



Design Guide 10

Windows & Doors

10.1 TRADITIONAL WINDOWS

Windows are the eyes of a building. They make a fundamental contribution to the character and appearance of buildings, and of settlements more widely. Changes to windows represent one of the easiest ways to dramatically alter the character and appearance of buildings.

There are a number of traditional window types found in the District:

10.2 CASEMENT WINDOWS

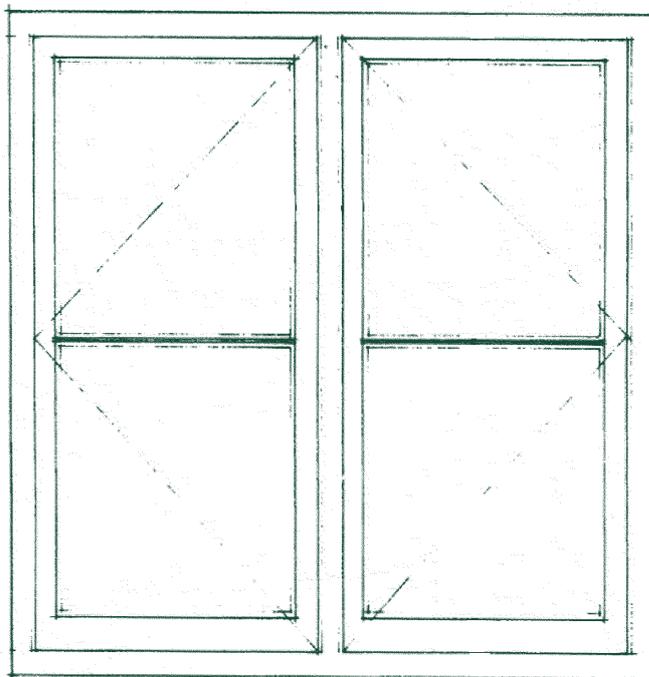
The most common traditional window type, found mainly in vernacular houses and cottages from the C17 onwards.

- The casements are flush with the window frames, the joinery in-plane and without raised features or mouldings (i.e. not storm casements);



Fig. 1 New traditional flush, side-hung casement window

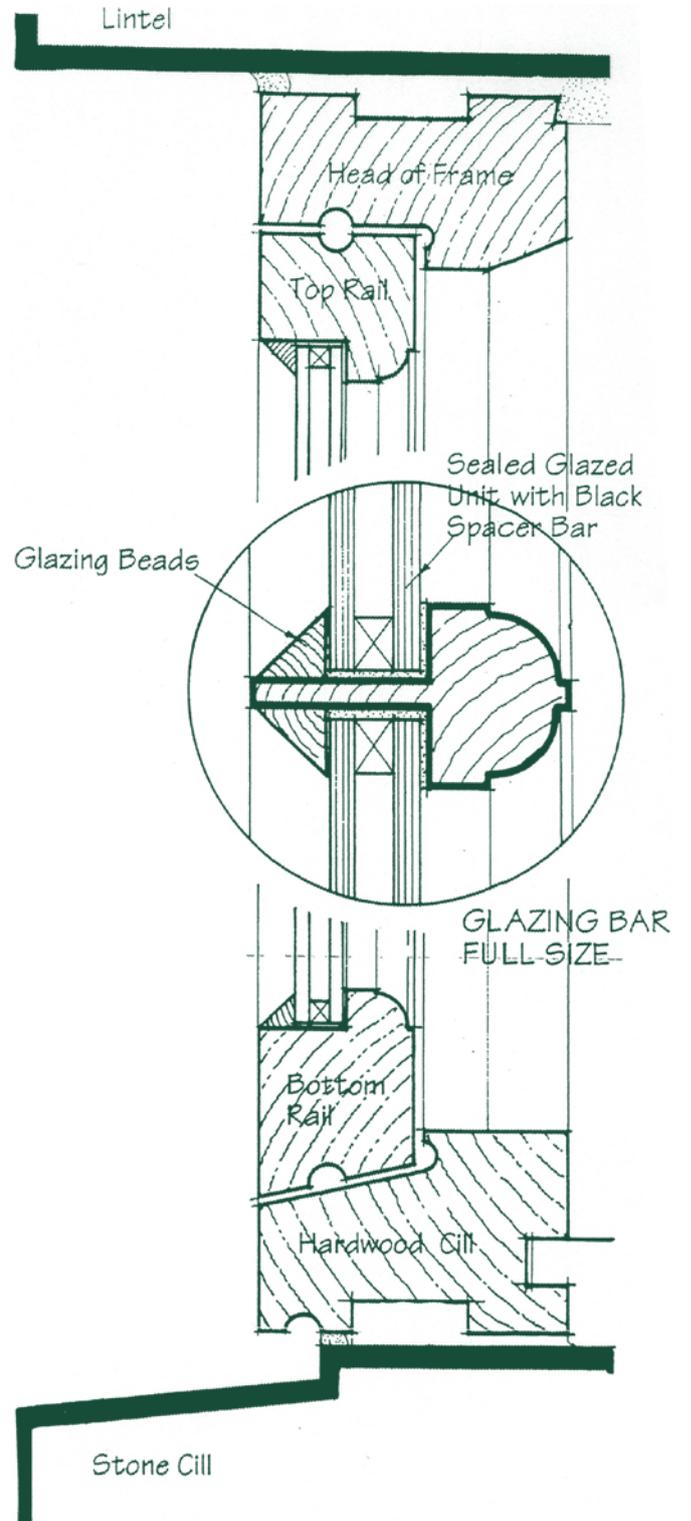
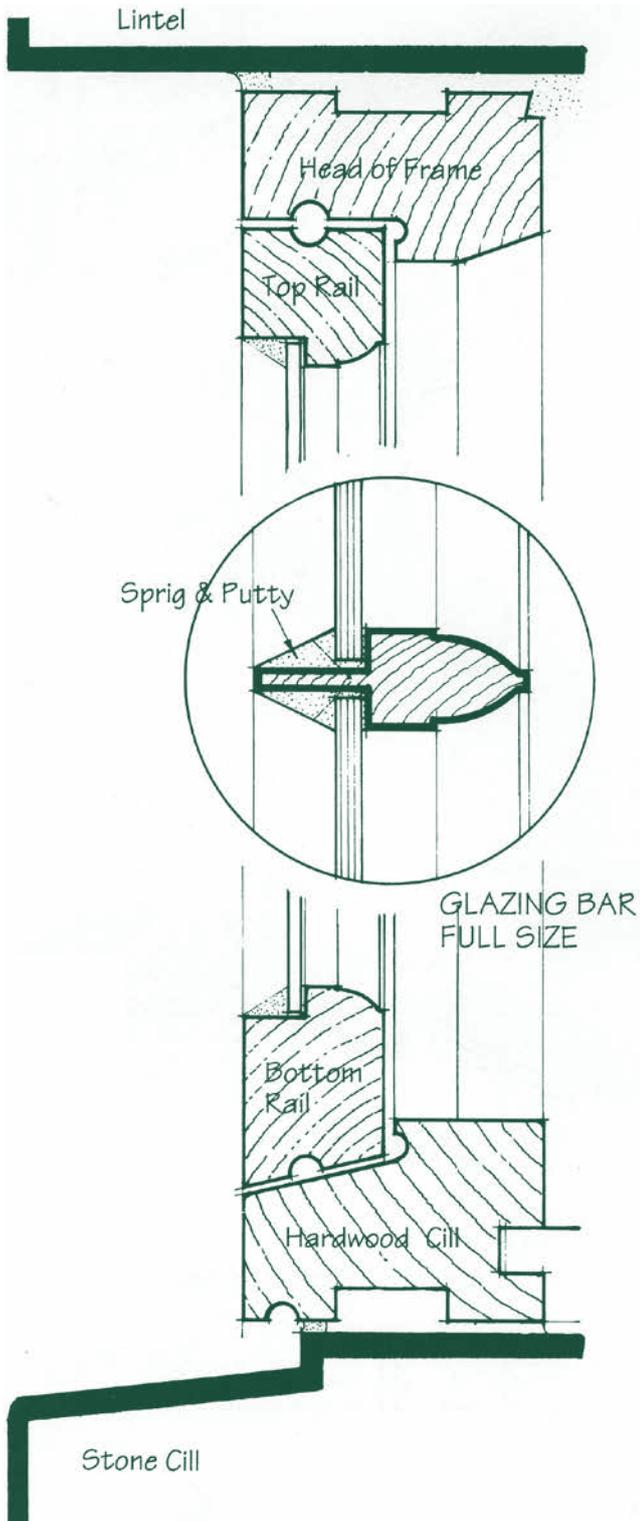
- The fixed and side-hung opening elements are balanced and symmetrical, the panes of glass of uniform size and proportion within a given window;
- The glazing is usually divided up by glazing bars, typically with smaller panes in earlier windows and larger panes in later windows;
- The panes may be square or, if rectangular, with the rectangles generally upright;
- Judgments about glazing bar pattern should be made on a window-by-window basis, rather than slavishly applying an identical pattern to a range of windows without due regard to variations in the size and proportions of the window openings;
- The frames are recessed into the wall, typically by c.75mm or more;
- Lintels may be timber (plain or chamfered) or stone;
- Sills may be timber, stone or tiled.



Elevation
(Not to scale)

Traditional casement window:
Single-glazing

Traditional casement window:
Double-glazing



10.3 SASH WINDOWS

A window type that became widespread in the C18 and C19, the vertical sliding sash is characteristic of higher status houses of the C18, but also of vernacular houses of both the C19 and C20. In parts of some settlements in the District – the historical cores of Woodstock and Chipping Norton, for example – the vertical sliding sash window is the dominant window type.

With vertical sliding sash windows, the casements slide vertically within the frame, counterbalanced by sash weights boxed into the framing of the window.

Advances in glass technology, resulting in larger panes of glass becoming increasingly affordable over time, saw glazing bar patterns alter in the second half of the C19, with fewer and larger panes of glass common from c.1850 onwards.

A switch from sash to casement windows, or vice versa, can lead to visually incongruous results, owing to the distinctive proportions of each type of window opening.

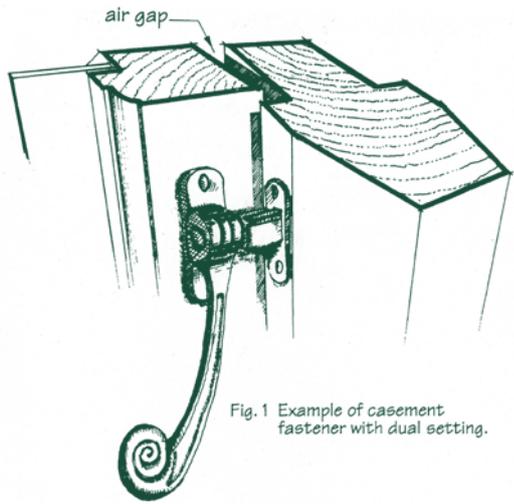
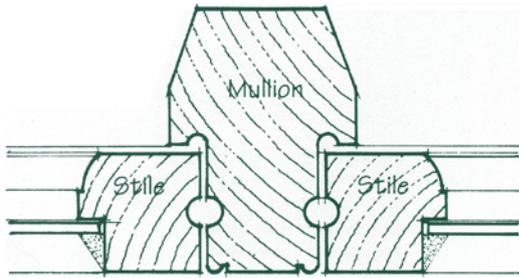


Fig. 1 Example of casement fastener with dual setting.

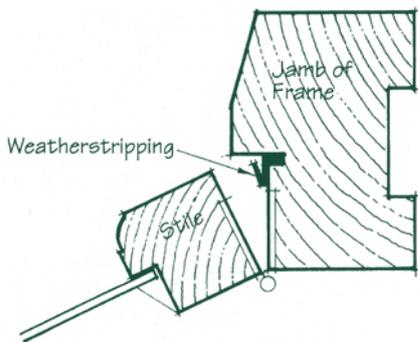


Fig. 2 Example of weatherstripping.

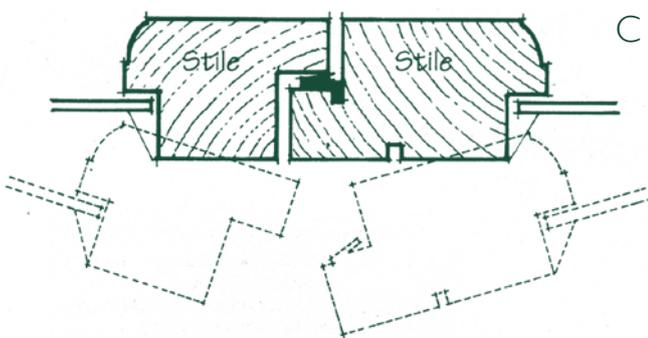


Fig. 3 Example of escape window with stile of opening casement incorporating fake mullion.



Fig. 2 Traditional vertical sliding sash windows

10.4 STONE MULLION WINDOWS

A distinctive window type found in both vernacular and higher status houses of the C16 and C17 in particular (though also revived in Jacobean style houses of the C19).

The window surround is of stone, and the opening divided up (typically into two or three lights) by vertical stone mullions. Both the surround and the mullions are typically chamfered or ovolo moulded in profile. The window surround may be plain, but over the window is generally a hood mould with lable stops, forming an 'eyebrow' over the window designed to throw rain water clear of the window opening below.

Stone mullion windows are often comparatively more expansive in higher status houses, and occasionally divided horizontally by stone transoms in the case of the largest windows.

The windows themselves are typically metal-framed, the glazing often comprising small panes of glass supported by lead 'comes'.



Fig. 3 Traditional C17 stone mullion windows

10.5 DORMER WINDOWS

A distinctive and visually prominent window type, lighting attic spaces and giving character and variety to the roof-scapes of both vernacular and higher status houses and cottages, particularly those of the C18 and C19.

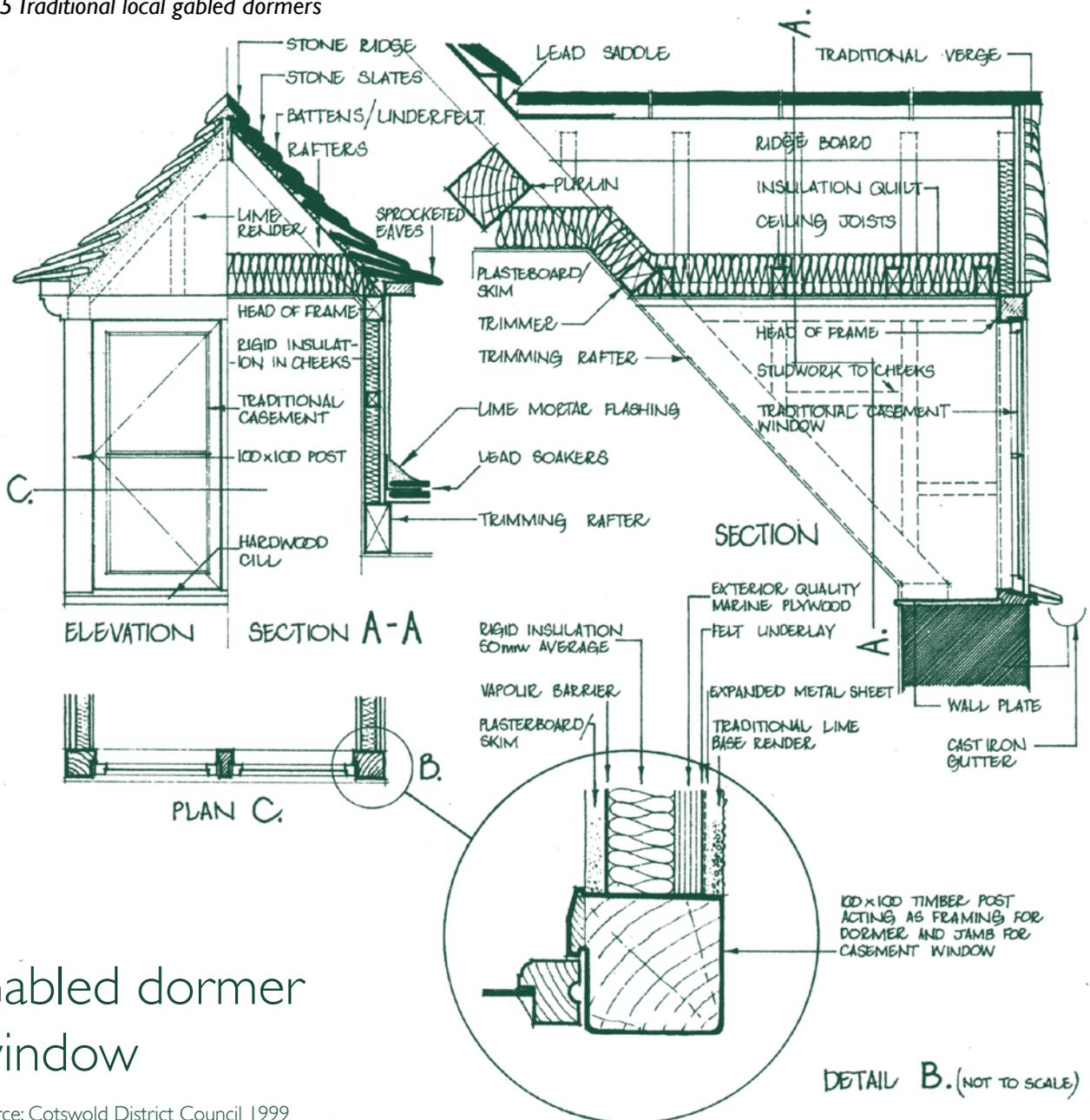


Fig. 4 Traditional local gabled and hipped dormers

- Traditional dormer windows are proportionately smaller than the windows in the elevations below;
- They are typically of gabled form, but occasionally have hipped roofs;
- They can occupy one of three locations on the roof: a) Packed up of one of the purlins; b) at the eaves aligned to the internal wall face; c) at the eaves aligned to the external wall face. The most common position is at or below half-way up the roof slope, the ridge well below the main ridge of the house. Dormers flush with the external wall face are generally uncommon in the District;
- The windows themselves are generally flush-fitting, side-hung timber two-light casements (see *CASEMENT WINDOWS* above);
- The window is formed by timber posts acting both as framing for the dormer *and* jambs for the window itself;
- The cheeks and gable (if the window is gabled) are of roughcast render.



Fig. 5 Traditional local gabled dormers

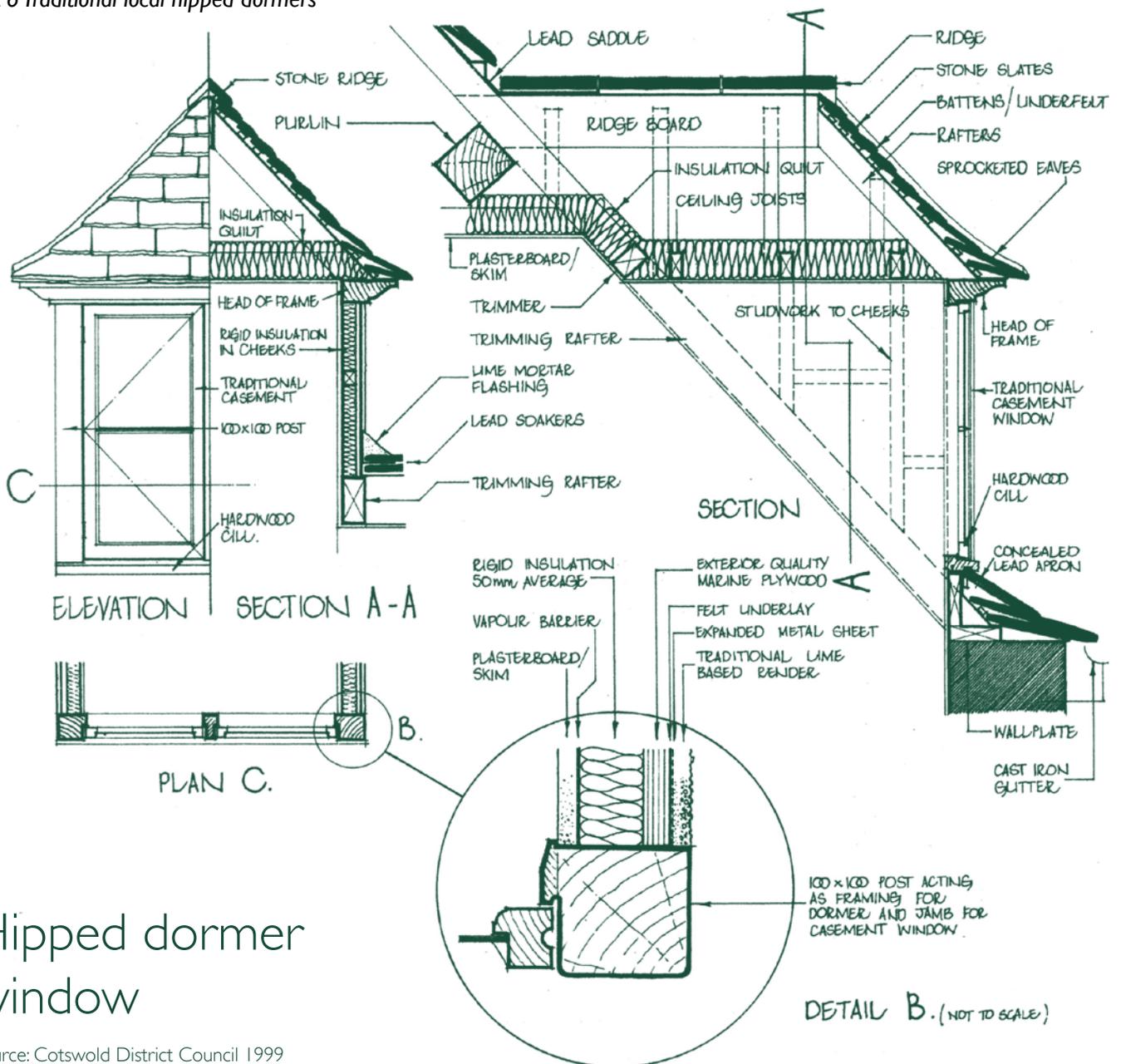


Gabled dormer window

Source: Cotswold District Council 1999



Fig. 6 Traditional local hipped dormers



Hipped dormer window

Source: Cotswold District Council 1999

10.6 REPAIR AND REPLACEMENT OF WINDOWS

As a general principle, traditional windows in period properties, whether Listed or un-Listed, should be retained, repaired or, if replacement is strictly necessary, replaced on a strictly like-for-like basis, rather than with inappropriate modern windows. A pieced-in repair is often a better (and cheaper) solution than wholesale replacement. Draughty and ill-fitting windows often only need stripping of old paint layers, careful re-hanging and draught-proofing to significantly improve their insulation. Original 'crown' or 'cylinder' glass has a distinctive uneven appearance, and should be retained or replaced on a like-for-like basis, rather than being replaced by flat modern 'float' glass.

Traditional window designs are fundamental to the character of local buildings. When replacement windows are installed these should match the original windows in both design and materials. If the property has a variety of traditional window types it is generally not desirable to make all the windows conform artificially to one type (for example by replacing the sashes with new windows to match the existing casements). A range of window types within the one property is locally characteristic, expressing different chapters in the story both of the building and of the settlement more widely.

Wood is the traditional material for windows. Modern substitutes, such as uPVC and aluminium do not look the same, and have poor environmental consequences. European hardwoods, such as oak and elm, were usually left to weather naturally; while softwoods such as pine (popular in the C19 and C20) were traditionally painted. Timber stains and varnishes are modern introductions, and are not traditional finishes for period joinery.

See *also*: Design Guide 19: Traditional Paint Colours

10.7 DOUBLE-GLAZING

Modern sealed unit double-glazing can bring noticeable advantages, in terms of heat and sound insulation, to a traditional building. However, it can also have profound implications for the appearance and character of such buildings – whether Listed or not.

As a general principle, where double-glazing is deemed acceptable, the closer the double-glazed window accords visually with a traditional single-glazed window, the better:

- The window should be of timber, the joinery detailed to match traditional window types;
- The double-glazing should be as thin as possible (c.12mm or less) ideally with black spacer bars between the sheets of glass;
- The window should have properly detailed glazing bars (with the glazing bars framing up the individual panes of glass, rather than sandwiching unbroken sheets of glazing, or being sandwiched between unbroken sheets of glazing).



Fig. 7 An inappropriate modern uPVC double-glazed window

10.8 LISTED BUILDINGS

Traditional windows are often a critically important feature of Listed Buildings; their significance highlighted in List entries. Any change to the windows in a Listed Building (including changes to materials, design or glazing) will require Listed Building Consent.

As with all proposals relating to Listed Buildings, the essential Planning test will apply: are the proposed changes likely to cause harm to the character or fabric of the Listed Building? If the answer is 'yes', it is highly unlikely that Listed Building Consent will be granted.



Fig. 8 A Palladian sash window in a Listed Building

Double-glazing can often result in unacceptable visual harm to the character and fabric of Listed Buildings, owing to its conspicuous modernity, the visible internal refraction of light within the units, and unduly deep glazing bars. However, it may be deemed acceptable in some limited circumstances. Assessments made in respect of double-glazing in Listed Buildings will be carefully made on a case-by-case basis, the merits of the proposals set against the relative merits of the existing windows.

As a broad guide, the following are examples of scenarios in which it is *unlikely* that Listed Building Consent would be granted for change, including from single- to double-glazing:

- Material changes to windows that are substantially original;
- Material changes to windows belonging to the nineteenth-century or earlier;
- Material changes to appropriately detailed traditional window types, particularly in a primary, street-facing or public elevation.

Again, as a broad guide, the following are examples of scenarios in which it is *possible* that Listed Building Consent might be granted for change in certain circumstances, including from single- to double-glazing:

- Material changes to windows that are recent and of poor quality or untraditional appearance or materials, where a net gain to the character or appearance of the Listed Building can be clearly demonstrated;
- Material changes to windows in later extensions (most notably perhaps rear extensions), which would entail no harm or result in a clear improvement to the character or appearance of the Listed Building.

10.9 DOORS

The traditional material for doors, whether external or internal, is timber. Door types vary in their design, depending on the age, status and type of property. Great care should be taken in the choice both of external doors, which (like windows) can have a significant bearing on the appearance and character of the property; and of internal doors, which often form part of a room's, or an entire house's, decorative scheme and aesthetic.

As a general principle, where an original or early door and its frame survives, these should be retained, preferably *in situ*, and refurbished where necessary, rather than being discarded or replaced with a modern alternative. Traditional door fittings and ironmongery should also be retained – or even re-used on replacement doors.

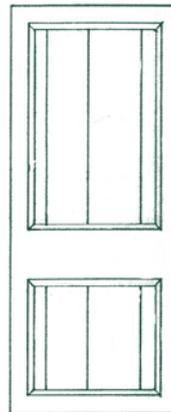


Fig. 9 A traditional paneled entrance door

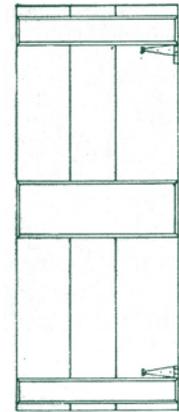
For vernacular houses and cottages of the C17 and the first half of the C18, a solid upright planked or boarded door is characteristic (in modern versions, these sometimes have a small square window in the upper half of the door). For houses and cottages of the later C18 and the C19, solid doors of Georgian or Victorian character, typically with four or six fielded panels are often found. These would generally be unglazed, though perhaps with a window or fanlight above (modern Georgian style doors with integral fanlights have no historical basis and should be avoided).

Similar patterns are found with internal doors, with framed and boarded or planked doors found in earlier vernacular properties, and 4- or 6-panel doors common in C18 and C19 houses.

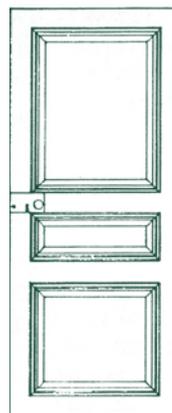
Material changes to doors in Listed Buildings – particularly to original external doors – may need Listed Building Consent.



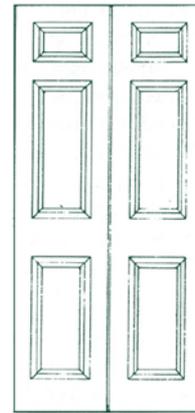
A framed and boarded door with butt-jointed boards nailed to back of frame.



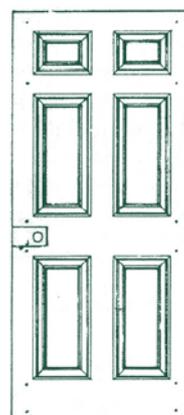
A planked door with ledges only - no bracing or framing.



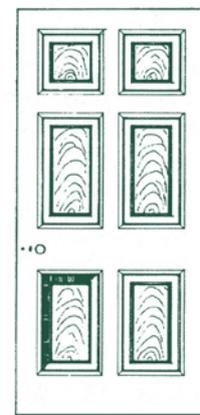
A Queen Anne door with three panels; this one also has bolelection mouldings.



Mid-Georgian with central bead to create the impression of larger, double-size door.



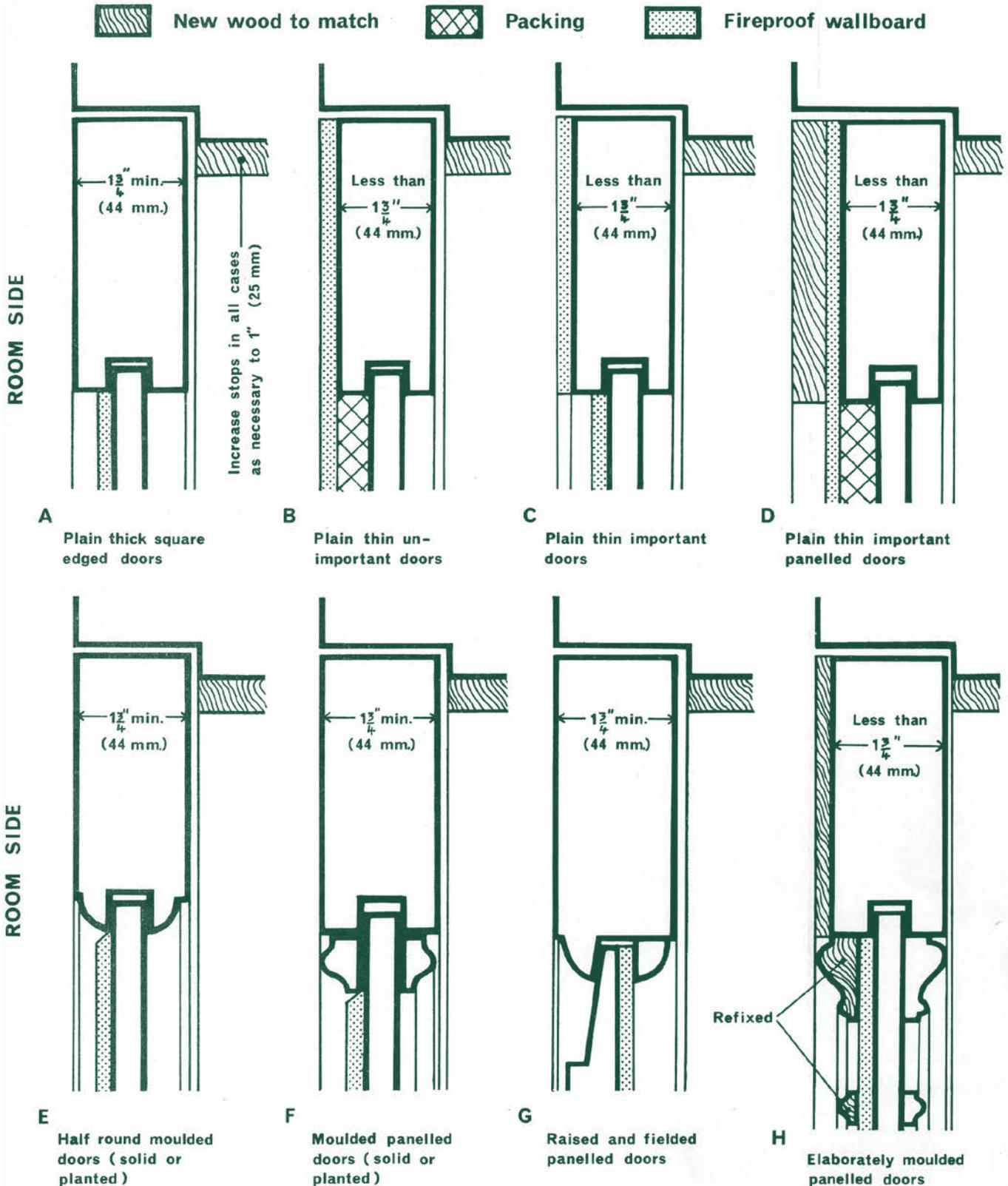
Typical mid-Georgian oak door with raised and fielded panels.



A later Georgian door.

Doors:

Fire protection doors in historic buildings



With thanks to Oxford City Council for allowing use of these drawings.