

**March 2010**

**The Construction Sector**

Contents

UK, England and English Regions

1. Construction Skills – The Construction Sector
2. Craft
3. Technical
4. Professional and Management

**1. Sector – Construction**

Sector information

ConstructionSkills is the Sector Skills Council for Construction.

ConstructionSkills is a partnership between CITB-ConstructionSkills, the Construction Industry Council (CIC) and CITB-CS NI (Northern Ireland) and as such covers the whole industry across the whole of the UK, and all of the issues that the industry faces. ConstructionSkills represents every part of the construction industry, from architects to bricklayers, in every part of the UK.

Construction is the creation of the built environment. It is everything around you that is man-made from football stadiums to roads. It covers all stages of the construction process, including creating the initial ideas and designs, actually building the structure and ensuring that everything continues to work smoothly after it is complete.

The industry spans the following areas:

- Infrastructure – Roads and Rail
- Public and Private Housing
- Public non-housing - Schools
- Industrial
- Commercial – Offices and Retail
- Repair and Maintenance

The wide variety of skills required by the construction industry leads to a varied and interesting range of job opportunities. Good career opportunities exist for those who have an interest in the design and management of construction works, the supporting technical roles and also for those who wish to develop and use practical craft skills working on site.

Over the duration of any construction project many different professional, technical, managerial and craft occupations are involved. Team work is essential. The work has to be designed, planned and priced involving professional architects, engineers, quantity surveyors and estimators. Professional managers are required to plan and organise the work. Supervisors and craftspeople are required to ensure the work is properly carried out.

Employing 2.35 million people the combined employment of construction workers and professionals account for over 8% of the UK workforce.

The construction sector is characterised by:-

- A very large number of small firms. (92%).
- A large share of manual workers (55%).
- A third of its workforce self-employed (37%).
- An itinerant workforce

The above figures can be found in Sector Skills Assessment for the Construction Sector 2009, ConstructionSkills Summary which can be found on the web link below -

[www.cskills.org/supportbusiness/businessinformation/researchfromssc/skills\\_needs\\_analysis.aspx](http://www.cskills.org/supportbusiness/businessinformation/researchfromssc/skills_needs_analysis.aspx)

## **2. Craft**

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

The craft sector covers a whole range of different trades from bricklaying to roofing to demolition. Working in the craft sector can involve lots of variety including working with lots of different:

- Materials e.g. wood, brick, slate, plastic
- Machinery e.g. electric drills, cranes, tile cutters
- Locations and places e.g. in a workshop, outside, on a roof
- Buildings and structures e.g. prisons, schools, roads, tunnels

With over 30 occupations to choose from there is a career to suit most people including -

- Wood occupations e.g. Site Joiner, Shop fitter, Wood Machinist
- Exterior occupations e.g. Bricklayer, General Construction Operative
- Interior occupations e.g. Painter and Decorator, Ceiling Fixer
- Specialist occupations e.g. Thatcher, Roofer, Scaffolder
- Plant occupations e.g. Plant Mechanic, Plant Operator

Careers in the craft sector suit people who are practical and are willing to work in a team. Craftspeople can also move into professional and technician roles. To train in this sector people usually follow a training programme such as an apprenticeship which includes on the job training which can be coupled with attending college.

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

In the construction industry, as long as you have the determination and put in the hard work, there is plenty of scope to move up the career ladder. It's also worth noting that in the construction industry, more than 35% of people are their own boss and run their own companies. There are a huge variety of training programmes available in the construction industry, so whatever you choose to do first is not necessarily what you will do for the rest of your life. Once you are working in the construction industry, there are plenty of opportunities available for developing your skills and knowledge. Your career path is likely to be varied and may well change as you begin to specialise.

To be successful in today's employment market, you must take responsibility for continually improving your skills and understanding. You need to continue learning throughout your working life. The dynamic nature of the construction industry means that training and development opportunities are regularly available. You must also achieve relevant industry certification proving your competence.

The construction sector accounts for 47% of all UK carbon emissions generated and has a major responsibility in addressing the global challenge of carbon reduction. As a result the UK construction sector is facing a number of fundamental changes over the next few years and beyond. New legislation has been put in place in some parts of the industry but skills will also need to be adapted.

The key areas for consideration are Energy, Water, Materials and Waste. As a result the industry is looking, among other aspects, towards:

- Product innovation
- Lean manufacturing
- Innovation in manufacturing away from the construction site
- Large scale renewable energy
- Zero-carbon (residential and non-residential)
- Low carbon refurbishment of existing housing stock
- Low energy buildings
- Waste management
- Flood risk
- Social/ Behavioural change

Individuals employed in one of the many craft occupations will need to be competent with installing features such as:

- Airtightness - A robust primary air barrier around entire house
- Energy efficient ventilation
- Vented window panels
- Solar panels converting energy from the sun into electricity
- Factory produced flat panel units which are transported to site for assembly
- Vacuum insulation panels
- Cavity wall insulation
- External insulation
- Refurbishment of sash windows

Specific examples of skills required include:

1. Solar Thermal – Understanding of installation issues; understanding of high temperatures and pressures; liaison with other contractors e.g. electrician; maintenance of roof integrity i.e. sealing and bracketry; weather tightness of roof
2. Heat Pumps e.g. water source heat pump - Supervision of ground works; awareness of potential damage to ground loop; post pressure test
3. Solar panels - Electrical safety especially high DC voltages; Inverter trip and failure; weather tightness of roof; penetration of roof by fire spread
4. Wind turbines – Weather tightness of roof; penetration of roof by fire spread

Many people believe that new products require new skills to design or install them. However it is often a case of skills being either an add-on to existing skills or an amalgam of current skills. Roofers for example are now being trained to install solar panels to enable energy from the sun to be converted into electricity through semi-conductor cells in addition to their traditional skills. Individuals with construction experience should have an awareness of many of the technical terms which will assist them to appreciate how their skills can be transferred into new and emerging jobs.

The important thing is to have an understanding of the variety of, and very specific, needs of different parts of the industry depending on the legislation which impacts on them e.g. housing, commercial, public buildings, energy.

### 2.3 Information on pay scales in the sector

As with most industries, construction industry pay scales are based on a number of variables. Construction salaries are influenced by experience, one's role in the industry, the type of construction that is involved as well as the geographic location.

The table below provides a guide to the average salary for a selection of craft roles within the construction industry. The salary range applies to fully qualified and experienced people.

<b>Job role</b>	<b>Salary Range (£)</b>
Bricklayer	23,000 – 28,500
Carpenter	24,000 – 31,000
Ceiling Fixer	22,000 – 28,000
Demolition Operative	17,000 – 25,000
Labourer	15,000 – 21,000
Painter & Decorator	19,500 – 25,500
Plant Mechanic	24,000 – 31,000
Plant Operator	22,000 – 28,000
Plasterer	21,000 – 29,500
Roofer	20,000 – 29,000

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

Most people enter craft careers through apprenticeships although other types of training schemes are available. A construction apprenticeship is usually a two year programme to NVQ/SVQ level 2, then a further one year advanced programme to achieve NVQ/SVQ level 3. To apply, entrants have to have found an employer that will sponsor them to complete an apprenticeship.

Formal qualifications are not essential although reasonable GCSE grades, especially in maths and English can help with the training and promotion prospects.

Mathematical ability is needed to be able to measure and calculate accurately, e.g. estimating, planning and setting out projects and for such things as calculating areas and volumes. A reasonable standard of English is useful to be able to interpret plans, product information, material lists and to understand both written and verbal instructions. Applicants may have to sit an assessment.

Information about construction apprenticeships and details of current vacancies are provided by the National Apprenticeship Service [www.apprenticeships.org.uk](http://www.apprenticeships.org.uk)

Applicants may also apply direct to employers.

Visit [www.bconstructive.co.uk/apprenticeships](http://www.bconstructive.co.uk/apprenticeships) to find out more about applying for a construction apprenticeship

### 2.5 Qualifications

Most craft occupations have an NVQ available at both levels 2 and 3. These qualifications are achieved by assessment on-site combined with some college-based training. Employment is essential to achieve an NVQ.

#### Mainstream Craft Qualifications

- **Trowel Occupations:**  
NVQ Levels 2 & 3, including Bricklayer and Craft Mason
- **Wood Occupations:**  
NVQ Levels 2 & 3, Site Carpentry, Bench Joinery
- **Roofing Occupations:**  
NVQ Levels 2 & 3, Roof Tiler, Roof Slater and Roof Slater & Tiler (combined) Built-Up Felt Roofing, Roof Sheeting and Cladding
- **Decorative Finishing and Industrial Painting Occupations:**  
NVQ Levels 2 & 3, Painter and Decorator
- **Plastering:**  
NVQ Levels 2 & 3

N.B. There is an equivalent SVQ available where there is an NVQ.

People looking to gain craft skills and qualifications prior to employment should take a construction diploma at a further education college. These are generally available in the main craft occupations at levels 1, 2 and 3. A qualification gained through a course will be invaluable during a search for employment as it will demonstrate a willingness and commitment to develop a career within the industry.

Once in suitable employment, construction diplomas can be converted into S/NVQs by recording relevant work-based evidence on site. A [Programme-Led Apprenticeship \(opens new window\)](#) is available to convert a college course into a full S/NVQ.

For additional information on the range of craft qualifications on offer from Construction Awards Alliance, just one of the awarding bodies, visit their website [www.caalliance.co.uk](http://www.caalliance.co.uk)

### 2.6 Data on employment and labour market trends and forecasts

#### Annual recruitment requirement by occupation

Craft Occupation	2010 – 2014
Wood trade and interior fit out	4,530

Bricklayers	2,070
Building Envelope Specialists	990
Painters and Decorators	3,720
Plasterers and dry liners	860
Roofers	270
Floorers	1,390
Glaziers	1,130
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	950
Scaffolders	1,080
Plant operatives	3,010
Plant mechanics/fitters	1,010
Steel Erectors/Structural	800
Labourers	6,900
Electrical Trades and Installation	1,150
Plumbing and Heating, Ventilation and Air Conditioning Trades	1,080
Civil Engineering Operatives	2,620

**Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	300,790	259,450	255,450
Bricklayers	93,740	82,470	77,990
Building Envelope Specialists	101,320	84,780	80,140
Painters and Decorators	146,240	128,600	129,820
Plasterers and dry liners	52,760	40,660	41,230
Roofers	50,580	40,420	38,330
Floorers	41,620	36,370	33,850
Glaziers	44,170	39,390	37,100
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	64,600	54,640	51,050
Scaffolders	27,680	20,380	26,210
Plant operatives	51,240	46,820	59,230
Plant mechanics/fitters	35,800	32,170	33,400
Steel Erectors/Structural	32,240	26,440	27,190
Labourers	123,170	102,600	135,040
Electrical Trades and Installation	200,310	181,890	170,720
Plumbing and Heating, Ventilation and Air Conditioning Trades	188,120	160,140	152,970



Civil Engineering Operatives	61,450	50,980	71,200
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Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on -

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

## 2.7 Skill shortages

For most employers in the construction industry the recession and low or uncertain demand were key issues and consequently there has been a very dramatic fall in skills shortages facing employers compared with previous years.

Research in this area points to quite a wide variation in the type of employers encountering skill shortages when recruiting. Professional services firms that had attempted to recruit skilled staff were far more likely to have encountered recruitment difficulties (56%) than the construction contracting sector (22%). There were also wide geographic differences. Few employers in the East and West Midlands that had sought to recruit skilled staff had encountered difficulties (9% and 16% respectively), whereas in London and Scotland approaching two in five had experienced difficulties (40% and 39% respectively).

In many cases the skills lacking among applicants are very occupation specific, and in other cases the 'skill' is more about personal attitudes and commitment / motivation (mentioned by 33% of employers experiencing hard-to-fill vacancies) or a lack of experience (27%). Among broader generic skills mentioned were a lack of literacy / numeracy (8%) and a lack of IT skills (7%).

On the construction contracting side of the sector, the largest volume of skills gaps (c. 13,000) was reported for labourers and general operatives, and 6% of this occupation was described as not being fully proficient. Following this a number of occupational areas had a broadly similar number of staff lacking proficiency (in the 3,500 – 5,000 range): managers, painters / decorators, admin, carpenters / joiners, scaffolders and supervisors. On the professional services side, the total number of staff lacking proficiency was broadly similar across a number of occupations including architects, admin staff, building surveyors, mechanical engineers, other engineers, technical positions and architectural technologists (each c. 1,000).

The above information is based on a Research Report 'Skills and Training in the Construction Sector 2009' prepared for ConstructionSkills and Central Office of Information (COI) by IFF Research Ltd, Sept 2009. To obtain a copy of this report please email [iag.recruitmentandcareers@cskills.org](mailto:iag.recruitmentandcareers@cskills.org)

If we look at the UK annual recruitment requirements 2010-2014 below we can see that the highest annual recruitment requirements for craft occupations are for Wood trade and interior fit out (4,530), Labourers (6,900) and Painters and Decorators (3,720).

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<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	4,530
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Building Envelope Specialists	990
Painters and Decorators	3,720
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Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	950
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Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/csn](http://www.cskills.org/csn)

### 2.8 Information on opportunities for adults changing career direction

Adults entering the craft sector from a different career background will find that the following transferable skills are useful and sought after by employers:

- Communication
- Interpersonal skills (cooperation, reliability, trust & punctuality)
- Teamwork
- Self-motivation and ability to work independently
- Using your initiative
- Working to deadlines
- Problem solving
- Ability to learn and adapt to changing situations
- Numeracy
- Listening skills
- Following instructions/procedures/completing tasks
- Mobility (able to move from one project location to another)
- Quality and output

This sector can help them develop a whole range of skills and knowledge including –

- Hand-eye co-ordination
- Problem solving
- Team working
- Measuring skills
- Health and Safety (work in a safe manner)
- First aid
- Visualisation (2D to 3D – reading drawings)
- Spatial awareness
- Quality & output
- Work at height (ladders & access equipment)

Once trained and experienced, it is possible for crafts people to advance into supervisory roles.

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

Many adults will find themselves being able to transfer the skills and knowledge they have acquired in another field of industry into the craft sector. Some examples of sectors which might be relevant to the craft sector include:

- Land based industries e.g. landscaping and agriculture
- Manufacturing
- Engineering
- Armed Forces

- Stage/theatre construction

Some transferable skills may relate to specific elements of other area sectors. For example an adult who has been working as a Rigger in the entertainment industry may have developed knowledge skills and experience which are relevant to being a Scaffolder.

There is a new qualification framework, the Qualifications and Credit Framework (QCF) which will support and encourage the transferability of similar alternative units within qualifications which should facilitate adults transferring from one sector to another sector and allow for progression pathways both horizontally and vertically. For more information please refer to – [www.qcda.gov.uk/8150.aspx](http://www.qcda.gov.uk/8150.aspx)

## 2.10 Job profiles

Any one entering a job in construction will be joining one of Britain's largest industries in a career that's challenging, exciting and rewarding. You'll also be joining an industry that's respected around the globe. Britain has a reputation for world class design, inspirational architecture and the highest quality building work. What you get out of a career depends on you. You may enjoy the hands-on satisfaction of actually building things, or you may be more interested in the design or management of projects. Either way, no one day is the same as the next.

You could be working in the office or outdoors, in an environment that's constantly changing. You'll also have the opportunity to learn on the job, because there's a massive range of training available at all levels and there are lots of opportunities to progress within the industry. Who knows, you might even end up running your own business.

A career in construction involves joining a team of specialist people all working together to build a strong, long-lasting future. Whatever the role in the industry, every team member is as important as the next. So, if you want to make a real difference to the environment, enjoy a huge variety of work and get complete job satisfaction in the knowledge that you helped build something that will last a lifetime or longer, please see the below job profiles for more information about craft trades in the construction industry.

### **Wood**

**Bench Joiner** - Bench joiners prepare and assemble doors windows and staircases, ready for installation. They also create fitted furniture, such as wardrobes and cupboards for buildings

**Carpenter and Joiner** - A building isn't all about bricks and mortar. Timber is an essential part of just about every structure, and it's the carpenter and joiner's job to prepare it and put it into place.

**Form Worker** - Formworkers make temporary structures out of wood or metal.

**Shop Fitter** - A shopfitter's job is to plan, build and finish the shop interior. Starting with an empty room, they choose, cut and shape the materials that give a shop its own look and style.

**Wood Machinist** - It's the job of the wood machinist to prepare floorboards, skirting boards and window frames.

## **Roofing**

**Built Up Felt Roofer** - Felt roofers apply felt to a roof, usually in several layers bonded together, to form a watertight covering and keep the interior of the building dry. It is a skilled job that requires specific training.

**Lead Sheeter** - Lead sheeting is used for many things, including as a weatherproof finish on flat and pitched roofing.

**Waterproofing Systems Operative** - Liquid waterproofing systems are very varied, but all are specially formulated for roofing and applied to a certain thickness.

**Mastic Asphalter** - Mastic asphalters lay mastic asphalt on to a range of surfaces and structures to waterproof, protect and strengthen them. Mastic asphalt is a material made from a mixture of limestone and bitumen.

**Roof Sheeter and Cladder** - Roof sheeting and cladding is a lightweight covering that's attached to a building's structure. It's made in large units using metal, plastic or fibre cement.

**Roof Slater and Tiler** - Roof slaters and tilers create a waterproof covering for a building by applying individual slates or tiles to a basic timber framework, such as the roof of houses.

**Single Ply roofer** - Single ply roofing is attached to buildings as sheets. It's the single ply roofer's job to fix them and protect the building.

## **Trowel**

**Bricklayer** - Bricklayers provide the shell of the building that every one sees. It could be anything from ornamental work to vaulted archways and it's not just bricks.

**Construction Operative** - General construction operatives work with a range of skills in many different areas helping different members of the team. Tasks can include preparing the ground for construction, preparing materials such as cement and plaster and digging shallow trenches.

**Stonemason** - Stonemasons work restoring historical buildings as well as creating new ones.

## **Interiors**

**Ceiling Fixer** - The role of a ceiling fixer usually involves fitting suspended ceilings, often in big modern buildings like shops, offices and hospitals.

**Dry liner** - Not all finishes applied to walls and ceilings are 'wet', like plaster. 'Dry' finishes, such as plasterboard and wallboard are also used. A dry lining operative is the skilled worker who carries out this job.

**Floor Layer** - The floor layer is responsible for finding the right material for the job and then, once the surface has been prepared and the material cut to fit, putting the floor finish in place.

**Glazier** - Glazing is a highly skilled job that involves cutting glass - as well as other window materials - to the right size and fixing them in place

**Painter and Decorator** - The role of a painter and decorator in the construction industry is normally more involved than simply decorating a room in a house. - Oil rigs, bridges and steelwork all need heavy-duty coatings.

**Partitioner** - Most large modern buildings are divided into rooms by partitions. Partitioning is one of the last things to be done on a construction project, and by the time the partitioner arrives there could well be people working in the building already.

**Plasterer** - Most people know one part of the plasterer's work: applying wet finishes to walls, ceilings and floors. This is called solid plastering. That's by no means all they do, though.

**Plumber** - The role of a plumber is highly varied and ranges from installing, servicing and repairing plumbing systems in homes and businesses.

**Renderer** - Renderers work on new buildings or on the extension or maintenance of existing buildings, and provide an attractive finish to the outside.

**Wall and Floor Tiler** - Wall and floor tiling may sound straightforward, but it can be a complex job, using coloured and textured tiles to decorate the inside of a building.

## **Plant**

**Plant Hire Controller** - Plant-hire controllers are organisers. It is their job to ensure that plant equipment is in the right place at the right time, and they need to be on hand to sort out any emergencies that might occur.

**Plant Mechanics** - As the name suggests, a plant mechanic looks after the machinery found on a construction site, including excavators, cranes, trucks, and more.

**Plant Operator** - Plant operators get to use the large machinery associated with building and construction, including excavators and bulldozers, cranes, forklifts and telescopic handlers.

**Plant Sales People** - This is a sales job that involves meeting with construction companies to negotiate the hire or sale of plant equipment.

## **Demolition**

**Demolition Operative** - Demolition is one of the most highly skilled jobs in construction and one of the most spectacular. It can also be very dangerous.

**Scaffolder** - Scaffold is usually made of metal tubes, fitting and metal or timber platforms, put together by scaffolders so that workers can reach the parts of the structure they're working on.

**Steeplejack** - As a steeplejack you could be repairing and renovating church spires, monuments and chimneys, as well as many other structures.

**Steel Erector** - Steel erectors install the prefabricated structural steel frames of buildings such as warehouses, industrial units and multi-storey buildings.

### **Other Specialist Trades**

**Building Envelope Specialist** – A building envelope specialist is responsible for installing a whole range of external facades on buildings e.g. external cladding, balcony systems, shop front systems and atrium glazing.

**Civil Engineering Operative** – A civil engineering operative helps skilled craft workers in different jobs on a civil engineering site. This may involve tasks such as putting up barriers, safety signs, digging trenches, laying road surfaces and using and maintaining machinery such as drills, pumps and compressors.

### **Heritage**

The heritage sector has a long history of building traditional style structures for everyday use, as well as an abundant architectural heritage of grand houses, cathedrals and castles. There is a wide range of craft skills used in the heritage sector.

Our built heritage bears witness to centuries of human skill and ingenuity and today we have the challenge of keeping the skills alive so that we can continue to conserve and maintain our vast range of historic properties by using the relevant traditional craft skills and working sympathetically with the original materials. The conservation, repair and maintenance of old buildings is a specialist part of the construction industry. This requires highly skilled craftspeople, using traditional methods and materials under the supervision and guidance of architects, surveyors and conservation officers.

To work in this sector a sound introduction to a craft occupation or technical career, via a recognised craft or technical qualification is the first step. You can then undertake specific training and gather work based evidence to achieve a Heritage Skills NVQ Level 3. This will allow you to work in the general construction industry, as well as specialising in the built heritage sector.

Craft skills in building conservation and restoration include:

- Blacksmith/ Architectural metalworker
- Bricklayer and Craft Mason
- Carpenter and Joiner
- Dry Stone Waller
- Lead Worker
- Painter and Decorator
- Plasterer
- Roof Slater and Tiler
- Steeplejack

- Stone mason
- Thatcher
- Wall and Floor Tiler

### **Craft skills in building conservation**

For more information on careers in the heritage sector, visit [www.nhtg.org.uk](http://www.nhtg.org.uk). This web site gives you access to information on traditional building craft skills, how to get a career in crafts, relevant qualifications and training courses, and advice for employers on training opportunities for employees.

### **Building Services**

Building Services covers the essential services that allow buildings to operate. It includes the electrotechnical, heating, ventilating, air conditioning, refrigeration and plumbing industries.

Building Services is part of a sector that:

- Has over 51,000 businesses
- Consists of approximately 558,000 individuals
- Carries out a £19.3bn turnover
- Represents between 2% and 3% of the GDP
- Has careers available at craft, technical and professional level.

For more information on careers in the Building Services sector, visit [www.summitskills.org.uk](http://www.summitskills.org.uk)

### 2.11 Case studies

All these case studies below can be found on ConstructionSkills' website, [www.cskills.org](http://www.cskills.org)

Web link – [www.cskills.org/workinconst/inconstruction/casestudies](http://www.cskills.org/workinconst/inconstruction/casestudies)

- Ceiling Fixer (Apprentice) - Tyron Vella
- Bench Joiner - Rachel Moth
- Bricklayer - Shameen Azmutally
- Built Up Felt Roofer - Adam Ward
- Demolition - Holly Bennett
- Plant Operator Apprentice - Hannah Shroeder
- Stonemason - Michael Goulding
- Steeplejack - Chris O'Neil

### 2.12 FAQs

#### **What is a Programme Led Apprenticeship (PLA)?**

A Programme Led Apprenticeship is a progression route into an apprenticeship for full-time students who have passed or are about to pass a Diploma Level 2 (used to be called Intermediate Construction Award/ICA) in their chosen trade e.g. brickwork.

In addition, applicants also need to have passed:

- key skills level 1 or Maths and English GCSE A to C grade



- Health & Safety test at college along with Employment Rights and Responsibilities, which is part of the college course.

On completion of an ICA/Diploma Level 2 + key skills, students can then work with employers in order to achieve an NVQ Level 2 i.e. a full apprenticeship framework. This will allow them to qualify for a full Construction Skills Certification Scheme (CSCS) card and further progression to an NVQ level 3 qualification.

To find out more about Programme Led Apprentices please visit - [www.bconstructive.co.uk/careers/whatneed/qualified/progapprentice](http://www.bconstructive.co.uk/careers/whatneed/qualified/progapprentice)

To hear first hand from a Programme Led Apprentice please click on [http://www.bconstructive.co.uk/peopleprojects/diaries/bricklayer\\_majid.aspx](http://www.bconstructive.co.uk/peopleprojects/diaries/bricklayer_majid.aspx)

**I want to find out more information about getting into construction. Where can I go?**

For basic information on careers in the construction industry visit [www.cskills.org](http://www.cskills.org) and [www.bconstructive.co.uk](http://www.bconstructive.co.uk). For more detailed information on how to enter the industry as an adult visit <http://www.lifelonglearning.co.uk/>

**I would like to retrain within the construction industry, what opportunities are available to me?**

For help on retraining in the construction industry contact Next Step, at [www.nextstep.org.uk](http://www.nextstep.org.uk) where they will be able to offer you support and guidance on the best way to retrain and to re-enter the industry.

**How can I use my current experience within the construction industry to get qualified?**

If you have experience working on-site and are in employment the best way to get yourself qualified would be by taking the On-Site Assessment and Training (OSAT) scheme.

OSAT helps experienced workers get the qualifications to prove they can do the job. It turns their existing skills and experience into a nationally recognised qualification such as an NVQ or SVQ. Having these qualifications also helps qualify them for a Construction Skills Certification Scheme (CSCS) card. The whole process is carried out on site.

Another option if you have a minimum of five years experience and don't need any further training, is to take the Experienced Worker Practical Assessment (EWPA). It integrates the key criteria of the NVQ into one practical assessment, together with work-based evidence and employer endorsement, which must be completed within an allotted time.

For more information about EWPA telephone 0844 248 5262

For more details please download OSAT and EWPA leaflet: [http://www.cskills.org/uploads/osat-leaflet\\_tcm17-4427.pdf](http://www.cskills.org/uploads/osat-leaflet_tcm17-4427.pdf)

## **A vacancy I am applying for says I need a CSCS card. What do I need to do?**

CSCS cards are increasingly demanded as proof of occupational competence and health & safety awareness.

The quickest and easiest way to apply for a CSCS card is to use the SkillsDirect service by calling:

0844 248 5262 or log onto [www.cscs.uk.com](http://www.cscs.uk.com)

They will talk to you about your job role and any qualifications you already have and they will then manage the whole process for you at no extra cost.

## **How can I apply to take my Health & Safety test?**

To apply to sit your Health & Safety test call SkillsDirect on 0870 850 5262 or click on [www.cskills.org/supportbusiness/healthsafety/test](http://www.cskills.org/supportbusiness/healthsafety/test)

### 2.13 Sources of additional information, web-links etc

#### **Help and Advice**

[www.bconstructive.co.uk](http://www.bconstructive.co.uk) – the ConstructionSkills website for young people looking to enter the industry.

<http://www.lsc.gov.uk/adultentitlement> - Adult Entitlement to Learning. A government funding initiative to give eligible adults aged 19 and over the chance to access a range of courses.

[www.cscs.uk.com](http://www.cscs.uk.com) – the organisation that runs the Construction Site Competence Card scheme – all workers must have a valid card to work on sites.

[www.cskills.org](http://www.cskills.org) – the ConstructionSkills website for adults, employers and schools and colleges

[www.jobcentreplus.gov.uk](http://www.jobcentreplus.gov.uk) – Jobcentre Plus list details of local job and help and advice in finding a job

[www.learndirect.co.uk](http://www.learndirect.co.uk) – LearnDirect provide a number of online learning packages to help with basic skills

[www.lsc.gov.uk](http://www.lsc.gov.uk) – The Learning and Skills Council provide funding for some types of training within the UK

[http://www.direct.gov.uk/en/educationandlearning/adultlearning/dg\\_071762](http://www.direct.gov.uk/en/educationandlearning/adultlearning/dg_071762)  
Nextstep provide help with taking your next step in learning, skills and work

<http://www.nhtg.org.uk> NHTG (National Heritage Training Group) – Supporting traditional building skills and professional development for the heritage sector

## **2.14 Craft - Regional Information**

### 2.14.1 East Midlands.

### Annual recruitment requirement by occupation

Craft Occupation	2010 – 2014
Wood trade and interior fit out	800
Bricklayers	190
Building Envelope Specialists	360
Painters and Decorators	160
Plasterers and dry liners	-*
Roofers	-*
Floorers	Less than 50
Glaziers	80
Specialist Building Operatives e.g. Ceiling fixer, Pipe layer, Thermal insulation fitter	200
Scaffolders	Less than 50
Plant operatives	230
Plant mechanics/fitters	-*
Steel Erectors/Structural	-*
Labourers	1,210
Electrical Trades and Installation	-*
Plumbing and Heating, Ventilation and Air Conditioning Trades	130

Civil Engineering Operatives	160

\*No appreciable recruitment requirement

### **Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	18,710	15,300	15,700
Bricklayers	7,610	6,780	6,690
Building Envelope Specialists	5,270	4,580	4,720
Painters and Decorators	9,880	7,710	7,890
Plasterers and dry liners	4,320	2,900	3,010
Roofers	2,520	2,180	2,230
Floorers	3,290	2,870	2,760
Glaziers	3,500	2,720	2,480
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	3,990	3,460	3,440
Scaffolders	1,490	890	1,050
Plant operatives	3,230	3,130	4,250
Plant mechanics/fitters	2,340	2,310	2,460
Steel Erectors/Structural	2,710	1,880	1,880

Labourers	8,060	6,110	8,460
Electrical Trades and Installation	16,170	13,180	11,950
Plumbing and Heating, Ventilation and Air Conditioning Trades	9,940	8,610	8,900
Civil Engineering Operatives	4,460	3,220	4,590

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 2.14.2 East of England

##### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	-*
Bricklayers	580
Building Envelope Specialists	-*
Painters and Decorators	1,000
Plasterers and dry liners	-*
Roofers	60
Floorers	260
Glaziers	370
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	150

Scaffolders	190
Plant operatives	390
Plant mechanics/fitters	-*
Steel Erectors/Structural	60
Labourers	490
Electrical Trades and Installation	-*
Plumbing and Heating, Ventilation and Air Conditioning Trades	870
Civil Engineering Operatives	400

\*No appreciable recruitment requirement

### **Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	28,790	25,540	25,710
Bricklayers	9,230	8,780	8,810
Building Envelope Specialists	12,160	10,690	10,540
Painters and Decorators	12,780	12,770	14,310
Plasterers and dry liners	4,590	3,570	3,820
Roofers	5,920	4,580	4,310
Floorers	5,110	4,270	4,100

Glaziers	4,920	4,890	4,820
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	6,340	5,110	4,480
Scaffolders	3,690	2,420	2,950
Plant operatives	4,720	4,580	6,560
Plant mechanics/fitters	3,040	2,600	2,910
Steel Erectors/Structural	2,220	1,970	2,290
Labourers	11,790	9,570	12,680
Electrical Trades and Installation	21,100	20,340	19,950
Plumbing and Heating, Ventilation and Air Conditioning Trades	15,970	15,650	16,060
Civil Engineering Operatives	4,760	4,180	6,570

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

### 2.14.3 London

#### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	-*

Bricklayers	-*
Building Envelope Specialists	140
Painters and Decorators	-*
Plasterers and dry liners	130
Roofers	-*
Floorers	-*
Glaziers	Less than 50
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	Less than 50
Scaffolders	150
Plant operatives	510
Plant mechanics/fitters	-*
Steel Erectors/Structural	250
Labourers	640
Electrical Trades and Installation	-*
Plumbing and Heating, Ventilation and Air Conditioning Trades	-*
Civil Engineering Operatives	330

\*No appreciable recruitment requirement

**Total employment by occupation**



<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	32,900	28,160	25,410
Bricklayers	7,980	6,370	5,470
Building Envelope Specialists	12,720	10,360	8,930
Painters and Decorators	21,590	18,520	17,350
Plasterers and dry liners	4,810	4,320	4,390
Roofers	4,640	3,520	2,960
Floorers	5,290	4,440	3,930
Glaziers	4,400	3,350	2,760
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	7,110	6,700	5,890
Scaffolders	2,620	2,560	3,600
Plant operatives	3,480	3,330	4,540
Plant mechanics/fitters	4,140	3,460	3,560
Steel Erectors/Structural	2,390	2,450	2,640
Labourers	13,840	12,570	16,830
Electrical Trades and Installation	30,250	27,250	24,780
Plumbing and Heating, Ventilation and Air Conditioning Trades	20,940	17,260	14,500

Civil Engineering Operatives	5,290	5,140	7,500
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Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 2.14.4 North East

#### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	240
Bricklayers	510
Building Envelope Specialists	70
Painters and Decorators	240
Plasterers and dry liners	70
Roofers	-*
Floorers	350
Glaziers	Less than 50
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	210
Scaffolders	Less than 50
Plant operatives	70
Plant mechanics/fitters	Less than 50

Steel Erectors/Structural	-*
Labourers	550
Electrical Trades and Installation	270
Plumbing and Heating, Ventilation and Air Conditioning Trades	-*
Civil Engineering Operatives	70

\*No appreciable recruitment requirement

### **Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	15,890	11,580	11,340
Bricklayers	5,210	3,870	3,650
Building Envelope Specialists	2,770	2,200	2,260
Painters and Decorators	5,450	4,810	5,100
Plasterers and dry liners	2,610	1,840	1,790
Roofers	4,020	2,700	2,550
Floorers	1,960	1,760	1,700
Glaziers	1,650	1,490	1,590
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	3,970	3,300	3,440

Scaffolders	1,420	940	1,080
Plant operatives	3,000	2,350	2,760
Plant mechanics/fitters	1,900	1,660	1,700
Steel Erectors/Structural	2,900	1,950	1,800
Labourers	5,480	4,250	5,380
Electrical Trades and Installation	10,050	7,840	7,410
Plumbing and Heating, Ventilation and Air Conditioning Trades	10,160	7,740	7,690
Civil Engineering Operatives	5,930	4,320	5,320

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 2.14.5 North West

#### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	240
Bricklayers	210
Building Envelope Specialists	60
Painters and Decorators	620
Plasterers and dry liners	170

Roofers	170
Floorers	410
Glaziers	190
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	Less than 50
Scaffolders	-*
Plant operatives	140
Plant mechanics/fitters	230
Steel Erectors/Structural	-
Labourers	Less than 50
Electrical Trades and Installation	430
Plumbing and Heating, Ventilation and Air Conditioning Trades	-*
Civil Engineering Operatives	350

\*No appreciable recruitment requirement

### **Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	30,080	23,640	22,740
Bricklayers	7,470	6,390	6,180

Building Envelope Specialists	7,800	6,300	6,140
Painters and Decorators	15,600	12,120	11,540
Plasterers and dry liners	7,740	5,250	4,700
Roofers	5,270	3,700	3,420
Floorers	5,060	4,180	3,960
Glaziers	4,400	3,740	3,660
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	4,620	3,910	3,910
Scaffolders	3,730	2,310	2,540
Plant operatives	5,430	4,560	5,580
Plant mechanics/fitters	4,360	3,950	4,060
Steel Erectors/Structural	3,430	2,630	2,540
Labourers	13,200	9,810	11,830
Electrical Trades and Installation	18,640	16,620	16,300
Plumbing and Heating, Ventilation and Air Conditioning Trades	18,640	14,650	14,060
Civil Engineering Operatives	6,800	4,990	6,280

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 2.14.6 South East

#### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	60
Bricklayers	-*
Building Envelope Specialists	-*
Painters and Decorators	340
Plasterers and dry liners	-*
Roofers	-*
Floorers	-*
Glaziers	160
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	90
Scaffolders	110
Plant operatives	170
Plant mechanics/fitters	-*
Steel Erectors/Structural	Less than 50
Labourers	290
Electrical Trades and Installation	-*

Plumbing and Heating, Ventilation and Air Conditioning Trades	-*
Civil Engineering Operatives	290

\*No appreciable recruitment requirement

### **Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	37,400	32,010	29,970
Bricklayers	14,990	11,970	10,410
Building Envelope Specialists	17,490	14,440	13,090
Painters and Decorators	19,750	17,910	17,600
Plasterers and dry liners	5,490	4,700	4,820
Roofers	6,330	4,990	4,440
Floorers	6,500	5,390	4,810
Glaziers	6,160	5,820	5,380
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	8,020	6,840	6,110
Scaffolders	3,780	2,930	3,620
Plant operatives	5,840	5,480	7,170
Plant mechanics/fitters	5,620	4,880	4,680
Steel Erectors/Structural	4,100	3,170	3,000



Labourers	18,040	14,530	17,720
Electrical Trades and Installation	23,580	20,690	18,700
Plumbing and Heating, Ventilation and Air Conditioning Trades	28,070	23,230	20,750
Civil Engineering Operatives	6,780	6,180	9,120

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 2.14.7 South West

##### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	350
Bricklayers	60
Building Envelope Specialists	-*
Painters and Decorators	-*
Plasterers and dry liners	190
Roofers	Less than 50
Floorers	-*
Glaziers	-*
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer,	-*

Thermal insulation fitter	
Scaffolders	100
Plant operatives	220
Plant mechanics/fitters	-*
Steel Erectors/Structural	80
Labourers	1260
Electrical Trades and Installation	150
Plumbing and Heating, Ventilation and Air Conditioning Trades	-*
Civil Engineering Operatives	80

\*No appreciable recruitment requirement

### **Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	27,090	24,110	22,990
Bricklayers	8,630	8,100	7,280
Building Envelope Specialists	13,080	11,040	9,860
Painters and Decorators	14,240	13,070	12,780
Plasterers and dry liners	4,030	3,240	3,380
Roofers	4,600	3,730	3,340

Floorers	3,340	3,600	3,220
Glaziers	5,270	4,750	4,180
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	5,600	4,890	4,270
Scaffolders	1,640	1,660	2,350
Plant operatives	3,210	3,100	3,730
Plant mechanics/fitters	2,840	3,020	2,970
Steel Erectors/Structural	2,490	2,260	2,420
Labourers	11,320	10,420	14,650
Electrical Trades and Installation	12,080	13,000	12,080
Plumbing and Heating, Ventilation and Air Conditioning Trades	16,760	15,620	14,600
Civil Engineering Operatives	5,180	4,580	6,390

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 2.14.8 West Mids.

#### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	640

Bricklayers	-*
Building Envelope Specialists	250
Painters and Decorators	100
Plasterers and dry liners	-*
Roofers	-*
Floorers	-*
Glaziers	-*
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	-*
Scaffolders	-*
Plant operatives	90
Plant mechanics/fitters	-*
Steel Erectors/Structural	Less than 50
Labourers	710
Electrical Trades and Installation	310
Plumbing and Heating, Ventilation and Air Conditioning Trades	-*
Civil Engineering Operatives	320

\*No appreciable recruitment requirement

**Total employment by occupation**

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<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	22,360	19,740	20,960
Bricklayers	6,100	4,760	4,380
Building Envelope Specialists	8,040	6,740	6,980
Painters and Decorators	11,520	9,170	9,370
Plasterers and dry liners	4,460	2,820	2,750
Roofers	5,950	4,680	4,370
Floorers	1,930	1,300	1,190
Glaziers	4,390	3,350	3,260
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	5,900	4,440	4,370
Scaffolders	1,620	1,110	1,420
Plant operatives	3,170	2,560	3,100
Plant mechanics/fitters	2,650	2,040	2,090
Steel Erectors/Structural	3,150	2,400	2,440
Labourers	8,650	6,530	8,960
Electrical Trades and Installation	18,850	15,410	14,500
Plumbing and Heating, Ventilation and Air Conditioning Trades	15,930	12,340	12,420
Civil Engineering Operatives	5,440	3,920	5,330

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 2.14.9 Yorkshire and the Humber

##### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	270
Bricklayers	130
Building Envelope Specialists	-*
Painters and Decorators	220
Plasterers and dry liners	-*
Roofers	-*
Floorers	340
Glaziers	-*
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	-*
Scaffolders	50
Plant operatives	Less than 50
Plant mechanics/fitters	110
Steel Erectors/Structural	80

Labourers	540
Electrical Trades and Installation	-*
Plumbing and Heating, Ventilation and Air Conditioning Trades	-*
Civil Engineering Operatives	-*

\*No appreciable recruitment requirement

### **Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	24,530	20,700	20,710
Bricklayers	9,750	8,670	8,490
Building Envelope Specialists	8,170	6,580	6,220
Painters and Decorators	10,090	8,670	9,090
Plasterers and dry liners	5,130	3,860	3,960
Roofers	2,840	2,600	2,610
Floorers	3,820	3,390	3,260
Glaziers	3,560	3,220	3,060
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	5,950	4,520	4,050

Scaffolders	2,590	1,870	2,340
Plant operatives	4,570	3,890	4,830
Plant mechanics/fitters	3,490	3,240	3,350
Steel Erectors/Structural	2,220	2,160	2,500
Labourers	10,350	8,110	10,680
Electrical Trades and Installation	18,570	15,550	14,430
Plumbing and Heating, Ventilation and Air Conditioning Trades	18,600	15,330	14,740
Civil Engineering Operatives	6,330	4,790	6,310

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 2.14.10 Northern Ireland

##### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	200
Bricklayers	80
Building Envelope Specialists	-*
Painters and Decorators	-*



Plasterers and dry liners	-*
Roofers	-*
Floorers	-*
Glaziers	-*
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	Less than 50
Scaffolders	60
Plant operatives	150
Plant mechanics/fitters	70
Steel Erectors/Structural	-*
Labourers	180
Electrical Trades and Installation	-*
Plumbing and Heating, Ventilation and Air Conditioning Trades	-*
Civil Engineering Operatives	70

\*No appreciable recruitment requirement

### **Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	11,110	11,580	12,190

Bricklayers	4,510	4,800	5,000
Building Envelope Specialists	2,520	1,870	1,530
Painters and Decorators	2,910	2,680	2,690
Plasterers and dry liners	2,680	2,470	2,490
Roofers	1,420	1,220	1,190
Floorers	500	410	370
Glaziers	1,010	990	980
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	1,980	1,760	1,700
Scaffolders	390	290	310
Plant operatives	3,890	3,860	4,810
Plant mechanics/fitters	1,400	1,200	1,260
Steel Erectors/Structural	660	620	650
Labourers	4,050	3,320	3,750
Electrical Trades and Installation	5,550	5,600	5,450
Plumbing and Heating, Ventilation and Air Conditioning Trades	4,910	4,540	4,500
Civil Engineering Operatives	1,170	1,120	1,560

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 2.14.11 Scotland

#### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	760
Bricklayers	-*
Building Envelope Specialists	Less than 50
Painters and Decorators	670
Plasterers and dry liners	290
Roofers	-*
Floorers	-*
Glaziers	Less than 50
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	140
Scaffolders	390
Plant operatives	1,030
Plant mechanics/fitters	500
Steel Erectors/Structural	290

Labourers	410
Electrical Trades and Installation	-*
Plumbing and Heating, Ventilation and Air Conditioning Trades	-*
Civil Engineering Operatives	550

\*No appreciable recruitment requirement

### **Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	34,980	31,840	32,350
Bricklayers	7,410	7,020	6,620
Building Envelope Specialists	4,600	4,020	3,910
Painters and Decorators	15,490	14,490	15,060
Plasterers and dry liners	3,300	2,810	3,310
Roofers	5,750	5,230	5,240
Floorers	3,190	3,210	3,040
Glaziers	2,220	2,210	2,120
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	6,640	5,860	5,560
Scaffolders	2,450	2,230	3,100
Plant operatives	6,720	6,280	7,650
Plant mechanics/fitters	2,940	2,750	2,880

Steel Erectors/Structural	3,110	2,970	3,320
Labourers	10,740	10,570	15,550
Electrical Trades and Installation	17,300	17,790	17,130
Plumbing and Heating, Ventilation and Air Conditioning Trades	20,840	18,300	17,800
Civil Engineering Operatives	5,340	5,090	7,680

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 2.14.12 Wales

#### **Annual recruitment requirement by occupation**

<b>Craft Occupation</b>	<b>2010 – 2014</b>
Wood trade and interior fit out	1170
Bricklayers	370
Building Envelope Specialists	140
Painters and Decorators	410
Plasterers and dry liners	-*
Roofers	Less than 50
Floorers	Less than 50
Glaziers	270

Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	100
Scaffolders	Less than 50
Plant operatives	50
Plant mechanics/fitters	110
Steel Erectors/Structural	-*
Labourers	730
Electrical Trades and Installation	-*
Plumbing and Heating, Ventilation and Air Conditioning Trades	120
Civil Engineering Operatives	60

\*No appreciable recruitment requirement

### **Total employment by occupation**

<b>Craft Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Wood trade and interior fit out	16,950	15,290	16,250
Bricklayers	4,860	4,990	5,320
Building Envelope Specialists	6,690	5,980	6,200
Painters and Decorators	6,930	6,720	7,360
Plasterers and dry liners	3,580	2,900	2,980
Roofers	1,310	1,300	1,410

Floorers	1,540	1,570	1,580
Glaziers	2,630	2,700	2,930
Specialist Building Operatives e.g. Ceiling fixers, Pipe layer, Thermal insulation fitter	4,480	3,920	3,990
Scaffolders	2,250	1,630	1,910
Plant operatives	3,990	3,680	4,510
Plant mechanics/fitters	1,440	1,040	1,570
Steel Erectors/Structural	2,840	2,000	1,800
Labourers	7,660	6,830	8,890
Electrical Trades and Installation	8,180	8,660	8,460
Plumbing and Heating, Ventilation and Air Conditioning Trades	7,360	6,880	7,360
Civil Engineering Operatives	3,960	3,460	4,740

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

### **3. Technical**

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

A career in technical support can be exciting and varied, covering a broad range of disciplines. For nearly every construction job there is a technical role. Technicians are valuable members of the team who often support the work of engineers, architects, quantity surveyors etc. Technicians have to apply practical knowledge but do not necessarily carry out manual skills. A career in technical support is ideal for good organizers and strong communicators. To enter this sector you need A 'Level passes or equivalent, a relevant industry qualification or experience in a craft trade. There are a variety of jobs available in this sector including:

- Estimator
- Buyer
- Roofing Technician
- Architectural Technician

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

In the construction industry, as long as you have the determination and put in the hard work, there is plenty of scope to move up the career ladder. It's also worth noting that in the construction industry, more than 35% of people are their own boss and run their own companies. There are a huge variety of training programmes available in the construction industry, so whatever you choose to do first is not necessarily what you will do for the rest of your life. Once you are working in the construction industry, there are plenty of opportunities available for developing your skills and knowledge. Your career path is likely to be varied and may well change as you begin to specialise.

To be successful in today's employment market, you must take responsibility for continually improving your skills and understanding. You need to continue learning throughout your working life. The dynamic nature of the construction industry means that training and development opportunities are regularly available. You must also achieve relevant industry certification proving your competence.

The construction sector accounts for 47% of all UK carbon emissions generated and has a major responsibility in addressing the global challenge of carbon reduction. As a result the UK construction sector is facing a number of fundamental changes over the next few years and beyond. New legislation has been put in place in some parts of the industry but skills will need to be adapted.

The key areas for consideration are Energy, Water, Materials and Waste. As a result the industry is looking, among other aspects, towards:

- Product innovation
- Lean manufacturing
- Innovation in manufacturing away from the construction site
- Large scale renewable energy
- Zero-carbon (residential and non-residential)
- Low carbon refurbishment of existing stock
- Low energy buildings
- Waste management



- Flood risk
- Social/ Behavioural change

Individuals employed in a technical occupation will need to understand the potential and use of techniques such as:

- Airtightness - A robust primary air barrier around entire house
- Maximisation of daylighting
- Energy efficient ventilation
- Zoning – thermal and lighting
- Efficient servicing strategy
- Shutters, balconies and canopies
- Vented window panels
- Rainwater harvesting – Includes water butts and the avoidance of open/ grated gullies
- Solar panels converting energy from the sun into electricity
- Wind Turbines - 40% of the onshore Europe's wind resource is in the UK
- Off-site manufacturing
- Pod construction - The production of three dimensional elements e.g. bathrooms in a factory which are delivered to site and incorporated into the building design
- Panellised - Factory produced flat panel units which are transported to site for assembly
- Vacuum insulation panels
- Cavity wall insulation
- External insulation

Specific examples of skills required include:

1. Solar Thermal – Understanding of installation issues; understanding of high temperatures and pressures; maintenance of roof integrity i.e. sealing and bracketry; weather tightness of roof
2. Heat Pumps e.g. water source heat pump - Awareness of potential damage to ground loop post pressure test
3. Solar panels - Electrical safety especially high DC voltages; Inverter trip and failure; Awareness of design issues such as wind uplift; impact of shading/ glare; weather tightness of roof; penetration of roof by fire spread
4. Wind turbines – Understanding of installation issues including materials needed to support products e.g. type of concrete; weather tightness of roof; penetration of roof by fire spread

Many people believe that new products require new skills to design or install them. However it is often a case of skills being either an add-on to existing skills or an amalgam of current skills. Future skills will lead to some adaptation of behavioral and soft skills as well as the need to deal with changes to computer technology and computer programmes.

The important thing is to have an understanding of the variety of, and very specific needs of, different parts of the industry depending on the legislation which impacts on them e.g. housing, commercial, public buildings, energy.

### 3.3 Information on pay scales in the sector

As with most industries, construction industry pay scales are based on a number of variables. Construction salaries are influenced by experience, one's role in the industry, the type of construction that is involved as well as the geographic location.

The table below provides a guide to the average salary for a selection of job roles within the construction industry. The salary range applies to fully qualified and experienced people.

<b>Job role</b>	<b>Salary Range (£)</b>
Architectural Technician	29,000 - 39,000
Buyer	30,800 - 36,800
Computer Aided Design Operative (CAD)	30,600 - 36500
Construction Technician	24,200 - 34,000
Estimator	33,500 - 39600
Plant Technician	28,000 - 36,200
Roofing Technician	27,500 - 33,600

### 3.4 Information on entry requirements, application processes

To train for a technical occupation, a minimum of four good GCSE's (A\*-c)/Standard Grades are required and possibly an A-Level/Higher or equivalent vocational qualification. Technicians are valuable members of the construction team who support the work of engineers, architects, quantity surveyors.

There are two main options:

- work and go to college part-time
- Achieve full-time college qualifications before joining the industry (academic route). Once working, the opportunity to complete further vocational and professional qualifications and move to supervisory or management roles is available.

Technician related courses are offered at most further education colleges and some universities. University applications should be made via [www.ucas.ac.uk](http://www.ucas.ac.uk)

### 3.5 Qualifications

#### **Higher National Diploma (HND)**

Most people enter via an accredited BTEC HND course in a relevant construction subject. This is a preferred route for people who want to achieve a higher education qualification without studying for a degree. There is a choice of HND's but most will include general construction management, finance and technology plus optional specialist units.

Course duration is two years full-time, or three years with an industrial placement. A part time option is available, called a Higher National Certificate (HNC).

### **National Diploma**

Designed to meet the needs of people wishing to take up a career in Building/Civil Engineering/Architectural or surveying. Courses are generally for two years full-time although a part time option is available (National Certificate). Minimum entry requirements four GCSE A\*-C including maths and science. Progression is in to Higher Education (HND/Degree) or direct entry into the industry.

### **NVQ 3 in Construction Contracting**

This NVQ Level 3 is designed for technical people working in a wide range of job roles. These include people who might be considered to be office based such as estimators, buyers and planners; also people who might be considered to be site based who undertake a role in a similar area.

### 3.6 Data on employment and labour market trends and forecasts

#### **Annual Recruitment Requirement by Occupation**

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	685

#### **Total employment by occupation**

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	81,755	69,430	72,860

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

### 3.7 Skill shortages

For most employers in the construction industry the recession and low or uncertain demand were key issues and consequently there has been a very dramatic fall in skills shortages facing employers compared with previous years.

Research in this area points to quite a wide variation in the type of employers encountering skill shortages when recruiting. Professional services firms that had attempted to recruit skilled staff were far more likely to have encountered recruitment difficulties (56%) than the construction contracting sector (22%). There were also wide geographic differences. Few employers in the East and West Midlands that had sought to recruit skilled staff had encountered difficulties (9% and 16% respectively), whereas in London and Scotland approaching two in five had experienced difficulties (40% and 39% respectively).

In many cases the skills lacking among applicants are very occupation specific, and in other cases the 'skill' is more about personal attitudes and commitment / motivation (mentioned by 33% of employers experiencing hard-to-fill vacancies) or a lack of experience (27%). Among broader generic skills mentioned were a lack of literacy / numeracy (8%) and a lack of IT skills (7%).

On the construction contracting side of the sector, the largest volume of skills gaps (c. 13,000) was reported for labourers and general operatives, and 6% of this occupation was described as not being fully proficient. Following this a number of occupational areas had a broadly similar number of staff lacking proficiency (in the 3,500 – 5,000 range): managers, painters / decorators, admin, carpenters / joiners, scaffolders and supervisors. On the professional services side, the total number of staff lacking proficiency was broadly similar across a number of occupations including architects, admin staff, building surveyors, mechanical engineers, other engineers, technical positions and architectural technologists (each c. 1,000).

The above information is based on a Research Report 'Skills and Training in the Construction Sector 2009' prepared for ConstructionSkills and Central Office of Information (COI) by IFF Research Ltd, Sept 2009. To obtain a copy of this report please email [iag.recruitmentandcareers@cskills.org](mailto:iag.recruitmentandcareers@cskills.org)

### 3.8 Information on opportunities for adults changing career direction

Adults entering the technical sector from a different career background will find that the following transferable skills are useful and sought after by employers:

- Communication
- Interpersonal skills
- Teamwork
- Self-motivation and ability to work independently
- Using your initiative
- Working to deadlines
- Problem solving
- Ability to learn and adapt to changing situations
- Numeracy
- Working under pressure
- IT skills
- Listening skills
- Assimilation of information

- Mentoring others
- Resourcing

This sector can help them develop a whole range of skills and knowledge including –

- Problem solving
- Team working
- Communication
- IT/software packages e.g. CAD
- Health and Safety
- Supervisory

Trained and experienced technicians or supervisors can advance into professional and/or managerial roles.

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

Many adults will find themselves being able to transfer the skills and knowledge they have acquired in another field of industry into the technical sector.

Some examples of sectors which might be relevant include:

- Land based industries e.g. landscaping and agriculture
- Manufacturing
- Engineering
- Armed Forces
- IT

There is a new qualification framework, the Qualifications and Credit Framework (QCF) which will support and encourage the transferability of similar alternative units within qualifications which should facilitate adults transferring from one sector to another sector and allow for progression pathways both horizontally and vertically. For more information please refer to –

[www.qcda.gov.uk/8150.aspx](http://www.qcda.gov.uk/8150.aspx)

### 3.10 Job profiles

Anyone entering a job in construction will be joining one of Britain's largest industries in a career that's challenging, exciting and rewarding. You'll also be joining an industry that's respected around the globe. Britain has a reputation for world class design, inspirational architecture and the highest quality building work. What you get out of a career depends on you. You may enjoy the hands-on satisfaction of actually building things, or you may be more interested in the design or management of projects. Either way, no one day is the same as the next.

You could be working in the office or outdoors, in an environment that's constantly changing. You'll also have the opportunity to learn on the job, because there's a massive range of training available at all levels and there

are lots of opportunities to progress within the industry. Who knows, you might even end up running your own business.

A career in construction involves joining a team of specialist people all working together to build a strong, long-lasting future. Whatever the role in the industry, every team member is as important as the next.

Most people might not be aware that for nearly every construction job there is a technical role to go with it. As a result, people with technical skills are in very high demand. Technicians are valuable members of the team who support the work of engineers, architects, surveyors, etc, to ensure that these operatives can carry out their jobs smoothly. Please see the below job profiles for more information about technical occupations in the construction industry.

## **Technical**

**Architectural Technician** - Architectural Technicians support architectural technologists, architects, engineers and surveyors and apply the technical plan and drawings to the real structure.

**Buyer** - Once a construction project tender is won, the buyer works with suppliers to ensure everything that's needed is bought in from the suppliers.

**Computer Aided Design Operative** - CAD technicians use computer generated drawings to prepare the information needed for a construction job. This can involve working across a wide range of fields, including architecture, building services, building, civil and structural engineering.

**Estimator** - The estimator's job is to calculate the approximate total cost of the building work from the contract drawings and the bill of quantities.

**Planner** - It's the planner's job to make sure that a project is completed with the right resources, and to ensure that they're all delivered safely, on time, and with the right amount and quality.

**Plant Technical Support** - Plant technicians deal with the general running and safety of the plant and machinery used on-site.

**Roofing Technician** - Based mainly in the office or factory, your job would include estimating costs and budgets, planning schedules and ensuring they are followed, drafting plans and details for craftspeople and assisting architects, builders and surveyors in the construction of a project.

**Site Engineer** - The site engineer sets out from the plans all the roads, drains, sewers and structures involved in construction operations.

**Site Inspector** - All building, construction and civil engineering sites need to be tested and inspected for safety and competence.

**Site Technical Support** - Site technicians get involved with the general running and safety of the site. Your role would include hiring and buying materials and machinery, and organising people and equipment

## **Heritage**

The heritage sector has a long history of building traditional style structures for everyday use, as well as an abundant architectural heritage of grand houses, cathedrals and castles.

Our built heritage bears witness to centuries of human skill and ingenuity and today we have the challenge of keeping the skills alive so that we can continue to conserve and maintain our vast range of historic properties by using the relevant traditional craft skills and working sympathetically with the original materials. The conservation, repair and maintenance of old buildings is a specialist part of the construction industry. This requires highly skilled craftspeople, using traditional methods and materials under the supervision and guidance of architects, surveyors and conservation officers.

To work in this sector a sound introduction to a craft occupation or technical career, via a recognised craft or technical qualification is the first step. You can then undertake specific training and gather work based evidence to achieve a Heritage Skills NVQ Level 3. This will allow you to work in the general construction industry, as well as specialising in the built heritage sector.

## **Building Services**

Building Services covers the essential services that allow buildings to operate. It includes the electrotechnical, heating, ventilating, air conditioning, refrigeration and plumbing industries.

Building Services is part of a sector that:

- Has over 51,000 businesses
- Consists of approximately 558,000 individuals
- Carries out a £19.3bn turnover
- Represents between 2% and 3% of the GDP
- Has careers available at craft, technical and professional level.

For more information on careers in the Building Services sector, visit [www.summitskills.org.uk](http://www.summitskills.org.uk)

### 3.11 Case studies

All these case studies below can be found on our website, [www.cskills.org](http://www.cskills.org) on this web link – [www.cskills.org/workinconstr/inconstruction/casestudies](http://www.cskills.org/workinconstr/inconstruction/casestudies)

- Architectural Technician - Barbara Cartwright
- Building Technician - Gurarjan Shaan
- Civil Engineering Technician - Gemma Matsell
- Environmental Technician - Simon Cole
- Estimating Technician - Fiona Shanks
- Quantity Surveying Technician - Michael Bandoni
- Roofing Technician - Claire Chivers

### 3.12 FAQs

## **What is the difference between a technician, a craftsperson and somebody working in a professional and management role?**

For nearly every construction job there is a technical role. Technicians are valuable members of the team who often support the work of engineers, architects, quantity surveyors etc. Technicians have to apply practical knowledge but do not necessarily carry out manual skills. They often work at a level between craftspeople and managers and act as a link between management and the workforce on site.

## **I've got 4 GCCE's grade A-C including maths and science, what can I study next to become a technician?**

You will also need to study further qualifications which can include A levels (maths and science would be relevant subjects to consider) or a BTEC National Diploma/Certificate. You can then go on to further study a Higher National Diploma/Certificate or an NVQ in Construction Contracting. You may also be able to follow a technical apprenticeship which generally covers -

- BTEC National Certificate in Civil Engineering or Construction
- NVQ Level 3 in Construction Contracting Operations
- Key Skills in Numeracy and Communication (this depends on the college/provider)

## **How can I find out more about Technical Apprenticeships?**

Contact your local college or ConstructionSkills adviser; or visit ConstructionSkills careers portal at [www.bconstructive.co.uk](http://www.bconstructive.co.uk)

Availability of Technical Apprenticeships can vary depending on which area of the country you are based in and if employers in your area are recruiting technical apprentices.

## **How does a Technical Apprenticeship work?**

You must be employed to follow a technical apprenticeship

Part of the time you will be studying your BTEC National Certificate in Civil Engineering or Construction at college. This may be on day or block release.

The rest of the time you will be working with your employer gaining the work experience you need to complete your apprenticeship and develop your knowledge and skills to become a competent technician.

## **What are my career prospects if I become a technician?**

You can study for higher level qualifications such as:

- a Higher National Diploma/Certificate (HND/HNC),
- a Foundation Degree, a Degree (e.g. in Construction Management),
- an NVQ Level 4 or



- you could look into membership and qualifications offered by professional bodies such as the Chartered Institute of Building ([www.ciob.org.uk](http://www.ciob.org.uk))

You can also gain the skills and experience to progress into roles of increasing responsibility and seniority - for example you could become a senior buyer or a chief estimator or a construction manager.

### 3.13 Sources of additional information, web-links etc

[www.bconstructive.co.uk](http://www.bconstructive.co.uk) – the ConstructionSkills website for young people looking to enter the industry.

[www.cscs.uk.com](http://www.cscs.uk.com) – the organization that runs the Construction Site Competence Card scheme – all workers must have a valid card to work on sites.

[www.cskills.org](http://www.cskills.org) – the ConstructionSkills website for adults, employers and schools and colleges

[www.jobcentreplus.gov.uk](http://www.jobcentreplus.gov.uk) – Job Centre Plus list details of local job and help and advice in finding a job

[www.learnirect.co.uk](http://www.learnirect.co.uk) – LearnDirect provide a number of online learning packages to help with basic skills

[www.lsc.gov.uk](http://www.lsc.gov.uk) – The Learning and Skills Council provide funding for some types of training within the UK

[http://www.direct.gov.uk/en/educationandlearning/adultlearning/dg\\_071762](http://www.direct.gov.uk/en/educationandlearning/adultlearning/dg_071762) - Nextstep provide help with taking your next step in learning, skills and work

[www.targetjobs.co.uk/construction](http://www.targetjobs.co.uk/construction) – Information on graduate jobs and careers intelligence

<http://www.ciat.org.uk/en/careers> Chartered Institute of Architectural Technologists – specialise in the technological side of the construction process

### **3.14 Technician - Regional Information**

#### 3.14.1 East Midlands.

#### **Annual Recruitment Requirement by Occupation**

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	70

### Total employment by occupation

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	5115	4195	4550

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

### 3.14.2 East of England

### Annual Recruitment Requirement by Occupation

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	340

### Total employment by occupation

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	6,610	6,570	7,780

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

### 3.14.3 London

#### **Annual Recruitment Requirement by Occupation**

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	-*

\* No appreciable recruitment requirement

#### **Total employment by occupation**

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	12,135	10,280	10,300

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

### 3.14.4 North East

#### **Annual Recruitment Requirement by Occupation**

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	-*

-\* No appreciable recruitment requirement

#### **Total employment by occupation**

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
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Technical Staff e.g. Building Technicians, Civil Engineering Technicians	4145	3555	3875

\*No appreciable recruitment requirement

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

### 3.14.5 North West

#### **Annual Recruitment Requirement by Occupation**

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	_*

\* No appreciable recruitment requirement

#### **Total employment by occupation**

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	8960	6800	6845

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

### 3.14.6 South East

### Annual Recruitment Requirement by Occupation

Technician Occupation	2010 – 2014
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	—*

\* No appreciable recruitment requirement

### Total employment by occupation

Technician Occupation	2008	2010	2014
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	11,970	10,735	11,245

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

### 3.14.7 South West

### Annual Recruitment Requirement by Occupation

Technician Occupation	2010 – 2014
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	—*

\* No appreciable recruitment requirement

### Total employment by occupation

Technician Occupation	2008	2010	2014

Technical Staff e.g. Building Technicians, Civil Engineering Technicians	7,425	6,050	5,820
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Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 3.14.8 West Mids.

#### **Annual Recruitment Requirement by Occupation**

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	—*

\* No appreciable recruitment requirement

#### **Total employment by occupation**

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	6,885	5,380	5,690

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 3.14.9 Yorkshire and the Humber

#### **Annual Recruitment Requirement by Occupation**

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	40

**Total employment by occupation**

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	6,530	5,055	5,195

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

3.14.10 Northern Ireland

**Annual Recruitment Requirement by Occupation**

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	—*

\* No appreciable recruitment requirement

**Total employment by occupation**

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	900	860	975

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Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 3.14.11 Scotland

##### **Annual Recruitment Requirement by Occupation**

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	205

##### **Total employment by occupation**

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	8,020	7,295	7,930

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 3.14.12 Wales

##### **Annual Recruitment Requirement by Occupation**

<b>Technician Occupation</b>	<b>2010 – 2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	30



### **Total employment by occupation**

<b>Technician Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Technical Staff e.g. Building Technicians, Civil Engineering Technicians	3,045	2,665	2,865

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

## **4. Professional and Management**

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

The range of professional and management careers the construction industry offers is vast and includes jobs in:

- Design e.g. Architects, Structural Engineer, Geospatial Modeller
- Surveying e.g. Quantity Surveyor, Building Surveyor, Hydrographic Surveyor
- Management e.g. Construction Manager, Project Manager, Site Supervisor
- Planning e.g. Planner, Facilities Manager, Town Planner

Professional and managerial careers in construction are varied, making full use of people's creative, technical and business skills. People who work in this sector can be involved at some or all of the stages of a construction project from the early planning stages to maintaining a building after it has been constructed. Some who enter this area of the industry will become specialised in their chosen field. Others will start their own companies or become managers in construction businesses, large or small. Most of the professional and management positions require a higher education qualification, however you can work and study simultaneously, working your way up from a craft or technical position.

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

In the construction industry, as long as you have the determination and put in the hard work, there is plenty of scope to move up the career ladder. It's also worth noting that in the construction industry, more than 35% of people are their own boss and run their own companies. There are a huge variety of training programmes available in the construction industry, so whatever you choose to do first is not necessarily what you will do for the rest of your life. Once you are working in the construction industry, there are plenty of opportunities available for developing your skills and knowledge. Your career path is likely to be varied and may well change as you begin to specialise.

To be successful in today's employment market, you must take responsibility for continually improving your skills and understanding. You need to continue learning throughout your working life. The dynamic nature of the construction industry means that training and development opportunities are regularly available. You must also achieve relevant industry certification proving your competence.

The construction sector accounts for 47% of all UK carbon emissions generated and has a major responsibility in addressing the global challenge of carbon reduction. As a result the UK construction sector is facing a number of fundamental changes over the next few years and beyond. New legislation has been put in place in some parts of the industry but skills will need to be adapted.

The key areas for consideration are Energy, Water, Materials and Waste. As a result the industry is looking, among other aspects, towards:

- Product innovation
- Lean manufacturing

- Innovation in manufacturing away from the construction site
- Large scale renewable energy
- Zero-carbon (residential and non-residential)
- Low carbon refurbishment of existing stock
- Low energy buildings
- Waste management
- Flood risk
- Social/ Behavioural change

Individuals employed in one of the many Professional and Management occupations will need to accommodate the following in their designs:

- Airtightness - A robust primary air barrier around entire house
- Maximisation of daylighting
- Energy efficient ventilation
- Zoning – thermal and lighting
- Efficient servicing strategy
- Downstairs bedrooms included in the design
- Shutters, balconies and canopies
- Vented window panels
- Rainwater harvesting – Includes water butts and the avoidance of open/ grated gullies
- Bio-energy e.g. woodchip boilers
- Solar panels converting energy from the sun into electricity
- Wind Turbines - 40% of the onshore Europe's wind resource is in the UK
- Off-site manufacturing
- Pod construction - The production of three dimensional elements e.g. bathroom in a factory which are delivered to site and incorporated into the building design
- Panellised - Factory produced flat panel units which are transported to site for assembly
- Vacuum insulation panels
- Cavity wall insulation
- External insulation

Specific skills required include the following:

1. Solar Thermal – Understanding of installation issues; understanding of high temperatures and pressures; maintenance of roof integrity i.e. sealing and bracketry; weather tightness of roof
2. Heat Pumps e.g. water source heat pump - Supervision of ground works; awareness of potential damage to ground loop post pressure test
3. Solar panels - Electrical safety especially high DC voltages; Inverter trip and failure; Awareness of design issues such as wind uplift; impact of shading/ glare; weather tightness of roof; penetration of roof by fire spread
4. Wind turbines – Understanding of installation issues including materials needed to support products e.g. type of concrete; weather tightness of roof; penetration of roof by fire spread

Many people believe that new products require new skills to design or install them. However it is often a case of skills being either an add-on to existing skills or an amalgam of current skills. Future skills will lead to some

adaptation of behavioral and soft skills as well as the need to deal with changes to computer technology and computer programmes.

The important thing is to have an understanding of the variety of, and very specific, needs of different parts of the industry depending on the legislation which impacts on them e.g. housing, commercial, public buildings, energy.

#### 4.3 Information on pay scales in the sector

As with most industries, construction industry pay scales are based on a number of variables. Construction salaries are influenced by experience, one's role in the industry, the type of construction that is involved as well as the geographical location.

For instance, construction management salary is likely to be higher than the average construction worker salary because of the level of responsibility required to manage a construction project.

The table below provides a guide to the average salary for a selection of job roles within the construction industry. The salary range applies to fully qualified and experienced people.

<b>Job role</b>	<b>Salary Range (£)</b>
Architect	35,000 – 48,000
Building Control	33,000 – 41,000
Civil Engineer	36,000 – 42,000
Construction Manager	38,500 – 47,000
Quantity Surveyor	41,000 – 49,000
Structural Engineer	36,000 – 47,300
Surveyor	33,000 – 47,000

#### 4.4 Information on entry requirements, application processes

Many people enter a professional career by completing a relevant degree before joining a company.

Entry to a degree course normally requires:

- Minimum 5 GCSEs (Grade A\*-C)
- Minimum 2 A levels

Graduates will be trained for highly specialized or management positions and will have the opportunity to gain professional qualifications such as chartered status.

Alternatively some people may progress to a professional career through part-time study at a college whilst in employment. This is a longer route to professional qualifications than a degree programme and requires a willingness to do extra study in your own time.

#### 4.5 Qualifications

The main entry qualifications for professional and management careers are as follows:

- With a National Certificate (NC), National Diploma (ND)
- With a Higher National Certificate (HNC), Higher National Diploma (HND)
- With a degree (BA, BSc, BEng, MEng)

Progression can be made through each level or school qualifications, such as A levels, can be used to enrol straight to onto an HNC/D or degree course. Professional training should continue beyond the achievement of a degree and into employment. This can include attending workshops and lectures, work experience, writing essays and, depending on previous qualifications, possibly a final examination.

### **National Certificates and National Diplomas**

These are college qualifications in construction related subjects. They are roughly equivalent to A levels in standard. NC courses tend to be part-time (usually taken through day release from work from a construction company), while a ND course is usually full-time. Courses at this level normally last about two years.

### **Higher National Certificate and Higher National Diploma**

These are higher level qualifications which can be gained at college or university. HNC courses are usually part-time, while HND courses are generally full-time. Either way, they take about two years to complete.

People leaving college or university with this qualification tend to enter the industry as advanced technicians or trainee managers and work towards professional qualifications such as Chartered Builder, Chartered Surveyor etc

### **Foundation Degree**

Before you embark on a degree course, you can opt to take a foundation degree. This is a vocational qualification combining college training and work experience. These are advisable if you want to enter a technical, engineering or supervisory role, rather than a craft trade. You do not always need specific academic requirements to get on to a foundation degree course, although previous experience and course-compatibility will be taken into account.

Most foundation degrees last two years with full-time study, or three years part-time. Studying part-time would give you the opportunity to spend more time in the workplace as well as at college.

For further information: [www.findfoundationdegree.co.uk](http://www.findfoundationdegree.co.uk) or [www.ucas.ac.uk](http://www.ucas.ac.uk)

Foundation degrees are not available in Scotland.

### **Degree**

Degrees are usually studied at university and last between 3 and 5 years, depending on the programme being studied and whether undertaken full or part-time.

A degree has more specific study areas than vocational qualifications and will require relevant entry requirements. Studying on a Construction and the Built Environment course, accredited by a professional institution, is highly regarded in the construction industry.

Once qualified, membership of a professional organisation at the appropriate level is evidence of competencies and an important badge of recognition for clients. Each professional body encourages its members to participate in continuous professional development (CPD) to improve and update knowledge and skills throughout a career.

There are a wide range of construction degree level courses available. For the most comprehensive list: [www.ucas.ac.uk](http://www.ucas.ac.uk)

#### 4.6 Data on employment and labour market trends and forecasts

##### **Annual Recruitment Requirement by Occupation**

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	950
Construction Managers	2,950
Civil Engineers	1,480
Other construction professionals e.g. Town Planners, Mechanical Engineers	685
Architects	660
Surveyors	830

##### **Total employment by occupation**

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	116,060	96,050	103,560
Construction Managers	245,830	206,900	216,200

Civil Engineers	57,260	49,370	52,070
Other construction professionals e.g. Town Planners, Mechanical Engineers	81,755	69,430	72,860
Architects	45,840	38,630	39,360
Surveyors	63,150	57,630	59,550

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 4.7 Skill shortages

For most employers in the construction industry the recession and low or uncertain demand were key issues and consequently there has been a very dramatic fall in skills shortages facing employers compared with previous years.

Research in this area points to quite a wide variation in the type of employers encountering skill shortages when recruiting. Professional services firms that had attempted to recruit skilled staff were far more likely to have encountered recruitment difficulties (56%) than the construction contracting sector (22%). There were also wide geographic differences. Few employers in the East and West Midlands that had sought to recruit skilled staff had encountered difficulties (9% and 16% respectively), whereas in London and Scotland approaching two in five had experienced difficulties (40% and 39% respectively).

In many cases the skills lacking among applicants are very occupation specific, and in other cases the 'skill' is more about personal attitudes and commitment / motivation (mentioned by 33% of employers experiencing hard-to-fill vacancies) or a lack of experience (27%). Among broader generic skills mentioned were a lack of literacy / numeracy (8%) and a lack of IT skills (7%).

On the construction contracting side of the sector, the largest volume of skills gaps (c. 13,000) was reported for labourers and general operatives, and 6% of this occupation was described as not being fully proficient. Following this a number of occupational areas had a broadly similar number of staff lacking proficiency (in the 3,500 – 5,000 range): managers, painters / decorators, admin, carpenters / joiners, scaffolders and supervisors. On the professional services side, the total number of staff lacking proficiency was broadly similar across a number of occupations including architects, admin staff, building

surveyors, mechanical engineers, other engineers, technical positions and architectural technologists (each c. 1,000).

The above information is based on a Research Report 'Skills and Training in the Construction Sector 2009' prepared for ConstructionSkills and Central Office of Information (COI) by IFF Research Ltd, Sept 2009. To obtain a copy of this report please email [jag.recruitmentandcareers@cskills.org](mailto:jag.recruitmentandcareers@cskills.org)

If we look at the UK annual recruitment requirements for 2010-2014 below we can see that the highest annual recruitment requirement for professional and management occupations are for Construction Managers (2,950). Like the craft occupations, professional and managerial occupations also felt the full effects of the recession and as such the annual recruitment requirements from 2010-2014 for the professions will take time to recover, especially for architects and surveyors.

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	950
Construction Managers	2,950
Civil Engineers	1,480
Other construction professionals e.g. Town Planners, Mechanical Engineers	685
Architects	660
Surveyors	830

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/csn](http://www.cskills.org/csn)

#### 4.8 Information on opportunities for adults changing career direction

Adults entering the professional and management sector from a different career background will find that that the following transferable skills are useful and sought after by employers:



- Communication at all levels
- Interpersonal skills
- Teamwork
- Self-motivation and ability to work independently
- Using your initiative
- Working to deadlines
- Setting up & designing programmes
- Problem solving
- Ability to learn and adapt to changing situations
- Numeracy
- Working under pressure
- Negotiation skills
- Organisational skills
- IT skills
- Presenting skills
- Motivating skills
- Delegating
- Setting objectives
- Prioritising
- Identifying/ evaluating options
- Lateral thinking
- Accepting responsibility
- Budgeting/costing
- Mentoring
- Resourcing
- Health & Safety policy responsibilities including CDM (Construction Design & Management responsibilities)

This sector can help them develop a whole range of skills and knowledge including –

- Problem solving
- Team working
- IT/software packages e.g. CAD
- Health and Safety
- People management

Other skills and knowledge are more specific to particular roles. For example, engineering and surveying careers may focus more on maths and science.

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

Many adults will find themselves being able to transfer the skills and knowledge they have acquired in another field of industry into the professional and management sector. Some examples of sectors which might be relevant include:

- Sciences
- Other design industries such as furniture design
- Accountancy and finance particularly in relation to careers such as buying and quantity surveying
- Manufacturing
- Engineering
- Armed Forces

Some transferable skills may relate to specific elements of other area sectors. For example an adult who has been working as a manager in the manufacturing industry may have developed knowledge and skills which are relevant to being a Construction Manager.

There is a new qualification framework, the Qualifications and Credit Framework (QCF) which will support and encourage the transferability of similar alternative units within qualifications which should facilitate adults transferring from one sector to another sector and allow for progression pathways both horizontally and vertically. For more information please refer to – [www.qcda.gov.uk/8150.aspx](http://www.qcda.gov.uk/8150.aspx)

#### 4.10 Job profiles

Any one entering a job in construction will be joining one of Britain's largest industries in a career that's challenging, exciting and rewarding. You'll also be joining an industry that's respected around the globe. Britain has a reputation for world class design, inspirational architecture and the highest quality building work. What you get out of a career depends on you. You may enjoy the hands-on satisfaction of actually building things, or you may be more interested in the design or management of projects. Either way, no one day is the same as the next.

You could be working in the office or outdoors, in an environment that's constantly changing. You'll also have the opportunity to learn on the job because there's a massive range of training available at all levels and there are lots of opportunities to progress within the industry. Who knows, you might even end up running your own business.

A career in construction involves joining a team of specialist people all working together to build a strong, long-lasting future. Whatever the role in the industry, every team member is as important as the next.

There is a lot that needs to be done before a construction project can begin to get off the ground. Creative people, financial experts and legal professionals all play a part in the initial development phases. Once that project has actually begun, construction managers, engineers and surveyors organise the people working on the site to ensure that what is built matches the original designs. Please see the below job profiles for more information about professional occupations in the construction industry.

#### **Professions**

**Architect** - Once the initial ideas for a new building or restoration job have been sketched out, it's the architect's job to design the building in detail.

**Architectural Technologist** - Architectural technologists are specialists in the application and integration of technology into design and construction.

**Building Engineer** - The job of the Building Engineer is an important and varied one. It incorporates all activities involved in the creation and maintenance of the built environment.

**Building Services Engineer** - It's the building services engineer's job to design, install and maintain the essential services such as gas, electricity, water, heating and lighting - as well as many you probably don't give much thought to.

**Building Control Surveyor** - It's the building control surveyor's job to check plans in the office and inspect the buildings themselves, to ensure that none of the regulations are overlooked.

**Building Surveyor** - It's the building surveyor's job to "care for" new and old buildings, ensuring that they are structurally sound.

**Civil Engineer** - As a civil engineer, you'll be instrumental in the design and construction of buildings, bridges, pipelines, dams, railways and roads. Essentially it is the civil engineers of the world that make sure everything runs smoothly and we're not left in chaos

**Construction Manager** - The construction manager's job is to ensure that the construction site runs smoothly, no matter what difficulties and problems occur.

**Facilities Manager** - Construction's not just about the construction element of the job. Once it's built, and populated by its occupants, there is still much to be done. That's where Facilities Managers step in

**General Practice Surveyor** - Just like cars, buildings are bought, sold, renovated and valued, and a general practice surveyor plays a big part in every deal.

**Geospatial Modeller** - A geospatial modeller is involved in some of the newest and most exciting branches of construction, producing computerised 3-D models of natural and built landscapes.

**Geotechnical Engineer** - While most people in construction are concerned with what's happening above the ground, the geotechnical engineer carries out investigations of below ground conditions, to determine the conditions under our feet, be it rock, soil, or water.

**Geomatics Surveyor** - Geomatics surveyors use satellite images as well as other surveys to provide mapping information of the varied landscape of the Earth's surface. This data is then used to make important decisions about the best places to locate a building.

**Hydrographic Surveyor** - In the past, it was often very difficult to accurately measure the depths of lakes, oceans and rivers. These days it can be done by satellite navigation, and is a job carried out by hydrographic surveyors

**Landscape Architect** - Landscape architecture is really a combination of architecture and horticulture. Working with plants, shrubs and trees, they develop the spaces between buildings

**Land Surveyor** - It's the land surveyor's job to measure, record and visually present features of the landscape all around us.

**Project Manager** - This is a very varied job, and can often begin at the design stage and run right through to the completion of a construction project.

**Quantity Surveyor** - Once a building project starts it's important that it follows the originally agreed budget. It's the quantity surveyor's job to make sure this happens, by managing cost efficiently and getting the best value out of contractors.

**Structural Engineer** - A structural engineer makes sure that a building's shape, design and the materials it is made from are strong enough to withstand the forces of nature.

**Town Planner** - Town Planners balance constructing new developments with conserving our natural and built heritage, understanding the needs of the local environment, economy and population.

## **Heritage**

The heritage sector has a long history of building traditional style structures for everyday use, as well as an abundant architectural heritage of grand houses, cathedrals and castles. There is a wide range of craft skills used in the heritage sector.

Our built heritage bears witness to centuries of human skill and ingenuity and today we have the challenge of keeping the skills alive so that we can continue to conserve and maintain our vast range of historic properties by using the relevant traditional craft skills and working sympathetically with the original materials. The conservation, repair and maintenance of old buildings is a specialist part of the construction industry. This requires highly skilled craftspeople, using traditional methods and materials under the supervision and guidance of architects, surveyors and conservation officers.

Graduate professions in building conservation and restoration include:

- Architect
- Building/ Quantity Surveyor
- Conservation Officer
- Conservator
- Engineer
- Town Planner

For more information on careers in the heritage sector, visit [www.nhtg.org.uk](http://www.nhtg.org.uk). This web site gives you access to information on traditional building craft skills, relevant qualifications and training courses, and advice for employers on training opportunities for employees.

## **Building Services**

Building Services covers the essential services that allow buildings to operate. It includes the electrotechnical, heating, ventilating, air conditioning, refrigeration and plumbing industries.

Building Services is part of a sector that:

- Has over 51,000 businesses
- Consists of approximately 558,000 individuals
- Carries out a £19.3bn turnover
- Represents between 2% and 3% of the GDP
- Has careers available at craft, technical and professional level.

For more information on careers in the Building Services sector, visit [www.summitskills.org.uk](http://www.summitskills.org.uk)

#### 4.11 Case studies

All these case studies below can be found on our website, [www.cskills.org](http://www.cskills.org) on the web link – [www.cskills.org/workinconstr/inconstruction/casestudies](http://www.cskills.org/workinconstr/inconstruction/casestudies)

- Inspire Scholar - Matthew Steers.
- Architect - Karen Nugent
- Architectural Technologist - Tina Dufty
- Building Surveyor - Neil Clubbs
- Civil Engineer - Andy Gotts
- Commercial Manager - Niall Grant
- Design Management Trainee - Fred Mills
- Infrastructure Engineer - Alison Rogerson
- Land Surveyor - Erik Kodjie
- Quantity Surveyor - Chim Lungu

For more details on ConstructionSkills' Inspire Scholarship Programme please go to [www.bconstructive.co.uk/inspire](http://www.bconstructive.co.uk/inspire)

#### 4.12 FAQs

##### **What qualifications do I need to do a degree in construction?**

It will depend on what course you are interested in and where you want to study. You will usually need a minimum of 2 A Levels/ Scottish Highers or equivalent qualifications e.g. BTEC National Diploma. Some courses will also prefer a science or maths based background. To find out more about construction courses and requirements, visit [www.ucas.co.uk](http://www.ucas.co.uk) or have a look at university and college prospectuses in your local Connexions office or careers library.

##### **What funding is currently available to support adults moving into the construction industry?**

If you are looking to enter the industry at technical or professional level you may be eligible for an Inspire Scholarship. For more details please visit [www.bconstructive.co.uk/inspire](http://www.bconstructive.co.uk/inspire)

#### 4.13 Sources of additional information, web-links etc

## Help and Advice

[www.bconstructive.co.uk](http://www.bconstructive.co.uk) – the ConstructionSkills website for young people looking to enter the industry.

[www.cic.org.uk](http://www.cic.org.uk) – the organization responsible for all professional roles with the construction industry

[www.cscs.uk.com](http://www.cscs.uk.com) – the organization that runs the Construction Site Competence Card scheme – all workers must have a valid card to work on sites.

[www.cskills.org](http://www.cskills.org) – the ConstructionSkills website for adults, employers and schools and colleges

[www.lsc.gov.uk](http://www.lsc.gov.uk) – The Learning and Skills Council provide funding for some types of training within the UK

[www.targetjobs.co.uk/construction](http://www.targetjobs.co.uk/construction) – Information on graduate jobs and careers intelligence

[www.findfoundationdegree.co.uk](http://www.findfoundationdegree.co.uk) – Information about Foundation degree with useful course search facility

[www.architecture.com](http://www.architecture.com) – RIBA (Royal Institute of British Architects). Careers information, entry routes and how to become an architect.

<http://www.iwanttobealandscapearchitect.com> – the careers website for the profession that combines art and science, design and the environment.

[www.ice.org.uk](http://www.ice.org.uk) ICE (Institute of Civil Engineers) – Information about how to become a Civil Engineer

[www.ices.org.uk](http://www.ices.org.uk) ICES (Institute of Civil Engineering Surveyors)

[www.istructe.org.uk](http://www.istructe.org.uk) – Institution of Structural Engineers

[www.apm.org.uk](http://www.apm.org.uk) – Association for Project Management

[www.rics.org](http://www.rics.org) RICS (Royal Institute of Chartered Surveyors) – professional body for qualifications and standards in land, property and construction

### **4.14 Professional and Management - Regional Information**

#### 4.14.1 East Midlands.

#### **Annual Recruitment Requirement by Occupation**

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process	-*

managers	
Construction Managers	100
Civil Engineers	210
Other construction professionals e.g. Town Planners, Mechanical Engineers	140
Architects	_*
Surveyors	Less than 50

\*No appreciable recruitment requirement

#### **Total employment by occupation**

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	6,870	4,940	5,570
Construction Managers	16,240	12,730	13,840
Civil Engineers	3,670	2,510	2,570
Other construction professionals e.g. Town Planners, Mechanical Engineers	5115	4195	4550
Architects	1,790	1,450	1,650
Surveyors	3,740	3,180	3,230

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 4.14.2 East of England

#### **Annual Recruitment Requirement by Occupation**

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	190
Construction Managers	600
Civil Engineers	-*
Other construction professionals e.g. Town Planners, Mechanical Engineers	340
Architects	150
Surveyors	480

\* No appreciable recruitment requirement

#### **Total employment by occupation**

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	12,930	10,750	11,790
Construction Managers	12,160	19,950	22,070
Civil Engineers	4,370	4,680	5,510



Other construction professionals e.g. Town Planners, Mechanical Engineers	6,610	6,570	7,785
Architects	2,430	2,150	2,310
Surveyors	5,410	5,250	6,030

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 4.14.3 London

#### **Annual Recruitment Requirement by Occupation**

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	470
Construction Managers	200
Civil Engineers	180
Other construction professionals e.g. Town Planners, Mechanical Engineers	—*
Architects	—*
Surveyors	260

\* No appreciable recruitment requirement

#### **Total employment by occupation**

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	20,650	19,370	20,790
Construction Managers	31,940	29,800	31,280
Civil Engineers	7,320	6,430	5,820
Other construction professionals e.g. Town Planners, Mechanical Engineers	4,145	3,555	3,875
Architects	15,920	13,840	13,390
Surveyors	9,520	10,390	11,530

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 4.14.4 North East

#### **Annual Recruitment Requirement by Occupation**

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	-*
Construction Managers	70
Civil Engineers	70

Other construction professionals e.g. Town Planners, Mechanical Engineers	-*
Architects	Less than 50
Surveyors	-*

-\* No appreciable recruitment requirement

### **Total employment by occupation**

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	3,690	3,050	3,330
Construction Managers	12,410	9,830	10,170
Civil Engineers	2,690	2,310	2,660
Other construction professionals e.g. Town Planners, Mechanical Engineers	4145	3555	3875
Architects	1,430	1,170	1,300
Surveyors	790	540	560

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

4.14.5 North West

**Annual Recruitment Requirement by Occupation**

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	80
Construction Managers	200
Civil Engineers	-*
Other construction professionals e.g. Town Planners, Mechanical Engineers	-*
Architects	120
Surveyors	-*

\*No appreciable recruitment requirement

**Total employment by occupation**

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	10,880	8,330	8,580
Construction Managers	24,200	19,020	19,750
Civil Engineers	6,540	4,780	4,860
Other construction professionals e.g. Town Planners, Mechanical Engineers	8960	6800	6845

Architects	2,530	2,190	2,430
Surveyors	6,040	5,720	5,990

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 4.14.6 South East

#### Annual Recruitment Requirement by Occupation

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	—*
Construction Managers	—*
Civil Engineers	330
Other construction professionals e.g. Town Planners, Mechanical Engineers	—*
Architects	250
Surveyors	—*

\* No appreciable recruitment requirement

#### Total employment by occupation

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process	17,290	14,530	14,940

managers			
Construction Managers	40,560	33,900	33,270
Civil Engineers	5,640	6,260	7,060
Other construction professionals e.g. Town Planners, Mechanical Engineers	11,970	10,735	11,245
Architects	5,010	4,370	4,480
Surveyors	9,390	8,010	7,890

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 4.14.7 South West

#### Annual Recruitment Requirement by Occupation

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	60
Construction Managers	60
Civil Engineers	_*
Other construction professionals e.g. Town Planners, Mechanical Engineers	_*
Architects	_*

Surveyors	-*
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\* No appreciable recruitment requirement

**Total employment by occupation**

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	9,110	7,810	8,520
Construction Managers	20,950	18,130	18,700
Civil Engineers	6,070	4,580	4,230
Other construction professionals e.g. Town Planners, Mechanical Engineers	7,425	6,050	5,820
Architects	3,600	2,800	2,650
Surveyors	5,700	5,300	5,070

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

4.14.8 West Mids.

**Annual Recruitment Requirement by Occupation**

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process	-*

managers	
Construction Managers	720
Civil Engineers	—*
Other construction professionals e.g. Town Planners, Mechanical Engineers	—*
Architects	—*
Surveyors	—*
Total	—*

\* No appreciable recruitment requirement

#### **Total employment by occupation**

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	10,710	7,170	7,440
Construction Managers	22,050	15,780	16,120
Civil Engineers	5,510	3,400	3,410
Other construction professionals e.g. Town Planners, Mechanical Engineers	6,885	5,380	5,690
Architects	1,920	1,360	1,480
Surveyors	5,790	4,670	4,790



Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

Yorkshire and the Humber

**Annual Recruitment Requirement by Occupation**

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	-*
Construction Managers	90
Civil Engineers	100
Other construction professionals e.g. Town Planners, Mechanical Engineers	40
Architects	-*
Surveyors	-*

\*No appreciable recruitment requirement

**Total employment by occupation**

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	10,250	6,980	7,060
Construction Managers	19,520	15,010	15,330

Civil Engineers	4,850	4,390	4,780
Other construction professionals e.g. Town Planners, Mechanical Engineers	6,530	5,055	5,195
Architects	2,530	1,720	1,610
Surveyors	5,690	4,290	4,160

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 4.14.10 Northern Ireland

#### **Annual Recruitment Requirement by Occupation**

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	110
Construction Managers	-*
Civil Engineers	-*
Other construction professionals e.g. Town Planners, Mechanical Engineers	-*
Architects	-*
Surveyors	80

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\* No appreciable recruitment requirement

### Total employment by occupation

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	1,260	1,300	1,510
Construction Managers	4,340	4,310	4,600
Civil Engineers	1,940	1,680	1,650
Other construction professionals e.g. Town Planners, Mechanical Engineers	900	860	875
Architects	1,440	1,220	1,170
Surveyors	1,190	1,250	1,310

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 4.14.11 Scotland

### Annual Recruitment Requirement by Occupation

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	70

Construction Managers	630
Civil Engineers	380
Other construction professionals e.g. Town Planners, Mechanical Engineers	205
Architects	60
Surveyors	-*

\* No appreciable recruitment requirement

### **Total employment by occupation**

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	9,600	9,050	10,760
Construction Managers	22,730	20,610	22,920
Civil Engineers	4,770	4,810	5,710
Other construction professionals e.g. Town Planners, Mechanical Engineers	8,020	7,295	7,930
Architects	6,390	5,420	5,760
Surveyors	6,410	5,910	5,960

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on [www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)

#### 4.14.12 Wales

#### Annual Recruitment Requirement by Occupation

<b>Professional and Management Occupation</b>	<b>2010 – 2014</b>
Senior Executive and business process managers	-*
Construction Managers	330
Civil Engineers	240
Other construction professionals e.g. Town Planners, Mechanical Engineers	30
Architects	70
Surveyors	Less than 50

\* No appreciable recruitment requirement

#### Total employment by occupation

<b>Professional and Management Occupation</b>	<b>2008</b>	<b>2010</b>	<b>2014</b>
Senior Executive and business process managers	2,830	2,780	3,410
Construction Managers	8,710	7,780	8,550
Civil Engineers	3,880	3,560	4,000
Other construction			

professionals e.g. Town Planners, Mechanical Engineers	3,045	2,665	2,865
Architects	860	960	1,220
Surveyors	3,490	3,140	3,180

Source – Construction Skills Network, Experian

For full and up to date Construction Skills Network/Labour Market Intelligence reports click on

[www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/](http://www.cskills.org/supportbusiness/businessinformation/csn/csnoutputs/)