains an important issue for many construction and building services employers.

Occupational profile

Figure 2.8 shows the broad occupational breakdown of the sector’s workforce. Around 45% or 30,900 construction and building services jobs are within skilled trades occupations, a far greater proportion than is found across all industries (11%).

Figure 2.8: Broad occupational breakdown



Source: Labour Force Survey Spring 2005. Inferred data. Note figures include the self-employed.

Around 16% of the construction and building services workforce (around 11,000 people) work within managerial occupations, the next largest broad occupational group.

Figure 2.9: Specialist construction and building services occupations

Occupation	Employees	Self employed	% of sector’s employment
Managers in construction	5,000	1,200	9
Carpenters and joiners	1,100	4,000	7
Construction trades n.e.c.*	1,200	3,700	7
Plumbing, heating & ventilating engineers	2,300	2,100	6
Electricians, electrical fitters	1,600	2,000	5
Painters and decorators	900	2,400	5
Construction operatives n.e.c.*	1,200	700	3
Plasterers	300	1,400	2
Floorers and wall tilers	100	1,500	2
Bricklayers, masons	500	1,100	2
Glaziers, window fabric and fitters	300	1,100	2
Labour & other construction trades n.e.c.*	300	400	1
Architects	400	400	1
Roofers, roof tilers and slaters	200	500	1
Other sector specific	1,700	600	3
Total sector specific	17,100	22,800	57
	44%	76%	

Source: Labour Force Survey Spring 2005. Inferred data. Note figures include the self-employed. Totals may not sum due to rounding. * Not elsewhere classified.

Figure 2.9 shows that around 44% of employees and 76% of self-employed workers in the sector work in ‘sector specific’

occupations (approximately 39,900 jobs). These are occupations where over two thirds of employment is within construction and building services and where sector based initiatives might be particularly appropriate.

Managers in construction account for the largest proportion of the industry’s overall workforce (9%). Other significant specialist occupations include carpenters and joiners (7%) and plumbing, heating and ventilation engineers (6%).

Figure 2.10 shows occupations which are not specific to the construction and building services sector and where cross sector initiatives to support workforce development may be more appropriate.

Figure 2.10: Employment in other occupations

Occupation	Employees	Self employed	% of sector's employment
General office assistants or clerks	2,000	200	3
Labrers build & woodworking trades	1,000	1,100	3
Personal assistants & other secretaries	1,300	300	2
Accounts wages clerk, bookkeeper	1,100	100	2
Prod. works & maintenance managers	800	200	2
Metal working prod & maintenance fitter	600	400	1
Chartrd surveyors (not qntity surv)	700	200	1
Engineering professionals n.e.c.*	600	200	1
Estimators, valuers and assessors	600	100	1
Managers and proprietors in other services nec*	300	400	1
Other non sector specific	12,700	4,000	25
Total non sector specific	21,900	7,200	43
	56%	24%	

Source: Labour Force Survey Spring 2005. Inferred data. Note figures include the self-employed. Totals may not sum due to rounding. * Not elsewhere classified.

Figures 2.9 and 2.10 also show that the proportion of the workforce in self-employment varies widely between occupational groups. In most cases the **majority of people working in skilled trade occupations are self-employed.**

It is not possible to split the occupational analysis between the *construction (ConstructionSkills)* and *building services (SummitSkills)* sub-sectors. Clearly plumbing, heating and ventilation engineers, and electricians and electrical fitters will be more common in *building services*. However, many general construction business establishments will also employ people in these occupations.

Commuting

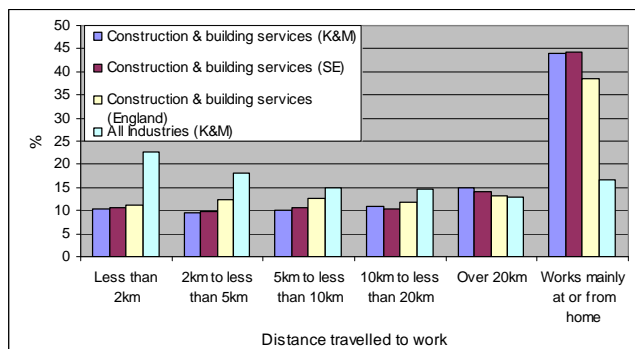
Analysis of the 2001 Census reveals that currently around 91% of those working in the construction and building services¹³ sector in Kent and Medway also live in the area. The proportion of workers living and working in the same area is highest within the East Kent area (81%) and lowest in West and Mid Kent (61%).

In general, commuting is more common amongst higher paid occupations (i.e. managerial and professional occupations). Lower skilled workers are more likely to live and work in the same area.

Many construction and building services workers in Kent and Medway (as well as regionally and nationally) report that they work from home (around 44%, see Figure 2.11).

This could be somewhat misleading. The self-employed may travel significant distances to work depending on the project they are working on at any one time but record their place of work as their home. The mobility of self-employed workers can present additional difficulties for those wishing to promote workforce development in the sector.

Figure 2.11: Distance travelled to work



Source: ONS Census 2001, Standard Tables, Workplace population.

¹³ Census 2001 data only allows for analysis of ‘Construction’ in the broadest term (SIC 45) and therefore does not include the repair of electrical household goods and architectural and engineering activities
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3. Sector Skills Issues

Regional Overview

Although employment within the sector is not forecast to grow significantly across the South East, a constant supply of skills is required to address issues of natural labour turnover and more provision may be required in some areas to meet current skill shortages.

The NESS offers some insight into sector **skill shortages** (a lack of suitably skilled people in the labour market) and **skill gaps** (skill deficiencies in the existing workforce).¹⁴

The National Employers Skills Survey (NESS 2005) suggests that around 14% of construction and building services employers in the South East have unfilled vacancies. Of these, over half (53%) were considered to be hard to fill and around a third (33%) were considered to be skill shortage vacancies, where there was a shortage of suitably skilled people in the labour market.

Around 15% of the sector’s employers report skills gaps amongst their existing workforce. A lack of experience on the job is the cause of skill gaps most often highlighted by employers.

The construction and building services workforce in the South East is dominated by intermediate skilled workers (59% have level 2 and 3 qualifications), around a quarter are high skilled (25%) and the remaining 16% have low level skills.

Around 65% of employers report funding or arranging job related training for employees over the past 12 months. As in many industries, high skilled workers are more likely to report that they have recently undertaken training.

Skill needs in Kent and Medway

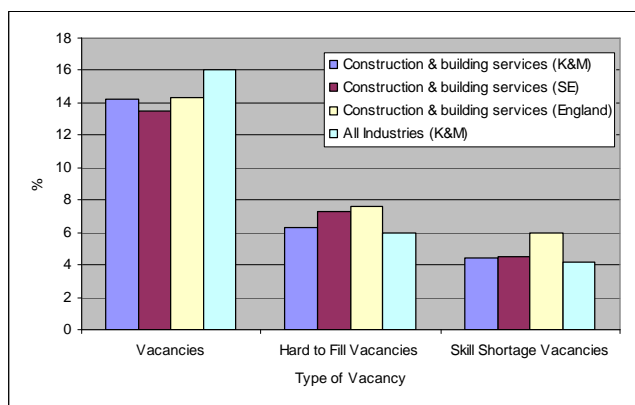
Construction and building services employers are slightly less likely to report unfilled vacancies than employers in all industries (Figure 3.1). Hard to fill vacancies are reported by around 6% of construction and building services employers in Kent and Medway (around 600 employers). This is slightly below the proportion of employers reporting hard to fill vacancies at a regional or national level (7% and 8% respectively).

Around 4% of construction and building services employers in Kent and Medway **report skill shortage vacancies**. This is slightly lower than the proportion of construction and building services employers reporting skill shortages in England as whole (6%). *This could suggest that the highly publicised skills shortages in the sector are starting to be met within Kent and Medway and the South East.*

Other evidence on recruitment difficulties in the sector presents a contradictory picture. The *ConstructionSkills* Skills Foresight Report suggests that around 59% of employers in the South East have recent experience of long-term vacancies.

The difference could partly be a result of question wording. Small businesses are less likely to have a vacancy at a specific point in time, and the NESS asks managers specifically about vacancies at the time of interview.

Figure 3.1: Skill Shortages



Source: NESS 2005. Note figures do not include the self-employed or businesses with only one employee.

Hard to fill and skill shortage vacancies are more common in *building services*. The Institute of Plumbers and Heating Engineering suggests that the plumbing industry in particular suffers from severe skills shortages, which have been fuelled by the poor image of the sector.¹⁵ *ConstructionSkills* suggest that plumbers, roofers and plant mechanics are causing particular recruitment difficulties in *construction*.¹⁶

Skill gaps are also less commonly reported in the construction and building services sector than in the economy as a whole (10% of employers compared with 17% across all industries). Furthermore, the proportion of construction and building services employers reporting skill gaps is lower in Kent and Medway than at a regional or national level.

Skill gaps are also more often reported by employers in the *building services* (*SummitSkills*) sub-sector (19%) compared with 8% in the *ConstructionSkills* sub-sector. This pattern is reflected at both regional and national levels (Figure 3.2).

Figure 3.2: Skill Gaps

	Kent and Medway	South East	National
<i>Construction (ConstructionSkills)</i>	8	13	13
<i>Building Services (SummitSkills)</i>	19	24	20
Construction and building services	10	15	14
All Industries	17	18	16

Source: NESS 2005. Note figures do not include the self-employed or businesses with only one employee.

Construction and building services employers within the South East are most likely to report that the impact of skill gaps is an increase in the workload for other staff (63%). They are more likely than employers across all industries to report that skill gaps also increase operating costs (44% compared with 36%) and/or result in the outsourcing of work (20% compared with 10%).

¹⁴ The NESS does not include the self-employed or businesses with only one employee.
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¹⁵ www.iphe.org.uk/consumer/cowboys.html. Accessed 3/2/06

¹⁶ Employers Skill Needs Survey, *ConstructionSkills*, Autumn 2004.

The most commonly cited cause of skill gaps in the construction and building services workforce is that staff lack experience and/or have recently been recruited (77% of construction and building services employers with skills gaps). This is supported by *ConstructionSkills* research findings, which suggest that 45% of construction employers in the South East report that new employees lack a variety of required skills, despite being qualified¹⁷.

Figure 3.3: Skill gaps by occupation

	Managers and senior officials	Professionals	Skilled trades
% of workforce with skills gap in occupation	14%	11%	34%
% of workforce in occupation	15%	11%	44%

Source: NESS 2005. Note figures do not include the self-employed or businesses with only one employee.

Figure 3.3 shows the incidence of skill gaps in the three largest occupational groups in the sector compared with the proportion of the workforce found in each occupation. Around a third (34%) of skill gaps identified by employers are related to skilled trades occupations. However, they are less common than might be expected from the proportion of the workforce employed in skilled trades (44%).

Around 14% of reported skill gaps relate to managerial occupations and a further 11% to professional occupations. Some 56% of managers and senior officials in the sector are not qualified to Level 4 (approximately 6,200 people).

Skills in particular need of improvement include technical and practical skills (cited by 59% of employers with skill gaps) and problem solving skills (cited by 36%).

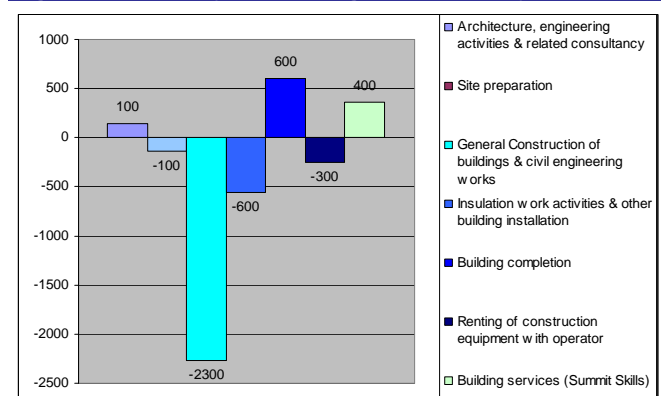
Employment Change

The ABI suggests that **construction and building services employment fell in Kent and Medway by 5% between 1999 and 2004** (a loss of around 2,100 jobs) and in the South East by around 3% over the same period. However, nationally employment in the sector grew by around 5%.

Figure 3.4 shows how employment change differed in Kent and Medway. There were around 2,500 fewer jobs in *construction (ConstructionSkills)* in 2004 than in 1999 (7% decrease). Within this group the largest decline in employment was in general construction and civil engineering (overall loss of 2,300 jobs), although increases in employment were posted in the building completion and architectural and engineering activities sub-sectors (approximately 700 additional jobs). Employment also increased in *building services (SummitSkills)*, where around 400 new jobs were created.

Although overall construction and building services employment appears to have declined, year-on-year changes in employment have been quite erratic. The reasons for this are unclear. The pattern could relate to inaccuracies in National Statistics data or the flow of self-employed people in and out of the construction and building services workforce.

Figure 3.4: Employment change 1999-2004 by sub-sector



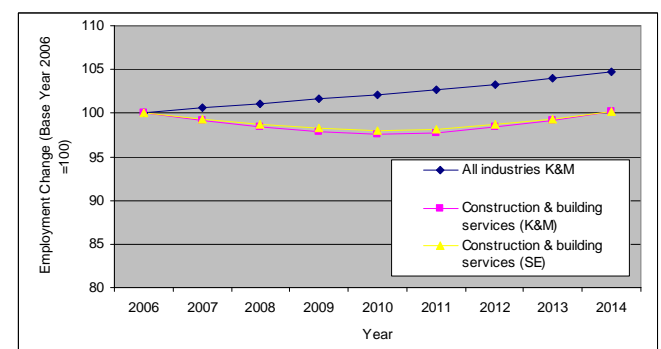
Source: ABI 1999 and 2004. Note: Figures do not include the self-employed.

Nationally, employment in both the *construction (ConstructionSkills)* and *building services (SummitSkills)* sub-sectors increased over the same time period (by 3% and 19% respectively).

Forecast data from Working Futures 2 suggests that **construction and building services employment in 2014 in Kent and Medway will be at a similar level to that in 2006**. Figure 3.5 shows that employment in the sector, both within Kent and Medway and across the South East, will dip over this period, with employment levels falling slightly until 2010 before recovering to current levels by 2014.

The forecasts for construction and building services are quite different from the total for all industries (an overall increase of 5%). **It is possible that the forecasts do not take enough account of recently announced major construction and building services projects** within Kent and Medway and the South East (e.g. relating to the 2012 Olympic Games or revisions to SEERA South East Plan).

Figure 3.5: Forecast employment 2006-2014



Source: IER/Warwick University, Working Futures 2. Note figures do not include architectural and engineering services or repair of electrical household goods.

Figure 3.6 shows that while a decline in employment is expected in some occupational groups, others are expected to increase.

¹⁷ Skills Foresight Report, Construction Skills, 2003. Second Edition 2006

Figure 3.6: Forecast employment by occupation

Occupation	% change in employment 2006-2014	Estimated Jobs in K and M
Managers and Senior Officials	9	1000
Professional occupations	3	200
Associate Professional and Technical	2	100
Administrative and Secretarial	-13	-900
Skilled Trades Occupations	3	900
Sales and Customer Service Occupations	6	<100
Machine and Transport Operatives	-3	-100
Elementary Occupations	-25	-900

Source: IER/Warwick University, Working Futures 2. Figures do not include architectural and engineering services or repair of electrical household goods. Personal Service occupations omitted due to small sample size.

Employment in elementary occupations is expected to decline most rapidly (by 25%), although this might not take into account the requirements of those assembling the new modular housing systems. Significant job losses are also expected within administrative and secretarial roles (13% or 900 jobs).

In contrast, employment in managerial occupations is forecast to grow by around 9% or 1,000 jobs. Growth is also forecast in the sector's largest occupational group (skilled trades), equating to an additional 900 jobs in the sector.

Whilst overall construction and building services employment will remain relatively stable in Kent and Medway, the majority of annual demand for new staff is to address natural turnover in the labour market, where people leave their current job through retirement, sickness and job changes for example.

Qualitative evidence suggests that **new construction materials and building practices will also create a demand for different types of skills and training.** The increasing use of pre-fabrication, particularly in social housing and civil engineering projects, is leading to a growth in semi-specialist assembly roles, for example. Whilst these jobs may not be highly skilled, they often require workers who are generalists and know a little about a range of construction trades.¹⁸

New construction materials are often branded products that require skills unique to the brand, and training is provided by the manufacturers concerned. However, some employers and manufacturers believe this is creating a bottleneck to innovation in the sector that learning providers could help to overcome through 'top-up' or ancillary courses alongside their mainstream provision.¹⁹

Skills and qualification issues

The analysis of skills in this paper uses qualifications as a proxy measure for skill level. Whilst this is not ideal, qualifications are the best measure available. Three broad skill levels are used:

Low skill (NVQ 1 or less including those with no qualifications). Common skills requirements for these jobs

at this level include basic literacy, numeracy and IT skills and a range of generic skills.

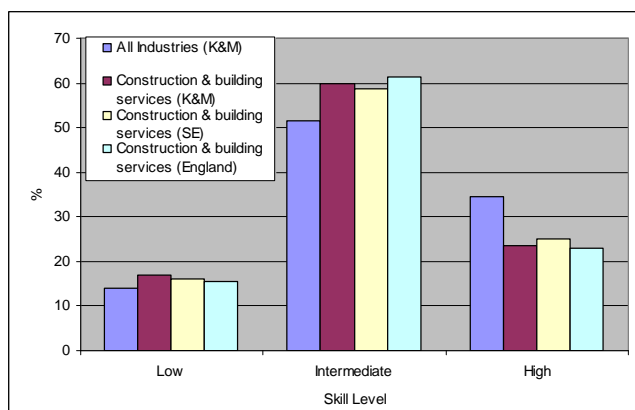
Intermediate skill (NVQ 2-3). Skill requirements in these occupations are often vocational or technical in nature. They may also require higher level generic skills including analytical and problem solving abilities.

High skill (NVQ 4+). These skills are important in managerial and professional and associate professional roles. They are sometimes technical in nature but usually require high level analytical, communication and people management skills.

Over half of the workforce (41,200 people or 60%) in Kent and Medway possess intermediate level skills, reflecting the importance of skilled trades in the industry. High level skills are less common than in all industries (23% compared with 35%) and around 17% of the workforce (11,600 people) have low level skills. This is broadly reflective of the sector both regionally and nationally.

Around 11% of those working in the sector hold no formal qualifications (7,700 people) compared with 8% across all industries. The proportion of workers with no qualifications gives an indication of the likely extent of basic skills needs in the sector.

Figure 3.7: Skill Levels – Broad Analysis



Source: LFS Spring 2005. Inferred data. Note: Figures include the self-employed.

Sub-sector data is unfortunately only available for the 'architectural and engineering' minor sub-sector. Skills levels within this sub-sector contrast sharply with the rest of the construction sector. Around 65% of the 'architectural and engineering' workforce has high level skills.

Learning Provision

The predominance of intermediate level skills in the sector means that **Further Education (FE) and Work Based Learning (WBL) courses are particularly important sources of newly qualified staff.** However, not all those completing relevant courses will join the sector and new entrants to the construction and building services sector can come from a range of different backgrounds.

In 2004/05 around **6,371 learners** were undertaking **Further Education courses** in areas related to the construction and building services sector in Kent and Medway (Figure 3.8).

¹⁸ ESAN Partnership 2005 Op. Cit
¹⁹ ESAN Partnership 2005 Op. Cit
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Figure 3.8: FE Provision 2004/05

Area of Learning	Number of Learners	Level 1 & entry level	Level 2	Level 3	Level 4+	Other
Engineering	1,869	14%	36%	35%	4%	0%
Construction Planning & the built environment	466	62%	1%	4%	0%	33%
Architecture	48	0%	0%	100%	0%	0%
Building & Construction	3,989	16%	59%	17%	5%	3%
Total						
Construction	6,371	19%	51%	22%	4%	4%
All Industries	-	39%	27%	17%	2%	15%

Source: LSC – Kent and Medway ILR.

Just over half (51%) of all learners studying construction and building services related courses were studying towards qualifications at Level 2. This is much higher than the average found across all areas of learning (27%).

Overall, around **96% of learners following construction and building services related qualifications were male** compared with just 43% of all FE learners.

Figure 3.9 shows that around 441 learners were enrolled on construction and building services related **Work Based Learning** qualifications in 2004/05²⁰ (7% of all learners). Of these learners around 87% were studying at Level 2 (e.g. Foundation Apprenticeships) and the remaining 13% were enrolled on Level 3 courses.

As with FE, the majority of learners following construction and building services related WBL programmes were male (99%).

Figure 3.9: WBL Provision 2004/05

Area of Learning	No Learners	Level 1 and entry level	Level 2	Level 3	Level 4+	Other
Construction	441	0%	87%	13%	0%	0%
All Industries	-	4%	58%	24%	1%	14%

Source: LSC – Kent and Medway ILR. Note: Figures are a snapshot of learners as of January 2005 to take account of the fact that WBL provision is not governed by term dates.

Another route for workforce development within Kent and Medway was the *Profit from Learning* (PfL) initiative. This Government backed training initiative allowed employers to access funded training as well as claim compensation for the time staff spend on the training²¹. Profit from Learning statistics for Kent and Medway reveal that 42 construction businesses participated in the PfL initiative, the majority of which were micro and small businesses (35).

²⁰ Figures are for January 2005 (Period 6 of the academic year) and provide a 'snapshot' of those in learning to take account of the fact that WBL does not follow term times. The number of learners has then been identified based on the highest qualification level of the learner. Where a learner's highest level of learning is in Construction, the learner has been included.

²¹ The Profit from Learning initiative was launched in Kent and Medway in September 2003 as a pilot scheme. The programme was available to companies in the area up until 31st March 2006. Train 2 Gain has now replaced Profit from Learning.

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Overall around 250 employees undertook training as part of the programme. Around 90% of learners undertook NVQ Level 2 qualifications and a further 8% undertook basic skills training.

As is the case across FE and WBL provision, the majority of learners following Profit from Learning courses were male (82%). *The dominance of male learners across FE, WBL and PfL Construction and building services related provision indicates that there is still room for improvement, especially in terms of building a more diverse workforce.*

Figure 3.10 shows that around 660 learners were undertaking construction and building services related courses with **Adult and Community Learning (ACL)** providers in Kent and Medway during 2004/05. As with ACL learning more generally, the majority of learners undertaking construction and building services related courses were following entry or Level 1 qualifications (97%).

Figure 3.10: ACL Provision 2004/05

Area of Learning	No of Learners	Level 1 and entry level	Level 2	Level 3	Level 4+	Other
Construction	660	97%	3%	0%	0%	0%
All Industries	-	83%	13%	3%	<1%	<1%

Source: LSC – Kent and Medway ILR.

More than half (59%) of the learners undertaking ACL construction and building services related courses were female.

An important priority in current government policy is developing a “**vocational ladder**” into employment for young people from the age of 14, from vocational GCSEs and Young Apprenticeships through Foundation and Advanced Apprenticeships to Foundation Degrees.²²

Foundation Degrees are vocational Higher Education qualifications at a level 3-4. They aim to integrate academic and work based learning through close collaboration between employers, universities and FE colleges. Since 2003, the government has been working to expand the number and range of Foundation Degrees available. Some examples of Foundation Degrees on offer at Further Education and Higher Education institutions in Kent and Medway with relevance to the construction and building services sector include:

- Civil Engineering
- Construction

Most of the above Foundation Degrees can be studied as either full-time courses lasting two years, or part-time, over 3 years²³.

Current Training Levels

One in five (20%) construction and building services workers report having undertaken job-related training in the last three months, compared with 29% of the workforce across all industries.

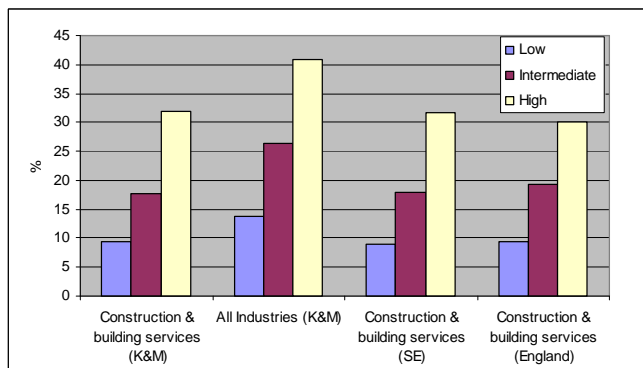
As in many sectors, highly skilled workers are more likely to receive work-related training. However, in construction and

²² Department for Education and Skills website – www.dfes.gov

²³ UCAS website – www.ucas.ac.uk

building services the level of job-related training undertaken at all skill levels is lower than that found in all industries (Figure 3.11).

Figure 3.11: Job-related training in previous 13 weeks



Source: LFS Spring 2005. Inferred data. Note: Figures include the self-employed.

There is no significant difference between Kent and Medway, the South East and England as a whole in the proportion of construction and building services workers undertaking job-related training.

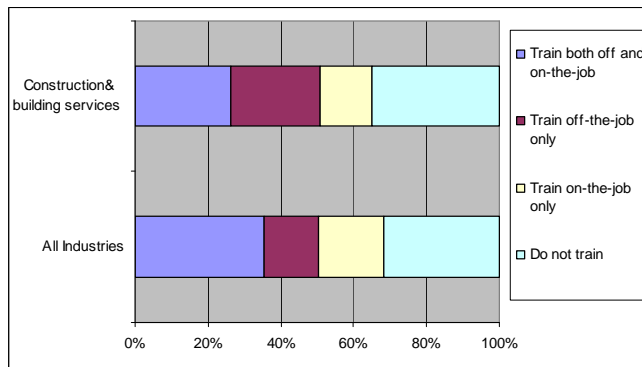
Just under two thirds (65%) of construction and building services employers in Kent and Medway report having funded or arranged training for their employees in the last 12 months. This is slightly lower than the average for all industries (68%) but on a par with construction and building services employers in the South East (65%) and higher than the sector nationally (60%).

Employers in *building services (SummitSkills)* are more likely to have funded or arranged training for staff than in the *construction (ConstructionSkills)* - 75% compared with 63%. This trend is reflected at both the regional and national level.

The higher levels of training in the *building services (SummitSkills)* sub-sector could be related to the level of legislation governing the sector (particularly within electrical installation). Building Regulations require people carrying out certain types of electrical work to be certified to do so. They are also updated relatively frequently.²⁴

Figure 3.12 shows the breakdown of training funded or arranged by employers in Kent and Medway. **Training that is solely off-the-job is more common in the sector than across all industries** (reported by 24% of construction and building services employers compared with 15% of all employers).

Figure 3.12: Type of training funded or arranged



Source: NESS 2005. Note figures do not include the self-employed or businesses with only one employee.

Around a third of construction and building services establishments in Kent and Medway identify that they have a training plan in place, which specifies in advance the level and type of training employees will need in the coming year. This is lower than the proportion found across all industries (41%). A lower than average proportion of construction and building services employers report having a budget for training in place (21% compared with 30% across all industries).

²⁴ www.learn-direct-advice.co.uk
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4. Sector Prioritisation

In recent years the LSC has introduced a wide range of initiatives to improve the responsiveness of vocational learning provision to the needs of employers from all sectors. Nevertheless, the LSC has also sought to identify key industries and occupations where the allocation of additional resources and the development of a more bespoke 'employer offer' could make most impact.

In 2005, the LSC, in conjunction with SEEDA, undertook an exercise to formalise and update its process for identifying priority sectors in South East England²⁵. **The sector prioritisation balanced scorecard should not be used in isolation from other evidence and from taking a broad view of the data.** In a separate exercise the LSC Kent and Medway as part of the Local Skills Productivity Alliance concluded that construction was one of four current priority sectors for workforce skills.

The balanced scorecards (Figures 4.1 and 4.2) have suggested that there is a clear case for regarding construction and building services as a priority sector both regionally and within Kent and Medway. In the South East the sector scores above average in regard to productivity and to unmet skills needs and in Kent and Medway the sector scores above average across all three indicators – see Methodology box overleaf.

The sum of the scores across each indicator gives the sector an overall score of 6 for the construction and building services sector²⁶ in the South East (see Figure 4.1).

Figure 4.1: Sector Scorecard – Construction and building services SE

Indicator	Measure	Construction and building services (South East)	13 Industry Average
Economic Scale	Output (GVA) Share	6%	7.7%
	Employment share	4%	7.7%
	Relative empl. concentration (SE-UK)	0.92	1.00
Growth Potential	Productivity (GVA per employee)	£59,025	£38,929
	Forecast empl. growth 2004-2014	1%	7%
Skill needs	% of employees with sub-level 2 qualifications	25%	20%
	% employees with level 2 or 3 qualifications	60%	48%
	Hard to Fill vacancies as % total employment	1.3%	1.3%
Score		6	6.3

Source: South East Sector Prioritisation Framework 2006
Note on scoring: Unshaded=0; Light green=1; Darker green=3

²⁵ Building upon existing regional and national frameworks including SSDA, DTI cluster methodology, RES, FRESA and Workforce Skills programme.

²⁶ The construction and building services sector definition used in the Prioritisation Framework excludes SIC 7420 'architectural and engineering activities' and SIC 5272 'Repair of electrical household goods'.
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All three of the skill needs measures are highlighted as contributing to this score, suggesting that the sector has unmet skill needs *and* is heavily reliant on intermediate level skills where LSC funded provision could make a significant impact.

Productivity in the sector is also higher than average with Gross Value Added of £59,025 per employee compared with an average of £38,829 across all industries. Compared to other sectors, construction and building services is less vulnerable to competition from low cost locations and more likely to rely on high technology and knowledge based activities. In the case of construction and building services productivity levels may also reflect capital investment in plant and machinery.

The overall score for construction and building services is the joint 6th highest of 13 broad sectors in the South East. The score for the construction and building services sector in Kent and Medway is actually higher than the regional score and places it 5th within the sub-region (see Figure 4.2).

Figure 4.2: Sector Scorecard – Construction and building services KM

Indicator	Measure	Construction and building services (Kent and Medway)	13 Industry Average
Economic Scale	Output (GVA) Share	7.6%	7.7%
	Employment share	6%	7.7%
	Relative empl. concentration (SE-UK)	1.42	1.00
Growth Potential	Productivity (GVA per employee)	£55,901	£32,523
	Forecast empl. growth 2004-2014	2%	6%
Skill needs*	% of employees with sub-level 2 qualifications	25%	20%
	% employees with level 2 or 3 qualifications	60%	48%
	Hard to Fill vacancies as % total employment	1.3%	1.3%
Score		8	6.4

Source: South East Sector Prioritisation Framework 2006

Notes: On scoring, Unshaded=0; Light green=1; Darker green=3. *Skill needs figures are regional due to small local sample size

Principally this is a result of the relatively high concentration of construction and building services employment and activity within Kent and Medway.

The prioritisation project also created regional skills needs indicator for individual Sector Skills Councils, although the specific measures were slightly different.

Figure 4.3 shows that both the *construction* and *building services* sub-sectors score on this indicator, suggesting that they are of direct relevance to LSC policy and programmes. The employees with level 3 qualifications measure is just over the threshold for a higher score within the *building services (SummitSkills)* sub-sector. Indeed, *SummitSkills* is the highest scoring SSC on this indicator, suggesting that the

building services sub-sector represents a significant demand for qualifications at this level.

Figure 4.3 Skills needs indicator for SSCs

Indicator	Measure	Construction Skills SSC	Summit Skills SSC
Skill needs	% of employees with sub-level 2 qualifications	22%	25%
	% employees with level 3 qualifications*	35%	39%
	% Businesses with Hard to Fill vacancies*	6.9%	5.0%
Score		2	4

Source: South East Sector Prioritisation Framework 2006

Notes: On scoring, Unshaded=0; Light green=1; Darker green=3. *indicates slightly different measure from main scorecards.

Construction and building services has also been indirectly identified as a regional priority through the occupational scorecards developed for the Prioritisation Framework. Figure 4.4 shows that skilled construction and building trade occupations are expected to see significant employment growth and are already experiencing higher than average recruitment difficulties. The vast majority of employment in these occupations is within the construction and building services sector.

The full scorecard ranks skilled building and construction trades as the joint 4th priority occupation (of 25 occupational groups) across the region. This occupational group has a similar score and rank in the scorecard for Kent and Medway (score of 9 and rank of joint 5th respectively).

Figure 4.4: Regional Occupational Scorecard – Skilled construction and building trades

Indicator	Measure	Skilled construction and building trades	25 occupation average
Economic Scale	Employment share	4%	4%
Growth Potential	Forecast empl. growth 2004-2014	25%	7%
Skill Needs	% of employees with sub-level 2 qualifications	28%	20%
	% employees with level 2 or 3 qualifications	66%	47%
	Hard to Fill vacancies as % total employment	1.9%	1.3%
Score		9	5.6

Source: South East Sector Prioritisation Framework 2006

Note on scoring: Unshaded=0; Light green=1; Darker green=3

Skilled metal and electrical trade occupations also scored highly in the prioritisation exercise. This group includes plumbers and electricians but also a number of occupations more likely to be employed in engineering and manufacturing sectors.

Methodology

The revised **South East Sector Prioritisation Framework** scores broad industrial sectors and occupations on a range of economic indicators that measure relative importance to the LSC and partners in terms of three dimensions:

1. **Economic scale:** The indicators prioritise larger sectors which are more likely to require significant resource allocations
2. **Growth potential:** The indicators highlight growing sectors as more likely to support future regional competitiveness
3. **Skills and learning needs:** The indicators identify sectors with unmet skills needs and/or intermediate level skills needs where LSC provision can make most difference

For each dimension there are several measures, each given equal weight. Each indicator has been given a score as follows:

0	significantly below the average,
1	at or above the average,
3	significantly above average (1.5 times the mean)

For more details on the South East Sector Prioritisation Framework, please see the Overview paper.

5. The LSC Offer

This paper has suggested that the construction and building services sector relies to a significant extent on intermediate level skills and the training funded and co-ordinated by the Learning and Skills Council in conjunction with *SummitSkills* and *ConstructionSkills*.

The sector has been identified as a regional priority and is also clearly of strategic importance within Kent and Medway. This has led to significant investment and capacity building in new learning provision.

The core offer

The LSC will continue to provide a wide range of learning opportunities for young people (aged 14-19) wishing to enter the construction and building services sector. This will give employers access to Level 2 and Skills for Life training for staff who do not hold qualifications at Level 2 or above (equivalent to 4 GCSEs A*- C). This training is fully funded for eligible individuals. All seven Further Education colleges offer a range of provision to the sector and a range of LSC funded Apprenticeships will continue to be available through colleges and private training providers.

Following a series of Employer Training Pilots (e.g. Profit from learning) the LSC is also introducing a National Employer Training Programme (Train 2 Gain). This will give employers across all sectors access to free Level 2 training for staff who do not hold qualifications at level 2 or above. The government has also pledged to match the offer for those who want to study full-time at college in order to gain equivalent qualifications.²⁷

The LSC is also developing a national quality kitemark to recognise colleges that are responsive to local employer needs, building on standards such as Action for Business Colleges (A4BC) in the South East. Three colleges in Kent and Medway are accredited A4BC colleges (Canterbury, West Kent and Mid-Kent College).²⁸

Beyond the core

Specialist expertise and capacity in construction and building services skills provision will continue to be developed through Centres of Vocational Excellence (CoVEs). Two colleges in Kent and Medway are recognised CoVEs for the construction and building services sector. Mid Kent College has been awarded CoVE status for Electrical Installation and South Kent College for Construction. These colleges are also involved in delivering construction and building services related Foundation Degrees in conjunction with the University of Kent at Canterbury.

West Kent College has opened a Construction Crafts and Engineering centre in Tunbridge Wells. The centre provides a range of courses including plumbing, bricklaying and carpentry.

Kent is also home to the National Construction College (NCC) at Erith, near Dartford. The NCC is run by *ConstructionSkills* and offers a wide range of sector specific training for both young people and adults.²⁹

²⁷ DFES 2005. 'Skills: Getting on in Business, Getting on at Work' White Paper available at www.dfes.gov.uk/publications

²⁸ LSC 2006 'Regional Statement of Priorities: South East Region.'

www.lsc.gov.uk

²⁹ ESAN Partnership 2005. Op. Cit. Second Edition 2006

Sector Skills Agreements

Ensuring that employers have access to provision that meets their needs is one of the key priorities of the LSC. Therefore the LSC has a significant role to play in the development and delivery of Sector Skills Agreements which establish the demand for skills and how these skills will be supplied.

The development of a Sector Skills Agreement is a five stage process involving;

1. Assessment of current and future skills needs
2. Assessment of current provision
3. Analysis of gaps and weaknesses
4. Assessment of the scope for collaborative action
5. Development of an action plan

At a national and regional level the LSC is committed to supporting the activities outlined in the *ConstructionSkills* Sector Skills Agreement. The Agreement outlines 11 areas where collaborative solutions are sought to the three broad priorities for the sector (see Section 1). The LSC is identified as a partner in 9 of these areas. Figure 5.1 (overleaf) summarises the activities envisaged. It remains to be determined which activities the LSC will implement and/or lead on at a regional or local level.

The Agreement builds in particular on two key schemes for training and accrediting the existing construction workforce developed by *ConstructionSkills* and partners (Figure 5.2).

Figure 5.2: Current Accreditation Schemes

The Construction Skills Certification Scheme (CSCS)

This national scheme was introduced in response to the increasing demands of clients and contractors for workers to have appropriate qualifications. The scheme provides workers with ID and registration cards that state that the worker is qualified in an activity (a range of cards are available, from trainee level to professional membership). In order to gain a card, workers must prove their competence (e.g. NVQ) as well as pass a health and safety test. Around half of workers in the South East claim to have a skills card or certificate.³⁰

On-Site Assessment and Training (OSAT)³¹

The national OSAT scheme was introduced in the South East of England in the year 2000, and offers a fast-track route to gaining a qualification for those workers who have the necessary skill and experience to do their job but no formal qualifications. Workers are visited by an assessor who assesses what skills the worker already has and identifies any additional gaps which they must demonstrate to achieve a formal qualification. Staff can work at their own pace but the process typically takes around 4/5 assessor visits over 6 months or less.

The LSC is also committed to supporting the development of a Sector Skills Agreement for the building services sector together with *SummitSkills* in 2006/7. *SummitSkills* are also currently promoting a system of skillscards that operate in tandem with the CSCS scheme run by *ConstructionSkills*.

SummitSkills, in partnership with other Sector Skills Councils, are currently in the consultation stage for the development of

³⁰ Workforce mobility and skills in the construction sector in London and the South East region, IFF Research for CITB and SEEDA, Jan 2004.

³¹ CITB Website.

two 14-19 vocational diplomas, which are set to be launched in September 2008³² (see Figure 5.3).

Figure 5.3: Vocational Diplomas

Vocational diplomas were introduced by the government as qualifications that would be of value to employers. The diplomas are intended to provide a clear pathway to employment and further learning. There are three levels of diploma; Levels 1 and 2 combined equates to 5 GCSEs and Level 3 is the equivalent of 3 A 'levels. Each level will include functional skills such as Maths and English, employability and personal skills and vocational related work experience. These diplomas will be delivered through partnerships of employers, schools and colleges.

SummitSkills is working in conjunction with built environment and engineering related SSCs to develop two diplomas for 14-19 year olds; built environment and engineering, which are set to be launched in 2008.

Source: <http://www.summitskills.org.uk/Projects/184#consist>

³² <http://www.summitskills.org.uk/Projects/184>
Second Edition 2006

Figure 5.1: The LSC and the Sector Skills Agreement for Construction

Broad Priority	Collaborative Solution	LSC role
1. Shaping up the Industry's Business Performance	1. Increasing the number of companies investing in training – principally through the development of a 'one stop shop' to training advice.	<ul style="list-style-type: none"> Simplify the construction offer in terms of advice, training and funding support. Work with <i>ConstructionSkills</i> to develop a sector offer as part of the NETP, including a brokerage service and sector diagnostics.
	2. Develop the management and leadership skills of construction managers in supply chains.	<ul style="list-style-type: none"> Signpost access to relevant training and development. Commitment to promoting the management and leadership skills offer as part of a fit for purpose Sector Qualifications Strategy – integral to the NETP offer.
	3. Supporting life long learning in construction by developing training schemes with a wider range of professional companies.	<ul style="list-style-type: none"> Support the establishment of a Lifelong Network for Construction. Development of part-time Foundation Degrees to support progression and upskilling within the industry.
	4. Developing skills for sustainability by delivering a sectoral strategic plan.	<ul style="list-style-type: none"> None identified.
2. Brushing up the Industry's Existing Skills	5. Intensifying and widening the industry's qualifying the workforce initiative by improving provider's capacity to get on-site.	<ul style="list-style-type: none"> Nationally available funding for the OSAT Programme. Realisation of funding models and eligibility rules. Support for a quality assured site-based delivery and assessment model. Development of a site-based assessment and delivery of basic skills. Commitment to supporting the rollout regionally and locally to support targets in the sector . Development of Purchasing Plan to align public and employer funding from September 2006. Redirection of funding to priority courses identified within the Sector Qualification Strategy.
	6. Developing flexible training structures for specialist occupations by providing adequate funding support for training and approved courses.	<ul style="list-style-type: none"> Contribute to on going research into existing patterns of provision. Work with CoVE network to develop strategies to support delivery of specialist training needs. Develop the means to deliver and fund manufacturer based training and development of heritage skills. Recognise in the funding regime the high capital and operating costs of some specialist provision. Development of a utilised funding model and a credit-based framework to support incremental learning. To be discussed as part of the provision strategy and purchasing plan.
	7. Assisting the effective integration of migrant workers by developing integration packages.	<ul style="list-style-type: none"> Contribute to research to establish the scope of the challenges to be addressed. Contextualised and funded ESOL provision through proposed regional centres. Commitment to the assessment of prior skills within this target group.
3. Stepping up the Quality of Qualified New Entrants	8. Improving understanding of career opportunities in construction by delivering activities to support curriculum's.	<ul style="list-style-type: none"> Support for the delivery of construction related curriculum activities through the network of Curriculum Centres. Work with the SSC to ensure parity of esteem and provision matched to supply and demand. Development of Young Apprenticeships and Construction and the Built Environment GCSE.
	9. Increasing apprentice completions and widening opportunities for on site practice by development and use of a "programme led" pathway.	<ul style="list-style-type: none"> Alternative delivery and funding models in order to increase framework completions. Shared best practice through CoVE network to address identified barriers to framework completion. Commitment to developing with CITB-<i>ConstructionSkills</i> a fit for purpose apprenticeship framework.
	10. Improving diversity within the Industry by recruitment of female and ethnic minority people into the industry.	<ul style="list-style-type: none"> Support for training providers to actively promote "atypical" careers. Fully funded Adult Apprenticeship pilots which are equal with that available for 16-19 year olds. Discretionary and match-funding criteria for widening participation including employer participation.
	11. Increasing applications for construction related courses.	<ul style="list-style-type: none"> None identified.

Source: *ConstructionSkills* 2005 'The Sector Skills Agreement for Construction England 2005-2010'.

Appendix I. Sector Description

Construction and Building Services Sector: SIC2003 Definition

CITB ConstructionSkills SSC

4511 Demolition and wrecking of buildings; earth moving

Includes demolition or wrecking of buildings and other structures, clearing of building sites, earthmoving, levelling and grading of construction sites, trench digging, rock removal, blasting, etc, building site drainage, drainage of agricultural or forestry land

4512 Test drilling and boring

Includes test drilling, test boring and core sampling for construction, geophysical, geological or any other similar purpose

4521 General construction of buildings and civil engineering works

Includes assembly and erection of prefabricated commercial buildings on the site, assembly and erection of prefabricated domestic buildings on the site construction of civil engineering constructions, assembly and erection of prefabricated civil engineering constructions on the site

4522 Erection of roof covering and frames

Includes erection of roofs, roof covering, waterproofing, including hydrophobic wall treatment

4523 Construction of highways, roads, airfields and sports facilities

Includes construction of motorways, streets, roads, other vehicular and pedestrian ways, construction of railways, construction of airfield runways, construction work other than of buildings for stadiums, swimming pools, gymnasiums, tennis courts, golf courses and other sports installations, painting of markings on road surfaces and car parks, surface work on elevated highways, bridges and tunnels, installation of crash barriers, traffic signs and the like.

4524 Construction of water projects

Includes construction of waterways, harbour and river works, pleasure ports (marinas), locks, etc., dams and dykes, dredging, sub-surface work.

4525 Other construction work involving special trades

Includes construction activities specialising in one aspect common to different kinds of structures, requiring specialised skills or equipment

4532 Insulation work activities

Includes installation in buildings or other construction projects of thermal, sound or vibration insulation

4534 Other building installation

Includes installation of illumination and signalling systems for roads, railways, airports and harbours, installation in buildings or other construction projects of fittings and fixtures not elsewhere classified, general technical repair and maintenance of building installations

4541 Plastering

Includes application in buildings or other construction projects of interior and exterior plaster or stucco including related lathing materials

4542 Joinery installation

Includes installation of not self-manufactured doors, windows, door and window frames, fitted kitchens, staircases, shop fittings and the like, of wood or other materials, interior completion such as ceilings, wooden wall coverings, and movable partitions.

4543 Floor or wall covering

Includes laying, tiling, hanging or fitting in buildings or other construction projects of ceramic, concrete or cut stone wall or floor tiles, ceramic stove fitting, parquet and other wood floor coverings, carpets and linoleum floor coverings including of rubber or plastic, terrazzo, marble, granite or slate floor or wall coverings and wallpaper.

4544 Painting and glazing

Includes interior and exterior painting of buildings, painting of civil engineering structures, installation of glass, mirrors, etc.

4545 Other building completion

Includes installation of private swimming pools, steam cleaning, sandblasting and similar activities for building exteriors, other building completion and finishing work not elsewhere classified.

4550 Renting of construction or demolition equipment with operator

Includes renting of cranes with operator.

7420 Architectural and engineering activities and related technical consultancy

Includes consulting architectural, urban planning and landscape architectural activities, quantity surveying activities, engineering consultative and design activities, engineering design activities for industrial process and production, geological and prospecting activities, weather forecasting activities, geodetic surveying activities and activities of technical consultants other than engineers.

SummitSkills SSC (electrical wiring and plumbing)

4531 Installation of electrical wiring and fittings

Includes installation in buildings or other construction projects of electrical wiring and fittings, telecommunications wiring, electrical heating systems, electric solar energy collectors, lifts and escalators, fire alarms, burglar alarm systems, aerials etc.

4533 Plumbing

Includes installation in buildings or other construction projects of plumbing and sanitary equipment, gas fittings, heating, ventilation, refrigeration or air conditioning equipment and ducts, non-electric solar energy collectors, sprinkler systems.

5272 Repair of electrical household goods

Appendix II: Construction (including Building services) Specialist Occupations

1122 MANAGERS IN CONSTRUCTION

Plan, organise, direct, coordinate the construction and maintenance of civil and structural engineering works including houses, flats, factories, roads, runways, bridges, tunnels and railway works, harbour, dock & marine works and water supply, drainage and sewage works.

There are no pre-set entry standards. Entry is possible with either a degree or equivalent qualification, relevant experience or without academic qualifications. On-the-job training is provided and professional qualifications are available.

TASKS

- receives ITTs, arranges for estimates
- plans site layout and access routes, advises on technical problems and staffing, oversees implementation of site security and safety procedures;
- plans, directs and co-ordinates the construction and maintenance of civil and structural engineering works
- examines designs, drawings and specifications, confirms programme of building work and lays down building lines, levels, etc.;
- monitors and reports on work in progress to ensure that materials and construction methods meet with specifications and statutory requirements and that there are no deviations from agreed plans.

5315 CARPENTERS AND JOINERS

Construct, erect, install and repair wooden structures and fittings used in internal and external frameworks and cut, shape, fit and assemble wood to make templates, jigs, scale models and scenic equipment for theatres.

There are no formal academic entry requirements, though GCSEs/S grades are advantageous. Entry is typically through a Modern Apprenticeship or National Traineeship approved by the Construction Industry Training Board leading to an NVQ /SVQ in General Construction at Level 3.

TASKS

- examines drawings and specifications to determine job requirements;
- selects and measures appropriate wood and cuts, shapes and drills to specification using saws, planes, chisels and other power or hand tools;
- aligns and fixes prepared wood pieces by screwing, nailing, gluing and dowelling to form frames, shop fronts, counter units, decking, theatrical sets, furniture, small wooden craft, scale models and wooden templates;
- checks accuracy of work with square, rule and spirit level;
- maintains and repairs woodwork and fittings.

5319 CONSTRUCTION TRADES NEC

Workers in this unit group undertake a variety of tasks in the construction, alteration, maintenance and repair of buildings, steeples, industrial chimneys and other tall structures.

There are no formal academic entry requirements, though GCSEs/S grades are advantageous. Entry is typically through a Modern Apprenticeship or National Traineeship approved by the Construction Industry Training Board leading to an NVQ/SVQ in General Construction at Level 3.

TASKS

- selects, measures and cuts steel bars, rods and wire to required lengths, positions and fixes reinforcements into position and tensions as required using hydraulic jacks;
- lays bricks, tiles and building blocks to construct, repair and decorate buildings;
- pours and levels concrete, prepares surfaces for painting and plastering, and mixes and applies plaster and paint;
- installs plumbing fixtures, woodwork structures and fittings, and sets glass in frames;

5314 PLUMBERS, HEATING AND VENTILATING ENGINEERS

Workers in this unit group assemble, install, maintain and repair plumbing fixtures, heating and ventilating systems and pipes and pipeline systems in commercial, residential and industrial establishments.

There are no formal academic requirements although GCSEs/S grades are advantageous. NVQs/SVQs in Mechanical Engineering Services are available at Levels 2 and 3. Modern Apprenticeships are available for plumbing and lead to an NVQ/SVQ at Level 3.

TASKS

- examines drawings and specifications to determine layout of system;
- measures and cuts required lengths of copper, lead, steel, iron, aluminium or plastic using hand or machine tools;
- installs fittings such as storage tanks, cookers, baths, toilets, taps and valves, refrigerators, boilers, radiators and fires;
- tests completed installation for leaks and makes any necessary adjustments;
- attaches fittings and joins piping by welding, soldering, cementing, fusing, screwing or other methods;
- repairs burst pipes and mechanical and combustion faults and replaces faulty taps, washers, valves, etc.

5241 ELECTRICIANS, ELECTRICAL FITTERS

Assemble parts in the manufacture of electrical and electronic equipment, and install, maintain, and repair electrical plant, machinery, appliances and wiring.

Academic qualifications may not be required, though some GCSEs/S grades or an equivalent qualification may be an advantage. NVQs/SVQs in Servicing Electronic Systems are available at Levels 1, 2 and 3. Modern Apprenticeships combining practical work experience and technical training are available at Levels 2 and 3. Entrants must have good eyesight and normal colour vision.

TASKS

- examines drawings, specifications and wiring diagrams to determine the method and sequence of operations;
- selects, cuts and lays wires, connects to sockets, plugs or terminals;
- cuts, bends and installs electrical conduit;
- assembles parts and sub-assemblies
- installs electrical plant, machinery and other electrical fixtures and appliances
- examines electrical plant or machinery, domestic appliances and other electrical assembly for faults using test equipment and replaces worn parts and faulty wiring.

5323 PAINTERS AND DECORATORS

Workers in this unit group apply paint, varnish, wallpaper and other protective and decorative materials to interior and exterior walls and surfaces, make signs and showcards, paint designs and lettering on wood, glass, metal, plastics and other materials and stain, wax and French polish wood surfaces by hand.

There are no formal academic entry requirements, though GCSEs/S grades are advantageous. Entry is typically through a Modern Apprenticeship or National Traineeship approved by the Construction Industry Training Board leading to an NVQ/SVQ in General Construction at Level 3.

TASKS

- erects working platform or scaffolding up to 5 metres in height;
- prepares surfaces by cleaning, sanding and filling cracks/ holes with appropriate filler;
- applies primer, undercoat and finishing coats, mixes adhesive or removes self-adhesive backing and positions covering material on wall
- sketches outline of lettering/design onto surface and paints, or presses gold/similar leaf onto adhesive, as required to reproduce design;
- stains, waxes and French polishes wood surfaces by hand.

**8149 CONSTRUCTION OPERATIVES
NEC**

Workers in this unit group operate insulating equipment, fix plasterboard or dry linings to ceilings and walls, help construct, maintain, repair and demolish buildings and clean and resurface eroded stonework, and lay, join and examine pipe sections for drainage, gas, water or similar piping systems.

There are no formal academic entry requirements. Training is typically provided on-the-job. NVQs/ SVQs in General Construction Operations are available at Levels 1, 2 and 3.

TASKS

- fills machine with insulating mixture, positions hose, drills access hole and fills cavities or coats surfaces
- selects appropriate plasterboard or dry lining panels, cutting and fixing as required
- cuts, shapes and fits wood, lays bricks/tiles, cleans exterior surfaces of buildings and resurfaces eroded stone/brickwork, other alteration, repair and demolition of buildings;
- selects appropriate asbestos, clay, concrete, plastic/metal pipe sections and lowers them into prepared trenches using hoisting equipment;
- Connects piping to manholes and attaches pipe junctions and tests joints

5321 PLASTERERS

Apply plaster and cement mixtures to walls and ceilings, fix fibrous sheets and cast and fix ornamental plasterwork to the interior or exterior of buildings.

There are no formal academic entry requirements, though GCSEs/S grades are advantageous. Entry is typically through a Modern Apprenticeship or National Traineeship approved by the Construction Industry Training Board leading to an NVQ /SVQ in General Construction at Level 3.

TASKS

- mixes, or directs the mixing of, plaster to desired consistency;
- applies and smoothes one or more coats of plaster and produces a finished surface, using hand tools or mechanical spray;
- pours liquid plaster into mould to cast ornamental plaster work;
- measures, cuts, installs and secures plaster board and/or ornamental plasterwork to walls and ceilings;
- covers and seals joints between boards and finishes surface;
- checks surface level using line, spirit level and straight edge.

5322 FLOORERS AND WALL TILERS

Lay composition mixtures (other than mastic asphalt) to form flooring, plan, fit and secure carpet, underlay and linoleum and cover and decorate walls and floors with terrazzo and granolithic mixtures, tiles and mosaic panels.

There are no formal academic entry requirements, though GCSEs/S grades are advantageous. Entry is typically through a Modern Apprenticeship or National Traineeship approved by the Construction Industry Training Board leading to an NVQ/SVQ in General Construction at Level 3.

TASKS

- examines drawings and specifications to determine job requirements;
- cleans floor surface, fixes wooden laying guides and mixes, pours and levels granite and terrazzo mixtures, bitumen, synthetic resin or other composition mixtures to form flooring;
- examines premises to plan suitable layout and cuts, lays and secures underlay, carpet and linoleum;
- finishes covering by rolling, smoothing, grouting or polishing;
- mixes cement screed or other adhesive, cuts and positions floor and wall tiles and checks alignment of tiling with spirit level.

5312 BRICKLAYERS, MASONS

Bricklayers and masons erect and repair structures of stone, brick and similar materials and cut, shape and polish granite, marble, slate and other stone for building, ornamental and other purposes.

There are no formal academic entry requirements, though GCSEs/S grades are advantageous. Entry is typically through a Modern Apprenticeship or National Traineeship approved by the Construction Industry Training Board leading to an NVQ /SVQ in General Construction at Level 3.

TASKS

- examines drawings, photographs and specifications to determine job requirements;
- marks and cuts stone using hammers, mallet and hand or pneumatic chisels;
- spreads mortar on foundations and bricks, and places, levels and aligns bricks in mortar bed;
- uses hand and power tools to shape, trim, carve, cut letters in and polish stone;
- levels, aligns and embeds stone in mortar and faces brick, concrete or steel frame with stone to make and repair structures.

**5316 GLAZIERS, WINDOW
FABRICATORS AND FITTERS**

Workers in this unit group install pre-glazed wooden, metal or PVC framework, and cut, fit and set glass in windows, doors, shop fronts, and other structural frames.

There are no formal academic entry requirements. Entry is typically through a Modern Apprenticeship in Glazing Installation or Installing Architectural Glazing Systems leading to an NVQ/SVQ at Level 3.

TASKS

- examines drawings or specifications to determine job requirements;
- scores plain, coloured, safety and ornamental glass with hand cutter and breaks off glass by hand or with pliers;
- smoothes edges of glass and positions and secures in frame or grooved lead strips;
- applies mastic, putty or adhesive between glass and frame and trims off excess with knife;
- fixes mirror panels to interior and exterior walls and repairs and replaces broken glass.

**9129 LABOURERS IN OTHER
CONSTRUCTION TRADES NEC**

Workers in this unit group perform a variety of labouring occupations in building and civil engineering not elsewhere classified in MINOR GROUP 912: Elementary Construction Occupations.

There are no formal academic entry requirements. Training is typically provided on-the-job. NVQs/ SVQs are available in some areas.

TASKS

- covers ceilings, floors, walls and exposed surfaces of boilers, pipes and plant with insulating material;
- lights oil, coal or other heating vessel and breaks up blocks of asphalt, bitumen or tar;
- stirs melting mixture, adds aggregate if required, pours mixture into buckets and turns off heating;
- measures and fixes timber and other structures to support excavations, cables or other rail, signal and telecommunications equipment;
- erects and repairs fencing, excavates, constructs and maintains land drainage systems and prepares graves for burial;
- operates, cleans and lubricates valves and sluices, removes weeds, dead animals and other debris from water and carries out minor repairs to banks and footbridges.

Appendix III: Glossary

Glossary of Abbreviations

ABI	Annual Business Inquiry
CITB	Construction Industry Trading Board
CoVE	Centres of Vocational Excellence
DfES	Department for Education and Skills
E2E	Entry to Employment
EDIMS	Equality and Diversity Impact Measures England
ESOL	English for Speakers of Other Languages
ETP	Employer Training Pilot
FE	Further Education
GCSE	General Certificate of Secondary Education
GNVQ	General National Vocational Qualifications
GVA	Gross Value Added
HE	Higher Education
HEFCE	Higher Education Funding Council for England
HNC	Higher National Certificate
HND	Higher National Diploma
ICT	Information and Communications Technology
ILR	Individual Learner Records
JSA	Jobseekers Allowance
KCC	Kent County Council
KS3	Key Stage 3
LAD	Local Authority District
LFS	Labour Force Survey
LSC	Learning and Skills Council
LSCKM	Learning and Skills Council Kent and Medway
NEET	Not in Education, Employment or Training
NESS	National Employer Skills Survey
NETP	National Employer Training Pilot
NUTS	Nomenclature of Territorial Units
NVQ	National Vocational Qualification
ODPM	Office of the Deputy Prime Minister
ONS	Office for National Statistics
PfL	Profit from Learning
PLASC	Pupil Level Annual Schools Census
SEEDA	South East England Development Agency
SfL	Skills for Life
SFR	Statistical First Release
SSA	Sector Skills Agreement
SSC	Sector Skills Council
SSDA	Sector Skills Development Agency
StAR	Strategic Area Review Technology
UA	Unitary Authority
WBL	Work Based Learning

Glossary of Terms

Annual Business Inquiry Action for Business Colleges

Annual Survey of businesses undertaken by ONS. Flagship programme supported by the South East region's six LSC's and SEEDA, as part of the Workforce Skills Programme.

Basic Skills CoVE

Numeracy, Literacy and ESOL.
Centres of Vocational Excellence - Colleges with specialist provision and facilities aimed at meeting needs of employers primarily to tackle level 3 skills in technical, craft and supervisory roles.

IER/Warwick University (WF II)

Institute of Employment Research at the University of Warwick employment forecast model (based primarily on LFS and ABI)

Labour Force Survey

Quarterly survey of labour workforce

Level 1

4 - 5 GCSE passes grades D – G or NVQ 1

Level 2

5 GCSE grades A* - C, O-Level or NVQ 2

Level 3

A Level or NVQ 3 equivalent

Level 4

Higher Education: first and sub-degree

HNC, HND, NVQ4

Level 5

Postgraduate degree or NVQ 5

Literacy

Ability to read and write

National Employer Skills Survey

NESS is an annual Survey of Employers that allows comparative data analysis at local, regional and national levels with respect to training activity, vacancies, hard to fill vacancies and skills gaps. The survey is funded by the LSC in partnership with the SSDA and DfES, and includes a sample of around 75, 000 employers nationally with local sample boosts.

Ability to understand and use numbers.

Numeracy

Sector Skills Agreement

An agreement between employers (represented by a Sector Skills Council) and key funding partners (LSC) to meet existing and future training needs. Agreements will enable the government, employers, employee representatives and organisations who plan, fund and support education and training to tackle the provision of skills around a common set of objectives.

Sector Skills Councils

Currently 25 councils representing approximately 85% of the economy.

Skills Gaps

Exist where those in work in an organisation do not have the necessary skills to perform their jobs to a satisfactory standard.

Skills Shortages

Exist where there is insufficient supply of skilled labour among the working population.

Train to Gain

Replaced the Employer Training Pilot (marketed in Kent and Medway as Profit from learning).

Useful Publications

‘Kent Economic Report’, Kent County Council

‘Kent Prospects’, Kent County Council

‘Learning and Skills Assessment’, Learning and Skills Council for Kent and Medway

Useful Links

Learning and Skills Council: www.lsc.gov.uk

Learning and Skills Council for Kent and Medway:
www.lsc.gov.uk/kentandmedway

Department for Education and Skills: www.dfes.gov.uk

South East England Development Agency: www.seeda.co.uk

Sector Skills Development Agency: www.ssda.org.uk

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www.lsc.gov.uk/kentandmedway

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