Window comparisons

ENGLISH HERITAGE

Wood

Traditional timber sliding sash windows come in many shapes and sizes. They were usually hand-made to fit the building for which they were designed and their main characteristics in common are:

- *their construction and detailing:* a heavy frame, with boxes at the sides to take the counterbalance weights, constructed to form two (or more) tracks in which the sashes slide up and down

- *their vertical orientation,* in terms of both the window as a whole and (in most cases) the individual panes

Modern sash windows, or windows designed to imitate them, can be divided into a number of categories.

Individually-made timber sash windows, which can be made to any pattern, size, and specification, are produced for specialist markets where the context and quality demand traditional forms and detailing.

Factory-made, but high-quality timber sliding sash windows are made to a limited range of patterns, sizes, and specification, and are produced for specialist markets where the use of standard windows with some variation from strictly traditional detailing is acceptable, but where a reasonably close approximation to the appearance of a traditional window is still required. To maintain competitive pricing while meeting modern standards for new work, the detailing of these products differs from traditional windows. The two main reasons for this are commercial pressures (standard sizes of timber, machine cutting and handling, machine-made jointing) and regulatory requirements and enhanced standards (incorporating features such as double glazing, draughtproofing, and trickle vents).

Inappropriate replacement in a late Georgian street: before (left) and after (right)

Factory-made economy ranges of timber sliding sash windows are made to a limited range of patterns, sizes, and specification, and produced for mass markets where the use of standard-configuration windows is acceptable. The general pattern of these windows is similar to that of traditional products, but they do differ considerably in their detailing.

PVC-U

The individual components are factory-made, but the windows themselves are made by specialists to any size (within minimum and maximum limits) and in a wide range of patterns. They are manufactured in the UK largely for the replacement-window market and their general shape can be similar to that of traditional forms, but their detailing is completely different.

Aluminium

These windows are factory-made to any size (within minimum and maximum limits) and in a wide range of designs. Produced in this country largely for the replacement-window market, aluminium windows are similar in their general pattern to traditional windows, but they differ completely in their detailing.

Modern facsimiles can offer better insulation, security, and safety than traditional windows. However, it is now possible to upgrade existing windows and to incorporate enhancements into traditionally designed and constructed new windows to give improved, comparable performance in these areas.

FRAMING OPINIONS
LEAFLET 5

Cost comparison: repair or replacement

The following cost comparisons were carried out in late 1993 using a timber-framed, seventeenth-century house (above) that had been refronted in the mid eighteenth century. All sixteen sash windows in the house needed refurbishment or repair.

Repairs

Window overhauling involved:

- repairs to rotten timber members by splicing in replacement timber and filling with a two-part, epoxy-resin filler
- adjustment of weights and replacement of sash cords
- cleaning of pulleys (or replacement with a traditional pattern where the existing pulleys could not be made to work efficiently)
- cleaning of meeting rail catches (or replacement with a traditional brass quadrant pattern where the existing catches could not be made to operate efficiently)

Draughtproofing was also installed and the windows were redecorated with oil gloss paint. The total cost of this work was £4620. Various features could have been added during the overhaul, including:

- key-operated shoot bolt meeting rail locks or dual-screw security fasteners, at an additional cost of £240 (overall total: £4860)
- a simplex-based, swing-sash system to allow easy cleaning, at an additional cost of £1040 (overall total: £5660)
- secondary glazing, at an additional cost of £2001 (overall total: £6621)

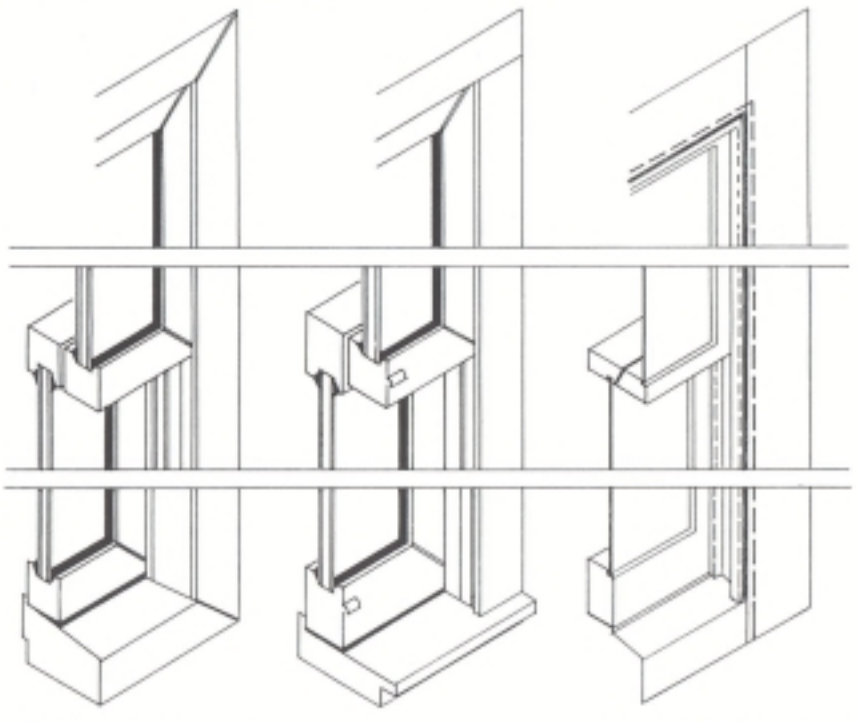
Replacement windows

Several manufacturers were invited to submit quotations for supplying and fixing replacement windows. The quotations received were as follows:

- individually made timber windows from a local joiner: £7180
- individually made timber windows from a specialist national joinery firm: £17,457
- PVC-U windows from two suppliers: £8065 and £6818
- aluminium windows: £6512

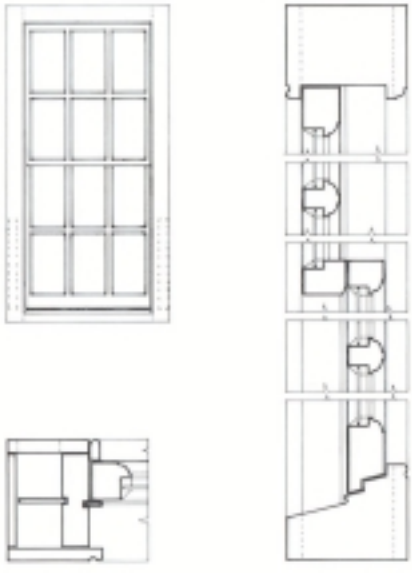
Specifications for the work described above can be obtained from English Heritage, Room 528, Keysign House, 429 Oxford Street, London W1R 2HD.

PVC-U and traditional timber sash windows compared

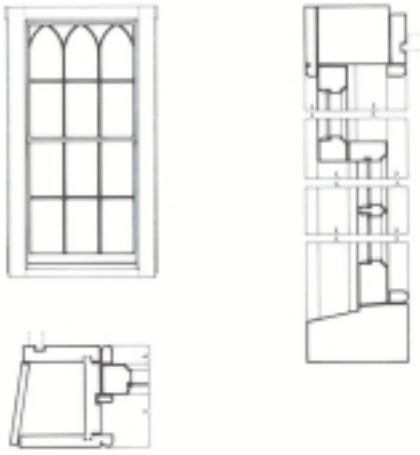


Different PVC-U frames

Traditional timber frame



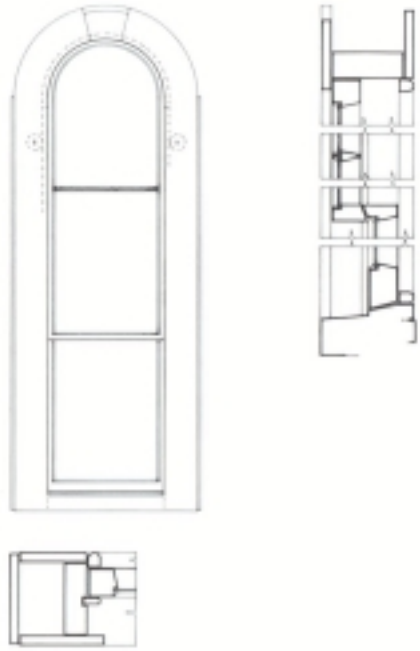
Early eighteenth-century window, The Mount , Guildford



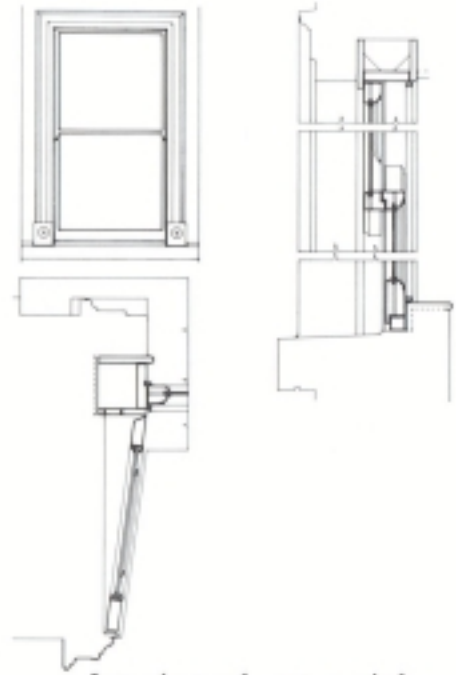
Late eighteenth-century window

Late eighteenth-century window, Grovelands House , London

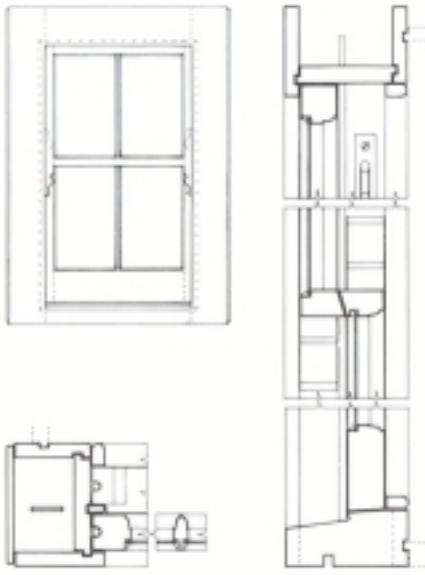
Early nineteenth-century window, Norwich Road, Ipswich



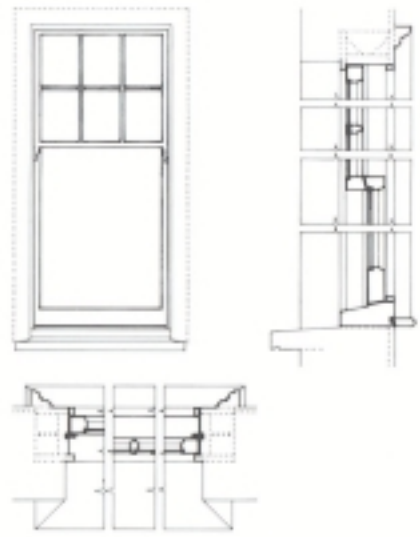
Early nineteenth-century window



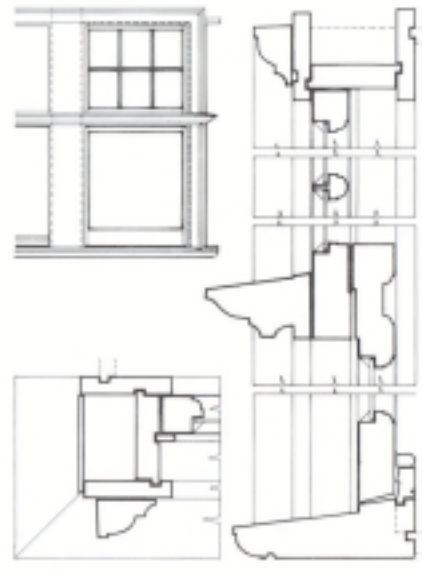
Late nineteenth-century window, Moyne Park , Galway



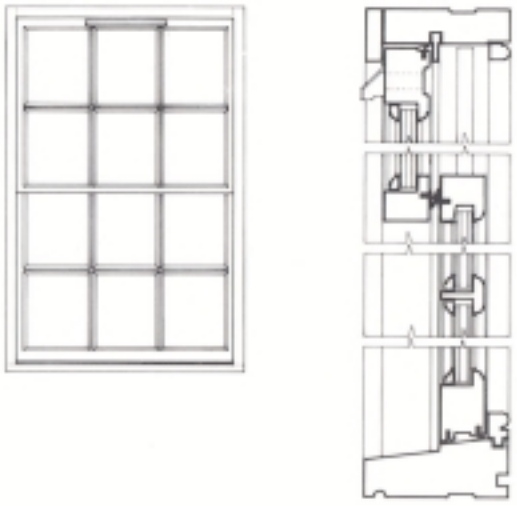
Late nineteenth-century window, Banstead Hospital Chapel



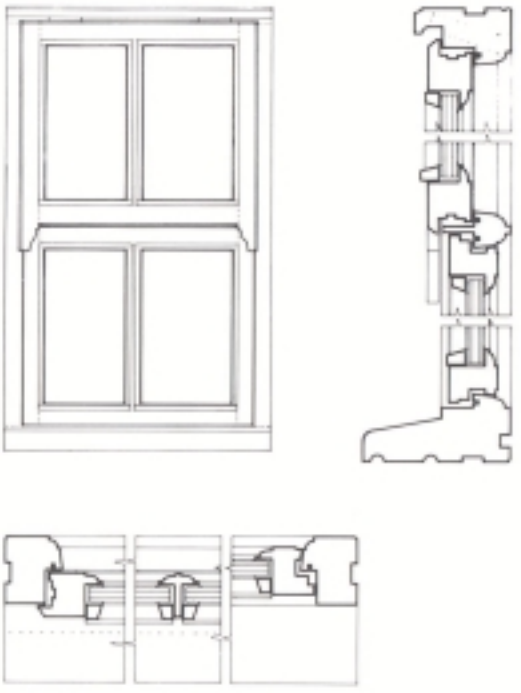
Early twentieth-century window, Rusholme Road, Putney



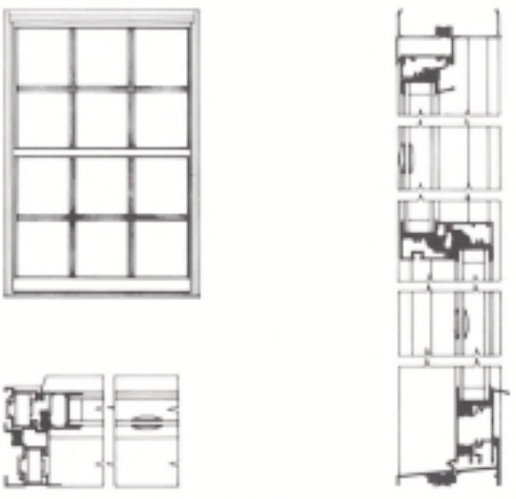
Early twentieth-century window, Normansal School, Surrey



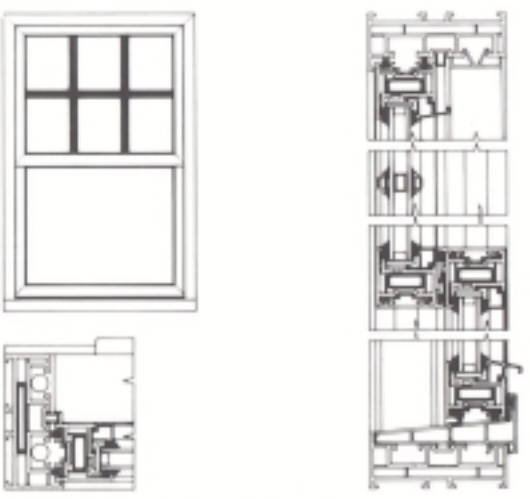
1993 Mumford and Wood
double hung sash window



1993 Boulton and Paul
'Regency' top hung casement



1993 W H Smith & Sons
(Extrusions) Ltd
PVC-U vertically sliding window



1993 'Clearview' Windows Ltd
aluminium double hung sash window

Produced by English Heritage

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071 973 3000

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