Maintenance Matters

Maintenance of Historic Buildings:

Top Tips For Maintaining Your Heritage Buildings

Derry City & Strabane
District Council

Comhairle
Chathair Dhoire &
Cheantar an tSratha Báin

Derry Cittie & Stràbane
Destrick Cooncil

Regular monitoring and minor maintenance is the most effective way to protect historic buildings from deterioration.
The most common cause of damage is due to water getting into the fabric of the building, from its roof, rainwater goods or exterior walls.
If such issues are left unattended, they can cause serious problems within a building due to penetrating damp, leading eventually to rot.

Get to know your building. A regular schedule of inspection of a property can help to identify the risk areas and put plans in place for repairs before 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 in a conservation area, you may need to apply for consent before carrying out any works which alter the character and appearance. Please contact Derry City & Strabane District Council or the Department for Communities, Historic Environment Division for advice.

www.derrystrabane.com/regeneration
www.communities-ni.gov.uk/historic-environment

Ensure that you consider your safety, and the safety of others, when carrying out checks and maintenance on your building. Where works are required it is always good to consider gaining the advice of a qualified professional.

Rainwater Goods & Drainage:

Rainwater goods (gutters, downpipes, valleys and flashing) remove water from the roof area and prevent water penetration. All should be kept clear to prevent water over-spill into the walls and onto the face of the building. It is vital that they are kept in good order with annual inspections, including during periods of rainfall to most easily identify overflow issues or leaks.

Equally important is to check 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.

Hard landscaped ground surfaces such as concrete or tarmac, adjacent to the building, may result in splash back and are better avoided where possible.

Make sure to check that gutters and downpipes are securely fixed to the building. Damp patches, staining or areas of algae or vegetation on the walls may indicate failure of roof drainage.

If 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.

Cast iron rainwater goods can often be repaired. This avoids unnecessary removal of original features and replacement with inappropriate alternatives.

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.

Roof:

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 are carried out by a skilled tradesperson.

Replace any missing slates, and repair any damage to lead flashings at junctions and valleys, and where the roof meets any chimneys, dormers or walls.

If roof repair is required, 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.

Chimneys are often overlooked as they are harder to inspect. Plant growth on a chimneystack usually means that mortar joints are failing. Water damage to chimneys can increase the likelihood of deterioration and even collapse.

Walls:

Walls not only provide shelter from the elements but also hold the building up. If they are kept dry it will not only ensure your house is comfortable to live in, it will help to minimise the need for maintenance.

Bricks and stone rely on the integrity and flexibility of the masonry pointing or mortar used to keep water out of a building. Walls can easily suffer long term damage due to inappropriate repairs or harsh cleaning.

A render is often used to provide a protective finish to a wall and was traditionally lime based. Use of lime allows 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. Use of cement in render and repointing repairs should be avoided.

Check for defects such as:

- Degradation & Delamination
- Signs of movement
- Areas of staining
- Missing mortar
- Failed or washed out pointing
- Damp patches
- Mould and algae growth
- Cracks, open joints or erosion
- Close trees

Seek professional advice before undertaking any work and always consult a structural engineer if you have concerns about the stability of a wall.

Windows and Doors:

Timber sash and case windows are typically found on historic buildings. Timber windows have proven to be very durable if maintained. Often original timber is of higher quality than modern timber, so traditional windows can be repaired and exceed the lifespan of modern alternatives.

This approach to maintenance and repair of doors and windows is not only the best approach for conservation of historic character, it will in most cases be more cost effective than like for like replacement.

Check for defects such as:

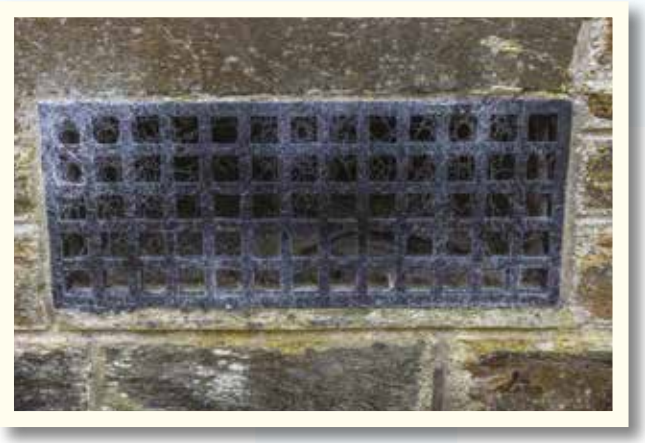
- Areas of wetting
- Damp patches
- Flaking and peeling paint
- Missing putty or slips
- Open joints
- Broken/damaged cords
- Wet rot or soft wood

Ventilation:

Ventilation is essential to the movement of moisture out of old buildings. Older buildings have generally been designed to be vapour open that is built with ventilation and air movement in mind. This is important when planning maintenance and repairs.

Materials including lime, stone, brick and timber, in their characteristics and the way they are put together allow for the movement of air and water vapour through and around the building fabric.

A common feature of historic buildings are air vents below floorboard level in a suspended ground floor. These vents allow moisture beneath floors to escape, but not if they're clogged, painted over or the outside ground level has been raised to cover them.



Interventions, such as the introduction of impermeable coverings or coatings may hinder air and water movement through lime, stone, brick and timber. Resulting damp, coupled with poor ventilation e.g. blocked up vents, can result in the development of mould, rot and fungus particularly in timber beams and details. For example, dry rot.

If the source of the water is removed and the fresh air ventilation improved the dry rot will die. Dry rot may be treated. It is recommended that if you have a dry rot issue you consult a professional.

Vernacular buildings:

Thatch:

Thatch represents one of the key traditional architectural features associated internationally with all of Ireland. However, today numbers have significantly decreased with less than 150 recorded thatch roofed buildings in Northern Ireland.

Thatch roofs have traditionally been constructed in materials local to the building's setting, and often locally grown. Materials such as reed, straw and flax were, and remain, common, although now often imported. It is accepted that materials for thatching have a much shorter lifespan than slate or metal, and rot naturally over time. Thatch may also be susceptible to rodent, bird or insect inhabitation or infestation.

Overall, thatch must be recognised as higher maintenance than more common slate roofs. Look out for greening and vegetation, and thinning on thatch roofs. Look out for patches of damp on internal roof coverings, particularly around chimneys and ridges.

Thatch Under Tin:

'Thatch under tin' (actually galvanized corrugated steel) is a hybrid roof type evolved out of need for a quick, affordable solution to failing thatch, and has preserved many examples of original roof construction that would have otherwise been lost. Commonly found on modest vernacular buildings in Northern Ireland, what may appear to be a simple corrugated iron roof may often be found to conceal a much earlier thatch roof underneath.

While the resilience of a thatch may be extended due to the protection that a tin covering affords. However in some cases the addition of tin on top of a thatch may cause it to be poorly ventilated and lead the natural materials to 'sweat'.

With thatch under tin, make sure to check the integrity of the corrugated iron, look out for rusted edges or holes in the roof fabric. Repair or replace sections where necessary. Pay particular attention to junctions between the roof and walls and the roof and chimney. Corrugated roofs are often painted, and this may help with material longevity.

Look out for patches of damp or decay on internal roof coverings, as this may be evidence of moisture caught between internal and external roof coverings.

Impact of Climate Change on Historic Buildings:

Our climate, and therefore our weather is changing. Climate change may to some buildings mean greater contextual threats from flooding, erosion, and sea level rise. However, the biggest, or at least most widespread, impact of climate change on historic buildings is a general increase in intensity and extreme conditions of storms, wind, rain, and temperatures, which directly affects the historic fabric.

This will increase existing responsibility for owners with regard to management & monitoring and maintenance & repair of older buildings, with particular attention to performance of the building materials & detailing, over and above that which we already consider basic maintenance.

Where maintenance and repair are evidenced to be carried out but are not working, or withstanding increasing challenges from weather, adaptation or mitigation against risk may be the next consideration for a heritage asset.

Adaptation may, for example include increasing the size and quantity of rainwater goods to deal with increased rainfall.

As with any works to an historic building, such adaptation should be sympathetic and appropriate, and considerate of the buildings wellbeing and historic character. Such changes to a listed building will require planning permission.

Maintenance Timetable

Building Element	*When to Check*
Roofs	Spring & Autumn
Rainwater Goods	Spring & Autumn
Render	Spring
Brick and Stone	Autumn
Windows and Doors	Autumn

	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 buildings character and history and ensure the new work is sympathetic and appropriate. - 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 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 other 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 cast 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.
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.

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DfC Department for Communities www.communities-ni.gov.uk

With thanks to the Society for the Protection of Ancient Buildings and Ulster Architectural Heritage.

www.derrystrabane.com/regeneration
www.spab.org.uk
email: Regeneration@derrystrabane.com

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