



Occupational Analysis of Labour Market Intelligence (LMI) Data for Learning Providers

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Executive Summary

Introduction

1. This report summarises aggregate labour market information by occupation and industry sector from a number of sources, including Futureskills Scotland (FSS), Scottish Enterprise (SE) and the Sector Skills Development Agency (SSDA¹). Each of these sources is based on a different model and provides different projections.
2. We have also taken employment projections from individual sector skills councils (SSCs) and looked at how these compare with other projections where relevant.
3. We have analysed employment projections from all of the above sources, extracted key messages and considered the implications of the findings for learning providers in Scotland.

Futureskills Scotland (FSS) Projections

4. FSS forecasts appear to be the most widely used source of labour market projections in Scotland.
5. There is a clear shift in projected employment from primary² and secondary to tertiary industries. There is predicted to be a large percentage increase in employment in other business services³, and increases in banking and insurance, and hotels and catering. Employment in engineering as a whole is expected to decrease most in percentage terms.
6. Broadly these figures suggest that there will be an increased need for provision in business, finance and other services, but less need for engineering courses. Of course these figures mask a number of occupations within each industry sector. Demand for engineering graduates currently outstrips supply, so a decrease in engineering employment may still result in a shortage of labour (albeit a smaller one) in the engineering sector by 2017.
7. Highly skilled occupations, such as managers and senior officials and professional occupations, and occupations in the service sector, such as sales and customer services, are projected to have the largest growth in employment. Employment in elementary occupations, for example construction labourers and factory operatives, is likely to fall.
8. The predicted shift in employment from elementary occupations to skilled and service sector occupations has a number of implications. The decrease in elementary employment suggests that more people overall will require training and learning of some form. There is likely to be higher demand for graduate labour to fill professional and managerial jobs. Sales and customer service occupations will require 'soft' skills such as team working and people skills that will be required to be delivered through Scotland's colleges, universities and work based learning providers.

Scottish Enterprise (SE) Projections

9. In contrast to FSS projections, SE projections suggest employment change is not as simple as a shift from primary and secondary to tertiary industries. Employment growth is projected to be largest in percentage terms in agriculture, forestry and fishing and construction – in contrast to FSS projections. Growth is also expected in financial and business services. Engineering employment is expected to decline.
10. Projected increases in agriculture, forestry and fishing and construction imply that there may be skills shortages in these sectors. While these mask a variety of occupations, there may be increased need for example for construction apprenticeships, which will depend largely on incentivising employers to provide places.
11. A fall in engineering employment may indicate a future reduced need for engineering graduates, but as noted above, there is currently a shortage of graduate engineers, therefore capacity should not be reduced in anticipation of this.

¹Following recommendations in the Leitch Review (2006), the SSDA is now closed. The Alliance of Sector Skills Councils – a collective body made up of all 25 SSCs, and The UK Commission for Employment and Skills (UKCES) opened for business on 1 April 2008.

²Primary industries are agriculture, land-based, fishing and mining/extraction. Secondary industries are manufacturing, tertiary industries are service sector industries.

³SIC 74. Includes Market Research and Public Opinion Polling, Technical Testing and Analysis, Advertising, Labour recruitment and provision of personnel, Investigation and security activities, Industrial Cleaning, Photographic activities, Packaging Activities, Secretarial and translation activities

Sector Skills Development Agency (SSDA) Projections

12. Projections from the SSDA back up findings by FSS that there will be a shift in employment from primary and secondary to tertiary (service) industries. The highest growth in percentage terms is projected to be in business and other services, which includes financial services, other business activities and other services.
13. These projections suggest an increased need for business and finance courses in the future and a reduced need for training in agriculture and engineering. Of course there will still be demand for training in industry sectors that are predicted to have reduced employment, as existing workers will leave the industry and have to be replaced.
14. SSDA projected employment changes over 2004-14 highlight a move away from lower skilled and technical occupations towards service sector occupations. This is consistent with FSS projections.
15. The predicted shift in employment from elementary occupations to skilled and service sector occupations has a number of implications. The decrease in elementary employment suggests that more people overall will require training and learning of some form. There is likely to be higher demand for graduate labour to fill professional and managerial jobs. Sales and customer service occupations will require 'soft' skills such as team working and people skills that will be required to be delivered through Scotland's colleges, universities and work based learning providers.

Impact of the 2014 Commonwealth Games and other Developments

16. There are a number of forthcoming construction projects that will increase demand for construction workers in Scotland, including the Commonwealth Games, M74 extension, Glasgow Airport Rail Link and a hotel boom in Glasgow and Edinburgh.
17. There will be increased demand for construction workers and therefore a need to encourage employers to offer construction apprenticeships. Construction demand related to the Commonwealth Games is likely to peak around 2010, so action is urgent.

Projections by Individual Sector Skills Councils (SSCs)

18. We have analysed employment projections from individual SSCs. The SSCs analysed are as follows:
 - Asset Skills
 - ConstructionSkills
 - EU Skills
 - Improve
 - Lantra
 - Lifelong Learning UK
 - Proskills
 - Skills for Logistics
 - SkillsActive
 - SSSC (Scottish Social Services Council)⁴
 - Summit Skills.

Asset Skills

19. Employment in property and cleaning is expected to decline during 2004-14. Housing and welfare officer employment is expected to increase significantly.
20. There will be an increased requirement to train housing and welfare officers and caretakers and maintenance staff. Housing and welfare officers are likely to require degree level or equivalent qualifications. Despite this there will be continued need to train cleaning and domestic staff to meet replacement demand, although most of these staff are trained on-the-job.

⁴The Scottish Social Services Council is part of the Sector Skills Council Skills for Care and Development?

Executive Summary

ConstructionSkills

21. Construction employment is projected to increase by 17% over 2006-12. The highest annual demand for workers will be in wood trades and interior fit-out, non-construction operatives⁵ and electrical trades. The largest percentage increase will be in other professionals/technical and IT staff, although the numbers employed in this area will remain relatively small.
22. Continued demand for wood trades and interior fit-out workers will require provision of apprenticeship places at SVQ 3 (SCQF 6/7) level. The fit-out component will also require workers to be trained in a narrower range of skills at SVQ level 2 (SCQF 5). Electrician apprenticeships at SVQ level 3 (SCQF 6/7) will also be required, as will a diverse range of support occupations to support the industry. It is important that measures are taken to incentivise employers to offer apprenticeships in these trades.

Energy and Utility Skills (EU Skills)

23. Employment projections for the EU Skills sub-sectors expect electricity, gas and water workforces all to lose jobs over the next decade, and only waste management is projected to make a net gain in employment.
24. The projected increase in waste management employment may lead to demand for a number of specialist courses, but on the whole this is a sector with declining demand. Some training will still be required to meet replacement demand.

Improve

25. Although some projections expect employment is expected to decrease slightly, employers are generally positive about employment growth over the period 2006-11. There is likely to be increased demand for higher level occupations. Employers report future skill issues of IT skills and technical and practical skills.
26. Growth in this sector will require an increase in appropriately qualified workers, most likely to be highly skilled. There will also be an increased need for people trained in basic IT and technical and practical skills that are not necessarily at a high level. These skills may be required to be integrated into existing skillsets by workers at all levels in the sector.

Lantra

27. The skills predicted to be in greatest demand are soft transferable skills such as communication and planning/organisation skills. Employers believe that all skills will be required at a higher level in 3 years time. In particular, skills such as communication and environmental management currently required at an intermediate level will be required at a high level. The trend is towards acquisition of SCQF Level 6 and above across all skill areas.
28. Implications for learning provision. There will be a need for schools, colleges, universities and other learning providers to continue the emphasis on integrating personal transferable skills into land-based courses. There will be a general need to increase skills taught at SCQF level 6 and above are taught, implying a greater role for Scotland's universities and colleges.

Lifelong Learning UK

29. An increased share of the workforce will be professional occupations. The sector will require almost 300,000 new recruits to meet expansion and replacement demand. Skill requirements are projected to grow faster than employment, suggesting an upskilling of the workforce.
30. There will be a need to increase the skills of existing employees in addition to training new recruits. In particular it will be necessary to increase 'soft' transferable and employability skills to meet future demand.

ProSkills

31. At a UK level, employment is projected to grow in managers and senior officials, professional occupations, associate technical and professional occupations. It is expected to fall or remain constant in all other occupation groups.
32. The employment projections suggest increased demand for training workers in high-level occupations. This is likely to include graduate level workers in both management and technical production skills, for example graduates in Chemistry with Management would be in high demand.

SkillsActive

33. Employment growth is projected to be stronger than Scottish or UK average for all sub-sectors with the exception of caravans. The highest percentage annual change over 2004-14 will be in agricultural trades, process plant and machine operatives, and elementary personal services, although managers and senior officials will still be the largest occupation in terms of numbers employed.
34. The employment projections suggest increased demand for training in less skilled occupations, most of which is likely to be on-the-job. The fact that managers and senior officials will continue to be the largest occupation and have the largest growth highlights the need for graduate level workers and for in-work management training.

Skills for Logistics

35. Net employment demand in the freight logistics sector is expected to fall, although there is likely to be significant replacement demand. Employment in administrative occupations is predicted to grow, while operative and elementary employment is likely to fall.
36. Replacement demand will ensure a continuing need to train drivers, this is likely to be on-the-job training. The growth in service occupations will require training provision in secretarial skills, typically around SCQF level 6.

SSSC - Scottish Social Services Council

37. Demand for community care and pre-school care is likely to rise in the future, resulting in likely increased demand for workers in these sectors. Demand for criminal justice social work and children and families social work is less clear, although it is expected to at least remain at current levels.
38. To meet increased demand there will be a need to train greater numbers of people in both community care and pre-school child care.

SummitSkills

39. There is some disagreement over future employment growth in the building services engineering sector. Both forecasts indicate growth in the sector, but SummitSkills' own data suggests a higher rate of growth than Experian.
40. Although estimates of scale may vary, there is likely to be a continued need to train building services engineering workers. Measures must be put in place to encourage employers to recruit apprentices. Appropriate college provision will also be required and this should be flexible, up-to-date and meet the needs of employers, for example in providing short vocational courses at below SVQ level 3 (SCQF 6/7) if required.

Conclusions

41. Overall, there will be increased demand for learning and training in higher skilled occupations and an increased demand for service sector and transferable skills at a high level. Providers, including schools, colleges, universities and work based learning providers should continue the emphasis on integrating personal transferable skills into training. There will be an overall need to increase the level at which all skills are taught, and an increased role for Scotland's learning providers in providing graduate and diploma level business and management courses.

Glossary

Term	Definition
Labour force (FSS)	Those who are economically active, i.e. either working or seeking work, regardless of age.
Labour force (SSDA)	Employed residents plus International Labour Organisation (ILO) unemployed.
Workforce (SSDA)	Obtained by summing workplace employment (employee jobs and self-employment jobs), HM Forces, government-supported trainees and claimant unemployment.
Working age population (SSDA)	The total number of people aged 16-65 (males) or 16-60 (females).
Working age population (FSS)	Males aged 16-64 (inclusive) and females aged 16-59 (inclusive).
Population	The total number of residents.
Employment (FSS)	The total number of jobs.
FTE Employment (SE)	Employment expressed as equivalent of full-time jobs.
Workplace-based employment (SSDA)	The total number of jobs.
Resident-based employment (SSDA)	The total number of people in employment. May differ from workplace-based as some people may have more than one job.
Forecast/Projection	These terms are used interchangeably and refer to the statistical estimation of future events.

I: Introduction

Purpose and Rationale

- 1.1 The main purpose of labour market forecasting is to ensure that measures can be undertaken to equate the supply of labour with the demand for labour, both overall and in specific skill and geographical sectors.
- 1.2 This report provides detailed information on the secondary LMI data gathered broken down by occupation and industry sector. From sources we have identified, we have collated occupational and industry sector projections at both broad and detailed levels, and summarised the relevant data.

Our Approach

- 1.3 In this report we compare LMI forecast data from a number of key sources and draw our own conclusions from these. Conclusions based on forecasts will always be subject to a number of caveats though, given the imprecise of nature of predicting future events. The scientific basis for economic forecasting is well established and we present the most authoritative forecasts available – but, they are not facts waiting to happen and are subject to interpretation and judgement.
- 1.4 We are confident that we have consistent forecast information for Scotland from at least four reliable sources, namely:
 - Futureskills Scotland (IER based)
 - Scottish Enterprise (Experian based)
 - Sector Skills Development Agency (SSDA)
 - Sector Skills Councils.
- 1.5 This report complements two other reports which provide:
 - a national overview of LMI forecasts together with comparisons of models and data sources
 - detailed information on the secondary data gathered broken down geographically.

Report Structure

- 1.6 This report will be structured as follows
 - **Futureskills Scotland data** is summarised. Our research indicates that this is the most widely used source
 - **Scottish Enterprise data** is summarised. This is useful data based on the Experian forecast model
 - **SSDA data** is summarised. This is taken from the Working Futures report
 - **Individual SSC data** is detailed. We have summarised relevant data from eight SSCs
 - **Conclusions** regarding labour market projections and the relative merits of each approach
 - **Appendix 1** provides detailed tables of labour market projections from FSS, SE and SSDA, and **Appendix 2** details projections from specific SSCs.
- 1.7 The following sections of this report summarise the data sources and gaps we have identified to date with respect to each of the themes.



2: Employment Projections by Industry and Occupation

2.1 Here we summarise detailed information on the secondary labour market forecast data gathered giving a national picture for Scotland. We take forecasts from a number of sources and state the implications for learning providers. Details of data sources used are provided in Appendix I.

Futureskills Scotland Projections

What does it Provide?

2.2 The latest Futureskills Scotland (FSS) 2007 data provides long-range LMI projections up to 2017. Forecasts for labour demand (by employers for workers) and supply (suitable workers available to work) are based on the Institute for Employment Research (IER) Local Economy Forecasting Model (LEFM). Supply forecasts also use the Cambridge Econometrics (CE) macroeconomic model. Qualifications forecasts are based upon the IER qualifications model.

Employment by Industry

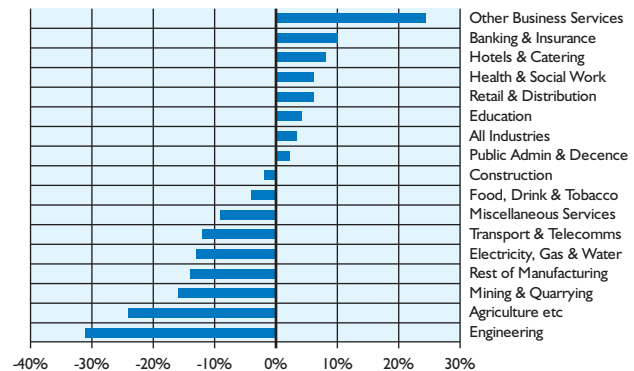
Key Message: there is a clear shift in projected employment from primary and secondary to tertiary (service) industries. There is predicted to be a large percentage increase in employment in other business services⁶, and increases in banking and insurance and hotels and catering. Employment in engineering is expected to decrease most in percentage terms.

2.3 Across all industries, there will be 82,000 new jobs in Scotland between 2007 and 2017. Other business services⁶ are projected to experience the largest increase (24%) in employment demand, with engineering projected to see the largest fall (31%).

2.4 **Figure 2.1** shows the projected percentage change in employment in each industry over 2007-17. In particular this highlights:

- an increase in employment in other business services of 24%
- a decrease in employment in Engineering of 31%
- a decrease in employment in Agriculture of 24%.

Figure 2.1: Projected % Change in Employment by Industry, Scotland, 2007-17



Source: FSS, Labour Market Projections 2007 – 2017 (page 21-22)

2.5 **Table A2.1** in Appendix I shows the projected total employment numbers by industry in detail. In particular, it is worth noting that Other Business Services (456,000 jobs in 2017), Retail and Distribution (422,000 jobs in 2017) and Health and Social Work (401,000 jobs in 2017) contribute to nearly half of total employment (1,279,000 jobs in 2017).

Implications for Learning Provision: broadly these figures suggest that there will be an increased need for provision in business, finance and other services, but less need for engineering courses. Of course these figures mask a number of occupations within each industry sector. Demand for engineering graduates currently outstrips supply, so a decrease in engineering employment may still result in a shortage of labour (albeit a smaller one) in the engineering sector by 2017.

Employment by Occupation

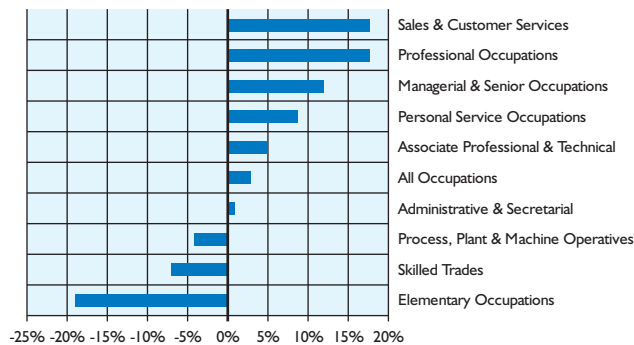
Key Message: highly skilled occupations and occupations in the service sector are projected to have the largest growth in employment. Employment in elementary occupations is likely to fall.

2.6 We have analysed data from Futureskills Scotland on employment by occupation over the period 2004-14. This is summarised in **Figure 2.2**. There is a projected shift in employment from low-skilled elementary occupations to high-skilled professional occupations over this period. There is also projected to be notable increases in sales and customer service employment and managers and senior officials.

⁶SIC 74. Includes market research and public opinion polling, technical testing and analysis, advertising, labour recruitment and provision of personnel, investigation and security activities, industrial cleaning, photographic activities, packaging activities, secretarial and translation activities.

- 2.7 Key points are:
- a projected increase of 18% in employment in professional occupations
 - a projected increase of 18% in Sales and customer service occupations
 - a projected fall of 19% in employment in Elementary occupations.
- 2.8 **Table A2.2** in Appendix I summarises these projections in more detail.

Figure 2.2: Projected % Change in Employment by Occupation, Scotland 2007-17



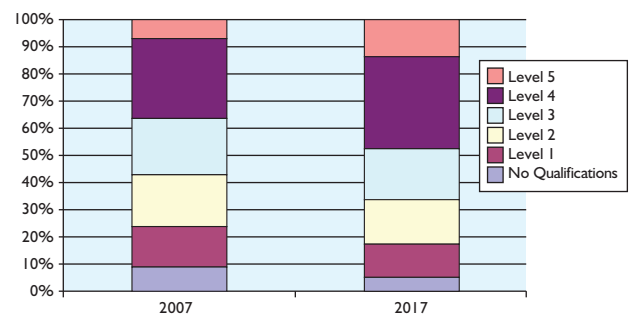
Source: FSS, Labour Market Projections 2007 – 2017 (page 27)

- 2.9 This has implications for skills needs. If the economy is successful, as predicted, in shifting towards higher value added occupations, employers will increase their demand for more highly skilled labour. In order to meet this, Scotland needs to have an appropriately skilled labour supply, realistically this means SCQF level 8/9 and above.

Implications for Learning Provision: the predicted shift in employment from elementary occupations to skilled and service sector occupations has a number of implications. The decrease in elementary employment suggests that more people overall will require training and learning of some form. There is likely to be higher demand for graduate labour to fill professional and managerial jobs. Sales and customer service occupations will require ‘soft’ skills such as team working and people skills that will be required to be delivered through Scotland’s colleges, universities and work based learning providers.

- 2.10 **Figures 2.3 and 2.4** sheds light on this, summarising FSS projections of the labour force (supply of workers) and employment (demand for workers) by highest qualification.
- 2.11 Figure 2.3 predicts that there will be an increase in the proportion of the labour force qualified to SVQ level 4 (SCQF level 8/9) and level 5 (SCQF level 11), and a corresponding fall in those qualified to SVQ level 3 (SCQF level 6/7) and below.

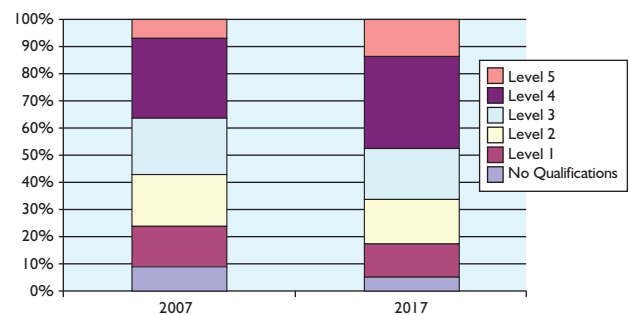
Figure 2.3: Projected Labour Force by Highest Qualification, Scotland, 2007-17



Source: FSS, Labour Market Projections 2007 – 2017 (page 18)

- 2.12 Similarly, Figure 2.4 predicts a rise in employment of people qualified to level SVQ level 4 (SCQF level 8/9) and level 5 (SCQF level 11), and a corresponding fall in employment of workers qualified to SVQ level 3 (SCQF level 6/7) and below.

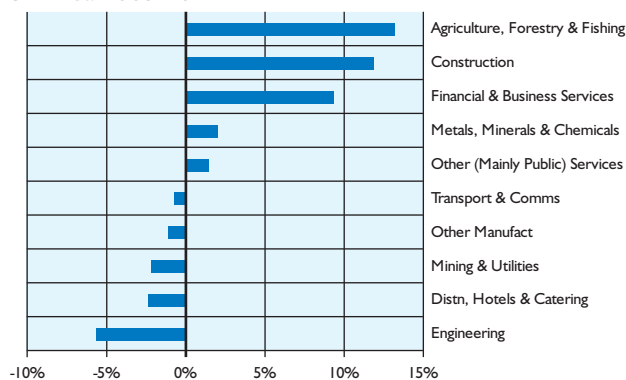
Figure 2.4: Projected Employment by Highest Qualification, Scotland, 2007-17



2: Employment Projections by Industry and Occupation

- 2.13 If these estimates are to be believed, it paints a positive picture, implying that Scotland is on track to meet increased demand for skilled occupations with an appropriately skilled labour supply. There may of course remain skills shortages within specific occupations where supply does not keep pace with demand. Examining Figure 2.3 above, these are likely to include the occupations with the strongest projected growth in demand such as sales and customer service, and professional occupations.
- 2.14 **Table A2.3** in Appendix I provides more detail on this, detailing FSS estimates on the workforce and labour supply by skills level over 2004-09.
- 2.15 In the next section we examine projections by Scottish Enterprise and compare these to FSS data.

Figure 2.5: Projected FTE Jobs by Industry Sector, SE Area 2005-10



Source: Scottish Enterprise

Scottish Enterprise Projections

Key Message: in contrast to FSS projections, SE projections suggest employment change is not as simple as a shift from primary and secondary to tertiary (service) industries. Employment growth is projected to be largest in percentage terms in agriculture, forestry and fishing, and construction. Growth is also expected in financial and business services. In contrast engineering employment is expected to decline.

- 2.16 Here we present the main findings from Scottish Enterprise (SE) projections. Scottish Enterprise National now has responsibility for providing LMI forecasts for all Local Enterprise Company (LEC) areas within the SE remit. This was previously the responsibility of individual LECs in many cases.
- 2.17 Scottish Enterprise bases its projections on the Experian model, the latest of which was run in spring 2007 and provides forecasts up to 2010. Scottish Enterprise stresses that forecasts for periods greater than three years in advance are likely to lose accuracy.
- 2.18 Scottish Enterprise does not disaggregate employment forecast data by occupation, but they do produce a breakdown by broad industry group. Projected employment by industry is summarised in Figure 2.5.
- 2.19 This highlights that the sector with the largest forecast increase in employment over 2005-10 is agriculture, forestry and fishing, with a projected 13.4% rise, followed by construction, with a 12.4% rise. The sector forecast to have the largest fall is engineering with a projected 5.7% drop in employment. This ties in with FSS projections.

- 2.20 **Table A2.4** in Appendix I shows SE employment projections in more detail.

Implications for Learning Provision: projected increases in Agriculture, Forestry and Fishing and Construction imply that there may be skills shortages in these sectors. While these mask a variety of occupations, there may be increased need for example for construction apprenticeships, which will depend largely on incentivising employers to provide places. A fall in engineering employment may indicate a future reduced need for engineering graduates, but as noted previously, there is currently a shortage of graduate engineers, therefore capacity should not be reduced in anticipation of this.

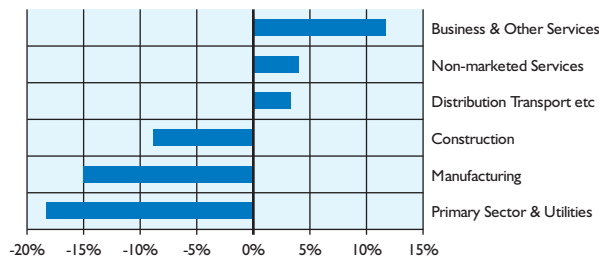
Sector Skills Development Agency Projections Employment by Industry Sector

Key Message: projections from the SSDA back up findings by FSS that there will be a shift in employment from primary and secondary to tertiary (service) industries. The highest growth in percentage terms is projected to be in business and other services, which includes financial services, other business activities and other services.

- 2.21 Data produced by the Sector Skills Development Agency (SSDA) give projections to 2014 of employment by both detailed industry sector and detailed occupation. These produce similar results to the FSS figures, although the SSDA figures are lower across all industries.

2.22 **Figure 2.6** gives a breakdown of projected employment by industry over the period 2004-14. This shows that the largest employment growth in percentage terms is projected to be in business and other services⁷, and the largest percentage fall in primary sector and utilities⁸.

Figure 2.6: Projected percentage Change in Employment, Scotland, 2004-14



Source: SSDA, Working Futures Report 2004 – 2014 Spatial Report

2.23 **Table A2.5** in Appendix 1 describes SSDA forecasts in more detail. This highlights that:

- the largest sectors in terms of absolute employment by 2014 are projected to be retail and distribution (407,000) and other business activities (403,000)⁹;
- the largest % employment growth over the period is projected in other business activities (16.6%), and the largest % fall in agriculture and engineering (both 22.7%).

Implications for Learning Provision: these projections suggest an increased need for business and finance courses in the future and a reduced need for training in agriculture and engineering. Of course there will still be demand for training in industry sectors that are predicted to have reduced employment, as existing workers will leave the industry and have to be replaced.

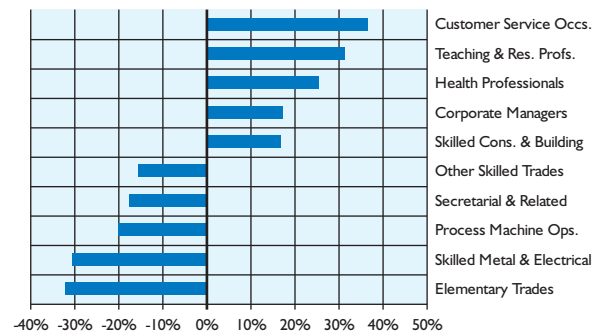
Employment by Occupation

Key Message: SSDA projected employment changes over 2004-14 highlight a move away from lower skilled and technical occupations towards service sector occupations. This is consistent with FSS projections.

2.24 **Figure 2.7** provides an overview of the occupations that are projected to have the greatest increase and decrease in employment over 2004-14. We have shown the top 5 gainers and losers in percentage terms. Changes over the period highlight a move away from lower skilled and technical occupations towards service sector occupations.

2.25 The largest percentage employment growth is projected to be in Customer service occupations (36.7%), followed by Teaching and research professionals (31.6%). The largest percentage fall is projected to be in Elementary trades (32%), followed by Skilled metal and electrical (30.4%).

Figure 2.7: Projected Percentage Change in Employment, Scotland, 2004-14



Source: SSDA, Working Futures Report 2004 – 2014 Spatial Report

2.26 A full summary of projected employment change in all 25 occupations is detailed in Table A2.6 in Appendix 1. This also highlights that the largest sectors in terms of absolute employment by 2014 are projected to be Corporate managers (290,000), followed by Admin and Clerical (265,000).

⁷Includes Financial Services, Other Business Activities and Other Services

⁸Includes Agriculture, etc., Mining & quarrying, Electricity, Gas & Water

⁹SIC 70-74. Includes Real Estate Activities, Renting of Machinery and Equipment Without Operator and of Personal and Household Goods, Computer and Related Activities, and Other Business Activities (SIC 74). See Table A2.5b in Appendix 2 for more details.

2: Employment Projections by Industry and Occupation

Implications for Learning Provision: the predicted shift in employment from elementary occupations to skilled and service sector occupations has a number of implications. The decrease in elementary employment suggests that more people overall will require training and learning of some form. There is likely to be higher demand for graduate labour to fill professional and managerial jobs. Sales and customer service occupations will require 'soft' skills such as team working and people skills that will be required to be delivered through Scotland's colleges, universities and work based learning providers.

Impact of the 2014 Commonwealth Games and other Developments

Key Message: there are a number of forthcoming construction projects that will increase demand for construction workers in Scotland, including the Commonwealth Games, M74 extension, Glasgow Airport Rail Link and a hotel boom in Glasgow and Edinburgh.

- 2.27 Future construction projects in Scotland are likely to have a major impact on the demand for construction workers. Peaks in construction employment are often met by the short-term recruitment of migrant labour.
- 2.28 It is important to anticipate future construction demand so that this can be met as far as possible from the domestic workforce in order to avoid reliance on a highly mobile migrant workforce that could quickly choose to relocate elsewhere. Over-reliance on a migrant workforce could also discourage domestic residents from training in construction, thus creating long-term skill shortages in the industry.
- 2.29 A recent report¹⁰ highlighted that the 2014 Commonwealth Games will result in more than £3 billion of expenditure on private and public construction and refurbishment in the area between now and 2014. It predicts capital expenditure is likely to grow significantly to a peak in 2010 and to continue to be substantial until 2014.

- 2.30 Major projects will include construction of the arenas and the athletes' village, together with supporting infrastructure including the M74 extension and redevelopment of Ibrox Stadium.
- 2.31 Estimates of future construction employment related to specific projects include:
- Commonwealth Games – 1200 jobs¹¹
 - Glasgow rail link – 266 jobs¹²
 - M74 extension – 350 jobs¹³.
- 2.32 To help address this demand, Glasgow City Council will offer an apprenticeship to every 16 year old who leaves school in 2009, with 2,000 construction apprenticeships expected to be offered. There is currently an excess of demand for apprenticeships in Glasgow, with 2,500 applications for 70 construction apprenticeships in 2007. This initiative has been welcomed by construction employers.
- 2.33 It is widely argued that the number of construction apprenticeships in Scotland has been insufficient to meet demands from the industry and from potential entrants. Of course there is a 'chicken and egg' scenario, with employers ultimately responsible for creating apprenticeship places. The number of construction apprenticeships is increasing: figures from the Scottish Building Apprenticeship and Training Council (SBATC) suggest an increase in entrants of 42% over 2003-07.

Implications for Learning Provision: there will be increased demand for construction workers and therefore a need to encourage employers to offer construction apprenticeships. Construction demand related to the Commonwealth Games is likely to peak around 2010, so action is urgent.

¹⁰MTW Research *Commonwealth Games Construction & Refurbishment Market Report 2007-2014*. Available to purchase at <http://www.marketresearchreports.co.uk/Commonwealth%20Games%20Construction%20Expenditure%20Market.htm>

¹¹Scottish Government <http://www.scotland.gov.uk/News/Releases/2008/03/31/102311>

¹²Glasgow Airport Rail Link Bill Committee Official Report 24 April 2006 <http://www.scottish.parliament.uk/business/committees/glasgowAirLinkBill/or/ga06-0302.htm>

¹³Scottish Government <http://www.scotland.gov.uk/News/Releases/2002/05/1557>

3: Projections From Individual Sector Skills Councils

3.1 In this section we have examined information from a number of SSCs and identify some useful labour market projections and the implication of these for learning providers. The SSCs analysed are as follows:

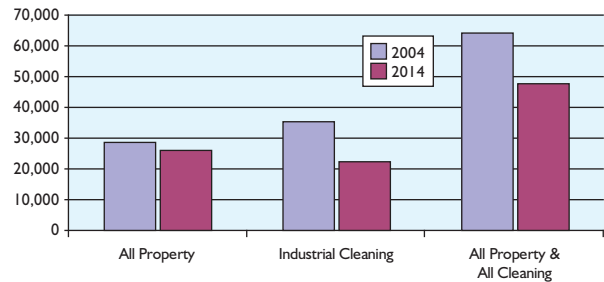
- Asset Skills
- ConstructionSkills
- Energy and Utility Skills
- Improve
- Lantra
- Lifelong Learning UK
- Proskills
- Skills for Logistics
- SkillsActive
- SSSC (Scottish Social Services Council)
- Summit Skills.

Asset Skills

Key Message: employment in property and cleaning is expected to decline during 2004-14. Housing and welfare officer employment is expected to increase significantly.

- 3.2 Asset Skills covers employment in property, housing and industrial cleaning. The sector currently employs around 46,000 people in Scotland.
- 3.3 Data on future skills needs is provided by Asset Skills on numbers employed by sub-sector and occupation and is based on projections undertaken by the IER at the University of Warwick. The figures apply only to expansion demand, as opposed to replacement demand, and like any regional data, should be treated with caution.
- 3.4 **Figure 3.1** provides an overview of employment projections in Asset Skills. This shows a small decline in employment, with the largest drop in Industrial cleaning (4%).

Figure 3.1: Projected change in numbers employed in Asset Skills sub-sectors



Source: Asset Skills Skills Needs Assessment for Scotland March 2006

- 3.5 A detailed breakdown of projected employment demand by occupation is provided in **Table A3.1** in Appendix 2. This highlights a projected significant increase in the share of housing/welfare officers as a proportion of Asset Skills employment, and a significant decrease in the proportion of cleaners and domestics.
- 3.6 This suggests a movement from lower skilled manual employment to higher skilled service sector employment. However, cleaners and domestics remain the largest occupation in terms of numbers employed within Asset Skills in 2014.

Implications for Learning Provision: there will be an increased requirement to train housing and welfare officers and caretakers and maintenance staff. Housing and welfare officers are likely to require degree level or equivalent qualifications. Despite this there will be continued need to train cleaning and domestic staff to meet replacement demand, although most of these staff are trained on-the-job.

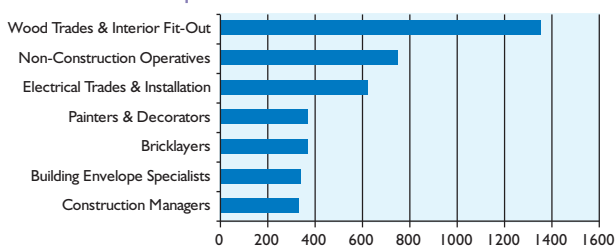
ConstructionSkills

Key Message: construction employment is projected to increase by 17% over 2006-12. The highest annual demand for workers will be in wood trades and interior fit-out, non-construction operatives¹⁴ and electrical trades. The largest percentage increase will be in other professionals/technical and IT staff, although the numbers employed in this area will remain relatively small.

3: Projections From Individual Sector Skills Councils

- 3.7 ConstructionSkills is the SSC for construction. They produce labour market forecasts for Scotland in the *2008–2012 ConstructionSkills Network Labour Market Intelligence* report¹⁴.
- 3.8 The report estimates that total construction employment in Scotland will rise from 212,500 in 2006 to 248,070 by 2012 – an increase of 17%.
- 3.9 ConstructionSkills estimates that this rise translates into an additional 6,320 workers each year to 2012. The largest annual labour requirement will be in wood trades and interior fit-out: the largest occupation group in Scotland.
- 3.10 A summary of the projected Annual Recruitment Requirement between 2008–12 for the six most required occupations is shown in **Figure 3.2**. This highlights:
- the highest demand is projected to be for wood trades and interior fit-out
 - there will also be substantial demand for non-construction operatives¹⁵ and Electrical trades.

Figure 3.2: Construction Trades with Highest Recruitment Requirement 2008–12



Source: ConstructionSkills

- 3.11 A detailed forecast of employment projections by sub-occupation is given in Table A3.1b in the appendix. This highlights:
- the smaller occupations tend to have the largest projected percentage increase
 - the highest total demand by 2012 is projected to be for wood trades and interior fit-out – this trade is also forecast to increase substantially, by 10%
 - other notable increases are projected to be in construction professionals and technical staff (12%), floorers (11%), roofers (10%) and plumbers and other heating ventilation and air conditioning (HVAC) trades (10%).

Implications for Learning Provision: continued demand for wood trades and interior fit-out workers will require provision of apprenticeship places at SVQ 3 (SCQF 6/7) level. The fit-out component will also require workers to be trained in a narrower range of skills at SVQ level 2 (SCQF 5). Electrician apprenticeships at SVQ level 3 (SCQF 6/7) will also be required, as will a diverse range of support occupations to support the industry. It is important that measures are taken to incentivise employers to offer apprenticeships in these trades.

Energy and Utility Skills (EU Skills)

Key Message: employment projections for the EU Skills sub-sectors expect electricity, gas and water workers all to lose jobs over the next decade. Only waste management is projected to make a net gain in employment.

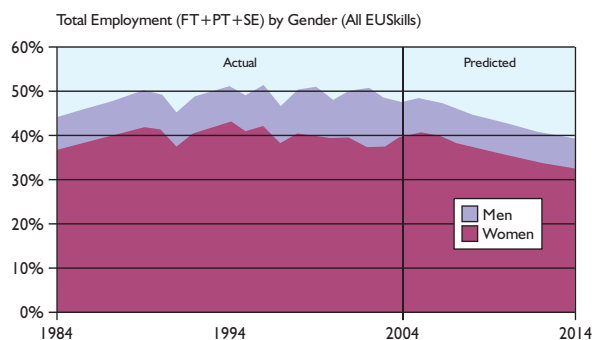
- 3.12 Energy and Utility Skills (EU Skills) is the SSC responsible for the utilities and related industries, including electricity generation and distribution, gas, water and waste management.
- 3.13 EU Skills are currently developing projections for their four sub-sectors, but have only completed the process for gas distribution networks; this data cannot be broken down by nation.
- 3.14 However, some limited information can be obtained from the Working Future Report for EU Skills completed by IER at the University of Warwick¹⁶. Employment projections for the EU Skills sub-sectors expect electricity, gas and water to all lose jobs over the next decade, and only waste management is projected to make a net gain in employment.
- 3.15 At the regional level, most of the projected job losses are concentrated in England and Scotland. In Scotland, all four sectors are projected to lose jobs, such that overall eight thousand EU Skills jobs are forecast to be lost.
- 3.16 **Figure 3.3** shows predicted changes in EU Skills employment by gender to 2014.

¹⁴ConstructionSkills (2008) 2008–2012 Construction Skills Network Labour Market Intelligence. Available at http://www.constructionskills.net/pdf/research/outputs/2008/SC_LMI_070208.pdf

¹⁵Non-construction operatives is a diverse occupational group including all of the activities under the SIC 45 and 74.2 umbrella that cannot be classified elsewhere, such as cleaners, elementary security occupations and routine inspectors and testers. ConstructionSkills note that the skills required in these occupations are highly transferable to other industries and forecasting such movement is hazardous given the lack of robust supportive data.

¹⁶IER *Employment Projections for Energy and Utility Skills (EU Skills) 2006*

Figure 3.3: Scotland: All EU Skills: Total Employment by Gender (000s)



Source: IER *Employment Projections for Energy and Utility Skills (EU Skills) 2006*

Implications for Learning Provision: the projected increase in waste management employment may lead to demand for a number of specialist courses, but on the whole this is a sector with declining demand. Some training will still be required to meet replacement demand.

Improve

Key Message: although some projections expect employment is expected to decrease slightly, employers are generally positive about employment growth over the period 2006-11. There is likely to be increased demand for higher level occupations. Employers report future skill issues of IT skills and technical and practical skills.

- 3.17 Improve is the SSC for the food and drink manufacturing sector. Projections produced for the SSDA (Dickerson et al, 2006)¹⁷ forecast that overall employment in the sector is projected to decrease by 5% to 2014. Despite this, there will be an increase in the number and share of higher skilled employees, with high-level roles such as management projected to make up over 50% of employees by 2014.
- 3.18 The report *Skills Needs in the Scottish Food and Drink Manufacturing Sector*¹⁸ provides some limited data from a telephone survey of 200 food and drink manufacturing companies in Scotland about their views of the future of employment in the sector.

¹⁷Dickerson, A. Homenidou, K. Wilson, R. (2006) *Working Futures II 2004-2014*, Workbooks. SSDA, 2006

¹⁸GEN Consulting (2006) *Skills Needs in the Scottish Food and Drink Manufacturing Sector*



3: Projections From Individual Sector Skills Councils

3.19 This survey found that expectations are largely positive, with over half (55%) of the food and drink firms stating that they expect their employment to increase over the next 2-3 years, while a similar proportion feel that their employment will increase over the next 5 years. Just 2% of firms believe that their employment will decrease over the next 2-3 and 5 years.

3.20 There is a difference among the food and drink sub sectors, with both bakery and fish being less positive about future employment prospects. Despite this, the majority of these firms are still quite positive about the future (44% of fish firms and 49% of bakery firms believing employment will increase over the next 2-3 years).

3.21 **Table 3.1** outlines the firms' expectations of employment over the next 2-3 years and the next 5 years.

Table 3.1: Expectations of Employment over the Short to Medium Term in the Scottish Food and Drink Manufacturing Sector

	Over the next 2-3 years		Over the next 5 years	
	Number	%	Number	%
Increase	383	55%	377	54%
Decrease	17	2%	14	2%
Stay the same	247	36%	235	34%
Don't know	46	7%	66	10%

Source: GEN Consulting Skills Needs in the Scottish Food and Drink Manufacturing Sector

3.22 Table 3.2 shows projected future skill needs of employers in the sector. This suggests that the key skill needs in the future will be:

- basic computer/IT skills
- other technical and practical skills
- craft skills
- operational management skills.

Table 3.2: Key Future Skills Issues Outlined by Scottish Food and Drink Manufacturing Firms

	Over the next 2-3 years		Over the next 5 years	
	Number	%	Number	%
Basic computer literacy/using IT	30	30%	35	30%
Advance IT or software skills	3	2%	3	2%
Craft skills	21	18%	21	18%
Oral communication skills	6	5%	5	4%
Written communication skills	11	9%	10	9%
Customer handling skills	13	11%	11	9%
Team working skills	12	10%	12	10%
Problem solving skills	10	9%	10	9%
Planning and organising skills	14	12%	13	11%
Strategic management skills	5	4%	4	3%
Operational management skills	20	17%	16	14%
Marketing	10	8%	10	9%
Legislative skills	8	7%	8	7%
Training/coaching skills	11	10%	11	10%
Product development	19	16%	18	15%
Using numbers	8	7%	6	5%
Literacy skills	9	7%	8	7%
Other technical and practical	54	45%	54	46%
Health and safety	17	14%	17	15%

Source: Improve

Implications for Learning Provision: Growth in this sector will require an increase in appropriately qualified workers, most likely to be highly skilled. There will also be an increased need for people trained in basic IT and technical and practical skills that are not necessarily at a high level but may be required to be integrated into their existing skill sets by workers across the board.

3: Projections From Individual Sector Skills Councils

Lantra

Key Message: the skills predicted to be in greatest demand are soft transferable skills such as communication and planning/organisation skills. Employers believe that all skills will be required at a higher level in three years' time. In particular, skills such as communication and environmental management currently required at an intermediate level will be required at a high level. The trend is towards acquisition of SCQF Level 6 and above across all skill areas.

- 3.23 Lantra is the SSC for the environmental and land-based sector, which comprises 17 industries¹⁹ distributed across Scottish Enterprise and Highlands and Islands Enterprise areas.
- 3.24 Research by Lantra²⁰ asked businesses to identify what skills are required within their business, and the level at which they require skills currently, and in three years' time.

- 3.25 Table 3.3 shows the proportion of establishments that identify that 'lower' (i.e. basic and intermediate) level skills will be needed currently and in three years' time, and the proportion of establishments that report that 'higher' (i.e. high and advanced) level skills will be needed currently and in the future. Fewer establishments report that they will require lower level skills for all occupations in the future than currently.
- 3.26 There is an increasing demand for higher level skills for all occupations in three years' time. Lantra state that although these categories do not directly correlate to SCQF Levels, the trend is towards acquisition of SCQF Level 6 and above across all skill areas.

Table 3.3: Current and Future Skill Requirements, Land Based Industries, 2006-09

Skills Currently Required	% of Businesses Citing as Current Requirements	Current Level Required	Level Required in 3 Years
Communication	66.5	Intermediate	High
Planning and organisation	63.2	High	High
Environmental management	58	Intermediate	High
Technical	57.9	High	High
Literacy	55.8	Intermediate	High
Numeracy	55.8	Intermediate	High
Finance/accounts	54.1	Intermediate	High
Waste management	51.2	Intermediate	High
Computing/IT	46.3	Intermediate	High

Source: Lantra

Implications for Learning Provision: there will be a need for schools, colleges, universities and other learning providers to continue the emphasis on integrating personal transferable skills into land-based courses. There will be a general need to increase skills taught at SCQF level 6 and above are taught, implying a greater role for Scotland's universities and colleges.

¹⁹Lantra represents 17 environmental and land-based industries. Official data, and work which is based on this data (such as FSS Surveys and Working Futures), covers employers in agriculture and forestry quite well – but overlooks many of our other industries. Lantra argue these stats also tend to underplay the significance of the sector as the self-employed and sole traders (which make up a high proportion of land-based) are overlooked.

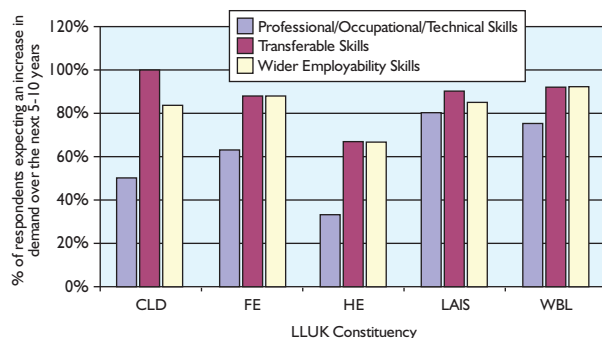
²⁰Lantra (2006) *Sector Skills Agreement – Scotland Annex*

Lifelong Learning UK

Key Message: an increased share of the workforce will be professional occupations. The sector will require almost 300,000 new recruits to meet expansion and replacement demand. Skill requirements are projected to grow faster than employment, suggesting an upskilling of the workforce.

- 3.27 These forecasts draw on UK-wide findings from the 'Working futures 2004–2014: sectoral report' and draws on views expressed by respondents to an employer survey undertaken in Scotland as part of LLUK's Stage 1 SSA.
- 3.28 **Figure 3.4** shows professionals will constitute 56% of the overall workforce in 2014 (up 3% from the year 2004). Across the UK, almost 300,000 new recruits will be required in the lifelong learning workforce by the year 2014, in order to satisfy both expansion and replacement demand.
- 3.29 According to the LLUK employer survey, respondents in Scotland were more likely to expect increasing demand for skills over the next 5-10 years than growth in particular occupations.

Figure 3.4: Percentage of respondents expecting an increase in demand for particular skills over the next 5-10 years, by constituency and occupational group



Key: CLD = Community Learning and Development, FE = Further Education, HE = Higher Education, LAIS = Libraries, Archives and Information Services, WBL = Work-Based Learning.

Source: LLUK online employer survey, 2006, employers in Scotland.

Implications for Learning Provision: there will be a need to increase the skills of existing employees in addition to training new recruits. In particular it will be necessary to increase 'soft' transferable and employability skills to meet future demand.

ProSkills

Key Message: employment is projected to grow in managers and senior officials, professional occupations and associate technical and professional occupations. It is expected to fall or remain constant in all other occupation groups.

- 3.30 ProSkills is the SSC working for the building products, coatings, extractives, furniture, glass, paper and printing industries - the process and manufacturing sector.
- 3.31 ProSkills provide employment forecasts by sub-sector and occupation based on forecasts undertaken by the IER at the University of Warwick²¹. Unfortunately, this data is currently only available at UK level, however there are some interesting findings.
- 3.32 Employment in the sector as a whole is projected to decline by around 12% over 2004-14. The majority of this decline will be in lower-skilled occupations, in particular elementary occupations.
- 3.33 The report predicts that for the UK, the employment share of Managers and Senior Officials, Professional Occupations and Associate Technical and Professional occupations will rise.

²¹Proskills Working Futures 2004-2014 Sectoral Report

3: Projections From Individual Sector Skills Councils

3.34 **Table 3.4** provides projected employment demand by occupation for the sector.

Table 3.4: Composition of Employment of Occupation, Proskills, UK

	Employment Levels (000s)				
	1994	1999	2004	2009	2014
1. Managers and Senior Officials	63	71	68	71	71
2. Professional Occupations	21	23	21	22	22
3. Associate Professional and Tech	60	68	67	70	72
4. Administrative, Clerical and Sec	60	53	42	35	29
5. Skilled Trades Occupations	110	102	80	73	67
6. Personal Service Occupations	9	10	9	9	8
7. Sales and Customer Service Occs	13	14	13	12	11
8. Machine and Transport Operatives	119	111	92	87	80
9. Elementary Occupations	71	64	51	41	31
Total Employment	527	517	445	418	390
	Employment Shares (%)				
	1994	1999	2004	2009	2014
1. Managers and Senior Officials	12	14	15	17	18
2. Professional Occupations	4	4	5	5	6
3. Associate Professional and Tech	11	13	15	17	18
4. Administrative, Clerical and Sec	11	10	10	8	7
5. Skilled Trades Occupations	21	20	18	17	17
6. Personal Service Occupations	2	2	2	2	2
7. Sales and Customer Service Occs	3	3	3	3	3
8. Machine and Transport Operatives	23	21	21	21	21
9. Elementary Occupations	13	12	11	10	8
Total Employment	100	100	100	100	100

Source: Proskills

3.35 Scottish employment data is available through the FSS Sector Profile²², but this does not include forecast data. The report does outline the main challenges anticipated by employers up until 2007. The main challenges were (% employers reporting problem):

- cost of expanding or obtaining new facilities (24%)
- increasing competition from outside Scotland (21%)
- keeping existing customers/business (14%)
- keeping up with changes in technology (14%)
- attracting appropriately skilled staff (14%).

Implications for Learning Provision: the employment projections suggest increased demand for training workers in high-level occupations. This is likely to include graduate level workers in both management and technical production skills, for example graduates in chemistry with management would be in high demand.

²²FSS Proskills (Process and Manufacturing Industries) Scottish Sector Profile 2007

Skills for Logistics

Key Message: net employment demand in the freight logistics sector is expected to fall, although there is likely to be significant replacement demand. Employment in administrative occupations is predicted to grow, while operative and elementary employment is likely to fall.

3.36 Skills for Logistics is the SSC for the freight logistics industries, and works alongside companies involved in moving, handling or storing goods. Its document *Scottish Logistics Sector Profile (2007)*²³ provides forecasts using Working Futures II (WFII) data, which suggest that employment in the Scottish logistics sector is predicted to remain fairly static by 2014, following a period of large scale growth in the logistics sector since 1984, due to globalisation and increased trade through the ports, airports and roads in Scotland.

3.37 WFII predicts a tail off in growth following this period. However, Skills for Logistics note that important retail developments such as the recent application for development of the Edinburgh Cameron Toll shopping centre and Glasgow's Fort and Junction 10 shopping centres will impact both construction and retail logistics activity. As well as this, progress is being made on the Grangemouth Investment Zone and port and the possibility of the building of significant container ports at Hunterston and Scapa Flow.

3.38 As shown in **Table 3.5**, when taking into consideration the number of new employees needed by 2014 including replacement demand to cover for eventualities such as retirement, the number of new workers needed in the Scottish logistics sector is 17,000 without factoring in the developments listed above. This is mainly due to an aging driver population that accounts for almost a third of all replacement demand needs.

Table 3.5: Logistics Employment Estimates for Scotland

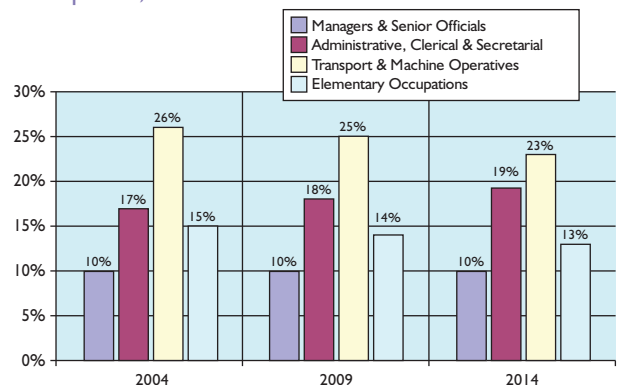
	2004	2009	2014	Net Change 2004-2014	Replacement Demand	Total
Scottish Logistics	63,000	61,000	59,000	-4,000	21,000	17,000

Source: Skills for Logistics *Scottish Logistics Sector Profile*

3.39 As illustrated by **Figure 3.5**, Working Futures II predictions on the major occupational groups within Scotland shows an increase in administration, clerical and secretarial occupations. This reflects changes in the sector with relation to increased customer service expectations and the need for firms to run more efficient business operations.

3.40 It also predicts a continued demand for management positions within the logistics sector, accompanied by a fall in machine operative and elementary occupations. This is in many ways due to the increased customer facing and technological advances in the sector that will require individuals to manage relationships with increased responsibility. Transport and machine operatives are expected to remain the largest sub-group.

Figure 3.5: Skills for Logistics Employment by Occupation, 2004-14



Source: Skills for Logistics

Implications for Learning Provision: replacement demand will ensure a continuing need to train drivers, this is likely to be on-the-job training. The growth in service occupations will require training provision in secretarial skills, typically around SCQF level 6.

²³Skills for Logistics (2007): *Scottish Logistics Sector Profile*

3: Projections From Individual Sector Skills Councils

SkillsActive

Key Message: employment growth is projected to be stronger than Scottish or UK average for all sub-sectors with the exception of Caravans. The highest percentage annual change over 2004-14 will be in Agricultural Trades, Process Plant and Machine Operatives and Elementary Personal Services, although Managers and Senior Officials will still be the largest occupation in terms of numbers employed.

3.41 SkillsActive is the sector skills council (SSC) for the active leisure and learning sector, which itself consists of five sectors: playwork, health and fitness; sport and recreation; caravans and the outdoors. Of these, by far the largest share of employment is in sport and recreation.

3.42 SkillsActive produced labour market forecasts for the sector in Scotland, based on Experian data, up to 2014²⁴. Projections are compiled for the five key sub-sectors and for 12 occupations.

3.43 These SkillsActive forecasts for employment growth in the sub-sectors of active leisure and learning are shown below in comparison with employment growth across all sectors. This highlights that employment growth is projected to be stronger than Scottish or UK average for all sub-sectors with the exception of caravans. The sub-sector with the highest projected growth over 2009-2014 is health and fitness, although this is still relatively modest (1.9%).

Table 3.6: Employment Growth in Active Leisure and Learning in Scotland
(Average Annual Growth, %)

	2004 to 2009	2009 to 2014
Active Leisure and Learning	2.1%	1.2%
Sport and Recreation	2.7%	1.7%
Health and Fitness	2.9%	1.9%
Playwork	0.8%	0.0%
The outdoors	1.3%	0.8%
Caravans	-1.7%	-2.4%
Whole Scotland Economy	-0.1%	0.0%
Whole UK Economy	0.6%	0.4%

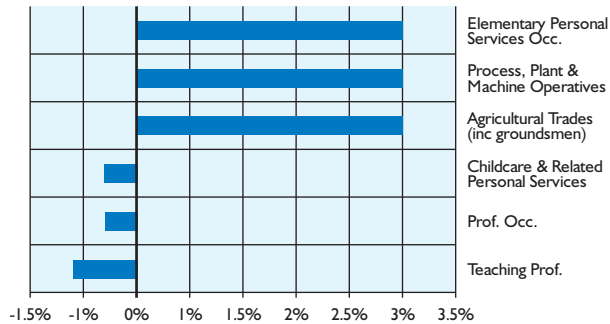
Source: SkillsActive (2005) *The Future for Active Leisure and Learning – Scotland*

3.44 The SkillsActive report also provides some commentary on the projected profile of the workforce in the sector. In general, they believe the profile in terms of employment status and age will remain relatively stable.

- the percentage of 25 to 44 year olds is forecast to fall and the percentage of those 45 and older to rise
- there are proportionally more part time workers in the active leisure and learning sector than in the whole Scottish economy. Part-time employment will continue to exceed full-time employment over 2004-14
- the sector will continue to be staffed mainly by employees rather than self-employed, and the proportion of employees may even rise.

3.45 A breakdown of employment growth in the sector by occupation and selected key detailed occupation is provided in **Figure 3.6**. This shows the highest percentage increases in less skilled occupations. The highest percentage annual change (2.5%) over 2004-14 will be in agricultural trades, process plant and machine operatives and elementary personal services.

Figure 3.6: Projected Employment Change by Occupation, 2004-14

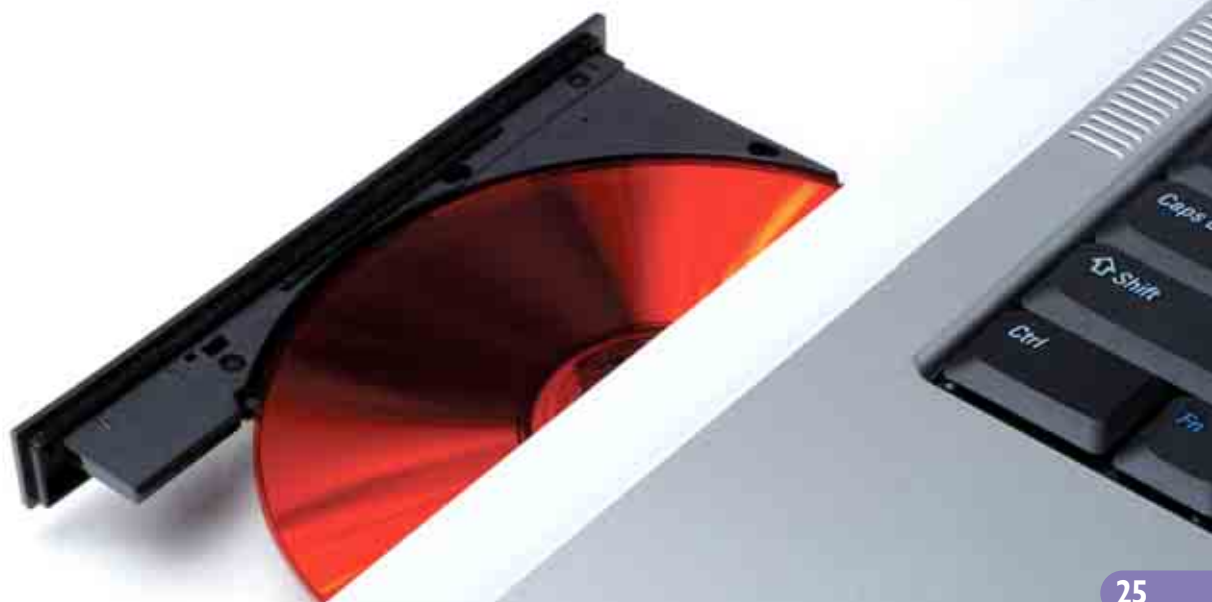


Source: SkillsActive (2005) The future for Active Leisure and Learning – Scotland

3.46 A more detailed breakdown of SkillsActive occupations is given in Table A3.2 in Appendix 2. This highlights that:

- the single occupation with the highest proportion of employment will continue to be managers and proprietors
- the largest absolute growth will be in managers and senior officials.

Implications for Learning Provision: the employment projections suggest increased demand for training in less skilled occupations, most of which is likely to be on-the-job. The fact that managers and senior officials will continue to be the largest occupation and have the largest growth highlights the need for graduate level workers and for in-work management training.



3: Projections From Individual Sector Skills Councils

SSSC - Scottish Social Services Council

Key Message: demand for community care and pre-school care is likely to rise in the future, resulting in likely increased demand for workers in these sectors. Demand for criminal justice social work and children and families social work is less clear, although it is expected to at least remain at current levels.

3.47 The Scottish Social Services Council deals with skills for social care and housing support in Scotland. This broadly covers the following SIC sectors.

Table 3.7: SIC Code Definition of Sector	
SIC Code	Description
85.3	Social work activities
85.31	Social work activities with accommodation
85.31/1	Charitable social work activities with accommodation
85.31/2	Non-charitable social work activities with accommodation
85.32	Social work activities without accommodation
85.32/1	Charitable social work activities without accommodation
85.32/2	Non-charitable social work activities without accommodation

Source: SSSC

3.48 In terms of future demand, SSSC argues that demand and need for services is therefore likely to vary across the seven sub-sectors²⁵ that make up the social services sector in Scotland.

3.49 The numbers of staff that are required will depend on the method taken to meet the need, (e.g. to what extent should the focus be on maintaining older people in their own homes or moving them into care homes?), which itself will be dependent on Government policy. Estimation of future skill needs in the sector is therefore subject to assumptions about community care policy.

3.50 To estimate community care employment, the SSSC quote the first Range and Capacity Review report (Scottish Executive, 2004), taking the baseline scenario, which assumed that both prevalence rates and current policies on service delivery will remain constant. On this basis they identified the following increases in staffing by 2017:

- residential care 37%
- day care 32%
- domiciliary care 32%.

3.51 This increased demand is estimated to represent 36,000 jobs (27,000 FTE) by 2017.

3.52 Demand for early years services (pre-school child care) is estimated to rise. This is a result of more women returning to work, and the Scottish Childcare Strategy. The long term objective of the Scottish Government is to increase provision by 50%, which is likely to result in an increased demand for workers in this area.

3.53 Future demand for workers in criminal justice social work and children and families social work is less clear, although it is expected to at least remain at current levels.

Implications for Learning Provision: to meet replacement demand and cover projected expansion there will be a need to train greater numbers of people in community care and pre-school child care.

SummitSkills

Key Message: there is some disagreement over future employment growth in the building services engineering sector. Both forecasts indicate growth in the sector, but SummitSkills' own data suggests a higher rate of growth than Experian.

- 3.54 SummitSkills covers the building services engineering sector, which can be split into three main areas of employment: industrial, commercial and domestic. The building services sector represents the electrotechnical, heating, ventilating, air conditioning, refrigeration and plumbing industries.
- 3.55 According to the SummitSkills Scottish LMI Profile document *Building Services Engineering Labour Market Information*²⁶, the building services engineering sector will continue to enjoy growth patterns identified over the last few years, fuelled by a significant amount of new build, which will translate into a demand for significant numbers of apprentices within the building services engineering sector.
- 3.56 The data in this document only relates to anticipated uptake of apprenticeships, rather than labour forecasts for the whole sector. Growth within Scotland is predicted by Experian (who produce LMI for both Construction Skills and SummitSkills) not to be as buoyant as has been the case in previous years.
- 3.57 In primary research carried out by SummitSkills however, as part of their Sector Skills Agreement, 91% of companies in the building services engineering sector who were interviewed stated that they expected the sector in Scotland to grow in the short to medium term (84% Highlands and Islands, 97% Scottish Enterprise) which suggests that the market may be more buoyant than is perceived by Experian.
- 3.58 Employer surveys of this type can be open to reporting bias, as employers have an incentive to over-report skill shortages. Therefore we would treat these findings with caution.
- 3.59 SummitSkills has therefore recommended in the SSA that no diminution of training places occur in Scotland and that current levels of funding are maintained. To facilitate this, SummitSkills has placed in brackets in the appropriate boxes in the **Table 3.8**, the anticipated uptake of apprenticeship places that it is perceived will be required:²⁷

Table 3.8: Anticipated Uptake of Apprenticeships in the Building Services Engineering Sector in Scotland

Scottish Employment			Average Annual Requirement
	2006	2010	2006-2010
Electrotechnical	15,420	16,540	420 (900)
Plumbers (including Gas)	5,886	6,356	140 (500)
Heating and Ventilation	3,270	3,531	78 (91)
Air Conditioning and Refrigeration	1,744	1,883	42 (44)

Source: Experian/ Hammond (2006) Amended

Implications for Learning Provision: although estimates of scale may vary, there is likely to be a continued need to train building services engineering workers. Measures must be put in place to encourage employers to recruit apprentices. Appropriate college provision will also be required and this should be flexible, up-to-date and meet the needs of employers, for example in providing short vocational courses at below SVQ level 3 (SCQF level 6/7) if required.

²⁶SummitSkills *Building Services Engineering Labour Market Information*

²⁷To avoid any confusion, SummitSkills would like to emphasise that the figures in brackets are a Hammond (2007) addition and are not part of the original Experian calculations, nor have anything to do with the Experian calculated model.

4: Conclusions

- 4.1 Through analysing labour market projections by industry and occupation from the key sources we have come up with a number of potential scenarios that will impact on learning providers.
- 4.2 FSS data predicts a projected shift in employment from low-skilled elementary occupations to high-skilled professional occupations. There are projected to be notable increases in sales and customer service jobs, and in managers and senior officials.
- 4.3 Analysis of skills supply projections implies that Scotland is on track to meet this increased demand for skilled occupations with an appropriately skilled labour supply. There may of course remain skills shortages within specific occupations.
- 4.4 Analysis of SSDA projections by detailed occupation also shows a move away from lower skilled and technical occupations towards service sector occupations. The largest percentage employment growth is projected to be in customer service, and teaching and research professionals (31.6%).
- 4.5 These figures suggest that there will be an increased need for learning provision in business, finance and other services, but less need for engineering courses. However, demand for engineering graduates currently outstrips supply, so a decrease in engineering employment may still result in a shortage of labour.
- 4.6 Scottish Enterprise projections differ from those by FSS and SSDA and suggest employment change is not as simple as a shift from primary and secondary to tertiary (service) industries. Projected increases in agriculture, forestry and fishing, and construction imply that there may be skills shortages in these sectors and there will be a need to incentivise employers to provide apprenticeships. This is even more urgent given the increased demand likely from Commonwealth Games infrastructure projects.
- 4.7 Analysis of individual SSC predicted requirements indicates a general upskilling of the labour force in all SSCs. There is a projected trend away from employment elementary skills towards customer service, transferable and managerial skills.
- 4.8 It also highlights marked differences in forecast between subsectors within these industries, with some sectors expecting net growth and others net decline in employment. SSCs are keen to emphasise that even where net employment is expected to decline there will be replacement demand for workers leaving the industry, and upskilling requirements for existing workers.
- 4.9 Overall, there will be increased demand for learning and training in higher skilled occupations and an increased demand for service sector and transferable skills at a high level. Scotland's colleges, universities and work based learning providers should continue the emphasis on integrating personal transferable skills into training. There will be an overall need to increase the level at which all skills are taught, and an increased role for Scotland's learning providers in providing business and management courses.

Appendix I:

Detailed Labour Market Projections

Table A2.1: Projected Total Employment in Scotland by Industry, 2007-2017

Industry	Total Employment		Total Change	% Change
	2007	2017		
Agriculture etc	49,000	37,000	-12,000	-24
Mining and quarrying	25,000	21,000	-4,000	-16
Food, drink and tobacco	49,000	47,000	-2,000	-4
Engineering	52,000	36,000	-16,000	-31
Rest of manufacturing	135,000	116,000	-19,000	-14
Electricity, gas and water	15,000	13,000	-2,000	-13
Construction	167,000	163,000	-4,000	-2
Retail and distribution	397,000	422,000	25,000	6
Hotels and catering	185,000	199,000	14,000	8
Transport and telecommunications	148,000	130,000	-18,000	-12
Banking and insurance	118,000	130,000	12,000	10
Other business services	369,000	456,000	87,000	24
Public administration and defence	181,000	184,000	3,000	2
Education	201,000	209,000	8,000	4
Health and social work	377,000	401,000	24,000	6
Miscellaneous services	162,000	148,000	-14,000	-9
All industries	2,630,000	2,712,000	82,000	3

Source: FSS, Labour Market Projections 2007 – 2017 (page 21-22)

Table A2.2: Projected Employment by Broad Occupation

	2004	2009	2014	Change 2004-2014	
				Number	%
Managers and senior officials	334,000	351,000	369,000	35,000	10
Professional occupations	304,000	335,000	371,000	67,000	22
Associate professional and technical occupations	346,000	355,000	364,000	18,000	5
Administrative and secretarial occupations	338,000	335,000	330,000	-8,000	-2
Skilled trades occupations	287,000	277,000	269,000	-18,000	-6
Personal service occupations	162,000	169,000	175,000	13,000	8
Sales and customer service occupations	201,000	213,000	226,000	25,000	12
Process, plant and machine operatives	209,000	203,000	196,000	-13,000	-6
Elementary occupations	340,000	305,000	272,000	-68,000	-20
Total	2,521,000	2,543,000	2,572,000	51,000	2

Source: Futureskills Scotland Labour Market Projections to 2014 Technical Report

Appendix I:

Detailed Labour Market Projections

Table A2.3: Projected Numbers in Employment, Employed, of Working Age and Economically Active

Equivalent Level	In Employment			Employed			Working Age			Economically Active		
	2004	2007	2009	2004	2007	2009	2004	2007	2009	2004	2007	2009
SVQ 4+	866,000	978,000	1,049,000	830,000	940,000	994,000	924,000	1,081,000	1,167,000	829,000	941,000	1,001,000
SVQ 3	531,000	547,000	554,000	502,000	519,000	519,000	641,000	649,000	655,000	514,000	527,000	529,000
SVQ 2	499,000	486,000	474,000	473,000	460,000	443,000	628,000	600,000	589,000	488,000	476,000	464,000
SVQ 1	361,000	333,000	314,000	343,000	317,000	294,000	478,000	459,000	442,000	358,000	339,000	320,000
No qualifications	265,000	194,000	151,000	251,000	184,000	141,000	502,000	415,000	343,000	273,000	206,000	164,000
Total	2,522,000	2,539,000	2,543,000	2,400,000	2,420,000	2,392,000	3,174,000	3,204,000	3,198,000	2,461,000	2,490,000	2,478,000

Source: Futureskills Scotland Labour Market Projections to 2014 Technical Report

Equivalent qualifications to each SVQ level

SVQ Level Comparable qualifications

- 5 SVQ 5: Higher degree (postgraduate)
- 4 SVQ 4: First degree; Sub degree higher education (HND, DipHE)
- 3 SVQ 3: Advanced Higher; HNC; BTEC; RSA higher; Nursing, Teaching
- 2 SVQ 2: Credit Standard Grades; GNVQ intermediate; BTEC first diploma
- 1 SVQ 1: General Standard Grades; GNVQ Foundation; BTEC first certificate

Table A2.4 Projected FTE Jobs by Industry Sector, SE Area 2005-10

	Agriculture, Forestry and Fishing	Mining and Utilities	Metals, Minerals and Chemicals	Engineering	Other Manufacturing	Construction	Distn, Hotels and Catering	Transport and Comms	Financial and Business Services	Other (Mainly Public) Services	All sectors
2005	47,227	39,684	48,717	68,334	115,107	174,615	413,704	140,224	411,427	705,660	2,164,699
2006	52,614	40,487	49,344	66,031	111,382	178,815	412,872	137,709	427,082	721,424	2,197,759
2007	53,391	41,366	50,392	65,444	114,633	185,622	408,610	140,257	436,707	729,226	2,225,647
2008	54,134	40,747	50,535	65,190	115,764	191,697	406,189	139,360	441,618	722,036	2,227,271
2009	54,064	39,894	50,194	64,821	114,838	195,766	404,882	139,396	445,783	716,959	2,226,597
2010	53,566	38,805	49,731	64,407	113,697	195,677	403,672	139,244	450,057	716,254	2,225,109
Change	13.4%	-2.2%	2.1%	-5.7%	-1.2%	12.1%	-2.4%	-0.7%	9.4%	1.5%	2.8%

Source: Scottish Enterprise

Table A2.5: Employment by Industry

	2004	2009	2014	2004	2014	Change 2004-2014		
	(000s)	(000s)	(000s)	(%)	(%)	(000s)	(%)	(% per annum)
Agriculture, etc	46	40	35	1.8	1.4	-10	-22.7	-2.5
Mining and quarrying	24	22	20	0.9	0.8	-3	-14.2	-1.5
Electricity, gas and water	15	14	13	0.6	0.5	-2	-11.5	-1.2
<i>All primary sector and utilities</i>	84	--	69	3.3	2.7	-15	-18.3	-2.0
Food, drink and tobacco	49	48	47	2.0	1.8	-2	-5.0	-0.5
Engineering	57	51	44	2.3	1.7	-13	-22.7	-2.5
Rest of manufacturing	148	138	126	5.9	4.9	-23	-15.3	-1.6
<i>All manufacturing</i>	255	--	217	10.1	8.4	-38	-15.0	-1.6
Construction	188	180	171	7.4	6.7	-17	-8.8	-0.9
Retail, distribution	392	399	407	15.6	15.8	15	3.8	0.4
Hotels and restaurants	182	179	184	7.2	7.1	2	0.9	0.1
Transport and comm.	143	146	150	5.7	5.8	6	4.3	0.4
<i>All distribution transport etc.</i>	718	--	740	28.5	28.8	23	3.2	0.3
Financial services	110	109	106	4.3	4.1	-4	-3.3	-0.3
Other business activities	346	368	403	13.7	15.7	57	16.6	1.5
Other services	164	175	182	6.5	7.1	18	10.7	1.0
<i>All business and other service</i>	619	--	691	24.5	26.9	71	11.5	1.1
Public admin. and defence	152	152	149	6.0	5.8	-3	-1.8	-0.2
Education	211	218	224	8.4	8.7	12	5.8	0.6
Health and social work	295	305	311	11.7	12.1	16	5.4	0.5
<i>All non-marketed services</i>	658	--	684	26.1	26.6	26	3.9	0.4
All Sectors	2,522	--	2,572	100.0	100.0	50	2.0	0.2

Source: SSDA, Working Futures Report 2004 – 2014 Spatial Report

Note: Figures are rounded and percentage changes apply to unrounded figures.

Appendix I:

Detailed Labour Market Projections

Table A2.5b: SSDA Sector Definitions

	SIC 2003		SAM41 (MDM)	Broad Sector Group
1 Agriculture, etc ^(a)	(AB)	01 to 05	1	1
2 Mining & quarrying ^(a)	(C)	10-14	2-4	1
Manufacturing, of which: ^(b)	(D)	15-37	5-21	2
3 Food drink & tobacco	(DA)	15-16	5	2
4 Engineering	(DL+)	29-33	16-18	2
5 Rest of manufacturing	(rest of D)		6-15, 19-21	2
6 Electricity, gas & water ^(a)	(E)	40/41	22-24	1
7 Construction	(F)	45	25	3
8 Retail, distribution	(G)	50 to 52	26,27	4
9 Hotels & restaurants	(H)	55	28	4
10 Transport & communication	(I)	60 to 64	29-32	4
11 Financial services ^(b)	(J)	65,66,67	33,34	5
12 Other business activities ^(b)	(K)	70 to 74	35-37	5
13 Public admin. & defence	(L)	75	38	6
14 Education	(M)	80	39	6
15 Health & social work	(N)	85	40	6
16 Other services	(O,P,Q)	90 to 99	41	5

Notes:

- a) Although these categories are shown here, small sample sizes preclude producing some, more detailed, breaks for these sectors.
- b) These categories are modified from those adopted by ONS for regional reporting in order to avoid cutting across the categories used in Table A.6.

Source: SSDA, Working Futures Report 2004 – 2014 Spatial Report

Table A2.6 Occupational Change in Scotland

	2004	2014	2004	2014	Change 2004-2014		
	(000s)	(000s)	(%)	(%)	(000s)	(%)	(% per annum)
Corporate managers	247	290	9.8	11.3	43	17.3	1.6
Managers/proprietors	87	79	3.4	3.1	-8	-8.9	-0.9
Sc. and tech. profs.	79	91	3.1	3.5	12	15.9	1.5
Health professionals	25	31	1.0	1.2	6	25.5	2.3
Teaching and res. Profs.	146	192	5.8	7.5	46	31.6	2.8
Business professionals	54	56	2.2	2.2	2	3.5	0.3
Sc. and tech. assoc. profs.	53	60	2.1	2.3	7	13.3	1.3
Health assoc. profs.	104	110	4.1	4.3	5	5.0	0.5
Protect. serv. Occs	41	40	1.6	1.6	-1	-2.9	-0.3
Culture, med. and sports	41	46	1.6	1.8	4	10.5	1.0
Business assoc. profs.	106	109	4.2	4.2	2	2.0	0.2
Admin and clerical	260	265	10.3	10.3	5	2.1	0.2
Secretarial and related	79	65	3.1	2.5	-14	-17.5	-1.9
Skilled agric. trades	36	41	1.4	1.6	5	12.8	1.2
Skilled metal and electrical	98	68	3.9	2.7	-30	-30.4	-3.6
Skilled cons. and building	94	110	3.7	4.3	16	17.2	1.6
Other skilled trades	59	50	2.4	2.0	-9	-15.4	-1.7
Caring personal service	118	133	4.7	5.2	14	12.2	1.2
Leisure occupations	43	43	1.7	1.7	-1	-1.6	-0.2
Sales occupations	165	176	6.6	6.9	11	6.6	0.6
Customer service occs.	36	49	1.4	1.9	13	36.7	3.2
Process machine ops.	113	91	4.5	3.5	-22	-19.7	-2.2
Drivers and other ops.	96	105	3.8	4.1	9	9.4	0.9
Elementary: trades	106	72	4.2	2.8	-34	-32.0	-3.8
Elementary: service	234	200	9.3	7.8	-34	-14.6	-1.6
All occupations	2,522	2,572	100.0	100.0	50	2.0	0.2

Source: SSDA, Working Futures Report 2004 – 2014 Spatial Report

Appendix 2:

Projections from Individual SSCs

Table A3.1: Projected average annual rate of change, Asset Skills Occupations, 2004-2014

Specific occupation	Percentage share of employment 2004	Percentage share of employment 2014	Change indicator
Property Managers	4.1	2.0	Decline
Building Surveyors	1.3	0.1	Decline
Housing/Welfare officers	13.4	20.4	Significant increase
Estimators and Valuers	1.6	0.1	Decline
Estate Agents	0.6	0.1	Decline
Resident Wardens	2.6	4.1	Increase
Caretakers and Maintenance	6.0	10.6	Increase
Mobile machine drivers	5.4	8.7	Increase
Window Cleaning	2.4	0.2	Decrease
Road Sweeping	1.4	3.9	Increase
Cleaners and Domestic	56.8	44.9	Significant decline
Launderers	3.1	4.4	Increase
Elementary Cleaners nec.	1.3	0.5	Decrease
Total All Occupations	100.0	100.0	

Source: Asset Skills Skills Needs Assessment for Scotland March 2006

Note: A significant decline or significant increase has been defined as a minus or plus change of 5 or more percentage points.

Table A3.1b Construction Employment by Occupation, Scotland, 2006-12

	Actual	Forecast		Change 2006-12	Annual employment forecast
	2006	2008	2012		
Senior and executive managers	1,180	1,220	1,290	6%	<50
Business process managers	4,310	4,560	4,950	9%	150
Construction managers	12,060	12,930	14,060	9%	330
Office-based staff (excl. managers)	11,870	12,740	13,620	7%	300
Other prof/technical staff and IT	1,750	2,030	2,470	22%	<50
Wood trades and interior fit-out	35,640	38,760	42,770	10%	1,360
Bricklayers	6,390	7,310	7,880	8%	370
Building envelope specialists	5,900	6,760	7,260	7%	340
Painters and decorators	13,060	14,180	15,890	12%	370
Plasterers and dry liners	2,430	2,620	2,820	8%	70
Roofers	4,150	4,510	4,970	10%	200
Floorers	2,780	2,980	3,300	11%	<50
Glaziers	2,430	2,600	2,730	5%	50
Specialist building operatives	4,840	5,220	5,690	9%	170
Scaffolders	2,360	2,580	2,810	9%	160
Plant operatives	6,030	6,470	7,010	8%	180
Plant mechanics/fitters	1,610	1,690	1,810	7%	70
Steel erectors/structural	3,370	3,630	3,820	5%	110
Labourers nec*	14,270	15,460	16,490	7%	180
Electrical trades and installation	14,290	15,500	16,900	9%	620
Plumbing and HVAC trades	11,830	13,000	14,240	10%	260
Logistics	3,640	4,000	4,320	8%	50
Civil engineering operatives	6,610	7,160	7,760	8%	210
Non-construction operatives	18,340	20,230	17,480	-14%	750
Construction profs and technical staff	21,260	22,890	25,730	12%	<50
Total (SIC 45 and 74.2)	212,400	233,038	250,082	7%	6,320

Source: ConstructionSkills

Table A3.2: Detailed occupational profile forecasts for Active Leisure and Learning in Scotland

	Proportion of total employment			Absolute change	Average annual change
Managers and Senior Officials	19%	20%	20%	2,560	2.1%
Functional Managers	3%	3%	3%	280	1.7%
Managers and Proprietors in Hospitality and Leisure Services	11%	11%	11%	1,180	1.7%
Prof. Occ.	11%	10%	9%	-190	-0.3%
Teaching Prof.	8%	7%	7%	-310	-0.6%
Ass. Prof. and Tech. Occ.	15%	16%	16%	1,850	1.9%
Sports and Fitness Occ.	9%	9%	8%	790	1.5%
Admin. and Secretarial Occ.	10%	11%	11%	1,410	2.1%
Secretarial and Related Occ.	6%	6%	6%	830	2.3%
Skilled Trades Occ.	7%	7%	7%	780	1.7%
Agricultural Trades (includes grounds men)	3%	3%	4%	540	2.5%
Personal Service Occ.	19%	19%	19%	2,020	1.7%
Childcare and Related Personal Services	2%	2%	2%	-40	-0.3%
Leisure and Travel Service Occ.	6%	6%	6%	660	1.7%
Sales and Customer Service Occ.	1%	1%	1%	90	1.3%
Process, Plant and Machine Operatives	1%	1%	1%	190	2.5%
Elementary Occ.	16%	15%	16%	1,540	1.6%
Elementary Personal Services Occ.	9%	10%	10%	1,490	2.5%
Elementary Cleaning Occ.	4%	4%	3%	110	0.5%
Weighted Base	52,760	59,460	63,020	-	1.6%

Source: SkillsActive (2005) *The future for Active Leisure and Learning – Scotland*



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