Career Prospects in

CONSTRUCTION

UNIVERSITY OF HULL

HOP

HUMBER OUTREACH PROGRAMME

OfS Uni Connect Programme

People who work in construction help to shape the world around them. They create the infrastructure that supports towns and cities. The infrastructure could be roads, bridges and railways or a facility such a business offices, home, schools or hospitals. It is an industry that never stands still.

It is a HUGE job sector with many varied jobs from Architect to Town Planner to Electrician. Jobs range from the very start of a project, the planning and designing and continue all the way through until the project is complete.

In 2019, there was 2.4 million jobs in the construction sector, 7% of the UK total. 17,000 jobs in the sector in the Humber, 5% of employment in the Humber region.

DID YOU KNOW?

19%

of those studying advanced apprenticeships in construction progress to Higher Education

The UK construction industry is the safest in Europe

There are all kinds of construction degrees

Over **320,000** women work in construction in the UK

Many of the jobs often require working outside and are often **physically demanding**

UCAS states there are **425** degree courses that include Construction at **105 providers** in the UK

190,000 of the workforce nationally are predicted to retire in the next 5 years, therefore the industry requires new skilled workers to replace these. Currently there is a lack of skilled workers in this region as 1 in 3 employers are struggling to fill vacancies. Specifically, Electricians, Plumbers and Heating & Ventilation Engineers are in demand!

There are 3 main sectors in the construction industry in the UK:

- Commercial and social (approx. 45%)
- Residential (approx.. 40%)
- Infrastructure (approx. 15%)

Why work in the construction industry?

- See your ideas come to life
- Improve the environmental impact of buildings
- Enjoy a huge variety of work
- Gain a professional status
- Put your creative skills to the test
- Work as part of a team
- Have the opportunity to travel and work abroad

TYPES OF JOBS IN CONSTRUCTION

Careers in this sector aren't limited to the trades you easily recognise on a building site, such as bricklaying, scaffolding or welding. Meanwhile, engineers of all kinds play a vital role in property and construction, as their highly technical skills are required throughout the planning, building, maintenance and preservation stages.

Acoustics Consultant
Acoustics consultants help manage and control noise and vibrations in homes, workplaces and other environments.

Architect
Architects design new buildings and the spaces around them, and work on the restoration and conservation of existing buildings.

Boat Builder
Boat builders build, repair and refit marine craft from small sailing boats to large sea going vessels.

Architectural technician
Architectural technicians work closely with architectural teams on the design process of building projects.

Bricklayer
Bricklayers build houses, repair walls and chimneys, and refurbish decorative stonework. They also work on restoration projects.

Builders' merchant
Builders' merchants sell building and do-it-yourself products and materials to the building trade and the public.

Building site inspector
Building site inspectors check the quality and safety of construction work.

Civil Engineer
Civil engineers design and manage construction projects, from bridges and buildings to transport links and sports stadiums.

Carpenter
Carpenters and joiners make and install wooden structures, fittings and furniture

Construction plant mechanic
Construction plant mechanics make sure that heavy plant machinery like diggers and dumper trucks is well maintained and working safely.

Dry liner
Dry liners use plasterboard panels to build internal walls, suspended ceilings and raised flooring in houses, offices and shops.

Water network operative
Water network operatives look after the pipes, mains and pumping stations that supply homes and businesses with water.

Construction manager
Construction managers organise the work on building projects, making sure it's completed safely, within budget and on time.

Dry liner
Dry liners use plasterboard panels to build internal walls, suspended ceilings and raised flooring in houses, offices and shops.

Crane driver
Crane drivers operate lifting machinery on construction, quarrying and mining sites, at ports and in warehouses.

Drone pilot
Drone pilots remotely operate aircraft used in work like surveying, film making and aerial photography.

Estimator
Estimators work out how much it will cost for a company to supply products and services to its clients.

Gas mains layer
Gas mains layers install and maintain the pipelines that supply homes and businesses with gas.

Quantity surveyor
Quantity surveyors oversee construction projects, managing risks and controlling costs.

Mechanical engineering technician
Mechanical engineering technicians design, install and repair industrial plant machinery and parts.

Land surveyor
Land surveyors measure the shape of the land, and gather data for civil engineering and construction projects.

Rural surveyor
Rural surveyors value the assets of farms and estates, advise clients on legal and tax issues, and plan and develop land use.

Steeplejack
Steeplejacks carry out repairs on buildings and structures to make them safe.

Town planner
Town planners help shape the way towns and cities develop, and balance the demands on land with the needs of the community.

Technical surveyor
Technical surveyors carry out tasks to support chartered surveyors, architects and engineers.

MYTH BUSTING

MYTH

Working in construction is bad for your health

FACT

The UK construction industry is the safest construction industry in Europe

MYTH

Construction always means working in the cold and doing a practical job

FACT

There is a huge variety of jobs in many working environments

This means you could be working on a construction site, an office, at home or a workshop/manufacturing site.
There is also the potential to work nationally as well as internationally.

MYTH

Construction has no jobs for women, so a female employee would feel outnumbered and out of place

FACT

Over 320,000 women work in the UK's construction industry

If you are interested in finding out more check out the **#notjustforboys** campaign by the Construction Youth Trust.

MYTH

It is easy to work in construction

FACT

This is often not the case at all

Many of those with jobs in the sector will not work just 9-5, instead they will be expected to work long hours, potentially including evenings and weekends to finish projects. Depending on the job you do, you may be working outside regardless of the weather, it could be boiling hot sunshine or the pouring rain! Some jobs will also require difficult work that can be both mentally and physically exhausting. There may also be the requirement to travel around the country to do jobs, this can involve overnight stays away from family.

MYTH

Construction is a physically dangerous industry to work on

FACT

Not all jobs within the sector will require physical activity

It totally depends on the route your pursue, however if your role does require physical labour it doesn't mean that you will be put in danger. In fact there are now **vast health and safety measures which help to minimise any risks involved.**

YEAR 9

What GCSE's are important for a career in CONSTRUCTION

This pretty much depends on what specific career you are interested in. There are only a few careers that require you to have completed specific subjects instead it is all about opening doors for yourself. Most jobs will however to require you have at least 5 GCSE grades at grades 9 to 4 including English Language and Maths.

Instead think about the subjects you like and are interested in, there is no point choosing a subject you don't like, it will be a long, boring two years and you will be unlikely to succeed! It may also be worth thinking about the skills you will gain from the subjects and whether these skills will benefit you in a career in construction.

Below are two examples of jobs within construction and what GCSE's to consider.

Architect

Definitely: Maths, English Language, Science

Think about: Art, Design Technology

To train as an architect you will **need five good GCSEs** (or equivalent Level 2 qualifications) at grade 4/C or above, including Maths, English Language and Science.

In addition, you will need to be able to draw or sketch out diagrams, so subjects such as Art, Graphics or Design Technology would be useful. Consider continuing one of these through to A-level (Level 3) as many architecture courses require to see a portfolio of creative work when you apply.

Civil Engineer

Definitely: Maths; English Language; Science

Think about: Engineering

There are several routes into becoming a civil engineer: an apprenticeship, college course or university degree. You'll usually **need at least five GCSEs** (or equivalent Level 2 qualifications) at grade 4/C or above, including Maths, English Language and Science.

Most university degrees ask that you have studied Maths and/or Physics at A-level, so if your schools offers separate Science subjects, make sure to take Physics so you can carry it through.

Some schools offer GCSEs in Engineering and you might consider taking this if you're set on this career path, although it isn't compulsory.

OPTIONS

Once you've done your GCSE's, you'll be able to choose your level 3 pathway. You have the option of three different routes:

1 A-Levels,
2 Vocational Qualifications or
3 Apprenticeships

1 A Levels

A-Levels are subject-based qualifications that are usually studied over 2 years. They are assessed by examinations. Some degrees relevant to the Construction sector ask for specific A-Levels. However, some useful A-Levels may be;

- Maths -Physics
- Technology
- Other Science subjects

2 Vocational Courses

Vocational qualifications are usually offered by a sixth form or local college. They are qualifications related to specific areas of employment.

There are different levels of vocational qualifications, it is important to choose the right level to ensure your progression.

Vocational qualifications tend to be much more hands-on.

T-levels are a new type of vocational qualification. They bring classroom learning and an extended industry placement together on a course designed with businesses and employers. You will spend 80% of your time in the classroom and 20% in a 45 day placement with an employer to give you the skills and knowledge companies look for.

Some examples of vocational qualifications you could study are;

- Level 3 BTEC- Construction and the Built Environment
- Level 3 BTEC- Plastering
- Welding NVQ

Currently you can study a Design, Surveying and Planning for Construction T-Level.

From Sept 2021 you will be able to study a Building Services Engineering for Construction T-Level or an On-site Construction T-Level.

3 Apprenticeships

Apprenticeships combine practical training in a job with study. As an apprentice you would be employed and earning a wage whilst also learning to achieve a qualification. You would spend 80% of your time on the job and 20% training and studying.

There are different levels of apprenticeships available, if you achieve at least 5 GCSE's (grades 9-4) your next step in your progression would be a level Advanced apprenticeship.

Some examples of Advanced Apprenticeships are;

- Apprenticeship Engineering Construction Pipe-fitter
- Construction- Brick
- Construction- Wood
- Civil Engineering Technician
- Apprentice Materials Testing Laboratory Technician

POST 18

OPTIONS

There are lots of options to choose from at 18. What's right for you will depend on your situation and the career or job you have in mind and your preferred method of learning.

University

Usually 3 years, longer if a placement year is included Entry requirements dependent on the course and the university. Some will ask for specific A-levels and grades in those courses, some will require certain grades in GCSE's Courses will cost up to £9,250 per year.

Some examples of the types of Higher education courses;

- Construction Engineering Management (with placement year) BSc (Hons), Loughborough University
- Building Surveying BSc (Hons), Nottingham Trent University
- Construction BSc (Hons), University Centre Peterborough
- Architecture (with placement) BSc (Hons), University of Bath
- Property Development and Planning BSc (Hons), Nottingham Trent University
- Construction & The Built Environment HND, DN Colleges Group

Employment

Some employers will offer custom alternatives for A level students.

Apprenticeships

These apprenticeships will allow students to gain a level 4 qualification.

Entry requirements vary but they will usually expect a level 3 qualifications and 5 GCSE's grade 9-4 often including Maths and English Language.

Usually last two to four years.

Degree Apprenticeships Usually last between 3 to 6 years.

These apprenticeships will allow students to gain a bachelors degree level qualification and there professional qualification.

Some examples of the types of Higher education apprenticeships;

- Architect
- Building control surveyor
- Chartered town planner,
- Construction quantity surveyor
- Design and Construction management
- Construction site management
- Senior/head of facilities management
- Civil Engineer, Level 6

Important skills needed for CONSTRUCTION

Jobs in the construction sector usually require a mixture of different soft skills and hard skills.
Some of the most common soft skills required are:

Problem solving skills

Many roles will require the individual to review the evidence and look for solutions to overcome any issues that they run in to. Problems will be an everyday occurrence in many roles in the construction sector whether this is inaccurate measurements or project delays, to ensure that projects run smoothly and money is not lost problem solving skills are vital.

Communication skills

Every job in the construction industry will need good communication skills, whether this is verbal or written. Often individuals will be working in potentially dangerous environments so they need to be able to effectively communication questions, directions and decisions to their team. They will also often need to write reports and provide clear emails and documents for clients.

Teamwork

Roles within the construction section will often require excellent team working skills and collaboration with peers. If working on a site, poor team work will slow a project down causing money to be wasted and clients to be unhappy with the progress. If working in an office, often construction sector jobs will work with multiple agencies to complete a project.

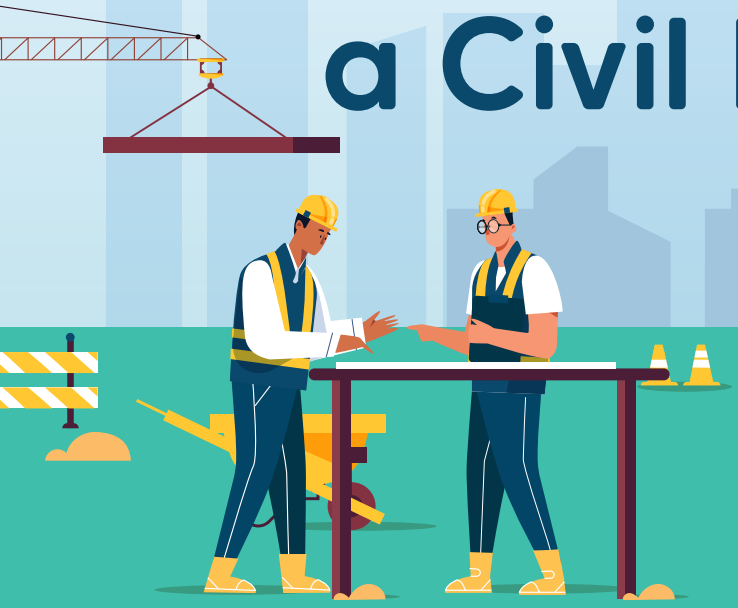
Organisation

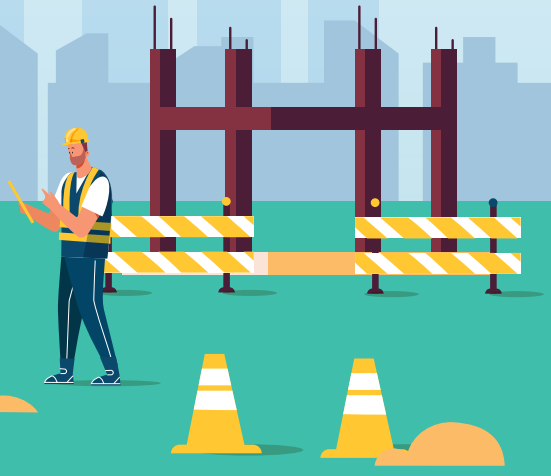
If working with lots of reports and projects it will be important for you to manage your workload effectively so that each project is completed by the deadline and to the highest standard. Many roles in the construction sector will also need the individual to manage their own diary and organise their appointments, meeting and work to be able to get everything they need to completed each day. If working on a site, organisation will slow the work down. If you do not know where the necessary tools are you will have to spend time looking for these or replacing them.

Ability to work under pressure

Within the sector you may often find yourself with a number of strict deadlines for the projects you are working on. This means you will need to complete your work with the pressure of those deadlines looming with the knowledge of how missing them will affect the overall project and your company.

A DAY IN THE LIFE OF a Civil Engineer





- Check and respond to emails and messages that have been received over night.
- Discuss with colleagues and contacts what projects are currently being planned and in progress and what the public opinion is of previous work. This allows a civil engineer to plan their day. They will also review their appointment schedule for the day.
- Begin drafting work for projects that are upcoming.
- May receive phone calls from a contractor to inspect some work that has been done, so they must plan this into their schedule.
- Attend appointments to carry out the work that has been requested. This may involve inspecting electrical work and ensuring that everything meets building code requirements. They should also suggest improvements to current ideas and designs. This type of appointment will happen most days for a civil engineer.
- Meet with people who are proposing new developments. Discuss associated costs and potential issues, for example buying land, surveying, and ensuring hazards are removed. May visit the site to inspect it and do some planning.
- Meeting with other engineers to discuss new products on the market.
- Make plans of the proposals and look into the different construction options available. Email these plans to officials and proposers.
- Review reports such as soils and grading reports and examine if there are drainage issues. Determine if there are potential solutions for these.
- Organise the next days work and leave the office.

Signposting

Key websites

www.goconstruct.org/

www.building.co.uk/

www.careersinconstruction.com/

www.lmihumber.co.uk/construction/

www.citb.co.uk/

www.constructionnews.co.uk/news/

www.adir.hull.ac.uk/home/564/564268/Downloads/a-professional-career-built-environment.pdf

www.logonmoveon.co.uk/courses?AreaSlug=&Search=construction%20&Postcode=&Radius=0

Key employers

- Amey
- Arcadis
- Arup
- Atkins
- Balfour Beatty
- BAM Construct UK
- Barratt Developments
- Beal Homes- Humber region
- Carter Jonas
- CBRE
- Costain
- Countrywide Group
- Cushman & Wakefield
- Grosvenor
- GVA
- Hobson Porter- Humber region
- Howdens- Humber region
- JLL
- Keepmoat- Humber region
- Kier Group
- Knight Frank
- Lang O'Rourke
- Lendlease
- MKM- Humber region
- Mott Macdonald
- Redrow
- Savills UK
- Sewell- Humber region
- Skanska
- VINCI Construction UK
- Willmott Dixon

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