April 2010

Process Manufacturing

Proskills is the Sector Skills Council for Process Manufacturing

Contents

1. Sector Information – Proskills

Proskills is the Sector Skills Council for Process Manufacturing. At the time of writing this report, the sector consists of 8 industries:

- Building Products
- Coatings
- Extractive and Mineral Processing
- Furniture, Furnishings and Interiors
- Glass & Related Companies
- Ceramics
- Paper
- Print and Printed Packaging

In addition, there are several additional industries that have historically aligned themselves to industries in the sector and who currently have affiliations with Proskills. These include:

- Glazing and Window Manufacture
- Soft Furnishings
- Design
- Paper Merchants
- Mining Services

More information can be found on Proskills website

Sub Sector – Building Products

2.1 A brief description of what the sub-sector covers at UK level

The UK building products and refractories industry plays a key role in the UK's construction industry and also produces plaster products and fibre cement for construction purposes.

The industry covers the manufacture of:

- Refractory ceramic products
- Bricks, tiles and construction products in baked clay
- Concrete and plaster products for construction purposes
- Fibre cement
- Other articles of concrete, plaster and cement
- Abrasive products
- Other non-metallic mineral products
- Ceramic insulators and insulating fittings

2.2 Information on careers available and new emerging jobs, transferability of skills career paths and opportunities for progression

- Key skills are considered transferable skills in this sector. Key skills are defined as application of number, communication, information technology and problem solving skills.
- All jobs and opportunities for progression are shown on the progression route

2.3 Information on pay scales in the sector

- Entry level – *e.g. Junior Production Operative £12,000 - £14,000*
- Full operative – *e.g. Production Operative £14,000 - £28,000+*
- Senior Management – *e.g. Production Manager £25,000 - £40,000+*

2.4 Information on entry requirements, application processes (e.g. Apprenticeships)

The Building Products Apprenticeship does not impose any restrictions to entry such as a minimum level of qualifications. However, for entry to an Apprenticeship/Foundation Modern Apprenticeship, candidates must demonstrate the potential to achieve at least an NVQ Level 2 and have sufficient knowledge and ability to undertake training to achieve key skills at Level 1 and/or 2 and a suitable technical certificate. There is direct entry onto the Level 3 frameworks.

Typically 16 year old leavers with 3 to 5 GCSE grades D-G including English, Maths, and Science can readily be identified as an Apprentice. Equally, those with higher grades could readily be identified as Advanced Apprentices/Modern Apprentices.

The prime responsibility for the selection and recruitment of trainees lies with individual employers who will have a clear idea of their own requirements.

As a general guide candidates should have the following skills and attributes:

- Self motivation to succeed within the Industry/Sector

- Willingness to work
- Willingness to learn and apply that learning in the workplace
- Demonstrate that they have the potential to complete the qualifications which are part of the Apprenticeship
- Ability to communicate effectively with a range of people
- Numeracy and Literacy Skills

Information on the apprenticeship can be found on the Proskills website, under the section on Qualifications.

2.5 Qualifications

Qualification Title	Level	Target learners
Certificate in Clay Building Products	3	employed 19+ 16-18
Certificate in Clay Building Products	2	employed 19+ 16-18
NVQ in Building Products Operations *	2	employed 19+ 16-18
NVQ in Building Products Operations *	3	employed 19+ 16-18
NVQ in Performing Manufacturing Operations	2	employed 19+ 16-18
Foundation Degree in Clay Technology	4/5	employed 19+

***Will be available shortly.**

2.6 Data on employment and labour market trends and forecasts

There has been a decline in the number of employees over the last decade, but the last year in particular has shown a marked decline in employment levels as a result of the economic downturn. Turnover for the industry is currently around £7.5bn.

Workers in the Building Products industry tend to be full time and directly employed, rather than on a contract basis. Work is often shift-based, especially at lower levels. The industry suffers from a poor image, and the range of career opportunities does not appear to be widely known.

The largest occupational groups in the industry are:

- Process Plant and Machine Operatives
- Managers and Senior Officials
- Skilled Trades Occupations

Demographic Data

Age Bands	
16-24	7%
25-34	25%
35-44	27%
45-54	26%
55-64	14%
65+	1%

Gender Splits	
Female	13%
Male	87%

Sole Traders	
Total:	907

Disability	
Disabled	16%
Non-disabled	84%

Qualification Levels	
Level 5	7%
Level 4	11%
Level 3	18%
Level 2	29%
Level 1	17%
None/Don't Know	19%

2.7 Skills shortages

Around three quarters of the workforce are in larger companies, 29% of which report having skills gaps. Skill gaps are reported across the range of occupational groups, and in total, numbers are most widely reported amongst Process, Plant & Machine operatives, Skilled Trades & Managers. These however are by far the largest occupational groups within the Building Products industry and therefore it is not surprising they have the largest total numbers of employees who are not fully proficient at their job.

As a percentage of occupational groups, Sales & Customer Service occupations have proportionally the highest problem with skill gaps. Whilst only a very small occupational group survey results show one fifth of all people in this occupational group are not fully proficient at their job.

There will be a continuing need for Health and Safety skills in the sector, and it will become more important for people to be multi-skilled, and be able to work across several areas of the business.

Skill shortages in the industry include:

Process, Plant and Machine Operatives	Assemblers and routine operatives, Plant and machine operatives, Production/productivity, Job specific, Quality and customer care managers/Quality, Process operatives, Technical, Non job-specific, Speed of work/meeting deadlines, Motivation, Supervisory, Customer service, Mobile machine drivers and operatives
Skilled Trades	Production related, Job specific, Supervisory, Speed of work/meeting deadlines, Technical, Engineering, Motivation, Quality and customer care, Sales
Managers	Production management, Sales, Admin/office skills, Management skills, Technical, Speed of work/meeting deadlines
Sales and Customer Services	Job specific, Sales, Production/productivity, Quality and customer care, Non job-specific

2.8 Information on opportunities for adults changing career direction

This sector has three major sub sectors:

- Clay building products
- Precast concrete building products
- Refractory products

In the Building Products Sector there are a wide range of career opportunities for adults looking to change career direction. Examples of these include: engineering and maintenance, product design and manufacture, production managers, production supervisors, process operatives, logistics and sales and marketing. Entry level jobs exist within production, administration and engineering.

In pre-cast concrete many employers are committed to staff development to enable them to achieve their full potential. There is a range of jobs providing options, which allow individuals to follow their own personal career goals.

Businesses within this sector are now looking for a more balanced workforce, encouraging applications from men and women, across a wide range of cultures and ethnic backgrounds, to reflect the mix in our society. Jobs on offer can involve working outside, which can mean working in wet and cold weather. However, these jobs require the support of office staff that complete administration work, IT support engineering, maintenance and management activities.

The refractory industry employs a wide range of engineers, scientists, technicians and plant personnel, both male and female. Knowledge of science and mathematics is required to assist in understanding the various types of materials used within the industry.

For more information, visit the Proskills career site:
http://www.proskills.co.uk/prospect4u/building/working_in_the_industry.php

2.9 Information on points of entry or transfer into a sector from another area sector

A number of areas provide opportunities for people looking to change sectors. Examples include, engineering and maintenance, product design and manufacture, process operators, logistics sales and marketing. Applicants for these positions would be expected to have experience in these areas and in some cases relevant qualifications.

2.10 Job profiles – Building Products

Trainee Engineer (Apprentice)
Maintenance Engineer
Trainee Mobile Plant Operative
Experienced Mobile Plant Operative
Production Operative
Team Leader / Supervisor
Pre-cast Concrete Installer (Cladding & Flooring)
Quality Assurance Technician

Engineering Tradesmen (Works Engineer)
Trainee Quantity Surveyor
Junior Operations Manager
Laboratory Technician
Engineering Manager
Experienced Quantity Surveyor
Quality Assurance Manager
Production / Operations Manager
Technologist
Senior Engineering Manager / Engineering Director
Production Director
Marketing Director

2.11 Case Studies

Paul – *Group Energy Manager*

2.12 FAQs

1. ***Q. Is working in the Building Products Sector heavy, dirty manual work?***

   A. Generally most large Building Products Sites are highly automated and relatively clean with very little heavy manual work. However, some of the smaller sites entail a high degree of manual work. One area where there is a high degree of skill and manual dexterity is the production of hand-made bricks. These are generally classed as a premium product and have a very attractive surface finish.

2. ***Q. Are jobs in the Building Products Sector limited to manufacturing operations?***

   A. NO. The Building Products Sector uses two main types of raw materials, clay and precast concrete. Some of the products fulfil the same functions but the processes used are different. Both types of industry offer a range of jobs and both have a culture of "promoting from within the " which offers employees a variety of progression routes to a range of "better" jobs within the company.

   B. Different job roles require different skills and abilities and most people are able to find a role that suits their abilities.

3. ***Q. Is the Building Products Sector environmentally friendly?***

   A. Both precast concrete and clay building products are expensive to produce in terms of energy, but because they have very long life cycles (several hundred years) are recyclable, they are among the most environmentally friendly construction materials.

4. ***Q. Are Clay and Precast concrete products becoming obsolete for the construction of zero carbon homes?***

A. Definitely not. The thermal characteristics of both materials make them ideal materials to act as heat sinks for low energy and zero carbon homes.

5. Q. Does the precast concrete and clay building products industries, with its limited range of products, have a long term future?

A. Yes, because the industry not only produces a vast range of products, but new products are being developed all the time.

Typical products include bricks, building blocks, tiles, pipes, curb stones and many more mundane items.

New developments include permeable paving blocks (to be used in conjunction with water reclamation systems), a new design of building block that can be laid without mortar for laying foundations for buildings, and highly insulated blocks/bricks to increase the thermal efficiency of houses.

2.13 Sources of additional information – web links etc

- British Precast Concrete Federation (BPCF)
- Institute of Materials, Minerals and Mining
- Institute of Quality Assurance (IQA)
- Quarry Products Association
- Virtual Quarry

2.14 Regional Data

Region	Work Places	2009/2010 Employees	Trends and shortages
North East	100	1,700	There are very few sites currently in existence in the North East. The industry has declined in size over the last decade and is now suffering the effects that the credit crunch. In the last year, there has been an increase of some 500 employees.
North West	310	6,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. In fact, the North West has seen a significant growth in the last year now employing 6,000 people. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Yorkshire & Humber	370	4,300	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
East Midlands	310	7,300	The Midlands have a large number of manufacturing sites. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
West Midlands	320	6,000	The Midlands have a large number of manufacturing sites. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Eastern	250	4,300	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
London	100	2,600	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South East	330	8,200	The South East has a large number of head office and other administrative sites. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South West	310	2,600	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Wales	200	2,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Scotland	200	4,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Northern Ireland	200	3,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Total	**3,000**	**51,000**	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.

2.15 Economic Downturn

80% of the Building Products industry are reporting that they have been affected by the economic downturn in some way. Of those employers surveyed, 48% of employers have experiences a contraction of sales in 2008/2009, and 25% experiencing some growth in sales.

The majority of companies looked to reducing production costs in a way to ride the downturn, but the Building Products industry was the hardest hit sub-sector in the Proskills footprint with regards to redundancies. 42% of the industry decreased the size of their workforce. More information on the effects of the economic downturn can be found on the Proskills website

2.16 Influence of the 'Green' agenda on the demand for jobs, skills and qualifications

The Building Products industry is proactive in embracing new technologies to aid recycling of products and the reduction of carbon emissions. Many process in these industries require large resources of energy and some larger companies have identified alternative processes that have generated new jobs and require a new set of skills for employees. Examples of the schemes include:

- Carbon capture and storage
- The use of alternative fuels in industrial processes
- Carbon dioxide control measures

As many of these schemes rely on technology, operatives will increasingly require specialised skills.

3 Sub Sector – Coatings

3.1 A brief description of what the sub-sector covers at UK level

This industry covers the manufacture of:

- Decorative and industrial paints
- Varnishes
- Powder coatings
- Printing inks
- Mastics and sealants
- Wallcoverings

3.2 Information on careers available and new emerging jobs, transferability of skills career paths and opportunities for progression

- Key skills are considered transferable skills in this sector. Key skills are defined as application of number, communication, information technology and problem solving skills.
- All jobs and opportunities for progression are shown on the progression route

3.3 Information on pay scales in the sector

- Entry level – *e.g. Trainee Maintenance Engineer £11,000 - £12,500*
- Full operative – *e.g. Production Quality Controller £14,000 - £18,000*
- Senior Management – *e.g. Senior Maintenance Engineer £25,000 - £40,000*

3.4 Information on entry requirements, application processes (e.g. Apprenticeships)

The Coatings Apprenticeship does not impose any restrictions to entry such as a minimum level of qualifications. However, for entry to an Apprenticeship/Foundation Modern Apprenticeship, candidates must demonstrate the potential to achieve at least an NVQ Level 2 and have sufficient knowledge and ability to undertake training to achieve key skills at Level 1 and/or 2 and a suitable technical certificate. There is direct entry onto the Level 3 frameworks.

Typically 16 year old leavers with 3 to 5 GCSE grades D-G including English, Maths, and Science can readily be identified as an Apprentice. Equally, those with higher grades could readily be identified as Advanced Apprentices/Modern Apprentices.

The prime responsibility for the selection and recruitment of trainees lies with individual employers who will have a clear idea of their own requirements.

As a general guide candidates should have the following skills and attributes:

- Self motivation to succeed within the Industry/Sector
- Willingness to work
- Willingness to learn and apply that learning in the workplace
- Demonstrate that they have the potential to complete the qualifications which are part of the Apprenticeship
- Ability to communicate effectively with a range of people
- Numeracy and literacy skills.

Information on the apprenticeship can be found on the Proskills website, under the section on Qualifications.

3.5 Qualifications

The following qualifications have been designed specifically for the industry.

Qualification Title	Level	Target learners
Certificate in Coatings Technology	4	employed 19+, unemployed 19+ , 16-18
Certificate in Coatings Technology	3	employed 19+, unemployed 19+, 16-18
Certificate in Coatings Technology	2	employed 19+, unemployed 19+ , 16-18
Certificate in Coatings Technology	5	employed 19+, unemployed 19+ , 16-18
NVQ in Producing Surface Coatings	2	employed 19+, 16-18
Introduction to the Coatings Industry	1	14-19, employed 19+ , unemployed 19+, 16-18

3.6 Data on employment and labour market trends and forecasts

There has been a decline in the number of people working in the Coatings industry over the last decade, but this has slowed more recently and the last 3 years show steady employment levels. Turnover for the industry is currently around £3.9bn. Workers in the Coatings industry tend to be full time and directly employed, rather than on a contract basis. Work is often shift-based, especially at lower levels. The industry suffers from a poor image, and the range of career opportunities does not appear to be widely known.

The largest occupational groups in the industry are:

- Process Plant and Machine Operatives
- Managers and Senior Officials
- Elementary Occupations

Age Bands	
16-24	6%
25-34	16%
35-44	36%
45-54	28%
55-64	13%
65+	1%

Gender Splits	
Female	33%
Male	67%

Sole Traders	
Total	1207

Disability	
Disabled	13%
Non-disabled	87%

Qualification Levels	
Level 5	16%
Level 4	4%
Level 3	25%
Level 2	25%
Level 1	19%
None/Don't Know	11%

3.7 Skills shortages

It has been widely predicted that higher level management and technical skills will become more important to the industry in the future as more of the elementary tasks become automated. There will be a continuing need for Health and Safety skills in the sector, and it will become more important for people to be multi-skilled, and be able to work across several areas of the business.

Skill shortages in the industry include:

- Employability skills, including team-working, having a good attitude, and using initiative
- Craft and Technical skills including colour mixing and chemistry
- Management and Leadership skills

3.8 Information on opportunities for adults changing career direction

The Coatings sector

Within the Coatings industry there are a range of fascinating technical jobs available. Entry level jobs are available in a number of fields including, laboratory assistant, production operative, manufacturing operative, production support, business support and administration, quality control and maintenance.

The Coatings industry is part of the modern manufacturing sector and it relies on highly skilled, high tech and creative people, who use their abilities and knowledge to support production processes that are often automated. Excellent careers are

available for people that show commitment and enthusiasm. Career development opportunities include specialist jobs, providing opportunities for people that enjoy engineering, science and those that want to help the environment. There are also a wide range of business support jobs such as administration, IT and managerial roles.

Coatings employers are keen to attract new enthusiastic employees who have not worked in the coatings industry. The skills needs of employers from this sector are wide ranging, but work related qualifications achieved in other sectors are welcome, especially the development of technical skills covering anything from 'Project Management' or 'Health and Safety in the Work Place' to ICT skills.

For more information visit the Proskills career site:
http://www.proskills.co.uk/prospect4u/coatings/working_in_the_industry.php

3.9 Information on points of entry or transfer into a sector from another area sector

Coatings employers are keen to attract new enthusiastic employees including those who have not worked in the sector before. A number of positions would be open for applications from outside the sector including, laboratory assistant, production operative, business support and administration, quality control, health and safety, maintenance engineering, sales and customer support.

Although the sector does take people with little or no experience in the industry, but it does help if some time has been spent within an industrial setting. If you have a technical/research background in chemistry/physics then there could be opportunities within product technology and research and development departments.

3.10 Job profiles – Coatings

Production Operative
Experienced Production Operative
Production Quality Controller
Team Leader / Supervisor
Production Manager
Trainee Maintenance Engineer
Maintenance Engineer
Experienced Maintenance Engineer
Senior Maintenance Engineer
Production / Operations Director

3.11 Case Studies

Celine Drean - *Coatings Technologist*

3.12 FAQs

1. **Q.** ***What is the "Coatings" industry?***

   A. The Coatings industry is made up of manufacturers of decorative paints (the paints you buy in DIY stores), industrial paints (paints for cars, aeroplanes, steel beams, cans etc), printing inks, (for

newspapers, packaging, magazines, etc), powder coatings (for fridges etc), and wallcoverings (wallpapers for your home). There are about 400 coatings manufacturers throughout the UK ranging from large companies like ICI and Akzo Nobel, to much smaller companies.

For more information about the industry, go to www.bcf.org.uk . BCF is the trade association for the Coatings industry and its website has lots of information about the industry.

2. **Q.** ***What sort of jobs are available in the industry?***

A. All sorts, ranging from production operative, to working in the laboratory on research and development (R&D), to sales, customer service and management roles. To find out more about career opportunities in the Coatings industry, go http://www.proskills.co.uk/prospect4u/coatings/working_in_the_industry.php where you can downloadable Proskills' career's booklet for the Coatings industry.

3. **Q.** ***Are there any jobs available in current economic circumstances?***

A. The industry, as with all others, is being affected by the credit crunch. Some companies are operating in "niche" markets and are still considering taking people on, particularly young people, to invest in the future and be prepared when the up-turn comes along. There may also be vacancies for other more experienced people.

4. **Q.** ***What's it like to work in the coatings industry?***

A. Although the industry has been around for a long time, many of the processes are very modern, and people work in close teams. All parts of the business have a strong customer focus, so meeting customer needs to tight deadlines is very important. The industry is continuously improving its environmental performance, so everyone in the business has responsibilities in this area. To keep up to date with the technical developments, companies provide continuous learning and training. Companies vary from large internationals, to family-owned businesses.

5. **Q.** ***I've just left school and I have decided I want to work in the Coatings industry. I have no experience. What steps can I take to achieve this?***

A. Begin your enquiries as soon as you possibly can, preferably whilst still at school - you can get a job in the industry directly from school. You will need to look up Coatings employers within your own 'travel to work' area using the yellow pages and/or the internet, or use the BCF web site, www.bcf.co.uk to get the names and addresses of local companies. Use the www.prospect4u.co.uk website to see what careers and jobs are available and to see where your interests may lie. Ring the companies up, or send them a C.V. with a page of information about yourself and what you are looking for (e.g. an Apprenticeship in …). Make a note of who you have sent the C.V. to and phone them a couple of weeks later to ask whether they have been able to consider your application. Get help from teachers or the careers

service regarding the C.V. to make sure it is put together properly. Have a think as to why you are keen on a job and career in the Coatings industry so that you have an answer ready when asked during an interview – and don't forget, there are a wide range of jobs available!

6. **Q. *I want to do an apprenticeship in the Coatings industry – what do I do?***

A. There is an Apprenticeship framework for the industry that offers different career pathways. If you are still at school, contact your teacher who will advise you on the next steps. Normally, you will need to already have a job in a Coatings company to be considered for an apprenticeship. See the answer to question 5 above. For other details, ring Proskills on **01235 833 844**.

A. Visit the Vacancy Matching Service, which is an online portal providing all the information available on Apprenticeships. It is designed to provide opportunities to match potential apprentices with employers who have vacancies. The Vacancy Matching Service will also track learners' and employers' progress through the system and identify where intervention is needed, whilst also recording information on Apprenticeships and the employers that offer them. http://www.apprenticeships.org.uk/Be-An-Apprentice/Searching-for-Vacancies.aspx

7. **Q. *What skills will I need to work in the industry?***

A. It depends on the job you do. But, generally, you should be willing and able to work in a team, and have a positive attitude to work. You should also be able to use initiative, as the modern manufacturing systems used in Coatings companies do demand that people are able to work with the minimum supervision.

3.13 Sources of additional information – web links etc

- British Coatings Federation

3.14 Regional Information

Region	Workplaces	Employees	Trends and shortages
North East	40	1,000	
North West	170	5,000	The industry has a large presence in the North West, and there are a number of large manufacturing sites. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Yorkshire & Humber	120	2,200	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
East Midlands	80	1,000	There are very few sites currently in existence in the East Midlands. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
West Midlands	110	3,400	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Eastern	110	1,200	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
London	80	1,600	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South East	100	3,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South West	90	1,600	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Wales	<50	< 500	There are very few sites currently in existence in Wales. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Scotland	100	1,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Northern Ireland	<50	< 500	There are very few sites currently in existence in Northern Ireland. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Total	1,000	21,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.

3.15 Economic Downturn

Over three quarters of employers in the Coatings industry say they have been affected by the recession, reporting that customers are spending and ordering less and that demand for products has reduced. Over a third of businesses have contracted and seen the size of their workforce reduced, but most have remained relatively stable, and some have experienced growth.

The coatings industry has been very proactive in dealing with the recession. 66% of employers looked at developing new products, 56% increased marketing while only 23% of the industry decreased the size of their workforce.

More information on the economic downturn can be found on the Proskills website

3.16 Influence of the 'Green agenda on the demand for jobs, skills and qualifications

The Coatings industry is continuing to adopt increasingly advanced technologies and customer needs in the future are likely to be more demanding and variable, and this requires a more flexible workforce.

Advanced coatings contribute towards the improved performance, protection and appearance of many products, ranging from cars to houses to specific industrial applications. Coatings contain a wide range of materials including ceramics, plastics, and metals as well as more traditional pigments, and are usually applied as liquids or powders. They can add protective and anti-corrosive properties to metals used in aerospace and space technologies, manufacturing printing inks for plastic electronics, coating for fibre optic cables, and a growing recognition of the benefits that nanotechnology can bring to a huge variety of end products.

The Low Carbon agenda will be a major driver for the industry in the future and there is growing demand for products that meet sustainability criteria, in terms of:

- Improving product performance to meet customer demands
- Improving production processes to reduce waste in operating systems
- Reducing the environmental impact of manufacturing and production
- Increasing the life span and sustainability of products
- The end-of-life and disposal of products

4. Sub Sector – Extractives & Mineral Processing (EMP)

4.1 A brief description of what the sub-sector covers at UK level

This industry covers:

- Deep coal mines and opencast coal working
- Mining and agglomeration of lignite
- Extraction and agglomeration of peat
- Manufacture of solid fuel
- Mining of iron ore, uranium, thorium, and other non-ferrous metal ores
- Quarrying of ornamental and building stone, limestone, gypsum, chalk and slate
- Operation of gravel and sand pits
- Mining of clays, kaolin, chemical and fertiliser minerals
- Production of salt
- Manufacture of cement, lime, plaster, ready-mixed concrete, and mortars
- Cutting, shaping and finishing of ornamental an building stone
- Other mining and quarrying activities

4.2 Information on careers available and new emerging jobs, transferability of skills career paths and opportunities for progression

- Key skills are considered transferable skills in this sector. Key skills are defined as application of number, communication, information technology and problem solving.
- All jobs and opportunities for progression are shown on the progression route (currently in development

4.3 Information on pay scales in the sector

- Entry level – *e.g. Production Operative £12,000 - £14,000*
- Full operative – *e.g. Quality Assurance Technician £14,000 - £18,000+*
- Senior Management – *e.g. Engineering Manager £25,000 - £40,000*

4.4 Information on entry requirements, application processes (e.g. Apprenticeships)

The Extractive and Mineral Processing Apprenticeship does not impose any restrictions to entry such as a minimum level of qualifications. However, for entry to an Apprenticeship/Foundation Modern Apprenticeship, candidates must demonstrate the potential to achieve at least an NVQ level 2 and have sufficient knowledge and ability to undertake training to achieve key skills at Level 1 and/or 2 and a suitable technical certificate.

Typically 16 year old leavers with 3 to 5 GCSE grades D-G including English, Maths, and Science can readily be identified as an Apprentice. Equally, those with higher grades could readily be identified as Advanced Apprentices/Modern Apprentices. There is direct entry onto the Level 3 frameworks.

The prime responsibility for the selection and recruitment of trainees lies with individual employers who will have a clear idea of their own requirements.

As a general guide candidates should have the following skills and attributes:

- Self motivation to succeed within the Industry/Sector
- Willingness to work
- Willingness to learn and apply that learning in the workplace
- Demonstrate that they have the potential to complete the qualifications which are part of the Apprenticeship
- Ability to communicate effectively with a range of people
- Numeracy and literacy skills.

Information on the apprenticeship can be found on the Proskills website, under the section on Qualifications.

4.5 Qualifications

The following qualifications have been designed specifically for the industry.

Qualification Title	Level	Target learners
Award in An introduction to Extraction and Mineral Processing	2	employed 19+ unemployed 19+ 16-18
Certificate in Extraction and Mineral Processing	2	employed 19+ unemployed 19+ 16-18
Certificate in Extraction and Mineral Processing	3	employed 19+ unemployed 19+ 16-18
Certificate in Shotfirers	2	employed 19+ 16-18
NVQ in Blasting Operations	3	employed 19+
NVQ in Bulk Explosive Truck Operations	3	employed 19+
NVQ in Construction Site Supervision	3	Employed 19+
NVQ in Drilling Operations (Extractives)	2	employed 19+ 16-18
NVQ in Health, Safety and Environmental Management in the Extractive and Minerals Processing Industries	4	employed 19+ 16-18
NVQ in Health, Safety and Environmental Management in the Extractive and Minerals Processing Industries	5	employed 19+ 16-18
NVQ in Health, Safety and Environmental Management in the Extractive and Minerals Processing Industries	3	employed 19+ 16-18
NVQ in Highways Maintenance (Construction)	2	employed 19+ 16-18
NVQ in Mining Operations	2	employed 19+ 16-18
NVQ in Mining Operations	3	employed 19+ 16-18
NVQ in Plant Operations (Extractives)	2	employed 19+ 16-18
NVQ in Process Operations	2	employed 19+ 16-18
NVQ in Processing Operations for the Extractive and Minerals Processing Industries	1	employed 19+ 16-18
NVQ in Processing Operations for the Extractive and Minerals Processing Industries	3	employed 19+ 16-18
NVQ in Processing Operations for the Extractive and Minerals Processing Industries	2	employed 19+ 16-18
NVQ in Specialised Plant and Machinery Operations	2	employed 19+ unemployed 19+ 16-18
NVQ in Roadbuilding (Construction)	2	employed 19+ unemployed 19+ 16-18

Qualification Title	Level	Target learners
NVQ in Mines Rescue Operations	3	employed 19+
NVQ in Mines Rescue Operations	4	employed 19+
NVQ in Supervision of Underground Mines Operations	3	employed 19+
NVQ for Mines Technicians	3	employed 19+
NVQ in Mines Management	4	employed 19+
Certificate in Civil Engineering and Extractives	3	employed 19+ unemployed 19+ 16-18
National Diploma in Civil Engineering with Extractives Specialism	3	Employed 16+ Unemployed 16+
NVQ in Weighbridge Operations	2	employed 19+ unemployed 19+ 16-18
NVQ in Weighbridge Operations	2	employed 19+ unemployed 19+ 16-18

4.6 Data on employment and labour market trends and forecasts

The EMP industries have remained relatively stable in terms of employment over the past few years. Their success depends heavily on the success of the Construction industry. Turnover for the industry is currently around £9.0bn.

Workers in the EMP industries tend to be full time and directly employed, rather than on a contract basis. Work is often shift-based, especially at lower levels. The industry does suffer from image problems, and the range of career opportunities does not appear to be widely known.

The largest occupational groups in the industry are:

- Process Plant and Machine Operatives
- Managers and Senior Officials
- Professional occupations

Demographics

Age Bands	
16-24	8%
25-34	22%
35-44	27%
45-54	22%
55-64	19%
65+	2%

Gender Splits	
Female	23%
Male	77%

Sole Traders	
Total	2741

Disability	
Disabled	15%
Non-disabled	85%

Qualification Levels	
Level 5	19%
Level 4	6%
Level 3	23%
Level 2	25%
Level 1	18%
None/Don't Know	9%

4.7 Skills shortages

It has been widely predicted that higher level management and technical skills will become more important to the industry in the future as more of the elementary tasks become automated. There will be a continuing need for Health and Safety skills in the sector, and it will become more important for people to be multi-skilled, and be able to work across several areas of the business.

Skill shortages in the industry include:

- Employability skills, including team-working, having a good attitude, and using initiative
- Craft and Technical skills including driving heavy plant and blasting
- Management and Leadership skills

4.8 Information on opportunities for adults changing career direction

Employees need to be self-motivated, highly skilled and they must have a responsible attitude and follow safe working practices at all times. The sector welcomes adults looking to change careers that have the right attributes and technical abilities.

Because of the diverse nature of the sector, it provides a number of specialist roles from entry level jobs such as: shot firer, weighbridge operator, road builder, goods vehicle driver, trainee engineer, miner and able seaman, through to: logistics manager, processing plant manager, geologist, estate manager and quarry manager. All these jobs are available to adults changing careers. Obviously if you have related experience and qualifications, this will increase your chances of finding a suitable job.

Engineering roles are in demand, in particular people with experience in maintaining and repairing large machinery and civil engineers involved in the design and construction of bridges, tunnels, roads, railway, dams, pipelines and other major buildings. There are also opportunities for environmental managers, especially where experience in working with hazardous substances, water contamination and an ability to correct damage to land can be demonstrated. The ability to use processes to protect the environment and make sure it is restored when work has finished will also put applicants in good stead. Other opportunities include, Estate Managers, Marine Superintendents (Dredging), and Laboratory Assistants. Experience of management and customer service would also be viewed favourably when considering more senior roles, for instance Mine/Quarry Managers. In addition, a background in calculating quantities, costs and labour to meet customer requirements, are some of the skills needed to become a quantity surveyor.

Finally, having transferable skills and experience from the support service such as Health and Safety Advisors, administration staff, logistics managers, computer experts, supervisors and business managers will also open up possible opportunities to work in the EMP sector.

For more information visit the Proskills career site:
http://www.proskills.co.uk/prospect4u/extractives/working_in_the_industry.php

4.9 Information on points of entry or transfer into a sector from another area sector

The industry is keen to attract, employ and retain the best people available by offering competitive salaries, benefits and safe working environments. The industry offers a number of opportunities ranging from: mining, civil, mechanical and industrial engineering, geology, estate management, logistics, contracting, operations, production, environment, planning and development, health and safety, finances, IT, sales and marketing and HR. Some experience and/or qualifications in the relevant field will be beneficial though not always essential.

The skills base requirements for the sector covers a wide scope, ranging from mobile and fixed plant operators through to laboratory technicians, electricians, fitters, and quarry managers.

4.10 Job profiles – Extractives & Mineral Processing

Job profiles and descriptions

4.11 Case Studies

Peter Williamson – *Quarry Manager*

4.12 FAQs

1. Q. *I have a full time job which is not in the Extractive and Mineral Processing industry but I am interested in completing an Apprenticeship as a Plant Operator, can I do this part-time?*

A. It is possible to study Extractive and Mineral Processing subjects part-time, however to be an Apprentice you will need to be employed within the Extractive and Mineral Processing industry. Some employers will offer part-time work and you may be able to gain some suitable experience from this. You will need to ask your part-time employer whether you are able to become an Apprentice, but minimum hours do apply to Apprenticeships.

2. Q. *I've just left school and I have decided I want to work in the Extractive and Mineral Processing industry like my Dad, perhaps even become a Quarry Manager however, I have no experience. What steps can I take to achieve this?*

A. Begin your enquiries as soon as you possibly can, preferably whilst still at school. You may be able to get a job in the Extractive and Mineral Processing industry directly from school; however you may wish this job to be covered by an Apprenticeship. You will need to look up Extractive and Mineral Processing employers within your own 'travel to work' area using the yellow pages and/or the internet and send them a C.V. – 1 page of information about yourself and what you are looking for (e.g. an Apprenticeship in …). Make a note of who you have sent the C.V. to and phone them a couple of weeks later to ask whether they are able to consider your application. Get help from teachers or the careers service regarding the C.V. with regards to spelling etc.

Have a think as to why you are keen on becoming a Quarry Manager because you may also be interested in other similar jobs as well for example an Plant Operator or Geologist. Also, if you want to become a Quarry Manager then perhaps you would also enjoy Geology or a number of other Extractive and Mineral Processing Industry roles; whatever you decide to do you will need to state this in your C.V.

3. Q. *Can you provide me some general advice on where to research when finding the right Extractive and Mineral Processing Apprenticeship for me?*

A. Contact all of the local colleges and training providers to ask whether they run courses in your chosen subject and ask whether they are able to give you contacts of employers the college might be connected with.

A. Search the internet for Extractive and Mineral Processing Industry related bodies such as the Quarry Products Association, Mineral Products Qualification Council as they should be able to offer advice on companies and training providers/colleges within the sector.

A. If you get an interview, ask the employer whether an Apprenticeship is possible.

A. Speak to your job centre regularly to see whether suitable jobs are advertised and keep an eye on the local newspaper.

A. Visit the Vacancy Matching Service, which is an online portal providing all the information available on Apprenticeships. It is designed to provide opportunities to match potential apprentices with employers who have vacancies. The Vacancy Matching Service will also track learners' and employers' progress through the system and identify where intervention is needed, whilst also recording information on Apprenticeships and the employers that offer them.
http://www.apprenticeships.org.uk/Be-An-Apprentice/Searching-for-Vacancies.aspx

4. Q. *What is the work like?*

A. Being a Quarry Manager tends to be manual/physical type of work but the skill level and dexterity required is dependent upon the type of job role you are interested in doing. It is very satisfying to be able to see the quarry well run and to achieve its delivery targets for its customers. The skills that you acquire along the way will stay with you for life. Please see individual job descriptions for the role you are interested in for more detailed information on the type of work involved.

5. Q. *What personal skills will I need to do this job?*

A. Personal requirements for each job within the Extractive and Mineral Processing industry vary; however, most roles involve working with other employees where Health, Safety and environmental compliance is paramount. Good maths and an interest in geology, science and the built environment would also be very beneficial.

4.13 Sources of additional information – web links etc

- British Aggregates Association
- Careers Transition Partnership
- EPIC Training & Consultancy Services Limited
- EMP Awarding Body
- Institute of Asphalt Technology
- Institute of Materials, Minerals & Mining
- Proskills UK, Sector Skills Council for the Extractive & Mineral Processing Industries
- Quarry Products Association, Trade Association for the Quarrying Industry

4.14 Regional Information

The numbers shown in the table below show the number of employees by region based on the core industries in the Proskills sector. There will be large numbers of people associated with the industry who do not show up in these statistics as they technically fall into another sector, including people working with logistics, blasting, drilling and surveying.

Region	Workplaces	Employees	Trends and shortages
North East	380	2,100	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
North West	920	8,500	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Yorkshire & Humber	970	7,100	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
East Midlands	960	8,500	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
West Midlands	690	7,100	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Eastern	960	2,800	There are very few sites currently in existence in Eastern England. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
London	510	17,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.

South East	1,120	7,100	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South West	1,280	10,700	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Wales	700	5,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Scotland	1,100	6,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Northern Ireland	400	4,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Total	10,000	86,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.

4.15 Economic Downturn

The current recession has had a significant effect on companies within the Extractives industry with 40% of companies reporting that their business has contracted over the last 12 months. This has been reflected by workforce size as 36% of companies have decreased the size of their workforce in the last 12 months. However for many companies business has either stayed the same or increased, and most are still maintaining their workforce level.

Extractives companies are using a wide array of initiatives to help combat the recession and the outlook for the future is fairly positive, with fewer expecting their business and workforce to decrease and more expecting it to remain the same.

More information on the economic downturn can be found on the Proskills website

4.16 Influence of the 'Green agenda on the demand for jobs, skills and qualifications

Increasing use of technology and automation is likely to result in a continuing contraction of the extractive industry workforce. This in turn will create a demand for highly skilled individuals with a range of talents. Recruitment, training and development will play an important part in embracing new technology and moving the industry forward.

The core elements of sustainability, employee welfare, recycling and energy use are the key drivers for the Extractive and Mineral Processing industries.

Health and safety remains a top priority and there is a determination throughout the sector to eliminate workplace accidents. Health and Safety training is, and will continue to be, of increasing importance in the EMP industry.

Future developments will include more efficient use of materials, and improved production processes to reduce and conserve energy. The use of recovered and recycled materials is also playing an increasingly important role as a way of both re-using waste products and conserving valuable raw materials.

The UK Coal mining industry is already fairly advanced in terms of its processes, but faces a difficult future unless government support for coal usage is forthcoming. Progress in carbon capture and storage will be vital to any future success.

5. Sub Sector – Furniture, Furnishings and Interiors (FFI)

5.1 A brief description of what the sub sector covers at UK level

This industry covers the manufacture of:

- Cabinets
- Chairs and seats
- Office furniture
- Contract furniture *e.g. shops, hospitals, hotels, schools*
- Kitchen furniture
- Mattresses
- Other furniture

Additional industries include:

- Manufacture of soft furnishings

5.2 Information on careers available and new emerging jobs, transferability of skills career paths and opportunities for progression

- Key skills are considered transferable skills in this sector. Key skills are defined as application of number, communication, information technology and problem solving.
- All jobs and opportunities for progression are shown on the progression route

5.3 Information on pay scales in the sector

- Entry level – *e.g. Packaging & Dispatch Operative £12,000 - £14,000*
- Full operative – *e.g. Soft Furnisher £14,000 - £18,000*
- Senior Management – *e.g. Research & Development Manager £45,000 - £75,000+*

5.4 Information on entry requirements, application processes (e.g. Apprenticeships)

There are no imposed entry requirements for the Apprenticeship or Advanced Apprenticeship for the Furniture, Furnishings and Interiors Manufacturing industry.

Most people train and gain qualifications as they work through an apprenticeship, although there are other kinds of training programmes.

To enter the industry, it is desirable that you have a good basic education, Maths and English would be good. Apprentices will develop skills using their hands and specialist equipment whilst learning about furniture materials and production methods. They will also have the chance to do qualifications that can take them into technical, supervisory or management occupations, possibly running their own business.

Due to the variety of roles within the industry, no generic skills and attributes can be specified as part of the initial recruitment. However, employers should consider the following:

- Interest in making furniture, furnishings and interiors
- Motivation to succeed within the industry/sector
- Interest in working with their hands
- Willingness to learn and apply that learning in the workplace
- Ability to demonstrate that they have the potential to complete the qualifications which are part of the apprenticeship
- An attitude to work that implies they would work in a safe manner
- Ability to communicate effectively with a range of people
- Whether they have the level of numeracy and literacy to be a success with your company

Information on the apprenticeship can be found on the Proskills website, under the section on Qualifications.

5.5 Qualifications

The following qualifications have been designed specifically for the industry.

Qualification Title	Level	Target learners
Certificate in Furniture Production	1	employed 19+ unemployed 19+ 16-18
Certificate in Furniture Production	2	employed 19+ unemployed 19+ 16-18
Certificate in Furniture Production	3	employed 19+ unemployed 19+ 16-18
NVQ in Making and Installing Furniture	2	employed 19+ unemployed 19+ 16-18
NVQ in Making and Installing Production Furniture	3	employed 19+ unemployed 19+ 16-18
NVQ in Making and Repairing Hand-Crafted Furniture and Furnishings	3	employed 19+ unemployed 19+ 16-18
NVQ in Supporting the Production of Furniture and Furnishings*	1	employed 19+ unemployed 19+ 16-18
NVQ in Woodmachining	2	employed 19+ unemployed 19+ 16-18
NVQ in Woodmachining	3	employed 19+ unemployed 19+ 16-18
NVQ in Finishing Furniture*	2	employed 19+ unemployed 19+ 16-18
NVQ in Fitted Furniture and Interiors*	2	employed 19+ unemployed 19+ 16-18
NVQ in Furniture Making *	2	employed 19+ unemployed 19+ 16-18
NVQ in Restoring Furniture*	2	employed 19+ unemployed 19+ 16-18
NVQ in Upholstery and Soft Furnishings*	2	employed 19+ unemployed 19+ 16-18
NVQ in Restoring Furniture*	3	employed 19+ unemployed 19+ 16-18
NVQ in Supervision in the Furniture, Furnishings and Interiors Industry *	3	employed 19+ unemployed 19+ 16-18
NVQ in Supporting the Production of Furniture and Furnishings*	1	employed 19+ unemployed 19+ 16-18
NVQ in Upholstery and Soft Furnishings*	3	employed 19+ unemployed 19+ 16-19
NVQ in Fitted Furniture and Interiors*	3	employed 19+ unemployed 19+ 16-20
NVQ in Finishing Furniture*	3	employed 19+ unemployed 19+ 16-21
NVQ in Furniture Making *	3	employed 19+ unemployed 19+ 16-22
NVQ in Making and Installing Furniture, Furnishings and Interiors (Design)*	3	employed 19+ unemployed 19+ 16-23
Introduction to Furniture Making*	2	

Producing Hand Crafted Furniture*	3			
Craft Certificate in Upholstery	2	14-19, employed 19+	unemployed 19+	16-18
Advanced Craft Certificate in Upholstery	3	14-19, employed 19+	unemployed 19+	16-18
Craft Certificate in Soft Furnishings	2	14-19, employed 19+	unemployed 19+	16-18
Advanced Craft Certificate in Soft Furnishings	3	14-19, employed 19+	unemployed 19+	16-18

***New qualifications available late 2009 via the QCF**

5.6 Data on employment and labour market trends and forecasts

Turnover for the core industry is currently around £10.8bn.
Workers in the Furniture industry tend to be full time and directly employed rather than on a contract basis. Work is often shift-based, especially at lower levels. The industry suffers from a poor image, and the range of career opportunities does not appear to be widely known.

The largest occupational groups in the industry are:

- Skilled Trades Occupations
- Machine Operatives
- Managers and Senior Officials

Age Bands	
16-24	13%
25-34	19%
35-44	22%
45-54	28%
55-64	18%
65+	2%

Gender Splits	
Female	29%
Male	71%

Sole Trader	
Total	18870

Disability	
Disabled	11%
Non-disabled	89%

Qualification Levels	
Level 5	9%
Level 4	5%
Level 3	31%
Level 2	23%
Level 1	15%
None/Don't Know	18%

5.7 Skills shortages

It has been widely predicted that higher level management and technical skills will become more important to the industry in the future as more of the elementary tasks become automated. There will be a continuing need for health, safety and environment skills in the sector and it will become more important for people to be multi-skilled and be able to work across several areas of the business.

Skill shortages in the industry include:

- Craft and Technical skills including cabinet making, polishing, upholstery, and wood carving/machining
- Management and Leadership skills
- Employability skills, including team-working, having a good attitude and using initiative

5.8 Information on opportunities for adults changing career direction

A diverse range of careers are available from entry level assemblers, frame makers, wood machinists to restorers, polishers, upholsters, installers and cabinet makers. Adults must have good hand eye coordination to be able to use tools effectively. Experience in wood working and the craft skills would be handy and there are opportunities for people currently working in design, window installation, surveying to start careers in FFI. Experience of working with Computer Aided Design (CAD) would also be an advantage when applying for roles in design.

To apply for management positions, good experience of report writing, stock control, and team working as well as financial planning, meeting targets and customer satisfaction will help.

Soft furnishings and upholstery work that is generally employed in craft workshops can be physically demanding. Working as an upholsterer, you will need to have experience of working in a production factory and be prepared to work shifts. Kitchen fitters, furniture installers and blinds and shutter installers can come from a range of career backgrounds. A good background in installations in domestic situations will help along with excellent customer service skills and working to deadlines.

For more information visit the Proskills career site:
http://www.proskills.co.uk/prospect4u/furniture/working_in_the_industry.php

5.9 Information on points of entry or transfer into a sector from another area sector

There is a wide range of opportunities for those looking to change career paths, from work in a production or processing operation to fitting kitchens and designer roles. Entry into the industry is via several routes from: Cabinet Making, Furniture Design, Furniture Polishing and Finishing, Soft Furnisher, Upholsterer, Wood-machinist, Furnisher Restoration, and Production, Processing and Manufacture. Although consideration will be given to experience, the sector is keen to employ people with enthusiasm and the right attitudes.

5.10 Job profiles – Furniture, Furnishings and Interiors

Cabinet Maker/Hand Crafted Furniture
Designer
Finisher/Polisher (including French Polishing)
Production (Manufacturing/Assembly/Installation)
Restorer
Soft Furnisher
Upholsterer
Upholsterer – Cutter
Upholsterer – Sewer
Wood Machinist
Installers for Kitchens/Bedrooms/Bathrooms

5.11 Case Studies

Jim Davidson - Adult Modern Apprentice Joiner Furniture Assembly

5.12 FAQs

1. **Q.** ***I have a full time job which is not in the furniture industry but I am interested in doing an Apprenticeship in Furniture Making, can I do this part-time?***

   A. It is possible to study furniture-related subjects part-time, however to be an Apprentice you will need to be employed within the Furniture industry. Some employers will offer part-time work and you may be able to gain some suitable experience from this. You will need to ask your part-time employer whether you are able to become an Apprentice but minimum hours do apply to Apprenticeships.

2. **Q.** ***I've just left school and I have decided I want to work in the Furniture industry like my Dad, perhaps even become a Cabinet Maker however, I have no experience. What steps can I take to achieve this?***

   A. Begin your enquiries as soon as you possibly can, preferably whilst still at school. You can get a job in the industry directly from school; however you may wish this job to be covered by an Apprenticeship. You will need to look up employers within your own 'travel to work' area using the yellow pages and/or the internet and send them a C.V. – 1 page of information about yourself and what you are looking for (e.g. an Apprenticeship in …). Make a note of who you have sent the C.V. to and phone them a couple of weeks later to ask whether they have been able to consider your application. Get help from teachers or the careers service regarding the C.V. with regards to spelling etc. Have a think as to why you are keen on becoming a Cabinet Maker because you may also be interested in other similar jobs as well for example an Upholsterer or Wood-machinist. Also, if you want to become a Cabinet Maker as you think that you would enjoy making things from wood then perhaps you would also enjoy joinery; whatever you decide to do you will need to state this in your C.V.

3. **Q.** ***Can you provide me some general advice on where to research when finding the right Furniture Apprenticeship for me?***

   A. Contact all of the local colleges and training providers to ask whether they run courses in your chosen subject and ask whether they are able to give you contacts of employers the college might be connected with.

   A. If you get an interview, ask the employer whether an Apprenticeship is possible.

   A. Speak to your job centre regularly to see whether suitable jobs are advertised and keep an eye on the local newspaper.

   A. If you live a long way from any college or training provider and you do find employment, your employer may allow you to lodge away from home on a block release basis to gain the necessary qualifications or the qualification may be able to be done at the employers premises. (Some employers are not aware of this and you could let them know).

A. Visit the Vacancy Matching Service, which is an online portal providing all the information available on Apprenticeships. It is designed to provide opportunities to match potential apprentices with employers who have vacancies. The Vacancy Matching Service will also track learners' and employers' progress through the system and identify where intervention is needed, whilst also recording information on Apprenticeships and the employers that offer them.
http://www.apprenticeships.org.uk/Be-An-Apprentice/Searching-for-Vacancies.aspx

4. **Q. *What is the work like?***

A. Making furniture tends to be manual/physical work but the skill level and dexterity required is dependent upon the type of job role you are interested in doing. It is very satisfying to be able to see a piece of work that you have completed and the skills that you acquire along the way stay with you for life. Please see individual job descriptions for the role you are interested in for more detailed information on the type of work involved.

5. **Q. *What personal skills will I need to do this job?***

A. Personal requirements for each job within the furniture industry vary; however, most roles involve working with your hands and to high levels of accuracy. Having good hand-to-eye coordination is important. A keen interest in creating and/or installing furniture and furnishings would also certainly help.

5.13 Sources of additional information – web links etc

- Association of Master Upholsterers & Soft Furnishers (AMUSF) www.upholsterers.co.uk
- British Blinds & Shutters Association (BBSA) www.bbsa.org.uk
- British Furniture Confederation (BFC) www.britishfurnitureconfederation.org.uk/
- Change Management in the European Upholstery Sector www.change-up.org
- Didac Ltd www.didac.co.uk
- 'Icould' www.icould.com
- Institute of Carpenters www.carpenters-institute.org/
- Institute of Quality Assurance (IQA) www.iqa.org
- Kitchen, Bedroom & Bathrooms National Training Group www.kbbntg.com
- National Bed Federation (NBF) www.bedfed.org.uk
- North Lancs Training Group (NLTG) www.nltg.co.uk
- Oxford & Cherwell Valley College www.oxford-cherwell.ac.uk
- Timber Trade Federation (TTF) www.thedoorway.org.uk
- UK Kitchen Bathroom Bedroom Specialists Association (KBSA) www.kbsa.co.uk
- UK Modern Furniture www.ukmodernfurniture.co.uk/
- Ukfirst www.ukfirst.org.uk
- WEBS Training Ltd www.webstraining.com
- Worshipful Company of Furniture Makers www.furnituremkrs.co.uk
- Worshipful Company of Upholders www.upholders.co.uk

5.14 Regional Information

The numbers shown in the table below show the number of employees by region based on the core industries in the Proskills sector. There will be large numbers of people associated with the industry who do not show up in these statistics as they technically fall into another sector including those who work with soft furnishings and some metal/plastic furniture, and groups of designers and installers.

Region	Workplaces	Employees	Trends and shortages
North East	360	6,500	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
North West	1,410	19,500	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Yorkshire & Humber	1,240	23,400	The region with the highest percentage of furniture companies. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
East Midlands	1,460	15,600	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
West Midlands	1,230	15,600	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Eastern	1,460	11,700	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
London	1,140	6,500	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South East	1,770	16,900	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South West	1,160	14,300	
Wales	500	3,000	
Scotland	500	10,000	
Northern Ireland	300	6,000	
Total	12,200	149,000	

5.15 Economic Downturn

The current recession has had a significant effect on companies within the furniture industry. 37% of companies reported that their business has contracted over the last 12 months and 30% of companies have decreased the size of their workforce.

The furniture industry appears to have been proactive in responding to the current economic climate and companies have undertaken several initiatives with 52% of companies developing new products, 49% increasing marketing and 31% are investing in new machinery.

More information on the economic downturn can be found on the Proskills website

5.16 Influence of the 'Green agenda on the demand for jobs, skills and qualifications

Global competition has had a massive impact on the Furniture manufacturing industries in the UK and this is likely to continue over the coming years.

Low Carbon and sustainability will also continue to be key drivers in terms of process and product improvement, renewable and recyclable materials, and end-of-life procedures. Whilst employment in some traditional skilled roles is likely to decrease, the number of designer-makers is likely to increase.

It will be important to account for small companies and sole traders in skills development activity to help this side of the industry progress.

6 Sub Sector – Glass and Related Industries

6.1 A brief description of what the sub-sector covers at UK level

This industry covers:

- Manufacture of flat glass
- Shaping and processing of flat glass
- Manufacture of hollow glass
- Manufacture of glass fibres
- Manufacture and processing of other glass including technical glassware

Additional industries include:

- Glazing and Curtain walling
- Manufacture and installations of windows, doors and conservatories
- Automotive Glazing
- Architectural Stain Glass and Stain Glass conservation

6.2 Information on careers available and new emerging jobs, transferability of skills career paths and opportunities for progression

- Key skills are considered transferable skills in this sector. Key skills are defined as application of number, communication, information technology and problem solving skills.
- All jobs and opportunities for progression are shown on the progression route

6.3 Information on pay scales in the sector

- Entry level – *e.g. Production Operative £12,000 - £14,000*
- Full operative – *e.g. Quality Assurance Technician £14,000 - £18,000+*
- Senior Management – *e.g. Engineering Manager £25,000 - £40,000*

6.4 Information on entry requirements, application processes (e.g. Apprenticeships)

The Glass Apprenticeship does not impose any restrictions to entry such as a minimum level of qualifications. However, for entry to an Apprenticeship/Advanced Apprenticeship candidates must demonstrate the potential to achieve at least an NVQ level 2 and have sufficient knowledge and ability to undertake training to achieve key skills at Level 1 and/or 2 and a suitable technical certificate.

Typically 16 year old leavers with 3 to 5 GCSE grades D-G including English, Maths, and Science can readily be identified as an Apprentice. Equally those with higher grades could readily be identified as Advanced Apprentices.

The prime responsibility for the selection and recruitment of trainees lies with individual employers who will have a clear idea of their own requirements.

As a general guide candidates should have the following skills and attributes:

- Self motivation to succeed within the Industry/Sector
- Willingness to work
- Willingness to learn and apply that learning in the workplace
- Demonstrate that they have the potential to complete the qualifications which are part of the Apprenticeship
- Ability to communicate effectively with a range of people
- Numeracy and Literacy skills

Information on the apprenticeship can be found on the Proskills website, http://www.proskills.co.uk under the section on Qualifications.

6.5 Qualifications

The following qualifications have been designed specifically for the industry.

Qualification Title	Level	Target learners
Certificate in Glass Related Operations	3	employed 19+ unemployed 19+ 16-18
NVQ in Automotive Glazing	3	employed 19+ unemployed 19+ 16-18
NVQ in Automotive Glazing	2	employed 19+ unemployed 19+ 16-18
NVQ in Fenestration Installation and Surveying	2	employed 19+ unemployed 19+ 16-18
NVQ in Fenestration Installation and Surveying	3	employed 19+ unemployed 19+ 16-18
NVQ in Glass Manufacturing	2	employed 19+ unemployed 19+ 16-18
NVQ in Glass Manufacturing	3	employed 19+ unemployed 19+ 16-18
NVQ in Glass Processing	2	employed 19+ unemployed 19+ 16-18
NVQ in Glass Processing	3	employed 19+ unemployed 19+ 16-18
NVQ in Glazing	3	employed 19+ unemployed 19+ 16-18
NVQ in Glazing	2	employed 19+ unemployed 19+ 16-18
NVQ in Production of Glass Supporting Fabrications	2	employed 19+ unemployed 19+ 16-18
NVQ in Production of Glass Supporting Fabrications	3	employed 19+ unemployed 19+ 16-18
Certificate in Glass Related Occupations (technical certificate level 3)	3	employed 19+ unemployed 19+ 16-18
NVQ in Installing Domestic Fascias, Soffits and Bargeboards	2	employed 19+ unemployed 19+ 16-18
Certificate in Glass Related Occupations (technical certificate level 2)	2	employed 19+ unemployed 19+ 16-18
Introduction to the Glass Industry	1	14-19, employed 19+ unemployed 19+ 16-18

6.6 Data on employment and labour market trends and forecasts

There has been a decline in the numbers of employees in the Glass manufacturing industry, but this seems to have slowed and the last 3 years show steady employment levels. Turnover for the Glass manufacturing industry is currently around £3.7bn

Workers in the Glass industry tend to be full time and directly employed, rather than on a contract basis. Work is often shift-based, especially at lower levels. The industry suffers from poor image, and the range of career opportunities does not appear to be widely known.

The largest occupational groups in the industry are:

- Process Plant and Machine Operatives
- Skilled Trades Occupations
- Managers and Senior Officials

Age Bands	
16-24	10%
25-34	24%
35-44	25%
45-54	26%
55-64	12%
65+	3%

Gender Splits	
Female	16%
Male	84%

Sole Traders	
Total	1801

Disability	
Disabled	10%
Non-disabled	90%

Qualification Levels	
Level 5	12%
Level 4	7%
Level 3	24%
Level 2	22%
Level 1	21%
None/Don't Know	15%

6.7 Skills shortages

It has been widely predicted that many technical skills will, in time, become automated. There will be a continuing need for Health and Safety skills in the sector, and it will become more important for people to be multi-skilled, and be able to work across several areas of the business.

Skill shortages in the industry include:

- Employability skills, including team-working, having a good attitude, and using initiative
- Craft and Technical skills including glass cutting, laminating, and computer aided design
- Management and Leadership skills

6.8 Information on opportunities for adults changing career direction

The Glass Sector

A diverse range of careers are available from entry level glass manufacturing and processing jobs to window, door and conservatory installations in domestic and commercial properties, to specialized glass design and architectural stained glass. Some of the jobs available to adults looking to change careers might require prior experience but on the job training is available and most employers are prepared to offer jobs if the candidate demonstrates enthusiasm, good communication skills a mature attitude and a willingness to learn.

Some of the entry level jobs available in manufacturing and processing:

For hot end glass operator working shifts, it is an advantage to have a manufacturing background but not essential. Furnace operator, glass bender and glass blower, working under hot conditions again on the job training is provided. Craft glass workers and stained glass makers require interest in design and art work but again it is not essential. Career progression from these areas can lead to line supervisors, quality assurance managers and also self employed craft workers and

even production manager/director. Automotive glazier is an entry level job which could lead to a career in the automotive related industries.

For the Home Improvements sub sector, an ability to work with tools, be able to work outdoors, pay attention to detail and working with customers in the field will help to secure work in a number of areas including entry level assistant window and door fitters.

Progression would be mostly as a self-employed fitter but there are employed opportunities to become window and door/conservatory surveyor, service engineers with progression through to installation management and even branch/operations management.

Window /door / conservatory sales is one of the major job categories where adults from a variety of backgrounds are welcomed. The job requires self belief, determination, good organizational and communication skills but the rewards can be great. Progression can be through to Sales Manager, Area Sales Manager and even to Regional sales Director.

For more information visit the Proskills career site: www.prospect4u.co.uk

6.9 Information on points of entry or transfer into a sector from another area sector

The Glass sector is varied, ranging from large mass production and fabrication plants to specialized studios designing glass vases. There is a shortage of technicians, maintenance and electrical engineers.

There are opportunities to work in the field as window fitters, surveyors and service engineers and although full training is provided it is an advantage if you have a full driving licence, are used to working outdoors in all weathers and have good hand to eye coordination. In addition, applicants with basic building skills are sought after, such as, woodworking, plastering and bricklaying. There is also a requirement to work from heights on occasions.

6.10 Job profiles – Glass

Trainee Glass Blower
Senior / Scientific Glass Blower
Cold End Worker
Glass Engraver / Decorator or Stained Glass Maker / Lead Light Maker
Craft Glass Worker
Glassmaker / Glass Processor / Lamp Maker
Senior Glassmaker / Window & Door Fabricator / Laminator / Toughener
Autoclave Operator
Autoclave Controller
Batch Plant Operator

Manufacturing Machine Operator
Furnace Controller / Batch Plant or Machine Controller
Engineering Apprentice
Engineer – Glass Manufacture
Glass Fibre – Maker / Laminator or Moulder
Optical Engineering Technician
Craft Glass Worker (Self Employed)
Line Manager / Supervisor
Quality Assurance Manager
Health and Safety Advisor / Manager
Lead Design Engineer
Optical Software Sales Engineer
Operations / Production Manager
Engineering Manager
Operations / Production Director
Trainee Installer / Glazier – Windows / Doors / Conservatories (Self Employed)
Experienced Installer / Glazier - Windows / Doors / Conservatories (Self Employed)
Service Engineer - Windows / Doors / Conservatories
Surveyor - Windows / Doors / Conservatories
Service / Office Manager - Windows / Doors / Conservatories
Glass Technician – Un-graded (Automotive Glazing)
Mobile Glass Technician – Graded A-C (Automotive Glazing)
Field Trainer / Supervisor (Automotive Glazing)
Trainee Sales Representative (Self Employed)
Experienced Sales Representative (Self Employed)
Installation or Branch Manager
Regional Training Officer (Automotive Glazing)
Operations Manager
Sales Manager
Regional Operations Manager
Operations Director
Regional Sales Manager

6.11 Case Studies

Helen Chick – Specialst Conserver

6.12 FAQs

1. Q. *I have a full time job which is not in the Glass industry but I am interested in doing an Apprenticeship in Glass, can I do this part-time?*

A. It is possible to study glass-related subjects part-time, however to be an Apprentice you will need to be employed within the Glass industry. Some employers will offer part-time work and you may be able to gain some suitable experience from this. You will need to ask your part-time employer whether you are able to become an Apprentice but minimum hours do apply to Apprenticeships. There are a few programme-led apprenticeships but with limited funding and no promise of employment on completion.

2. **Q. *I've just left school and I have decided I want to work in the Glass industry like my Dad, perhaps even become a Senior Surveyor however, I have no experience. What steps can I take to achieve this?***

A. Begin your enquiries as soon as you possibly can, preferably whilst still at school. You can get a job in the industry directly from school; however you may wish this job to be covered by an Apprenticeship. You will need to look up employers within your own 'travel to work' area using the yellow pages and/or the internet and send them a C.V. – 1 page of information about yourself and what you are looking for (e.g. an Apprenticeship in …). Make a note of who you have sent the C.V. to and phone them a couple of weeks later to ask whether they have been able to consider your application. Get help from teachers or the careers service regarding the C.V. with regards to spelling etc. Also, look up Glass training providers on the website and see if any are offering short introductory courses. There are a number of colleges that provide basic training for the building trades and this would be a good starting point if you can't get a job with a window/door/glazing company. Often employers have good and regular contact with these training providers because they know trainees will be available.

3. **Q. *Can you provide me some general advice on where to research when finding the right Glass Apprenticeship for me?***

A. Contact all of the local colleges and training providers to ask whether they run courses in your chosen subject and ask whether they are able to give you contacts of employers the college might be connected with.

A. Decide which apprenticeship is right for you; there are a number of directions you could go in:

- Glass processing - this is work in a factory where you will be treating glass to create a special type of glass like, toughened glass, laminated glass, glass film, solar panels, mirrors, curved glass, partitions, stain glass and many more
- Glass manufacturing - this is working in a major float glass factory where huge jumbo sheets of glass are manufactured and distributed all over the world, or in a large glass container factory
- Automotive Glazing - you could end up repairing and replacing windscreens for roadside customers
- Glazing/fenestration/surveying - working with home improvement companies replacing windows and doors and building conservatories for domestic and commercial properties.

A. If you get an interview, ask the employer whether an Apprenticeship is possible.

A. Speak to your job centre regularly to see whether suitable jobs are advertised and keep an eye on the local newspaper.

A. If you live a long way from any college or training provider and you do find employment, your employer may allow you to lodge away from home on a block release basis to gain the necessary qualifications or the qualification may be able to be done at the employers premises. (Some employers are not aware of this and you could let them know).

A. Visit the Vacancy Matching Service, which is an online portal providing all the information available on Apprenticeships. It is designed to provide opportunities to match potential apprentices with employers who have vacancies. The Vacancy Matching Service will also track learners' and employers' progress through the system and identify where intervention is needed, whilst also recording information on Apprenticeships and the employers that offer them.
http://www.apprenticeships.org.uk/Be-An-Apprentice/Searching-for-Vacancies.aspx

4. Q. *What is the work like?*

A. Working in the Glass sector tends to be manual/physical work but the skill level and dexterity required is dependent upon the type of job role you are interested in doing. It is very satisfying to be able to see a piece of work that you have completed and the skills that you acquire along the way stay with you for life. Please see individual job descriptions for the role you are interested in for more detailed information on the type of work involved.

5. Q. *What personal skills will I need to do this job?*

A. Personal requirements for each job within the Glass industry vary; however, most roles involve working with your hands and to high levels of accuracy. Having good hand-to-eye coordination is important. For many jobs good customer service skills are important too and being able to work closely as part of a team.

6.13 Sources of additional information – web links etc

- ABC Awards - Vocational Awarding Body
- British Glass
- Construction and Built Environment Diploma
- Creative and Media
- Glass Qualifications Authority
- GGF
- Glass Training Limited
- Know Your Place - Non Traditional Careers for Women and Girls
- Manufacturing Diploma

6.14 Regional information

The numbers shown in the table below show the number of employees by region based on the core industries in the Proskills sector. There will be large numbers of people associated with the industry who do not show up in these statistics as they technically fall into another sector including those who work in design, glazing, automotive glazing, and window manufacture.

Region	Workplaces	Employees	Trends and shortages
North East	1,060	5,600	There are very few sites currently in existence in the North East, although there are large numbers of glaziers who are not included in these figures. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
North West	2,340	30,600	The industry has declined in size over the last decade, but this appears to be levelling off more recently. There are also large numbers of glaziers who are not included in these figures. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Yorkshire & Humber	2,270	30,600	There are a number of large manufacturers in Yorkshire and there are also large numbers of glaziers who are not included in these figures.. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
East Midlands	1,580	15,300	The industry has declined in size over the last decade, but this appears to be levelling off more recently. There are also large numbers of glaziers who are not included in these figures. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
West Midlands	2,540	19,500	The industry has declined in size over the last decade, but this appears to be levelling off more recently. There are also large numbers of glaziers who are not included in these figures. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Eastern	2,490	7,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. There are also large numbers of glaziers who are not included in these figures. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
London	1,940	7,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. There are also a number of glaziers who are not included in these figures. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South East	2,460	16,700	The industry has declined in size over the last decade, but this appears to be levelling off more recently. There are also large numbers of glaziers who are not included in these figures. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South West	1,630	7,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. There are also a number of glaziers who are not included in these figures. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Wales	1,100	7,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. There are also large numbers of glaziers who are not included in these figures. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.

Scotland	1,300	18,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. There are also large numbers of glaziers who are not included in these figures. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Northern Ireland	900	3,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Total	21,600	168,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. There are also large numbers of glaziers who are not included in these figures. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.

6.15 Economic Downturn

Nearly two fifths of businesses in the glass industry have contracted and seen the size of their workforce reduced over the past year due to the economic downturn.

Major issues facing Glass companies include energy costs, a lack of credit, changing customer demands and lack of demand for products but the outlook for the future is much more positive, with a third of businesses forecasting expansion, but with the size of the workforce likely to remain somewhere near current levels.

More information on the economic downturn can be found on the Proskills website

6.16 Influence of the 'Green' agenda on the demand for jobs, skills and qualifications

The manufacture of windows and other glass construction products, where constant improvements in insulating properties will be required is likely to be a key driver for the industry. Across the whole supply chain, higher level skills will be the driving force behind product development and innovation. Ensuring flexibility will be key to skills supply, and modular qualifications that can be tailored to individual company needs will help smaller companies to specialise, and larger companies to develop their workforce in an efficient business-focussed manner. Whilst mature/ well established companies will require continuing support to help maintain their business, it will be important to support new developments, which will provide future growth in the industry.

Other growth areas are likely to be in technical glassware, solar glazing systems, and design. Although higher level skills will increase in importance as automation of the manufacturing process increases, there will continue to be occupations and skill needs at lower levels.

7. Sub Sector – Paper

7.1 A brief description of what the sub-sector covers at UK level

This industry covers the manufacture of:

- Pulp
- Paper and paperboard
- Corrugated paper and paperboard and of containers of paper and paperboard
- Household and sanitary goods and of toilet requisites
- Paper stationery
- Other articles of paper and paperboard

Additional industries include:

- Paper Merchants

7.2 Information on careers available and new emerging jobs, transferability of skills career paths and opportunities for progression

- Key skills are considered transferable skills in this sector. Key skills are defined as application of number, communication, information technology and problem solving skills.
- All jobs and opportunities for progression are shown on the progression route (currently in development)

7.3 Information on pay scales in the sector

This information is not currently available

7.4 Information on entry requirements, application processes (e.g. Apprenticeships)

The Paper Apprenticeship is currently going through the approval process with the Apprenticeship Approval Group.

7.5 Qualifications

The following qualifications have been designed specifically for the industry.

Qualification Title	Level	Target learners
Certificate in Paper Technology	2	employed 19+ unemployed 19+ 16-18
Certificate in Paper Technology	3	employed 19+ unemployed 19+ 16-18
NVQ in Fibreboard Operations	2	employed 19+ 16-18
NVQ in Fibreboard Operations	3	employed 19+ 16-18

7.6 Data on employment and labour market trends and forecasts

Employment has fallen steadily over the last decade in the Paper industry. Turnover for the core industry is currently around £3.2bn.

Workers in the Paper industry tend to be full time and directly employed, rather than on a contract basis. Work is often shift-based, especially at lower levels. The industry suffers from a poor image and the range of career opportunities does not appear to be widely known.

The largest occupational groups in the industry are:

- Process Plant and Machine Operatives
- Managers and Senior Officials
- Elementary Occupations

Age Bands	
16-24	8%
25-34	15%
35-44	34%
45-54	23%
55-64	20%
65+	1%

Gender Splits	
Female	21%
Male	79%

Sole Traders	
Total	1008

Disability	
Disabled	14%
Non-disabled	86%

Qualification Levels	
Level 5	11%
Level 4	8%
Level 3	25%
Level 2	23%
Level 1	19%
None/Don't Know	15%

7.7 Skills shortages

It has been widely predicted that higher level management and technical skills will become more important to the industry in the future as more of the elementary tasks become automated. There will be a continuing need for Health and Safety skills in the sector, and it will become more important for people to be multi-skilled, and be able to work across several areas of the business.

Skill shortages in the industry include:

- Employability skills, including team-working, having a good attitude, and using initiative
- Craft and Technical skills including engineering and paper-making
- Management and Leadership skills

7.8 Information on opportunities for adults changing career direction

The Paper Sector

For people entering the paper sector from other sectors there are a number of jobs that exist in the service section including, marketing, sales, purchasing, logistics, warehouse operatives and management, accounts and human resources. In addition, there are manufacturing jobs at entry level that would ideally require some experience of working in a traditional manufacturing setting but applicants with no experience could be considered. Plant workers, fibre preparation operatives, utilities workers, are some of the entry level positions. In addition there are opportunities for more experienced applicants to go for higher level positions: Chemical Process

Engineers, Paper and Board Technologists, Paper Chemists, Quality Control Managers, and supervisory roles. Although most Paper Companies prefer to promote internally there are a number of positions made available for external applicants. The paper Merchants work in a high tech fast moving and changing environment so people skills become vitally important and although there is usually in-house training available to develop a range of skills, external candidates demonstrating a variety of abilities will be considered. Some of those abilities include: challenging personal capabilities, open to new learning, accept change, analyse processes, a flexible approach to work, be open, care for the environment, strong Health and Safety principles, foster team spirit, be proactive. Obviously you would not be expected to demonstrate all these abilities straight away but a good number would assist in applying for jobs with Paper Merchants.

7.9 Information on points of entry or transfer into a sector from another area sector.

The Paper Sector

The paper sector uses a mixture of: traditional and modern processes:

Traditional manufacturing processes still recognised in the paper mills, jobs like:

- Back Tenders- *Back tenders* use machinery to dry and finish the paper. They inspect it and make certain that it is wound properly onto huge rolls. With their helpers they may cut, weigh, and wrap the rolls of finished paper. Some plants also employ other workers to finish the paper that will be used in books, magazines, and other high-quality products.
- *Supercalender operators*, for example, run the rolls of paper through machines that give it a smooth, shiny finish.
- *A paper sorter and counter* inspects the finished paper. In converting plants, the paper is made into finished products, ranging from paper plates and napkins to wallpaper and cardboard boxes.

Modern Technological processes, jobs like:

- CAD operators
- CNC engineers
- Research scientists-nanotechnologies

Whichever level entering the Paper Sector there are career progression opportunities. From entry level factory operatives through to production manager, from warehouse assistant to logistics/transport manager, from sales assistant to purchasing director, marketing director. The opportunities are there for right minded applicants.

7.10 Job profiles – Paper

This information is not currently available

7.11 Case Studies

Ashley Morris – Aylesford Newsprint Ltd

7.12 FAQs

1. ***Q. I've just left School and I have decided I want to work in the Paper industry like my Dad, perhaps even become a Manager however, I have no experience. What steps can I take to achieve this?***

A. Apply for an Apprenticeship either with an Employer or College. Once achieved, this lays the foundation for continuous learning and career advancement via a number of routes into management.

2. ***Q. Can you provide me some general advice on where to research when finding the right Apprenticeship for me?***

A. Contact all of the local colleges and training providers to ask whether they run courses in your chosen subject and ask whether they are able to give you contacts of employers the college might be connected with.

A. If you get an interview, ask the employer whether an Apprenticeship is possible.

A. Speak to your job centre regularly to see whether suitable jobs are advertised and keep an eye on the local newspaper.

A. If you live a long way from any college or training provider and you do find employment, your employer may allow you to lodge away from home on a block release basis to gain the necessary qualifications or the qualification may be able to be done at the employers premises. (Some employers are not aware of this and you could let them know).

A. Contact the Human Resource Department of Local Companies within the Paper and Paper related sector and ask them about Apprenticeships. To help you find companies to approach, visit the Confederation of Paper Industries Website and the National Association of Paper Merchants Website. The Paper Agents Association is a good place to find links to other useful Paper related websites.

A. Visit the Vacancy Matching Service, which is an online portal providing all the information available on Apprenticeships. It is designed to provide opportunities to match potential apprentices with employers who have vacancies. The Vacancy Matching Service will also track learners' and employers' progress through the system and identify where intervention is needed, whilst also recording information on Apprenticeships and the employers that offer them.
http://www.apprenticeships.org.uk/Be-An-Apprentice/Searching-for-Vacancies.aspx

3. ***Q. What is the work like?***

A. Papermaking provides a myriad of opportunities in a variety of disciplines but can be broadly divided into two routes; engineering and papermaking. Most employees in papermaking are involved in the manufacturing processes and maintenance of the highly technical papermaking machine. These machines work continuously and so shift working is usually required. Other roles include supervisors, managers, commercial and office staff, accountants, professional and administrative specialists and scientific, engineering and technical staff.

4. ***Q. What personal skills will I need to do this job?***

A. The higher the skill levels you have achieved the greater the chance of securing employment. However, once employed, dedication and a professional attitude are vital for success at work. Good written and verbal communication skills, I.T. skills, manual dexterity and an interest in science are required. You'll need commitment and need to be ready for further and continuous study. You will be happy to work as both part of a team and an individual able to use your own initiative**.**

7.13 Sources of additional information – web links etc

- Paper Industry Technical Association
- The Paper Trail
- The National Association of Paper Merchants

7.14 Regional Information

The numbers shown in the table below show the number of employees by region based on the core industries in the Proskills sector. There will be large numbers of people associated with the industry who do not show up in these statistics as they technically fall into another sector including engineers and paper merchants.

Region	Workplaces	Employees	Trends and shortages
North East	90	7,600	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
North West	530	23,500	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Yorkshire & Humber	310	13,400	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
East Midlands	390	13,400	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
West Midlands	340	800	There are very few manufacturing sites currently in existence in the West Midlands. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Eastern	430	6,700	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.

London	360	4,200	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South East	450	10,900	There is a very active cluster of paper mills in the South East. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South West	300	3,400	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Wales	200	6,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Scotland	200	7,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Northern Ireland	<50	2,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Total	3,600	99,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.

7.15 Economic Downturn

Nearly half of paper businesses have contracted during the economic downturn and the Paper industry has experienced a worse contraction than the rest of the Proskills "footprint".

Nearly a quarter have seen the size of their workforce reduced but business contraction however, has not been universal with over a quarter of businesses having expanded in the last 12 months and slightly more than one-half say that their business has remain the same or expanded, and that in general they have managed to maintain their workforce level.

Two-thirds of companies have reported to be looking for new domestic markets and around one-half say they are increasing marketing or developing new products.

More information on the economic downturn can be found on the Proskills website

7.16 Influence of the 'Green' agenda on the demand for jobs, skills and qualifications

The paper industry has had great success in reducing emissions and waste in recent years, and it will continue to be drivers for the industry moving forwards. Better processes and exploitation of materials will be key, as will improvements in customer service, other added-value services, and Health and Safety.

The paper industry has made great strides in recycling and reducing energy consumption, and constant improvement in this area will continue to be a driver over the coming years. Advanced products with enhanced strength, absorbency and other properties will continue to be developed, which will require new material and engineering skills.

8 Sub Sector – Print

8.1 A brief description of what the sub-sector covers at UK level

This industry covers

- Printing of newspapers
- Printing not elsewhere classified
- Bookbinding
- Pre-press activities
- Ancillary activities related to printing

8.2 Information on careers available and new emerging jobs, transferability of skills career paths and opportunities for progression

- Key skills are considered transferable skills in this sector. Key skills are defined as application of number, communication, information technology and problem solving skills.
- All jobs and opportunities for progression are shown on the progression route

8.3 Information on pay scales in the sector

- Entry level – *e.g. Production Operative £10,000 - £16,000*
- Full operative – *e.g. Machine Printer £16,000 - £35,000+*
- Senior Management – *e.g. Senior Production Manager £25,000 - £70,000*

8.4 Information on entry requirements, application processes (e.g. Apprenticeships)

There are no academic or similar entry requirements to gain entry onto the Print Apprenticeship or advanced Apprenticeship, although participants need to be capable of achieving the mandatory aspects of the programme i.e. NVQ, Key Skills and Technical Certificate at the required levels.

Typically 16 year old leavers with 3 to 5 GCSE grades D-G including English, Maths, and Science can readily be identified as an Apprentice. Equally those with higher grades could readily be identified as Advanced Apprentices/Modern Apprentices.

This is a list of skills and attributes which are relevant to occupations in the sector. They are based upon typical job roles and tasks that an apprentice will carry out. It is likely that a successful Apprentice will have the following qualities:

- Ability to communicate effectively with colleagues
- Effective use of number skills

- Good problem solving skills
- A team player
- Enthusiastic about developing technologies
- Prepared to update skills and knowledge constantly

Information on the apprenticeship can be found on the Proskills website, under the section on Qualifications.

8.5 Qualifications

The following qualifications have been designed specifically for the industry.

Qualification Title	Level	Target learners
Certificate in Printing and Graphic Communications	3	employed 19+ unemployed 19+ 16-18
Certificate in Printing and Graphic Communications	2	employed 19+ unemployed 19+ 16-18
NVQ in Carton Manufacture	3	employed 19+ 16-18
NVQ in Envelope Manufacture	2	employed 19+ 16
NVQ in Envelope Manufacture	3	employed 19+ 16
NVQ in Hand Binding	3	employed 19+ 16
NVQ in Machine Printing	2	employed 19+ 16
NVQ in Machine Printing	3	employed 19+ 16
NVQ in Mechanised Print Finishing and Binding	2	employed 19+ 16
NVQ in Mechanised Print Finishing and Binding	3	employed 19+ 16
NVQ in Print Administration	3	employed 19+ 16
Print Technical Management*	4	employed 19+ unemployed 19+
Print Technical Management*	5	employed 19+ unemployed 19+
Master Printer*	4	employed 19+ unemployed 19+
Master Printer*	5	employed 19+ unemployed 19+
NVQ in Print Administration	2	employed 19+ 16-18
Digital Print Production	3	employed 19+ unemployed 19+ 16-18

8.6 Data on employment and labour market trends and forecasts

There has been a decline in the number of people employed in the Printing industry in recent years. Turnover for the core industry is currently around £12.6bn.

Workers in the Printing industry tend to be full time and directly employed, rather than on a contract basis. Work is often shift-based, especially at lower levels.

The industry suffers from a lack of understanding about the interesting and varied careers available. The perception is that of a dirty and inky environment; on the contrary, the industry is high-tech and controlled by computer technology.

The largest occupational groups in the industry are:

- Skilled Trades Occupations
- Managers and Senior Officials
- Elementary Occupations

Age Bands	
16-24	9%
25-34	22%
35-44	26%
45-54	26%
55-64	15%
65+	2%

Gender Splits	
Female	29%
Male	71%

Sole Traders	
Total	9089

Disability	
Disabled	29%
Non-disabled	71%

Qualification Levels	
Level 5	11%
Level 4	7%
Level 3	33%
Level 2	24%
Level 1	11%
None/Don't Know	14%

8.7 Skills shortages

It has been widely predicted that higher level management and technical skills will become more important to the industry in the future as more of the elementary tasks become automated. There will be a continuing need for Health and Safety skills in the sector, and it will become more important for people to be multi-skilled, and be able to work across several areas of the business.

Skill shortages in the industry include:

- Employability skills, including team-working, having a good attitude, and using initiative
- Craft and Technical skills including pre-press, digital design, litho printing and book-binding
- Management and Leadership skills

8.8 Information on opportunities for adults changing career direction

Effective team working is a essential to the success of every part of the printing industry, ranging from sale accounts to estimation design, from proof reading to production right through to delivery, graphic design, marketing and advertising.

The print sector has a wide range of jobs available from entry level machine assistant, trainee operator, trainee bookbinder, carton manufacturer and design or reprographic assistant. Experience is not required although some time in a production job would help.

Experience and training can be gained on the job but the service jobs including account manager, print buyer, print estimator and print administrators would be available for adults with experience in similar fields not necessarily in the print sector.

Other opportunities exist in the technical fields such as packaging technologists; web publication designers, desk top publishing editors require related qualifications but again experience of working with these technologies in other sectors would be beneficial.

There are a number of high level technical specialist jobs which provide excellent career routes for enthusiastic team players that are willing to learn. Even at a more junior level of entry, good progression is possible, for example:

- Entry level pre-press operator can progress to experienced pre-press operator and on to studio manager
- A graphic designer with general qualifications can progress to an experienced graphic designer and through to freelance graphic designer
- Reprographic assistant progressing to machine printer to experienced machine printer and eventually to account manager

For more information visit the Proskills career site:
http://www.proskills.co.uk/prospect4u/printing/working_in_the_industry.php

8.9 Information on points of entry or transfer into a sector from another area sector

The Print Sector has experienced a big change in working practices with the introduction of new technologies; today the opportunities for people looking to change career paths are related to this new technology. Opportunities are available in: graphic design, desk top publishing, machine printers, print estimators and the general service departments like sales and marketing, IT, finance, quality control and HR. Production workers usually advance within their specific field or department.

8.10 Job profiles – Print

Trainee Junior Sales Personnel / Print Estimator
Sales Representative
Sales Manager
Sales Director
Pre-press Operator
Experienced Pre-press Operator
Studio Manager / Senior Printing Administrator
Reprographic Assistant / Print Room Assistant
Trainee Book Binder / Print Finisher
Experienced Book Binder / Print Finisher / Craft Bookbinder
Printing Administrator
Experienced Printing Administrator
Operations Production Manager
Machine Printer
Experienced Machine Printer
Graphic Designer
Experienced Graphic Designer
Freelance Graphic Designer
Account Manager / Account Executive
Senior Production Manager

8.11 Case Studies

Shawn Hopkins – Print Estimator

8.12 FAQs

1. Q. ***I have a full time job which is not in the Printing industry but I am interested in doing an Apprenticeship in printing, can I do this part-time?***

A. It is possible to study printing-related subjects part-time, however to be an Apprentice you will need to be employed within the printing industry. Some employers will offer part-time work and you may be able to gain some suitable experience from this. You will need to ask your part-time employer whether you are able to become an Apprentice but minimum hours do apply to Apprenticeships.

2. Q. ***I've just left School and I have decided I want to work in the printing industry like my Dad; however, I have no experience. What steps can I take to achieve this?***

A. Begin your enquiries as soon as you possibly can, preferably whilst still at school. You can get a job in the industry directly from school; however you may wish this job to be covered by an apprenticeship.

You will need to look up employers within your own 'travel to work' area using the yellow pages and/or the internet and send them a C.V. – 1 page of information about yourself and what you are looking for (e.g. an Apprenticeship in …). Make a note of who you have sent the C.V. to and phone them a couple of weeks later to ask whether they are able to consider your application. Get help from teachers or the careers service regarding the C.V. with regards to spelling etc.

3. Q. ***Can you provide me some general advice on where to research when finding the right printing apprenticeship for me?***

A. Contact all of the local colleges and training providers to ask whether they run courses in your chosen subject and ask whether they are able to give you contacts of employers the college might be connected with.

A. If you get an interview, ask the employer whether an Apprenticeship is possible.

A. Speak to your job centre regularly to see whether suitable jobs are advertised and keep an eye on the local newspaper.

A. If you live a long way from any college or training provider and you do find employment, your employer may allow you to lodge away from home on a block release basis to gain the necessary qualifications or the qualification may be able to be done at the employers premises. (Some employers are not aware of this and you could let them know).

A. Visit the Vacancy Matching Service, which is an online portal providing all the information available on Apprenticeships. It is designed to provide opportunities to match potential apprentices with employers who have vacancies. The Vacancy

Matching Service will also track learners' and employers' progress through the system and identify where intervention is needed, whilst also recording information on Apprenticeships and the employers that offer them.
http://www.apprenticeships.org.uk/Be-An-Apprentice/Searching-for-Vacancies.aspx

4. Q. *What is the work like?*

A. Working in the printing industry can be very varied and technical work. There are a variety of jobs on offer but they are all split into three main areas, pre-press, printing and finishing. Pre-press tends to be mainly computer and office based these days, printing and finishing is highly practical and skilled. In all areas you must have an eye for detail and complete work to the highest standard. Companies of all types and sizes from across the country rely on their printed products to "sell" their products and services. Poorly printed products have a direct effect on their business; therefore, your role in the printing industry is crucial.

5. Q. *What personal skills will I need to do this job?*

A. Personal requirements for each job within the printing industry vary; however, most roles involve working with your hands and to high levels of accuracy. Having good colour perception, accurate spelling and an attention to detail is important. A keen interest in graphics, computers and practical skills would also help.

8.13 Sources of additional information – web links etc

- PrintIT!
- British Print
- City Fringe Partnership - Print and Publishing
- Jobs in Print
- Print Dynamics

8.14 Regional Information

The numbers shown in the table below show the number of employees by region based on the core industries in the Proskills sector. There will be large numbers of people associated with the industry who do not show up in these statistics as they technically fall into another sector including a significant number of designers.

Region	Workplaces	Employees	Trends and shortages
North East	650	7,400	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
North West	2,250	24,100	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Yorkshire & Humber	2,080	20,400	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
East Midlands	3,250	18,500	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
West Midlands	2,220	20,400	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Eastern	3,250	31,500	There is a large concentration of companies in the East of England. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
London	4,620	20,400	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South East	4,740	25,900	There is a large concentration of companies in the South East. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South West	2,360	16,700	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Wales	800	4,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Scotland	1,200	14,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Northern Ireland	300	2,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Total	27,000	206,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.

8.15 Economic Downturn

Print has suffered a smaller contraction than of all other Proskills industries as a whole.

Around a third of all respondents reported no change and a similar proportion reported some contraction. Fewer respondents, but, nevertheless a significant minority at 31% reported some expansion.

24% of print companies surveyed have reduced the size of their workforce over the past 12 months with just 11% having expanded. For the remaining 65% of companies, the workforce had remained roughly the same size over the last year.

The main factors affecting businesses currently are a lack of demand for products, competition from within the U.K, and changing customer demands and so 58% of companies were aiming to reduce production costs, 57% are looking at new domestic markets, and 55% are increasing their marketing.

More information on the economic downturn can be found on the Proskills website

8.16 Influence of the 'Green' agenda on the demand for jobs, skills and qualifications

The Printing industry is changing, with greater emphasis now put on embellishing the manufacturing process with added-value services such as design and multimedia. Companies that can adapt to these requirements are likely to be more successful in the future than those that remain as pure manufacturers. The industry will continue to pursue process controls and efficiencies to boost productivity across the range of manufacturing activities and services, and will continue to adopt new technologies that help to achieve this. Likely growth areas include the preparation and printing of functional materials and other digital and ink-jet outputs. Expensive manufacturing techniques such as offset litho printing are likely to become less common as the mass market continues to demand speed and value for money over quality.

Printed electronics is a new technology using printing methods to apply materials that are capable of conducting electronic currents. These techniques have a wide range of industrial and commercial applications, including smart packaging and clothing, large area electronic circuits, lighting and photovoltaics. As the techniques used are, for the most part, similar to those used in more traditional printing, the manufacture of functional materials is a great example of a growth industry that can add value through the application of knowledge, expertise, creativity and design.

9 Sub Sector – Glazed Ceramics

9.1 A brief description of what the sub-sector covers at UK level

This industry covers the manufacture of:

- Ceramic household and ornamental articles
- Ceramic sanitary fixtures
- Ceramic tiles and flags
- Other ceramic products

9.2 Information on careers available and new emerging jobs, transferability of skills career paths and opportunities for progression

- Key skills are considered transferable skills in this sector. Key skills are defined as application of number, communication, information technology and problem solving skills.
- All jobs and opportunities for progression are shown on the progression route (still in development)

9.3 Information on pay scales in the sector

This information is not currently available

9.4 Information on entry requirements, application processes (e.g. Apprenticeships)

There are no formal pre-entry requirements to becoming an Apprentice in the Ceramics industry.

As a guide, industry employers have indicated that those wishing to become an apprentice should have the following personal attributes:

- Punctuality and good timekeeping
- Self motivation to succeed within the industry
- Enthusiasm
- Team worker
- Capacity to follow instructions
- Demonstrate the potential to complete the qualifications
- Willingness to learn and apply learning in the workplace
- Willingness to work with due regard to health and safety
- Willingness to multi-skill and adapt to different work roles

Information on the apprenticeship can be found on the Proskills website, http://www.proskills.co.uk under the section on Qualifications.

9.5 Qualifications

The following qualifications have been designed specifically for the industry.

Qualification Title	Level	Target learners
NVQ in Manufacturing Ceramic and Associated products	1	employed 19+ unemployed 19+ 16-18
NVQ in Manufacturing Ceramic and Associated products	2	employed 19+ unemployed 19+ 16-18
Certificate in Ceramics Manufacture	2	employed 19+ unemployed 19+ 16-18

9.6 Data on employment and labour market trends and forecasts

The vast majority of the industry is located around Stoke-on-Trent in the West Midlands. Turnover for the core industry is currently around £1.4bn.
Workers in the Ceramics industry tend to be full time and directly employed, rather than on a contract basis. Work is often shift-based, especially at lower levels. The industry suffers from a poor image, and the range of career opportunities does not appear to be widely known.

The largest occupational groups in the industry are:

- Skilled Trades Occupations
- Managers and Senior Officials
- Process Plant and Machine Operatives

Age Bands	
16-24	2%
25-34	29%
35-44	17%
45-54	33%
55-64	16%
65+	2%

Gender Splits	
Female	49%
Male	51%

Sole Trader	
Total	2903

Disability	
Disabled	17%
Non-disabled	83%

Qualification Levels	
Level 5	16%
Level 4	10%
Level 3	20%
Level 2	19%
Level 1	17%
None/Don't Know	19%

9.7 Skill shortages

It has been widely predicted that higher level management and technical skills will become more important to the industry in the future as more of the elementary tasks become automated. There will be a continuing need for Health and Safety skills in the sector, and it will become more important for people to be multi-skilled, and be able to work across several areas of the business.

Skill shortages in the industry include:

- Employability skills, including team-working, having a good attitude, and using initiative
- Craft and Technical skills including use of new technology, design and use of clay
- Management and Leadership skills

9.8 Information on opportunities for adults changing career direction

This information is not currently available

9.9 Information on points of entry or transfer into a sector from another area sector

This information is not currently available

9.10 Job profiles – Glazed Ceramics

This information is not currently available

9.11 Case Studies

This information is not currently available

9.12 FAQs

1. **Q.** ***I have a full time job which is not in the Glazed Ceramics industry but I am interested in doing an Apprenticeship in a whitewares related subject , can I do this part-time?***

A. It is possible to study Glazed Ceramics related subjects part-time, however to be an Apprentice you will need to be employed within the industry. Some employers will offer part-time work and you may be able to gain some suitable experience from this.

2. ***Q. I've just left School and I have decided I want to work in the Glazed Ceramics industry like my Dad, perhaps even become a Ceramic/Pottery Maker however, I have no experience. What steps can I take to achieve this?***

A. Begin your enquiries as soon as you possibly can, preferably whilst still at school. You can get a job in the industry directly from school; however you may wish this job to be covered by an Apprenticeship. You will need to look up employers within your own 'travel to work' area using the yellow pages and/or the internet and send them a C.V. – 1 page of information about yourself and what you are looking for (e.g. an Apprenticeship in …). Make a note of who you have sent the C.V. to and phone them a couple of weeks later to ask whether they are able to consider your application. Get help from teachers or the careers service regarding the C.V. with regards to spelling etc. Have a think as to why you are keen on becoming a Ceramic/Pottery Maker because you may also be interested in other similar jobs as well for example an ceramic decorator.

3. ***Q. Can you provide me some general advice on where to research when finding the right Glazed Ceramics Apprenticeship for me?***

A. Contact all of the local colleges and training providers to ask whether they run courses in your chosen subject and ask whether they are able to give you contacts of employers the college might be connected with.

A. If you get an interview, ask the employer whether an Apprenticeship is possible.

A. Speak to your job centre regularly to see whether suitable jobs are advertised and keep an eye on the local newspaper.

A. If you live a long way from any college or training provider and you do find employment, your employer may allow you to lodge away from home on a block release basis to gain the necessary qualifications or the qualification may be able to be done at the employers premises. (Some employers are not aware of this and you could let them know).

4 ***Q. What is the work like?***

The work varies greatly according to the employer's business. Some processes are automated and others are carried out by hand. The work involves pouring liquid clay (or 'slip') into moulds, pushing tools onto flat clay or balls of clay to make different shapes, shaping clay on a potter's wheel, or using a lathe to turn and shape products.

Ceramic items are fired (heated to very high temperatures in a kiln) and glazed to make them waterproof, hardwearing and/or decorate them.

Most ceramic/pottery makers work 39 hours a week, Monday to Friday. Overtime, shift work and weekend working may be required by some employers. Pottery makers can work in large factories or small workshops or studios that may be hot, noisy and dusty. Lifting and carrying may be required, but many factories have lifting devices.

5. ***Q. What personal skills will I need to do this job?***

- Be good with your hands and able to work with delicate objects
- Pay attention to detail and have a good eye for shape
- Have good hand-to-eye co-ordination
- Be patient and able to work well on their own and in a team
- Enjoy creative activities and practical work

9.13 Sources of additional information – web links etc

- Stoke Council
- British Ceramics Confederation
- Unity (the union)

9.14 Regional Information

Region	Workplaces	Employees	Trends and shortages
North East	30	1,800	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
North West	80	1,000	There are very few manufacturing sites currently in existence in the North West. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Yorkshire & Humber	60	3,400	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
East Midlands	90	1,600	There are very few manufacturing sites currently in existence in the East Midlands. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
West Midlands	300	8,100	The industry has a large presence in the West Midlands, particularly around Stoke-on-Trent. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Eastern	90	2,600	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
London	80	3,900	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South East	130	1,800	There are very few manufacturing sites currently in existence in the South East. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
South West	140	1,800	There are very few manufacturing sites currently in existence in the South West. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Wales	100	1,000	There are very few manufacturing sites currently in existence in Wales. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Scotland	100	2,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Northern Ireland	<50	1,000	There are very few manufacturing sites currently in existence in Northern Ireland. The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.
Total	1,200	30,000	The industry has declined in size over the last decade, but this appears to be levelling off more recently. The effects that the credit crunch will have on the industry are not fully understood yet. Generally speaking, the skill needs for the future will be in higher level management and technical operations.

9.15 Economic Downturn

There is a very mixed picture concerning the impact of the recession on companies' businesses. Nearly a third of companies' say their business has contracted and a quarter say they have reduced the size of the workforce. However this means that most say that their business has remained the same or expanded, and that in general they have managed to maintain their workforce level. These business trends in the Ceramics industry over the last 12 months have been slightly better than those in Proskills industries as a whole.

The most common response companies have made to the recession has been to develop new products. Others are looking for new markets, both domestic and overseas, and reducing production costs.

In general Ceramics companies are more optimistic than other industries in Proskills' footprint and most expect their business to improve or stay the same over the next 12 months.

More information on the economic downturn can be found on the Proskills website

9.16 Influence of the 'Green' agenda on the demand for jobs, skills and qualifications

The Glazed Ceramics industry is efficient and effective, and has done a lot to reduce wastage, energy use, and emissions over the past few years. However, its success in the future depends largely on successfully competing in the global economy, and price stability in the energy market. Given the right support, advanced ceramics manufacture is likely to grow. This will lead to increased need for knowledge and skills in higher level materials science, as well as management and production skills. Added value services will be important complements to the core manufacturing activities.

Ceramics can provide a range of properties including great strength for relatively little weight, and can be manufactured to variety of specifications including protective casings for aircraft, engine components, synthetic bones and teeth, and vehicle brakes. The specific insulating properties of refractory ceramics mean they are able to maintain their strength and structure at very high temperatures, and are often used as insulating materials in reactors, furnaces, and engines.