



STONE EDGE

*Historic building restoration*





## A PASSION FOR CONSERVATION

Stone Edge is a building restoration and conservation company, operating throughout the UK. We carry out work to the highest standard on listed buildings, commercial city centre properties, churches, stately homes, government buildings and ancient scheduled monuments.

Our offices are strategically located in London, the Midlands, the North West and the North East, enabling us to service our clients and contracts efficiently.

Traditional building and conservation skills are combined with the latest technology by our in-house teams of highly experienced craftsmen and women.

Stone Edge's attention to detail and craftsmanship mean that we are often engaged by architects to work on the conservation and restoration of precious ecclesiastical buildings. The very nature of these historic structures, many of which are Grade I listed, is such that only the highest skilled professionals are involved. Each project is different – yet all of them are a thrill for the stonemasons and the whole building conservation team.

As a respected historic building restoration company, we are recognised for our transferable skills and are available for new-build stonemasonry projects, particularly where attention to detail and finishing of the very highest standards is required. In fact, we're regularly called upon to lend stonemasonry expertise to new build schemes. A stonemasonry design service complements the

new-build aspect of the company and provides drawing solutions for masonry embellishment of any project. Stone Edge has even reconstructed entire historic buildings from scratch, such as historic Sandown Hall.

Other types of structures are in need of our services and Stone Edge is consulted each year by local councils and parishes around the country, to give advice on the correct cleaning and conservation methods for their local war memorials. In recent years, we have carried out the sombre task of hand-carving the names of the country's soldiers, fallen in modern conflicts around the world.

Whatever your project type or scope, Stone Edge will provide you with a full solution. From cleaning and repairing war memorials to restoring a hospital entrance, or even hand-carving masonry or monuments – you can be assured that our craftspeople will give each job the same attention to detail.

Stone Edge's reputation is built on its wealth of experience of stone, brick and timber-framed buildings, a respect for the heritage and, above all, a passion for quality.



## PRINCIPAL SERVICES

We offer a free initial consultation to architects, engineers and building surveyors to help with the identification of causes of failure and the development of repair strategies and logistics. Our areas of expertise are:

**Façade Cleaning and Repair**

**Traditional Stonemasonry and Lime Mortars**

**Masonry Design**

**Stone Restoration**

**Faience and Terracotta**

**Stabilisation Systems (Cintec)**

**Roofing Repair and Replacement**

**Architectural Lead Work**

**Conservation of Decorative Metalwork and Bronze Work**

**Decorative Fibrous Plaster**

**Brick Matching Service**

**Joinery Repairs**

**Roped Access**

**Surveys and Dilapidation Reports**

Stone Edge has undertaken the conservation and restoration of Grade I and Grade II\* listed buildings, ancient scheduled monuments and war memorials, ranging in date from the 12th to 20th centuries.

### FAÇADE CLEANING AND REPAIR

Stone Edge specialises in all aspects of stone cleaning, stone restoration and stone repairs. Specialist stone façade cleaning is a complex process and we utilise state-of-the-art systems and methodologies to ensure the best possible results. Mistakes were made in well-intentioned, but misinformed, restoration works during the last century. It is crucial that the correct method of cleaning is chosen. We carry out initial trials and analysis on the nature of soiling and assess the extent of deterioration before selecting which method, or combination, should be used.

We are skilled in the following techniques:

- Multiple nebulous water sprays for limestone façades
- Hot water vacuum system (internal works)
- Stonehealth Jos/TORC vortex cleaning system
- Stonehealth DOFF, utilising low-pressure steam cleaning system
- Restorative Techniques Thermatech heritage cleaning system
- Poultice cleaning, for delicate tooled areas and where water is not permissible

### TRADITIONAL STONEMASONRY AND LIME MORTARS

Stone Edge's stonemasons have created many remarkable pieces of hand-carved stonemasonry and are able to replicate, on carefully sourced stone, virtually any detail required. Stone restoration, stone cleaning, stone repairs and lime mortars are the very essence of Stone Edge's building conservation and restoration projects. Natural lime-based stone mortars and renders are far superior products and essential in the correct repair and construction of historical stone-built façades. Stone Edge is a huge advocate of these traditional products and methods, with an experienced team dedicated solely to lime pointing, renders and mortar repairs.





## MASONRY DESIGN

Accuracy and attention to detail is fundamental to Stone Edge. Our team of stonemasons regularly undertakes site surveys to record dimensions, complex profiles and features of the stoneworks. These surveys are then translated using AutoCAD for the purposes of approval and manufacture. This could be for the replacement or repair of an individual stone unit, or the production of a full replicated version of a particular scheme. Drawings are produced for all work including cleaning, pointing, takedown and building restoration projects. For both new-build and stone restoration projects, a complete manufacture package is available, including the production of general drawings together with cross-referenced detail sheets and cutting lists.

## STONE RESTORATION

Our specialist stone restoration team undertakes complex and difficult projects with great skill. With a reputation for quality and attention to detail, Stone Edge's craftsmen can repair stone to closely match the existing stonework. All of the original detail will be preserved or replenished if worn or damaged. Combining modern management techniques and knowledge of traditional building methods, Stone Edge offers an unrivalled quality of service. All stone can be repaired, using a mixture of methods and materials both modern and traditional.

## FAIENCE AND TERRACOTTA

Terracotta and faience are often the most decorative part of our historic building heritage. To ensure we preserve these building elements, careful maintenance is key for long term preservation. If not maintained, terracotta and faience will deteriorate over time, including material spalling, cracking, glaze crazing and rust staining from failed anchoring points. Repairs need to be carried out in a careful and considerate manner. Our reputation in this specialist field has resulted in notable conservation projects, including the former Royal Insurance Building in Liverpool, Fortnum & Mason's department store and the Rainbow Theatre. We offer sound advice on how to protect and conserve these Victorian kiln products, including correct cleaning methods, and more importantly, those methods to avoid.







## STABILISATION SYSTEMS (CINTEC)

Cintec's products and Stone Edge's repair techniques are recognised and approved by Heritage Authorities. The Cintec system offers almost limitless possibilities for strengthening, stabilising, anchoring and repairing masonry and other structural elements in buildings. Stone Edge has successfully used the Cintec system on several bridge restoration projects, where we were retained for our structural and masonry expertise.



## ROOFING REPAIR AND REPLACEMENT

Work to the roof of a historic building requires a different approach from conservation work to other parts of its fabric. Inevitably, more of the structure has to be replaced than when working on the walls of the building. When appropriate we repair but, when it is necessary to replace, we respect the original design and detailing. Stone Edge is able to undertake the repair or replacement of heritage roofs of all types and complexities.



## ARCHITECTURAL LEAD WORK

We are frequently asked to complete the architectural lead work on our restoration and conservation projects. The scope of this work is all-encompassing, ranging from simple abutment flashings to rainwater heads, from downpipes and water cisterns to roof embellishments and even statuary decorative elements.



## CONSERVATION OF DECORATIVE METALWORK AND BRONZE WORK

Cleaning and conservation of architectural metalwork and bronze is a specialist trade and one that we often take on as part of the principal contract package. In today's atmospheric conditions, bronze architectural features soon become discoloured, requiring regular inspection and waxing. Stone Edge enjoys a close working relationship with one of the North West's leading bronzing experts and, consequently, we are happy to include this trade within our scope of services.

## DECORATIVE FIBROUS PLASTER

Plasterwork restoration in historic listed buildings is specialist work, which Stone Edge carries out on many of its projects, overseeing restorative works to both Grade I and Grade II listed buildings throughout the UK. The company enjoys a close working relationship with leading fibrous plaster building restoration experts from a wide variety of conservation organisations.

## BRICK MATCHING SERVICE

A particular speciality is sourcing, matching and fixing brickwork and pointing to exactly match those of the existing structure. Stone Edge conducts exhaustive searches to ensure the correct clay, sand and stone are used in both re-build and restoration projects. There is also an extensive brick and stone library where clients can cross reference samples they have retrieved from their building or structure.

## JOINERY REPAIRS

Timber-framing is sometimes dismissed as a liability but can prove remarkably durable, as shown by the survival of many centuries-old examples. When problems occur they are frequently down to poor maintenance, or unsuitable alterations, and fall into two main categories:

- Decay from beetle or fungal attack due to dampness, for example when protective render is removed, particularly from south-west facing walls, or a cementitious rather than lime-based render is applied.
- Distortion from overloading or the removal of frame members such as studs, for example.

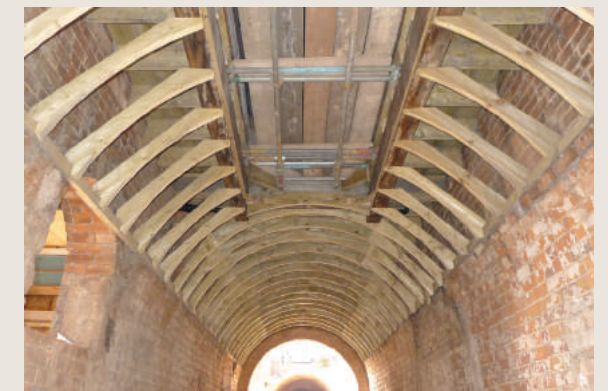
When problems occur, Stone Edge offers repairs to the timbers based around the sound conservation philosophy of maximum retention of the original and minimal intervention.

## ROPED ACCESS

Roped access is a quick and safe method of gaining access high up on historical buildings that are otherwise inaccessible. Easy set up means a rapid response to emergency building restoration and conservation work. An added benefit is that the building can remain open and is not obscured by costly scaffolding. All roped access work is carried out using ropes and soft tape slings, eliminating the possibility of any damage to the building's decorative features. Stone Edge's Industrial Rope Access Trade Association (IRATA) qualified staff consists of time served stonemasons and professional surveyors.

## SURVEYS AND DILAPIDATION REPORTS

We offer a free initial consultation to architects, engineers and building surveyors to help with the identification of causes of failure and the development of repair strategies.







## THE PIECE HALL, HALIFAX

The Grade I listed Piece Hall was originally built to support the trading of pieces of cloth and has been a focal point for Halifax's commercial, civic and cultural life since 1779.

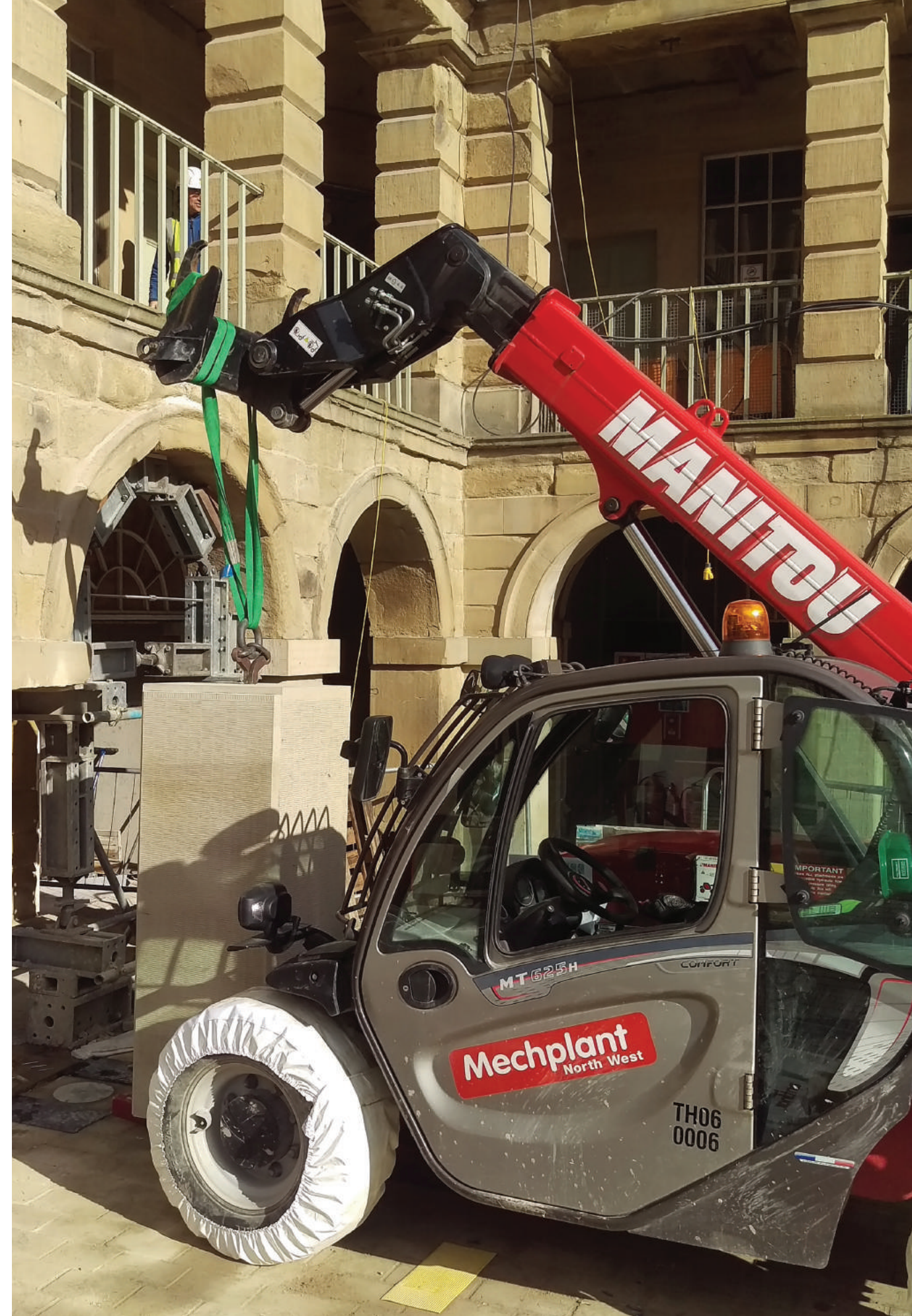
Stone Edge was engaged as the heritage masonry contractor for the Piece Hall Conservation and Transformation Project. Repairs needed to be meticulously carried out and of the highest standards of workmanship. We used our knowledge and expertise, working with the architects, to confirm the most appropriate type of repair in every instance. Between November 2014 and July 2017, over 1,000 individual stone repairs were carefully completed.

Every replacement stone was individually hand-tooled, using the same techniques and fire-sharpened chisels as were employed by the 18th century stone masons. This ensured the new had a uniformity and harmony with the old. Traditional lime mortars resulted in the best match and final finish.

Time-worn stones were restored using indenting techniques. The old stone was removed and stainless-steel pins introduced into the sound stone remaining. New stone from the quarry was prepared to the required size and profile, using hand tools and mechanical grinders, with holes for the pins. Lime mortar was used to bond the stone together and point the cuts in.

The replacement of two large columns, one of the biggest challenges of the project, required extensive research and planning. Stone Edge developed a bespoke grab, enabling the column to be picked up from a horizontal position on the ground, rotated through 90 degrees to vertical, driven into position and then placed very gently on its base. It was held in position by the grab, while the capping was replaced on top.

This was one of the most significant and high-profile heritage projects ever to have been undertaken in the UK and Stone Edge is proud to have played a part.







## BRODSWORTH HALL, DONCASTER

Grade I listed Brodsworth Hall was built in the 1860s as an up-to-date new residence for the Thellusson family. It remained largely unchanged until it came into the hands of English Heritage in 1990. The opportunity was taken to conserve the imposing hall in its 'as found' state. It is now recognised as one of the most complete surviving examples of a Victorian country house in England.

Stone Edge was engaged by English Heritage in January 2017, to carry out an overhaul of the mechanical and electrical infrastructure services, which included replacing the existing heating system. This work required careful consideration of the containment routes for the M&E.

Large sash windows were taken out to assess their condition, with existing glazing recorded, labelled and removed where necessary to allow repairs to be carried out. Once all necessary repairs were completed, the reinstalled windows were decorated internally and externally.

On the roof, leadwork was replaced on flat-roof areas and repairs were made to the roof lanterns.

A particularly interesting aspect of the project was the repair of the building's unique timber roller shutters on the ground floor windows. These had remained closed for years as they were difficult to operate and many were broken. Clever repairs and alterations were made to the mechanism to allow their easy operation by the English Heritage staff. At last, they could be opened safely and light was allowed back in to grand rooms that had spent years in darkness.

This gentle conservation of the building allows today's visitors to appreciate the way of life of those who lived and worked at Brodsworth.





## THE TOLL HOUSE, STRATFORD-UPON-AVON

Clopton Bridge in Stratford-upon-Avon is a Grade I listed medieval masonry bridge with 14 pointed arches, spanning the Avon at the place where the river was forded in Saxon times. In 1814, Thomas Keen built the ten-sided toll house from local Warwickshire sandstone. Surviving records show that the building contained 'oak boards, 4 grates, a meat safe and a deal cupboard with 5 shelves'. The toll charges ranged from one shilling and sixpence for a coach driven by six horses, to a penny for a horse and rider. Sadly, Mr Keen's toll business was not a success. In 1839, the charging of tolls came to an end.

We first visited the Toll House over 175 years later. The Grade I listed building, with an attractive crenelated roofline and gothic windows, had fallen into serious disrepair. Its restoration was the first major project to be undertaken by the Stratford Historic Buildings Trust who, supported by significant grant funding, employed Stone Edge to carry out the works.

The exciting project to bring the building back into use involved work to the exterior and the interior. The scheme preserved the original historic fabric

and introduced new elements which would give the building a modern-day function.

Flaking stonework on the external elevations was gently and conservatively descaled, 318 stone replacements were carried out and the building was repointed with lime mortar. The roof was completely renewed, with an intricate ten-sided, pitched roof including a central rooflight. The building's original porch, with its front door onto the bridge, was taken down stone by stone and rebuilt, including the challenge of positioning a 520kg arch stone over the door.

Internally, a new mezzanine level was installed, accessed by an elegant curved glass staircase. This created an office and exhibition area. An unsightly porch on the lower-ground floor was removed and replaced with a new two-storey extension, double the original footprint, which now accommodates the M&E, WC and entrance lobby.

This was a complex project, with multiple trades in a confined space – next to a busy road and a water course. This type of work is relished by Stone Edge and we are particularly proud of this example.







## THE ROYAL ACADEMY OF MUSIC, LONDON

The Royal Academy of Music is a world-renowned institution and Britain's oldest conservatoire. Since 1911, the Academy has been based in its striking Edwardian home, designed by Sir Ernest George, in the heart of central London. As well as a centre of excellence for the training of the most talented musicians, the building houses many treasures in its museum, and a busy 450 seat theatre.

Stone Edge was appointed by the Royal Academy in 2017 to remove the existing hard landscaping and steps in front of the main façade. These were to be replaced by a newly constructed pedestrian and vehicular access ramp, allowing level access to the main entrance of the building. It was crucial that any disruption was kept to a minimum and we organised our works carefully, to ensure that the Academy's day-to-day activities were not affected.

The access ramp was built using Jablite blocks in a stainless-steel structure, finished with a concrete cover slab, then backfilled with concrete. Once complete, 400 square metres of York stone sett paving was laid to the entire frontage of the building.

Traditional stone was used, sympathetic to the original façade, to reflect the elegance of the building. The existing steps up to the main building and to the front of the museum were removed and replaced with new steps in York stone. A retaining balustrade wall was built in Portland stone along the access ramp creating a stunning finish to the frontage.

A pair of brass lion urns, an original feature of the building, were reinstated and mounted on stone plinths at the front entrance, finishing off the scheme beautifully.



## HEALTH AND SAFETY, ENVIRONMENT AND QUALITY MANAGEMENT

Health, safety and the environmental impact of our activities are very important to Stone Edge. Our management processes ensure that we operate as a responsible contractor and that no operative, staff, member of the public or the environment suffers from the product or by-product of our works.

Stone Edge is an OHAS 18001 accredited company with fully audited H&S management systems. This is supported by the company's policy towards promotion. Our succession planning is linked to appropriate training and development needs, affording all Stone Edge staff the opportunity to continually develop.

The company operates a fully audited Quality Management System ISO 9001, and ISO 14001 Environmental Management System. Consequently, we are fully committed to maintaining and developing our systems in order to establish a quality environment on all of our projects.

In addition to the accreditations, Stone Edge managers and site staff hold the following qualifications:

- Scaffold Inspection (CISRS)
- CSCS Heritage Cards
- IOSH Managing Safely
- First Aid At Work
- Understanding CDM 2015
- Historic England Building Conservation Masterclasses
- Professional Development Diploma in Historic Building Conservation & Repair
- The Use of Stone in Building (Stone Federation of Great Britain)
- The Safe Use of Abrasive Wheels
- Asbestos Awareness
- Supervising & Managing Specialist Construction Work
- ASTA Powerproject
- Microsoft Project Advanced Level 3
- IPAF Powered Access Certification
- PASMA Mobile Scaffold Erection (to comply with Work at Height Regulations 2005)
- SMSTS Five Day Training

