

Construction Careers

A Careers Guide on the Craft, Technical and Professional Roles within the Construction Industry





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THE EXCITING AND DYNAMIC WORLD OF CONSTRUCTION

With such varied and wide-ranging opportunities, a career in construction is both challenging and immensely rewarding. Whether you're involved in the design, construction, or maintenance of buildings and infrastructure like bridges, roads, tunnels, and waterways, the journey in construction is an exciting one. For those that take pride in creating and producing visible, lasting results, a career in construction offers the chance to shape skylines, build communities and bring projects to life from the ground up.

Construction plays a crucial role in creating the spaces where we live, work and play. Whether you're drawn to the creative challenges of design, the technical aspects of engineering, or the hands-on experience of building, a career in construction provides a rewarding blend of creativity, stability and the satisfaction of making a lasting impact. Construction boasts a variety of careers including skilled trades, IT, marketing, project management, design and many more.

If you would like to work as part of a team that leaves a lasting mark on our built environment, construction can help you fulfil your dreams and provide a pathway to a successful and rewarding future.

Your career could be as part of a world class team that may find you working locally but could also allow opportunities to travel if you wish. Construction is one of the nation's biggest and most diverse industries. There are over 170 different jobs, and this number keeps growing as new ways of working are created.

How you choose to enter the industry depends on you. You can start your career in an apprenticeship where you are employed from day one and earn as you learn to gain the qualifications necessary for your chosen occupation or you can study full and part-time courses. Others may join the industry later in life and retrain for a rewarding career.

To learn more about a career in construction, explore the following useful websites:

CITB NI www.citbni.org.uk

NI Direct www.nidirect.gov.uk

Go Construct www.goconstruct.org

DISCOVER YOUR PATH: A THRIVING CAREER IN CONSTRUCTION AWAITS

The excitement of construction provides a career unlike any other. You could be involved in designing or creating a new structure such as a hospital, a retail building or homes for people to live in. Or perhaps you would prefer to help restore historic buildings, using the same skills and techniques used by previous generations or even construct sets for film and TV.

The construction industry offers a wide range of careers, including skilled tradespeople, project and site managers, Building Information Modeling (BIM) specialists, Computer Aided Design (CAD) professionals, quantity surveyors, civil engineers, and many others

Perhaps you're the sort of person who likes making things with your hands, working within a team, using your technical ability to figure out how things work or even simply designing new and innovative ways to deliver a particular client's needs. Whichever of the above describes you, there's certainly a career in construction suited to you.

The construction industry in Northern Ireland has historically been male dominated, but this trend is changing. Today, approximately 15% of the workforce in construction is female - a notable increase from previous decades. The construction industry is becoming more inclusive and offers diverse and rewarding opportunities, and it's increasingly becoming a space where everyone can thrive.

The industry is evolving, with more emphasis on creativity, innovation, and sustainability—areas where diverse perspectives are especially valuable. By joining the construction industry, you can help shape the world around you, contribute to meaningful projects, and build a rewarding career. Now is the perfect time for you to break new ground in construction and make your mark on this dynamic industry.

This booklet will help you decide which kind of construction related jobs may suit you best.

CONSTRUCTION AND ITS IMPACT ON THE ECONOMY

Construction is one of Northern Ireland's largest industries and is a significant generator of wealth for the economy. A study by the CBI and Oxford Economics, titled *Fine Margins* (published in 2020), has shown that for every £1.00 spent in the UK construction industry the multiplier effect creates approximately £2.92 of value for the whole economy. Government policy often uses construction as a catalyst to drive economic growth, while providing buildings that reflect a growing economy which ultimately should create a better standard of living for everyone.

It's hard not to be amazed by some of the innovative construction projects that have emerged in Northern Ireland in recent years. Landmark developments like Titanic Belfast, which houses the world's largest Titanic attraction, Belfast Grand Central Station, Ulster University Belfast Campus, the A5 road scheme, Strule Shared Education Campus in Omagh and the Narrow Water Bridge at Warrenpoint, are just a few examples of what the industry can achieve.

These new tourist attractions and construction projects draw people to explore and experience different places. These developments not only enhance the visitor experience but also support local businesses, such as restaurants, shops, and transportation services, creating a positive ripple effect on the economy. This constantly evolving sector is also leading the way in bringing buildings up to a much greater standard of energy efficiency, by incorporating increased amounts of insulation, technically improved construction materials such as triple glazed windows and integrating renewable energies into the existing stock of buildings. The aim being to reduce energy costs and lower our Carbon Footprint which will benefit everybody now and for future generations.

But construction is more than building sites and skyscrapers. Construction involves a broader scope, that includes planning, regulatory frameworks, job creation, and community development, all of which contribute to a sustainable and resilient economic framework beyond merely erecting buildings.

WHY CONSIDER A CAREER IN CONSTRUCTION?

A career in construction offers numerous benefits and promising future prospects. This industry provides job stability and growth opportunities, driven by the constant demand for new infrastructure, residential housing, and commercial buildings. Construction careers often offer competitive salaries, comprehensive benefits, and the potential for rapid advancement.

Working in construction also brings the tangible satisfaction of seeing the physical results of your labour, contributing to community development. With advancements in technology and sustainable building practices, the sector is evolving, creating new and exciting roles that combine traditional skills with modern innovation. Moreover, the construction industry is essential for economic development, ensuring a steady demand for skilled and motivated people, making it a resilient and rewarding career choice.

RECRUITMENT

WHAT EMPLOYERS ARE LOOKING FOR IN POTENTIAL EMPLOYEES

Employers typically look for a combination of technical skills, soft skills, and craft ability in potential employees. Key attributes include:

- Self-Motivation: Employers look for evidence of reliability, time management skills and a drive to succeed. They also look for practical skills and knowledge or willingness to learn and gain technical expertise related to careers in construction, demonstrated through past work experience, or education.
- Practical skills: Ability to work with your hands as well as your head.
- Adaptability and Problem-Solving: The ability to quickly adapt to new situations and solve problems efficiently, showcasing creativity and resourcefulness.

Communication Skills:

Strong verbal communication abilities to collaborate effectively with colleagues, clients, and stakeholders. Accuracy in numerical skills is also desirable.

- Work Ethic and Reliability: Demonstrating a strong work ethic, dependability, and punctuality, ensuring tasks are completed on time and to a high standard.
- **Teamwork and Collaboration:** The ability to work well in a team, contributing positively and supporting colleagues to achieve common goals.
- Attention to Detail: Precision and thoroughness in completing tasks, ensuring accuracy and quality in work.
- **Cultural Fit:** Alignment with the company's values, mission, and culture, ensuring a harmonious and productive work environment.
- Leadership Potential: For roles with growth potential, employers value leadership qualities, such as the ability to motivate and guide others, and a willingness to take on responsibility.

TIPS & HINTS ON FINDING AN EMPLOYER

1. Schools and Colleges:

Many schools, training organisations, further education colleges and universities in Northern Ireland offer construction courses. They have strong links with local construction companies and utilise their career services and job placement programs.

2. Apprenticeships and Training Programs: Explore apprenticeship information through organisations like CITB NI (Construction Industry Training Board NI) and local colleges and training providers that offer construction-related programs such as Traineeships, ApprenticeshipsNI and Higher Level Apprenticeships. 3. Job Fairs and Industry Events: Attend job fairs focused on construction, such as Northern Ireland Apprenticeship Week, and other local recruitment events.

4. Government Projects:

Check out large local projects in your area that may have job openings.

- 5. Professional Social Media: Use LinkedIn to follow construction companies, join industry groups, and connect with professionals in the field. Engage with content and job postings related to construction.
- Online Job Portals: Utilise job search websites that specialise in construction.

SOME USEFUL LINKS:

- CITBNI:
- www.citbni.org.uk/careers
- www.jobapplyni.com
- NIDirect: www.nidirect.gov.uk/ campaigns/careers

Reach out to a university, your local college or training provider who may be able to assist. You can find contact details and lots more construction careers information by visiting **www.citbni.org.uk/careers.**

USING THESE STRATEGIES AND RESOURCES WILL HELP YOU FIND SUITABLE CONSTRUCTION EMPLOYMENT OPPORTUNITIES.



THE CONSTRUCTION TEAM - CRAFT / TRADE OCCUPATIONS

Craft occupations, also known as skilled trades, are essential roles in the construction industry that require you to use your hands as well as your head to complete an apprenticeship. Craftspeople or tradespeople are crucial in turning architectural and engineering plans into physical structures. The following are some key craft occupations within construction. 9

WOOD OCCUPATIONS

The job: Wood is one of the key materials used in construction today, and working with it can provide a rewarding career. Overall, woodworkers will need to enjoy using their hands, as well as a variety of hand and power tools. Good hand-eye co-ordination is essential for working in wood occupations, as are accurate measuring skills. Being organised and able to work in a team really helps. Many jobs involve working inside and out, so you're not always stuck in the same place. The person: Working with wood requires a range of skills that blend technical know-how with creativity. Precision in measuring and marking wood is crucial for accurate cuts and assemblies. Those involved with making components from wood will have to develop proficiency in the use of hand and battery operated tools, be physically fit, careful, accurate and able to follow detailed instructions from architects.

BENCH JOINER

The job: A Bench joiner uses their skills to manufacture products out of wood, which includes preparing and assembling timber products such as doors and windows, staircases and fitted furniture.

CARPENTER AND JOINER

The job: Carpenters and joiners prepare and put into place most of the wooden parts of buildings – from roof structures to expertly crafted windows and doors. They use very specialised woodworking tools and work with many kinds of wood.

CNC OPERATOR / WOOD MACHINIST

The job: CNC operators prepare timber for the bench joiner to assemble. The operator may programme and use a 3 Axis machine which will mainly work with sheets of timber. Advanced operators can programme and use 5 Axis machines which could machine curved objects like half of a football. Most of the work is carried out in a machine shop with specialist equipment, some of which is CNC operated. In fact, a large part of the job involves setting up, maintaining and operating machines safely. so to progress in this role it helps to be mechanically minded with an aptitude for Computers.

SHOPFITTER

The job: The next time you go to shops, take a look at the different styles of decoration and types of materials used to fit them out. The people who are responsible for this are skilled shopfitters. Working from designers' plans, they choose, cut, and shape the materials that transform an empty room into a sophisticated interior. Shopfitters often need to work through the night to ensure the shop is ready to open again in the morning. This indoor job is ideal for those seeking variety and the opportunity to work with different skills and materials

ROOFER

The job: A roofer is a skilled person who specialises in the construction, repair, and maintenance of roofs. This role is vital in ensuring that buildings are properly protected from weather elements such as rain, snow, and wind.

GREEN ROOF INSTALLER

The job: A green roof installer designs, installs and maintains roofing systems that are top covered by plants and other vegetation. They select appropriate plant species, ensure waterproofing, and integrate green roofs with existing structures.

The person: Knowledge of horticulture, roofing techniques, environmental science, manual dexterity, attention to detail.



TROWEL OCCUPATIONS

The job: Working with the harder materials, such as brick and stone, can be very creative. Stonemasons and bricklayers are often called on to produce interesting decorative effects. The trowel occupations also demand practical people who can work quickly and repetitively, often high above the ground.

BRICKLAYER

The job: This is probably the job that most people think of when you mention the construction industry. But they probably don't appreciate the many different types of material that bricklayers use, and the different effects they can create (such as ornamental walls and vaulted archways). Bricklayers also use a variety of specialist tools to spread mortar, cut bricks or blocks to size and to check that walls are perfect.

The person: If you want to be a bricklayer, you'll have to like the great outdoors and not mind working at heights. Bricklayers also must be physically fit, careful, accurate and able to follow detailed instructions from architects. Bricklayers often get to travel around the country, and sometimes abroad.

PLASTERER

The job: Most people know about one part of the plasterer's work: applying wet finishes to walls, ceilings and floors. This is called solid plastering. Alternatively, fibrous plastering involves making ornamental plasterwork in a workshop – the kind you might see on the ceilings of decorative buildings.

The person: Plasterers must be prepared to climb ladders, work at height and will spend most, but not all, of their time indoors. As a plasterer, you will need to become an expert at using the specialist tools of the trade.

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WALL AND FLOOR TILER

The job: Wall and floor tilers can achieve quite spectacular results using coloured and textured tiles to decorate the inside of buildings. Tilers might work in a domestic bathroom one week, and in a huge swimming pool the next.

The person: Due to the variety of locations they're called to work in, tilers must be flexible and adaptable. They also need to be good with their heads as well as their hands – at the very least, able to work out how many tiles an Olympic size swimming pool might need.

PAINTER AND DECORATOR

The job: Much of what painters and decorators do in the construction industry is nothing like the work they do in homes. Oil rigs, bridges and steelwork need heavy-duty coatings, while stately homes and five-star hotels need painters and decorators who may be required to skilfully apply gold leaf to ornamental staircases.

The person: Naturally, you need to be good with your hands. Most of the work is indoors, but some is outdoors. You'll need to be prepared to travel to different sites as well. But it's not just about big buildings and bridges; many jobs let you show off your artistic skills and design flare.

SCAFFOLDER

The job: A scaffolder is a skilled person responsible for assembling and dismantling scaffolding structures, which are temporary frameworks used to support workers and materials during the construction, maintenance, and repair of buildings and other structures. Ensuring the safety and stability of the scaffold is crucial.

The person: If you want to be a scaffolder, you'll have to like the great outdoors and not mind working at heights. You also need to be physically fit and careful in your work.



PLANT OCCUPATIONS

Plant occupations involve understanding and using heavy machinery, both on-site and in mechanical workshops. A good eye for safety is required, and plant operators need to be able to communicate well with the people they're working with. As you're working with machinery that's often complex, you'll be trained to use all the specialist tools and to understand how the machines work. New technologies such as hydrogen are being used to power construction plant offering a clean, zero-emission energy source.

PLANT MECHANIC

The job: A plant mechanic looks after all the plant: the light and heavy-duty machinery used on construction sites, such as diggers, cranes and trucks. They make sure that the plant runs properly and must be on hand when something breaks down. Plant mechanics are crucial to construction projects. Machinery that isn't working properly can hold up the whole construction process, often at a cost of thousands of pounds per day.

The person: You'll have to like machines and be mechanically minded if you want to do this work. You'll need to be prepared for hands-on work too. Depending on your job and the projects you're involved in, you may have to be out on-site as well as in the workshop.

PLANT OPERATOR

The job: Plant operators handle a wide range of tasks, including earthmoving with bulldozers, excavators, and diggers, as well as crane operation and materials handling using forklifts and telescopic handlers. Some of the machinery you'll work with is impressively large, capable of moving hundreds of tonnes of earth in a day or lifting extremely heavy loads into place from the ground. As you might expect, safety is paramount.

The person: To succeed as a plant operator, you need a good understanding how machinery and equipment work, including skills in troubleshooting and maintenance.

GENERAL CONSTRUCTION OPERATIVE

The job: General construction operatives are involved in a range of practical tasks on a construction site using a broad range of skills. Some of the areas that general construction operatives are often involved in are site preparation, concreting, working with timber, sorting and moving materials and much more. As you might expect, there's a great demand for skilled operatives in today's construction industry.

The person: This is a job for people who enjoy doing something different every week. You'll have to know different safety procedures for each job you do. Above all, you'll have to be flexible – happy to work indoors, outdoors, and at great heights or depths.

This is not an exhaustive list of all the craft occupations within the construction industry. For further details visit www.citbni.org.uk/careers

TECHNICAL, SUPERVISORY AND MANAGEMENT OPPORTUNITIES IN THE CONSTRUCTION INDUSTRY

THE CONSTRUCTION TEAM - TECHNICAL SUPPORT

There are also a range of technical and professional careers that the construction industry has to offer. A role in technical support can be both exciting and diverse, covering a wide range of disciplines that are crucial to the success of the construction team.

Everyone working in technical support has the same key skills in common – they are excellent organisers and communicators, and all have strong business skills. Often people will work across a number of these jobs, so it's always interesting and challenging.

TECHNICAL SUPPORT OCCUPATIONS

BUILDING TECHNICIAN

The job: Building technicians are involved with the side of the industry that constructs buildings. They may work on-site supervising operations, or in an office where they create plans using Computer Aided Design (CAD) system, develop schedules and prepare documents. Often, it will be a mixture of both site and office activities.

BUYER

The job: Once a construction project gets underway, a Buyer contributes to the selection of suppliers. They ensure that materials, labour and plant are all delivered on time and within budget. Typically working for the contractor, a buyer will often buy in bulk for several sites to get the most competitive price.

DESIGN TECHNICIAN

The job: If you have an interest in IT / CAD and want to use your skills, why not consider applying them to something exciting like the construction industry? Computer Aided Design Technicians use drawings to prepare information in a variety of fields such as architecture, building services, building, civil and structural engineering together with drawings for shopfitting which are all very common.

BIM (BUILDING INFORMATION MODELLING) MANAGER

The job: The BIM Manager develops and manages digital models of construction projects. They coordinate between various stakeholders using BIM technology, ensure data integrity, and optimise project workflows. They need to be proficient in BIM software (such as Revit), have strong collaboration and project management skills, possess keen attention to detail, and understand the construction processes.



CIVIL ENGINEERING TECHNICIAN

The job: Civil Engineering Technicians provide technical support to engineers on construction projects. They tend to work in one area ranging from constructing roads, bridges, tunnels and other major construction projects. The use of Computer Aided Design (CAD) is a vital element of the Civil Engineers work.

ESTIMATOR

The job: Estimators help with the preparation, processing and submission of tenders (this is the way contractors get much of their work) and cost estimates for a project.

Much of the estimating process is now computerised. Accuracy and mathematical skills are essential to become a trusted estimator.

HEALTH AND SAFETY OFFICER

The iob: A Health and Safety Officer is responsible for ensuring that safety protocols and regulations are followed on construction sites to protect workers and prevent accidents. They develop and implement health and safety policies and procedures. Conduct regular site inspections to ensure compliance with safety regulations. Investigate accidents and incidents to determine causes and recommend preventive measures. Provide training and support to employees on health and safety practices. Through training and experience you will acquire knowledge of health and safety regulations and best practices. You will need strong observational and analytical skills and excellent communication and training skills.

PLANT TECHNICIAN

The job: You will be involved in buying, hiring and organising all the plant equipment used on a construction site, from diggers to large cranes. The key thing is making sure that budgets are not exceeded, and the equipment meets the technical requirements.

QUANTITY SURVEYOR TECHNICIAN

The job: As a Quantity Surveying (QS) Technician (also known as cost consultants or construction accountant) you will play a crucial role in the construction industry, working closely with professional quantity surveyors and other construction professionals. The main job of a QS technician involves assisting in the management of costs and contracts associated with construction projects.

CONSTRUCTION PLANNER

The job: Construction planners make sure construction projects are built with the right resources to the right quality and cost, on time and safely.

SITE INSPECTOR

The job: A building and civil engineering site inspector uses inspection and testing methods to confirm that the quantity and quality standards of materials, workmanship and construction are satisfactory. They also ensure that health and safety aspects are being adhered to.

SITE TECHNICIAN

The job: As a site technician you would be providing the quality control and information needed to support a team of workers. This team might include, amongst others, supervisors, managers, and operators of specialist equipment. Most of the work is based on a construction site.

This is not an exhaustive list of Technical, Supervisory and Management opportunities within the construction industry. For further details visit **www.citbni.org.uk/careers**

PROFESSIONAL ROLES IN DESIGN, ENGINEERING, FINANCE, MANAGEMENT & PLANNING

Construction offers many opportunities for professionals. Much of this work takes place before a project even gets to the physical building stage. Creative people such as architects, financial experts and legal professionals all play a part in getting a project off the ground. Once the construction work begins, construction managers, engineers and surveyors organise all the people working on the site to ensure that what is built matches the original designs.

- CONSTRUCTION
 MANAGERS
- DESIGNERS
- ENGINEERS
- SURVEYORS
- PLANNERS

CONSTRUCTION CAREERS

DESIGNERS

ARCHITECT

The job: Architects create designs for imaginative new buildings to meet the needs of users and the environment as well as developing solutions for restoring or reusing old buildings. Architecture is a very practical and creative field to work in and may involve:

- Working closely with the client to establish their requirements for a new building.
- Preparing design information for new buildings as drawings or 3-dimensional models.
- Using Computer Aided Design (CAD).
- Coordinating and managing other professionals or a construction project.
- Problem-solving.
- Conducting research.
- Selecting materials and building elements, such as different window types or floor finishes.

The person: As an architect, you need more than just an eye for detail. You will have to deal with local authorities to obtain planning permission and choose the building materials to meet a client's specific needs. The key criteria is a design flare with creativity. You will also need to be a good communicator as you will have to constantly liaise with the construction team, clients and team members.

To find out more about a career as an architect visit **www.architecture.com** or **www.rsua.org.uk**

ARCHITECTURAL TECHNOLOGIST

The job: A Chartered Architectural Technologist is a specialist in the science of architecture, and they help make a building project come to life. As a Chartered Architectural Technologist, you would work very closely with other construction professionals, creating solutions to enable a building to be constructed and even manage the process. Your role may involve:

- Providing architectural design services and solutions.
- Specialising in the science of architecture, building design and construction.
- Forming the link between concept and construction.
- Negotiating the construction project.
- Managing the process from conception through to completion.

The person: As an architectural technologist, you will need great interpersonal skills and creativity, and you should be able to think in a logical way. In order to complete drawings, you will need to demonstrate a good ability to use computer aided design (CAD). You will also need to be a good negotiator as you'll be dealing with strict planning and building authorities. To find out more visit www.ciat.org.uk



MANAGERS

CONSTRUCTION MANAGER

The job: A construction manager plays a pivotal role in the planning, coordination, and day to day running of the building site. Their responsibilities span from the early stages of project planning through to the completion of the build, ensuring that projects are completed on time, within budget, and to the required quality standards.

The construction manager liaises with architects, planners, engineers, surveyors, trades people and suppliers to ensure that projects are completed safely, on time and on budget. They have an in-depth knowledge of all aspects of the construction business, are well organised and have good numeracy skills. The person - skills required:

- Leadership / People skills: Strong leadership skills to manage teams and motivate workers.
- **Communication:** Excellent communication skills for coordinating with various stakeholders and resolving issues.
- Problem-Solving: Ability to quickly address and solve problems that arise during construction.
- **Time Management:** Effective time management to ensure that projects are completed on schedule.
- **Technical Knowledge:** Understanding of construction processes, materials, and building codes.
- **Financial Management:** Ability to manage budgets, control costs, and handle financial aspects of the project.

For more information visit www.ciob.org or www.apm.org.uk

CONSTRUCTION CAREERS

PROJECT MANAGERS

The job: Project managers bring about the successful completion of a project. A project could be coordinating anything from a relatively small project like the conversion of a loft in a house to huge projects such as building Titanic Belfast or Belfast Grand Central Station. They take responsibility for the total control of a project from initial conception to the finished product. They must also coordinate a lot of different professions which involves a significant amount of communicating and organising.

The person: Project Managers are good leaders, able to guide and motivate the team. They also need to communicate well in writing. They are very good organisers who enjoy a challenge, working to deadlines and have good problem-solving skills.

For more information visit www.apm.org.uk or www.ciob.org **CONSTRUCTION CAREERS**

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ENGINEERS

CIVIL ENGINEER

The job: Civil Engineers work to connect people, places and resources together. They do this in many ways, for example building roads and railways, waterways, dams and buildings. We may take for granted things like travelling on the bus, and having constant access to clean drinking water but without civil engineers this would not be possible.

The person: A civil engineer's role is varied and stimulating and may include:

- Concept and detailed design proposals for new bridges or tunnels.
- Preparing CAD drawings and detailed reports on new proposals for clients.
- Carrying out calculations for new structures on-site.

To find out more visit **www.ice.org.uk**

STRUCTURAL ENGINEER

The job: Structural Engineers are a key part of the design and construction teams, often working alongside civil engineers and architects, creating structures from houses, theatres, sports stadia and hospitals to bridges, oil rigs, office blocks and even space satellites.

The person: A Structural Engineer's role may include:

- Advising on the best choice of materials.
- Using mathematical calculations to predict how a structure will react to various loads and stresses.
- Communicating the design of the structure through drawings, specifications and computer models so that others can build it.
- Designing and testing the foundations for a new building.

To find out more visit **www.istructe.org**

BUILDING SERVICES ENGINEER

The job: Building services engineers make buildings comfortable and safe for people to live, work and learn in. They work with the other members of the design team to ensure a building is the right temperature, well-ventilated and well-lit.

The person: A building services engineer's role may include:

- Ensuring buildings use resources like water and energy in an environmentally sensitive way.
- Designing the lighting levels and choosing appropriate light sources.
- Using design software to create the best layout for power outlets and computer points.
- Planning how gas, electricity and water will enter and be distributed around a building.

For more information visit **www.cibse.org**



SURVEYORS

QUANTITY SURVEYOR

The job: Quantity surveyors (also known as cost consultants or construction accountants) manage and advise on all the costs of a construction project. Quantity Surveyors may work closely with the client or the contractors to ensure a project is efficient, on budget and profitable. Quantity surveyors are the accountants of the industry enjoying high levels of responsibility. They are comfortable working with numbers, analysing drawings or written information and reporting back to the client or design team. They also have a great understanding of the building process, and the legal issues involved.

The person: On most projects, your key responsibilities could involve:

- Carrying out initial studies to estimate materials, time and labour costs.
- Putting together detailed information, listing all of the materials and processes required to complete a project so that the contractors can put in an accurate price.
- Monitoring each stage of construction to make sure that costs are in line with forecasts.
- Providing financial reports to clients.
- Providing legal and contract advice to the client.

For more information visit **www.rics.org**

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BUILDING SURVEYOR

The job: Building surveyors provide professional advice on the design, maintenance, repair and refurbishment of buildings. The nature of the work may vary in scale from multimillion pound structures to modest adaptations and repairs. It may also include working with buildings of architectural or historic importance. Building surveyors have good observational skills and a very good understanding of how buildings are constructed. Building Surveyors are practical with good problem-solving skills.

Your responsibilities could include:

- Assessing structural faults in buildings.
- Providing solutions for structural problems.
- Advising on the building regulations.
- Taking action on dangerous structures.

The person: If you're passionate about preserving our historic buildings then this could be the job for you. It offers great variety including carrying out structural surveys, doing legal work, preparing plans and specifications and advising people about energy saving, conservation matters and the preservation of old buildings.

If you'd like to know more visit www.rics.org or www.ciob.org

LAND SURVEYOR

The job: Land surveyors advise on the features of a particular piece of land by providing accurate measurements of natural and man-made structures. As you can imagine when you create a new building it is important to have detailed information on the land levels, or the exact location of water features and the positions of underground services like drains, pipes and trees before starting construction.

The person: Land surveyors need to have good observational skills, be comfortable working with numbers and be confident using computers and Computer Aided Design (CAD) software linked to a Geographic Information System (GIS).

Land surveyors tend to work outdoors a lot, as well as in an office. Your role could involve:

- Measuring and recording, storing and communicating geographical information.
- Using CAD and geomatic software to create a site plan drawing or models.

For more information visit **www.rics.org**

PLANNERS

Planners are involved in helping developments that assist economic growth. They are also instrumental in protecting our environment and architectural heritage. In fact, you could say that planners balance the various needs of the environment, the local economy and the local population with innovative planning solutions.



TOWN PLANNER

The job: Town Planners oversee the development of entire towns or regions. They must understand the needs of the local environment, economy and population. Planning can be very rewarding as it has a major impact on the environment in which people live and work.

The person: A town planner's work may involve:

- Consulting residents, businesses and other stakeholders over planned development.
- Reviewing and commenting on proposals for new buildings or changes in use of an existing building.
- Developing new strategies on how an area should develop.
- Making sure new buildings are sustainable and environmentally friendly.
- Protecting historic buildings or areas.

For more information visit **www.rtpi.org.uk**

This is not an exhaustive list of the Professional roles within the construction industry. For further details visit www.citbni.org.uk/careers



The construction industry encompasses a wide range of job roles, each requiring different skills and expertise. There are over 170 different types of jobs available. The industry is evolving, integrating new technologies and sustainable practices. This evolution has created many new and emerging job roles some of which are in the following section.



SUSTAINABILITY CONSULTANT

The job: Advise on sustainable building practices, conduct environmental impact assessments, develop strategies to minimize carbon footprint, and ensure compliance with green building standards including working towards a net zero strategy.

The person: Should have a knowledge of sustainable construction practices, environmental science, project management, analytical skills, communication and familiarity with standards like LEED or BREEAM.

CONSTRUCTION TECHNOLOGIST

The job: Implement and manage construction technologies such as drones, 3D printing, and robotics, enhance project efficiency through tech solutions, and train staff on new technologies.

The person: Should have technical knowledge of construction technologies, problem-solving, project management, training abilities, innovation. You should also be prepared to embrace new technologies as they are developed.



PREFABRICATION SPECIALIST

The job: Design and oversee the production of prefabricated building components, ensure quality control, coordinate with construction teams for on-site assembly, and optimise production processes.

The person: Should have knowledge of prefabrication techniques, engineering, project management, quality control and be willing to collaborate on design and development.

VIRTUAL DESIGN AND CONSTRUCTION (VDC) COORDINATOR

The job: Coordinate virtual design and construction processes, develop 3D models, simulate construction activities, and collaborate with project teams to resolve design conflicts.

The person: Proficiency in VDC software (such as Navisworks, Synchro), 3D modelling, collaboration, problem-solving, project management.

CONSTRUCTION DATA ANALYST

The job: Collect and analyse data from construction projects, generate insights to improve efficiency and reduce costs, develop predictive models, and support decision-making processes.

The person: Should have data analysis, statistical modelling, proficiency in data analysis tools (such as Excel, Python) communication, construction industry knowledge.

DRONE OPERATOR

The job: Operate drones for site surveys, inspections, and monitoring, capture aerial imagery and data, process and analyse drone data, and ensure compliance with aviation regulations.

The person: A Drone piloting certification is essential. It is likely you will have technical knowledge of drones. You will have good skills in data analysis, attention to detail, and an understanding of construction processes.

CONSTRUCTION CYBERSECURITY SPECIALIST

The job: Protect construction projects from cyber threats, develop and implement cybersecurity policies, monitor networks for security breaches, and ensure compliance with data protection regulations.

The person: Will have a good knowledge of cybersecurity practices. You will also possess good IT skills, problem-solving skills, with attention to detail. An understanding of construction software and systems is also important.

MARKETING WITHIN CONSTRUCTION

The job: Marketing in the construction industry involves promoting construction services, building a strong brand, and creating demand for projects through strategic communication and outreach. Marketing professionals in this field work to enhance the company's reputation, attract new clients, and support business development efforts.

The person: You will be a strategic thinker with the ability to build and maintain professional relationships. You will have the ability to develop and deliver a detailed comprehensive marketing plan. A marketeer's work may involve:

- Communication: Strong written and verbal communication skills to convey messages effectively.
- Creativity: Innovative thinking to create engaging content and campaigns.
- Digital Proficiency: Knowledge of digital marketing tools and platforms.
- Analytical Skills: Ability to interpret data and measure marketing effectiveness.
- Project Management: Organisational skills to manage multiple projects and deadlines.

These new roles highlight the growing intersection between construction and technology, sustainability, and data analysis, offering exciting career opportunities in a rapidly evolving industry.

PATRIXAYS INTO THE INDUSTRY

WHAT'S NEXT?

There are numerous pathways into the construction industry, which welcomes everyone from newcomers to those with some experience and career changers. Now that you've chosen construction as your career, this information will guide you in taking your next steps.

WORK EXPERIENCE

There's no better way to really test the waters than to gain on-the-job experience. Construction offers a huge variety and number of work placements which can be valuable in helping you decide if a career in construction is for you. Placements can last for a few days to several weeks and are designed to be safe and structured so that the most is made of your time.

Most schools run work experience schemes and may be able to arrange one for you.

STUDY THE QUALIFICATIONS

Below are descriptions of some of the qualifications available to people in school, already working or looking to start a career in construction.

OCCUPATIONAL STUDIES IN CONSTRUCTION

These are vocational qualifications designed to provide learners with a broad introduction to the construction crafts, focusing on practical skills, knowledge, and understanding of various construction-related occupations. Modules are available in Carpentry and Joinery, Brickwork, Plastering, Painting and Decorating and Wall and Floor Tiling.

GCSE

The GCSE in Construction and the Built Environment gives students a realistic understanding and experience of Construction that will enable them to develop an authentic working relationship with the real world of work. It involves a practical craft to create a project from wood such as a small table.

BTEC (BUSINESS AND TECHNOLOGY EDUCATION COUNCIL)

BTEC's are specialist work-related qualifications for anyone taking their first steps into the world of work, progressing through their careers, or planning to enter university. They combine practical learning with subject and theory content.

APPRENTICESHIPS

Apprenticeships are structured training programs that combine on-the-job training with classroom instruction, allowing individuals to gain practical experience while earning a wage. They are typically offered in skilled trades, such as plastering, brickwork, and carpentry and joinery.

KEY FEATURES OF APPRENTICESHIPS:

- On-the-Job Training: Apprentices work under the guidance of experienced professionals, learning practical skills in real-world environments.
- Classroom Instruction: Alongside hands-on training, apprentices receive related technical instruction, often through colleges or training organisations.
- Earn While You Learn: Apprentices earn a wage that increases as they gain skills and experience.
- Certification: Upon completion, apprentices often receive a nationally recognised qualification, certifying them as a skilled professional in their field.
- Duration: Apprenticeships typically last 1 to 4 years, depending on the trade or profession.

Benefits:

- Career Development: Apprenticeships provide a clear pathway to a stable career with opportunities for advancement.
- **Debt-Free Education:** Apprenticeships offering job training are fully funded.
- Industry-Specific Skills: Participants gain highly specific skills that are directly applicable to their chosen field.



HIGHER LEVEL APPRENTICESHIPS (HLA's)

In recent years, the concept of apprenticeships has expanded beyond traditional trades to include occupations like Site Management and Quantity Surveying where Higher Level Apprenticeships are available. HLA's provide an alternative to traditional three or four year university degrees, offering a more practical and financially sustainable route to a career.

Apprenticeships offer a valuable blend of hands-on experience and education, making them an attractive option for individuals seeking a direct path to a career, particularly in construction where practical skills are highly valued.

NATIONAL VOCATIONAL QUALIFICATIONS (NVQ's)

NVQ's are work-based qualifications. achieved through assessment and training. To gain an NVQ, candidates must prove they have the ability (skills) to carry out their job to the required standard. NVQ's are based on national occupational standards. which describe the skills required in various job roles. They are available in many subjects, ranging from craft skills such as Joinery or Brickwork to Business Administration, and are usually taken by those who are already employed or are seeking to enter a specific job field. They can form part of your apprenticeship and run from Level one, covering basic work skills, up to senior management levels.



HIGHER NATIONAL DIPLOMA (HND) AND HIGHER NATIONAL CERTIFICATE (HNC)

HND and HNC are technical qualifications and are full-time and part-time respectively.

A HND in Construction is designed for those wishing to enter or advance within the construction industry and combines theoretical knowledge with practical skills. The HND is typically equivalent to the first two years of a university degree. The course duration is two / three years depending on whether an industrial placement is available. The HND in Construction provides a strong foundation for those aiming to develop a career in the construction industry, with the option to further specialise or advance through additional study or professional experience. Students who have successfully completed an HND at Distinction level can normally progress directly to the second year of a degree programme.

An HNC is the part -time option of the HND. The same units are studied at college, the only difference being that the HNC is part-time, usually one long day per week, with the remainder of the time being spent in employment. As employers are actively involved in this qualification it is not necessary to provide a work placement.

Career Opportunities

Graduates with an HND in Construction have a wide range of career opportunities in various sectors of the construction industry, including:

- Construction Management:
 Overseeing construction projects
 from inception to completion.
- **Quantity Surveying**: Managing the financial aspects of construction projects.
- **Building Surveying**: Inspecting and advising on the construction and maintenance of buildings.
- Site Engineering: Managing the technical aspects of construction sites.

FOUNDATION DEGREES

These offer a mix of vocational and academic learning and are flexible in terms of training time. Generally, they can be achieved in three years studying part-time or two years studying full-time. Progression is very similar to HND qualifications.



DEGREE PROGRAMME

For these qualifications, you will usually study three or four years full-time at university. Degrees allow people who like academic study to specialise in a certain subject. You should take a degree programme that has been accredited by a professional institution.

PROFESSIONAL QUALIFICATIONS

Each professional organisation represents a particular profession, such as engineering, surveying or architecture. Membership will be evidence of your abilities and an important badge of recognition, especially if you decide to work overseas.

If you are interested in finding out more about entry criteria and routes into the industry:

- Speak to a Careers
 Teacher in your school.
- Contact a university, your local college or training provider.
- Contact the Careers Service www.nidirect.gov.uk/ campaigns/careers.
- Visit **www.citbni.org.uk/careers** for further information and guidance.

CONSTRUCTIO CAREER CASE STUDIES

The following case studies demonstrate training in action in local construction companies and illustrate the good work that is continuing in the sector.

MATTHEW GRAHAM RAHORAN LTD JOINERY APPRENTICE

Matthew Graham is a joinery apprentice for Rahoran Ltd, a residential and construction company based in Fivemiletown.

He is completing his NVQ Level 3 apprenticeship in joinery fulltime, based with his employer and attending the college one day per week. Matthew is a very dedicated and hardworking member of the team which was acknowledged when he won FMB NI Apprentice of the Year. He has made an impression on his employer with his willingness to take on and succeed with a wide range of challenges in both residential and commercial jobs.

Speaking about his experience in the construction industry and why he followed the apprenticeship route he said, "I've always had an interest in construction. A family friend gave me the opportunity to gain hands-on experience in my younger years and my school subjects focused on technology, design and engineering to A Level which guided me towards the path of joinery. I have never looked back. I really enjoy seeing the finished product when completed, working as part of a team and the variety of the work.



The Fermanagh weather can be challenging on some of the outdoor projects but it is all part of the job." Matthew is currently working on a key residential development in the Fermanagh area with his main areas of work focusing on joisting houses, building stud walls, plaster boarding, fitting door frames and laying flooring. Rahoran Ltd said. "We are extremely proud of Matthew and how he has developed his skills over the past few years. He can be relied upon to adapt and perform well in any environment, a true team player and asset to the company." On encouraging others to enter the industry Matthew said, "You need an eye for detail and a passion for your line of work, be prepared to listen to advice and feedback on your projects and get all the hands-on experience you can. It is a great industry to join, lots of variety and pride in seeing a project completed."

CONSTRUCTION CAREERS

PAMELA ANDERSON

Pamela is a graduate of the BSc in Architectural Technology and Management from Ulster University, having started her construction education by completing a Foundation Degree in Architectural Technology and Management at Belfast Metropolitan College.

She has completed a 3 month internship in a small architect's office as an Architectural Assistant and has been offered a full-time. position as a result. Her internship included completing Planning Permission Applications and Building Control Applications, building models, producing sketch proposals, carrying out surveys, producing drawings for feasibility studies, and helping with the general running of the office. Pamela enjoys being able to impact the built environment and having the opportunity to work on bespoke projects.

"The problem-solving skills that are required also make the job interesting and make sure that no project is exactly the same. Also, I enjoy the fact that you get to meet and work with so many different professionals within the industry during a project."



Pamela's advice to women thinking of entering a similar career in construction is "Do not be put off by the workload that is required of you when you are studying in University. Also do not be intimidated by the prospect of having to put your own ideas forward and ensure that they are heard."

WILLIAM BUCHANAN BRICKWORK APPRENTICE

Following his GCSEs at Cookstown High School, William has progressed to the Level 3 NVQ Diploma in Brickwork Apprenticeship programme at South West College.

William has always enjoyed working outdoors and using his hands so working in the construction industry was natural progression for him. He attends the college one day per week and the rest of his time is spent working with a local contractor on private residential projects. Speaking about working as a brickwork apprentice William savs: "There's so much more to bricklaying these days and it goes far beyond the hard hat, trowel and concrete. Between the college workshop and on-site with my employer I'm constantly learning about new techniques, technologies and materials to create buildings that are smart and energy efficient to meet today's building regulations and client expectations.

My role on-site is a varied one, from preparing the site through surveys and marking out the building, to doing foundations, setting timelines with a team and placing orders for raw materials such as drainage, insulation, damp proof course, cavity trays, timber, bricks and machinery.



This also gives me a wider set of skills which are increasingly in demand. I also get the chance to work with a range of other people involved in building projects such as other construction trade persons, building control officers, suppliers, architects and clients. As well as learning how to communicate and set targets with these groups of people, it also keeps me on my toes with regards to what's going on in the wider industry and how our roles impact the job. The work is demanding and we also work to tight deadlines, and then of course there's the inclement weather but I wouldn't have it any other way. There's a great sense of achievement in working on housing projects from start to finish and there is always some piece of knowledge and experience which I can take from one job to the next."

The construction industry is changing, with the new skills, techniques and requirements within it so there is big demand for brickwork apprentices. On completion of his Level 3 William plans to continue his studies with an HNC Construction qualification.

To research lots more careers case studies like these and others in the construction industry, log on to **www.citbni.org.uk/careers** where you will find a library of video case studies and more including:

- Ruth Farell Senior Commercial Surveyor
- **Diarmuid Mullan** Site Manager
- Cathy Cleary
 Purchasing & Sustainability
 Manager
- Jason Porter
 Apprentice Joiner
- Una Barrett Carbon Associate
- **Dean Justin** Apprentice Joiner
- Hanna Miskimmin
 Environmental Placement
 Student
- Eilis Blee Higher Level Apprentice
- Conor Scullion
 Owner, Scullion Stonemasonry



CITB NI Nutts Corner Training Centre 17 Dundrod Road Crumlin BT29 4SR

Tel: 028 9082 5466 Email: info@citbni.org.uk www.citbni.org.uk



September 2024



