



A Future in Construction Careers Guide

A focus on craft, technical and professional
opportunities within the construction industry





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A FUTURE IN CONSTRUCTION

It's all about working together

Choose a career in construction and you won't be starting out on your own. You'll be joining a team of specialist people all working together to build a strong, long-lasting future.

Whatever your role is in the industry, if it's as a bricklayer or plasterer, civil engineer, architect or construction manager, every team member is as important as the next. So whether your talent is working with your head or hands, you can be sure there's a career in construction for you.

This booklet has been produced to give you an insight into the huge range of careers the construction industry has to offer. It gives you an idea of what each job is like and what skills you'll need to succeed.

There are also useful websites that will help:

www.bconstructive.co.uk

www.citbcnsni.org.uk

THE CAREERS

"The construction industry gives you the opportunity to create part of the built environment that people can enjoy."

Construction boasts a wide variety of careers including skilled manual labour, project management, IT, marketing, design and much more. Construction needs people with creative, technical, management and practical skills. So whether you like figuring out how things work, making things with your hands, working in a team, taking charge of projects or you really like designing things, there's definitely a career for you.

To get started, all you need are the basics.

- Your career in any area of the construction industry will require commitment and enthusiasm.
- Whether you go to college, learn on site, or go to university you'll be given specialist training for your chosen career.
- You'll be given comprehensive training in all aspects of health and safety. This next section will help you decide which kinds of job suit you best.

A WORLD-CLASS INDUSTRY

Join one of Northern Ireland's largest industries and you'll have chosen a career that's challenging, exciting and rewarding.

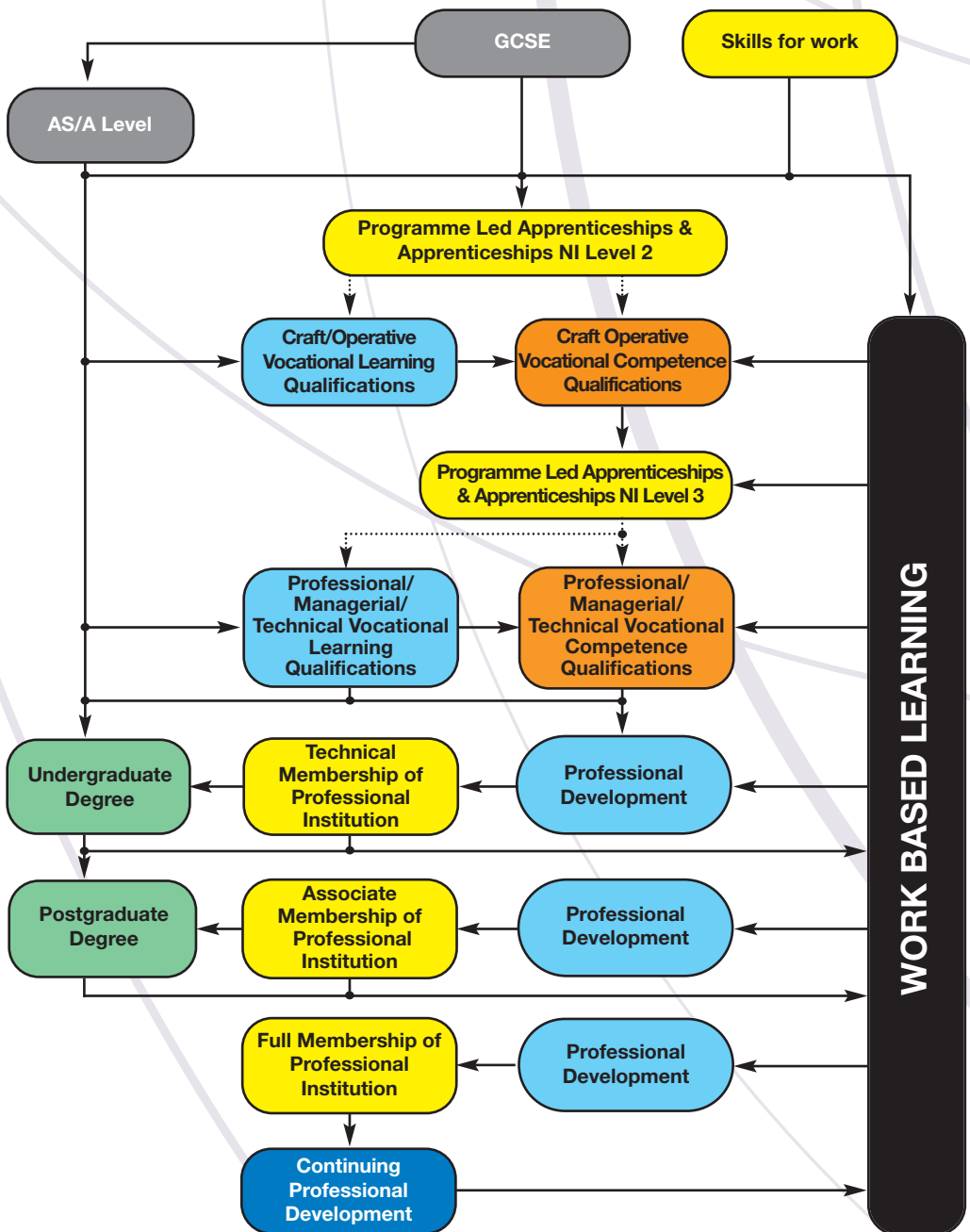
You'll also be joining an industry that's respected around the globe. Britain has a reputation for worldclass design, inspirational architecture and the highest quality building work.

It's hard not to be amazed by some of the innovative construction projects we've seen over the last few years. Victoria Square in Belfast, Newry Bypass and the Millennium Forum in the North West to name but a few.

As part of the construction team you could build your local hospital, your football team's stadium, or manage the construction of an ecological success story like The Ecos Centre, Ballymena.



Progression Map for Northern Ireland



OPPORTUNITIES IN THE INDUSTRY

The next few pages describe the huge range of careers available at craft level. All these jobs are part of the team that makes the construction industry work together.

Your future in one of Northern Ireland's largest industries

What you get out of a career depends on you. You may enjoy the hands-on satisfaction of actually making things. Or you may be more interested in a management or professional role, such as surveying or planning.

No one day is the same as the next. You may spend some time in the office and some time working outdoors, in an environment that's constantly changing.

You'll also have the opportunity to learn on the job. Because there's a massive range of training available at all levels, there are lots of opportunities to progress within the industry. Who knows, you might even end up running your own business.

Key benefits of working in construction

- Be an important part of a team
- Make a real difference to the environment from city regeneration to ensuring essential facilities are available.
- Enjoy a huge variety of work
- The opportunity to work abroad
- Get complete job satisfaction in the knowledge that you helped build something that will last a lifetime or longer
- Give yourself the freedom to start your own business
- Start at any level and work your way to the top
- Work towards a range of respected professional qualifications
- Put your creative skills to the test
- Work with your hands and your head

"This dynamic industry presents work that is full of diversity and challenges; with the changing face of construction, it's a great time to be able to make a contribution."

CRAFT OCCUPATIONS



The Construction Team - Craft Occupations



Team Work

"It's a great feeling being part of a team. Everyone works together to get the job done."

CRAFT OCCUPATIONS

“The Construction Industry gives you the opportunity to create part of the built environment that people can enjoy.”

WOOD OCCUPATIONS

The job: Wood remains one of the key materials used in construction today, and working with it can provide a rewarding living. Overall, woodworkers will need to enjoy using their hands, as well as a variety of hand and power tools. Good handeye 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.

Bench Joiner

The job: Bench joiners use their skills to manufacture goods out of wood, which includes preparing and putting together. They prepare and put together doors, windows, staircases and fitted furniture, using woodworking tools and specialist machinery. Usually based in a workshop, bench joiners sometimes travel out to construction sites.

Carpenter and Joiner

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

Wood Machinist

The job: Wood machinists prepare and shape timber for use in making floorboards, skirting boards and window frames. Most of the work is carried out in a machine shop with specialist equipment. In fact, a large part of the job involves setting up, maintaining and operating machines safely, so it helps to be mechanically minded.

Formworker

The job: Formworkers make temporary wood or metal structures, used like a mould into which wet concrete is poured. Once the concrete is set, the form is removed to reveal perfectly

shaped pieces of concrete. Formwork is used in the construction of anything made from concrete, including bridges, foundations, suspended floors, beams and staircases.

Shopfitter

The job: Next time you go round the 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 that makes you want to spend your cash.

Once the shops are shut, shopfitters often need to work through the night to get the job done. This is an indoor job for people who are looking for variety and the opportunity to work with different skills and materials.

TROWEL OCCUPATIONS

The job: Working with the harder materials, such as brick and stone, can be quite 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 people: If you want to be a bricklayer, you'll have to like the great outdoors and not mind working at heights. Bricklayers also have to 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 people: Plasterers have to be prepared to climb ladders, and will spend most of their time indoors. As a plasterer, you will need to become an expert at using the specialist tools of the trade.

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 factory using vast, heavy-duty tiles the next.

The people: Due to the variety of locations they're called to work in, tilers have to be flexible and adaptable. They also have 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 can skillfully apply gold leaf to ornamental staircases.

The people: 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.



PLANT OCCUPATIONS

The job: 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.

Plant Operator

The job: Plant operators are involved in various types of work: earthmoving (e.g. operating bulldozers, excavators, diggers), crane driving and materials handling (e.g. using forklifts and telescopic handlers). Some of the machines are quite breathtaking. They can move hundreds of tonnes of earth in a day or lift very heavy loads into place from ground level. As you might expect, safety is paramount.

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 have to 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 process, often at a cost of thousands of pounds.

The people: 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.

GENERAL CONSTRUCTION OPERATIVE

The job: General construction operatives are masters of many trades, with an extraordinarily wide range of skills. Some of the areas that general construction operatives are often involved in are concreting, formworking and timbering. And, as you might expect, there's a great demand for these people.

The people: This is a job for people who enjoy doing something different every week. A spell installing timber in trenches to make them safe to work in could be followed by a few days concreting the floor of an office block. 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, at great heights or depths.

This is not an exhaustive list of all the craft occupations within the construction industry.



TECHNICAL, SUPERVISORY AND MANAGEMENT OPPORTUNITIES IN THE INDUSTRY



The Construction Team - Technical Support

There are also a range of technician and professional careers the construction industry has to offer.

A career in technical support can be exciting and varied. It covers a broad range of disciplines and is an important part of the construction team. Everyone working in technical support has the same key skills in common – they're good organisers and communicators and all have strong business skills. Below are just some of the jobs in technical support – you might recognise a few of these. Often people will work across a number of these jobs, so it's always interesting and challenging.



TECHNICAL SUPPORT OCCUPATIONS

Building Technician

The Job: The job is involved with the side of the industry that constructs buildings. Building technicians may work on-site supervising operations or in an office – drawing up plans, schedules and documents. More often than not, it will be a mixture of the two.

Buyer

The Job: Once a construction project gets underway, a buyer contributes to the selection of suppliers. The buyer also ensures materials, labour and plant are all delivered on time and within budget.

Design Technician

The Job: If you have an interest in IT and want to use your skills, why not consider applying it to something really exciting like the construction industry? Computer Aided Design Technicians use drawings to prepare information for construction. They work in a variety of fields

such as architecture, building services, building, civil and structural engineering.

Civil Engineering Technician

The Job: Civil Engineering Technicians work in constructing roads, bridges, tunnels and other major construction projects.

Estimator

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

Plant Technician

The Job: You will get involved in buying, hiring and organising all the plant and equipment used on a construction site, from diggers to large cranes. The key thing is to make sure that budgets are stuck to, and everything meets the technical requirements.

Construction Planner

The Job: They will make sure that the construction project is 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 assembly are satisfactory. They also ensure that health and safety aspects are being adhered to.

Site Technician

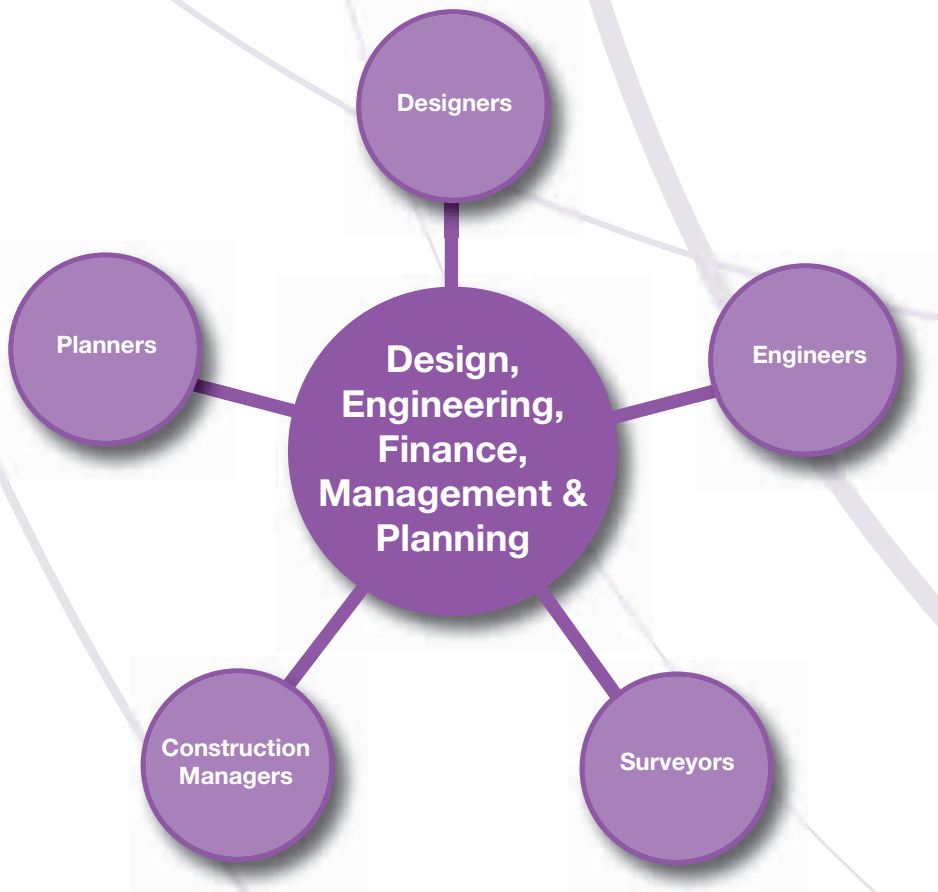
The Job: These technicians assist in the construction of works by providing quality control and information needed to support a team of workers. This team might include, amongst others, supervisors, managers, and operators of specialist equipment. Most of the work is based on a construction site.

PROFESSIONAL ROLES



Design, Engineering, Finance, Management & Planning

Construction offers a number of opportunities in the above areas. A lot of this type of work takes place before a project even gets to the physical building stage. Creative people, 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.



DESIGNERS

Architect

The Job: Architects come up with imaginative new buildings designed to meet the needs of users and the environment as well as 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 building as drawings or models
- Using CAD – computer aided design
- Co-ordinating and managing others
- Problem solving
- Research
- Selecting materials and building elements such as window types or floor finishes.

The People: As an architect, you need more than just an eye for detail. You have to deal with local authorities to obtain planning permission and choose the building materials to meet a client's specific needs. 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 People: As an architectural technologist, you will need great interpersonal skills and creativity, and you should be able to think things through in a logical way.

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**

Urban Designer

The Job: Urban design is the process of shaping cities, towns and villages. It is the art of making places. Urban designers consider the bigger picture and their work may involve:

- Producing drawings and models of design proposals
- Involving local people in the process of creating new proposals
- Analysing existing spaces and working out how to improve them.
- Assessing the impact of change on different environments

The People: Urban designers are good at understanding the use and function of spaces, they also enjoy coming up with innovative design solutions and are interested in how people live and use the city.

To find out more please visit **www.udg.org.uk**

ENGINEERS

Civil Engineer

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

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

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

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

Structural Engineer

The Job: Structural engineers are a key part of the design and construction team, often working alongside civil engineers and architects, on the creation of structures of all kinds from houses, theatres, sports stadia and hospitals to bridges, oil rigs, office blocks and space satellites.

The People: 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.uk

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.

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.

The People: If this sounds like your field, you need to have an interest in science, especially physics. You'll also have to be keen on protecting the environment because you'll be making sure that all types of energy are used efficiently. For more information visit

www.cibse.org

SURVEYORS

Quantity Surveyor

The Job: Quantity surveyors (also known as cost consultants)

manage and advise on all of the costs of a construction project. Quantity Surveyors may work closely with the client or the contractors to ensure a project is both 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 drawn 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 People: 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

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, a very good understanding of how buildings are constructed, 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
- Attending court to present evidence.

The People: If you fancy helping to keep our heritage 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.uk

Land Surveyor

The Job: Land surveyors (sometimes known as Geomatic 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 position of water features, underground services like drains, pipes and trees before starting construction.

The People: Land surveyors need to have good observational skills, be comfortable working with numbers and confident using computers and software. 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 computer aided design and geomatic software to create site plan drawings or models.

For more information visit

www.rics.org

CONSTRUCTION MANAGERS

The Job: Construction site managers run building sites, liaise with architects, planners, engineers, surveyors, trades people and suppliers to ensure that projects are completed safely, on time and on budget. They can often be described as site managers as their role is to run a construction site. They are different to project managers, who coordinate all aspects of the overall project, whereas construction managers are responsible for coordinating the building of the project.

The People: Construction managers must be good problem solvers and forward planners. They have great people skills and are good at presenting and debating ideas in meetings. They have an in-depth knowledge of all

aspects of the construction business, are well organised and have good numeracy skills. Your work would typically include:

- Discussing construction proposals with the design team and client
- Working to the construction programme
- Managing the work and safety of all staff working on or visiting the site
- Monitoring progress, costs and checking quality
- Reporting regularly to the client and design team
- Liaising with the local authority to ensure the building is constructed to building regulation standards.

For more information visit **www.ciob.org.uk/home** or **www.apm.org.uk**

Project Managers

The Job: Project managers bring about the successful completion of a project. A “project” could be coordinating anything from a relatively small scale building like the conversion of a loft in a house right up to a huge project such as building the Victoria Square.

In doing so, they take responsibility for the total control

of a project from initial conception to the finished product. They have to coordinate a lot of different professions which involves a significant amount of communicating and organising.

The People: Project Managers are good leaders and are 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.uk/home**

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: 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 People: A town planner's work may involve:

- Consulting local 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 for how an area should develop.
- Making sure new buildings are sustainable and environmentally friendly
- Protecting historic buildings or areas.

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

WHATS NEXT?

Now that you have decided construction is for you, this information will help you take 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 and can be invaluable in deciding if a career in construction is for you. Placements last for 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.



THE QUALIFICATIONS

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

Apprenticeships

These schemes help you to work, learn, earn and get qualifications all at the same time. For example, they enable you to achieve qualifications with planned and monitored work experience.

QCF Vocational Qualifications

The QCF is a new framework designed to make vocational qualifications in Northern Ireland easier to understand and simpler to use. These are qualifications that you obtain by proving that you can do a job through assessments during the course, rather than by passing exams. You get them through a combination of workplace and college experience which are available as awards, certificates and diplomas.

Higher Qualifications

Higher National Certificate (HNC)
Higher National Diploma (HND)

These are technical qualifications and are part-time and full-time. You could start these programmes at 16 or 18 e.g. after A Levels you could start a HND.

Foundation Degree

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.

Degree Programmes

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 if you decide to work overseas.

If you are interested in finding out more about entry criteria and routes into training speak to a careers adviser.

CONSTRUCTION AMBASSADORS

“Construction is all about enthusiasm and teamwork. I work with people from all walks of the construction industry and beyond to develop a project from concept through costing and design to construction and completion. It’s very satisfying to stand beside a structure and know I had a hand in building it.”

CITB-ConstructionSkills Northern Ireland has developed a Construction Ambassador programme to help promote career opportunities within the industry and interact with young people within schools.

What is a Construction Ambassador?

Construction Ambassadors are a regional network of people who already work in the industry covering all trades and professions, who give young people a real life perspective of the industry by visiting schools and attending careers conventions giving first hand information on what it is like to work in construction.

Construction

Ambassadors are the faces of the industry, sharing positive experiences with young people who are considering construction as a career.

Through Construction, students can learn about health & safety, equal opportunities and the world of work and a Construction Ambassador enhances the link between education and employment.

Ambassadors are able to inspire, enthuse and inform students and teachers about the built environment and the opportunities a career in construction may bring.

WOMEN IN CONSTRUCTION NETWORK FOR NORTHERN IRELAND

The construction industry in Northern Ireland has women working in all areas of the industry including - joinery, health and safety, plastering, civil engineering, site investigations, architecture, painting and decorating, landscape architecture, road building, project management, boat building, plumbing, quantity surveyors, etc.

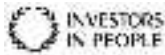
The Women in Construction Network has been developed by CITB-ConstructionSkills Northern Ireland, to support all local women engaged in the construction industry.

For more information on Women in Construction log on to: www.wicn.co.uk



CITB-ConstructionSkills Northern Ireland
Nutts Corner Training Centre
17 Dundrod Road
Crumlin
BT29 4SR
www.citbcsni.org.uk
www.bconstructive.co.uk

Tel: 028 9082 5466
Fax: 028 9082 5693
Email: info@citbcsni.org.uk



CITB-ConstructionSkills, CIC and CITB-ConstructionSkills Northern Ireland are working in partnership as ConstructionSkills, the Sector Skills Council for Construction

