

Maintaining and repairing

SASH WINDOWS



A guide for owners of historic buildings

Why are windows important?

Windows are one of the most important elements of a building. Their style and proportion greatly influence the character of a building and its surroundings.

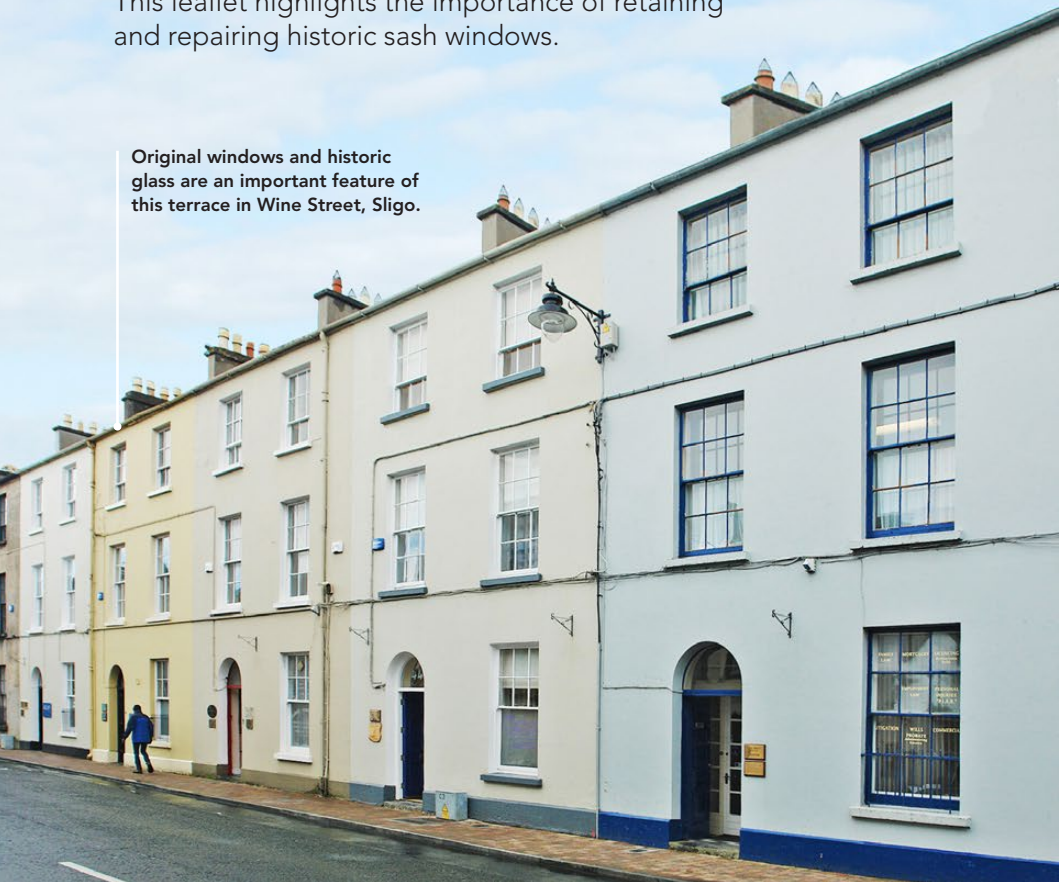
They also provide an important link to the origins and story of a building.

Well-maintained original windows show the character of a building to its best advantage.

Nothing will change the appearance of a historic building or streetscape more than the removal of original windows and the insertion of inappropriate windows.

This leaflet highlights the importance of retaining and repairing historic sash windows.

Original windows and historic glass are an important feature of this terrace in Wine Street, Sligo.



General principles

Timber sash windows require regular maintenance.

Regular inspections can draw attention to any potential problems such as rot or failure of parts of the frame. It can prevent the need for complete replacement, which can be expensive.

Repair before replacement

Repair should always be the first option considered. This is the best way of conserving the character and fabric of a historic building.

Use appropriate methods of repair

Using original techniques helps to ensure that the repaired window retains its traditional characteristics in terms of performance and design.

Use appropriate materials

Putting a top-hung uPVC window on an old building will detract from its character.

The use of uPVC in historic buildings should be avoided.

Beware of 'off-the-shelf' sash windows

In general terms, the modern 'off-the-shelf' sash windows available from large manufacturers are not the same as historic hand-crafted windows, in terms of their section and profile.

They do not possess the grace and elegance of a historic window.

This is due to the difference in construction methods and materials, and the lack of attention to traditional detailing.

These modern sash windows often detract from the unique character of a historic building.

If repair is not possible, replacement should be 'like for like'

It is uncommon for historic sash windows to be beyond repair. However, when this is the case, replacement on a like-for-like basis should be the next option, i.e. an exact copy of the existing window hand made by a specialist joiner.



A modern 'off-the-shelf' sash window (left) does not replicate the grace and elegance of the original 18th Century window (right)



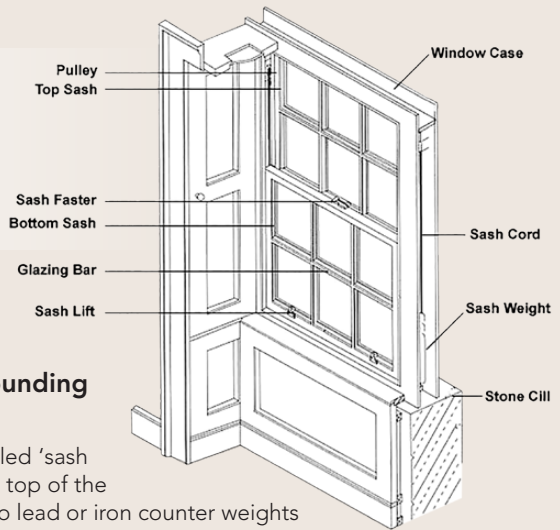
An inappropriate top-hung uPVC window

How do sliding sash windows work?

Sliding sash windows consist of two glazed timber frames, the 'sashes', which slide up and down in channels in the surrounding 'case'.

Sashes are usually hung on ropes called 'sash cords', which pass over pulleys in the top of the case. The sash cords are connected to lead or iron counter weights hidden within the surrounding case.

These weights counter-balance the heavy sashes, making it easier to open and close them, whilst also enabling the sashes to safely stay open in any position.



Why repair historic windows?

Historically windows were made by skilled joiners from high-quality seasoned timber.

With regular maintenance, these windows will last for generations, much longer than the life expectancy of a standard uPVC window (which is c. 20 years).

Modern timber can rarely match the quality and durability of the slow-grown softwoods originally used to make these windows. It is therefore best to retain as much of the original timber as possible wherever repair is required.

While a window might seem to be beyond repair, an examination by a specialist joiner is always recommended, as most defects can be corrected.

Timber decay often affects only 5% of the window. The lower corners and bottom rail are the main problem areas and are easily repaired.

Other common problems, such as broken sash cords and re-hanging sash weights, are simply solved in the right hands.

Only if the windows need major repair and upgrading will the costs be similar to replacement with new sash windows. If the required repair work is minimal, the cost may be much less than the cost of a new window.



A window cill before repair works



The same window cill after repair

Common Problems

The following common problems can be easily solved by an experienced joiner:

Decay

Where paint breaks down, the timber parts are directly exposed to the weather and become vulnerable to decay. The window cill is the area most prone to decay and in the majority of cases it is straightforward to repair.

Where decay is localised it is possible to splice in new timber. Care should be taken to select compatible wood with similar characteristics to the original. Tackling it early will minimise the amount of material that needs to be replaced.

Failure to open

Windows may not open or close properly for a number of reasons:

- They may have become painted shut.
- The sash cords may be broken.
- The sides of the sashes or cases may be worn – this is caused by operating the window with only one side properly balanced.

Draughts and noise

Draughts and noise can be reduced by re-fixing loose stop and parting beads and by using a simple system of draught strips between the sash and frame.



New timber has been used to replace rotten sections of this window sash.

Loss or breaking of the sash cord

Sash cords may wear out over time. If the cords snap, the attached weights will fall to the bottom of the case, making it difficult to open the window. Re-cording is best done before this happens.

Loss or deterioration of putty

Where paint fails on the sashes, the putty used to hold the glazing in place will become hard and crack. This can allow water to seep in and cause the timbers to decay.

The putty seal can occasionally be repaired, but when split or partially missing it should be replaced in its entirety and the window repainted.



A window cill showing signs of rot and requiring attention

Window maintenance

Regular maintenance will prolong the life of a sash window by many years.

Painting

Paintwork must be kept in good condition due to the effects of the weather on the outside and condensation on the inside.

Windows normally require external repainting every 3-5 years.

Existing paint can be an effective base for fresh coats, but it is important to ensure compatibility between that paint and any new coats.

All timber should be sound and the surface clean and dry before applying paint. The paint should completely cover the putty and should slightly overlap onto the glass (1-2mm) to seal the joint.

To avoid sealing the window shut, the joints where the sashes and the surrounding case meet must not be painted over.

Paint removal

Windows that have been painted shut can be fixed by carefully cutting through the paint using a craft knife and gently using a broad-based thin scraper blade to lever the sash and case apart.

Take care to avoid damage to timber, glass, putty and surrounding masonry.



Deteriorating paint leaves timber vulnerable to decay

Photo: Hugh Mac Conville

Cleaning

Regularly cleaning glass and timber surfaces will improve the appearance of sash windows and ensure that they function correctly.

Cleaning also presents an opportunity to inspect windows and spot any developing problems.

It is important to be aware of safety when cleaning. Keep both feet firmly on a solid surface at all times and never over-reach, especially at the upper levels of a building.



**Shimmering historic glass
on John Street, Sligo**
Photo: Hugh Mac Conville

Ironmongery

Surviving original ironmongery, such as cord clamps, sash lifts and sash fasteners, should be retained and reused wherever possible.

Broken or over-painted ironmongery can often be repaired.

Security

Timber blocks and/or special items of ironmongery (called sash stops) can be fitted to restrict opening beyond a required point.

Where windows have very low cills, internal barriers can also be fitted to help prevent accidents.

Historic glass

Historic glass is an often-overlooked element of traditional buildings, yet it contributes much to their character and appearance.

The imperfections in glass produced before the 1950s create an appealing 'shimmering' effect on the exterior by reflecting light at many angles in a way that modern glass does not.

The slight distortion of the view out of a window is one of the charms of historic glass.

When planning a window repair project, you should first consider the impact of the proposed works on any existing historic glass. Historic glass panes should be carefully extracted from a window and safely stored until the window is ready to be re-glazed.

Such glass should only be replaced if it is beyond repair. Salvaged glass may be used, and replica cylinder glass is also available.



**Historic glass reflects the
light beautifully at the
Methodist Hall, Sligo**
Photo: Hugh Mac Conville

Energy efficiency

Historic timber sash windows, if they are in good condition and appropriately upgraded, should be as weather-tight as new windows.

Heavy curtains and internal timber shutters will significantly help reduce heat loss.

Draught-stripping, which can be fitted cheaply and unobtrusively, will also reduce heat loss and improve noise insulation.

The installation of secondary glazing can also be effective in appropriate circumstances and acts in a similar way to double glazing.

This involves the fitting of a fully independent internal window on the room side of an external window.

Secondary glazing should only be used in appropriate circumstances where it does not affect the character of the windows and the room in which it is fitted.

The Planning Section should be consulted when this work is proposed on protected structures as other constraints may apply.

Double glazing - Replacing an original window with modern double-glazed windows can seem like an attractive option for home owners. However, a standard 'off-the-shelf' double-glazed sash window or a standard 'top-hung' window can significantly affect the character of a historic building.

Standard double-glazed windows are made with bulky sections of framing which are necessary to hold the glazing in place. The proportions of these windows are very different from those of historic windows, which are generally made with slim timber sections.

Two new double-glazing products have been developed in recent years: slim-profile and vacuum-sealed double-glazed panels. These products may be used where there is no historic glass on single-pane sash windows.



Successful unobtrusive secondary glazing on a Georgian building in Dublin



Inside a sash window at Governor's House, Sligo Gaol



Planning considerations

'6 over 6' sash windows
on a protected structure
in West Sligo.

It is the policy of Sligo County Council to require the retention and restoration of historic windows on protected structures and buildings in Architectural Conservation Areas (ACAs) as well as on historic buildings generally.

The removal of historic windows from protected structures or buildings within an ACA requires planning permission.

The carrying out of such work in the absence of planning permission could result in enforcement procedures, with the Planning Authority requiring the reinstatement of the original window design.

The installation of uPVC windows on a protected structure or within an ACA will not be permitted.

If you feel your historic windows need replacement or repair, whether or not your building is a protected structure or is within an ACA, please seek advice from the Planning Section of Sligo County Council.

Available grants

Each year, Sligo County Council, in conjunction with the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, administers the Built Heritage Investment Scheme and the Structures at Risk Fund for protected structures and buildings in ACAs. For more details, please consult www.sligococo.ie/heritage.

References and further reading

'Windows – A Guide to the Repair of historic windows'

Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs – Advice Series
(DAHRRGA) – Advice Series.



<http://www.ahrrga.gov.ie/app/uploads/2015/07/Windows-A-Guide-to-the-Repair-of-Historic-Windows-2007.pdf>

'The Legacy of Light: A History of Irish Windows'

Nessa Roche, Wordwell 1999.

'Irish Period Houses - A Conservation Guidance Manual'

Frank Keohane – Dublin Civic Trust, 2015.

'Energy Efficiency in Traditional Buildings'

DAHRRGA, 2010.



<http://www.ahrrga.gov.ie/app/uploads/2015/07/Energy-Efficiency-in-Traditional-Buildings-2010.pdf>

The text of this leaflet is based on the following document:

'Maintaining Sash and Case Windows'

INFORM – Information for Historic Building Owners, Historic Scotland, 2007



<https://www.historicenvironment.scot/archives-and-research/publications/publication/?publicationId=de744d4d-0610-48f4-af5e-a59500f93be8>



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Cover photo – Hugh Mac Conville

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A PDF version of this brochure is available to download from the Sligo County Council website at: <http://www.sligococo.ie/planning/Heritage/Architecture/>

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