



Building and Construction

Are you interested in working on a construction site with a team of people? Maybe your interest lies in buying and selling property and working in an office is more your sort of thing. All the jobs in the sector require someone with a great eye for detail, creative flair and someone who is very good at working with others.

The jobs featured in this section are listed below. For similar jobs to the ones in this section why not have a look at *Engineering, Manufacturing and Production* on page 195.

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Qualifications and courses

Professional architects must have chartered membership of the Royal Institute of British Architects (RIBA) and registration with the Architects Registration Board (ARB). The main route to qualification is through a RIBA/ARB-recognised degree. Minimum entry requirements are 3 A levels/H grades which should be drawn from academic fields of study. In addition you must have passed at least 5 GCSEs/National 5s including English, Maths and Physics or Chemistry. Equivalent qualifications such as a BTEC certificate/diploma may be accepted. Potential students may also be expected to present a portfolio at the interview stage.

Candidates without the usual entry requirements for a degree may be able to take a Foundation year at a school of architecture instead. Mature students with relevant experience may also be accepted.

Training as an architect takes 7 years. Candidates spend 3 years studying for an undergraduate degree in architecture (RIBA Part 1) and then undertake 12 months of supervised practical training in an architect's office or in some sector of the building industry. Then 2 years are spent studying for a diploma, further degree (BArch) or Master of Architecture (MArch) (RIBA Part 2). After completing a further 12-month work placement, trainees are then eligible to complete the RIBA Part 3 Examination in Professional Practice and Management.

If you have passed Part 1, you may be able to work as an architectural technician.

Alternatively, an office-based route for people with experience is also available whereby candidates are able to self-study for the RIBA Examination in Architecture while continuing to work full time.

What the work involves

Architects design new buildings, the spaces around them as well as any proposed changes to existing buildings.

Your work will include agreeing design briefs with clients, researching development sites, deciding which materials to use for particular buildings and drawing technical plans. You will also be responsible for testing new ideas, obtaining planning permission and inspecting building work while it is in progress.

You could specialise in a particular field such as building heritage and conservation, sustainable and environmental design, or project management.

Type of person suited to this work

You must be able to produce creative, detailed designs that meet the needs of your clients.

You will need excellent verbal communication skills for working with other professionals and for presenting your ideas to them and your clients. You also have to be organised and have good research and problem-solving skills.

As you will use computer-aided design (CAD) in your work, IT skills are also useful.

Working conditions

Although architects are based in offices, you will go out to visit construction sites and meet clients. You will need to pay attention to health and safety regulations when on-site. A driving licence may be necessary.

You are likely to work regular office hours, although you might have to do some work at weekends and during the evenings.

Future prospects

Generally, you would start work in a private architect's practice to gain wide experience of the work, but you may also work for other employers later on.

Self-employment is common for experienced architects.

Your career will be dependent on your experience, ability and competence. If you decide to remain in private work you could progress to associate level and possibly become a partner. Some of the larger architectural practices win international contracts so you could work on projects abroad.

You could continue to develop your knowledge by completing a postgraduate course in a subject related to architecture, such as civil engineering, town planning, and surveying, among others. These courses are offered by most schools of architecture.

Advantages/disadvantages

There may be problems to overcome when making design decisions, such as conflicting views to deal with.

There is personal satisfaction in dealing with these problems and creating designs for buildings that will influence the landscape for many years to come.

Money guide

Graduates who have completed Part 1 of their training can expect a starting salary of up to £20,000.

Upon completion of Part 2, salaries rise to £20,000–£26,000.

Once fully qualified as an architect, you can earn £26,000–£35,000 a year.

Those who reach senior level or become a partner in a firm can achieve a salary of up to £80,000.

Related opportunities

- Architectural Technician p57
- Architectural Technologist p58
- Construction Supervisor/Manager p74

Further information

Architects Registration Board
www.arb.org.uk

Royal Incorporation of Architects in Scotland
www.rias.org.uk

Royal Institute of British Architects
www.architecture.com

Qualifications and courses

The most common route into this career is to complete an HNC/HND in Architectural Design or Architectural Technology or alternatively, to gain a Foundation degree in Architectural Technology. HNC/HND courses usually require applicants to have acquired at least 1 A level/2 H grades (relevant subjects include physics and maths) as well as a GCSE/National 5 (A*-C/A-C) in your A level/H grade subject. You should also have another 3 or 4 GCSEs/National 5s (A*-C/A-C) including Maths, English and a science subject. Some candidates may be considered on the basis of relevant experience rather than qualifications.

You can also complete a degree but most employers will not expect applicants to be graduates. Candidates with at least 4 GCSEs/National 5s (A*-C/A-C) may seek apprenticeship training provided by employers in the workplace. Apprenticeship schemes tend to award candidates a qualification such as a BTEC/SQA or NVQ/SVQ.

To become a qualified architectural technician you will need to apply to become an Associate Member of the Chartered Institute of Architectural Technologists (CIAT). To pass the required Architectural Technician Professional and Occupational Performance (POP) Record, candidates must undertake 2 years of supervised work experience and be assessed against CIAT's professional standards.

What the work involves

This is essentially a support role; you will be providing assistance to the other members of the team including architects, architectural technologists, surveyors and engineers enabling them to complete their work as efficiently as possible. You will be responsible for liaising between the construction and design teams, making sure everyone is up to date with the latest project developments.

You will gather and organise all of the technical information required throughout the project.

You will prepare drawings, plans and specifications using computer-aided design (CAD) software and also by hand.

Type of person suited to this work

You need good drawing skills, both hand and CAD. You will need an ability to visualise in 3 dimensions.

You must also be able to develop a scientific and technological knowledge of building materials. You will need to understand building regulations and techniques and be able to explain them to others.

You will need to be able to work well alone, as well as having good verbal communication skills for working with other professionals, such as architects, surveyors and engineers. Your organisational, research and problem-solving skills will need to be excellent.

Working conditions

Architectural technicians are based in offices, but you may visit sites to inspect work in progress so a driving licence might be useful.

You will need to be aware of health and safety regulations when on-site and will be expected to wear safety clothing. When working on-site you will be outdoors in all weathers and may need to climb ladders or scaffolding.

You are likely to work normal office hours (9am-5pm, Monday to Friday), although you might have to work late and at weekends on some projects.

Future prospects

An architectural technician may take further CIAT-accredited training to develop their skills and apply to work as an architectural technologist.

You could choose to work in private practice or alternatively within the public sector in an area such as local government, research, education or central government. You may need to change employers in order to progress.

There is also the possibility to work freelance or on short contracts.

Advantages/disadvantages

As you are the main point of contact between contractors and clients, you will be at the centre of any confrontations that arise.

If you work for a larger company you will have the opportunity to work on a range of projects which will keep your job interesting.

Money guide

Architectural technicians usually receive a starting salary of £15,000-£20,000.

With experience this could rise to between £30,000 and £45,000 a year.

Architectural technicians employed on a freelance/self-employed basis can expect to earn a higher hourly rate than those in full-time employment.

Earnings vary widely depending on location and the individual employer.

Related opportunities

- Architectural Technologist p58
- Surveying Technician p110
- Town Planner/Planning Technician p113

Further information

Chartered Institute of Architectural Technologists
www.ciat.org.uk

Chartered Institute of Building
www.ciob.org.uk

Construction Industry Training Board (CITB)
www.citb.co.uk

Qualifications and courses

The preferred route to becoming an architectural technologist is to complete a degree in Architectural Technology which has been accredited by the Chartered Institute of Architectural Technologists (CIAT). Admission to a degree course relies on candidates gaining at least 2 A levels/3 H grades and 5 GCSEs/National 5s (A*-C/A-C). There are currently over 30 accredited degree programmes and they are listed on CIAT's website. Candidates who take an accredited degree benefit from exemptions when they study for their Professional and Occupational Performance (POP) Record which is a necessary requirement when becoming a chartered architectural technologist (MCIAT).

There is also the opportunity to gain entry to the field for candidates who choose to complete a degree in a related area of the industry such as architecture, architectural engineering, building services engineering, building/construction, built environment studies, civil and structural engineering, computer-aided engineering or surveying.

Completion of an HNC/HND in Architectural Technology or a Foundation degree in Architectural Technology will enable you to become a qualified architectural technician. Once you have had more than 10 years' experience and after successful completion of CIAT's professional standards assessment you could become an architectural technologist. Those with a relevant HNC/HND may also opt to convert their qualification to a degree by completing a 1-year top up course or alternatively, may be granted acceptance onto the second year of a degree course.

What the work involves

You will be responsible for ensuring that the architect's design is translated into a functioning building. You will be involved right from the start, helping to liaise with the client and the architect and advise them on any issues that might affect the build.

You will make sure that the more practical elements of the build run smoothly, by ensuring that the right materials are used and that all legal requirements and building regulations are met.

You will have a leading role within the construction team including developing project briefs, coordinating, negotiating contracts and providing guidance.

Type of person suited to this work

You need good drawing skills, both hand and computer-aided design (CAD). You will need an ability to visualise in 3 dimensions.

You must also be able to develop a scientific and technological knowledge of building materials. You will need to understand planning regulations and construction law, and be able to explain them to others.

You will need good communication skills for working with other professionals. Your organisational, management, research and problem-solving skills will need to be excellent.

Working conditions

Architectural technologists are based in offices, but you may need to visit sites to inspect work in progress so a driving licence could be useful.

You will generally be working weekdays 9am–5pm, but you might need to work extra hours to meet deadlines.

You will need to be aware of health and safety regulations when on-site and will wear safety clothing. On-site work can be cold and wet or hot and dusty, as you will be outdoors in all weathers.

Future prospects

Architectural technologists, with CIAT qualifications and experience, may set up their own practice or work in a partnership with other architectural technologists or architects.

It is also possible to progress within private firms to more senior positions or move to other companies which attract larger and possibly international contracts. Promotion is generally easier within larger firms but you may still need to change employers in order to progress.

Advantages/disadvantages

There may be problems to solve at any time during the architectural process, for example, issues with the supply of the right materials.

It is rewarding to make your contribution to the design and construction of buildings that will influence the landscape for many years to come.

Money guide

Generally salaries are higher in London and the south of England.

A junior technologist typically has a starting salary of £15,000–£23,000 a year.

After 3 years' experience you should be earning between £24,000 and £28,000 a year.

Once you are in a senior position and have been working for 10 years, you could achieve a salary of £30,000–£45,000.

Higher salaries are also possible for people who acquire extensive experience. Benefits such as company cars and pension schemes may also be offered by some practices.

Related opportunities

- Architect p56
- Architectural Technician p57
- Cartographer p66
- Town Planner/Planning Technician p113

Further information

Chartered Institute of Architectural Technologists

www.ciat.org.uk

Construction Industry Training Board (CITB)

www.citb.co.uk

Qualifications and courses

There is no specific entry route for this career although you will need a degree in either land management or another property-related subject to join a company as a trainee. You could study for a degree in property and valuation accredited by the Royal Institution of Chartered Surveyors (RICS) and join a surveying firm or you could enter a different area, such as estate management, and train as a property consultant on the job. Entry to a degree is normally a minimum of 2 A levels/3 H grades and 5 GCSEs/National 5s (A*-C/A-C).

Training is carried out on the job under the supervision of a senior consultant. The National Association of Valuers and Auctioneers (NAVA) offers property auction workshops to help develop trainees' skills. The National Federation of Property Professionals (NFoPP) offers a Level 3 Technical Award in Real Property Auctioneering which is made available through distance learning. Completion of this is necessary for membership of NAVA.

It is important to commit to a continuing professional development (CPD) programme to keep your skills and knowledge of property law and auctioning methods up to date.

What the work involves

You will be responsible for valuing property and land, from listed buildings to new builds, assessing the current market and organising the property or land to be auctioned off.

You will be meeting prospective clients, researching their property or land, attending the auction and getting the best price for the client.

You will need to make detailed reports of the property you value, and report back to your client. You might also have other duties such as advising clients how auctions work and of any other services your company offers.

Type of person suited to this work

You will need excellent communication skills to successfully run an auction, and be firm when settling a bid.

Being lively, outgoing and confident will help when you have to address a large crowd of people; a clear and authoritative voice will be beneficial.

You will need good observational skills for valuing land and property, with a good knowledge of the property market. You will need to keep up to date with current property laws.

Working conditions

You will work around 37 hours a week, Monday to Friday, with the possibility of working evenings and weekends, depending on when the auction is.

You will spend a lot of time in an office, but you will be out and about on a daily basis, meeting clients and valuing properties. You will need to work in all weather conditions, and travel around regularly – a driving licence and vehicle will be very useful.

Future prospects

There are jobs available across the UK, with international auction houses being based in London. There is currently a need for property auctioneers due to the increase in popularity of property auctions, therefore job prospects are good.

You can progress into a senior auction role or managerial position. It may be possible to move into different areas of auctioning, such as livestock or antiques.

Advantages/disadvantages

Auctions are fast-paced and lively events; this job offers an exciting day's work!

It could be frustrating when an auction does not go the way you planned and profit is not made.

You get great job satisfaction when you successfully auction off a property.

Money guide

The amount that you earn depends on which type of organisation you work for and where it is located. For example, an auction house may pay less than a private chartered surveyor company.

Starting salaries tend to be between £23,000 and £26,000 a year.

With experience, earnings can rise to £27,000–£36,000.

Chartered land and property valuers can earn around £40,000 a year.

Those who choose to work freelance may charge fees according to their experience and the type of contract undertaken.

Related opportunities

- Auctioneer p451
- Surveying Technician p110

Further information

National Federation of Property Professionals
www.nfopp.co.uk

Royal Institution of Chartered Surveyors
www.rics.org

Qualifications and courses

The main route to entering the field is to train via an apprenticeship, splitting your time between working on-site and training for a qualification at college. In England and Wales, the Construction Apprenticeship Scheme (CAS) allows you to study for NVQ Levels 2 and 3 whilst in Scotland a modern apprenticeship offers trainees the chance to gain an SVQ Level 2. Northern Ireland offers 4 different types of apprenticeships for people in different circumstances, each leading to a qualification in your chosen trade. Apprenticeships normally require candidates to have some GCSEs/National 5s (A*-E/A-E) in subjects such as English, maths, a science and technology.

Many employers now require trainees to have a Construction Skills Certification Scheme (CSCS) card before working on-site, something that can only be achieved through a formal qualification, such as a BTEC Introductory Certificate and Diploma in Construction, BTEC Certificate and Diploma in Construction or a City & Guilds Certificate in Basic Skills (6081). Those without qualifications may work for an NVQ and a CSCS card via the ConstructionSkills' On-Site Assessment and Training (OSAT) programme.

New Deal offers taster courses and placements with an employer for at least 26 weeks. It may be possible to stay on and study for NVQs/SVQs. To qualify you must be aged 18-24 and unemployed for more than 6 months, or 25 or over and unemployed for 18 months.

What the work involves

Bricklayers build and repair external and internal walls.

You will use a range of materials including bricks, stones and mortar as well as specialist tools to build walls that often include ornamental and decorative effects.

Jobs include building houses as well as office buildings, other public venues, shopping centres and stadiums. You will spend a lot of your time outside doing manual work.

Type of person suited to this work

As the work requires you to move around a lot and lift materials, you must be physically fit and able to work at height.

You need to be able to follow plans and work with accuracy and attention to detail, so that the walls you build are structurally perfect and create the right visual effect.

You also need to work in a team with other bricklayers and those in other construction trades and professions.

Working conditions

You will often be working outdoors and in all weather conditions. This can mean being cold and wet in the winter and hot and dusty in the summer.

To keep yourself and others safe you will need to observe health and safety regulations, which will include wearing protective clothing.

You are likely to work a normal working week, although weekend and evening work is common.

Future prospects

Construction is one of the largest industries in the UK. Recent surges in demand for new housing has led to an increase in demand for bricklayers, but following the severe job losses during the recession, there are not enough bricklayers to keep up with demand. Between January and March 2014, 60% of firms said they had trouble finding bricklayers to employ. With a shortage of bricklayers, job prospects are promising, but the market is still volatile.

In the long term, you could progress to technical, supervisory and managerial roles or move into related areas such as estimating and construction management. Encouragingly, the number of managerial positions required by the industry is predicted to increase by 2016. You can also become an instructor in a training school.

The construction industry has one of the highest percentages of self-employment and bricklayers are no exception. Many have set up their own businesses, often working on smaller, local contracts. You may also opt to specialise in different trades such as stonemasonry, restoration or conservation.

Advantages/disadvantages

The work can be physically demanding for some people.

This is a great career if you like being outdoors, doing practical and creative work.

As you develop your skills there are great opportunities for progression.

Money guide

Trainees and labourers can earn up to £15,000 a year until they become qualified, when they can earn anything between £16,000 and £23,000.

Experienced bricklayers and instructors can earn up to £30,000.

Overtime is often available and on some projects there are bonuses based on fast outputs which can lead to higher earnings. If you are self-employed you have more freedom to negotiate your rate of pay with your clients.

Related opportunities

- Building Technician p64
- Dry Stone Waller p77
- Stonemason p108

Further information

Construction Industry Training Board (CITB)
www.citb.co.uk

Federation of Master Builders
www.fmb.org.uk

Scottish Building Apprenticeship and Training Council
www.sbatc.co.uk

Qualifications and courses

Most entrants are graduates with a degree in a relevant subject such as building and construction, civil or structural engineering, surveying, architecture, or design. More specific courses in architectural heritage, conservation, building conservation, and management are offered by some universities. Many graduates will have an accredited or recognised postgraduate degree that meets the requirements of the Institute of Historic Building Conservation (IHBC). Membership of the IHBC is usually a requirement for jobs within this field.

Entry with an HND is possible, or alternatively you can enter as a planning technician after gaining considerable experience.

Training is usually provided on the job but employers do value candidates with demonstrable interest and experience within the field. Volunteering and work experience is particularly important if your degree is not directly relevant. The National Trust has around 47,000 positions available for volunteers.

The Society for the Protection of Ancient Buildings (SPAB) also runs a lecture series each year aimed at professionals in the industry which are useful in providing network-building opportunities. Once on the job, it is important to undergo continuing professional development (CPD) every 2 years. The IHBC offers its members numerous courses and seminars to ensure officers continue to enhance their skills.

What the work involves

Building conservation officers protect and restore buildings of special historical or architectural interest, such as houses, churches, windmills, factories and lighthouses.

You will be involved in planning the development of listed buildings and sites, recommending buildings for conservation, writing reports on their condition, making schedules and estimates for work required and giving advice to architects, local authorities or planning committees on building conservation.

You might have to source suppliers or craftspeople who work with specialised or traditional building materials.

Type of person suited to this work

You will be working to restore historic buildings and sites so it is important that you are interested in history, architecture and construction. An understanding of historical architecture, building methods and techniques would be very useful.

You will need excellent communication skills as you will coordinate the many different aspects involved in the development of one site. You must have excellent verbal and written skills to give presentations to planning authorities or government agencies to persuade them to follow your advice.

Working conditions

Your work is occasionally office based but much takes place outdoors on-site. This can be dusty and dirty, working at

heights and confined spaces in adverse weather conditions. Protective clothing, including hard hats and safety boots, is necessary as you may be visiting buildings in poor repair.

Travel during the day with the occasional overnight stay may be necessary. Working as a consultant may involve travel all over the UK or visiting sites in remote areas so a car and driver's licence are useful. Working hours include regular extra hours but not weekends or shifts.

Future prospects

Positions as a historic building inspector or conservation officer can be found in local authorities, district and county councils. Within the private sector there may be opportunities for promotion, eg to senior conservation officer or managerial roles, but, due to the low turnover of staff, it may be necessary to relocate in order to achieve career progression. In small organisations, promotions may be limited.

There are many opportunities in national government organisations such as English Heritage and charities such as the National Trust, the Victorian Society or the Georgian Group.

As a qualified and experienced professional you can be self-employed. With substantial experience and industry contracts you can become involved in consultancy which focuses on advisory and design work. You may even opt to move into lecturing in universities.

Advantages/disadvantages

You will gain a great deal of satisfaction from working to ensure the survival of listed buildings.

Buildings are often in a poor state of repair and building sites may be hazardous.

Money guide

Starting salaries range from £18,000 to £26,000.

Experienced building conservation officers earn between £26,000 and £32,000.

Salaries at senior levels may rise to £40,000 or more after 10–15 years' experience.

Related opportunities

- Architect p56
- Architectural Technologist p58
- Building Surveyor p63

Further information

Institute of Historic Building Conservation
www.ihbc.org.uk

Society for the Protection of Ancient Buildings
www.spab.org.uk

Qualifications and courses

To enter this profession you will need a relevant degree in subjects such as building services engineering, mechanical engineering, maths or physics. Entry to a degree usually requires 2 A levels/3 H grades with Maths or a science and 5 GCSEs/National 5s (A*-C/A-C) including English and Maths. Gaining work experience during school holidays can be useful in enhancing future job applications and ensuring you secure important contacts.

Accredited HNDs or Foundation degrees in engineering or technology can be used to progress to full degree courses or trainee posts. Some apprenticeships may also be available through the modern apprenticeship scheme, SummitSkills.

As a trainee you will need to complete Initial Professional Development (IPD) to become a professional engineer. You can train for this through your employer. You can then work towards incorporated engineer (IEng) or chartered engineer (CEng) status by gaining membership of the Chartered Institution of Building Services Engineers (CIBSE). In order to do so, you will need a first in an accredited Master of Engineering (MEng) degree.

It is important that you commit to a continuing professional development (CPD) programme in order to keep your skills up to date.

What the work involves

Building services engineers are responsible for each aspect of energy-using building services such as lifts, lighting, heating, air conditioning, water supply, ventilation and electrical supply.

You will design and plan services that are efficient, cost effective, sustainable and in the interest of public safety. You will also be responsible for organising and supervising the installation and maintenance of these services, working with architects and clients to reduce the environmental impact.

Although the industry is becoming increasingly multidisciplinary, you will probably specialise in mechanical engineering, electrical engineering or public health.

Type of person suited to this work

You will need to be highly practical as well as having excellent problem solving, communication and interpersonal skills. Teamworking skills are essential so that you can work with those involved in other aspects of each project's design and construction.

You should have an aptitude for design and technical drawing, model-making and show proficiency working with computers and computer-aided design (CAD) software.

Working conditions

Your time will be divided between office-based work, such as planning, designing and estimating costs of projects, to spending time on-site, coordinating installation or managing existing systems.

You may work on sites such as airports, hospitals, industrial plants, domestic housing, leisure pools, hotels and cinemas; for this you might need specialist skills.

You will usually be expected to work more than the average office hours but not weekends or shifts. Some roles require on-call availability in case of emergencies. You may have to travel within a day but overnight stays are uncommon.

Future prospects

Opportunities in this field are numerous with demand for building services engineers usually exceeding supply.

Progression within the role is fairly scripted, with graduate engineers progressing to project engineers, associates, a director/partner and then a managing director. As a chartered engineer you may establish yourself as an independent consultant.

Your choice of specialism is important in determining your career development so it is important to decide early in order to gain as much practical experience as possible.

Training in design, installation or maintenance can increase your chances of progression as does training in new specialties such as intelligent buildings and organic lighting.

Advantages/disadvantages

The profession was traditionally separated into electrical and mechanical roles, but is now becoming increasingly multidisciplinary so your role may be more flexible and diverse.

This profession depends heavily on the economic climate of the construction industry, so you need to be aware of this as it will affect your chances of employment.

Money guide

Your starting salary could range from £20,000 to £24,000.

With experience this can rise to between £25,000 and £35,000.

At senior level it is possible to earn more than £45,000 and as a partner of a consultancy firm it is possible to earn between £65,000 and £85,000.

Salaries vary according to an engineer's experience rather than qualifications, therefore the more experience you gain, the higher your wage.

Related opportunities

- Architect p56
- Civil/Construction Engineer/Civil Engineering Technician p69
- Electrical Engineer p203

Further information

Chartered Institution of Building Services Engineers
www.cibse.org

Institution of Engineering and Technology
www.theiet.org

Qualifications and courses

You will be required to hold a relevant degree accredited by the Royal Institution of Chartered Surveyors (RICS) in a subject such as surveying, construction, civil or building engineering. The Chartered Institute of Building (CIOB), the Association of Building Engineers (ABE), and the British Institute of Facilities Management (BIFM) also offer professional qualifications. Completing a RICS-accredited degree course, however, will automatically qualify you to train as a chartered surveyor allowing you to carry out the Assessment of Professional Competence (APC), entitling you to RICS membership. The APC scheme allows you to train as you work and normally takes between 2 and 3 years.

Candidates with a non-accredited degree, or a degree in a non-vocational subject, can opt for a RICS-accredited postgraduate conversion course. It is also possible to enter the industry at technical surveyor level if you hold a relevant HNC/HND or Foundation degree. To reach the level of a building surveyor will require you to complete further qualifications whilst you work.

Alternatively, the Chartered Surveyors Training Trust offers work-based training for young people aged 16–24 in London and the south-east of England. Applicants must have 4 GCSEs/National 5s (A*–C/A–C) or equivalent, preferably in English, Maths and a science.

Graduates who have completed a year in the industry as part of their degree maintain a distinct advantage when seeking work.

What the work involves

Building surveyors work on new building projects as well as making suggestions on how to improve or enhance existing structures.

You could work on residential and commercial building projects, and will advise on a number of areas including design, restoration, sustainability and repairs.

You may also be responsible for ensuring that buildings meet health, safety and access regulations.

Type of person suited to this work

Since the job involves explaining ideas and negotiating with industry professionals and clients, good communication skills are vital. You will produce detailed reports, so a good standard of written English is required.

You will need excellent time management skills and a head for figures to ensure that projects come in on time and within budget.

You will need a logical, analytical and practical approach to work, along with the ability to organise and manage a team. As much of the work involves computers and electronic equipment, you will need to have good IT skills.

Working conditions

Working hours are normally 9am–5pm, although longer hours and evening meetings with clients are not uncommon.

Most surveyors divide their time equally between the office, external client meetings, site visits and surveys. These travel commitments mean it is helpful to have a driving licence and transport.

When on-site you will need to stick to health and safety regulations and be prepared for all types of weather.

You may occasionally be called to give evidence in court proceedings concerning a breach of building regulations.

Future prospects

Although the industry was affected by the recent financial crisis, the demand for building surveyors is on the rise alongside a possible shortfall in graduates.

You could work for a variety of employers including surveying practices, construction companies, government departments, and mortgage and property companies, both in the UK and abroad. Freelance and consultancy work are also a possibility. Gaining chartered status opens up further opportunities for career progression.

With experience, you could become a partner in a company or establish your own firm. You could also specialise in one area such as advising on the restoration and improvement of historic or architecturally valuable buildings.

Advantages/disadvantages

Surveying provides a varied career as each day is different and there is a range of areas to work in.

Many surveyors are self-employed and enjoy the flexibility of working freelance.

Sometimes you will need to work extra hours to meet deadlines.

Money guide

Graduate surveyors can expect a salary of £18,000–£26,000. Those with chartered status are more likely to start on a higher salary.

Experienced surveyors can earn between £23,000 and £38,000 whilst senior chartered surveyors can earn in excess of £50,000.

Becoming a partner in a firm will offer you a salary of £70,000 or more.

Benefits, such as a company car, mobile phone and pension scheme, are also available.

Related opportunities

- Civil/Construction Engineer/Civil Engineering Technician p69
- Quantity Surveyor p100
- Rural Property/Practice Surveyor p103

Further information

Chartered Institute of Building

www.ciob.org.uk

Royal Institution of Chartered Surveyors

www.rics.org

Qualifications and courses

Building technicians normally need to train to NVQ/SVQ Levels 3 or 4. It is possible to train as a building technician with an employer as a construction apprentice. Apprenticeship schemes require a minimum of 4 GCSEs/National 5s (A*-C/A-C), including either Maths, a science, Design and Technology, or equivalent vocational qualification. Most apprentices start between the ages of 16 and 18, though entry is possible after this. In order to carry out an apprenticeship, you will need to find an employer who will sponsor your training.

HNDs in building studies or similar subjects can be studied over 2 years full time. Applicants should ideally have a science A level/H grade. Introductory courses to a career at technician level include BTEC Level 3 Diploma/Extended Diploma or Scottish Group Award in Construction.

You can apply for a ConstructionSkills Inspire Scholarship if you plan to pursue a construction-related degree. This includes a 10-week placement as well as a grant to support university study.

Many companies offer training schemes, day-release study (for HNC and Chartered Institute of Building exams), time spent on building sites, in-house training courses, and the Construction Industry Training Board (CITB) Technician Training Scheme.

Once qualified as a building technician, there are lots of opportunities to further your training whilst you work. You may for example, train for your NVQ Level 3 in Construction Site Supervision or NVQ Level 4 in Construction Site Management.

What the work involves

Building technicians support the work of construction professionals including surveyors and construction managers. They play an integral role in organising the construction of buildings by acting as a link between senior management and on-site labourers.

Your work will vary depending on your employer but might include planning work schedules, drawing up plans and estimating project costs and time scales. Knowledge of computer-aided design software (CAD) is necessary as technicians often have to make changes to plans and blueprints.

A building technician is also responsible for the negotiating and buying of materials, ensuring they are of good quality and are cost-effective. Another of your jobs will be to prepare sites prior to the commencement of a building project and later, to supervise staff whilst the work is being carried out. Monitoring building sites in terms of health and safety will be also be a high priority for you.

Type of person suited to this work

Organisational skills are essential as you ensure each construction job is completed accurately and efficiently.

Mathematical and IT skills are important for calculating costs, taking measurements and using CAD.

You must have an understanding of the technical aspects of construction. You must be dependable and will need strong communication skills for working with suppliers, site teams and other professionals.

Working conditions

When on site you will need to wear a safety helmet, overalls and boots at all times.

You are likely to work regular hours, but you may also have to start early, finish late or work at weekends on occasion as well as spend time away from home for various projects.

Future prospects

There is a steady supply of vacancies and a shortage of qualified applicants, particularly in London and Scotland.

Building technicians work for employers such as contractors, construction companies, property developers, surveyors' practices as well as within the public sector. You may also have the opportunity to work abroad.

There are vast opportunities for extending your responsibilities once employed. With experience and further qualifications, you may be promoted to a higher position such as building/construction manager. You may also choose to specialise in an area of expertise such as buying, drafting or estimating.

Advantages/disadvantages

It can be stressful having to work to deadlines.

Construction sites are dirty and dusty and some of your tasks may be dangerous.

Your work will be varied and interesting and you will be an integral part of the team producing all sorts of different buildings.

Money guide

Entry level salaries are typically £14,500-£16,500.

The average salary for a building technician ranges from £17,000 to £25,000.

Experienced senior building technicians can earn in excess of £30,000.

Related opportunities

- Architectural Technologist p58
- Construction Supervisor/Manager p74
- Surveying Technician p110

Further information

Chartered Association of Building Engineers
www.cbuide.com

Chartered Institute of Building
www.ciob.org.uk

Construction Industry Training Board (CITB)
www.citb.co.uk

Qualifications and courses

Although there are no formal entry requirements, GCSEs/National 5s in Maths, English and technology will be helpful for calculations, measurements and theory. Most employers will require some on-site experience so you may choose to shadow a professional or begin your career as a labourer. Your employer may then offer you training in carpentry.

Alternatively, another route into the industry involves attending college in order to gain a qualification. City & Guilds offer Certificates in Basic Construction Skills such as Carpentry and Joinery (6217-02) and Woodworking (6217-05) for young learners under the age of 16. By doing one of these, your chances of securing full-time work will be increased. Once employed, you can work towards NVQs/SVQs in Carpentry, both on the job and at college.

3-year Apprenticeships in Construction Building are available for school leavers. Diplomas and NVQs can be studied without an apprenticeship, or alongside practical work, by attending a training centre or college.

NVQs in Wood Occupations are available, such as the Diploma in Site Carpentry (Levels 2 and 3) and the Certificate in Shopfitting Site Work (Levels 2 and 3).

The Construction Awards Alliance (CAA) runs a Foundation Certificate in Building Craft Occupations. Young Apprenticeships for 14–16 year olds may be available through the Construction Industry Training Board (CITB).

What the work involves

Carpenters/joiners make, put in place or repair the wooden parts of buildings. You may be hired to make and install floorboards, skirting boards, cupboards, partitions, windows or doors. Other tasks may include fitting large wooden structures within the building trade, such as floor and roof joists or staircases.

You will work with different types of wood and use specialist hand tools such as hammers, chisels and planes, as well as power tools such as jigsaws and sanders. You will work either in a workshop or on-site with other building professionals.

Type of person suited to this work

You must have good practical skills and enjoy working with your hands and different tools.

You will be expected to follow plans and work carefully with attention to detail so that the structures you make fit into place correctly. As you will need to take measurements and calculate angles and dimensions, you will have to be good at maths and be accurate.

You should be physically fit in order to move around and lift materials. You must also be able to work in a team with other carpenters and those from the other construction trades.

Working conditions

You may work in a workshop or on construction sites, or divide your time between the two.

This can be heavy, dangerous and dusty work. You will need to keep to health and safety regulations, which may include wearing protective gear such as safety goggles and a mask. You are likely to work a normal working week, usually with an early start, although weekend work may also be required.

Future prospects

Across the UK there are around 240,000 carpenters/joiners, but employers are finding it difficult to recruit well-qualified and experienced workers. Many qualified carpenters are self-employed or work as sub-contractors.

With experience, you could move into a related occupation such as shopfitting, kitchen fitting or furniture making, or you may progress to technical, supervisory or managerial level. You may opt to specialise in one particular area, for example, in restoring old buildings or creating props. Alternatively, you might even consider instructing trainee carpenters in a college.

Advantages/disadvantages

Work can be seasonal: working fewer hours in the winter or having jobs cancelled is common.

You will develop a lot of new skills and you can specialise in certain areas such as listed buildings.

You get a sense of achievement when you see your woodwork in a building.

Money guide

Trainees start on a salary of £13,000–£16,000.

Qualified carpenters can earn anything in the range of £17,000–£23,000 per year.

Very experienced joiners may earn around £28,000 a year.

Skilled and experienced joiners could earn up to £40,000 per year.

The Building and Allied Trades Joint Industrial Council (BATJIC) agrees minimum wages annually.

Overtime is often available and on some projects you will receive bonuses based on output which can increase your earnings.

Self-employed carpenters will negotiate their own rates of pay.

Related opportunities

- Building Technician p64
- Construction Operative p72
- Window Fitter p117

Further information

British Woodworking Federation
www.bwf.org.uk

Institute of Carpenters
www.instituteofcarpenters.com

Qualifications and courses

The usual entry requirement for a cartographer is a relevant degree. Useful degree subjects include geography, geographical information systems, urban/land studies, surveying and mapping sciences. GCSE/National 5 English and Maths are generally needed for entry to these degrees and 2 A levels/3 H grades, including a science, Maths or Geography, would also be expected. Employers are increasingly seeking graduates with degrees in geographical information systems given the upturn in demand for digital map-making.

It may also be useful to hold a postgraduate qualification in a relevant subject, for example cartography, geographical information systems or remote sensing, if you are interested in more specialised areas.

Once employed, you will receive on-the-job training in relevant software and techniques. Government departments that employ cartographers have their own training schemes. It is also possible to work towards an NVQ/SVQ at Levels 3 and 4 in Spatial Data Management.

The Royal Air Force and Ordnance Survey may have opportunities for school leavers to study for a Certificate/Diploma or HNC/HND in Cartography by day release while training on the job.

The minimum entry requirements for a cartographic technician are 3 GCSEs/National 5s (A*-C/A-C), including Maths, English and occasionally a science. In practice, most entrants have A levels/H grades and some enter with a National Certificate/Diploma or HNC/HND in a relevant area.

Entry into the field is highly competitive, therefore by becoming a member of the Society of Cartographers and the British Cartographic Society, you will be able to secure important contacts and remain on top of current developments.

What the work involves

Cartography involves collecting, evaluating and displaying information gained from a variety of sources, including satellite technology, to create or update maps and navigation charts. This is achieved by using artistic, scientific, and technological methods.

Due to advances in information technology, geographical information systems and digital mapping techniques are now frequently used in this sector. You will use a range of sophisticated technology in all aspects of your work.

Type of person suited to this work

You will need to have strong IT, scientific and mathematical skills and an interest in geography.

Due to the nature of the work, it is essential that you have good spatial awareness, colour vision and an eye for layout and design. One sheet of a map can take months to produce, so you must be patient and dedicated to your work. A high level of accuracy and attention to detail is needed so that the map provides the best possible information for the user.

You must be willing to keep up with developments in the field and experiment with new ways of producing maps.

Working conditions

You are likely to work normal office hours at a workstation where you will have access to a computer.

At a senior level you will have more opportunity to meet and interact with colleagues and clients.

Part of your job will involve travelling around the UK to carry out surveys.

Future prospects

Most work is available in government departments, such as Ordnance Survey, the Hydrographic Office and the Meteorological Office. You could also work for local authorities, universities, councils, commercial map publishers, oil companies and motoring organisations.

With experience, you could become a freelance cartographer, provide consultancy services or work within higher education as a tutor.

Willingness to be geographically mobile can improve your chances of career progression.

If you are interested in living abroad, there are opportunities to work in cartography all over the world.

Advantages/disadvantages

Producing a map that looks good, is user friendly and likely to be used by many people is a very satisfying and rewarding experience.

As you near project deadlines, there is a higher level of pressure and you may be required to work late.

The work is varied and combines a variety of subject areas, from design to geography to maths.

Money guide

Starting salaries are usually between £16,000 and £20,000.

After 3-5 years' work experience, your earnings could increase to £20,000-£25,000.

It is possible for experienced or senior cartographers to achieve a salary of £30,000-£47,000.

Earnings vary depending on the size of the company and whether you work in the public or private sector.

Related opportunities

- Geographer p495
- Land/Geomatic Surveyor p92
- Town Planner/Planning Technician p113

Further information

Association for Geographic Information
www.agi.org.uk

British Cartographic Society
www.cartography.org.uk

The Survey Association
www.tsa-uk.org.uk

Qualifications and courses

No specific qualifications are required, although GCSEs/ National 5s or a BTEC in Construction and the Built Environment may be helpful. Useful GCSE/National 5 subjects include maths, design and technology, a science and English.

You could approach companies directly in order to seek work as a trainee. You will be trained on the job whilst working towards qualifications. This may also involve going to a college or training centre on day or block release. Prior construction experience, for example as a labourer or tradesperson, may support you in your search for work.

Alternatively, you could develop your skills by completing an NVQ/SVQ in Interior Systems (Construction) Ceiling Fixing (Levels 1–3). The Construction Specialist Apprenticeship may also be available for those aged 16–24 who are looking to become a ceiling fixer.

You can also train by carrying out one of the Construction Industry Training Board (CITB)'s Construction Skills Apprenticeships which involves both studying and on-site experience.

Many employers require you to have the CSCS card issued by the Construction Skills Certification Scheme as proof of your competence working on-site. This can only be granted if you hold a valid qualification or have on-site experience.

What the work involves

As a ceiling fixer you will fit suspended ceilings into new and existing commercial or public buildings.

Your work will involve fitting a ceiling grid in place and inserting tiles by using tools such as metal cutters and screwdrivers. The ceiling is fitted to the concrete floor of the room above and may hide wiring and air conditioning systems.

As the job requires you to work at heights and on construction sites, your safety training must be up to date.

Type of person suited to this work

You will need to be comfortable working at heights and you must be physically fit to do the necessary climbing, carrying and bending.

You need to be thorough and accurate. An understanding of technical plans is essential and you must be able to follow instructions but also use your initiative. Numeracy skills are important to measure materials and calculate weights. As you will work alongside other ceiling fixers, electricians, heating and ventilating fitters, painters and decorators you need to be a good team player.

Working conditions

You will need to travel to various construction sites so a driving licence will be useful. The sites you work on will mainly be indoors and you will most likely work from a ladder in confined spaces.

You will need to take safety precautions for yourself and your colleagues and you will be expected to wear protective clothing such as a hard hat, boots and overalls. You are likely to work Monday to Friday, normal office hours, although overtime may be available at the weekends.

This could be dusty work which might be difficult if you suffer from some allergies.

Future prospects

Demand for qualified ceiling fixers in the construction industry is expected to increase over the next few years, with job opportunities likely to be available once trained.

You will most likely start out as a tradesperson. With experience, you may progress to a supervisory or managerial position, or perhaps run your own company. You could also become a subcontractor.

Advantages/disadvantages

Working at heights and in confined spaces may be stressful for some people.

It is satisfying to see the transformation that takes place when you have worked on fitting a ceiling.

You will have the opportunity to work on a variety of projects in different types of buildings.

Money guide

Trainees can earn up to £13,000 a year.

Once qualified as a ceiling fixer, you can expect to earn anything between £16,000 and £22,000.

Highly skilled and experienced workers within the role can earn in excess of £27,000.

Those who do contract/temporary work may receive a higher hourly/daily rate than those in full-time employment.

There are often opportunities to increase your earnings through shift allowances, working overtime and receiving performance-related bonuses.

Related opportunities

- Construction Operative p72
- Plasterer p97
- Roofer p102

Further information

Association of Interior Specialists
<http://aisfpdc.org>

Construction Industry Training Board (CITB)
www.citb.co.uk

Qualifications and courses

You must become a member of the Royal Institution of Chartered Surveyors (RICS). For this you must complete an RICS-accredited degree course or a postgraduate conversion course. Degree entry requires 5 GCSEs/ National 5s (A*-C/A-C) and 3 A levels/4 H grades, or the relevant BTEC/SQA national awards. After completing an RICS-accredited course you must gain practical experience and undertake training before you will be fully qualified.

If you do not have the appropriate A levels or GCSEs you can take HNC/HND courses or Foundation degrees which can then be supplemented by an RICS-accredited degree course.

You can also train on the job as part of the Chartered Surveyors Training Trust scheme. This is available to those aged 16-24 who have 4 GCSEs/National 5s (A*-C/A-C) or equivalent. This programme involves a 2-year apprenticeship which will grant you Associate membership of the RICS. You then have the option to study for an accredited degree and take the RICS Assessment of Professional Competence to become a chartered surveyor.

You will be required to undertake continuing professional development (CPD) to keep up to date with surveying trends and skills.

You will primarily be based in an office but you will also spend a considerable amount of time on-site.

Depending on your field of specialisation, you might have to work in various weather conditions and wear protective clothing when on-site.

You may have to travel for your work, both abroad and within the UK. For this reason a driving licence is strongly recommended.

Future prospects

There are good prospects for people training as chartered surveyors as the current demand for them exceeds supply.

You may follow a formal promotion structure to gain senior management roles.

You could choose to become self-employed or to join a private practice.

As a qualified chartered surveyor and member of the RICS you will have to take part in continuing professional development (CPD). For this you must accumulate 60 hours of CPD every 3 years.

Advantages/disadvantages

Employers may provide benefits such as a company car, mobile phone, bonuses and pension scheme.

There is significant competition for graduates wishing to gain entry to some areas of chartered surveying.

What the work involves

As a chartered surveyor you will offer professional advice within the field of surveying in which you choose to specialise. This can be in building, construction, planning, the environment or quantity surveying. You will also spend time negotiating and explaining design/construction issues to clients.

You will have a variety of tasks to do such as examining plans, designs and project briefs, taking measurements, recording and analysing data and interpreting it through charts, maps or diagrams.

You may oversee entire construction projects, where you will ensure that specifications are met, calculate supplies needed and advise clients on the purchase, sale or development of property or land.

Type of person suited to this work

You should have an interest in construction, architecture, landscape and the environment.

As you are required to liaise with construction workers and clients, you must have excellent communication, negotiation and problem-solving skills and the ability to delegate tasks.

You need to be highly organised, methodical in your work and have a keen eye for detail as you may be coordinating several complex projects at the same time.

Working conditions

You will probably work 9am to 5pm, Monday to Friday. You may have to work longer hours to meet deadlines. Part-time work is available.

Money guide

As a graduate your starting salary may range from £18,000 to £26,000 a year.

Within 5 years of qualifying, you can expect to earn up to £45,000.

Senior chartered surveyors or those who are partners in firms have the potential to reach 6 figure salaries.

Geographical location does have an effect on how much chartered surveyors can earn with the highest wages typically found in London.

Depending on the type of project you are working on, very generous bonuses may be available.

Related opportunities

- Land/Geomatic Surveyor p92
- Surveying Technician p110
- Town Planner/Planning Technician p113

Further information

Chartered Association of Building Engineers
www.cbuide.com

Chartered Surveyors Training Trust
www.cstt.org.uk

Royal Institution of Chartered Surveyors
www.rics.org

Qualifications and courses

Entrants to civil engineering are usually graduates, although there are opportunities to progress from a craft or technical level.

The main route to becoming an engineer is a degree in the relevant branch of engineering or a closely related subject. It is recommended that you study a civil engineering course which is accredited by the Institution of Civil Engineers (ICE). The normal minimum entry requirements for an engineering degree are 3 A levels/5 H grades including Maths and a science, usually Physics or Chemistry. Equivalent qualifications such as BTEC/SQA Level 3 Certificates or Diplomas may be accepted.

Candidates who do not have the relevant A levels or equivalent may gain entry to an engineering degree by taking a 1-year Foundation course. Foundation courses are offered by universities and are sometimes taught at local partner colleges.

Once you have gained your degree you may then join a company's graduate scheme whereby you train alongside and with the support of a professional mentor for 1 to 2 years.

It is possible, however, to enter engineering after taking GCSEs/National 5s and progress to technician or professional level by studying part time for an HNC/HND or NVQ/SVQ Levels 4 or 5. You will need GCSEs/National 5s (A*-C/A-C) in English, Maths and a science. There are also BTEC and SQA Level 3 Certificates or Diplomas which will give you the relevant qualifications and can be studied at any age.

Alternatively, some engineering technicians gain entry to the career by firstly working through an engineering apprenticeship scheme. To gain a place you may need 4 GCSEs/National 5s with grades (A*-C/A-C) in subjects including maths, a science or design and technology, or equivalent qualifications. The availability of apprenticeship schemes depends on the job market of your local area and on the skills required by your local employers.

Professional engineers can work towards becoming chartered or incorporated members of one of the engineering professional bodies, such as ICE or the Chartered Institution of Building Services Engineers (CIBSE). The usual requirement for chartered status is an accredited MEng degree or equivalent. For incorporated status, a 3-year accredited BEng or BSc degree or an HND or equivalent, plus an additional period of learning, is required.

Undertaking a summer work experience placement or choosing a degree course with a year in industry can be useful ways to develop contacts within engineering and extend your knowledge.

Your work could span many areas including waste management, coastal development and geotechnical engineering.

Your job will involve communicating with clients and once you have gained significant experience, you can run projects as a project manager.

Civil engineer (contracting)

You will take the consulting civil engineer's designs and make them into a reality at ground level, overseeing and managing the construction project.

This will include recruiting a team, sourcing materials, managing budgets and ensuring that the project is completed on time.

Contractors will sometimes create a design and build a team themselves. The roles of consultants and contractors are therefore not always entirely different from one another.

Civil engineering technician

You will be responsible for providing technical support to the civil engineer, which may include producing costing and timing estimates for a project and helping with recruitment.

The role will also include aspects of land and quantity surveying, as well as the production of design drawings.

Projects in which you are involved will fall under the categories of structural, transportation, environmental and maritime.

Type of person suited to this work

Regardless of the area you decide to work in, you will need to enjoy finding creative but workable solutions to problems.

You will need to be confident when using computers to produce designs, work out budgets and undertake research.

You should also be good at maths and science so that you can make accurate calculations and understand the different building materials available to you.

You must be able to think 3-dimensionally so that you can visualise and design different buildings and structures.

Written and verbal communication skills are important as you will have to write reports, explain your designs to clients and other professionals and supervise construction staff. You will work as part of a team so you must be able to communicate and cooperate with people at all levels.

An understanding of environmental building issues, such as the use of energy efficient materials and land protection, is of increasing importance.

Working conditions

Working hours are typically longer than the average working week and can include early morning and evening work on-site.

Weekend or shift work is rare for civil engineers, although civil engineering technicians can be required to remain on 24-hour call for some projects.

Your work will involve being both indoors and out on-site.

When working on-site you will need to stick to health and safety regulations and be aware of your own and colleagues' safety. You will have to wear safety clothing including a helmet.

What the work involves

Civil engineer (consulting)

You will be designing and developing plans for construction projects such as roads, tunnels, bridges, railways, reservoirs, pipelines and major buildings.

You could spend time in dangerous places or in difficult environments, for example you may have to work at height, up ladders or on scaffolding.

When you are in your office, you will be based at a workstation where you will use a computer with specialised software and possibly a drawing board. You will attend meetings and speak to clients on the phone or in person.

It is also likely that you will have to work away from home occasionally, both within the UK and abroad, but the extent of this will depend on the size of the company you work for and the type of contracts they attract.

Future prospects

Job prospects for civil engineers tend to remain steady, and are promising. Around 100,000 professional civil engineers work in the UK for a range of employers including health trusts, local authorities, central government and energy suppliers (including water, gas, nuclear and electricity companies), contractors, consultancies and transport networks.

Work is available on a variety of projects including the building of new schools, hospitals and the upgrading of public transport networks.

Many UK civil engineering companies also operate globally, increasing the opportunities to work overseas. The range and size of opportunities open to you will depend on the size of the company you work for and the types of contracts won.

Civil engineering technicians can undertake job-related training and study for more qualifications to become a civil engineer.

There is scope to undertake further study and specialise in areas such as environmental engineering, coastal and marine engineering, geotechnics or tunnelling.

With experience, you can progress into management or possibly associate/partnership positions within UK or international companies. Within the public sector, there are opportunities for management and chief engineer jobs. Another career option is to become self-employed or to provide training or consultancy services.

Advantages/disadvantages

You will play an important part in the design and construction of buildings and structures throughout the world so you are likely to be well respected.

Seeing a project come to completion can be very satisfying.

Having an engineering background and qualifications opens up opportunities to enter other non-engineering careers at senior levels.

There is the opportunity to become self-employed or work overseas.

Work is varied, each day is different and you will be meeting and dealing with a wide range of people.

The pace of work varies quite extensively as you will alternate between a heavy workload and quieter periods.

There is a high level of responsibility in this field so the work can be demanding and occasionally stressful.

Money guide

Civil/Construction engineer

Starting salaries for civil engineers, either contracting or consulting, are between £17,000 and £25,000.

With more experience, engineers can earn anything between £25,000 and £40,000 a year.

Qualifying as a member or fellow of the Institution of Civil Engineers (ICE) can see salaries for civil engineers rise to between £60,000 and £100,000.

Civil engineering technician

Civil engineering technicians start on about £13,000–£19,000.

With experience, earnings increase to £20,000–£35,000 a year.

Senior technicians can earn £37,000 or more and if you train as a civil engineer your earning potential will increase as above.

Earnings are likely to be considerably higher in London and they vary depending on the size of the company.

Many employers offer additional benefits including a pension scheme, life insurance, a healthcare package and possibly a company car.

Related opportunities

- Architect p56
- Building Surveyor p63
- Insurance Risk Surveyor p32
- Town Planner/Planning Technician p113

Further information

Engineering Council UK

www.engc.org.uk

Institution of Civil Engineers

www.ice.org.uk

WISE

www.wisecampaign.org.uk

Qualifications and courses

There are no formal qualifications required in order to become a concreter. After you have completed school you may choose to seek employment within the industry. Training is usually available on the job.

An increasing number of employers require their employees to hold a Construction Skills Certification Scheme (CSCS) card to show proof of their competence working on-site. This can only be gained by having completed or, in the process of completing, a vocational qualification and health and safety test.

Apprenticeships are a common route into the construction field. It would be useful to have GCSEs/ National 5s (A*-E/A-E) including Maths, Design and Technology and English. You may be required to complete a test in order to secure your apprenticeship.

As a trainee, you can work towards NVQs in Trowel Occupations (Levels 1 and 2), Erection of Precast Concrete (Level 2) and Specialist Concrete Occupations such as Concrete Repair, Sprayed Concrete or Concrete Drilling (Level 2).

Alternatively, Foundation Construction Awards in Trowel Occupations are available if obtaining experience in the workplace for NVQs is a challenge. Colleges offer these awards alongside an apprenticeship.

What the work involves

Your job will include initially levelling and compacting the ground to prepare it for concreting and then the construction of drives and pathways, floor slabs, foundations, columns and beams.

You will be working as part of a construction team, working with other specialists on building projects.

You will take early-morning deliveries of concrete, dig foundation trenches, mix, lay and level the concrete on the prepared ground, vibrate it to remove air trappings, and wrap it in polythene sheeting in order to cure it.

As well as laying fresh concrete you may also be required to reinforce existing concrete structures, repair cracks that have been caused by moving ground and create different styles and effects within the setting concrete for aesthetic purposes.

Type of person suited to this work

You should have a careful, methodical approach to your work and have good hand skills.

Maths skills are important as you will be calculating quantities for materials.

You should enjoy working outdoors, as part of a team or on your own. Being fit and active is essential as you will be required to work long and at times hard hours.

You need to be aware of health and safety requirements when working on-site.

Working conditions

Your work will be site based, largely undertaking manual labour in dirty or dusty surroundings.

You will work 37 hours a week, including some early mornings and late nights.

You could work on a building site, motorway, private driveway or the interiors of large buildings.

Protective clothing is needed, as the work is messy and at times, potentially dangerous.

You will use traditional hand tools such as shovels as well as machinery such as cement mixers and drills.

Future prospects

You can move into specialised areas of work such as concrete spraying or concrete repair. It is also possible to progress to a managerial or supervisory role.

After gaining experience, many concreters choose to become self-employed. You could start your own company or work on a labour-only basis for a contractor.

You can work for building and engineering contractors, local authorities and public organisations. Job opportunities are also available abroad, as well as throughout the UK.

Advantages/disadvantages

You have the opportunity to earn good money if you work hard.

There is an increased risk of injury on construction sites. The cement in concrete can cause burning or inflammation and you should avoid contact with the skin.

The work is physically draining, as it involves a great deal of practical work and, at times, heavy lifting.

Money guide

As a trainee you can expect to earn around £12,500.

With experience this can rise to £20,000–£25,000.

Concrete sprayers with a lot of experience can earn £30,000.

Salaries can be boosted by bonuses and overtime.

You may earn more if you set up your own contracting firm.

Related opportunities

- Bricklayer p60
- Construction Operative p72
- Plasterer p97

Further information

Chartered Institute of Building

www.ciob.org.uk

The Concrete Centre

www.concretecentre.com

Women and Manual Trades

www.wamt.org

Qualifications and courses

Your training will take place mainly on the job by experienced labourers/construction operatives and tradespeople. Employers may ask for a number of GCSEs/National 5s in subjects such as English, maths and technology or equivalent qualifications. Once employed, there may be opportunities to study for NVQs/SVQs (Levels 1 and 2) in Construction and Civil Engineering or in Specialised Plant and Machinery Operations.

Many employers require you to hold a CSCS card issued by the Construction Skills Certification Scheme as proof of your competence working on site. A health and safety test and evidence of a vocational qualification is usually necessary in order to qualify for one of these.

City & Guilds offer Certificates in Basic Construction Skills (6217) for young learners under the age of 16 and an Award/Certificate/Diploma in Basic Construction Skills for 14–19 year olds. BTEC Certificates and Diplomas are available in Construction as well as a Foundation Certificate in Building and Craft Occupations.

You can also train to be a construction operative via a 2-year Construction Civil Engineering Apprenticeship scheme and choose to complete an extra year for a Level 3 Construction Diploma.

If you are a full-time student doing a construction-related course you can qualify for a programme-led apprenticeship (PLA) and gain experience up to NVQ Level 2.

What the work involves

Construction operatives support the work of other construction workers by doing various practical tasks.

Your work might include digging trenches, moving building materials and tools, putting up signs and safety barriers, helping to lay drains, and paving roads.

You will also mix and lay cement as well as operate construction equipment and vehicles.

Type of person suited to this work

As the work requires you to lift heavy materials and be on the move a lot you must be physically fit. You must also not mind working at great heights or depths.

You need to be able to follow and carry out instructions and work well in a team with other labourers and professionals.

It is essential to be hands on, flexible and trustworthy.

Working conditions

You will be working both indoors and outdoors in all weather conditions.

The work is often dusty and dirty and may be difficult for people suffering from allergies.

You will need to pay attention to both your own and your colleagues' health and safety. You will be expected to follow procedures for each type of work you do, including the wearing of protective clothing.

You may work a normal week, although evening and weekend work may also be available, and you might need to start early or finish late for some projects as well as work away from home at times.

Future prospects

Building projects, new builds and renovations cannot happen without construction operatives so they are in strong demand when business is doing well.

You could work for contractors or local authorities.

You may progress to a specialist craft career such as carpentry or bricklaying or advance to a supervisory role. You also have the option of becoming self-employed or finding work abroad.

Advantages/disadvantages

The work can sometimes be physically demanding.

You have the opportunity to learn a wide range of skills and work on a different project every day.

Your role on-site is important as you pave the way for tradespeople to complete their tasks.

Money guide

As a trainee starting out you can expect a salary of up to £15,500 per year.

As a qualified construction operative you could earn £17,000–£20,500.

Depending on the project they are working on, skilled operatives may receive up to £24,000 a year.

Overtime is often available for those who wish to increase their earnings.

On some projects there are bonuses based on outputs which can lead to higher earnings.

Related opportunities

- Bricklayer p60
- Building Technician p64
- Mastic Asphalter p93

Further information

Construction Industry Training Board (CITB)
www.citb.co.uk

Federation of Master Builders
www.fmb.org.uk

Women and Manual Trades
www.wamt.org

Qualifications and courses

There are no set academic entry requirements, although GCSEs/National 5s or equivalent in English, Maths and a science or technology are useful, alongside any equivalent vocational qualifications. It is also possible to take NVQs/SVQs in Specialised Plant and Machinery Operations (Levels 1 and 2) and Foundation, Intermediate and Advanced certificates in Maintenance of Construction Plant.

The minimum age to operate plant and equipment is 18 but 17-year-olds may work under supervision while they are training.

Construction civil engineering apprenticeships may be available for those over the age of 16 who wish to train as a construction plant operator. Another option is to train as an apprentice in Crane Operation or Plant Operations with the National Construction College. This route involves practical training and studying for the NVQ Diploma and Certificate in Plant Operations (Level 2).

The Construction Plant Competence Scheme (CPCS) card is required in order to operate most categories of plant, including cranes. New applicants must pass a health and safety test and technical test for a red CPCS card which allows trainees to work on-site. After working 300 hours and completing an NVQ/SVQ you can obtain a blue card.

What the work involves

Construction plant operators operate and maintain different forms of plant (machinery) used for tasks such as moving soil and building materials, flattening the earth and preparing concrete.

You may operate bulldozers, excavators, diggers, cranes and fork-lift trucks.

In larger organisations you may specialise in operating one type of plant. For example, crane operators control the machine to load and unload materials, working in conjunction with a signaller on the ground.

Type of person suited to this work

As you will often handle large and complex machines, you need to be good with your hands and have keen safety awareness. You will also need good mechanical knowledge.

You need to stay focused and communicate with your workmates so that you can operate safely. If you are working on cranes, you need to be comfortable working at heights, be alert and be a skilled driver.

Working conditions

You will work outdoors and on a variety of sites. Expect to get hot, dusty and dirty in the summer and cold, muddy and wet in the winter. You will have to stick to health and safety regulations and wear a protective helmet and boots.

You are likely to work a normal working week from Monday to Friday but you may also work extra hours at weekends. Some

construction firms operate longer hours during the summer months and shorter during the winter. You might have to travel away from home on some contracts.

A driving licence (often a large goods vehicle category C licence) is essential for crane operators.

Future prospects

Work is available across the UK with crane-hire companies, manufacturers, local authorities and construction companies. For operators specialising in engineering work there is a high concentration of jobs available in the Midlands and in the north of England.

With experience, you may progress to using a wider range of plant and you may supervise or train plant operators or work as a safety inspector. You may also choose to specialise in operating one type of plant.

With experience and financial backing, it may be possible to start your own construction plant operation or hire business.

Advantages/disadvantages

Working on construction sites can be noisy, dusty and dirty although you will have safety equipment/clothing such as ear protectors. Working at heights may be demanding for some people.

It is a skilled and varied career where you are responsible for some impressive machinery. It can be satisfying to be able to control the machinery efficiently and safely.

Money guide

Trainee construction plant operators typically have a starting salary of £13,000.

As you gain qualifications, your earnings can increase to £15,000–£19,000 a year.

Very experienced plant operators or those with specialist skills can achieve £20,000–£26,000.

It is possible to increase your earnings through bonuses and working overtime.

Related opportunities

- Construction Operative p72
- Demolition Operative p76
- Highways Maintenance/Road Worker p89

Further information

Chartered Association of Building Engineers
www.cbuide.com

Construction Industry Training Board (CITB)
www.citb.co.uk

Qualifications and courses

The normal entry qualification required to be a construction manager is a degree, HND or Foundation degree. Relevant subjects include construction project management, building services engineering and building technology. For entry to a degree, 5 GCSEs/National 5s (A*-C/A-C) including Maths and a science and 2 A levels/3 H grades are normally required. You could seek financial sponsorship from an employer whilst you complete your studies and then go on to work for them after you graduate.

If you chose a degree unrelated to the construction industry, you may still be able to enter the field by completing a Graduate Diploma Programme offered by the Chartered Institute of Building (CIOB).

Alternatively, it may be possible to work your way up from technician level, as an estimator or as a site supervisor. The NVQ/SVQ in Construction Site Supervision (Level 3) and Construction Site Management (Level 4) are open to anyone with experience in building site supervision and management. Technicians can also study part time towards an HNC or degree.

The Chartered Institute of Building (CIOB) offers qualifications at Levels 3 and 4 in Site Management and Site Supervisory Studies which could improve your career prospects.

Recently qualified graduates are likely to continue training on programmes designed for professional and managerial staff. The CIOB runs a professional development programme (PDP) leading to chartered membership of the Institute.

What the work involves

Construction supervisors/managers run both new build and maintenance construction sites. Your duties will include planning the build, preparing the site, arranging deliveries, and checking quality and cost of building materials and equipment.

You will also have the responsibility for overseeing the construction project, hiring and managing staff, making sure everyone is safe on-site, and solving problems when they arise.

You will need to report directly to whoever is paying for the work to be done and keep them updated on progress.

Type of person suited to this work

You have to be able to plan ahead and have good management and problem-solving skills so that projects run smoothly. Numeracy skills are important in order to budget your projects.

You need to be a good communicator, energetic, hard working and diplomatic in order to motivate and manage your staff effectively. You must be able to develop an in-depth knowledge and understanding of all aspects of the construction business. You will use computer software packages to plan workflow, so IT skills are also useful.

Organisational skills are essential and you should be prepared to take responsibility for anything that happens on your site.

Working conditions

You will be based on construction sites and are likely to work from a portable office. You will work outdoors in all weathers.

You may work a normal working week, but you may also have to start early, finish late or work at weekends on some projects. As some companies win contracts all over the UK, you might have to work away from home.

Future prospects

Demand in the construction industry does seem to be on the increase again after a few years of uncertainty. A rise in construction means that there are good opportunities for construction supervisors on a wide range of builds, including multi-million pound projects as well as opportunities abroad.

You may work for contractors, construction companies, project management companies, surveyors' practices, public services, utility companies or retailers.

With experience, you may be promoted to work as a contract manager on bigger and more prestigious projects. You could go into teaching the trade or work as a health and safety inspector.

Advantages/disadvantages

There is a great deal of satisfaction to be obtained from knowing that you have the ability to begin with an empty piece of land and leave a finished construction behind.

When there is a tight deadline to meet and a problem arises, the work can be stressful; particularly as many projects are on large but tightly planned budgets.

Money guide

Trainee construction managers usually have an annual salary of around £20,000.

Once you have gained experience as a manager, your earnings can rise to between £27,000 and £45,000.

For managers running the largest projects, a salary in excess of £70,000 is possible.

Earnings vary depending on geographical location and your particular employer.

Related opportunities

- Architectural Technician p57
- Building Surveyor p63
- Civil/Construction Engineer/Civil Engineering Technician p69

Further information

Chartered Institute of Building
www.ciob.org.uk

Construction Industry Training Board (CITB)
www.citb.co.uk

Qualifications and courses

There are no set academic requirements. However GCSEs/National 5s in English and Maths (A*-E/A-E) are an advantage as you will need to calculate quantities, form estimates and maintain written records.

Currently, there are no colleges that provide apprenticeships specifically for those wishing to go into the field of damp proofing. Some private companies, involved in Investors in People, may offer apprenticeships however.

On-the-job training is provided by experienced damp proofers. Damp-proof installer companies may also provide courses on safety awareness.

Technicians can take short courses at the British Wood Preserving and Damp Proofing Association. You can study for the Level 2 NVQ in Insulation and Building Treatments, a course developed by CITB ConstructionSkills. Courses accredited by the CITB are recognised throughout the industry.

In order to work on a building site, you must also hold a Construction Skills Certification Scheme (CSCS) card which acts as proof of your competency. Completing a vocational qualification before or whilst you train will qualify you for one of these.

What the work involves

You will provide guidance and solutions to people in residential or commercial properties who experience damp problems.

As a damp proofer, you inspect and assess properties using moisture meters to aid you in your discovery of a client's damp problems. Drawing on your knowledge and experience within the industry, you will provide your clients with recommendations as to how to eradicate their damp issues and suggest a suitable price at which to do so.

You also may need to install damp-proof courses to buildings. This is a horizontal layer of water-repellent/proof material that prevents moisture rising from the ground up the walls. This involves drilling holes in walls to inject mortar or creams/gels at varying pressures.

Type of person suited to this work

As you will be working on buildings or engineering projects, you should have an interest in construction and architecture. You should also be in good health and have an understanding of health and safety protocol.

You should have good problem-solving skills and relish new challenges. You should be able to work in a team and cooperate with colleagues and customers. You will need good written and communication skills to give and follow instructions and guidelines.

You need to have a keen eye for detail and have good practical skills to operate drills and specialist machinery such as moisture meters to check damp levels. You should also be willing to travel.

Working conditions

You will usually work 38 hours a week, Monday to Friday. You may have to work overtime and this could include evenings and weekends. These hours will vary depending on where you are working, who you are working for and even the weather.

You will have to do a lot of travelling to each new site. A driving licence and car would be useful.

Your work will be largely outdoors, so can be affected by the weather.

Future prospects

You can find job opportunities with the 1,500 damp proofing contractors across the UK. You can also find employment in related fields such as timber treatment, waterproofing and pest control.

With experience you will be eligible for promotion to remedial treatment surveyor or supervisory posts. The Wood Protection Association (WPA) runs its own training courses for surveyors and technicians and with an NVQ/SVQ Level 2 in Insulation and Remedial Maintenance you can apply for occupational assessment under the CSCS.

You could become self-employed.

Advantages/disadvantages

As a damp proofer you will have plenty of opportunities to travel around the UK and abroad.

Bonus payments are extremely common within this field of work.

You may have to work in uncomfortable weather conditions and antisocial working hours.

The work is very physical and demanding and a lot of your time will be taken up travelling between different work sites and projects.

Money guide

Starting salary can range between £12,000 and £15,000 a year.

With experience, this can rise to £25,000 a year.

With specialised skills and training you can earn in excess of £35,000.

Related opportunities

- Building Technician p64
- Concreter p71
- Thermal Insulation Engineer p112

Further information

Institute of Specialist Surveyors and Engineers
www.isse.org.uk

Wood Protection Association
www.wood-protection.org

Qualifications and courses

No formal qualifications are required to be a demolition operative. However GCSEs/National 5s (A*-E/A-E) in Maths, science subjects and English or a background in general construction may be useful for calculations, measurements and theory. The BTEC Diplomas (Levels 1-3) in Construction and the Built Environment may also be relevant for this job.

You can enter via the CITB ConstructionSkills Apprenticeship in Demolition Plant Operation, if you are under 16, but you need to be at least 18 to work as a demolition operative. There is also a specialist apprenticeship for people who work in demolition but do not handle machinery.

Most training is done on the job, with special attention given to health and safety – including accident prevention, manual handling, noise control and fire control/prevention. You can study for the NVQ Level 2 in Demolition and Demolition Plant. Other NVQs are available for specialist work such as the Level 2 in Removal of Hazardous and Non-Hazardous Waste.

You will need a Certificate of Competence of Demolition Operatives (CCDO) card to prove you are qualified to carry out the job safely. To qualify for one of these, you are normally required to have completed or signed up for a vocational qualification.

What the work involves

Demolition operatives demolish or dismantle buildings and structures. The job can be highly dangerous if the right precautions are not taken so you will be responsible for assessing structures and planning for the safest and most efficient way to demolish them.

You will clear and prepare sites, put up fencing and scaffolding, strip out fittings, and remove, sort and grade reusable materials.

You will use a variety of tools such as chisels, crowbars and axes for hand demolition of brick and stone and you may also use specialised machinery including pneumatic drills, steel girders, chainsaws and even explosives for bigger jobs.

Type of person suited to this work

As you will be involved in the construction industry you should have an interest in building, construction and the environment.

You should have a high level of fitness as your work will be quite physical a lot of the time, involving lifting and carrying, and you should be able to work at heights. You will also need good manual skills to operate equipment and tools and an aptitude for more delicate tasks such as hand demolition.

You should have a strong eye for detail and be able to follow health and safety instructions rigorously.

You should be willing to work as part of a team and be conscious of your safety and that of those around you.

Working conditions

You will normally work 39 hours per week. This will frequently include weekends and overtime.

As you will be working on construction sites you should be willing to work outdoors in dirty, dusty, noisy conditions in all weathers. This will also involve lifting, bending and working at heights.

You will need to wear protective equipment including helmets, boots, gloves and goggles which will be provided by the employer. You may also be required to wear breathing equipment for some jobs.

Future prospects

There are opportunities for demolition operatives on many building and development projects throughout the UK. You can find employment in specialist companies which may be based nationally but many companies are based in urban and traditionally industrial areas of the UK.

If you work hard and commit yourself to the job, there are fantastic opportunities for progression and personal achievement.

Advantages/disadvantages

Although it is unusual to be self-employed in this profession, with experience you can set up your own contracting business.

At times your work can be strenuous and potentially hazardous if you do not follow safety procedures.

Money guide

Demolition operatives have nationally recommended minimum rates of pay.

The starting salary for a trainee is around £12,500 a year.

Once qualified as a demolition operative, your salary will rise to anything between £13,000 and £18,000. As a senior operative you can earn up to around £23,000.

You may earn significantly more with overtime or for carrying out specialist responsibilities such as operating plant machinery or handling explosives.

Related opportunities

- Construction Operative p72
- Quarry Worker p224
- Scaffolder p104

Further information

Construction Industry Training Board (CITB)

www.citb.co.uk

National Federation of Demolition Contractors

www.demolition-nfdc.com

Qualifications and courses

No specific qualifications are necessarily required in order to become a dry stone waller. You can train with an experienced professional or do a land-based training course that includes dry stone walling.

The Dry Stone Walling Association of Great Britain (DSWA) runs a National Certification scheme at 3 levels (Initial, Intermediate and Advanced), which is open to anyone, including complete beginners. Completion of these usually leads to the DSWA Master Craftsman Certification. These qualifications are available through some colleges and across the DSWA branch network, including Scotland and Wales. These branches also offer short courses and practice days aimed at improving the skills of beginners and are usually led by a DSWA instructor over a period of one weekend.

Alternatively, you may choose to go down the apprenticeship route. A number of colleges across England offer Lantra Certificates in Dry Stone Walling (Levels 1 and 2) as part of a more general Diploma in Environmental Conservation. You will need sponsorship from an employer in order to complete this.

What the work involves

Dry stone walls are built as boundaries in rural landscapes, and sometimes in gardens and parks. Unlike other walls, they are built without the use of mortar or cement.

As a dry stone waller, you will build new walls and maintain and rebuild existing walls, using the existing or newly quarried stone.

You will prepare foundations, set up a frame and lay stones, as well as strip out any existing wall or stones. You will need to be able to use tools such as hammers, sledgehammers, pick axes and tape measures.

Type of person suited to this work

You need to be thorough, methodical and good with your hands.

Being physically fit is essential as you will be lifting and carrying heavy stones. You will also need endurance and self-motivation as you will most likely be self-employed.

An eye for design is useful for creating decorative effects. You may also need to work in a team with other dry stone wallers.

You will need to respect the plants, animals and insects that live within, on or around the walls and other parts of your working area so having an interest in conservation and the environment is useful. You should also be aware of health and safety regulations.

Working conditions

Your work will be physically demanding and take place outdoors in most weather conditions. The work may also be dusty and dirty.

You will need to wear protective gear such as boots, strong gloves and safety goggles.

Your working hours are likely to vary according to daylight hours and when the work is available. You may need to work weekends.

Future prospects

Dry stone walling is prospering due to the increased interest in conserving walls and the growth in artistic landscape projects. Given that dry stone walls are composed of natural materials, they are highly valued in a society increasingly concerned about its environment.

As a highly important feature of the British landscape, there is a demand for the maintenance, repair and creation of dry stone walls in farms, parks and gardens. Work is available in all rural areas of the UK for skilled members of the profession.

Employment is possible with organisations such as National Parks and The National Trust – although most experienced dry stone wallers are self-employed.

You can begin by working for an experienced dry stone waller and gain the necessary skills before working for yourself.

Many experienced wallers travel around the UK to complete projects. A few wallers combine this work with traditional bricklaying projects.

Advantages/disadvantages

The work can be physically demanding.

It is rewarding to use craft skills to build dry stone walls that are not only functional, but also enhance the landscape and become part of our heritage.

You also have the chance to be creative when producing decorative effects.

Money guide

The normal starting point for new entrants is around £8,000 per year.

For dry stone wallers with some experience, earning between £10,500 and £14,500 is possible.

Very skilled dry stone wallers with a lot of experience and contacts are able to earn up to £21,000, however earnings vary widely across the UK.

Related opportunities

- Blacksmith p198
- Construction Operative p72
- Stonemason p108
- Thatcher p111

Further information

Dry Stone Walling Association of Great Britain
www.dswa.org.uk

Lantra
www.lantra.co.uk

Qualifications and courses

An industry-recognised Level 3 NVQ qualification and a technical certificate are required in order to become a qualified electrician. Examples of these Level 3 qualifications include: a City & Guilds/EAL-approved Level 3 Diploma in either Electrotechnical Services (Electrical Maintenance) (2357), Installing Electrotechnical Systems & Equipment (Buildings, Structures and the Environment) (2357) or Electrical Installations (Buildings and Structures) (2365).

The most common route to training as an electrician is by undertaking an electrotechnical advanced apprenticeship. This route will involve working towards a Level 3 NVQ Diploma in the workplace whilst studying for a technical certificate one day a week at college. You will be required to secure employment prior to signing up for the apprenticeship and typical entry requirements include 3 GCSEs/National 5s (A*-C/A-C) including English, Maths and a science. You must be 16 or over.

The City & Guilds Certificate in the Requirements for Electrical Installations helps to ensure that those practising in the electrical industry are up to date with the latest safety regulations.

Those experienced in areas such as electronics may qualify for entrance onto a training course. Colleges and private organisations offer their own courses but candidates must show practical work ability. Other qualifications include the City & Guilds NVQ in Engineering Maintenance and the BTEC Certificates/Diplomas in Engineering.

Entry to the profession is quite competitive and you must pass a colour vision and selection test.

What the work involves

Electricians install and inspect the wiring systems in all kinds of buildings (residential and commercial) and mechanical equipment.

You will follow detailed diagrams and plans when checking and installing new systems. Once installed you will test them to make sure they are safe.

You may work on quite complex wiring systems, ranging from security circuits and computer networks to traffic lights and other street lighting.

Type of person suited to this work

You must have the practical skills to be able to use tools such as pliers, screwdrivers and drills as well as the ability to follow wiring diagrams and work within strict safety regulations. Knowledge of maths and physics is therefore beneficial.

You will need to be physically fit as the work involves bending, stretching, kneeling and generally being active. It can also involve working at heights, so you must be comfortable with this.

You may work alone or in a team but either way you will be talking to customers and explaining electrical problems, so good communication skills are an asset.

Working conditions

You may work a normal working week from Monday to Friday, but most electricians work 37–40 hours including evenings and weekends to accommodate the needs of their customers.

Electricians work in a variety of locations from people's homes to offices or building sites. You will almost certainly need a driving licence. The work can be dusty and dirty.

You will need to keep to health and safety regulations otherwise working with electricity can be exceedingly dangerous.

Future prospects

Employment prospects for new trainees are good as demand remains consistent.

Work is extremely varied and available in all kinds of environments including in housing associations, general building companies and public services such as local authorities and health trusts.

Most large employers have a formal progression structure, therefore, as you gain more experience, opportunities for supervisory and managerial responsibilities will become available and you may even move into consultancy work or training. Owning your own company and working abroad are also possible.

Advantages/disadvantages

You are providing a vital service and it is particularly rewarding to solve problems for people.

Many electricians are self-employed so you could have increased control over your work-life balance.

You may be required to work long hours and sometimes in physically difficult circumstances.

Money guide

The Joint Industry Board (JIB) for the Electrical Contracting Industry sets salary rates for apprentices and qualified electricians.

Trainee electricians may begin on around £8,000.

Once qualified, salaries rise to between £17,000 and £20,000.

Earnings increase with experience and those who specialise in a certain area can make £23,000–£30,000 a year.

Overtime and bonuses are also possible.

Related opportunities

- Bricklayer p60
- Carpenter/Joiner p65
- Plumber p98

Further information

Scottish Electrical Charitable Training Trust
www.sectt.org.uk

Qualifications and courses

No formal qualifications are required to become an estate agent. It is useful for entrants to have 5 GCSEs/National 5s (A*-C/A-C). Most entrants start as a trainee negotiator and undertake an NVQ in the Sale of Residential Property (Level 2). A degree, Foundation degree or HND in subjects such as property management, urban and land studies or civil and structural engineering, may increase your chances of employment in a competitive industry or a background in sales, customer service or administration could be advantageous.

Training is mostly carried out on the job. It may involve studying for Technical Awards offered by the National Federation of Property Professionals (NFoPP), such as the Sale of Residential Property, Residential Letting and Property Management and Commercial Property Agency. NFoPP also offer Certificates in these subjects which are intended for those with around 3 years' experience. Both the Technical Awards and the Certificates may be studied by distance learning or part time at a college. Further training may qualify you to become an energy assessor or surveyor.

School leavers looking to become an estate agent administrator can enrol on the Intermediate Level Apprenticeship in Property Services and those who want to become an estate agent could consider the Advanced Apprenticeship.

As an estate agent, you will be required to hold a valid driving licence.

What the work involves

Estate agents are responsible for selling or letting residential or commercial properties on behalf of their clients.

Properties are valued based upon factors such as their condition, location, comparison with other properties and the current housing market.

Estate agents market a property, show prospective buyers around and negotiate prices to ensure the best deal for their client.

During the selling process you will have to liaise with banks, surveyors, mortgage brokers and solicitors.

Type of person suited to this work

You will need excellent speaking and listening skills so that you can recommend suitable properties to potential buyers. You also have to be good at negotiating so that you can help buyers and sellers to agree prices for properties.

You must be confident dealing with people and prepared to work hard to achieve sales.

As you will be dealing with the figures when valuing properties or negotiating prices, you will need numeracy skills and an interest in keeping up to date with what is happening in the housing and property markets.

Working conditions

Some of your time will be spent in the branch office, and the rest of the time you will be visiting properties, so a driving licence is needed.

Estate agency branches are often modern and open plan with up-to-date equipment. You will spend a lot of your time working at a computer and speaking to your customers on the phone.

This can be very stressful work as you will have sales targets to reach and your earnings will depend on your selling ability. You are likely to need to work at the weekends and evenings (with some time off during the week instead).

Future prospects

Estate agents are located throughout the UK but there tend to be fewer opportunities in a poor housing market and within rural areas. Positions are not always advertised, therefore you may need to make general enquiries.

With experience and qualifications, there are opportunities for promotion, especially in larger companies. You may move from trainee to negotiator, then to senior negotiator and on to branch manager. If you established a substantial client base, you may opt to become self-employed or to carry out freelance work. You could set up your own agency or become a partner in a firm.

Advantages/disadvantages

The work can be stressful if you are finding it hard to meet sales targets, especially if you are working on a commission-only basis in a slowing housing market.

When the property market is booming, or for those who are very skilled in sales, the financial rewards can be high.

Money guide

Estate agents' earnings are usually a combination of a basic salary plus commission based upon their sales figures. Some estate agents work for commission only.

Starting salaries for new entrants are between £12,000 and £20,000.

With experience you can expect to earn around £25,000 a year.

Those employed at a managerial level can achieve up to £55,000.

Related opportunities

- Auction Property Consultant p59
- Planning and Development Surveyor p96
- Property Valuer p99

Further information

National Association of Estate Agents
www.naea.co.uk

Qualifications and courses

Whilst there are no specific entry qualifications to becoming a fabricator, GCSEs/National 5s (A*-E/A-E) in English and Maths are useful. A science and Design and Technology are also beneficial as you must have an understanding of calculations, measurements and theory.

Many trainees develop their profession through an apprenticeship scheme. The Level 3 Advanced Apprenticeship in Metal Processing will give you a broad understanding of the metal industry as well as the opportunity to develop and make a range of metal products, including structural steelwork. Construction apprentices learn practical skills under the supervision of skilled fabricators, as well as taking courses at a college or training centre. These relevant courses include NVQs/SVQs such as Level 1 in Construction and Civil Engineering Services, Fabrication and Welding Engineering (Levels 2 and 3), Carpentry and Joinery (Levels 2 and 3), and Level 4 in Construction Site Management.

A Construction Skills Certification Scheme (CSCS) card is needed to work on a building site as it acts as proof of your competence within the field. In order to qualify for one of these, you must have completed or be registered with a scheme that offers you an industry recognised qualification. CSCS cards are granted in accordance with your qualifications and experience.

What the work involves

Fabricators manufacture, assemble and install structural frames of buildings.

You will extend and adapt existing buildings or work on manufacturing the entire framework for new ones. This may include houses, public buildings, swimming pools, airport terminal buildings and caravans.

Your work will be influenced by architectural demands and advances. The need for thermal performance, speed and versatility in architecture means that traditional forms of construction such as concrete, steel and glass are being replaced with new, more efficient materials. You will probably work with a diverse range of materials such as aluminium, PVC foam, timber, natural stone and fibreglass.

Type of person suited to this work

As a fabricator you should have an interest in machinery and the construction industry.

You will be working on-site or in a manufacturing plant; as this may include physical labour you should be fit and have good manual skills.

You should also enjoy working in a team and have excellent knowledge and awareness of health and safety practices. You should be organised and know how to plan ahead.

Working conditions

You will typically work 39 hours per week, Monday to Friday. This may vary depending on the project you are working on.

You may also be required to do shifts and overtime or work evenings and weekends.

You may work in a variety of locations; outdoors, indoors and at heights. Weather conditions may make this work uncomfortable or delay work.

As a fabricator you might have to operate machinery such as mobile cranes.

Future prospects

As you gain experience you will have the opportunity to specialise in a certain area of fabrication. This could be as an aluminium fabricator (curtain walls, windows and frames), a conservatory fabricator (working with timber, aluminium or PVC to erect conservatories), or a window fabricator (working with frame makers and door makers building off-site manufactured rooms that can be assembled on-site).

As you accumulate experience you can progress to a higher level position such as a supervisor or you may also choose to become self-employed. There are also fantastic opportunities to take your skills abroad.

Advantages/disadvantages

New and exciting developments and improvements in materials and technology mean that your work is likely to include scope for diversity and creativity.

Your work at times may be very physically demanding.

Money guide

The wages of fabricators are normally paid according to the nationally recommended industry rates. Earnings of trainees are graded to a nationally agreed minimum rate.

Your starting salary may be around £13,000 a year.

With experience, you could earn between £18,000 and £25,000 per year.

Highly experienced fabricators may earn in excess of £35,000 a year.

Wages will increase in the event of overtime and shift allowances.

Related opportunities

- Building Technician p64
- Carpenter/Joiner p65
- Ceiling Fixer p67

Further information

Construction Industry Training Board (CITB)

www.citb.co.uk

National Association of Shopfitters

www.shopfitters.org

Qualifications and courses

You can become a facilities manager by completing a degree in any discipline although many entrants are graduates of property or land-based subjects such as building management or surveying. Others gain experience in relevant fields such as construction, building services engineering or hospitality in order to acquire the necessary skills to become a facilities manager. Postgraduate diplomas and master's degrees in facilities management, although not a prerequisite, can be particularly useful in aiding career progression, especially if you want to gain chartered status later on in life.

Alternatively, you can take vocational courses in facilities management. These include appropriate NVQs/SVQs or professional qualifications from the British Institute of Facilities Management (BIFM). You can also study for a Foundation degree (developed by Asset Skills), or an HND in Facilities Management. Entry into the field with these qualifications will usually be at a lower level however.

Work experience is recommended and employers will seek candidates with good experience. For graduates, year-long placements are invaluable.

You may have a permanent contract or work on a fixed-term contract. At times you may be required to be available at any time in the event of emergencies.

Future prospects

You may begin as an assistant in a particular support field such as IT, HR, finance, purchasing or health and safety and then progress to functional manager, senior manager and director positions.

You can work as a facilities manager in-house or join a facilities management provider or consultancy. This will provide a variety of projects and responsibilities but will not have the same level of stability.

It is recommended that you seek opportunities in different organisations to secure promotion.

Advantages/disadvantages

Prospects for career development can be excellent. If you are hardworking, flexible, and efficient, have commercial acumen and the ability to juggle tight budgets you can progress to higher level management jobs.

You may find it difficult to move from an in-house role to a position with a service provider as there is a perceived difference in outlook and experience.

What the work involves

Facilities managers are responsible for the management and administration of premises, including offices, schools and commercial properties. You will provide a safe and efficient work environment for staff by implementing procedures to improve facilities, reduce costs and increase productivity.

Your day-to-day work will depend on the type of organisation you work for, but will include a broad spectrum of tasks such as coordinating and managing central services, organising mail receipt and despatch, arranging contractors for security or supervising cleaning and catering.

You must be able to respond to all problems that arise unexpectedly, and react to them appropriately and efficiently.

Type of person suited to this work

As you will be coordinating many different aspects of an organisation, or many organisations in one location, you need to be highly organised. You should be able to meet deadlines and have strong problem-solving skills.

You will lead a team so you should have excellent negotiation skills and strong written and verbal communication ability. As you will be working with a variety of different people you should have good customer service skills.

You should also be aware of environmental issues affecting premises and how budgets are planned and controlled.

Working conditions

Your hours will vary depending on the organisation you work for but on average you will work from 9am to 5pm. You will mainly be office based, but you will move around a lot to inspect and supervise various projects throughout the location you work in.

Money guide

A starting salary for an entry-level assistant role may range from £18,000 to £22,000 per year.

An experienced facilities manager can earn between £25,000 and £35,000 a year.

Senior and regional facilities managers can earn in excess of £60,000.

Wages are typically higher in the south-east of England and in the capital. Financial bonuses may also be available.

Related opportunities

- Building Services Engineer p62
- Health and Safety Adviser p27
- Quality Manager p44

Further information

British Institute of Facilities Management
www.bifm.org.uk

Chartered Management Institute
www.managers.org.uk

Qualifications and courses

No specific qualifications are required, although a common route of entry is through an apprenticeship scheme where GCSEs/National 5s (A*-E/A-E) in Maths, Design and Technology, a science and English might be a requirement.

As an apprentice you will be trained on the job while working towards vocational qualifications. You may go to a college or training centre on day or block release. The Construction Industry Training Board (CITB) offers an apprenticeship scheme in Floor Covering, which will provide you with a Level 2 Construction Diploma in Floor Covering and a Level 2 NVQ Diploma in Flooring Occupations.

Alternatively, fast-track short courses from independent providers such as the Flooring Industry Training Association and NVQs/SVQs in Floor Covering at Levels 1-3 are available. These awards allow you to specialise in impervious coverings, textile carpeting or wood block flooring. You may also be able to acquire some of the necessary skills to become a floor layer by completing a BTEC Level 2 or 3 Certificate or Diploma in Construction.

Many employers on construction sites require workers to have a Construction Skills Certification Scheme (CSCS) card. This demonstrates that the holder has health and safety training. In order to be granted one of these, you must have completed or be registered with a scheme that awards you an industry recognised qualification.

Once employed, you may be required to hold a valid driving licence in order to commute between projects.

What the work involves

Floor layers fit various rooms and buildings with many different types of flooring, such as vinyl, wood, carpet, tiles, rubber or plastic. You will often work with materials chosen by the client but on occasion may be asked to make recommendations on the best material to use for the particular type of floor.

You will use various tools to prepare the surface, cut the flooring material to size and lay the floor.

You will work from technical plans and diagrams in order to lay and fit each floor correctly.

Type of person suited to this work

To do this work you will need accurate numerical skills in order to calculate the exact amount of flooring material you will need for each job.

You should be physically fit as you will spend a lot of time lifting and carrying materials, or working on your hands and knees.

You may work alone for some smaller jobs, but you must also be able to work in a team with other construction professionals for larger jobs. Good planning skills are helpful when organising your workload, and you should be happy meeting and talking to lots of different people.

Working conditions

You will usually work normal Monday to Friday office hours, but you may also need to work through the night or over weekends on some contracts, so that you can lay floors without disrupting the work of shops and businesses.

Most of your work will be spent indoors in a variety of locations including people's homes, hospitals, offices and construction sites, some of which will be dirty and dusty.

Some contracts may involve absence from home overnight or for longer periods of time.

Future prospects

Employment for floor finishers is expected to remain relatively steady given the variety of industries readily employing the small number of people within the profession.

Once you have qualified, work will be available within small or large flooring companies or contractors across the UK. You could work across numerous industries including construction, retail trade and manufacturing.

You may choose to specialise in using one type of flooring material such as tiles or laminates.

With experience, you can progress to supervisory or managerial posts. Alternatively, you could set up your own business as a self-employed floor layer.

Advantages/disadvantages

An attractive and well-laid floor can transform a room. The ability to use your skills and a range of materials to create this effect can give you great job satisfaction.

You will spend a lot of time travelling to and from jobs, and may need to spend time away from home on big flooring projects.

Money guide

The salary of a trainee ranges from £12,500 to £16,500 per year.

As a fully qualified floor layer you could earn £20,000 to £25,000.

Highly skilled, experienced floor layers can earn salaries of up to £30,000 a year.

Many floor layers are self-employed and earnings will depend on the ability to win contracts.

Related opportunities

- Carpenter/Joiner p65
- Plasterer p97
- Roofer p102

Further information

Construction Industry Training Board (CITB)
www.citb.co.uk

Flooring Industry Training Association
www.fita.co.uk

Qualifications and courses

At least 4 GCSEs/National 5s (A*-C/A-C) including English, Maths and sometimes science or technology subjects are normally required to enter this career. Practical subjects such as metalwork and woodwork are also useful.

Apprenticeships are available for people aged 16–24. An Advanced Level Apprenticeship in the gas industry is a good route for those who wish to become a gas service engineer. Apprentices work towards the NVQ/SVQ in Domestic Natural Gas Installation and Maintenance and Emergency Services Operations (Levels 2 and 3) awarded by City & Guilds (6034). You will normally need to be employed by a company willing to sponsor you prior to signing up to an apprenticeship. Gas service companies also run their own apprenticeship schemes.

Trainees must gain registration with the Gas Safe Register. To become registered, you will need to work towards the above City & Guilds NVQ/SVQ or complete equivalent in-house training with a company. Technicians with qualifications or training other than the NVQ/SVQ must complete Accredited Certification Scheme (ACS) assessments.

Gas service technicians have to demonstrate their gas safety competence on a 5-year cycle by successfully completing nationally agreed ACS assessments.

A valid driving licence is essential to allow travel between clients' premises.

Although most of your work will take place in customers' homes or business premises, you will also need to work on many different construction sites. You will need to wear protective clothing, such as a hard hat, goggles and gloves.

You will be required to travel to jobs in a van which stores your parts and equipment.

Future prospects

Job prospects for gas service technicians are favourable given the national shortage of trained personnel. There are opportunities for work throughout the UK.

You can work for national or private companies. In larger companies you can apply for training posts at local colleges or within private organisations.

Once you have gained enough experience, you could progress into gas engineering, a supervisory/management role or become self-employed. Your employer may even sponsor you to study further qualifications.

You could also choose to specialise in a specific area such as energy efficiency, oil-fired equipment or environmental technologies.

Advantages/disadvantages

If your employer offers 24-hour emergency cover, you may have to work some unsocial hours.

The job can be strenuous and can involve working at heights or in confined spaces.

There is a high demand for gas service technicians and career progression opportunities are good.

Successfully repairing a potentially dangerous gas leak can be a rewarding experience.

Money guide

During your apprenticeship, you can expect your salary to start from between £12,000 and £15,000 per year.

Salaries for qualified gas service technicians range from £19,000 to £30,000.

Those who become self-employed and manage their own company and employees can achieve in excess of £40,000.

It is also possible to increase your earnings through overtime and shift work.

Related opportunities

- Gas Network Engineer p210
- Heating and Ventilation Engineer p88
- Plumber p98

What the work involves

Your job will be to install, maintain, repair and test gas appliances such as fires, cookers, heating systems, shower units and industrial equipment. You will carry out scheduled maintenance checks on systems and equipment.

You could work in private homes or on business premises.

You may also have to give customers quotes for costs and timescales, sell additional company services and deal with complaints.

As a trained professional, you will be required to give advice on the safety and efficiency of gas systems and equipment.

Type of person suited to this work

You will need excellent practical and problem-solving skills as you will be required to investigate and fix faults.

Gas appliances are potentially dangerous so you should be very thorough, reliable and aware of safety practices.

As you will be visiting clients' homes, you should be personable and presentable.

Working conditions

Working hours are generally 8am to 5pm, Monday to Friday. However, if your employer offers 24-hour emergency cover, you may have to undertake shift work.

Further information

Energy & Utility Skills

www.euskills.co.uk

Gas Safe Register

www.gassaferegister.co.uk

Qualifications and courses

GCSEs/National 5s (A*-C/A-C) or relevant vocational qualifications can improve your chances of getting work in the industry. Maths, English and technology-based subjects are useful for the areas of the job that involve measurements and calculations and for theoretical training.

You can train and gain vocational qualifications while you work by completing an apprenticeship. You will be taught practical skills by an experienced professional and may spend time off-site at a college or training centre. Apprenticeships in the Glass Industry are available at both Intermediate and Advanced Levels and last for 2 to 3 years. You are likely to work towards NVQs in glass-related subjects. These include Glazing Installation and Maintenance, Automotive Glazing, and Fenestration Installation and Surveying at both Levels 2 and 3. You will have to complete an aptitude test and have a selection interview prior to acceptance onto an apprenticeship.

Glass Training Limited (GTL) also provides flexible learning schemes that offer candidates in full-time employment the opportunity to gain an NVQ/SVQ through a distance learning programme.

To work as a glazier you need to have a Construction Skills Certification Scheme (CSCS) card or be registered with an affiliated scheme. This scheme requires an NVQ Level 2 and the completion of a health and safety test.

You will need to work safely and be aware of your own, the public's and your colleagues' safety when carrying, cutting and fixing glass.

You may work normal working hours during the week, but you may also need to work at weekends and during evenings, possibly offering emergency cover for households and businesses when replacing broken glass.

Future prospects

Work is available with glazing and construction companies throughout the UK and the demand for trained glaziers is high.

The range of jobs in glazing work is also increasing to include specialist areas, for example automotive glass repair and replacement.

After gaining sufficient experience, you may progress to technical or supervisory levels, or you could decide to start your own glazing business. The majority of glaziers are self-employed.

Advantages/disadvantages

Working at extreme heights may be demanding for some.

You will get to work in a variety of locations on a wide range of projects.

Cutting tools and glass can be dangerous, so you will have to be aware of health and safety regulations.

You could be called out at all hours for emergency jobs but the rates of pay for this type of work will be higher.

What the work involves

Glaziers use specialist cutting and fixing tools to cut glass to the correct size and fit it into place.

You might fit glass into houses, shop fronts, office blocks or roofs.

You might be working on new buildings or replacing existing or broken glass.

You will use your knowledge to choose a suitable type of glass for each job.

Type of person suited to this work

You should be able to follow technical drawings accurately and have a good eye for detail when measuring the materials for a job.

As you will be using different hand tools a practical ability will be necessary. You will also need to be physically fit so that you can carry glass and be comfortable working at heights (sometimes extreme heights).

You may work alone for some jobs, such as in people's homes, but you must also be able to work and communicate with other glaziers, especially when working on large jobs with big, heavy panes of glass.

Working conditions

You will work indoors and outdoors in many different locations. A driving licence may be useful.

Money guide

Starting salaries can be between £13,000 and £16,000.

With qualifications, glaziers can expect to earn up to £18,000.

Those who are highly skilled, with experience and extra responsibilities such as emergency call-outs, might achieve anything from £20,000 to £35,000.

Shift allowances and the opportunity to work overtime can supplement your income.

Related opportunities

- Building Technician p64
- Ceiling Fixer p67
- Window Fitter p117

Further information

Glass and Glazing Federation
www.ggf.co.uk

Glass Qualifications Authority
www.gqaqualifications.com

Proskills UK
www.proskills.co.uk

Qualifications and courses

To become a heating and ventilation engineer, you will need to work towards an NVQ Diploma in Heating and Ventilation (Level 2 or 3). Most entrants to the profession study for these qualifications during an apprenticeship scheme. Apprenticeships in Heating and Ventilation are available at Intermediate and Advanced Level with 5 GCSEs/National 5s (A*-C/A-C) including Maths, English and a science subject required for entry. You will also need to pass a colour vision test and selection test.

Apprenticeships involve being trained by and working alongside a professional engineer whilst also attending college on day or block release. You may therefore be required to secure employment prior to signing up. NVQs/SVQs cover industrial, commercial, ductwork installation, service and maintenance of components. It usually takes 2 to 4 years to become fully qualified.

Other options for training include a City & Guilds Certificate in Energy Efficiency for Domestic Heating (6084) if you seek to become a domestic fitter and the Oil Firing Technical Association (OFTEC)'s training scheme for those who wish to work with oil-fired equipment.

It is also possible to achieve higher level qualifications including NVQ Level 4, Foundation or master's degree which can lead to professional membership of the Chartered Institution of Building Services Engineers (CIBSE).

What the work involves

Heating and ventilation engineers install equipment such as pipework and boilers for systems including central heating, hot and cold water services, and gas supplies in industrial and commercial buildings.

Your work will include cutting, bending and joining pipes that will need to withstand high pressures, so welding is an important part of the work.

When you have installed a system, you will test it to make sure that everything is working properly.

Type of person suited to this work

You must be a practical person so that you can use the equipment for the job. Understanding and following diagrams is an essential part of the work, so you need a logical, mechanically minded approach to your work. You will also need to be good at maths for making calculations.

It can be physically demanding work, as you will be bending, kneeling and working in tight spaces. You also need a head for heights and a safety-conscious attitude, because you will often be working from ladders and scaffolding.

Teamwork and communication skills are also important when you are installing large systems.

Working conditions

A lot of your time will be spent indoors, but you will also need a driving licence to travel between various construction sites, where you will need to wear safety protective clothing.

You may work a normal working week, but there may be times when you will work weekends and evenings to avoid disruption to clients or if you provide emergency cover. You may also be expected to work away from home.

Future prospects

There is currently a shortage of skilled heating and ventilation engineers with around 56,000 currently working in the UK.

Once you are qualified, work will be available with specialist heating and ventilation companies, or organisations such as the NHS or local authorities. With the government targeting greater energy efficiency, you may also opt to complete training that will allow you to install and maintain renewable energy technologies, eg solar powered heating systems. Some qualified fitters become self-employed, joining up with other engineers to offer sub-contracting services.

There are good prospects for advancement to supervisory roles and it is possible for you to become a heating and ventilation technician. If you take additional qualifications and higher education, progression to professional engineering level is also possible. There are also opportunities to work overseas.

Advantages/disadvantages

Working in cramped and awkward spaces can be uncomfortable.

Transforming a building from an empty shell into a warm, comfortable environment can be rewarding.

Career progression opportunities are excellent and there is demand across the country for work in this area.

Money guide

As an apprentice your starting salary could be between £9,100 and £11,250.

A newly qualified engineer could expect to earn up to £20,000.

With experience, you could achieve £22,000-£24,000.

Working overtime and receiving bonuses could increase your pay.

Related opportunities

- Gas Network Engineer p210
- Gas Service Technician p86
- Thermal Insulation Engineer p112

Further information

Building and Engineering Services Association
www.b-es.org

Building Engineering Services Training
www.best-ltd.co.uk

Qualifications and courses

There are no formal entry requirements for this work but GCSEs/National 5s in Maths, English and Design and Technology may be helpful. Personal skills and physical fitness are usually more important than qualifications. Employers may also want you to have some on-site experience, for example, as a construction labourer.

Your training will mainly be given on the job by experienced road workers. After you have secured employment, you may be able to study at a local college on day or block release to progress. You could work towards an NVQ Level 2 Certificate in Construction and Civil Engineering, an NVQ Level 2 Certificate/Diploma in Highways Maintenance, an NVQ Level 2 Diploma in Roadbuilding or a City & Guilds Level 2 Award in Winter Maintenance Operations. Your NVQ may cover areas such as excavation, re-surfacing, drainage, kerb laying and pavement construction.

Alternatively, you may opt to gain relevant skills prior to accepting full-time work by completing a City & Guilds (6217) Basic Skills in Construction course or a BTEC Level 2 in Construction.

To become a fully qualified site operative, you need to register with the Street Works Qualifications Register (SWQR) by studying for either a City & Guilds Certificate in Streetworks Excavation and Reinstatement, an SQA national award in Excavation and Reinstatement or a Street Works Excavation and Reinstatement qualification awarded by CABWI.

If working with plant machinery, you will need to be 18 or over. A driving licence will also be required and an LGV licence may be needed for some jobs.

Working conditions

You are likely to work a normal 37 hour working week, although you may also work weekends and evenings to avoid disrupting traffic.

You will need to be aware of the danger of traffic and mindful of health and safety for yourself and your colleagues. On-site, you will wear protective clothing such as a safety helmet, fluorescent jacket and boots.

Future prospects

Road workers may work for local authorities or, as work is increasingly contracted out, for specialist road-building or civil engineering companies.

Work is available across the UK. Some work is short term or seasonal. You could become self-employed and work on a contract basis.

As you develop and gain experience and qualifications, you may go on to lead a small team or become a supervisor.

Advantages/disadvantages

You will be helping to maintain and improve the safety of the roads in your local area which can be personally rewarding.

You will be carrying out physically demanding work outdoors during all weathers so you can expect to get hot in the summer and cold in the winter.

Money guide

Trainee road workers have a starting salary of £12,000–£14,500.

As you gain experience, you could earn around £18,000.

Road workers with additional responsibilities, such as supervisory duties, can achieve a salary of £24,000.

Qualified operatives can earn up to £40,000 a year.

Those who operate plant machinery may receive additional payments and you can increase your earnings with overtime and shift work.

Related opportunities

- Bricklayer p60
- Concreter p71
- Construction Operative p72

What the work involves

Road workers' tasks include building new roads, re-routing or widening existing roads, and repairing potholes and cracks in roads.

You will also have other duties such as putting up warning signs and barriers, controlling the movement of traffic near the work site, laying kerbstones and pavements, and gritting roads in the winter.

You will work with numerous building materials including concrete, tarmac and paving slabs. You will use a range of tools and equipment in your work, including specialised, heavy machinery such as diggers and rollers.

Type of person suited to this work

You must have a good standard of fitness, as the work involves a lot of hard, physical work and requires you to lift and carry heavy materials.

Practical ability with tools such as picks and shovels is useful, as is experience of operating equipment such as cement mixers, diggers and rolling machines.

As much of your work will be undertaken as part of a team of road workers and supervisors, it is important that you can get along with colleagues at all levels.

Further information

Construction Industry Training Board (CITB)

www.citb.co.uk

Street Works Qualification Register

www.swqr.org.uk

Qualifications and courses

It is possible to enter at an administrative level with GCSEs/National 5s (A*-C/A-C) and work your way up to housing officer. Personal qualities and pre-entry experience in housing or customer service is highly valued and, at times, more sought after by employers than qualifications.

Larger housing associations are, however, more likely to recruit graduates, therefore you may choose to study a degree or postgraduate qualification in a relevant subject such as housing, social policy, town planning or urban studies. You will need 2 or 3 A levels/H grades to be accepted. Those with an unrelated degree can complete the Chartered Institute of Housing (CIH) Level 4 Certificate in Access to Housing before progressing to the postgraduate diploma or master's degree in housing.

Housing officers whose degrees do not include a work placement will be expected to gain industry experience before they become a member of the CIH. Voluntary work in local authority housing departments, experience in a customer service role or as a member of a tenants' committee could all be useful when seeking employment.

The CIH also offers courses which can be studied part time and through distance learning; these include the Certificate in Housing Practice (Level 2-4).

meetings. As some of your work will involve travelling, a driving licence and your own vehicle is often required. Although you will normally work standard office hours, you might have to do some weekend work or unsocial hours.

You should be prepared to deal with rude and aggressive tenants.

Future prospects

Social housing is currently a growth area, with organisations taking on a number of new trainees as well as experienced staff.

Most housing officers work for local authorities and housing associations but you may also work for voluntary organisations, property companies, private landlords and housing trusts. You can work in various other sectors such as finance, IT, PR or law and with different groups of people, eg the homeless or elderly, students or people with disabilities.

With experience, you may specialise in one area, for example, homelessness assessment, special needs housing, urban renewal or tenant support. Alternatively, you may become a team leader or housing manager. Housing managers are particularly in demand in London and the south-east of England.

Housing associations have a strong tradition of developing the talent of their staff so there are great opportunities for progression.

What the work involves

You will manage and maintain rented housing, usually for a housing association or local authority. Tasks include assessing housing needs in an area and making policies to provide for them, allocating housing to applicants and planning property maintenance and repair.

You will also need to set rent rates, deal with tenants who are behind with their payments, resolve neighbourhood disputes and answer tenants' enquiries.

You will find yourself working with a variety of different people, ranging from vulnerable members of the community to those in challenging economic situations.

Type of person suited to this work

As most of your work will involve talking and listening to people, you will need excellent communication and negotiation skills. You should have an interest in working with diverse social groups and be sensitive to the needs of tenants and colleagues.

Maths and numeracy skills are useful for dealing with rental payments, maintenance and repair costs, and budgets.

It is important to keep up with developments in a range of housing and tenant welfare issues, be flexible and have the ability to solve problems as and when they arise. You will also need to be capable of working both independently and as part of a team.

Working conditions

Many housing officers are based in an office but regularly travel to make property inspections, visit tenants or attend

Advantages/disadvantages

You will be responsible for resolving complicated issues, such as misuse of property, and disputes between residents.

Helping people find a home can be personally rewarding.

Money guide

Salaries for those in housing assistant/customer service positions reach about £18,500.

Housing officers usually have a starting salary of £20,000-£27,000.

Those who become housing managers can expect to earn £28,000-£32,000.

At senior manager level, you can achieve earnings in excess of £50,000.

Related opportunities

- Residential Support Worker p556
- Social Worker p557
- Welfare Benefits Adviser/Welfare Rights Caseworker p562

Further information

Chartered Institute of Housing
www.cih.org

Scottish Federation of Housing Associations
www.sfha.co.uk

Qualifications and courses

No formal qualifications are normally required, however some GCSEs/National 5s in subjects such as maths or design might be useful as you must have an understanding of design technology and calculations. Other relevant qualifications include a BTEC Diploma Level 2 in either Manufacturing and Product Design, Engineering or Construction and the Built Environment.

Some employers will take on school-leavers as technician apprentices. Apprenticeships require 4 GCSEs/National 5s (A*-C/A-C) in Maths, a science or technology. A GCSE/National 5 in Manufacturing or Engineering may also be appropriate for this entry route. Apprentices are usually aged between 16 and 24.

As an apprentice, on-the-job training is provided by experienced professionals. You will also undertake further training at college through courses that focus on the safety requirements of your job, for example First Aid and health and safety. You can train for an NVQ Level 2 in Polymer Processing Operations or Performing Engineering Operations, an NVQ Level 3 in Polymer Processing and Related Operations or BTEC Level 3 Certificates/Diplomas in Polymer Processing and Materials Technology. If the training does not include NVQ Level 3, a workplace assessment will be carried out to check competence at this level.

Companies also tend to use a series of short course programmes with a specialist training provider to gradually build up the skills and knowledge required of a laminator.

Once technician status has been achieved it is possible to combine studying with further experience to gain an HND in Manufacturing Engineering (Metallurgy and Materials), Polymer Science or Polymer Technology.

With 4 years' experience, relevant NVQs/SVQs or a BTEC certificate/diploma, you could apply for membership of the Institute of Materials, Minerals and Mining.

What the work involves

Laminators work with polymer composite materials to make a variety of products such as hockey sticks, snowboards, canoes, car bodies, yachts and aircraft cabin interiors.

You will follow a brief for the design of a product, taking into consideration any requirements regarding strength, colour and finish. You will then choose the appropriate material to be pressed, sprayed or poured into a mould, prior to it being shaped into the final product.

You will work with traditional materials such as wood laminates, fibre glass and resin, and new products such as Kevlar.

Type of person suited to this work

You should have a keen interest in design and technology, engineering and materials science.

You should like practical work and have practical skills to handle tools and use specialist machinery. You need to be reasonably fit and have good vision for monitoring quality and noticing detail.

You should have initiative, follow a brief and work to a deadline. You should also be interested in, and keep up to date with, technological advancements in laminate materials. You should like to work in a team.

Working conditions

Your working hours will depend heavily on the project you are working on. Typically they can range from 37 to 40 hours but will vary according to the rate of your work and deadlines.

You will usually work in an environmentally controlled building. This means that the temperature is controlled and maintained to help resin harden quickly. Air is changed frequently to remove dust and the strong smell of resin.

You will be required to wear full protective clothing.

Future prospects

You may be employed by an engineering consultancy that undertakes installation projects for companies.

With experience and training there are opportunities to be promoted to roles such as technician and senior technician, or to move into design, research or development work for specialist composite laminate manufacturers.

Advantages/disadvantages

You may have the opportunity to work on products that are on the cutting edge of design such as speedboats, Formula 1 racing cars and craft for the military.

Your environment will frequently be dusty and involve the use of strong industrial chemicals which may be hazardous if handled incorrectly.

Money guide

A salary for an apprentice laminator starts at around £10,000 per year.

With further experience and qualifications this may increase to £25,000 per year.

A senior laminator can earn up to £30,000 per year.

Related opportunities

- Carpenter/Joiner p65
- Marine Craftsperson p214
- Polymer Technologist p221

Further information

British Plastics Federation
www.bpf.co.uk

Institute of Materials, Minerals and Mining
www.iom3.org

Qualifications and courses

Most entrants have completed a Royal Institution of Chartered Surveyors (RICS) accredited degree in subjects such as surveying and mapping science, geomatics or geographic information systems as well as a period of supervised instruction. If you wish to specialise in a particular area, such as hydroinformatics or environmental management, or if you are a graduate with a non-accredited degree, a postgraduate qualification may be required.

It may be possible to enter the industry at a lower level, for example, as a digital mapping assistant or as a computer-aided design (CAD) technician, with an HND or Foundation degree in a related area such as applied science, civil engineering or land/estate surveying.

Alternatively, apprenticeships for school or college leavers in land/geomatics surveying are also available. You will begin as an assistant surveyor and progress through a combination of training on the job and studying for an NVQ. GCSEs/National 5s (A*-C/A-C) in English, Maths and IT are usually required.

Once qualified, many surveyors work towards achieving chartered status and undertake further courses and assessment through bodies such as the Chartered Institution of Civil Engineering Surveyors (ICES) and the Royal Institution of Chartered Surveyors (RICS). This usually takes between 4 and 5 years. Regardless of your position, it is advisable to become a student member of RICS or ICES in order to keep up to date with developments in the industry and to support you in your continuing professional development.

What the work involves

Land/geomatic surveyors collect and analyse information to map the land and/or sea, which is then used when planning construction and civil engineering projects.

You will use satellite images, GPS, digital mapping and other equipment to produce surveys that record features such as contours, materials below the Earth's surface and man-made objects.

You will use technical software such as computer-aided design (CAD) to record and present the data you have gathered. You will also have to interpret data from maps and plans and explain it to clients.

Type of person suited to this work

You will be working with clients and other professionals on a daily basis, so excellent verbal and written communication skills will be needed to present and explain complex information.

As much of the work involves using technical equipment and producing maps, plans and reports using specialist computer software, you will need to have very strong analytical and IT skills with specific knowledge of geographical information systems (GIS) and AutoCAD.

Working conditions

Working hours are usually 9am to 5pm, but you may need to work unsocial hours to ensure projects are finished on time. Weekend or shift work may also be needed for certain projects.

As you will often work away from home, you will be paid more for overseas work and most contracts are on a short-term basis, although multinational companies offer good long-term opportunities.

Self-employment is an option, but finding work is not always easy so most surveyors choose to work in salaried employment.

Future prospects

As a result of the changing nature of mapping and spatial data management, there continues to be a current shortage of land/geomatic surveyors.

Most graduates start as a junior surveyor, from which there is a natural progression to surveyor and then on to a team management position. You could undertake further study and gain a qualification as a chartered surveyor as this can enhance opportunities for progression and improve pay. Ease of progress will depend on professional qualifications and the size of your employing organisation. Geographic mobility can also be helpful to career development.

Alternatively, you may decide to specialise in different areas such as offshore engineering and exploration or cartography and it is also possible to move between the public and private sectors.

Advantages/disadvantages

You will have the opportunity to travel throughout the UK and overseas.

You could be playing a key role in land and environmental development.

A considerable amount of time is spent outdoors so be prepared to get cold, wet and muddy.

Money guide

Starting salaries for non-graduates are around £14,500.

For newly graduated land surveyors salaries may be between £19,000 and £25,000.

With chartered status, your salary would rise to £27,000–£34,000.

At a senior level, either as a manager or a partner, salaries can reach £72,000.

Related opportunities

- Planning and Development Surveyor p96
- Rural Property/Practice Surveyor p103
- Town Planner/Planning Technician p113

Further information

Chartered Institution of Civil Engineering Surveyors
www.cices.org

Chartered Institution of Water and Environmental Management
www.ciwem.org

Qualifications and courses

To train in this field, it is useful to have some GCSEs/ National 5s (A*-E/A-E) in English, Maths, Design and Technology. Alternatively, vocational qualifications such as the BTEC Level 1 or 2 Certificate/Award/ Diploma in Construction, the Foundation, Intermediate and Advanced Levels in Construction Awards and the Scottish Progression Award/Skills for Work Award in Building Crafts may prove useful for introducing you to the basics of the industry.

Most entrants complete the Construction Industry Training Board (CITB) Construction Apprenticeship Scheme in Mastic Asphalt. This scheme takes 2 to 3 years to complete and apprentices study either an NVQ Level 2 or 3 in Mastic Asphalt or the Cskills Awards Level 2 Diploma in Mastic Asphalt. You may be required to complete an aptitude test prior to your acceptance. Training typically involves a combination of block-release training at an approved college or training centre, alongside on-the-job training from an experienced professional.

Additionally, if you decide to specialise in roofing, it would be useful to undergo examinations offered by the Institute of Roofing.

Mastic asphalters employed on construction sites require a Construction Skills Certification Scheme (CSCS) card. This demonstrates that the holder has health and safety training, as well as aiming for competence in a particular occupation. You will need to have or be working towards an NVQ or equivalent in order to be granted a CSCS card.

What the work involves

You will work with material called mastic asphalt, a mixture of limestone and bitumen which turns to liquid when heated. You will inspect a site, clean it, lay out membranes and guides and then spread hot liquid asphalt onto the area. It will cool into a protective waterproof surface.

You will work on surfaces such as dams, landfills, riverbank protection, car parks, bus stations, pathways and the roofs of buildings.

You will use various specialised tools such as boilers, mixers and cylinders in order to prepare surfaces and apply the asphalt.

Type of person suited to this work

You need to have good practical skills to be able to spread and form the mastic asphalt. Maths skills will be useful too, for calculating quantities of materials.

It is important to be able to understand plans, follow instructions and work well in a team.

As it is an active job you must be physically fit, and you must be happy climbing and working at heights. Agility is essential and you should be able to work quickly but accurately.

Working conditions

You will mainly work outdoors, although some of the work may be under cover. You will travel regularly between sites. You will need to wear protective gear such as a safety helmet, gloves and boots.

If you suffer from claustrophobia, vertigo or breathing problems, this work might be difficult for you.

You are likely to work a normal working week, although you might need to work evenings and weekends as well.

Future prospects

Most opportunities are with specialist mastic asphalt contractors. Self-employment is also common if you are skilled.

You can work your way up to become a supervisor, manager or trainer in large companies. Alternatively, you could set up your own contracting business.

You may need to move between employers for promotion.

Advantages/disadvantages

Working at heights on roofs, or in cramped conditions when working in tanks or underground spaces, can be demanding for some people. There is the possibility of fumes and accidental burns in this line of work.

You will develop a range of skills and work on a variety of surfaces.

Money guide

The average wage for a trainee starting in this line of work is £10,000 per year.

Once qualified, your wage may rise to around £16,000 a year.

With experience, your salary could reach £31,000.

Overtime is often available, and on some projects there are bonuses based on outputs, which can lead to higher earnings. Travelling expenses will be reimbursed.

Related opportunities

- Floor Layer/Finisher p84
- Roofer p102
- Thatcher p111

Further information

Construction Industry Training Board (CITB)
www.citb.co.uk

Mastic Asphalt Council
www.masticasphaltcouncil.co.uk

Qualifications and courses

In order to become a naval architect, you will need to gain a degree in a relevant subject such as naval architecture, ship science or ocean, offshore or marine engineering, ideally one accredited by the Royal Institution of Naval Architects (RINA). Newcastle University, University of Southampton and University of Strathclyde are the main institutions offering a degree specific to naval architecture, which may increase your chances. Typical entry requirements for a degree course include 2 A levels/3 H grades, including Physics and Maths, and 5 GCSEs/ National 5s (A*-C/A-C). A postgraduate qualification may also be useful, particularly when later seeking chartered status.

If you have work-based qualifications, eg a BTEC, HND or HNC, you can transfer to an engineering degree. Alternatively, you may be able to join a marine engineering apprenticeship after school through the Royal Navy or local ship builders.

As a graduate, you will carry out a RINA-accredited training scheme within the workplace where you will be trained by experienced professionals in areas including design, engineering practice and management services. Alternatively, the Ministry of Defence offers a Defence Engineering and Science Group Graduate Scheme, although it is competitive.

With 2 years' work experience and the relevant qualifications, full membership of RINA and registration as a chartered (CEng) or incorporated (IEng) engineer are possible.

What the work involves

As a naval architect you will be responsible for the design, construction and repair of marine vessels and offshore structures, including merchant ships, submarines and offshore drilling platforms. You will have to coordinate a team of engineers working on a project.

You will ensure that the structure you are working on is safe and seaworthy, within budget and to the designated specifications.

Your work will depend on the specialism you choose, but you could prepare architectural designs, work with computer or 3D models, source materials or evaluate the safety of the design.

Type of person suited to this work

As you will be working with others and as part of a team you will need to have good written and verbal communication skills.

You will be coordinating various aspects of a project such as budget, location and facilities, so you must be organised and efficient in your work. You must also be able to lead a team and work to a deadline.

Strong IT and numeracy skills and a keen eye for detail are also necessary.

Working conditions

You will work average office hours, 5 days a week. However you might have to work extra hours to meet deadlines.

You may be office based while working on design work, or visiting construction sites, docks and shipyards within the UK or overseas. Your surroundings may be noisy and dirty. If you are working on-board a craft you may encounter fumes, heat and noise and you will have to work in all weather conditions. You may have to wear protective clothing.

Future prospects

As a naval architect you can become self-employed, work for a company or as a design consultant. Given the small size of shipyards in the UK, there are limited openings for naval architects to work on the construction of new ships but you could find work in the design and production of small crafts and yachts or in maintenance and repair.

You can move up from technical roles to general management and on to senior roles. With chartered status, you can specialise in particular areas such as design, research or consultancy. Alternatively, you could work as a ship surveyor, assessing the safety of ship and marine structures. You may even opt to instruct at universities.

Organisations such as RINA provide continuing professional development (CPD) courses which cover areas such as new technologies, management systems and communication.

Advantages/disadvantages

There are lots of opportunities to work abroad for a ship surveying company, or you may work on a large scale project abroad.

Competition for jobs as a naval architect is high.

Some aspects of the work may involve working in difficult and physically demanding conditions.

Money guide

Your starting salary as a graduate can range from £22,000 to £28,000 a year.

With experience this can increase to £30,000-£50,000.

You could earn in excess of £50,000 if you are highly experienced and working for a large organisation.

Your income will vary when undertaking freelance or contract work.

Related opportunities

- Aerospace Engineer p196
- Marine Engineer p215
- Merchant Navy Engineering Officer p583

Further information

Defence Engineering and Science Group

www.gov.uk/defence-engineering-and-science-group

Royal Institution of Naval Architects

www.rina.org.uk

WISE

www.wisecampaign.org.uk

Qualifications and courses

It is useful to have some GCSEs/National 5s (A*–E/A–E) in subjects such as maths, design and technology and English. Numeracy skills are particularly important as calculating area and quantities will be a large part of your job.

Vocational qualifications, such as the City & Guilds Level 1 Certificate/Award in Basic Construction Skills may also offer you opportunities to grasp the basic skills required by the industry. Working as a decorator's labourer may also allow you to do this.

A common route of entry is a construction apprenticeship which leads to an NVQ/SVQ Level 3. As an apprentice, most of your training is carried out on the job whilst taking day or block release at college in order to obtain qualifications such as an NVQ/SVQ Diploma in Decorative Finishing – Painting and Decorating (Construction) (Level 2 and 3) and Cskills Diplomas in Decorative Finishing and Industrial Painting Occupations (Level 1 and 2). You can also apply for a construction craft apprenticeship from Construction Skills, which involves an aptitude test.

Those interested in heritage work can also train in graining, marbling and gilding, by completing the NVQ Level 3 in Heritage Skills (Construction).

A Construction Skills Certification Scheme (CSCS) card is mandatory in order to work on-site. You will need to have a relevant NVQ qualification and pass a health and safety test. A trainee card is available for those working towards a qualification.

A driving licence is also necessary in order to transport materials and equipment.

What the work involves

Painters and decorators improve the interior and exterior of people's homes and other buildings. On occasion, they may also be required to paint larger structures such as bridges.

Your work will include preparing surfaces by making sure they are clean and smooth, applying primers, undercoats and topcoats of paint and putting up wall coverings such as wallpaper.

You will use a range of tools including brushes, rollers and spraying equipment.

Type of person suited to this work

You need to be good with your hands, and particularly skilful when using fine decoration techniques. You will also need an eye for colour and design and an interest in décor.

You need to be friendly, personable and able to work well in a team. You will need to be fit and active as you will have to climb ladders and carry tools. You should not mind working at heights.

You must be able to measure accurately so that you can work out how much paint and other material you will need.

Working conditions

Most of the work is indoors, but some is outdoors. You will regularly work on ladders or on scaffolding. You might have to wear a mask to prevent you from breathing in paint fumes.

You are likely to work a normal working week, although weekend work and overtime is common. You may need a driving licence.

Future prospects

The building and construction industry is the largest employer in the UK and whilst there may be a shortage of skilled painters and decorators, the demand for people in this profession largely depends on the state of the economy.

You can work for painting and decorating companies or building contractors, local authorities or the NHS. Painting and decorating companies may offer a range of work or may specialise in work such as domestic, commercial, new build or industrial.

After gaining experience, it is possible to progress to a supervisory role or transfer into related areas such as estimating or contract management, particular in the larger organisations. With further training, you may opt to specialise in restoration or even instruct on a college course as a lecturer or craft teacher.

A popular option is to become self-employed and work on a sub-contract basis. Alternatively, you could take your skills abroad.

Advantages/disadvantages

Working at extreme heights may be difficult for some people.

It can be rewarding to see the improved look of a newly painted building or structure and you have the opportunity to be creative.

Money guide

New entrants/trainees can expect to earn between £14,500 and £17,000 per year.

NVQ Level 2 or 3 qualified painters and decorators can earn between £17,000 and £23,000.

Decorators with specialist skills and supervisory duties can earn £23,000 or more.

Overtime is often available, and on some projects there are bonuses based on outputs. Those who are self-employed set their own rates of pay.

Related opportunities

- Construction Operative p72
- Plasterer p97
- Wall/Floor Tiler p114

Further information

Painting & Decorating Association

www.paintingdecoratingassociation.co.uk

Qualifications and courses

In order to enter this profession, you will need a Royal Institution of Chartered Surveyors (RICS) accredited degree in a relevant subject such as surveying, estate management, economics or land and property development. Entry requirements for most degree courses are a minimum of 3 A levels/H grades and 5 GCSEs/National 5s (A*-C/A-C), or the relevant BTEC/SQA National Awards (or equivalent).

For graduates without an accredited degree or with a non-property related degree, a postgraduate conversion qualification approved by RICS is essential. Some large surveying firms may support you in your conversion training through a distance learning graduate traineeship or alternatively, you may complete this full time prior to employment.

Those with a relevant HND/HNC or NVQ/SVQ, plus significant work experience may be able to enter the field as a surveying technician. With further training, you could qualify as a planning and development surveyor.

Once employed you will continue to update your skills by working towards chartered status. In order to do so, you will be required to complete the Assessment of Professional Competence with the RICS or register with the Chartered Institute of Building's (CIOB) Faculty of Architecture and Surveying. Subject to a minimum of 2 years' experience and your performance in an interview, you will gain chartered status.

Work exists in a variety of areas including local authorities, construction firms, property developers and building conservation.

Although there is some day to day travelling involved, overnight stays are uncommon.

Most jobs are found in cities where there is a high level of commercial activity. You could work for public sector or private companies, which range in size from very small practices up to large multinational firms. Work in the public sector is becoming increasingly flexible, with part-time work and career breaks available.

Future prospects

As a graduate trainee you can progress to surveyor, to senior surveyor, and up to associate or partner with several years' experience. If you progress to become an equity partner you will earn a high salary and also get a cut of the company's profits.

If you work in the public sector, you could enhance your career prospects with a Royal Town Planning Institute (RTPI) qualification, or develop a more specialised career in one area of surveying. Specialist knowledge in regeneration, conservation or land management is particularly useful in a society where sustainable development is growing in importance.

You may also consider transferring to other areas of surveying, eg waste management, arts and antiques or telecommunications. You could even take your skills abroad, eg to assist disaster-relief projects.

Advantages/disadvantages

Work is varied and you have the opportunity to travel within the UK and overseas.

Although you might need to work extra hours, weekend work is rare.

You will have a lot of responsibility which can be stressful at times.

Money guide

New graduates will earn £20,000-£24,000.

Fully qualified and experienced surveyors can earn £24,000-£38,000 per year.

Chartered surveyors can achieve a salary over £50,000.

Partners in a surveying firm often earn £70,000-£80,000, with an additional share of profits on top.

Related opportunities

- Land/Gematic Surveyor p92
- Rural Property/Practice Surveyor p103
- Town Planner/Planning Technician p113

What the work involves

Planning and development surveyors develop and manage new building or refurbishment projects. You will create proposals and oversee projects from conception through to completion.

You will be responsible for recruiting team members for each project, as well as liaising with external industry professionals throughout.

You will also give valuations on properties and developments, advise clients on financing options for their building plans, and prepare their applications for planning permission.

Type of person suited to this work

As you will be managing team members, briefing other professionals and dealing with clients, well-developed communication and negotiation skills are required.

Good numeracy skills, coupled with scientific aptitude, are essential to successfully write proposals and manage financial details within a project. An understanding of legal matters within the building and construction industries is helpful, as is an interest in the architecture, history or preserving the natural landscape.

Working conditions

You may have to work longer than the standard 35 hour week, but weekend and shift work is unusual.

Further information

Chartered Institute of Building

www.ciob.org.uk

Chartered Institution of Civil Engineering Surveyors

www.cices.org

Royal Institution of Chartered Surveyors

www.rics.org

Qualifications and courses

A common route of entry into the plastering industry is to serve an apprenticeship. In order to be eligible for the Construction Apprenticeship Scheme (CAS) you will need some GCSEs/National 5s in English, Maths, and Design and Technology and an employer to sponsor your training.

Apprenticeship schemes are available at both Intermediate and Advanced Levels and offer a structured training programme leading to an NVQ/SVQ Level 3. Trainees will follow routes in solid plastering, fibrous plastering or dry lining. Programmes are validated by the Construction Industry Training Board (CITB) and last 2–3 years in England and Wales, and 4 years in Scotland. Most training is done on the job whilst attending college to obtain qualifications such as NVQs/SVQs in Plastering (Levels 1–3) or the City & Guilds Certificate in Basic Construction Skills – Plastering (6217-04). Further options available through City & Guilds include the Foundation/Intermediate Construction Awards. If you wish to specialise in the repair and conservation of historic buildings, you could also take an NVQ Level 3 in Heritage Skills (Construction).

Construction Skills Certification Scheme (CSCS) cards are required by plasterers employed on construction sites as proof of your competency on-site. You will need to have gained or be working towards a formal qualification, eg an NVQ, in order to qualify for one of these.

What the work involves

There are 3 types of plastering that you could do: solid, fibrous or dry lining. Solid plastering involves the application of plaster or cement to internal and external walls, ceilings and floors.

Fibrous plastering involves making ornamental plaster work, such as the kind you see on decorative ceilings.

Dry lining involves the use of plasterboard to construct walls or partitions and then skimming over the joins with plaster making them ready for decoration.

Type of person suited to this work

To be able to use your tools skilfully, you need to be good with your hands. An ability to use basic maths for calculating the amounts of materials you will need for a job is also helpful.

You will need to be able to work in a team with other plasterers, and with those in other construction trades.

You should be physically fit, as the work is very active. It can also be dusty when working with the plaster powder; this may be difficult if you suffer from certain allergies. You will be climbing ladders and possibly scaffolding, so you must be fine with heights.

Working conditions

Solid/dry lining

Most of the work for solid plasterers and those doing dry lining work is indoors, although you might have to work

outdoors if working on exteriors. You will work from ladders and scaffolding.

Fibrous

Most fibrous plasterers work in workshops, although you may also install your work on-site.

All plastering requires an understanding and appreciation of health and safety regulations, which includes wearing protective gear. You may work a normal working week, although you might need to start early or finish late, and weekend work may also be available.

Future prospects

The building industry is cyclical therefore during a recession, there may be less of a demand for plasterers. Shortages of qualified plasterers do exist however, particularly in the domestic market and as a fibrous plasterer.

Besides being employed by specialist plastering firms and building contractors, you can also work in the cultural heritage or public sectors, conserving and restoring historic buildings. Due to its rapid expansion, many plasterers are also moving into the related area of dry lining. Opportunities to diversify and move into tiling, estimating or site management are also possible.

After you have gained sufficient experience, you could progress to technical, supervisory or managerial roles or alternatively, you may opt to become self-employed. You may even be able to seek contract work overseas.

Advantages/disadvantages

Working at heights may be difficult for some people.

You will be able to work in a variety of locations and those in fibrous plaster work have opportunities to be creative.

Money guide

As a trainee you could earn around £14,000–£17,000.

Once qualified, salaries can rise to £17,000–£25,000. High earning plasterers could earn upwards of £35,000.

Overtime, shift allowances and performance-based bonuses can increase earnings. Self-employed plasterers negotiate their own rates.

Related opportunities

- Building Technician p64
- Mastic Asphalter p93
- Wall/Floor Tiler p114

Further information

Construction Industry Training Board (CITB)

www.citb.co.uk

Federation of Plastering and Drywall Contractors

<http://aisfpdc.org>

Scottish Building Apprenticeship and Training Council

www.sbatc.co.uk

Qualifications and courses

To grasp some of the basic practical skills, you might first complete a course relevant to the industry such as the City & Guilds Certificate Level 1 in Introduction to Plumbing, the City & Guilds Diploma Level 2 in Access to Building Services Engineering or the City & Guilds Diploma Level 2 in Plumbing Studies. These courses could be used as the first step towards a higher level qualification or as support when seeking employment.

A very common route of entry into plumbing is through an apprenticeship, lasting 2 to 3 years. This would involve a combination of learning on the job from experienced professionals whilst studying at a college for a qualification, eg an NVQ. In order to become a qualified plumber you will need to complete an industry-recognised qualification at Level 2 or 3, something you can do whilst taking part in an apprenticeship. Typical qualifications include City & Guilds NVQ Diploma in either Plumbing and Heating or Installing and Maintaining Domestic Heating Systems, the Excellence, Achievement & Learning Limited (EAL)'s NVQ Diploma Level 2 in Plumbing and Heating and NVQ Diploma Level 3 in Domestic Plumbing and Heating. Entrants for apprenticeships or training schemes need to pass a selection test and have their colour vision tested.

Once you have passed recognised qualifications and gained practical experience, it is possible to become a member of the Chartered Institute of Plumbing and Heating Engineering (CIPHE).

Gas Safe registration and possession of a Gas Safe ID card is a legal requirement for anyone installing or repairing gas fittings or appliances.

What the work involves

Plumbers install, maintain and repair plumbing, heating and water systems in various locations including people's homes and public buildings. You will also be responsible for routine check-ups on appliances such as boilers.

You will use a range of hand and power tools, such as wrenches, cutters and welding equipment.

When you have completed a job, you will need to test the system to make sure that everything is working properly.

Type of person suited to this work

Good practical skills are essential. You must be careful, accurate and follow instructions to ensure that systems work properly and safely. Analytical and problem-solving skills are also important.

You might be bending, kneeling and squeezing into tight spaces so it would help if you were physically fit. You need to be comfortable working at heights.

You need to be a team player but also willing to work alone. You should keep a good appearance and have excellent communication skills when dealing directly with customers.

Working conditions

You will work both indoors and outdoors, possibly within confined spaces and at heights. Travelling will be required for jobs so it would be useful to have a driving licence and your own vehicle.

You may work a normal working week but, if your organisation offers a 24/7 call-out service, you need to be available at all times of the day or night, any day of the week.

Future prospects

Work is available across the UK, though the job market is more competitive in London.

As a plumber, you can use your skills in a variety of areas, including heating and ventilation, refrigeration, air conditioning, gas servicing, kitchen and bathroom fitting. With additional training, you could move into gas central heating installation and repair. You may also opt to install and maintain renewable energy technologies, solar water heating systems and ground source heat pumps given the increasing importance placed on sustainable systems.

You can progress to supervisory, training or managerial positions or move into estimating or contract management. Self-employment is also available, with lots of plumbers opting to set up their own businesses.

Advantages/disadvantages

You could be called out any time of day to deal with plumbing emergencies, which can be difficult for those with family commitments.

Being able to solve a difficult problem and make a customer happy can be very rewarding.

Money guide

Trainee plumbers typically start on £10,000–£15,000 per year.

Newly qualified plumbers' earnings increase to £16,500–£21,000.

Experienced plumbers can expect £21,000–£35,000.

Earnings for self-employed plumbers can be much higher as they negotiate their own rates of pay.

Overtime is often available and those who attend emergency call-outs can receive higher pay for working unsociable hours. Self-employed plumbers negotiate their own rates.

Related opportunities

- Gas Network Engineer p210
- Heating and Ventilation Engineer p88
- Refrigeration Engineer/Technician p101

Further information

Chartered Institute of Plumbing and Heating Engineering

www.ciphe.org.uk

SummitSkills

www.summitskills.org.uk

Qualifications and courses

Although entry requirements vary depending on employer, in order to become a property valuer you would normally hold a degree or professional qualification accredited by the Royal Institution of Chartered Surveyors (RICS) in a relevant subject such as residential surveying and valuation, building surveying, law or real estate management.

If you hold an HND or HNC you could enter the profession as a surveying technician and after further training and experience, you could progress from associate level to chartered status.

Once employed within the industry, you should work towards gaining chartered membership of a professional body such as the RICS or the Institute of Revenues Rating and Valuation (IRRV). Graduates of an RICS-accredited degree are required to complete the Assessment of Professional Competence (APC) in order to do so. Subject to 2 years' postgraduate work experience and your performance in an interview with a panel of assessors, you can gain chartered status.

Those who have not studied a degree in a relevant subject can take an RICS-accredited postgraduate degree or diploma course in an auctioneering/valuation subject. You may have to combine these courses with work experience and further professional qualifications.

It is important that you update your skills throughout your career. The IRRV offers qualifications and training that cover the valuation, legal and taxation aspects of your job, ensuring continuing professional development.

Given the nature of your work, it is likely that you will require a driving licence.

You need to have excellent written and verbal communication skills in order to communicate with clients, employers and government bodies.

Working conditions

You will work about 35–40 hours per week, Monday to Friday. You may have to work weekends depending on the project or your employer.

You will mainly be office based but will frequently have to visit and inspect properties or meet clients. As you might need to travel locally, a driving licence is recommended.

Future prospects

There are many opportunities in the UK. You could work in an estate agency valuing property that is being sold, rented or mortgaged. You may find work in the Valuation Office Agency assessing property for local authorities and government departments.

Valuers are also required by HM Revenue & Customs (HMRC) where you will value property and land that must be taxed when it is sold or bought.

Once you have gained sufficient experience, you could become a project manager, company partner or work as a freelance consultant.

Advantages/disadvantages

The job tends to be diverse and interesting as you will usually combine your role as a valuer with other areas such as estate management, surveying and even auctioning.

Property and land valuations may become part of compensation claims which involve a lengthy legal process.

Occasionally, property viewings and auctions will take place in the evenings and at weekends.

Money guide

Your starting salary may be £23,000–£26,000. With experience, earnings can increase to between £27,000 and £36,000.

A property valuer with chartered status can earn in excess of £40,000 a year.

Freelance property valuers negotiate their own wage.

Related opportunities

- Auction Property Consultant p59
- Insurance Risk Surveyor p32

What the work involves

As a property valuer you will assess the value of property (buildings, land or personal items) for a client and advise them on how the property may be sold, loaned, taxed, acquired by a company or made part of a compensation claim. Local authorities also use these valuations to help set council tax and rating levels.

You will assess new commercial and industrial property and reassess existing property that has been altered.

You will provide reports on your valuations which may be important if property becomes part of legal negotiations or insurance claims. You may have to run live auctions where you will sell items that you have valued or you may pass them to a specialist.

Type of person suited to this work

You should have a keen interest in property valuation, law and taxation. You must have strong numerical skills to make accurate calculations, such as working out taxes or analysing accounts. As you may be hired by a company on a freelance basis, you will also need to be organised and able to use your initiative.

Further information

Institute of Revenues Rating and Valuation
www.irrv.net

National Association of Valuers and Auctioneers
www.nava.org.uk

Royal Institution of Chartered Surveyors
www.rics.org

Qualifications and courses

This career requires a degree or professional qualification accredited by the Royal Institution of Chartered Surveyors (RICS). If, however, you hold a non-accredited degree, or you opt to study a subject other than quantity surveying, you will be required to complete a 1-year postgraduate conversion course that is recognised by the RICS. Other first degree subjects which may be relevant include geography, maths, urban and land studies, economics, construction, civil and structural engineering. Entry to a degree will require a minimum of 2 A levels/3 H Grades and 5 GCSEs/National 5s (A*-C/A-C).

An HND in a related subject is also valued by employers and may gain you employment as a surveying technician. You can then progress to quantity surveyor level by studying, either part time or via distance learning, for RICS-recognised qualifications.

Once you are in employment, you should work towards gaining membership of the RICS or the Chartered Institute of Building's (CIOB) Faculty for Architecture and Surveying in order to become a fully qualified chartered surveyor. To gain chartered status, you must complete a 2-year training programme called the Assessment of Professional Competence (APC). Subject to you having gained a RICS-accredited degree, 2 years' work experience and your performance in an interview with assessors, you will gain chartered status.

What the work involves

Quantity surveyors are responsible for calculating costs, issuing contracts, keeping projects to time and within budget, managing subcontractors and arranging payments for work.

You will need a good understanding of building regulations to ensure that projects meet the required standards of quality and safety.

You could work on a wide variety of projects from residential developments to hospitals or sports stadiums.

Type of person suited to this work

You must have a high level of numeracy and the ability to manage financial projects as you will be responsible for all the financial details of projects. Good negotiation skills are also important, as you must agree contracts and prices with workers and contractors.

Excellent verbal and written communication skills are vital for leading and motivating the on-site team, liaising with clients and subcontractors, and producing accurate and detailed progress reports.

Finally, a good understanding of business and legal matters in relation to the building and construction industry is needed, since you will be responsible for ensuring that all projects meet current regulations and standards.

Working conditions

Working hours are slightly longer than average and will include early starts, late evenings and weekend work.

You will usually be office based, although it is not uncommon for the office to be in the form of a temporary hut on-site. Travel to client meetings and other projects is also expected.

Self-employment is possible, and many companies use freelance quantity surveyors on projects. There is also the opportunity to travel overseas.

Future prospects

Your opportunities are likely to lie within local authority or government departments, private practices, building contractors, property companies or commercial organisations both in the UK and abroad.

With experience, you can undertake a more comprehensive project management role and have the satisfaction of taking a job through from conception to completion. You may opt to specialise in certain areas such as value engineering, risk assessment, capital allowances or supply chain management or, alternatively, you could become self-employed.

There is usually a natural progression from quantity surveying to commercial management. Gaining chartered status will aid you in your bid for career progression.

Advantages/disadvantages

Working on numerous projects and with a range of people makes the job varied.

There are good opportunities for career progression and specialisation.

Hours are longer than average, with occasional weekend work.

Money guide

Starting salaries for quantity surveyors can range from £20,000 to £25,000, rising to £30,000–£45,000 a year with experience.

Senior surveyors can earn £50,000–£60,000 and partners in private firms can expect considerably more.

With chartered status, extra responsibilities or further qualifications, your earnings can significantly increase.

Benefits include shift and site allowances, pension schemes, healthcare packages and a company car.

Related opportunities

- Civil/Construction Engineer/Civil Engineering Technician p69
- Insurance Risk Surveyor p32
- Town Planner/Planning Technician p113

Further information

Construction Industry Training Board (CITB)

www.citb.co.uk

Royal Institution of Chartered Surveyors

www.rics.org

Qualifications and courses

The most common form of entry into the refrigeration engineering industry is by undertaking an apprenticeship. In order to be considered, you are likely to need 4 GCSEs/National 5s (A*-C/A-C) in English, Maths, Physics and Design and Technology.

Apprenticeships offer candidates the opportunity to gain the appropriate NVQs/SVQs required of a qualified refrigeration engineer/technician. As an apprentice, you will work towards either an NVQ in Servicing and Maintaining Refrigeration Systems (Level 2 and 3), an NVQ in Refrigeration/Air Conditioning Equipment Engineering Technology (Level 2 or 3) or, in Scotland, an SVQ in Install, Commission and Maintain Refrigeration Systems (Level 2 or 3). Alongside gaining an industry recognised qualification, you will also be educated in the necessary health and safety procedures.

Apprenticeships are open to people aged 16 or over and take 2 to 4 years. A combination of on-the-job training from experienced professionals and day or block release formal instruction at a college takes place. There are limited places available to candidates over 25.

Further qualifications such as HNCs/HNDs in Refrigeration and Air Conditioning and Foundation degrees in Building Services Engineering are also available. Alternatively, if you wish to specialise in fluorinated gas (F gases) or ozone depleting substances (ODS), you could complete the City & Guilds Level 2 Award in F-gas and ODS Regulations (2079). You may also apply to be a member of the Institute of Refrigeration which offers a variety of continuing professional development (CPD) workshops as you progress throughout your career.

What the work involves

Your work as a refrigeration engineer will involve the design, installation and repair of refrigeration equipment and air conditioning systems. You will be called out to undertake repairs and maintenance, estimate costs of construction and installation projects, inspect existing equipment, and give advice on adjustments and improvements.

Refrigeration engineers aim to create and maintain comfortable working/living environments in offices and homes that are both energy-efficient and safe.

Your work in commercial buildings and factories will be to provide refrigeration systems that keep food at the correct, safe temperature.

Type of person suited to this work

It is important that you like hands-on work and have a practical approach to problem solving.

You should be interested in the building services industry and keep up to date with relevant developments in legislation and technology.

Written and spoken communication skills are important as you will be in contact with clients and planning projects. You

should also have an aptitude for maths and physics and have strong technical skills.

Working conditions

You will normally work around 37 hours a week and how this is spread over a week may vary. However you might have to work longer hours during the summer which is peak time for refrigeration engineers.

You will be office based to plan visits to sites and organise jobs, but you will also visit various locations such as offices, shopping centres or factories. This will be to complete practical jobs such as maintenance, repair and installation.

You may also work in refrigeration transport, on specially adapted vehicles such as trucks, aircraft and fishing vessels or in vehicle workshops. On certain visits you might have to wear protective clothing or equipment.

Future prospects

As you gain experience in the field you will find opportunities for progression to supervisory and managerial roles.

To improve your skills you may take further qualifications such the NVQ in Building Services Engineering (Level 3 and 4) or in other refrigeration and air conditioning specific topics. Such courses act as a stepping stone to membership of the Chartered Institution of Building Services Engineers (CIBSE).

You can add further experience with further qualifications and work towards becoming an incorporated or chartered engineer. Alternatively, you may opt to become self-employed or move into teaching.

Advantages/disadvantages

There are opportunities to work abroad as UK qualifications are internationally recognised.

You may also be required to do overtime work and to be on-call overnight and at weekends.

Money guide

Trainees can earn around £11,000 to £19,000 a year, depending on the stage.

Starting salaries once you have qualified are around £20,000 to £25,000 a year.

This can increase to around £35,000 with experience, supervisory responsibilities and qualifications.

There are also opportunities for bonuses and overtime pay.

Related opportunities

- Civil/Construction Engineer/Civil Engineering Technician p69
- Electrical Engineer p203
- Electrician p78

Further information

Institute of Refrigeration

www.ior.org.uk

Qualifications and courses

In order to train as a roofer it may be useful to have some GCSEs/National 5s (A*-E/A-E) in relevant subjects such as maths, English, craft, design and technology or a vocational qualification, eg a BTEC Certificate/Diploma in Construction and the Built Environment or a City & Guilds Certificate in Basic Construction Skills (6218). Introductory vocational qualifications are available at some schools and colleges and act as a foundation for further training or preparation for first employment.

One means of entry into the roofing industry is to find work post-secondary school as an entry-level roofing labourer. This way you will gain both valuable on-site experience and opportunities for further training in roofing techniques.

Alternatively, you could enter the profession through an apprenticeship programme with a building or roofing company. ConstructionSkills offers specialised roofing apprenticeships through the National Construction College (NCC) that lead to NVQ/SVQ Level 2 qualifications. Most training is carried out on the job whilst attending college to obtain qualifications such as NVQs/SVQs in Roofing Occupations and Mastic Asphalting.

You will need a Construction Skills Certification Scheme (CSCS) card in order to work on-site. The purpose of this card is to demonstrate that the holder has health and safety training and maintains professional competency. You will normally have to have completed, or be in the process of completing, an industry recognised qualification as proof of your capability.

You could later gain membership of the Institute of Roofing (IOR) which offers numerous continuing professional development (CPD) schemes that update your skills.

What the work involves

Roofers remove old roofs and replace them, fit new roofs and repair existing ones. You will have a choice of roofing materials to work with, such as tile, slate, felt, thatch and sheet. You could specialise in flat or pitched (sloping) roofs or work on both.

When working on flat roofs you will need to spread a waterproof bitumen layer. On all types of roofs your work will involve measuring and cutting materials, layering them on the roof and using mortar or cement to seal it.

You could also carry out lead work or liquid applied roofing.

Type of person suited to this work

You need to have good practical skills and be physically fit, so that you can climb ladders and scaffolding and carry roofing materials. You must be comfortable working at heights.

It is important to be able to understand plans and follow instructions. You should be a team player with good communication skills when dealing with customers.

It will also be useful to be interested in building construction and to enjoy being outdoors.

Working conditions

You will work outdoors on roofs in various locations from people's homes to historic cathedrals and construction sites. The work can be dusty and dirty.

As you will be working up ladders, on scaffolding or on the roof itself, you will need to pay close attention to all health and safety procedures, which includes wearing protective gear such as a safety helmet and boots.

You are likely to work a normal working week, although extra work may be available at weekends.

Future prospects

There is a good demand for qualified roofers across the UK at the moment. Work is available within roofing companies, contractors, roofing material suppliers, local authorities and other public organisations.

You can decide to specialise in using one type of roofing material, such as slate, or you can train to become skilled in several types.

You may work your way up to technical, supervisory and managerial levels. After you have gained enough experience, you could start your own roofing company or seek contract work abroad.

Advantages/disadvantages

Working at heights may be difficult for some people.

You could get to work on some impressive projects such as fitting the roof on a new football stadium. It is satisfying to produce a lasting structure that is functional and looks good.

You will gain an understanding of other construction work, such as joinery.

Money guide

Trainee salaries are about £13,500–£15,000 a year.

As a qualified roofer you can earn £16,000–£24,000.

With experience, your salary can increase to £31,000.

Self-employed roofers negotiate their own rates.

Overtime and bonuses are often available.

Related opportunities

- Construction Operative p72
- Scaffolder p104
- Thatcher p111

Further information

Construction Industry Training Board (CITB)
www.citb.co.uk

Institute of Roofing
www.instituteofroofing.org

Qualifications and courses

This sector normally requires a Royal Institution of Chartered Surveyors (RICS) accredited degree in a related subject such as agriculture, forestry, estate, land or property management and surveying. Most degree courses require 5 GCSEs/National 5s (A*-C/A-C), 2 A levels/3 H grades or relevant BTEC Diplomas/Certificates (or equivalent).

If your first degree was in an unrelated or unaccredited subject, a postgraduate conversion course offered by the College of Estate Management (CEM) can be studied via distance learning. It is also possible to take a degree or postgraduate course at a college recommended by the Central Association of Agricultural Valuers (CAAV).

If you have a relevant HND or Foundation degree then you can qualify for Associate/RICS status. However, you will usually have to top up your qualifications to degree level in order to become a fully chartered surveyor.

Once qualified, you will need to complete the Assessment of Professional Competence (APC) during your first 2 years of employment, in order to gain chartered status.

Competition for training places in the industry is fierce and pre-entry work experience may increase your chances of employment. By completing work experience during your undergraduate year, not only are you developing your confidence in dealing with members of the rural community, but you are also enhancing your career prospects. Relevant work experience placements may include a working farm or estate agent.

It is highly recommended that you also gain a valid UK driving licence.

What the work involves

Rural property/practice surveyors manage properties in the countryside such as farms and estates. You will give professional and technical advice to rural landowners on how to develop their assets – land and property – as well as providing business and resource management and consultancy for land, construction and property industries.

Giving advice on the buying and selling of properties, on farming grants and subsidies and how national and EU law affects clients' businesses is a typical example of work involved.

However, jobs do vary between those who work for corporations who deal with several clients and those who manage estates. You can also choose to specialise in specific areas, such as auctioneering or environmental sustainability, but this can limit employability to an extent.

Type of person suited to this work

Excellent communication skills are needed as you will need to negotiate and liaise with people of all ages and backgrounds.

You must have an analytical mind and a clear, concise writing style in order to explain detailed statistical information.

A good understanding of rural issues, including knowledge of crops, is essential in order to assess a client's economic viability with accuracy. Problem-solving and forward-planning skills are also essential to keep on top of a heavy workload.

Working conditions

The average working week can reach over 40 hours and early morning and weekend work is common as you need to adapt around clients as well as rural events such as harvests.

You will mostly work outdoors, regardless of the weather. If you are office based, it will usually be in rural market towns or villages. You should be prepared to drive and travel regularly as work will often cover a large geographical area.

Future prospects

Your career path is narrowed but progression can occur very quickly. In larger companies, there may be the opportunity to specialise in areas such as pure agriculture or renewable energy use. By contrast, a smaller company could give you a greater range of projects which will build broader experience but with fewer opportunities for specialising.

With 10–15 years of experience, you could become a partner in a firm.

Advantages/disadvantages

You will be based in peaceful rural locations.

You will be instrumental in developing the future of the countryside and rural industries.

Hours can be long and you should expect to regularly work early mornings and weekends.

Money guide

Average earnings for new graduates are £20,000–£25,000.

With experience, this can increase to £38,000.

A senior chartered surveyor can receive a salary in excess of £40,000.

Additional benefits such as bonuses, a company car or health insurance are sometimes offered and subsidised accommodation may be available for surveyors managing a farm or estate.

Related opportunities

- Auction Property Consultant p59
- Building Surveyor p63
- Civil/Construction Engineer/Civil Engineering Technician p69

Further information

Agricultural Development and Advisory Service
www.adas.co.uk

Department for Environment, Food and Rural Affairs
www.defra.gov.uk

Royal Agricultural College
www.rac.ac.uk

Qualifications and courses

There are no set entry requirements but some GCSEs/ National 5s (A*-E/A-E) in subjects such as English, maths, a science and Technology or a vocational qualification, such as the BTEC Introductory Certificate or Diploma in Construction (Level 1) are useful.

In order to become a scaffolder, you will normally be trained on the job whilst studying for industry recognised qualifications part time at a college or training centre. Employers often expect some on-site experience so it may be useful to develop your skills by working first as a labourer.

The Construction Industry Scaffolders Record Scheme (CISRS) operates a systematic card system at all levels, ie labourer, trainee, scaffolder and advanced scaffolder, and is the recognised qualification for scaffolding. The CISRS card system ensures that operatives are properly trained and sufficiently experienced to work safely and competently. After on and off-site training and an NVQ Level 2 in Accessing Operations and Rigging, you can apply for a Scaffolder card. This will allow you to carry out basic scaffolding tasks as part of a scaffolding gang.

For the Advanced CISRS Card, scaffolders must have a Scaffolder Card, 12 months' subsequent experience and complete the 10-day Advanced Scaffolding course provided by CISRS and the NVQ Diploma in Accessing Operations and Rigging (Construction) (Level 3).

You will need to wear protective equipment such as a hard hat, boots and a safety harness.

You may work a normal working week from Monday to Friday, although you might need to start work early or finish late. Extra hours at weekends may also be available.

Future prospects

There is currently a good demand for scaffolders across the UK. There are lots of opportunities within specialist scaffolding firms and building contractors as well as in oil and power companies, particularly in the east of England and Greater London.

You may progress from basic to advanced scaffolder, and then on to supervisory and managerial positions where you might move into estimation or construction management. The CISRS offers supervisors/managers training in health and safety, risk assessment, design and resource management. If you possess computer-aided design skills, progression to project design and management is possible.

With experience you may set up your own business or take up contract work overseas.

Advantages/disadvantages

This job can be physically challenging and working at heights can be demanding for some people.

You will get to work in a variety of locations and you might have the chance to put up scaffolding for major sports and music events or for film sets.

Money guide

Starting as an apprentice or trainee, you can earn up to £13,000 per year.

Once qualified as a scaffolder, salaries range from £17,000 to £38,000 depending on experience.

Self-employed or contract scaffolders can often negotiate higher rates of pay.

Overtime is frequently available and on some projects there are performance-related bonuses which can lead to higher earnings.

Related opportunities

- Building Technician p64
- Construction Operative p72
- Roofer p102

Further information

Construction Industry Training Board (CITB)
www.citb.co.uk

National Access and Scaffolding Confederation
www.nasc.org.uk

What the work involves

Scaffolders put up scaffolding so that new constructions, or the maintenance of existing buildings and structures, can take place. You will put together metal tubes, fittings and wooden or metal platforms to create the scaffolding.

You will use tools such as swivel spanners and spirit levels in your work.

You may also put up spectator stands, stages and rigging for outdoor concerts and events.

Type of person suited to this work

Safety is the main priority in scaffolding. You need to ensure that it is safe for the people who will be working on it, passers-by, workmates and yourself. For this reason, you have to be able to keep your concentration, have good practical skills, be well organised and be able to follow instructions and take measurements accurately.

You must be physically fit so that you can lift and carry equipment up and down ladders and, of course, you must be happy working at heights.

You also need to be able to work as part of a team of scaffolders.

Working conditions

You will be working mainly outdoors in most weather conditions, often at great heights.

Qualifications and courses

No formal academic qualifications are required but some employers might expect entrants to have GCSEs/National 5s (A*-E/A-E) in English, Maths and a science. GCSEs/National 5s in Art, Design and Technology might also be useful. The BTEC Certificate and Diploma in Construction (Levels 1 and 2) and City & Guilds (5782) NVQ in Woodmachining (Levels 2 and 3) are also relevant.

In order to become a shopfitter, you could begin as a trainee in a relevant area of the industry such as a shopfitting joiner, wood machinist or metal fabricator.

Alternatively, you could serve an apprenticeship with a shopfitting company. As an apprentice, you will experience a combination of work-based training from professional shopfitters and a series of day or block release at a college studying for qualifications. NVQs/SVQs in Shopfitting (Levels 2-4) or an NVQ Diploma in Wood Occupations (Levels 1-3) which will include training, on-site work, bench work and site management are typically studied as part of an apprenticeship.

With experience you can apply for membership of the National Association of Shopfitters (NAS) for further training in areas such as contract law, estimation and site management, provided by the Shopfitting Independent Training Forum (SITF).

Many employers require you to have the CSCS card issued by the Construction Skills Certification Scheme as proof of your competence and a skills card distributed by the Shopfitting and Interior Contracting Competency Scheme (SICCS) specific to shopfitters. In order to obtain these, you will have to have completed or be in the process of completing an industry recognised qualification.

What the work involves

As a shopfitter you will create and install the interiors and exteriors of commercial buildings such as shops, banks, offices, restaurants and hotels. You may be working from designs made by an architect or designer, or you might have to research and prepare your own design drawings.

You will prepare, assemble and finish joinery and metalwork according to the design, before bringing each part together and assembling them on-site.

You will probably specialise in a particular area. These include a metal fabricator, cutting and shaping metal components; a wood machinist, using specialist machinery to cut precise parts for joiners.

Type of person suited to this work

As you will be working in a workshop or on-site you should have a keen interest in practical work and have good hand skills. You should also be interested in design and construction.

You should have an eye for detail and a high level of concentration, but you will also need a certain level of fitness as you will be required to work long and at times, hard hours.

As you will be taking measurements and making calculations frequently you should have good spatial awareness and an aptitude for maths.

Working conditions

You will work around 40 hours per week, with overtime often required, in a variety of locations. You may have to travel to work on-site and this may involve working away from home at times.

You may have to work irregular hours, overnight or at weekends to accommodate clients – work may need to be done during the night when premises are closed.

On-site work may be dusty, dirty and noisy and usually involves physical work such as lifting and bending.

Future prospects

Once you are qualified and have built up experience, you could progress to a supervisory or managerial role, ensuring your team's work meets the necessary standards. Experienced shopfitters may be able to apply to become masters of their trade through the Institute of Carpenters.

It is possible to establish your own shopfitting business.

Alternatively, the skills that you develop as a shopfitter could be utilised in various other building trades.

Advantages/disadvantages

Shopfitting is a diverse profession as your work will change according to the project that you are working on as well as the materials you will work with.

You will meet and work with many other professionals involved in construction such as engineers, architects, electricians and plumbers.

The job is physically demanding and you may be required to work long or unsocial hours.

Money guide

Your starting salary may be around £13,500 to £16,000.

With experience and qualifications, earnings can rise to between £17,000 and £22,000.

As a shopfitter with supervisory duties you may earn around £30,000 per year.

Related opportunities

- Builders' Merchant/Assistant p453
- Carpenter/Joiner p65
- Furniture Manufacturing Operative p209

Further information

Construction Industry Training Board (CITB)
www.citb.co.uk

Institute of Carpenters
www.instituteofcarpenters.com

National Association of Shopfitters
www.shopfitters.org

Qualifications and courses

There are no set qualifications to become a site manager/clerk of works. Experience in a relevant industry however, is necessary, perhaps at craft or technician level in construction or civil engineering. It is not normally a profession that you can enter when you first leave school.

As well as experience, you may need certain construction and civil engineering qualifications. You may decide to seek employment at trainee level and work your way up after completing some introductory courses. These might include a City & Guilds Award/Certificate/Diploma in Basic Construction Skills (Level 1), NVQs Level 2 or 3, a BTEC/SQA Level 2 or 3, a BTEC Higher National Diploma (HND) or Higher National Certificate (HNC) or a Foundation or Honours degree. Graduates may be taken on by companies as apprentices where they will learn on the job.

Once in employment, you can gain NVQs in Site Inspection (Levels 3 and 4) which will cover areas such as health and safety, inspecting property, planning, monitoring and maintenance of projects in construction.

As you accumulate qualifications you can achieve different levels of membership with the Institute of Clerks of Works and Construction Inspectorate (ICWCI). Although this membership is not essential, it is increasingly sought after by employers and beneficial to your career progression. To enter each level of membership you will need to have a relevant qualification, a report of your professional history, a professional practice interview and a materials identification test.

You may be required to obtain a Construction Skills Certification Scheme (CSCS) card as proof of your competency working on-site. Subject to your qualifications, your membership with ICWCI and an examination, you will be eligible for a CSCS card.

What the work involves

As a site manager/clerk of works you will be responsible for supervising all the on-site aspects of a construction contract.

You must ensure that good standards are maintained and that work is carried out efficiently and on time.

You will inspect and monitor materials, procedures and work so that the client is guaranteed quality and value for money. You will also act as a superintendent, advising contractors about aspects of work and solving problems as they arise.

Type of person suited to this work

You should have an interest in construction and should enjoy working outdoors and in all weather conditions. You will need to be physically fit and have a head for heights.

You need to be responsible, organised and honest as you may be in control of projects involving large teams of workers and a variety of materials. You will need a keen eye for

detail and to be thorough and vigilant in maintaining quality standards of work and materials.

You should have excellent communication skills, be able to lead a team and to establish appropriate working relationships with contractors' staff.

Working conditions

You will usually work around 40 hours a week, Monday to Friday. However you will frequently have to work at the weekend and during the evening depending on deadlines.

You will be based in a site office which will usually be a temporary structure. You will have to spend much of your time outdoors in all weather conditions.

You may have to climb ladders and scaffolding or in tunnel construction, work underground. When you are inspecting a site you might have to wear protective clothing such as a hard hat and work boots.

Future prospects

There is currently a shortage of site managers in the UK. As an experienced clerk of works you must undertake continuing professional development. This is so that you can keep up to date with advances in areas such as new materials, practices, law and regulations, and health and safety issues.

Clerks of works can move up to roles in site management or other management roles in the construction industry.

You may have the opportunity to specialise in your chosen field or become self-employed. You may even take your work abroad.

Advantages/disadvantages

You can choose to specialise in particular areas such as building, civil engineering or mechanical and electrical installations.

On-site inspection may be dusty, dirty and noisy.

Money guide

The starting salary for a clerk of works can be between £21,000 and £40,000 a year.

With experience, your salary can be in excess of £50,000 depending on the contract undertaken.

Related opportunities

- Building Surveyor p63
- Civil/Construction Engineer/Civil Engineering Technician p69
- Construction Supervisor/Manager p74

Further information

Chartered Institute of Building
www.ciob.org.uk

Institute of Clerks of Works
www.icwgb.org

Qualifications and courses

There are no formal entry qualifications for this job but you will find it useful to have GCSEs/National 5s (A*-E/A-E) in Maths, English, a science and Technology. Pre-entry experience within the construction industry, as a labourer or tradesperson, may be advantageous.

Young entrants can train on the job with an employer or as an apprentice within an approved apprenticeship scheme. CITB and the Steeplejack and Lightning Protection Training Group provide opportunities for apprenticeships. Entrants will be required to take aptitude tests in maths and problem solving and will be assessed in literacy and their ability to work at heights. Apprentices are sponsored by an employer and spend 6 months out of a 2 year period at the residential National Construction College.

Candidates will work towards NVQs/SVQs Levels 2 or 3 in Accessing Operations and Rigging – Steeplejacking and various other CITB-accredited courses such as Health and Safety, First Aid, Mobile Towers, Fire Fighting, Safe Use of Ladders and Industrial Rope Access.

Many employers require you to have the CSCS card issued by the Construction Skills Certification Scheme as proof of your competence working on-site. You will need to have completed or be working towards an industry recognised qualification in order to be granted one.

In order to remain up to date with current issues within the industry, you may find it useful to gain membership with The Association of Technical Lightning and Access Specialists (ATLAS).

What the work involves

Steeplejacks work on high structures including power station chimneys, cooling towers, oil refineries, factories and church spires. Your work on these structures will involve climbing to high places with your tools to complete routine maintenance, repairs or renovation projects.

You will plan each job carefully. To ensure a safe and accessible working environment you will put in ladders, specialist scaffolding or industrial rope access (abseiling), work platforms (cradles) and bosun's seat (harness) and fall-arrest devices.

You will be working on both historic buildings and modern constructions, in urban and rural areas.

Type of person suited to this work

You should be organised as you will have to make sure in advance that you have the right safety equipment and tools to complete the job. The ability to work well as part of a team is also important.

You must be comfortable working at heights or in confined spaces, have a good sense of balance and be physically fit. Good coordination and practical skills are required to use the tools of the trade.

You should enjoy working outdoors in all weather conditions and you must be very conscious of, and committed to, health and safety procedures.

Working conditions

Your working hours and shifts can vary and you might have to work during the evenings and weekends.

Your work will be physically demanding as it will involve rigging, climbing, carrying ladders and tools and working with your hands. You will need to wear protective clothing and headgear. You may have to work on industrial chimneys which can be extremely dusty, requiring respiratory equipment.

A driving licence is useful as you may have to travel.

Future prospects

As a steeplejack you will probably work for construction firms that specialise in steeplejacking. These tend to be based in the major UK cities such as London, Manchester, Nottingham, Bristol, Cardiff, Edinburgh and Glasgow, and tend to seek local employees.

With experience you will be eligible for promotion to a role as a supervisor or manager within a firm. With significant experience you can become self-employed, although this is not particularly common.

There are, however, increasing opportunities to work abroad.

Advantages/disadvantages

There are currently between 800 and 1,000 steeplejacks in the UK. As a qualified steeplejack you may find work easily and there are plenty of opportunities in this area.

Your work may be hampered by weather conditions, for example, high winds may prevent access to structures and delay completion of projects.

Money guide

Trainee steeplejacks over the age of 21 can earn between £15,000 and £17,000 a year.

Once qualified, your salary may increase to £20,000.

With experience, advanced skills and extra responsibilities, senior engineers can earn in excess of £25,000 a year.

Your wage can significantly increase with overtime and shift allowances.

Related opportunities

- Bricklayer p60
- Scaffolder p104
- Stonemason p108

Further information

Association of Technical Lightning and Access Specialists

www.atlas.org.uk

Construction Industry Training Board (CITB)

www.citb.co.uk

Qualifications and courses

There are no formal entry requirements to train as a stonemason but an interest in art and design is desirable and it may also be useful to have GCSEs/National 5s (A*-C/A-C) in English, Maths, Design and Technology in order to calculate areas and volumes. Pre-entry on-site experience, as a labourer for example, is highly valued by potential employers and may offer you a route in for subsequent stonemasonry training.

Another common form of entry is via an apprenticeship with a building or stonemasonry firm. Training is provided on the job by experienced professionals and combined with part-time attendance at college or training centre in order for you to gain relevant NVQs/SVQs, for example, in Stonemasonry Levels 2 and 3. Candidates will have to complete an aptitude assessment and may have to secure employment prior to acceptance.

As an apprentice you may work towards relevant qualifications in stonemasonry offered by the Construction Awards Alliance (CAA). NVQ Diplomas in Heritage Skills (Construction) – Mason (Level 3) or the City & Guilds NVQ in Stonemasonry (Levels 1–3) are available. Courses cover estimating, planning and setting out projects, as well as understanding product information and tools.

You might opt to complete a relevant course full time at college but you may find that future employers do value on-site experience.

Many employers on construction sites require workers to have a Construction Skills Certification Scheme (CSCS) card as proof of one's competence working on-site. A driving licence may also be useful, particularly for fixer masons, who will be required to travel between jobs.

What the work involves

There are 3 types of stonemason. Banker masons cut, shape and carve the stone, fixer masons assemble and fix stones into place and monumental masons make things such as plaques and headstones.

While the work is manual and strenuous it is also highly creative. You may work on new buildings but could also work on restoring and repairing old buildings.

Type of person suited to this work

Banker mason

As a banker mason, you have to be good with your hands to cut, shape and carve stone accurately. You also need artistic skills for producing decorative finishes.

Fixer mason

You must be physically fit so that you can lift the stones, although you will use special equipment to lift the heaviest ones. You must not mind working at heights.

Monumental mason

In this sector, you will be working closely with the funeral industry, so you need to be sensitive to people's requirements and have a good eye for design. It is also useful to be

interested in architecture and history, as much of the work involves restoring old buildings.

Working conditions

Banker masons mainly work in a workshop, while fixer masons work on-site in all weather conditions and restoration masons work on monuments and listed buildings, often at heights.

All masonry work can be dusty, noisy and unsuitable for people who have allergies. You will need to follow health and safety procedures and wear protective clothing.

You will normally work a 39-hour week but overtime may be required when nearing a project deadline.

Future prospects

There is good demand for stonemasons in the UK given the shortage of traditional craft skills.

You can choose to work for stonemasonry firms and larger building contractors. If you work for a small stonemasonry company you are likely to have to do both banking and fixing work. There are fewer opportunities in small, family run businesses however.

With experience, you may wish to specialise in restoration work or new buildings or to take on supervisory roles. You may even opt to instruct at a college or to become self-employed.

Advantages/disadvantages

The physical nature of the job, including working at heights, may be strenuous for some people.

You may have the opportunity to work on impressive restoration projects, for example in cathedrals or stately homes.

It can make you proud to produce work on a building that will be admired for many years.

Money guide

Starting salaries can range between £15,000 and £18,000 a year.

With experience, your salary could rise to between £20,000 and £30,000.

Overtime and bonuses are often available. Self-employed stonemasons negotiate their own rates.

Related opportunities

- Bricklayer p60
- Building Technician p64
- Dry Stone Waller p77

Further information

National Heritage Training Group
www.the-nhtg.org.uk

Stone Federation Great Britain
www.stonefed.org.uk

Qualifications and courses

Entrants normally have gained an accredited degree and/or postgraduate qualification in structural or civil engineering. Those who have studied another engineering subject or a highly numerate science degree may be able to enter the profession but their career progression may be slower and increasingly limited. In order to be accepted onto a degree course in engineering, you will normally be required to have achieved 2 A levels/3 H grades and 5 GCSEs/National 5s (A*-C/A-C). This should include maths and any science subject, although physics is at times specifically requested by certain universities.

It is possible to enter this career after studying for an HNC/HND or Foundation degree in Engineering. You will have to enter at technician level (TIStructE) and work your way up to engineer status by training on the job and gaining further qualifications. The Initial Professional Development (IPD) scheme lays out the skills you need to prove your ability as an engineer and work towards incorporated or chartered status. This takes 3 to 4 years before being completed with an exam and interview, the Professional Review Interview (PRI). Success will allow you to become a professional Chartered Structural Engineer (MIStructE) or Incorporated Structural Engineer (AMIStructE).

Graduate structural engineers are advised to pursue membership with the Institution of Structural Engineers (IStructE) and the Engineering Council as this can greatly improve your employability, salary and progression into senior or specialised roles.

You may opt to study for a master's prior to securing employment in order to work towards chartered status immediately, or alternatively, your employer may sponsor your studying whilst you work at associate level, for example, through a graduate training scheme.

What the work involves

Structural engineers design structures that are able to withstand the high pressure they are placed under.

You will work with architects on the design and construction of a variety of structures including bridges, tunnels, domestic houses, office blocks or sports stadia.

Among other tasks you will calculate the loads and stresses of a structure, analyse potential problems and test digital models to examine how they will endure influences such as wind, gravity and earth tremors. You will investigate soil conditions, visit construction sites, and undertake projects that involve demolition or repair of a structure.

Type of person suited to this work

You will need to be good at technical drawing and have 3D concept skills. You must have a keen eye for detail and accomplish your work efficiently and with the utmost accuracy.

You should have an aptitude for problem solving and analytical thinking. You should also have strong skills in maths, physics and IT.

You must be able to work in a team as well as being able to work with other professionals from across the construction industry.

Working conditions

You will work a total of approximately 40 hours a week, Monday to Friday. At times you might have to work at the weekend.

You will work both in an office and on-site. This can be in all weather conditions and you will have to wear protective clothing such as a hard hat.

You will frequently have to travel from site to site and a driving licence may be useful for this.

Future prospects

Many employers provide training schemes for new structural engineers which allow you to work towards achieving professional status. You may follow a formal progression structure beginning as a construction designer before becoming a project manager.

You may work in an engineering consultancy or construction company and later, specialise in a specific type of work, such as concrete buildings or refurbishment.

With chartered status you could become self-employed or move into research or lecturing. You could also find contract work abroad or go on to become a Fellow of the IStructE, a recognition of excellence in structural engineering.

Advantages/disadvantages

You should be prepared to work in all weather conditions.

Travel within a working day is common and you may be required to work away from home sometimes.

This is an important job with high levels of responsibility so you are likely to be well respected.

Money guide

Graduate trainees have a starting salary of £18,000–£23,000.

With experience, you could earn £24,000–£40,000.

A senior employee with chartered status could receive up to £50,000, with top positions attracting more than £70,000.

Related opportunities

- Architect p56
- Quantity Surveyor p100
- Surveying Technician p110

Further information

Association for Consultancy and Engineering
www.acenet.co.uk

Construction Industry Training Board (CITB)
www.citb.co.uk

Institution of Structural Engineers
www.istructe.org.uk

Qualifications and courses

There are a number of routes of entry into this profession, one being completing a relevant course at college to gain the basic skills required by the job. Introductory courses that are suitable include the Level 3 Diploma in Construction and the Built Environment or Civil Engineering for Technicians. These courses provide candidates with a useful foundation of knowledge which they can draw upon when training for more advanced qualifications such as a BTEC HNC/HND in Construction or a Foundation degree in Surveying, Construction or Civil Engineering.

Alternatively, the Chartered Surveyors Training Trust (CSTT) offers work-based training for young people aged 16–24, living in England. Applicants must have a minimum of 4 GCSEs/National 5s (A*–C/A–C) or equivalent. CSTT apprentices train for 2 years and, upon completion, have the option to study for a Royal Institution of Chartered Surveyors (RICS) accredited degree.

Another route for school leavers is to apply for the Advanced Level Apprenticeship in Surveying. Apprentices will typically work towards gaining an industry recognised qualification, for example, an NVQ/SVQ Level 4 in either Quantity Surveying Practice, Valuation, Spatial Data Management or Town Planning.

Once you have acquired the relevant qualifications and secured employment, you can work towards becoming a technical member (TechRICS) of RICS. In order to do so, you will need to complete a 2-year Assessment of Professional Competence (APC) which involves a period of structured training and practical experience followed by a technical assessment interview known as the Assessment of Technical Competence. Those with an NVQ/SVQ Level 4 and substantial work experience may proceed to the technical assessment interview.

Once you have qualified as a surveying technician, further training is possible in the form of NVQs. This may lead you to specialise in a particular area of surveying.

Because you will be dealing with very specific technical issues in each project, you will need to have an accurate and methodical approach to work, good numerical skills and the ability to multi-task.

You will need a good level of IT skills, and confidence in using the wide range of sophisticated equipment required for the job. Knowledge of business, law and health and safety-related regulations is also desirable.

Working conditions

Working hours usually follow those of a normal office job, but you will occasionally be called to work early mornings, evenings and at weekends during busy times or for certain site visits.

Most of the work is office based, but you will also spend time working on-site. This means you must be prepared for all weathers and wear appropriate safety equipment at all times.

You could work with a variety of contractors, ranging from central or local government to smaller surveying companies or even financial businesses and auction houses.

You will be carrying out a lot of complex technical tasks which require excellent concentration and can be quite tiring.

Future prospects

You could progress to become a consultant, a partner in a firm or even move into related sectors such as town planning or chartered surveying with the right qualifications. Self-employment is also an option.

Advantages/disadvantages

Job satisfaction is likely to be high as you will provide invaluable support on a number of important projects.

There is the opportunity to become self-employed or work overseas.

Earning potential is not as high as in some other roles in surveying and hours can be long and unpredictable at busy times.

Money guide

Salaries start from £18,000 to £22,000 per year.

With experience, you can earn £30,000 and more.

Salaries are generally higher in London.

Related opportunities

- Civil/Construction Engineer/Civil Engineering Technician p69
- Construction Supervisor/Manager p74
- Quantity Surveyor p100

What the work involves

Surveying technicians work alongside chartered surveyors, providing hands-on support across the full range of surveying specialisms including building, land, rural and commercial.

You will be expected to carry out a range of administrative tasks associated with each project, such as putting together contracts and writing reports.

You will also be using complex computer programs and technical equipment both on-site and in the office in order to create reports and survey drawings, and to assess various aspects of each project.

Type of person suited to this work

You will be working closely with other professionals and clients at all levels, so the ability to communicate both orally and in writing is vital.

Further information

Chartered Association of Building Engineers
www.cbuide.com

Chartered Surveyors Training Trust
www.cstt.org.uk

Royal Institution of Chartered Surveyors
www.rics.org

Qualifications and courses

There are no set entry requirements for this profession, however, it may help to have GCSEs/National 5s (A*-E/A-E) in English, Maths and IT. The BTEC Diploma/Certificate in Construction and the Built Environment offered by some schools and colleges may also be relevant to the skills of a thatcher.

There are no formal apprenticeship schemes for thatching, therefore it is recommended that you contact experienced senior thatchers or thatching companies to try and secure a training or apprentice role. In order to make the necessary contacts within the industry, you may find it useful to seek the help of the National Society of Master Thatchers, the National Council of Master Thatchers Associations or the Thatch Advice Centre. The National Society of Master Thatchers in particular offers a membership scheme, training courses and advice on technical issues, that could help you develop your career, ensure your skills are up to date and ultimately, enhance your career progression.

As a trainee thatcher you may be able to apply for the New Entrants Training Scheme, which takes 2 years to complete both on the job and at Knuston Hall in Northamptonshire. On completion you will gain an NVQ in Roofing Occupations (Thatching). This scheme is run by Herefordshire and Ludlow College.

An NVQ in Roofing Occupations (Thatching) at Level 2 or 3 familiarises candidates with health and safety procedures and equips candidates with the skills and specialist knowledge necessary to prepare and construct roofs and thatching materials.

The Traditional Building Skills Bursary Scheme seeks to address skill shortages in traditional crafts by offering bursaries and work experience placements for eligible applicants.

What the work involves

Thatching is the covering of roofs with plant stems such as water reed, combed wheat reed and long straw. Your tasks will include thatching new roofs and repairing or re-thatching existing thatched roofs.

Your work will involve using many different tools, including mallets, hooks, needles, knives and shears.

As thatchers work outside all year round, your hours will differ depending on the season.

Type of person suited to this work

You need to have good practical skills to use the specialised equipment and to develop an expertise in the craft. You must be physically fit so that you can climb ladders and scaffolding whilst carrying thatching materials. You will need to be comfortable working at heights.

It is important to be able to measure roofs accurately in order to calculate the required amount of thatching material so strong numerical skills are required.

Working conditions

You will work outdoors on roofs in rural locations in most weather conditions. The work can be dusty, which can be difficult if you suffer from certain allergies.

It is important that you follow health and safety procedures closely when working on roofs.

Your working hours are likely to vary according to when the work is available. This can be seasonal work, meaning you will be busiest during the spring and summer months when the weather is best.

Future prospects

There are approximately 500 thatcher businesses in the UK and, as about half of all thatched buildings need to be re-roofed every 15–20 years, there is a steady demand for thatching work. Conservation regulations do not allow owners of thatched properties to replace their roofs with any other material, therefore the number of thatched buildings requiring repair/replacement remains reasonably stable.

There is fierce competition for training vacancies and some thatchers have another job to supplement their income. Not all areas of the UK have thatched buildings so you may find you will need to relocate to an area where the skills are more in demand, ie in rural areas.

Your work opportunities are likely to be on a self-employed basis. It can take a number of years to become highly skilled.

Advantages/disadvantages

It is rewarding to practise an ancient craft and create thatched roofs that are both functional and decorative.

The job involves being active and working outdoors.

Working at heights may be demanding for some people and potentially dangerous.

You may need a second job to supplement your earnings.

Money guide

The starting salary for a qualified thatcher ranges between £13,000 and £16,000.

With experience, your salary is likely to rise to £17,000–£22,000 a year.

Self-employed thatchers who have established a good reputation with their clients can achieve around £35,000.

Related opportunities

- Roofer p102
- Stonemason p108

Further information

Lantra
www.lantra.co.uk

National Heritage Training Group
www.the-nhtg.org.uk

Thatching Advisory Services
www.thatchingadvisoryservices.co.uk

Qualifications and courses

There are no formal entry requirements for this profession and a common route of entry is through a 3-year Thermal Insulation Apprenticeship accredited by the Insulation and Environmental Training Agency (IETA). You will have to pass an entry test assessing your ability to work at heights and a medical screening, after which you will undertake on-the-job training by experienced professionals and a period of off-the-job instruction at college.

Apprentices will work towards an NVQ/SVQ Level 2 in Thermal Insulation Engineering, complete a Level 2 Certificate in Thermal Insulation and a course in Employment Rights and Responsibilities.

Once employed, you may opt to complete short training courses offered by the Asbestos Control and Abatement Division (ACAD) of IETA if you are an engineer working closely with asbestos.

Many employers on construction sites require workers to have a Construction Skills Certification Scheme (CSCS) card and a CCNSG Safety Passport. This demonstrates that the holder has health and safety training and is competent working on-site. You will need to have gained or be working towards completing an NVQ in order to be granted a CSCS card. If you are working without qualifications, the On-site Assessment Workshop or Experienced Worker Practical Assessment schemes will help you gain the qualifications required.

What the work involves

You will use various types of insulation to either prevent heat loss or keep heat out within different types of products and equipment, such as boilers, pipework, refrigeration or air conditioning. The types of insulation you will use will be dependent on the actual project but could involve silicate or foam.

You will measure, cut and shape insulating materials to fit around pipes, boilers and duct work. Once the item is insulated, you will cover it using sheet metal or another cladding material.

You will assess clients' needs and advise them on the best plan to solve their insulation problem.

Type of person suited to this work

You may be exposed to some potentially dangerous materials, so you must follow health and safety regulations carefully.

You should be able to understand instructions, have a practical approach to your work and enjoy using manual skills, particularly for cutting and fitting materials. Mathematical skills are useful for measuring and working out quantities.

Much of the work involves strenuous lifting, balancing and climbing up scaffolding, so you will have to be physically fit, as well as able to work within confined spaces and at height.

The ability to work in a team and get on with other people will be important as you will often work alongside other

professionals from the construction and engineering industries.

Working conditions

You could be working indoors or outside at heights, in places that are cramped or difficult to access.

You may be exposed to harmful substances and be working in dusty and dirty environments, so you will wear protective clothing, such as goggles and sometimes a face mask.

You will normally work a standard 38-hour week, but overtime and evening or weekend work might be required. Travelling around the country to visit different sites and projects may be necessary.

Future prospects

There is currently a growth in the demand for qualified thermal insulation engineers given the increasing focus on environmental conservation.

After gaining training and experience, you could find a job within building, building service engineering or specialised energy conservation companies or you could move into related areas such as heating and ventilation engineering or refrigeration.

Within the larger companies it might be possible to progress into technical, supervisory or managerial posts such as a site safety officer or contracts manager.

Advantages/disadvantages

You will be working alongside people from different industries. Opportunities are good and overseas work may be possible.

You will need many different skills to complete one job.

You may need to work away from home which could be difficult if you have family commitments.

Money guide

Apprentices usually earn £10,000–£16,000 a year, depending on the stage of training.

With qualifications this rises to £17,000–£22,000.

Senior thermal insulation engineers can earn up to £30,000.

Contract work is common and allowances could be made for working away from home.

Related opportunities

- Damp Proofer p75
- Gas Network Engineer p210
- Heating and Ventilation Engineer p88

Further information

Construction Industry Training Board (CITB)
www.citb.co.uk

Thermal Insulation Contractors Association
www.tica-acad.co.uk

Qualifications and courses

Town planner

You will need to have a Royal Town Planning Institute (RTPI) accredited qualification such as a degree or a postgraduate qualification. For degree entry you will need at least 2 A levels/3 H grades. For entry to a postgraduate course, a degree in a related subject such as geography, architecture or urban studies is required. To ensure chartered status, it is recommended that your qualifications be completed on a combined level of study, meaning both spatial planning and a specialist area of planning are covered.

Chartered (MRTPI) membership of the RTPI is available after completion of an accredited qualification and 2 years' relevant work experience.

Continuing professional development (CPD) forms an essential part of advancement in your career. You will be expected to undertake relevant courses and maintain an annual professional development plan.

Town planning technician

There are no set qualifications, but at least 4 GCSEs/ National 5s (A*-C/A-C) including English and Maths, are usually required. Many entrants also have A levels/ H grades, Foundation degrees or other relevant qualifications, such as a Scottish Group Award (SGA) in Construction, a HND in Planning or a graphic design or IT qualification. You may also find having relevant work experience, preferably in a planning office, advantageous when seeking employment.

Planning technicians are trained on the job by experienced professionals whilst studying part time or via distance learning for an NVQ/SVQ in Town Planning Support (Level 3-4).

Technical Membership (TechRTPI) of the Royal Town Planning Institute (RTPI) requires a recognised qualification at NVQ Level 3 or higher and 2 years' work experience.

You must be organised with good research, problem solving and analytical skills to investigate the potential effects of different proposals for land use.

Specialist skills required include competency in graphic design, desktop publishing and familiarity with computer-aided design (CAD), geographical information systems (GIS) and cartography.

Working conditions

Regular office hours are likely, although you may sometimes need to attend meetings in the evening.

Most town planners are based in offices but often go out on-site visits. A driving licence might be necessary.

Future prospects

There is a huge demand for more qualified planners in the UK and overseas.

Most employers are local authorities and planning consultancies, but opportunities also exist within central government, construction companies and environmental organisations.

With experience and chartered status, you may be promoted to senior or county planning officer or you could specialise in areas such as urban design or conservation. Alternatively, you could move into related careers such as recreation management, market research or property development.

Advantages/disadvantages

It is satisfying to deal with public problems and to improve the environment in which people live and work.

It can be frustrating to compromise on planning initiatives.

Dealing with angry or upset members of the public can be difficult.

Money guide

Newly graduated town planners could earn between £16,000 and £28,000. This will be more if you are a registered member of the Royal Town Planning Institute (RTPI).

Senior planners can earn up to £34,000, with extra responsibilities can earn £41,000.

Chief planning officers, heads of department and company directors can earn between £55,000 and £80,000.

Technicians can start on £14,000 a year and earn up to £28,000 with experience and supervisory experience.

Related opportunities

- Land/Geomatic Surveyor p92
- Planning and Development Surveyor p96
- Quantity Surveyor p100

What the work involves

Town planner

You will manage and develop urban or rural areas to best serve the population. When deciding how to use the land you will take into account commercial, social, environmental and heritage needs.

Town planning technician

You will support the work of town planners.

You will carry out surveys, map areas, record information, analyse and present reports and provide advice on planning permission.

Type of person suited to this work

You will need excellent communication skills as you will need to explain your ideas clearly and produce comprehensive written reports.

Further information

Royal Town Planning Institute
www.rtpi.org.uk

Qualifications and courses

A common route of entry into this industry is to complete an apprenticeship with a building or tiling firm. There are no specific qualifications required, although GCSEs/National 5s (A*-E/A-E) in subjects such as maths, technology or English may be required by some employers and are helpful when dealing with calculations, measurements and theory. Similar subjects or equivalent vocational qualifications such as the BTEC Introductory Certificate/Diploma in Construction may also be useful in introducing candidates to the basic skills required in the industry.

An apprenticeship is a possible route into this career, where you will receive on-the-job training and working towards industry recognised qualifications. These qualifications include an NVQ/SVQ in Wall and Floor Tiling at Levels 2 and 3. Apprenticeships are available to those aged 16–24 and may involve a skills learning exercise prior to your acceptance. You will have to secure employment prior to starting an apprenticeship and employers often value people with some on-site experience. You might first, therefore, gain experience as a labourer before applying for a formal training scheme.

It is becoming increasingly necessary to have a Construction Skills Certification Scheme (CSCS) card to work in construction as proof of your competency. You must have gained or be working towards an NVQ in order to be granted one.

What the work involves

You will fit tiles in various locations, from bathrooms and kitchens to hospitals and swimming pools. You may work with many kinds of tile including ceramic, stone, glass, terracotta, granite, marble and mosaic.

First you will set out (known as marking) an area by calculating the amount of tile and adhesive needed. You will then use bench-mounted or hand tools to cut the tiles to the correct size and shape.

You will level the surface with plaster, cement or sand, fix the tiles in the correct position and then fill in the gaps with grout.

Type of person suited to this work

Maths skills are essential as you will need to measure and calculate how much material you will need. You must work carefully and accurately. It is important to match colours and patterns, so a flair for design is useful.

You need to be physically fit for carrying the materials and for working on your hands and knees.

You need to be able to work on your own initiative as well as in a team. You should be presentable and pleasant when dealing with customers.

Working conditions

You will work mainly indoors in a variety of locations, ranging from a client's home to offices, factories and construction sites. A driving licence might be useful.

You may work a normal working week, but you may also need to work evenings or weekends so that you can tile walls and floors without disrupting businesses.

As you will use special cutting tools and adhesives you will need to be aware of health and safety procedures.

Future prospects

Work is available with specialist tiling companies and building contractors, or you may choose to become self-employed, providing services to individuals or sub-contracting for organisations. Demand for tilers very much depends on the current state of the economy.

It is possible to specialise in one type of tiling, for example flooring tiles, mosaic work or bathrooms.

With experience and further training, you may be able to progress into technical, supervisory or managerial positions. You could even move into college instruction.

Advantages/disadvantages

You will be on your hands and knees, sometimes working in dusty, dirty or cramped conditions.

The work is varied and you can achieve spectacular results using coloured and textured tiles to decorate walls and floors.

Money guide

Salaries for trainee tilers can be up to £14,000 a year.

With experience, this can rise to £17,000–£23,000.

Tilers with supervisory duties can earn between £25,000 and £30,000.

Overtime is often available, and on some projects there are bonuses based on outputs, which can lead to higher earnings.

Related opportunities

- Building Technician p64
- Construction Operative p72
- Floor Layer/Finisher p84

Further information

Construction Industry Training Board (CITB)

www.citb.co.uk

The Tile Association

www.tiles.org.uk

Qualifications and courses

There are no formal academic qualifications required to become a wastewater treatment plant operator. Some companies, however, do seek employees with a minimum of 4 GCSEs/National 5s (A*-E/A-E) in Maths, English and a science or technology subject. The BTEC Diploma in Engineering or Environmental and Land-based Studies may also be relevant for this type of work.

The most common form of entry into the industry is by a water industry apprenticeship. The minimum age for apprentices is generally 18 and applicants will normally be required to pass a medical examination prior to acceptance. Previous work experience on a building site or within plant maintenance may be advantageous, not only in introducing you to the basics of the industry but in your bid to secure an employer to sponsor your training.

As an apprentice, you will combine on-the-job training from experienced professionals with a series of day or block release instruction at a college or training centre where you will work towards achieving an industry recognised qualification. Courses include the NVQ/SVQ Level 2 in Operating a Process Plant (Water/Waste Water/Sludge), the City & Guilds Level 2 Certificate in Water Sector Competent Operators or Water Engineering.

To further your career, you may also choose to pursue an HNC/HND or degree which will qualify you for more senior roles.

In order to work as an operator, employers may require you to register with an appropriate safety passport scheme, eg the Energy and Utilities Skills Register (EUSR).

What the work involves

Water treatment plant operators monitor wastewater as it goes through various treatment processes which remove harmful substances. They ensure that treated water is returned to the water cycle and that waste is removed and destroyed as appropriate.

You will be responsible for the operation and maintenance of the plant, ensuring that septic tanks, filters and screens are disinfected, checking water samples, and adding treatment micro-organisms and chemicals to the water when necessary.

You will conduct tests on samples, take readings from monitors and adjust treatment equipment as necessary. You will work with a team composed of a supervisor, senior technicians, engineers and a manager.

Type of person suited to this work

You need to have a passion for the environment, science and technology. You also need to be happy to work with new technology which you will use on a daily basis.

You must be able to communicate effectively and work well in a team. You will have to follow health and safety regulations. It is important that you are fit and active as you may be doing practical, strenuous work at times, such as cleaning and maintenance.

You must be organised and methodical as you will be testing samples to ensure that harmful substances are removed from the water cycle.

Working conditions

You will work approximately 37 hours a week. Overtime may be possible but part-time work is rare. You will probably have to work shifts as water treatment plants operate 24 hours a day. You may have to join a call-out rota to cover nights and weekends.

You will be based indoors in control rooms but some of your work will involve being outside in all weather conditions. You may also have to carry out work at heights or in confined spaces.

Protective clothing is provided. This may include a breathing apparatus, and should be worn to prevent contact with harmful substances.

Future prospects

After gaining experience, you could progress to a role as a supervisor and from there, on to roles as an inspector, a superintendent or a plant manager. You may also choose to move into a related area such as treatment plant design.

Advantages/disadvantages

You may find opportunities to increase wages by taking extra shifts, going on stand-by and doing overtime.

Your working environment in the plant may be smelly and wet.

You may sometimes be called into work if there is an emergency situation.

Money guide

Your salary as a trainee can start at around £12,000 a year.

With experience and qualifications you can earn between £18,000 and £25,000.

Supervisors and department leaders can earn between £25,000 and £32,000.

Overtime and extensive shift work can greatly increase salary.

Related opportunities

- Brewery Worker p199
- Energy Engineer p205
- Water/Sewerage Network Operative p116

Further information

City & Guilds

www.cityandguilds.com

Energy & Utility Skills

www.euskills.co.uk

Water UK

www.water.org.uk

Qualifications and courses

There are no formal academic requirements needed to become a water/sewerage network operative but a number of GCSEs/National 5s (A*-C/A-C) including Maths, English, a science or technology may be useful in supporting your search for employment as is a history of relevant work experience, in site maintenance for example. Equivalent vocational qualifications such as the BTEC Diploma in Engineering may also be relevant to this line of work.

The most common route of entry is via an apprenticeship. Entrants combine on-the-job training from experienced professionals with a series of day or block release instruction at a training centre or college where you will work towards industry recognised qualifications. The Certification and Assessment Board for the Water Industry (CABWI) offers a range of relevant awards, including Level 2 Diplomas in Distribution Control and Operating Process Plant (Water) and Level 3 Diplomas in Leakage Control, Controlling Process Operations and Network Construction Operations.

An alternative route to an apprenticeship is work experience in a related area, such as road working, construction or plant machine operation.

Registration with an appropriate safety passport scheme, such as the Energy & Utilities Skills Register (EUSR), may be required by some employers for you to be able to work on-site. The passport acts as proof of competency to work on the water network.

A driving licence may be useful for some roles.

What the work involves

Water/sewerage network operatives lay, maintain and repair the pipework that carries drinking water, waste water and sewage.

Your tasks might include digging trenches in roads and relaying them afterwards, putting up barriers and warning signs, laying pipes, repairing leaks, clearing blockages and installing water meters.

You will use a range of tools such as welding equipment to join pipes together and machinery such as mechanical diggers.

Type of person suited to this work

You must have good practical skills and be mechanically minded so that you can use tools, equipment and machinery effectively. You must be able to follow health and safety regulations as working on-site can be dangerous. You will have to follow plans and instructions accurately, so that systems are installed correctly and safely.

You must be fit and active for bending, kneeling and carrying materials and equipment.

You will have to deal with complaints from the public, who might be upset that their water services are disrupted.

You must also be able to work in a team with other water/sewerage network operatives.

Working conditions

You will work outdoors in all weather conditions. The work can be dusty, dirty and wet, as well as smelly.

You will need to follow strict health, safety and hygiene regulations, which may include wearing a breathing apparatus, a safety helmet, boots and gloves.

You may work normal working hours or shifts, but the particular hours you work will vary according to the needs of the job and the hours of daylight available. You may be on-call 24/7 in case of the need for emergency repairs.

Future prospects

There is currently a strong demand for water/sewerage network operatives because the privatised water companies, who manage water supply and sewerage disposal, are investing money in developing their systems. The industry currently maintains an ongoing system of construction, operation and maintenance of water and waste water infrastructure, thus there is a steady supply of jobs available.

You can find work with water companies and construction firms across the UK. After gaining experience, you could progress to a role as a team leader or in senior management and with further training, as an engineering technician or incorporated/chartered water engineer.

You could move into related areas such as water distribution inspection work.

Advantages/disadvantages

The work can be physically demanding and it can get smelly if you are working on sewerage systems.

Helping to provide people with an essential service can be rewarding.

Money guide

Apprentices earn around £12,000 a year.

Once qualified, this can rise to between £17,000 and £25,000.

Your salary can rise with overtime and shift allowances.

Related opportunities

- Construction Operative p72
- Gas Network Engineer p210
- Plumber p98

Further information

Energy & Utility Skills

www.euskills.co.uk

Water UK

www.water.org.uk

Qualifications and courses

There are no formal entry requirements but you might find employers value candidates with some GCSEs/National 5s in subjects such as English, technology and, particularly, maths, as calculations and measuring are important aspects of your job. Equivalent qualifications, such as a BTEC Certificate/Diploma in Construction, may introduce you to some of the basic skills required in the industry.

Previous experience within related areas of the field, in carpentry or joinery for example, may be helpful if you decide to seek entry-level employment as a fitter's 'mate' or labourer.

The most common route of entry, however, is via an apprenticeship with a glazing company. An apprenticeship will typically involve a combination of on-the-job training from experienced professionals and a series of day or block release instruction at a college or training centre in order for you to work towards industry recognised qualifications. Applicants normally need GCSEs/National 5s (A*-E/A-E), or an equivalent qualification and may be required to pass an aptitude test prior to entry.

Whilst you train, you will have the opportunity to work towards gaining vocational qualifications such as NVQs/SVQs in either Fenestration Installation (Level 2-3) or Fire Resistant Glazing and Glazing Installation (Level 2-3). Your training will cover areas such as the removal and fitting of window frames, health and safety, customer relations and relevant paperwork.

The Glass Qualifications Authority offer many NVQs related to the manufacture and installation of glass and other products.

Many employers require their staff to hold a Construction Skills Certification Scheme (CSCS) card as proof of one's competency working on-site. You normally have to be working towards or have gained an NVQ in order to be granted one.

A driving licence may also be required in order for you to travel between clients.

What the work involves

Window fitters install windows into new and existing buildings.

You will use hand and power tools to take out any old windows and fit new ones. You will work with materials such as glass, plastic and wood.

Once you have fixed a new window into the allocated space, you will need to give it a weatherproof seal. Your job may also involve fitting doors, conservatories and weatherboarding.

Type of person suited to this work

You will need good practical hand skills for using tools and you will need to be physically fit as you will be lifting and carrying windows. Maths skills are essential in order to make accurate calculations and fit frames properly.

You should be safety conscious and comfortable working on ladders.

You may work on your own for some jobs, but you will often work with one other window fitter, or in a small team so you must be able to work with others. You should also be able to get on with customers because you will spend a lot of time on their premises.

Working conditions

You will work indoors and outdoors in a variety of locations, and you will be working in most weather conditions.

You will need to pay attention to health and safety, especially when working with glass, and be happy clearing up after your work has finished.

You are likely to work normal working hours during the week, but overtime may be available at weekends.

Future prospects

Work is available throughout the UK. There is an increasing demand for double-glazed windows and for conservatories so job prospects are good.

You may find opportunities for work within large national firms or smaller local companies and you could go on to specialise in fire-proof glazing or film application (applying film to glass for privacy). There are also openings within the sales and marketing sides of the industry.

After gaining sufficient experience, you may progress to team leader or supervisory positions or move into window surveying or estimating. You may even opt to become self-employed and run your own window-fitting business.

Advantages/disadvantages

Lifting and carrying windows and working at heights is physically demanding.

It is satisfying to make customers happy by improving the appearance, value and function of their buildings by installing and repairing windows.

Money guide

As a trainee, you can expect a salary of £14,000.

Once qualified, your salary will increase to around £16,000 and £25,000 a year, depending on your experience.

Overtime and shift allowances may increase your earnings. Self-employed fitters negotiate their own rates.

Related opportunities

- Carpenter/Joiner p65
- Ceiling Fixer p67
- Glazier p87

Further information

Glass and Glazing Federation
www.ggf.co.uk

Proskills UK
www.proskills.co.uk

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