



# Asset Engineering

## Services for Historic Structures

Safety	Conservation	Refurbishment	Asset Management	Maintenance Optimisation	
Materials	Durability	Quality	Assessment	Repair	Cathodic Protection

### Assets

- Listed buildings
- Scheduled monuments
- World heritage sites
- Ecclesiastical buildings
- Façades
- Historic floors
- Statuary
- Bridges
- Tunnels
- Masonry arches
- Earth structures

### Materials

- Stone
- Brick
- Terracotta
- Tiles
- Lime mortars
- Stucco
- Adobe, cob & pise
- Historic concrete
- Metals
- Timber
- Paints
- Bituminous mixtures

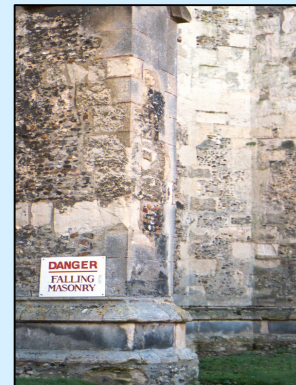
Halcrow strive to assist Clients in preserving the value and availability of their historic buildings and infrastructure, conserving them for the future and ensuring optimal asset management. Halcrow provide a comprehensive range of services for historic buildings and other cultural heritage, including:

- **Structural & Condition Survey** – visual inspection by experienced engineers and historic materials specialists. Including surveys using rope access techniques.



- **Non-Destructive Testing** – to investigate the nature of the structure and condition without intruding into the built fabric; including GPR and Thermography.
- **Defect Assessment** – investigation of specific defects arising in service, with on-site testing or laboratory analysis if necessary.
- **Identification and Selection of Conservation Repair Options** – identifying options based on the established causes of deterioration, effectiveness of available methods and minimisation of disruption to built fabric and operations.
- **Materials Advice** – expert advice on a wide range of traditional and modern materials. Sourcing of an appropriate match for conservation and repair.

- **Repair Design, Specification & Implementation** – based on detailed knowledge of sympathetic repair materials and preservation techniques. Including advanced techniques such as cathodic protection or strengthening. Checking work against the design and specification.
- **Monitoring** – on-going visual or instrumented monitoring of deterioration or repair behaviour to provide detailed information and early warnings on performance.
- **Conservation Management Plans** – considering cultural heritage risks to balance conflicting requirements for redevelopment and preservation.
- **Historical Research** – desk studies including archival research of historic and archaeological records.
- **Sustainable Construction** – advice regarding sustainable construction using traditional techniques and low carbon options.



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