

## The importance of windows

Windows are one of the most important elements of any building, and can help us read the history and development of the building; they are often referred to as the eyes of a building. However, they are often altered in their design, shape, style and material, without thinking of the impact on the history, character or appearance of the property, or its surroundings.

In a recent survey undertaken by English Heritage, the inappropriate replacement of windows, usually with Upvc has proven to be the largest element of detriment to Conservation Areas and historic buildings throughout the country, with much of the character and appearance of these special areas and buildings continually eroded through replacement, often even when it is not needed.



## Historical development of windows

The shape, design, style, materials and usage of windows has changed dramatically over the centuries. Prior to the C16th, glass was a highly expensive commodity, and was rarely used in any building. Whilst window glass has been available from the C13th, it wasn't until the C16th that glass started to become cheaper and more readily available. Initially, such windows were set in iron frames, to give some structural support to the window, and comprised of small sections of glass, laid in lead (leaded lights). Such windows were often in a horizontal format, being wider than they were high.



The C17th saw a dramatic change in the design of windows, especially in large houses - the use of the cruciform window, whilst still retaining leaded lights, was a much larger glazed window than had been used before, readily showing the wealth of the owner. With large, heavy mullions and transoms, the window changed from a horizontal to a vertical emphasis, often following similar lines of other elements on the building including doorways.

With the advent of better facilities and expertise in manufacturing glass during the C17th came the introduction of the sliding sash window. These were originally only sliding from the bottom, with the top as a fixed unit, and the box of the sash was often flush with the edge of the building. Again a change in the design after the Great Fire in 1667, to reduce fire risk, saw the sash box retained within the building, and windows were often recessed from the façade of the building.



As larger panes of glass (plate glass) became more affordable, so the design of the sash window reflected this change, with less lights per window – where a mid-C17th window may have had 24 panes, the C18th sash window reduced this to 12, and then to 8. Finally, during the C19th, sash windows tended to be largely one or two sheets of glass per slider.

The changes in the manufacture of glass, and the reduction in cost of glazing is also represented in all other types of windows, including casement windows. Casement windows were usually considered as a cheaper and less imposing style of window than the sash, and hence are generally found either to the rear of grander houses with sash windows to the front, or on all elevations of lower-status properties.



The changes in glazing patterns of casement windows are similar to those of the sash, where leaded lights would have originally been used, sometimes strengthened by transoms across the window, but more often with thick stone or timber mullions between each window. Often, early casement windows would not have an opening side, but would be fixed, and it was not until the C16th that hinged windows were introduced as a common window. These were originally iron framed, retaining the leaded lights, and were often inserted into older window frames.

Timber windows and surrounds, incorporating narrow, and often moulded, transom bars, started to be introduced during the C18th, with the greater use of slow-grown softwood, enabling more intricate detail to be incorporated into these simple windows.



Again, the size of glass panes gradually became larger, eventually enabling a window to incorporate three or four panes per window by the C18th. More modern windows have seen the complete removal of transoms, and the use of one sheet of glass per window.

With the introduction of plate glass during the C18th and C19th, blown glass (commonly referred to as Crown glass) was often lost through damage or replacement. Blown glass is full of imperfections, and gives a rippled appearance to the window. Whilst it is not often used now, it is still available in a variety of different styles, to suit the age of the building in which it is to sit. Companies including the London Crown Glass Company, Tatra Glass and Saint-Just continue to hand-blow specialist glass for windows.

Various organisations can assist in identifying the correct window style for your property, including The Georgian Group and The Victorian Society; the Conservation Officer can often assist in identifying styles and method of repair and/or replacement windows.

### Further Information

English Heritage publish specialist technical advisory leaflets which are available free from [www.helm.org.uk](http://www.helm.org.uk)

The Society for Protection of Ancient Buildings (SPAB) have information on traditional construction methods, and hold training days and courses for their members, detail of which can be found at [www.spab.org.uk](http://www.spab.org.uk)

**When replacing windows in any building, this needs to be undertaken by someone who is covered by a Competent Persons Scheme, such as FENSA - it is also likely that Building Regulations will be required and it is advised that the local Building Inspector be contacted.**

It is important to note that when working with Listed Buildings, special consent (Listed Building Consent) may be required for some works. It is advisable to check with the Council's Conservation Officer prior to starting any such works. If consent is necessary, a sample of the window, the glass, and drawn accurate sections may be required as part of any permission.

For further information and advice on the historic environment you can contact us in the following ways:

#### Writing:

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This document can be made available in other languages (including British Sign Language) and alternative formats (large print, audio tape, computer disc and braille) on request from **Wyre Forest District Council** by telephoning **01562 732928** or by e-mailing **worcestershirehub@wyreforestdc.gov.uk**

