

Windows for Historic Buildings in Kirklees Late Eighteenth and Nineteenth Centuries

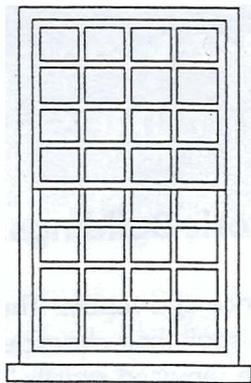
Principles of Repair, Reinstatement and 'Restorations' of Historic Buildings:

- **Repair:** The best practice for the restoration of historic buildings is by maintenance and repair. The removal of original historic features such as windows, doors, fireplaces etc., will spoil their character and erode their value. Where historic features are incapable of repair, they should be replaced exactly 'like for like'; NOT by 'look-alikes' e.g. top hung 'sliding sash' windows in lieu of the authentic pulleys and cords.
- **Reinstatement:** Where there have been inappropriate replacements (such as outward opening top hung vents) and the owner wishes to reinstate the original window type, careful thought and a 'good eye' is required to research what the original design was like. If there is no indication what the original window was like, then authentic historic precedents should be considered if there is evidence on neighbouring properties (particularly in the case of 'semi's' and terraces) and as long as they 'fit in' with the style of the house.
- **Restoration:** Historic buildings should be repaired and 'restored' with sympathetic care as one might repair and 'restore' a vintage car, an oriental rug or antique furniture. New design, details and materials should be in keeping with the overall design.
- The character, harmony, value and charm of many semidetached and terraced houses has been destroyed by the installation of new and different designs of windows, doors, porches and rainwater goods without considering the visual effect on the whole terrace or semi. Windows contribute significantly to the character and appearance and of historic buildings and conservation areas. Their replacement by inappropriate design, materials and details can severely spoil the character and delight in historic properties. Furthermore, the installation of many different types of windows in a fine terrace ruins the architectural harmony and value.
- To achieve the best and most satisfying results, it is important that the materials, construction, components and details of windows are in keeping with the period and style of the building.
- Restoring the authentic character of an historic house by reinstating the original details can significantly increase its value.
- Listed Building consent will be required if the new windows are different from the existing windows in design and detail.
- Before considering replacement windows for an historic house, it is important to ensure that the original windows are not removed without listed building consent. If the existing windows are not original, check neighbouring houses of the same style (particularly if the house is terraced or semi-detached) to see if any of them have original windows which can be precisely copied.
- The design of the original windows often indicates the period when the building was constructed:
- Mass produced windows lack the character, subtlety and interest of specially made windows
- PVCu windows are inappropriate to historic properties and detract from authentic character.
- The window drawings in this leaflet are generalised. There are many subtle variations of these classic types.

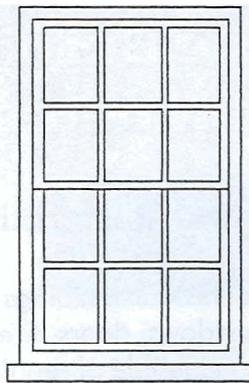
Common Late Eighteenth and Nineteenth Century Windows

Georgian, Regency and Victorian Periods: Sliding Sash Windows

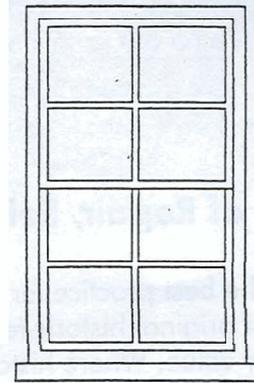
Sash Window Styles



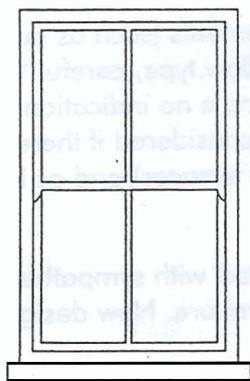
Early Georgian



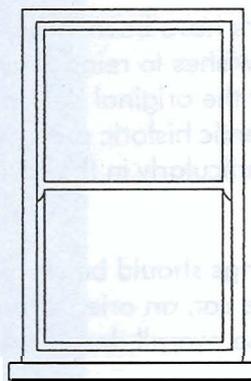
Late Georgian



Early Victorian



Late Victorian



Edwardian

- **Georgian and Regency (c1750 c1830)** double hung sliding sash windows are recognised by their elegance of proportions, slenderness and profiles of late Georgian glazing bars and the sparkle of historic glass with its reams (ripples) and seed (small air bubbles). There are a variety of designs depending upon the proportions which govern the number and size of pane. This leaflet considers the most commonly observed types.

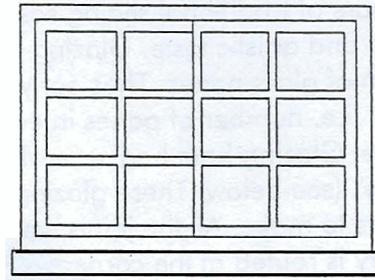
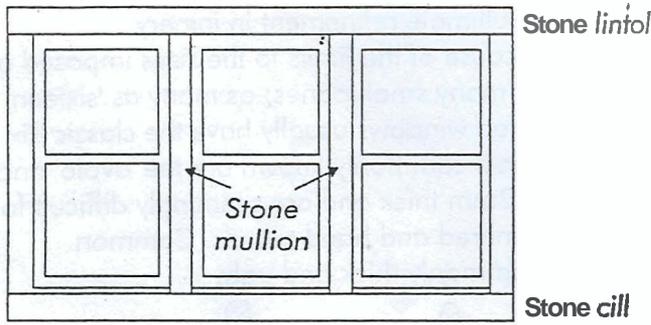
Early Georgian windows had small panes owing to the limits on glass size. Thus, the numbers of panes in each of the sashes could be as high as sixteen in each (see illustration). As the period developed, the number of panes reduced to classic 'six over six' (six panes in each sash). Similarly, the glazing bars became extremely slender in a variety of mouldings (see below). The thickness of glazing bars could be as slender as 12mm.

The sliding sashes needed to be balanced with lead weights so that they could be easily slid up and down. The weights were enclosed in timber enclosures to the side of the panes. (see constructional details on accompanying Technical Sheets.)

- **Victorian: (c1830 c1900)** vertically sliding sash windows carried on the tradition of the Georgian period in basic construction, but are noted for the larger sizes of pane (two over two or one over one) owing to the improvements in glass pane production. Victorian sliding sashes were installed in both neo Classical and neo Gothic buildings. Horns (the projections below the top sliding sashes) came into 'fashion' in mid century and are not seen on Georgian or Regency windows.

- **Edwardian (c1900 1915)** sliding sash windows were little different from their Victorian forebears except that the panes were larger often being a single glass pane above another.

Common Local Vernacular Window Types



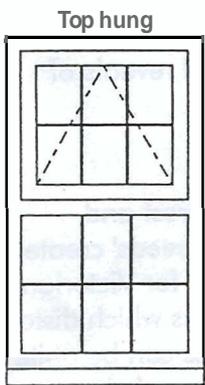
Yorkshire Horizontal Siding Sash Window

The above sashes can be: ● fixed sash ● side hung casements ● Yorkshire jack sash

● **Common local vernacular windows** are of two common types: the Yorkshire sliding sash (now quite rare) and the side hung casement windows. These windows are found in weavers' cottages. Their glazing patterns follow other historic windows in, that the earlier window had more smaller panes. In Kirklees the Victorian pattern is commonly seen with two panes. (See illustration although there are examples of 'earlier types to be found.)

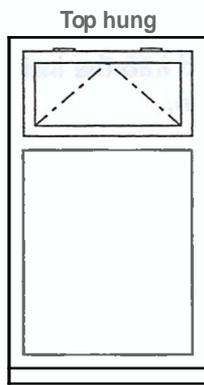
The so-called Yorkshire 'jack sash', a small vertically sliding sash window without weights and pulleys, is found in some vernacular dwellings in west Yorkshire.

Inappropriate Windows for Historic Buildings

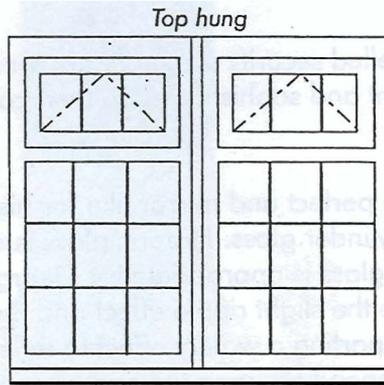


Insert mullions

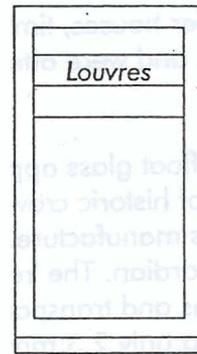
PVCu plastic double glazed



Stained timber double glazed



Other styles



● During the latter half of the twentieth century, it has become the fashion to replace historic windows with mass manufactured double glazed windows of which there are three basic types:

- aluminium frames (1960's 1970's)
- hardwood frames which are often stained brown. (1970's 1980's)
- PVCu windows (1980's 1990's)

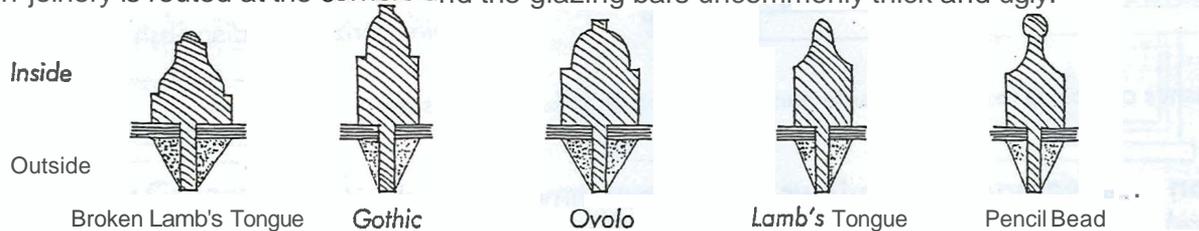
The majority of these windows have outward opening top hung ventilation sashes and are often installed to the front of the windows reveals thereby spoiling the character of the building and reducing its value.

They lack elegance, slenderness and subtlety. Their glazing bars are mostly fake being glued to the glass (see sketch above).

Details of Windows

GLAZING BARS

The glazing bars of traditional sliding sash windows constitute an ultimate refinement in joinery craftsmanship and artistic taste. Glazing bars were introduced because of the limits to the sizes imposed on the production of glass panes. Thus early Georgian windows had many small panes; as many as 'sixteen above sixteen' (i.e. number of panes in each sash) but late Georgian windows usually have the classic 'six over six' panes. Glazing bars had several common profiles, the most commonly known are the 'ovolo' and 'lamb's tongue'. (see below) These glazing bars are very slender 12mm thick and are seemingly difficult for modern joiners to make. All the joints were properly scribed and mitred and hand planes. Common modern joinery is routed at the corners and the glazing bars uncommonly thick and ugly.



FRAMES and SLIDING SASH PULLEYS

Sliding sash window frames are constructed as vertical square section tubular boxes to contain the lead weights which balance the window sashes. (see detail on Technical Sheet). They are normally set behind the reveal created by the outer leaf of the exterior wall so that only the window frame is visible from the outside. (In some later designs, the box frame is installed abutting the outer leaf of the wall which gives a thick appearance; but this detail is not common in West Yorkshire).

Some modern vertical sliding sashes are manufactured with spring balances rather than pulleys and lead weights; these are unacceptable replacements for pulleyed sashes.

SHUTTERS

In grander houses, timber panelled security shutters were incorporated into the inside splayed reveals of windows and were often elegant and sophisticated in their construction.

GLASS

Modern float glass appears too perfect and mirror like for historic windows and lacks the interest and subtlety of historic crown and cylinder glass. Historic glass is characterised by the 'reams and seeds' created during its manufacture. Crown glass is appropriate for Georgian buildings and cylinder glass for Victorian and Edwardian. The 'reams' are the slight ripple effect and the 'seeds' are the small air bubbles which distort reflections and transparency imparting a watery effect to reflection and sunlight. Historic glass can be quite thin being only 2-3 mm thick depending upon the size of pane. It is difficult to obtain and can only be obtained from salvaging glass from older buildings or from specialist suppliers. Fake, 'olde worlde' 'bull's eye' glass is wholly inappropriate elegant eighteenth and nineteenth century buildings. The glass is puttied from the outside.

DOUBLE GLAZING

Double glazing is unacceptable in historic buildings owing to its double reflections, silver seal linings and the effect that its weight has upon the dimensions of the glazing bars and increase in balance weight.

SECONDARY GLAZING

If double glazing is needed for energy saving purposes, secondary glazing is preferable as a supplement to the historic windows since this does not necessitate the removal of the original window

TRICKLE VENTS

Trickle vents (slits in the top of the window frame) are often specified for the purposes of building regulations for new installations but they are inappropriate for historic windows (or new windows in historic buildings) since they detract from the character of the traditional windows. As an alternative, the upper sashes were hung on lines but wedged in the closed position by hinged blocks attached to the pulley stiles and which could be opened for ventilation at a higher level. In this case, cleaning from the inside is more difficult. Side hung sashes can be fitted with short 'stay' latches for ventilation.