

**Skills Priorities and Challenges
for the Building Services Engineering Sector
in Wales**

Introduction

SummitSkills is the Sector Skills Council for the Building Services Engineering Sector. Its core SIC¹ codes are shown in table 1 below:

Table 1: SummitSkills' SIC03 defined footprint	
45.31	Installation of electrical wiring and fittings
45.33	Plumbing
52.72	Repair of electrical household goods
74.2	Architectural and engineering activities and related technical consultancy

SummitSkills also has responsibility for the following SOC codes² in its core footprint, as shown in table 2:

Table 2: SOC codes directly in SummitSkills' footprint	
SOC5241	Electricians, electrical fitters
SOC5249	Electrical/electronic engineers nec*
SOC5242	Telecommunications engineers
SOC5243	Lines repairers and cable jointers
SOC5244	TV, video and audio engineers
SOC5245	Computer engineers, installation and maintenance
SOC5314	Plumbing and HVAC trades
SOC5216	Pipe fitters

Currently there are a number of SOC codes that subject to amendment in the NSO review, and which SummitSkills believes contain individuals working as Building Services Engineering Sector professionals, and thus in the SummitSkills footprint; and these are shown in table 3.

Table 3: SOC codes subject to change post NSO Audit, which currently Experian believe contain BSE engineers	
SOC2123	Electrical engineers
SOC3112	Electrical/electronic technicians
SOC2124	Electronics engineers
SOC2122	Mechanical engineers
SOC3119	Science and engineering technicians nec*

Due to consultation between SummitSkills and the NSO, in the next survey, Building Services Engineers, will have their own SOC codes for professionals and a separate one for technicians, taken from SOC codes that have become obsolete. In addition SOC5314 plumbing and HVCA trades is to be broken up, with Air Conditioning and Refrigeration receiving their own SOC codes. SummitSkills was very pleased with the outcome of the consultation.

¹ Standard Industrial Classification

² Standard Occupational Classification

In addition to the SIC codes contained in table 1, SummitSkills believes that there may be other SIC codes where SummitSkills has a declared/undeclared interest, and these are shown in table 4 below:

Table 4: SIC Codes where SummitSkills may have an interest declared/undeclared	
25.21	Manufacture of central heating radiators and boilers
27.11	Manufacturers of electric motors generators and transformers
27.12	Manufacture of electricity distribution and control apparatus
27.31	Manufacturing of fibre optic cables
27.32	Manufacture of other electronic and electric wires and cables
27.33	Manufacture of wiring devices
27.4	Manufacture of electric lighting equipment
27.51	Manufacture of electric domestic appliances
27.90	Manufacture of other electrical equipment
28.13/1	Manufacture of pumps
28.14	Manufacture of other taps and valves
28.25	Manufacture of non-domestic cooling and ventilation equipment

In addition, there are a number of SOC Codes, where SummitSkills may have a declared or undeclared interest, and these are contained in table 5 below:

Table 5: SOC Codes Where SummitSkills may have an interest declared/undeclared	
3542	Adviser, service, home (gas supplier)
8131	Assembler, component (electrical, electronic)
8132	Assembler, components (mechanical)
3541	Buyer and estimator
2129	Environmental Engineer
3551	Environmentalist

Impact of the recession

The recession in the Construction and Building Services Engineering Sector during 2009 has been extremely significant in terms of job losses and company closure and liquidation, and this recession has also impacted in the Principality of Wales. SummitSkills in February 2009 based on the workloads of Building Services Engineering Sector Consultants estimated that the sector would contract between 18% and 42%, which has proved to be extremely accurate.

Table 6 shows the then projected job losses in the Building Services Engineering Sector in Wales.

Table 6: Total Indicative notional UK job losses from best case and worst case scenarios, by BSE industry³ in Wales			
	Employment 2008	Indicative notional job losses best case scenario	Indicative notional job losses worst case scenario
Electrical Trades and installation	3,840	692	1,602
Plumbing	3,271	590	1,386
Heating and Ventilation	2,013	362	841
Air Conditioning and Refrigeration	1,006	184	420

There is a tradition in the BSE sector, of last in- first out in any economic downturn, and this impacts adversely on apprentices. This problem is also exacerbated by a belief in the BSE sector that apprentices are expensive to a business, and therefore require to be cut first in a recession.

Table 7, shows the projected apprenticeship redundancies in the sector in 2009 in Wales. Regrettably, while in the projected parameters indicated by SummitSkills in the research, anecdotal evidence being returned to SummitSkills in the regions and nations of the UK (including Wales) suggests that the percentage of apprentices being made redundant is larger than that for qualified/ adult operatives generally.

Table 7: Total Indicative notional UK apprentice job losses from best case and worst case scenarios, by BSE industry⁴ in Wales				
	Indicative notional job losses best case scenario - all	Indicative notional job losses best case scenario - apprentices	Indicative notional job losses worst case scenario - all	Indicative notional job losses worst case scenario - apprentices
Electrical Trades and installation	692	24	1,602	56
Plumbing	590	21	1,366	48
Heating and Ventilation	362	13	841	29
Air Conditioning and Refrigeration	184	7	420	15

³ In the full report : 'Potential impact of the recession on the building services engineering sector in 2009' data is provided separately for the devolved nations and nine English regions.

⁴Ibid.

Employer spend on training

Prior to the recession the Building Services Engineering Sector in the SummitSkills footprint were asked about their spend per employee per year on training.

Table 8 shows the percentage for England and the devolved nations.

	England	Northern Ireland	Scotland	Wales	Average
Up to £200 per employee	4%	7%	5%	1%	4%
£201-£500 per employee	17%	1%	27%	1%	11%
£501- £1000 per employee	20%	7%	7%	22%	14%
£1001-£2000 per employee	16%	32%	10%	33%	23%
£2001-£5000 per employee	12%	26%	13%	7%	15%
> £5000 per employee	13%	5%	5%	6%	7%
Nothing	12%	15%	10%	11%	12%
Don't know or refused to answer	6%	7%	23%	19%	14%

Base= 2000

As can be seen from table 8, Welsh employers are among the least generous in providing training for their employees in the sector in the UK.

Table 9 shows the indicative average spend per employee on training in the Building Services Engineering sector in 2008 in Wales (a non-recession year). As can be seen from footnotes five and six, there are a number of assumptions that have to be made to arrive at this figure, and therefore the figures are indicative only.

	Number of Employees	Percentage for Wales	Total spend (assuming maximum unless otherwise stated)
Up to £200 per employee	101	1%	£20,200
£201-£500 per employee	101	1%	£50,500
£501- £1000 per employee	2,229	22%	£2,229,000
£1001-£2000 per employee	3,343	33%	£6,686,000
£2001-£5000 per employee	709	7%	£3,545,000
> £5000 per employee ⁵	608	6%	£3,040,608
Nothing	1,114	11%	£0
Don't know/refused to answer ⁶	1,925	19%	£0
		Total	£15,571,308
		Total average spend per employee	£1,537

⁵ Here, as it is not possible to work out exactly how much more over £5000 is being considered, the figure of £5001 is used, this therefore suggests that there may be an under calculation for training spend, and therefore the figure is indicative only.

⁶ Here it is assumed that there is no spend on employee training, in the light of not other information. It is assumed that the interviewees did not want to admit to not investing in training and therefore refused to answer, with a similar assumption having to be made for those interviewees who claimed that they did not know.

Table 9 suggests that while some companies are investing heavily in their employees, at least 11% of employees are receiving no training in any given year (which in Wales is less than the UK average of 12% at 11%), and if the refusals/don't knows are included, then the figure could be as high as 30%, which would equate to 3,039 employees in the sector not receiving any training whatsoever, and could potentially be very damaging for the sector in Wales.

These employers offering no training whatsoever to their employees are special priorities for SummitSkills, to seek to increase the amount of training being undertaken in the sector by employers for their employees, and SummitSkills will seek to work with the DEL and other partners and stakeholders to seek to engage with these employers.

Current and future skills priorities

SummitSkills have undertaken a number of research reports in 2008-2009, which have identified or confirmed previous research in the Sector Needs Analysis (undertaken in 2006, as part of the Sector Skills Agreement). The skills needs identified are:

- Management and Leadership training at all levels in the BSE Sector, but particularly at first line supervisor and middle management level.
- Environmental technologies and microgeneration. It is anticipated that a substantial part of the Government's renewables and environmental technologies policies at micro generation level, will be specified and installed by consultants, operatives and companies in the SummitSkills footprint. Currently, potential training needs in the event of an increase of demand are far in excess of the ability of the supply chain to meet that demand, and currently there are no formal qualifications available to facilitate demand. SummitSkills is working hard with a range of partners and stakeholders to address these issues.
- In relation to skills gaps, then there are a large number of companies who claim that their staff are fully competent.
- The recession and the decline in the value of £ sterling against particularly A8 countries means that many of the medium-large BSE companies may struggle to find appropriate numbers of workers, if migrant labour is not as freely available as it has been prior to the recession.

Leadership and Management

Table 10 below, indicates that on average across the core trade areas in the SummitSkills footprint, around 33% of individuals in management or supervisory positions hold management qualifications.

Table 10: Percentage of BSE companies whose managers hold management qualifications by industry					
	Total	Air Conditioning and Refrigeration	Electrotechnical	Heating and Ventilation	Plumbing
Yes	33%	53%	43%	11%	31%
No	66%	46%	57%	87%	67%
Don't Know	1%	1%	1%	2%	2%

Base= 2000

Although the levels of training are low, generally, the BSE sector does appear willing to train their managers and first line supervisors, as can be seen from table 11 below:

Table 11 shows the percentage of BSE companies whose managers hold management qualifications in the devolved nations. The impact of England is contained in the total section of this table.

Table 11: Percentage of BSE companies whose managers hold management qualifications by devolved nation				
	Total	Northern Ireland	Wales	Scotland
Yes	33%	30%	34%	27%
No	66%	65%	66%	71%
Don't Know	1%	5%	0%	3%

Base= 2000

Table 11 suggests that Wales has the highest percentage of managers in the BSE sector who hold some form of management qualification.

Table 12 below shows the percentages of companies in the BSE sector for the UK who would consider giving their managers and first line supervisors. Table 13 shows the same data for the sector in Wales, and suggests that the sector in the Principality is the least enthusiastic to undertake management training of the four nations.

Table 12: Percentage of BSE companies who would consider giving their managers management training to achieve a management qualification by industry					
	Total	Air Conditioning and Refrigeration	Electrotechnical	Heating and Ventilation	Plumbing
Yes	53%	97%	40%	29%	36%
No	45%	2%	58%	69%	63%
Don't Know	2%	1%	2%	2%	1%

Base=2000

Table 13: Percentage of BSE companies who would consider giving their managers management training to achieve a management qualification by devolved nation

	Total	Northern Ireland	Wales	Scotland
Yes	53%	55%	38%	36%
No	45%	45%	62%	62%
Don't Know	2%	0%	0%	2%

Base= 2000

Currently, as can be seen from table 14 below, in the BSE sector, where operatives do hold management qualifications, these are extremely varied in type, and it is suggested suitability for the BSE sector.

Table 14: Percentage of management qualifications held by managers in the BSE sector by qualification type, and by industry

	Total	Air Conditioning and Refrigeration	Electro-technical	Heating and Ventilation	Plumbing
NVQ Level 3 Management	3%	8%	3%	16%	7%
NVQ Level 4 Management	4%	0%	5%	3%	4%
NVQ Level 5 Management	12%	0%	29%	3%	5%
NVQ Level 2 in Team Leading	2%	0%	2%	3%	1%
The Art of Leadership Programme	1%	0%	1%	2%	0%
CMI Level 3 Introductory Certificate in first line Management	1%	0%	1%	0%	0%
CMI Level 3 Certificate in Management	1%	0%	1%	0%	0%
CMI Level 4 Introductory Diploma In Management	1%	0%	1%	0%	0%
CMI Level 5 Diploma in Management	0%	0%	0%	0%	1%
NVQ in Business Administration	0%	0%	1%	0%	0%
Marketing Qualification	0%	0%	0%	0%	1%
Degree Level in Business Management	19%	0%	29%	1%	5%
Chartered Management Accountancy Qualification	0%	0%	0%	0%	0%
IOSH- Health and Safety Management Certificate	1%	0%	1%	0%	4%
HNC in Management	1%	0%	1%	0%	1%
JIB Managers Skills Card	1%	0%	1%	1%	0%
Other	23%	61%	16%	22%	20%
Don't Know	39%	30%	19%	51%	57%

Base= 2000

As can be seen from table 14 above, the other category in table 14 shows the highest percentages recorded against it. Table 15 shows how these percentages were derived, and

the considerable variation of qualifications that the BSE sector considers to be management qualifications.

Table 15: Breakdown of other category for BSE sector contained in table 12 above	
Qualification	Responses
City and Guilds Unspecified	9
Degree Unspecified	7
HND	6
Business Management Course	4
Masters Degree	3
Diploma in Management Studies	3
BTEC HNC (not stated assume Building Studies)	3
Technical Level Qualification	3
Diploma in Management	3
CDM Management Qualification	2
Degree Level Qualification	2
Health and Safety Certificates	2
They have all the skills they need or we would not take them on	1
BA degree	1
BSC Degree	1
BIN	1
BTEC Certificate	1
BTEC and Diplomas in Management	1
Business Management Certificate	1
HND in Electrical and Technical Engineering	1
Business Management Certificate	1
Certificate in Management	1
Certified Contract Manager	1
City and Guilds in Management	1
City and Guilds Level 1 &2	1
City and Guilds in Design Management	1
City and Guilds in Building Management	1
City and Guilds	1
Institute of Industrial Managers	1
City and Guilds in Retail Management level s	1
CNS Management Certificate	1
Commercial Management Training Certificate	1
Construction Manager Skills	1
Construction Management Degree	1
Contract Management and Design Course	1
Dutch Diploma	1
Electrical Engineer Management Certificate	1
Electrical Management	1
Management Qualification in Electrical Contracting	1
HNC in Building Management	1
HVCA in Management Skills	1
LIM Level 3 in Industrial Management	1
The Institute of Management	1
KNEBS in Management Training	1

Leadership in Management Programme Certificate	1
Level 1 in Business Management	1
Management Skills Basic	1
Managerial Qualifications	1
MBA in Electrical Engineering and Management	1
Master of Business Administration	1
Mechanical Engineering Services LNC and HNC	1
MCMI (Member of the Chartered Management Institute)	1
MIET in Corporate Engineering Level	1
Modules of management courses like 'Manage and Men'	1
Most of them are Members of the Institute and have diplomas in management and finance	1
NEBBS Qualification from Management Course	1
NEDRS- the Certificate for Health and Safety	1
Organisation Executive Course	1
Qualifications from the Institute of Electrical Engineers	1
Scottish VEC Qualifications	1
Supervisor in Management Certificates	1
The managers have all got past experience from different trades and they have all used those management skills to try and enhance their position in the company. Although of course, learning about the various aspects of plumbing, is something they all needed to do	1
They have all sorts of qualifications, but I couldn't tell you what they are	1

Base= 2000

Table 16 shows the percentage and type of qualifications held by managers in the devolved nations including Wales, and suggests that predominantly in the Principality, the NVQ Level 4, with NVQs in Management and Degrees in Business Studies also featuring. The management qualification profile of the BSE sector in Wales is the most impressive of the devolved nations, and shows the most diverse spread among management qualifications, although as in the other nations a significant number of the qualifications were categorised under other qualifications.

Table 16: Percentage of management qualifications held by managers in the BSE sector, by qualification type, and by devolved nation					
	Total	Northern Ireland	Wales	Scotland	
NVQ Level 3 Management	3%	24%	3%	5%	
NVQ Level 4 Management	4%	0%	22%	6%	
NVQ Level 5 Management	12%	0%	9%	5%	
NVQ Level 2 in Team Leading	2%	0%	6%	5%	
The Art of Leadership Programme	1%	0%	0%	0%	
CMI Level 3 Introductory Certificate in first Line Management	1%	0%	0%	0%	
CMI Level 3 Certificate in Management	1%	0%	6%	0%	
CMI Level 4 Introductory Diploma in Management	1%	0%	0%	0%	
CMI Level 5 Diploma in	0%	0%	0%	0%	

Management				
NVQ in Business Administration	0%	0%	0%	5%
Marketing Qualification	0%	0%	0%	4%
Degree Level in Business Management	19%	0%	6%	4%
Chartered Management Accountancy Qualification	0%	0%	0%	0%
IOSH- Health and Safety Management Certificate	1%	0%	0%	10%
HNC in Management	1%	0%	0%	0%
JIB Managers Skills Card	0%	0%	0%	0%
Other	23%	36%	32%	52%
Don't know	39%	40%	40%	30%

Base= 2000

What tables 11-16 show, is that predominantly the BSE sector does not invest in leadership and management training, and where it does, investment appears to be across a wide range of courses, with many of the courses having little relevance to the BSE industry. Wales specifically seems the least enthusiastic in investing in management training, but appears to be the best qualified in management qualifications in the UK, and have the most spread of NVQ management courses.

To address the general issue, and improve management skills in the Sector, SummitSkills has been working to develop management NOS for the sector, and working with Universities and other providers to develop appropriate management qualifications for the sector. This work remains ongoing.

Environmental technologies

In the SummitSkills footprint, there are a range of environmental technologies that are vital to the achievement of the government's carbon reduction and renewable energy generation targets. Currently, engagement by the BSE sector in the installation of these technologies remains low.

Table 17 shows an indicative⁷ analysis of the potential training needs for the BSE sector core footprint, based on the number of operatives currently working in the technologies who have not received any kind of formal training, and the potential influx of operatives who may engage in the technology in the event that the market is stimulated by Government, either through a grant system, or through legislation.

Table 17: Wales BSE Sector in environmental technologies	
Solar Water and Heating	
Electrical Trades and Installation	1,109
Plumbing	988
Heating and Ventilation	608
Air Conditioning and Refrigeration	304
Photovoltaic	
Electrical Trades and Installation	1,397
Plumbing	1,245
Heating and Ventilation	766
Air Conditioning and Refrigeration	383
Combined Heating and Power Units	
Electrical Trades and Installation	1,695
Plumbing	1,510
Heating and Ventilation	929
Air Conditioning and Refrigeration	465
Micro Wind Energy	
Electrical Trades and Installation	1,397
Plumbing	1,245
Heating and Ventilation	766
Air Conditioning and Refrigeration	383
Ground Source Heat Pumps	
Electrical Trades and Installation	1,944
Plumbing	1,732
Heating and Ventilation	1,066
Air Conditioning and Refrigeration	533
Air Source Heat Pumps	
Electrical Trades and Installation	1,583
Plumbing	1,410

⁷ The term indicative is used deliberately here, as currently, the numbers are believed to be 'slightly high' in some environmental technologies against some trades, as an average percentage methodology was used to assess engagement. In addition, these figures only identify those operatives who are working in the technologies, but have received no training, or may do so in the event that the market is stimulated. What they do not take account of, is the potential for the market being heavily stimulated, such that many more/ all companies enter the market. In this event, the figures would be much larger. SummitSkills is currently working to improve the methodology to take account of industry differences at regional level, and it is hoped to publish these revised numbers in the February report.

Heating and Ventilation	868
Air Conditioning and Refrigeration	434
Biomass	
Electrical Trades and Installation	1,029
Plumbing	917
Heating and Ventilation	565
Air Conditioning and Refrigeration	282
Bio-Fuel (Liquid)	
Electrical Trades and Installation	919
Plumbing	819
Heating and Ventilation	504
Air Conditioning and Refrigeration	252
Micro Hydro Generation Systems	
Electrical Trades and Installation	750
Plumbing	668
Heating and Ventilation	412
Air Conditioning and Refrigeration	206
Fuel Cell Technology	
Electrical Trades and Installation	658
Plumbing	586
Heating and Ventilation	360
Air Conditioning and Refrigeration	180
Rainwater Harvesting	
Electrical Trades and Installation	877
Plumbing	781
Heating and Ventilation	481
Air Conditioning and Refrigeration	240

SummitSkills believes that if the environmental technologies in the industries in the SummitSkills footprint across the UK were to be stimulated, then the potential training needs identified in table 17 would make it difficult for the supply network to respond effectively to perceived demand.

SummitSkills is currently working with a number of partners and stakeholders to address this problem, as well as undertaking further research to accurately identify as the UK (including Wales) comes out of recession, the number of operatives requiring training in each environmental technology in each English region and devolved nation, and then (in consultation with partners and stakeholders) produce a plan by region/ nation to develop training to meet potential demand. It is anticipated that this research work will be completed by the end of April/May.

Skills gaps among SummitSkills' employers

Table 18 shows the percentage of BSE companies who consider that their staff have all the skills required for the work that they have by industry. The research contained in this table suggests that the majority of employers think that their staff are adequately skilled for the work that they do.

Table 18: Percentage of BSE companies interviewed, who consider that their staff have all the skills required for the work that they have by industry					
	Total	Air Conditioning and Refrigeration	Electrotechnical	Heating and Ventilation	Plumbing
Yes	81%	81%	78%	92%	83%
No	17%	17%	21%	8%	17%
Don't Know	2%	2%	1%	0%	0%

Base= 2000

Table 19 below shows for the UK, where employers believe that they have skills gaps, what these skills gaps are.

Table 19: BSE companies surveyed company skills needs by industry					
	Total	Air Conditioning & Refrigeration	Electro-technical	Heating and Ventilation	Plumbing
Electrical	21%	9%	33%	11%	9%
Regulations/ Legislations	5%	0%	8%	0%	5%
Boiler Maintenance	1%	0%	0%	0%	9%
Gas	11%	9%	1%	7%	18%
Welding	1%	0%	0%	5%	0%
Mechanical	1%	0%	1%	0%	0%
Health and Safety	4%	0%	4%	22%	4%
Business Skills	1%	0%	2%	2%	1%
Product Training	15%	17%	0%	2%	5%
IT Skills	9%	0%	23%	3%	4%
Plumbing	2%	0%	1%	5%	10%
Literacy and Numeracy	1%	0%	0%	2%	5%
Management Skills	1%	0%	1%	11%	0%
Solar Heating	1%	0%	0%	0%	3%
First Aid	1%	0%	1%	2%	0%
Technical Skills	6%	1%	13%	0%	3%
Scaffolding	0%	0%	0%	2%	0%
More Common Sense	1%	0%	0%	0%	3%
Experience	9%	9%	2%	7%	5%
Testing	2%	0%	4%	0%	1%
Keeping Qualifications/ Skills up to date	6%	3%	4%	6%	11%
Obtaining Required Qualifications	11%	9%	6%	5%	5%

General Increasing the number/ level of skills	1%	0%	1%	1%	3%
Apprentices are still learning	2%	0%	2%	0%	4%
Depends on requirements	8%	0%	18%	4%	3%
Training Costs are too high	1%	0%	1%	0%	3%
They should be trained more	10%	9%	3%	8%	9%
Inspection Techniques	1%	0%	2%	1%	1%
Become registered in the required trade	1%	0%	0%	2%	4%
Better communication skills	0%	0%	0%	1%	1%
Improved standards of training course	1%	0%	1%	0%	0%
Paperwork/ administration (including form filling	8%	0%	18%	0%	1%
Knowledge of renewable energy	1%	0%	0%	1%	3%
General trade skills	1%	50%	2%	1%	1%
Customer service skills	0%	0%	0%	1%	1%
Engineering Skills (unspecified)	5%	0%	13%	0%	0%
Finance	0%	0%	0%	0%	0%
Improvement to work attitude/ work ethics	1%	0%	0%	0%	3%
Other	10%	2%	15%	3%	16%
None	0%	0%	0%	0%	1%
Don't Know	1%	0%	1%	17%	1%

Base= 2000

Table 20 shows the same data by devolved nation, and suggests that in Wales, BSE companies are concerned about health and safety, gas and plumbing issues generally.

Table 20: BSE Companies surveyed companies skills needs				
	Total	Northern Ireland	Wales	Scotland
Electrical	21%	0%	14%	11%
Regulations/ Legislations	5%	16%	12%	8%
Boiler Maintenance	1%	0%	0%	11%
Gas	11%	0%	12%	0%
Welding	1%	0%	0%	3%
Mechanical	1%	0%	0%	0%
Health and Safety	4%	16%	14%	8%
Business Skills	1%	0%	12%	0%
Product Training	15%	0%	0%	0%
IT Skills	9%	0%	0%	5%
Plumbing	2%	16%	24%	0%
Literacy and Numeracy	1%	0%	0%	0%
Management Skills	1%	19%	0%	6%
Solar Heating	1%	0%	0%	4%
First Aid	1%	0%	12%	0%
Technical Skills	6%	0%	8%	1%

Scaffolding	1%	0%	0%	0%
More Common Sense	1%	0%	8%	0%
Experience	9%	3%	11%	0%
Testing	2%	19%	0%	0%
Keeping Qualifications/ Skills up to date	6%	35%	0%	17%
Obtaining Required Qualifications	11%	0%	0%	13%
General Increasing the number/ level of skills	1%	0%	0%	0%
Apprentices are still learning	2%	0%	0%	13%
Depends on requirements	8%	0%	0%	0%
Training Costs are too high	1%	0%	0%	0%
They should be trained more	10%	0%	8%	7%
Inspection Techniques	1%	19%	0%	0%
Become registered in the required trade	1%	0%	3%	0%
Better communication skills	0%	0%	0%	1%
Improved standards of training course	1%	0%	0%	2%
Paperwork/ administration (including form filling)	8%	16%	0%	0%
Knowledge of renewable energy	1%	0%	0%	0%
General trade skills	1%	0%	0%	1%
Customer service skills	0%	0%	0%	0%
Engineering Skills (unspecified)	5%	0%	0%	0%
Finance	0%	0%	0%	0%
Improvement to work attitude/ work ethics	1%	0%	0%	0%

Base= 2000

SummitSkills is currently working with partners and stakeholders to specifically identify skills needs more effectively in the sector, and will continue to do so to meet the sectors perceived training needs.

Labour requirements

Although the BSE sector has been affected by the recession, and labour in the sector is likely to reduce overall in the UK to 2014, and this is replicated in the Welsh BSE sector, particularly in the mechanical industries of plumbing, heating and ventilation, air conditioning and refrigeration.

Table 21 shows the labour requirement projects for the BSE sector to 2014 for Wales.

Table 21: Proposed numbers of operatives in core trade areas of SummitSkills footprint by trade and year; 2009-2014 in Wales							
	2008	2009	2010	2011	2012	2013	2014
Electricians	6,786	7,038	7,289	7,323	7,357	7,391	7,425
Plumbing	3,188	3,021	2,853	2,923	2,993	3,063	3,132
Heating and Ventilation Engineers	1,962	1,859	1,756	1,799	1,842	1,885	1,927
Refrigeration Trades	638	605	571	585	599	613	626
Air Conditioning Trades	343	325	307	315	323	331	337

Experian/ SummitSkills 2009

If one looks at the inflows and outflows for the sector, then allowing for an average of 5% outflow per year, due to retirements, deaths, transfers to other sectors, and specific to Wales a significant migration factor to other areas of the UK as well as the rest of the world, then the labour inflow requirements are still considerable to replace outflows.

Table 22: Wales inflow requirement for BSE sector 2009-2014		
	Total Labour Requirement	Total inflow requirement at assumption 5% outflow
2009		
Electricians	7,038	352
Plumbing	3,021	151
Heating and Ventilation Engineers	1,859	93
Refrigeration Trades	605	30
Air Conditioning Trades	325	16
2010		
Electricians	7,289	364
Plumbing	2,853	143
Heating and Ventilation Engineers	1,756	88
Refrigeration Trades	571	29
Air Conditioning Trades	307	15
2011		
Electricians	7,323	366
Plumbing	2,923	146
Heating and Ventilation Engineers	1,799	90
Refrigeration Trades	585	29
Air Conditioning Trades	315	16
2012		
Electricians	7,357	368
Plumbing	2,993	150
Heating and Ventilation Engineers	1,842	92
Refrigeration Trades	599	30

Air Conditioning Trades	323	16
2013		
Electricians	7,391	370
Plumbing	3,063	153
Heating and Ventilation Engineers	1,885	94
Refrigeration Trades	613	31
Air Conditioning Trades	331	17
2014		
Electricians	7,425	371
Plumbing	3,132	157
Heating and Ventilation Engineers	1,927	96
Refrigeration Trades	626	31
Air Conditioning Trades	337	17

SummitSkills (2009)

SummitSkills recognises that there is a need to continue to recruit labour to meet the needs of the sector coming out of recession, particularly given the use made of migrant labour by the sector in the previous building boom.

Migrant labour

Although from SummitSkills research, only 9% of the sample companies across the UK employed migrant labour, it should be remembered that 85% of the total SummitSkills footprint is micro businesses of less than five people, with the majority being sole traders.

Table 23 below shows however that the percentage of companies employing migrant labour rises as company size increases, with the largest recruiters of migrant labour being the largest companies, suggesting that the BSE sector may have a significant exposure to migrant labour, which may lead to skills shortages when the economy improves for those companies if the migrant labour does not return.

Table 23: Percentage of BSE companies employing migrant labour in the last 3 years by company size

	Total	Single Sites	Multi-Sites	2-15	16-25	26-49	50-250	251+
Yes	9%	8%	15%	7%	10%	29%	19%	81%
No	91%	92%	85%	93%	90%	71%	81%	19%
Don't Know	0%	0%	0%	0%	0%	0%	0%	0%

Base=2000

Table 24 shows the Percentage of BSE Companies employing migrant labour in the last three years by devolved nation including Northern Ireland.

Table 24: Percentage of BSE companies employing migrant labour in the last 3 years by devolved nation

	Total	Northern Ireland	Wales	Scotland
Yes	9%	9%	3%	9%
No	91%	89%	97%	91%
Don't Know	0%	2%	0%	0%

Base= 2000

Table 25 below, shows the country of origin where the migrant labour emanated from, and suggests that in Wales, Ireland and Poland were the only recorded countries of origin from which migrant labour came. It is likely that there were other nations represented in Wales, that were not picked up in this sample, but these are probably in the minority.

Table 25: Countries of origin/domicile of BSE migrant workers by company size in devolved nations

	Total	Northern Ireland	Wales	Scotland
Afghanistan	5%	0%	0%	0%
Albania	1%	0%	0%	0%
Algeria	1%	0%	0%	8%
Australia	11%	0%	0%	10%
Bahamas	1%	0%	0%	0%
Bulgaria	1%	0%	0%	0%
Cameroon	1%	0%	0	0%
Central Africa	0%	0%	0%	0%

Croatia	0%	0	0%	0%
Cyprus	1%	0%	0%	0%
Czech Republic	2%	0%	0%	0%
France	2%	0%	0%	0%
Germany	5%	0%	0%	0%
Ghana	0%	0%	0%	0%
Hungary	0%	0%	0%	0%
India	2%	0%	0%	0%
Iraq	1%	0%	0%	0%
Ireland	1%	0%	24%	0%
Italy	5%	0%	0%	4%
Jamaica	2%	0%	0%	0%
Laos	3%	0%	0%	0%
Latvia	1%	0%	0%	0%
Lebanon	1%	0%	0%	0%
Lithuania	1%	0%	0%	17%
Malaysia	5%	0%	0%	0%
Malta	0%	0%	0%	0%
Mauritius	1%	0%	0%	0%
New Zealand	1%	0%	0%	10%
Nigeria	13%	0%	0%	0%
Pakistan	0%	0%	0%	0%
Philippines	1%	0%	0%	0%
Poland	44%	100%	76%	73%
Portugal	4%	0%	0%	0%
Romania	1%	0%	0%	0%
Russia	4%	0%	0%	0%
Slovakia	3%	0%	0%	0%
South Africa	31%	0%	0%	0%
Spain	9%	0%	0%	0%
Sweden	0%	0%	0%	0%
Switzerland	0%	0%	0%	0%
Turkey	0%	0%	0%	0%
United States	1%	0%	0%	0%
Uzbekistan	1%	0%	0%	0%
Zimbabwe	1%	0%	0%	0%

Base= 2000

SummitSkills continues to work with the MAC, partners and stakeholders on issues related to migrant workers, while continuing to support the development of apprenticeships in the sector to increase the amount of skilled indigenous labour.

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