ULSTER ARCHITECTURAL HERITAGE

HANDS-ON HERITAGE

NORTHERN IRELAND

04

HOW TO?

Maintain Historic Buildings

HANDS-ON HERITAGE

Maintenance of a historic building not only ensures the preservation of historic fabric but could save you money in the long-term. Building materials can degrade over time, or deteriorate due to exposure or human intervention.

Supported by The National Lottery Heritage Fund, the Hands-On Heritage Project NI is a project that combines traditional heritage engagement and outreach with the introduction of a range of new digital engagement technologies, better connecting people and communities with built heritage.

APP GUIDE TOOLKIT

This is one of ten Heritage: How To? Guides, covering a broad spectrum of ideas in relation to Northern Ireland's historic environment.

However, the most common cause of damage to a building is moisture and water penetration getting into the fabric of a building from roofs, rainwater goods, exterior walls and even ground water rise. When left unattended, these seemingly small issues can accumulate into larger, and often more costly problems, for example penetrating damp that can lead to rot.

TOP TIP: GET TO KNOW YOUR BUILDING!

A regular scheme for inspecting your building will help you check and address any problems early. By doing so you will also be able to identify any risk areas and put plans in place to repair fabric before any further damage occurs. Repair of historic fabric should always be the default option before considering the removal or replacement of any original features.

If your building is listed or within a conservation area, you will need to apply for consent before carrying out works that alter the character or appearance of your building. If you are unsure whether the works require consent you should contact the Planning Department in your Local Authority for further advice and guidance.

When carrying out works, checks and maintenance on your building, make sure to consider your safety, and the safety of those around you. If you are in doubt it is always good to gain the advice of an accredited and qualified professional.

Throughout our Heritage: How To? Guides we refer to heritage assets as buildings and monuments.

Thank you to David Bunting @ImagesNI for providing a selection of images for this guide.

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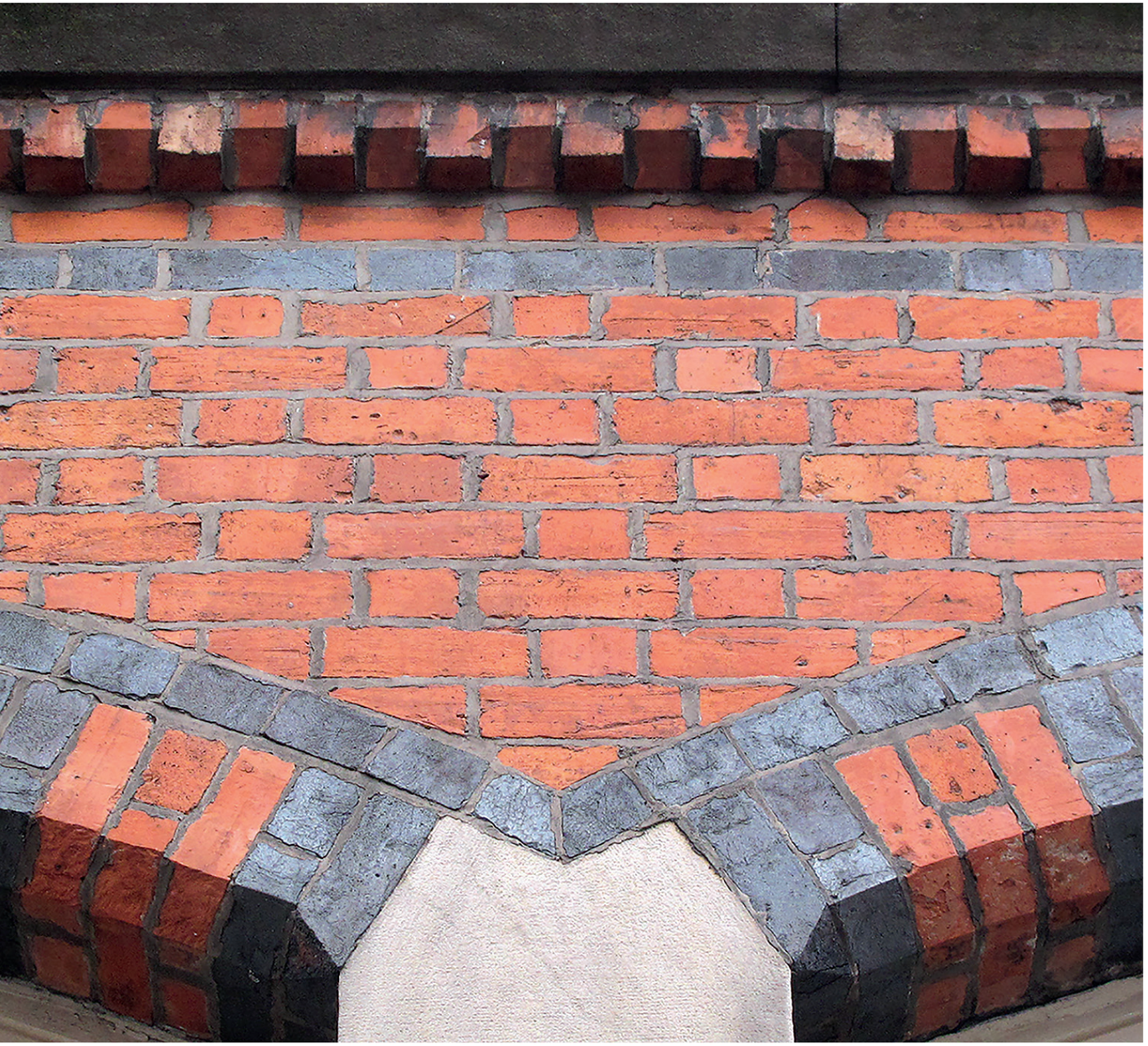


1 | Walls

Walls provide shelter from the elements but they also need protection and maintenance. Inappropriate repairs to brick and stone can cause serious damage. Seek professional advice before carrying out any repointing and always consult a structural engineer if you have concerns about the stability of a wall.

Bricks and stone rely on the integrity and flexibility of the mortar used to keep water out of a building. Missing mortar, failed or washed out pointing, cracked and open joints all allow water penetration, which is particularly damaging when frost occurs. Look out for signs of delamination and degradation of stone and brick. Cleaning and repairs of stone or brickwork should always be carried out under guidance from a qualified professional–harsh chemical cleaners, abrasive cleaning methods and inappropriate repairs can do long-term or permanent damage.



Render is used to provide a protective finish to a wall and was traditionally lime based. This allowed the wall behind to breathe as well as being flexible enough to accommodate movement in the building materials. Modern cement renders are harder and can trap moisture behind, forcing it into the building fabric and should be avoided. Hollow sounding areas indicate that the render has separated from the wall behind and needs to be repaired or replaced.

Trees growing close to walls or sometimes from the base of the wall should be carefully cut down as close to the base as possible and the stump treated to prevent further growth. Roots should be left in place, as removal will often cause considerable damage. Although unlikely, the wall should be monitored in case of any long-term local subsidence cracking.

Check for defects such as:


Signs of movement including cracks


Areas of staining


Material degradation


Damp patches


Mould, algae and vegetation growth


Cracks or erosion


Open joints, missing or crumbling pointing


Render detachment

Roofs, rainwater goods and chimneys
2 | Roofs

The roof is the most exposed area of a building and even minor leaks can lead to severe problems if left unattended. It is therefore essential that regular maintenance is carried out to ensure the building remains wind and watertight. It is recommended that repairs and inspections be carried out by a trained professional. Replace any missing or damaged slates, and repair any damage to lead flashings at junctions and valleys, and where the roof meets any chimneys, dormers or walls.

Original slates should be carefully salvaged and set aside for later reinstatement. Replacement slates should be introduced to less noticeable areas of the roof, with originals being set aside for use in the more prominent areas. New slates should match the original building material as closely as possible in type, colour, texture, size and thickness. If nails are noticeably corroded, they should be removed and good quality stainless steel nails introduced.

Only where roofing materials have come to the natural end of their life or repairs are no longer cost effective should the full re-slating of a roof be considered. A rough guide is that where one fifth or more of the slates have to be renewed, re-roofing should be considered.

2.1 | Rainwater goods

Rainwater goods (gutters, downpipes, valleys and flashings) are an essential way of removing excess water from the roof area and preventing water penetration. It is vital that they are kept in good order with annual inspections from ground level, especially during periods of heavy rainfall to most easily identify overflow issues and leaks.

Gutters should be kept clear to prevent water over-spill onto the face of the building, and checks should be made as to where your gutters and downpipes are draining to. Keep drains clear to direct water away from the base of the building, and clear of the foundations. External ground level can build up over time. Hard landscaped ground surfaces such as concrete or tarmac, adjacent to the building, may result in splash back and are better avoided where possible. Ground surfaces should be designed or sloped to direct water away from, not towards, the base of the building. Where trees are located near to a building it may be beneficial to fit drain covers and wire coverings to downpipes in order to prevent future blockages from leaves. Grass and other plant growth must also be removed regularly.

Cast iron rainwater goods can often be repaired. This avoids unnecessary removal of original features and replacement with inappropriate alternatives. Repair methods should always be explored before considering the removal of any original features. Cast iron is readily available in a range of traditional sizes and profiles and can easily be fitted by skilled workmen, if replacement is the only option. Extruded aluminum may also be accepted if replacement is the only option, however, material changes should be approved by your local planning department or DfC:HED.

Check for defects such as:

Areas of staining

Material degradation

Damp patches

Cracks or erosion

Vegetation

Render detachment



2.2 | Chimneys

Chimneys are often overlooked as they are harder to inspect. A regular programme of inspection should be undertaken, even when the chimney has become redundant. Water will enter an open chimney from above and if it is only in intermittent use, the flue will become damp. Putting chimney cowls in place will help reduce chances of water ingress, while allowing the chimney to remain in use. Plant growth, weather and impact damage can increase the likelihood of deterioration and even collapse. Plant growth on a chimneystack usually means that mortar joints are failing and further inspection should be made to prevent failure of the structure, which may result in more costly repairs.

Capped, permanently closed chimneys and closed up, unvented fireplaces can trap moisture within the structure, inviting instability and damp patches to the interior of a building. Opening closed chimneys, and fitting vented caps will prevent water entering from above, and ventilate the chimney stack. Closed fireplaces should be fitted with vented grilles.

Check for defects such as:


Material degradation


Missing or damaged roof covering


Mould, algae and vegetation growth


Cracks in the chimney and surrounding render


Missing/damaged flashings


Movement

3 | Windows and doors

Windows provide balance and unity to the façade. The removal of original period features and replacement with modern alternatives can have a detrimental effect on the appearance of the building. Often original timber is of higher quality than modern timber so traditional windows can be repaired and exceed the lifespan of modern alternatives. General maintenance should include the regular inspection of external paintwork, cills, joints and timber. Usually, problems occur where damage allows water to gather and penetrate the wood. Areas of soft timber indicate decay and need for repair. Windows and doors facing the prevailing wind are likely to weather more quickly.

To prevent timber decay, regular repainting should be carried out. Flaking paint should be removed before applying a new coat of paint. This will prevent a build up of paint around the window panes and provide a higher quality finish. As any professional painter will tell you, good preparation is the secret of a good job. Be aware of lead paint which may be harmful when removing from surfaces. Any cracks or open joints should be filled to protect the timber from water and stop decay. Where necessary, it may be possible to replace a section of rotten wood with new wood, this is called ‘splicing’. Sash cords and weights should also be inspected. Any areas of missing putty should be replaced with an appropriate putty and profile.

Old glass, including crown or cylinder types, differ significantly from modern forms. Old glass is often valued for its colour and texture; and can make a surprisingly important contribution to the character of windows and should be retained.

Original doors are important features of historic buildings. Removal and replacement with mass produced substitutes significantly alters the character of the property. Wherever possible, original door furniture such as knockers and letterboxes should be retained, restored and reinstated

Check for defects such as:

Areas of wetting

Damp patches

Flaking and peeling paint

Missing putty or slips

Open joints

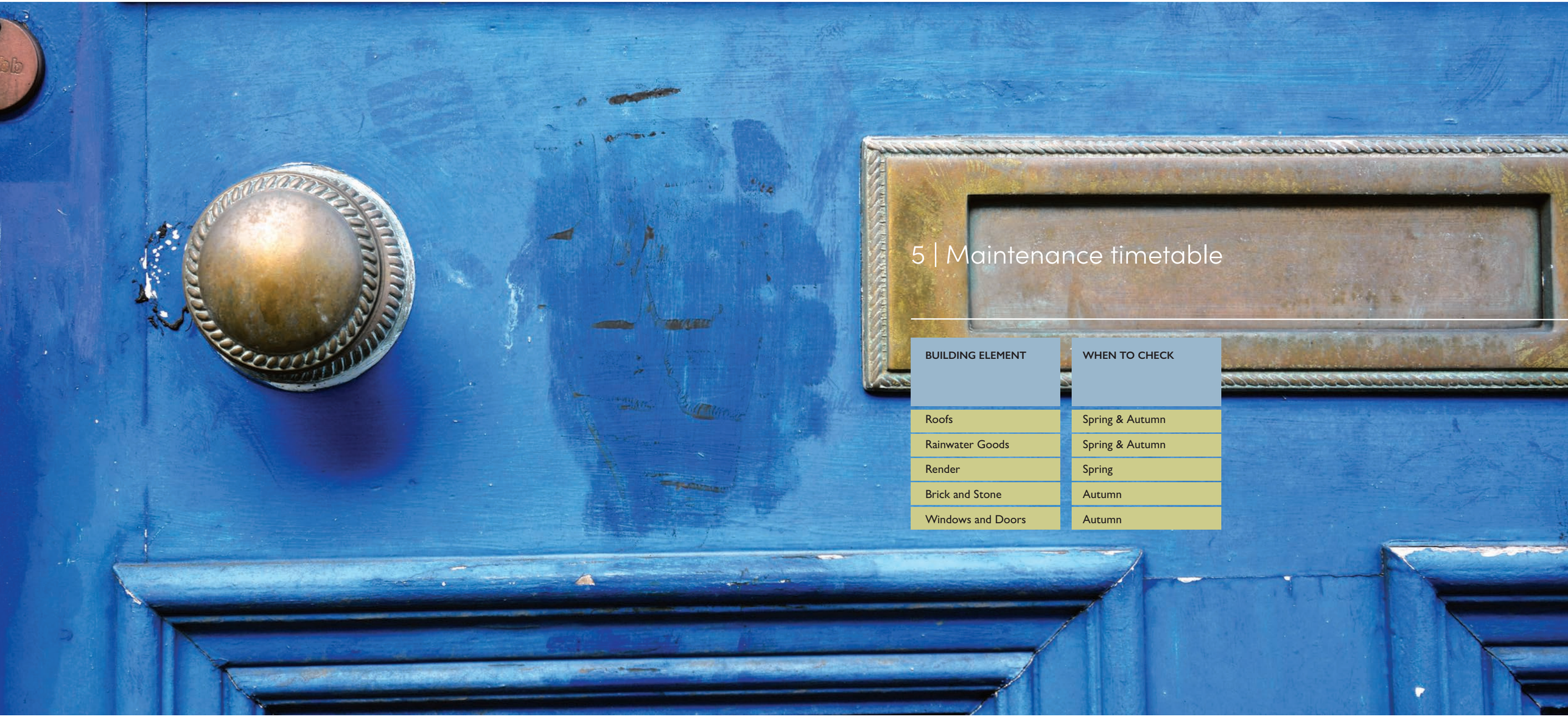
Broken/damaged lintels, cills and cords

Wet rot or soft wood



4 | Overview: do's and don'ts

	DO	DON'T
GENERAL	Carry out regular inspections and maintenance. Seek advice from suitable qualified professionals. Quickly identify problems and arrange repairs. Repair rather than restore or replace. Respect the building's character and history and ensure the new work is sympathetic. Remedy previous bad repairs. Use a reputable workman.	Allow serious defects to remain. Repair using unsympathetic materials. Use unsuitable mass-produced architectural elements. Waste re-usable materials. Remove or demolish original elements. Carry out any work without the required consents. Lay a hard surface or tarmac close to your building as it will prevent rainwater from soaking away.
WALLS	Use lime mortar for all pointing and repair works. Use traditional lime render and washes on undressed stonework. Seek professional help to remove staining.	Clad walls in stone or artificial materials. Strip render from stonework or brickwork and leave it exposed to the elements. Use cement-based mortars. Use aggressive cleaning materials.
ROOFS AND RAINWATER GOODS	Check for defects. Re-use original slates. Match replacement slates. Use lime mortar. Use cast iron or extruded aluminium for replacement rainwater goods.	Use inappropriate slating methods, styles or materials. Use poor quality slates. Use bituminous treatments. Remove original features. Use cement mortar. Fit aerials and satellite dishes.
WINDOWS AND DOORS	Check for defects Redecorate regularly. Replace missing putty and slips. Fill cracks and open joints.	Replace windows or doors in non-original patterns or materials. Damage original glass or ironmongery. Build up paint layers. Use silicon sealants. Strip or sandblast doors.



5 | Maintenance timetable

BUILDING ELEMENT	WHEN TO CHECK
Roofs	Spring & Autumn
Rainwater Goods	Spring & Autumn
Render	Spring
Brick and Stone	Autumn
Windows and Doors	Autumn

For more information on How To? **Maintain Historic Buildings** visit the Hands-On Heritage website www.handsonheritage-ni.org.uk where you can access related Heritage: How To? Guides.

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Promotion – Protection – Conservation – **Regeneration**

Ulster Architectural Heritage (UAH) works to promote the historic built environment, its protection, conservation and heritage-led regeneration, through advice and support, advocacy, publications, events, and projects delivery. Since its formation in 1967, the UAH has established itself as the lead independent voice for the historic built environment across the nine counties of Ulster, a fearless campaigner for historic buildings, a generous resource of information on local architecture and a source of advice on conservation.

UAH has had much success in influencing public opinion in favour of conservation of our historic built environment. UAH carries out reports, assessments, monitoring of the historic built environment and makes representations relating to planning and policy. UAH educates, engages and informs on built heritage through a wide range of events, publications and projects.

Made possible with Heritage Fund

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