

Asset Engineering

Building Stone Services

Safety	Remaining Life	Whole Life Cost	Asset Management	Maintenance Optimisation	
Materials	Durability	Quality	Assessment	Repair	Cathodic Protection

Assets

Masonry
Cladding
Façades
Stone floors
Slate & stone roofing
External paving
Hard landscaping
Historic structures

Materials

Natural stone
Roofing slate
Stone faced units
Cast stone
Mortars
Grouts
Bedding screeds
Fixings
Sealants
Surface treatments

Halcrow has wide experience of assisting Clients in achieving excellence in stone construction, including:-

- **Design Stage** – review of specifications at tender and pre-contract stages. Advice on materials suitability and durability.
- **Quarry & Production Works Appraisal** – to ensure sufficient materials with an acceptable range of colour, texture, strength & durability.



- **Testing** – specification of test regimes, supervision of testing and interpretation of results. Including assessment of slip resistance and potential for staining and discoloration.
- **Fabrication & Installation** – Inspection of works on-site, checking and testing of workmanship. Advice on resolution of site problems.
- **Structural & Condition Survey of Existing Structures** – visual inspection by stone specialists to prepare condition records and schedules of defects. Including surveys using rope access techniques and dye testing.
- **Non-Destructive Testing** – to investigate the nature of the structure and stone condition without intruding into the built fabric; including GPR and Thermography.

- **Defect Assessment** – investigation of stone-related defects arising in service, with on-site sampling and testing or laboratory analysis if necessary, and clear objective reports, which explain the cause(s) and significance of defects.
- **Repair Options** – identifying and specifying repair and/or conservation options based on the established causes of deterioration, effectiveness of available methods and minimisation of disruption to built fabric and operations. Including advanced techniques such as cathodic protection or strengthening.
- **Maintenance Advice** – including preventative maintenance techniques such as surface treatment and impregnation. Advice regarding cleaning methods for both modern and historic structures.
- **Monitoring** – on-going visual or instrumented monitoring of deterioration to provide early warnings.
- **Sustainable Construction** – advice regarding sustainable construction using traditional techniques and low carbon options.



Contacts

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