

External masonry, brickwork and render condition surveys

H+R provide external envelope condition investigation services in response to a wide variety of project requirements. We have particular expertise in relation to risk management of projects and the conservation and protection of historically significant structures and materials.

+ Preliminary investigations

H+R Preliminary Investigations seek to identify the fundamental causes of defects in masonry structures. An assessment of the nature, extent and likely impact of apparent and latent defects on the condition and life-span of materials is also made. The information provided can allow the optimum refurbishment and repair strategies to be adopted at an early stage in the life of a project. This allows efficient management of project costs and timetables, reduces project risk and protects capital values. The Preliminary Report may also include general recommendations for appropriate and cost-effective remedial works to restore and protect masonry and maintain a weather-tight external envelope.

+ Detailed investigations

H+R can carry out focussed investigations to meet detailed project requirements. These can record the locations and quantities of damaged masonry elements and generate a detailed schedule of works if required.

+ Stonework

Specialist investigations of original masonry or composite stone elements can be carried out to identify any defects relevant to the planned refurbishment. Cost-effective cleaning or other remedial measures can then be recommended and specified to protect the building fabric and achieve desired aesthetic results.



+ Brickwork and pointing including structural issues

Considerable damage can be caused to masonry through the use of incorrect repair strategies, materials or techniques. Specialist investigations of original brickwork and mortars can be carried out to identify their composition and any defects relevant to planned refurbishment works. Cleaning and cost-effective remedial measures can then be recommended to achieve desired aesthetic end results and minimise problems such as efflorescence, spalling, damp and decay after refurbishment. Draft specifications for repairs can be provided, or more detailed schedules of remedial works, including general, contract and preliminary clauses. These works are often essential, in conjunction with other remedial measures, to control damp and decay.



+ Render

Lime based and cementitious external render, which need to be retained on refurbishment, can be assessed for composition, condition and estimated service life. The information and advice provided can allow decisions to be made in situations where the demands of development and conservation are in conflict. For example, in achieving the correct balance between the retention or replacement of original materials.



+ Masonry fixings and wall ties

Non-destructive techniques such as impulse radar are utilised to assess condition of dowels, cramps and other fixings in historic masonry. Cavity wall tie condition can also be investigated and reported, based on inspection of a representative sample. Independent confirmation of the condition of ferrous and non-ferrous materials can often prevent unnecessary remedial works, reducing costs and delay to refurbishment projects.



H+R provide information and guidance to project design and development teams as well as those with responsibility for the conservation of the historic built environment. H+R have advised clients on a wide variety of projects, from cottages and manor houses, to lighthouses and office blocks.

H+R have wide experience of gathering information under challenging conditions and co-ordinating our work with contractors and other consultants to provide timely and focussed advice.