



Lewes District Council

www.lewes.gov.uk

Guidance Note:

Windows in Historic Buildings



1. Introduction: Windows are important

Windows have a significant impact on the character and appearance of a building, through their arrangement, size and detailing. They are an important element of the design of a building, give information about its origins and development, and are of real importance to the character and appearance of historic buildings, particularly those that are listed or situated within a conservation area. In order to protect the appearance of such buildings, proposals to carry out work which will alter the design, detailing, materials or method of operation of the windows require very careful consideration.

The historic and traditional buildings of Lewes District display a wide variety of window designs and materials, ranging from early mullioned timber windows with iron casements of the 16th and 17th centuries to Georgian and Victorian timber sliding sashes and 20th century metal Crittall windows.

There is increasing awareness of the need to improve the thermal efficiency of buildings and mitigate climate change. Upgrading windows is one option that many people consider. However, well-meaning replacement of historic windows with modern versions can have a damaging effect on the character and appearance of historic buildings, as well as losing historic fabric and architectural evidence.

This guidance note is intended to provide advice on how to approach windows in historic buildings to ensure that the character, appearance and integrity of our historic

buildings and conservation areas are preserved or enhanced.



Above: Examples of historic sash windows. Developments in glass-making allowed for larger panes of glass to be used like the example on the right



Above: Traditional iron casements with individual leaded lights set within timber frame (left) and simple timber casements with plain glass (right)

2. Is permission required?

Listed Buildings

Buildings are listed for special architectural or historic character and interest. All listed buildings are protected under the Planning (Listed Buildings and Conservation Areas) Act 1990 and the listing covers both the interior and the exterior of the building and also any structure within its curtilage dating from before 1st July 1948. Listed building consent is required for any work to the building which affects its character or special interest, and it is a criminal offence to alter a listed building without listed building consent in place.

You need to apply for listed building consent when:

- the windows are to be replaced with a new style of window,
- there is a change to the materials used for the frames,
- there is a change in the type of glazing e.g. single glazing to double glazing,
- you wish to repaint existing windows a different colour to the existing,
- you are proposing to re-glaze, involving the loss of original glass.

Repairs, or replacement of windows in listed buildings, on a strictly like-for-like basis, using traditional materials and techniques, will not usually require listed building consent. However, it is wise to check with the Planning Services department as in some cases listed building consent may be required, depending on the extent of the works and the nature of the windows being replaced.

If your listed building has modern windows which are unsympathetic to the character and appearance of the building, you may wish to consider replacing them with more appropriate ones. Please note that the replacement of modern windows in a listed building still requires Listed Building Consent even if you are replacing them with more sympathetically designed windows.

Conservation Areas

In conservation areas, planning permission is not normally required for the replacement of windows if the property is a single house (i.e. not flats or commercial property). There are, however, special controls called "Article 4 Directions", which the Local Planning Authority can put in place to withdraw such 'permitted development rights', i.e. restrict work that can normally be carried out without planning permission. In these areas, any change to doors or windows, including changed materials, details and designs and types of decorative finish, needs planning permission for works that face a highway, river, watercourse or open space. This includes replacement of modern windows with more sympathetically designed ones.

In Lewes District, Article 4 Directions are in place within the Lewes conservation area and part of the Ditchling conservation area.

Homeowners living in conservation areas who would not require planning permission for replacement of their windows are still encouraged to follow the advice given in this guidance note.

If in doubt as to whether listed building consent or planning permission will be required for the works you wish to carry out, it is recommended that you contact Planning Services to discuss your proposals, who will be pleased to give advice.

Building Regulations

Replacement windows in buildings that are neither listed nor in conservation areas must be upgraded to current Building Regulations thermal standards as part of the government's commitment to reducing overall CO2 emissions in buildings. However, Building Regulations Guidance documents recognise the importance of maintaining the special character of buildings that are either listed or in conservation areas and advise close consultation between conservation officers and building control surveyors. It is often possible to provide alternative energy conservation measures within such buildings that do not have such a negative impact on the character of the building. If your building is listed, remember that listed building consent is required for any work which affects the character and special interest of the building

3. Repair or Replacement?

Replacement of traditional windows should always be the last resort. If the originals are so badly deteriorated that they are beyond the skills of a good joiner or metal worker, a 'like-for-like' replacement should be made; that is, an exact copy of the existing window.

It should be noted that like-for-like replacements must exactly match the design, detailing, material and finish of the existing window in every respect. The subtle details of original architectural features contribute to the special interest and character of historic buildings, so even a minor difference in the replacement work can change that character.

Many windows are replaced when they could, in fact, have been repaired and retained. A good joiner can replace damaged sections of a timber window, whilst retaining the undamaged parts, thereby retaining historic fabric and the integrity of the building, and preserving the visual appearance of the window. This is often much cheaper than replacing the window completely.

Metal framed casements can usually be repaired, and early glazing may be reusable by replacing the leading which holds it in place. Seek advice from a metal window specialist and do not be persuaded to accept modern imitations.

Replacing modern windows

When replacing modern windows with ones more sympathetic to a historic building, it will be important that the design and detailing of the new windows is correct. Historic photographs may show what the original windows were like, or, if your property is in a terrace, neighbouring properties may still retain the original windows. If in doubt, contact Planning Services for advice.



Above: The timber sash windows in this Victorian terrace are retained in the property on the left but have been replaced with uPVC in the property on the right. uPVC cannot accurately replicate the quality or character of the original sash windows.

Security fittings

There is a wide range of security fittings available. Unobtrusive fittings should be selected which retain the appearance of the window. In listed buildings, modern security measures are likely to require listed building consent. If in doubt, contact Planning Services for advice.

Glass

Historic windows are often glazed with Crown or Cylinder glass which is of special interest. It is of value both for its age, and because it has more richness and sparkle than modern glass, which has a uniform, flat appearance. Crown glass was made by spinning molten glass into a large disc which was then cut in to panes after cooling. Cylinder glass was produced by blowing a cylinder of glass that was then split lengthways and flattened into a sheet. Both these processes produce bubbles and imperfections in the glass, and ripples which distort reflections and views through the glass. This gives the glass its unique character.

Old glass is becoming increasingly rare and should always be retained. Great care should be taken for its reuse, and it should be protected during building works. If it is necessary to remove panes to repair the windows they should be carefully removed and reused.

If replacement glass is needed, it can be sourced from companies specialising in the production of new glass for restoration purposes, or old glass may be available from architectural salvage companies. Horticultural glass, made for greenhouses, may also be suitable, as it is second-quality glass which displays some of the imperfections found in old glass.



Above: The imperfections in historic glass give a reflective quality which contributes to the character of windows



Above: Retention of historic windows contributes to the character and appearance of conservation areas

A note on sustainability...

Retaining historic windows is, in itself, sustainable. Existing historic windows contain embodied energy (i.e. the energy taken to originally make them). Preserving historic windows not only conserves their embodied energy, it also eliminates the need to spend energy on replacement windows. Consider where your new windows would come from, and the amount of energy expended in creating them and transporting them from where they were made.

If you are considering uPVC (plastic) windows, consider that while many companies promote them as maintenance-free, they have a limited lifespan, discolouring and becoming brittle with age. If a uPVC window needs repairing, often the whole unit needs to be replaced. uPVC is, unlike wood, a non-renewable resource, it uses more energy to manufacture than a timber frame, and it can release hazardous chemicals into the environment when incinerated.

However, traditional timber windows are relatively easy to repair and, when well-maintained, can last hundreds of years.

It is worth bearing in mind that there are often less damaging measures which can be taken to improve the thermal efficiency of homes. Please note, in listed buildings, Listed Building Consent may be required. These include:

- fitting heavy curtains
- draught proofing
- improving loft insulation
- cavity wall insulation
- fitting a new energy efficient boiler

4. How can the thermal properties of windows be upgraded?

If your reason for considering replacement windows is for draught proofing or thermal or noise insulation there are a number of methods that can be used to retain and upgrade historic windows.

Simple measures can be taken to improve the thermal properties of windows. Perhaps the simplest is the use of heavy curtains and blinds, or, where they exist, historic shutters, to improve the thermal efficiency of windows at night, when heat loss is greatest, or when rooms are unused.

Draught or weather stripping can be fitted to existing windows. This is a cost effective solution which can improve thermal efficiency whilst allowing the retention of traditional windows and their character. It can also help to ease rattling and improve the operation of windows. A good draught strip should insulate, be durable and inconspicuous. Please note that if your building is listed, Listed Building Consent is required for this work.

Internal secondary glazing can be an effective way of reducing heat loss and noise, providing it would not damage existing historic joinery such as shutters or window surrounds. If carefully designed, it can be relatively unobtrusive. Listed Building Consent is required for the addition of secondary glazing to windows in listed buildings. It is important to ensure that secondary glazing would not hinder the means of escape from the windows.

English Heritage recently carried out a major study into the thermal performance of sash windows. The findings suggest that even the simplest repair and basic improvements will bring significant reduction of draughts and heat loss. The key findings are:

- Simple repairs to mend cracks and eliminate gaps can significantly reduce the amount of air infiltration or draughts. On the window that was tested, air infiltration was reduced by one third.
- Air infiltration through a sash window in good condition can be reduced by as much as 86% by adding draught proofing.
- Heat loss through contact with the glass and frames can be significantly reduced by adopting simple measures like closing thick curtains and plain roller blinds. In the test, heat loss was reduced by 41% and 38% respectively.
- More elaborate measures reduce heat loss even more and can improve windows to meet modern Building Regulations, which target a U value for windows of 2 or below. In a test with good quality secondary glazing, this value was 1.7. Well-fitted, closed shutters also produce similarly good results. The best result is when the two methods are used together, resulting in a 62% reduction in heat loss and a U-value of 1.6.

(Source: www.climatechangeandyourhome.org.uk)

5. Which windows should be avoided?

The insertion of factory made standard windows of all kinds, whether in timber, aluminium, galvanised steel or plastic is almost always damaging to the character and appearance of historic buildings.

Alternative materials such as aluminium and uPVC cannot accurately reproduce historic details and character, and are not acceptable for replacement windows in listed buildings or buildings in conservation areas.

uPVC

uPVC is not a traditional, vernacular material and is unsuitable for use in historic buildings. uPVC windows are often crudely detailed, and the size of frame is usually much larger than that of a traditional window, giving uPVC windows an obtrusive, 'chunky' appearance. The shiny finish of uPVC is also out of keeping with traditional materials.



Above: uPVC windows are often crudely detailed and a poor substitute for traditional windows

Steel/aluminium

As with uPVC, the modern appearance of aluminium or steel windows is out of keeping with traditional materials. They may, however, be appropriate to more modern buildings.

Mass-produced modern timber windows

Mass-produced modern timber windows with standard stock mouldings usually show little regard for the subtleties that gave the originals their unique character and architectural interest.

Double glazed units

It is often difficult to install double-glazing in existing frames, or to replicate existing frames with new double-glazed units, without making noticeable changes to the profiles of the frame and glazing bars. The new glass in such units may also significantly alter the appearance of the window.

The size of the glazing bars and frame required to accommodate the double glazing is usually much greater than in historic windows and therefore make inappropriate replacements.

There are specialist companies which are now able to supply very slim double glazing. This may be acceptable in some cases, if it is proposed to replace non-traditional, unsympathetic windows in unlisted buildings in conservation areas and can be demonstrated to enhance the appearance of the

building and conservation area. However, the windows must be constructed with appropriate traditional materials and detailing, with traditional proportions, frame size and any glazing bars.

Applied glazing bars

Traditionally, where windows have glazing bars, these form part of the structure of the window. False glazing bars applied to the surface of the window are therefore historically incorrect, and aesthetically unconvincing.

6. Further advice

Further advice can be obtained from:

Planning Services
Lewes District Council
Southover House
Southover Road
Lewes
BN7 1AB

Tel: 01273 471600
Email: planning@lewes.gov.uk
Fax: 01273 484452
Minicom: 01273 484488
Website: www.lewes.gov.uk

Useful sources of information include:

Planning Policy Statement 5: Planning for the Historic Environment

The Lewes District Local Plan, adopted March 2003

English Heritage's website *Climate Change and Your Home*: www.climatechangeandyourhome.org.uk

The Society for the Protection of Ancient Buildings (SPAB) Technical Pamphlet 13: *Repair of Wood Windows*, 1998

The Society for the Protection of Ancient Buildings (SPAB) Technical Q&As:

Q&A 08: *Metal Windows*

Q&A 13: *Timber Windows*

Q&A 16: *Upgrading Windows*

Available on the SPAB website, www.spab.org.uk



This guidance note can be made available in large print, audiotape, disk or in another language upon request. Please telephone 01273 484141 or email lewesdc@lewes.gov.uk