CAREERS

BUILDING CONSERVATION AND RESTORATION

Working as a craftsperson or professional to preserve or restore a vast range of historic buildings – from country mansions, churches and castles to terraced houses, industrial buildings and bridges.

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The nation’s built heritage is an important part of our everyday life and contributes to our regional and national identities. Many of the buildings in our villages, towns and cities are hundreds of years old and so conservation, repair, maintenance and restoration are vital to their survival. This requires increasing numbers of craftspeople to have specialist knowledge and skills that build upon those gained working in mainstream construction.

**Today’s buildings are tomorrow’s heritage**

Our towns, cities and buildings shape our landscape – and the built heritage is what successive generations have made of the places they lived in. It provides a link to the past, but also forms a vibrant and important part of our built environment. It is difficult to imagine a world without construction – or the present and future without a past.

For the benefit and enjoyment of future generations it is therefore important to preserve our old buildings, especially those of historic or architectural value. Older buildings constructed before 1919 represent one-fifth of our total building stock. Some have been standing for centuries and used materials and designs that are no longer in general use today. These older buildings may be in need of attention and so repair, conservation or restoration is necessary.

The maintenance and conservation of old buildings is a specialist and prestigious part of the construction industry and it requires highly skilled craftspeople, for example bricklayers, carpenters and lead workers, and professionals such as architects, surveyors and conservation officers.
Career opportunities

Building conservation and restoration offers many career opportunities. There is the chance to learn and work in one or more of several different craft skills, which include:

- bricklaying and craft masonry
- carpentry and joinery
- lead working
- painting and decorating
- plastering
- roof slating and tiling
- steeplejacking
- stonemasonry

and graduate professions:

- architect
- building surveyor
- conservation officer
- engineer
- quantity surveyor
- conservator

In conservation and restoration you learn how to use traditional methods and materials and sometimes modern conservation techniques and practices.

To work in this sector, it is expected that you will have trained and gained a recognised craft or professional qualification. This allows you to work in the general construction industry as well as specialising in the built heritage sector.

It takes time to gain the knowledge, expertise and experience to carry out this specialised work. This is because you will need to develop an understanding of how to conserve and maintain the fabric of a building, as well as learning the typical day-to-day practices of your chosen trade. The emphasis on high-quality work and highly skilled decisions often makes the traditional building sector very attractive to career changers, but there are also increasing opportunities for young people to train and gain employment.
Choosing your vocation

Choosing a career in building conservation and restoration will help to preserve the UK’s heritage and reduce the current shortage of skilled craftspeople in the built heritage sector.

Projects range from working on ordinary pre-1919 buildings to grand palaces and historically important buildings and landmarks. There are also opportunities to repair and restore historic buildings throughout the world.

You will often work alongside other conservation and restoration craftspeople and graduates – many with different specialist skills. This provides different opportunities, and by developing your knowledge, skills and qualifications you can progress to become a master crafts-person or follow one of the other career paths illustrated on page 5.

You might work with specialist historic building contractors, private estates or organisations such as Cadw, English Heritage, Historic Scotland, The National Trust or The National Trust for Scotland.

For graduates, a career as a conservation architect, town planner, building surveyor, quantity surveyor, engineer, conservator or conservation officer exists in both private practice and with public sector bodies, such as local authorities and heritage agencies. This work requires a high level of technical knowledge and also needs a sound appreciation of craft skills and traditional building methods and materials.

A lot of the principles and knowledge required to work in this sector are unique, but are unlikely to restrict you to repair and restoration, should you wish to change career paths at a later date.
CAREER PATHS

Craftspeople & Graduates

Professional Entry Routes
Via degree, NVQ 5 and professional membership

Entry Trades
S/NVQ level 2 in:
Bricklaying and Craft Masonry
Plastering
Stonemasonry
Painting and Decorating
Carpentry and Joinery
Roof Slating and Tiling
Lead Working
Steeplejacking

Heritage Craft Careers
S/NVQ level 3 in:
Bricklaying and Craft Masonry
Plastering
Stonemasonry
Painting and Decorating
Carpentry and Joinery
Roof Slating and Tiling
Steeplejacking

Specialist Craftsman
Supervisor or Team Leader
Sub-contractor (self-employed and may run their own business)
Assessor or Instructor
Managing Director

Architect
Building Surveyor
Quantity Surveyor
Engineer
Planner
Conservation Officer

Estimator or Draughtsman
Site/Contract/Specialist Manager

Local Government
Private Practice
National bodies such as Cadw, English Heritage and Historic Scotland

Managing Director
Bricklayer and Craft Mason

Bricklayers and craft masons build or repair external and internal walls and chimneys using lime mortar, rather than ordinary Portland cement mortar. Sometimes, this will include special shapes, thicknesses and patterns of bricks and the use of different bonds, maybe with handmade rather than mass-produced bricks. Walls may contain a variety of different kinds of openings, including arches, and some high status buildings feature specialised high-quality gauged brickwork or a range of other decorative features requiring precision craft skills.

In some parts of the United Kingdom, craft masons build and restore walls using natural, rough stone. This is different from the fine square dressed blocks worked and constructed by stonemasons.

Each building or structure is different and offers a unique set of challenges to understand and resolve. The variety of buildings and the different techniques used to build them in the past means it is important to have an understanding of the building materials, so as to sympathetically replace or repair these using similar methods and materials.

Carpenter and Joiner

Carpenters and joiners make, fix and install replacement timber components for a building. This can include structural work, such as roofs, staircases or floors, or the repair or replacement of doors, door frames, skirting boards, architraves and other mouldings.

A bench joiner works in a workshop using a range of different woods to prepare components, such as doors, staircases and windows. Sometimes they may be required to make copies of the original elements.

Carpenters and joiners need an understanding of how wood may be affected in different situations in terms of moisture content, shrinkage and fungal attack. They also need to know how to overcome problems with the way the work is carried out and the quantity of materials needed to do the job. Working with other craftspeople is part of the job, as may be working closely with the architect or other professionals on particular projects.
**Lead Worker**

Lead has been used for centuries as a roofing material and remains a prominent feature of the modern skyline, providing protection from the elements for some of the UK’s most cherished buildings.

The skills of a lead worker in shaping and forming (bossing) the metal have hardly needed to change over many generations and – together with more modern welding techniques – can be applied just as easily to modern-day applications of lead sheet as to more traditional uses. Over 100,000 tonnes of lead sheet is used in UK construction each year, both in heritage work and modern weathering installations. A skilled lead worker can therefore be found just as often working on a modern roof as carrying out the refurbishment of a historic building.

Lead sheet durability and performance continues to provide long-term peace of mind for those charged with the responsibility of preserving our built heritage: the skills of the lead work craftsperson therefore remain at a premium for both traditional and modern installations.

**Painter and Decorator**

Painters and decorators work on internal and external restoration projects. Traditional skills involve thorough preparation of the surfaces, followed by careful application of the required finish, such as paint, varnish or wallpaper.

Because decorating methods have changed over the years, it can be challenging and inspiring to replicate the decorative finishes of earlier times.

This often requires different preparation and application techniques. It is also common for the paint or wall covering to be specially produced for the specific project and made in the style of the original.

Painters and decorators on restoration projects need to be highly skilled and be fully aware of the properties of the materials they are using.

The ornate nature of the finishes within many old buildings means that painters and decorators need a creative flair, but also an eye for detail. This is important when applying gold leaf or creating a grained or marbled paint finish.
Plasterer (Solid)

Solid plasterers repair and restore external walls (known as rendering or harling), internal walls and ceilings (plastering), or floor finishes (screeds), which may be smooth or semi-smooth.

Plasterers can also be responsible for the repair, restoration or replication of missing ornamental decoration on unusual surfaces, such as cornices, domed ceilings, vaults and other mouldings within historic buildings. This type of work is unique and may be carried out in either solid or fibrous plaster.

The plaster finish is only as strong as the underlying material it is being bonded to. So, before any actual plastering starts, a thorough examination and preparation of the background surface is needed.

This may include repair and maybe replacement of timber laths, essential in producing a high-quality and well-adhered finish.

Roof Slater and Tiler

Roof slaters and tilers install and repair roof coverings to protect buildings against the elements, normally working in pairs or in small teams over relatively short periods before moving on to the next job.

The slater and tiler will gain solid background knowledge of modern slating and tiling, using machine-made products, before learning conservation aspects of heritage roofing and then working with handmade materials from clay tiles to different types of natural stone and slate.

Roof slates and tiles on traditional buildings were usually quarried or produced locally. Therefore roofing materials, types and styles varied greatly from region to region around the UK.

The formation of an even, effective and eye-catching roof covering from random and inconsistent shapes of solid materials is one of the greatest challenges for the roof slater and tiler.

As your career in slating and tiling progresses, you may have the opportunity to develop various managerial roles, work closely with architects and other professionals, and develop an understanding of the design and history of traditional roofing.
Steeplejack

Churches, ancient monuments and listed buildings often have inaccessible features, such as spires, turrets and chimneys, that require the specialist access skills of a steeplejack. So, if you like the idea of scaling new heights this could be the job for you.

Steeplejacks usually work in pairs, using a range of access systems and abseiling. Once in position, they carry out visual and physical inspections to assess the overall structural stability or condition of individual building components; obtain samples for testing; report on identified problems and recommend necessary repair to the architect, surveyor or engineer.

On older buildings, steeplejacks must also possess a range of skills to undertake in-situ repair work, including re-pointing and masonry repairs, partial dismantling and re-building or applying coatings. You could even be involved in cleaning, repairing and maintaining lightning conductors – a modern invention, but very important in preventing damage to old buildings.

Stonemason

Stonemasonry involves conservation, repair and restoration of natural stone buildings, as well as the construction of new masonry structures. These may be built from different stone types in different regions in the UK, such as limestone, sandstone and granite, and often contain a range of decorative features and intricate carved detail.

Banker masons tend to be based off-site in a workshop and need to be skilful with tools used to shape different components. These are created from sawn blocks of stone, using templates and drawings as a guide. Often, decayed stones from a building need to be replaced and the banker mason must accurately replicate the shape and form of the original. Intricate carved details and decorative features require the skills of a carver, an extension of the same basic skills as the banker mason.

Fixer masons install the stone components produced by the banker masons to repair or restore the building, which may be of historic or architectural importance. This work normally involves working outside and often at height. The fixer mason needs to know how to use traditional lime mortars when building with stone and to have an understanding of the structural aspects of load-bearing elements, such as arches and lintels.

An understanding of the wide range of stone types and how they react to various conditions is necessary for all aspects of stonemasonry.

Facade preservation, cleaning and repair of old buildings is a specialised area of stonemasonry. The correct application of cleaning techniques and repair methods is crucial to avoid lasting damage to the building. This is different from the skills required to be a banker or fixer mason and can be acquired through an NVQ Level 2 qualification route.
Have you got what it takes?

Working in this sector can involve both young entrants and those seeking to change career.

To work within building conservation and restoration you will have to:

• have an interest in and appreciate old buildings
• enjoy working on a variety of buildings in different locations
• be good at understanding technical drawings and working with specialist tools
• enjoy working in small teams and to deadlines
• have patience
• get satisfaction from seeing a project through from start to finish and from the knowledge that your work will be there for years to come

Your career

At the beginning you will probably need to join a specialist building or restoration company. You can look forward to interesting experiences during your training, but be aware that you are likely to have to work some of the time on new buildings. It is quite unusual to work solely on historic buildings for your full career, unless you work for a heritage organisation or on a private historic estate.

Mostly you will do hands-on practical work, in a real working environment – which means you will actually get to do the job yourself, rather than just watching from the background. If you are an apprentice you can also go to college, either as a day-release student (on a course one day a week) or maybe on block release (every day for a set number of weeks).

If you are looking for a career change, you will need to find relevant employment with an employer willing to provide the support you will need to train. Then appropriate training schemes can be developed, which will take into consideration the skills and experience you already have.

By continuing your development and training within the craft skills it will ultimately be possible to progress to the status of a master craftsperson.
QUALIFICATIONS

A wide range of qualifications are available for craft occupations and professionals. Due to the highly specialised nature of the occupations the ability to train for these qualifications is restricted by the number of specialist colleges and universities. You may need to consider this when deciding upon your career.

Craft Occupations

The construction industry is working towards everyone achieving a Scottish or National Vocational Qualification (S/NVQ). These qualifications focus on you demonstrating your competence by assessing your work on-site combined with some college-based work. You have to be employed to achieve an S/NVQ.

Most crafts have an S/NVQ available at both levels 2 and 3, and a new Heritage Skills NVQ Level 3 is being launched that has pathways for all the traditional crafts.

What qualifications are available?

Trowel Occupations:
NVQ Levels 2 & 3, including Bricklayer and Craft Mason

Wood Occupations:
NVQ Levels 2 & 3, Site Carpentry, Bench Joinery, Wheelwrighting
NVQ Level 2 Heavy Structural Timber Framing

Roofing Occupations:
NVQ Level 2, Hard Metals and/or Lead
NVQ Levels 2 & 3, Roof Tiler, Roof Slater and Roof Slater & Tiler (combined)
NVQ Levels 2 & 3, Thatching option route

Decorative Finishing and Industrial Painting
Occupations:
NVQ Levels 2 & 3, Painter and Decorator

Façade Cleaning/Repair:
NVQ Level 2, Façade Preservation

Plastering:
NVQ Levels 2 & 3

Accessing Operations and Rigging:
NVQs Levels 2 & 3, Steeplejacking

Stonemasonry:
NVQ Levels 2 & 3

There is an equivalent SVQ available where there is an NVQ.
Professional/graduate opportunities

A range of opportunities are available in professional occupations for graduates and non-graduates. However, a degree is usually necessary to progress to the top of a profession.

A career as an architect, quantity or building surveyor, engineer or conservation officer is a key occupation in building conservation and restoration.

An architect working in private practice or for a local authority is responsible for reviewing the condition of a building; specifying and planning any required repair, conservation or maintenance; engaging and supervising a building contractor to carry out the work to ensure it is undertaken to the required standard; certifying payment for the completed work.

A building or quantity surveyor supervises work on site by working with the contractor and craftspeople to carry out the required task. This can also involve monitoring the progress of the project and claiming payment from the client for the work carried out.

A conservation officer is employed by the local authority and is responsible for ensuring that both old and listed buildings are maintained appropriately.

Professional qualifications

Professional qualifications show that you are capable and responsible. They can take a number of years to complete as part of a structured work-based training programme and may include examinations, depending upon your existing qualifications.

Professional training can be continued when you begin work, and can take a further few years. This can include attending workshops and lectures, work experience, writing essays and, depending on previous qualifications, possibly a final examination. For some professions there are specialist registers for competent practitioners of building conservation.

What qualifications are available?

Foundation degrees

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

Most foundation degrees last two years with full-time study, or three years part-time. Studying part-time would give you the opportunity to spend more time in the workplace as well as at college. Colleges are offering a range of foundation degrees that have course content relevant to the sector. For further information see the bConstructive website or Foundation Degrees website listed in our useful contacts section.

Foundation degrees are not available in Scotland.

Degrees

Degrees are usually studied at university and last between 3 and 5 years, depending on the programme being studied and whether you take it full- or part-time. A degree tends to be the highest rung of the ladder, and achievement can lead to chartered or incorporated status in your related professional specialism.

A degree has more specific study areas than vocational qualifications and will require relevant entry requirements. It is useful to study on a Construction and the Built Environment course, accredited by a professional institution, which is highly regarded in the construction industry. However, do check with the university to see if its course content includes the built heritage.

Once you have qualified, membership of a professional organisation at the appropriate level – together with conservation accreditation – is evidence of your competencies and an important badge of recognition for clients. Each professional body encourages its members to participate in continuous professional development (CPD) so you can keep adding to your knowledge and skills throughout your career.
CASE STUDIES

The following case studies of people currently working in the built heritage sector give an idea of what it is really like to be a craftsperson, architectural conservator or building conservation professional.

They have come into the sector from very different career routes and work on related aspects within the conservation field. Their accounts describe the type of work they are involved with, their passion for working with old or historic buildings, their sense of achievement and satisfaction in contributing to this important sector, and their career and earnings aspirations.

We hope you will be inspired by these case studies and the information within this booklet to consider a career in the built heritage sector.

Clara Willett – Stone Conservator

What encouraged you to get involved with the construction industry?

Working on buildings is creative and there is a lot of satisfaction with this since you can see the results of your efforts.

What qualifications do you have (construction or nonconstruction related; GCSEs, Standards, AS Levels, A Levels, NVQs etc, and route taken into the industry)?

9 GCSEs, 3 A levels, BA (Hons), Postgraduate Diploma in Architectural Stonework Conservation.

What do you do day-to-day?

I am involved in giving technical advice about conservation to people. This can be delivered through site visits, telephone and publications. I enjoy meeting and helping people, seeing interesting historic places and the opportunity to make a difference to how they are looked after.

Can you give an example of any recent projects you have been working on?

A set of neolithic stones were daubed with yellow paint. I gave advice on the best way to remove the graffiti without damaging the stone and the delicate surface patina (made up of lichens and algae) that takes hundreds of years to develop, and if removed through insensitive cleaning would spoil visitors’ enjoyment of this special ancient monument.

What surprised you about the construction industry?

What annoys me is that everyone seems to think that builders are rogue traders and try to overcharge people, when a lot of the time they are charging for services and skills that their clients don’t have. There are so many other trades that charge far more per hour and yet people don’t question it e.g. hairdressers!!

If you were to recommend your job to someone else, what would you say?

Get a good set of skills – whatever they are. If you’re good and reliable, there is always interesting and fulfilling work to be done that will pay you a good (not an outstanding!) salary.

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Christopher Robert Ridsdale – Stone Mason

What encouraged you to get involved with the construction industry?
A very generous offer of a new apprenticeship from one of my father’s colleagues.

Why were you attracted to working in the heritage sector?
The apprenticeship was based in the heritage sector and it gave me the opportunity to learn a craft trade and also be creative as a carver.

What qualifications/ConstructionSkills courses have you achieved?
NVQ 1+2 Banker Mason
City & Guilds Intermediate Construction Skills
Key Skills.

What do you do day-to-day?
My work is generally split equally between conservation masonry and banker work.

Can you give an example of any recent projects you have been working on?
I have only been in the job now for just over two years and unbelievably I’ve worked on 17 projects: three castles, two bridges, four churches, two medieval walls, one monastic muniments room, one Georgian archway, one working week in Romania, two NHTG Craft weekends and one pub!

If you were to recommend your job to someone else, what would you say?
Take in as much information as you can when it is offered. If it isn’t, ask. Always give 110%. This is not a soft job so be prepared for physical work. If you like that sort of thing then this is for you. As a banker mason it’s great to be able to carve. If you are creative then it’s great.

Stewart Inkster – Apprentice Stone Mason

Why were you attracted to working in the heritage sector?
I like old buildings.

What qualifications do you have (construction or nonconstruction related; GCSEs, Standards, AS Levels, A Levels, NVQs etc, and route taken into the industry)?
7 Standards.

What qualifications/ConstructionSkills courses have you achieved?
Health and Safety CSCS.

What do you do day-to-day?
Dressing stone in the yard and building work on sites.

Can you give an example of any recent projects you have been working on?
Building and dressing work on a large monument in Lasswade.

Where would you like to take your career in the future (eg. work on a major national project)?
I would like to start my own company.

Good bits and bad bits about your job?
Bad – the dust.
Good – finished work (pride in walking past a job and saying ‘I built that!’).
Jason Rider – *Apprentice Plasterer*

What encouraged you to get involved with the construction industry?

The industry offers so many real opportunities particularly with the apprenticeship schemes, and whatever I decided to do I knew I was never going to be out of a job. As an apprentice, I liked the idea of being able to learn a practical skill on the job that would give me a qualification and get paid for it at the same time. I did have a taste of life as a plasterer when I worked alongside a relative and I really enjoyed what I was doing.

What qualifications do you have (construction or nonconstruction related; GCSEs, Standards, AS Levels, A Levels, NVQs etc, and route taken into the industry)?

I’ve completed two years’ training and have NVQ levels 1 & 2 and am working towards level 3.

What do you do day-to-day?

The job is very varied and there isn’t such a thing as a typical day. I can be casting fibrous plaster mouldings one minute in the workshop or out on site working inside buildings, applying three-coat lime plaster to walls and fitting cornices and ceiling roses, or using a render gun applying lime rendering to the outside walls.

Can you give an example of any recent projects you have been working on?

I’ve worked on lime plastering and rendering projects at Gorton Monastery in Manchester, the refurbishment of the Temple of Minerva, an old Victoria folly in Harwick Park, Sedgewick, and I’ve also worked with clay plaster for the restoration of English Heritage’s Gibson Mill in Hebden Bridge.

If you were to recommend your job to someone else, what would you say?

If you’re creative, got a head for figures, happy to get messy, confident enough to work on your own initiative and are prepared to put in the hours then there’s nothing more rewarding that a career in traditional plastering. Once you’re qualified the money’s very good too.

Paul Malyon – *Apprentice Plasterer*

What encouraged you to get involved with the construction industry?

There is a shortage of skills within the construction industry particularly the specialists skills like the one I’m currently training for. I find the work really interesting too.

What qualifications do you have (construction or nonconstruction related; GCSEs, Standards, AS Levels, A Levels, NVQs etc, and route taken into the industry)?

9 GCSEs: ICT, English Language, German, PE, English Literature, RE, Geography, Science, Mathematics.

What do you do day-to-day?

At the moment I do 22 weeks block release at college and also work out on site with mentors or in the workshop producing fibrous plaster mouldings.

Can you give an example of any recent projects you have been working on?

The restoration of Brookfield Manor (plaster mouldings, arches etc), a synagogue in Manchester (using lime plastering) and the old town hall in Gateshead which is being converted into a theatre.

What surprised you about the construction industry?

The amount of work that there is!

If you were to recommend your job to someone else, what would you say?

It’s a great job with a lot of job satisfaction that gives you a sense of pride, especially when you end up visiting the historic places in the future that you’ve worked on and turn round and say ‘I did that!’.
USEFUL WEBSITES

www.nhtg.org.uk
www.bconstructive.co.uk
www.ucas.co.uk
www.foundationdegree.org.uk
www.constructionskills.net

Professional Institutions
Association of Building Engineers
www.abe.org.uk

Association of Consultant Building Surveyors
www.acbs.org.uk

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

Chartered Institute of Building
www.ciob.org.uk

Chartered Institute of Housing
www.cih.org

Institute of Conservation
www.icon.org.uk

Chartered Institution of Building Services Engineers
www.cibse.org

Engineering Construction Industry Training Board
www.ecitb.org.uk

Institute of Clerks of Works Great Britain Incorporated
www.icwgb.org

Institute of Highway Incorporated Engineers
www.ihiie.org.uk

Institute of Maintenance and Building Management
www.imbm.org.uk

Institute of Plumbing and Heating Engineering
www.iphe.org.uk

Institution of Civil Engineering Surveyors
www.ices.org.uk

Institution of Civil Engineers
www.ice.org.uk

Institution of Engineering and Technology
www.theiet.org

Institution of Structural Engineers
www.istructe.org.uk

Landscape Institute
www.l-i.org.uk

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

Royal Institute of British Architects
www.architecture.com

Royal Institution of Chartered Surveyors
www.rics.org/careers

Royal Town Planning Institute
www.rtpi.org.uk

For more information go online at www.nhtg.org.uk or call us on 01509 282860