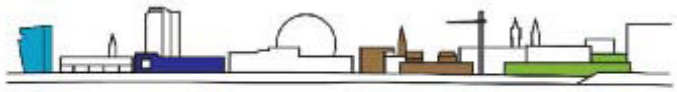


Technical Advice Note: The Repair and Replacement of Windows and Doors

Reference Number: DRAFT

Draft November 2011

Introduction

Windows and doors are important features of a building that contribute greatly to the character of the building and of the street in which the building stands. They are also elements of the building that are increasingly subject to alteration or replacement.

Unless care is taken over such alteration or replacement the appearance of the building can be seriously affected and the character of whole streets will be gradually eroded. In many instances the replacement of windows and doors is strictly controlled by planning legislation. Failure to obtain the appropriate consents could result in enforcement action being taken to have unauthorised windows or doors replaced, which may entail considerable costs for the building owner.

Listed Buildings

The replacement of windows and doors in listed buildings by new windows or doors requires listed building consent. Consent to replace original windows and doors will only be given when it can be demonstrated that they are beyond repair. If, in addition, the listed building is situated in a conservation area or is a flatted property within the curtilage of a listed building, planning permission will also be required. In most cases consent to replace a window or door, with anything other than a faithful copy of the original, is unlikely to be granted.

Conservation Areas

The replacement of windows or doors in buildings in conservation areas, by windows or doors which are not identical to the originals, requires planning permission. This applies to the front, side or rear of the property. Most buildings in conservation areas have sash and case windows and at the front of the property the only alternative to a sash and case window which is likely to be permitted is a sash and case 'lookalike' (this type of window is described elsewhere in this leaflet). In normal circumstances a different type of window may be permitted at the rear of the property provided it is not readily visible from a road or other public space.

Non-Residential Properties

For all non-residential properties, planning permission is required for the replacement of windows or doors by new windows or doors which differ in appearance from the existing arrangement.

Flats

Flats situated in conservation areas or within the curtilage of a listed building require planning permission for replacement windows and doors. For flatted properties out with these areas planning permission is only required if the dimensions of an existing window or door opening are to be altered

Accommodation out with the Categories Above

Houses and flats which are out with conservation areas or areas of special control do not require planning permission for replacement windows or doors. Planning permission is however always required for adding a new bay window in front of the building line of any property. For flatted properties planning permission is required if the dimensions of an existing window or door opening would be altered.

Other Areas of Special Control

Within the settlements of Burnbanks and Kingswells which are subject to Article 4 Directions, planning permission is required for the replacement of windows or doors which differ in appearance from the existing arrangement.

Sash and Case Windows

Sash and case windows are still retained in the vast majority of listed buildings and buildings in conservation areas. Many modern replacements, even those supposedly intended to reproduce the appearance of sash and case windows, can look clumsy and fussy. Where there is no alternative to replacement, new sash and case windows should be identical in appearance and material to the originals with particular attention paid to the profiles of sash frames and astragals. Faults commonly found on new windows can be avoided if, in their construction, the windows take account of the guidance given in the illustrations below

Repair of Sash and Case Windows

Defective sash and case windows should be repaired where possible, and their complete replacement should only be contemplated where they have clearly deteriorated beyond practical repair. In many case windows are replaced where only a minor amount of timber is rotten or where paint is peeling or cracking, this could easily be resolved with minor repair.

Quite frequently basically sound windows are discarded and new windows installed merely to allow the fitting of 'double glazing', when minor repairs, and the fitting of proprietary draught stripping systems can greatly improve the air tightness and sound proofing qualities of original windows, along with increase the ease of operation of the windows and the elimination of rattles. The repair and upgrading of original windows is to be encouraged and is therefore eligible for a grant.

Replacement of Sash and Case Windows

An original sash and case window should be replaced only where it has clearly deteriorated beyond repair, and only in such circumstances might a grant be offered towards the cost of its replacement. A grant may also be offered where it is proposed that an inappropriate modern window is to be replaced and a sash and case window reinstated. In either case, the replacement window should match the original in all respects, with particular attention being giving to the following:

Section Dimensions

The sizes of timber sections in the new window should closely match those of the original. This is particularly relevant to astragals and to the bottom rail of the

lower sash. The bottom rail should be at least 75mm deep and 25mm deeper than the meeting rails, on elevation. No more than 20-25mm of the sash box should be visible in the window opening, the remainder being concealed behind the masonry window check. Generally, when the window is fully closed, the visible part of the sash stiles, top rail and meeting rails should be of a similar width/ depth (See figure 1).

Sash Operation

Sashes will slide vertically to open and may be operated by sash weights or spiral spring balances. Additionally it will be acceptable for the lower sash to be fitted with 'simplex' hinges or similar, to allow the sash to open inwards for ease of cleaning, providing both sashes retain their vertical sliding operation. The relative proportions of the upper and lower sashes of the new windows must be the same as in the original windows.

Glazing Retention

Glazing should preferably be retained in position with putty but where double glazing units are to be fitted it may be that glazing beads will be required. In these circumstances the glazing beads should be wedge shaped to match a putty fillet. Such a bead would taper from 10mm at the glass to less than 2mm at the outside. The edge of the bead should be flush with, or kept slightly back from the face of the sash. It must never project out from the face of the sash, or an unwelcome shadow line will be created around each pane of glass.

Astragals

Where astragals are required, they must be kept slender to match the thickness of the original astragals, particularly in multiple pane sashes. Typically these astragals may only be 17-19mm wide and it may not be possible to accommodate double glazing in these circumstances (See figure 2). In listed buildings, where the interior of the building can often be as important as the exterior, the internal profile of the astragals must not be crudely over-simplified, but should reproduce traditional moulding appropriate to the period and detail of the building. In certain circumstances, only a faithful reproduction of the original moulded profile can be accepted. Astragals must carry through the sash to completely separate each pane of glass. Dummy astragals stuck to the glass or hinged astragal ‘cassettes’ are not acceptable.

Sashes with ‘horns’

It has become common practice for some manufacturers to extend the side stiles of upper sashes of their sash windows to form "horns" by the way of extra embellishment. Original Georgian and early Victorian windows never have horns, and neither should the windows which replace them. Horns do however appear on some later Victorian and Edwardian sashes. Their use should be contemplated only where there is clear evidence that they existed on the original windows and the design of the horns should match the original.

Construction Materials

Sash and case windows will normally be formed in red pine for painting. It is strongly recommended that the timber be double vacuum pressure impregnated with a suitable preservative, as this can greatly enhance the life of the window for a relatively small increase in cost. As this may not be included as standard by all

window manufacturers, property owners should seek confirmation from their contractor that their windows have been so treated. A brush or spray applied preservative is not nearly as effective as one which is vacuum pressure impregnated. Windows may also be formed in hardwood but in the interests of sustainability property owners may wish to check that the timber has come from an appropriately managed plantation and not a tropical rainforest. Window will, in most circumstances, be required to have a white finish.

External Finishes

As white is the colour of most existing sash and case windows in conservation areas in Aberdeen, this is the colour which new sash and case windows are generally required to be, and other colours will be agreed to, only in exceptional circumstances. It is recommended that new windows be finished externally in white microporous paint applied in accordance with the manufacturers instructions, or white opaque stain, both of which allow the wood to breathe, rather than a polyurethane based gloss or varnish, which may retain moisture entering or already present in the wood, causing eventual failure of the paint finish and accelerated decay in the wood.

Sash and Case 'Lookalike' Windows

These are generally permitted in conservation areas and in flats, but are not acceptable in any listed building whatever its category of listing. Grant assistance is not available for the installation of “lookalike” windows. Lookalike windows will normally be formed in timber and will have upper and lower sashes of the same size as those in the window they are to replace. It is of vital importance that the upper sash is stepped out in front of the lower sash in profile, with the meeting rails fully overlapping, such that the window when closed, is virtually indistinguishable from a true sash and case window.

The sashes however, may have a simple casement or fully reversible method of operation. Any astragals on the original window must be replicated in the new window. (See figure 3 below). Sash frame sections should also be of a similar size as the originals and upper sashes will in general not have horns. Windows consisting of a single casement with a middle transom, all on the one plane, are not acceptable as 'lookalikes'. White upvc vertical sliding windows may be acceptable as 'lookalike' replacements for windows which have no astragals, provided they fully replicate the significant features of timber sash and case windows. Such features would include:

a) no more than 25mm of the outer window frame should be visible at the top and sides, once the window has been fitted into the masonry opening.

b) the meeting rails must fully overlap.

c) the bottom rail of the lower sash must be at least 75mm high.

d) the glass must be recessed from the front face of the sash by at least 10mm.

Replacement of Doors

Traditional entrance doors are usually of solid timber framed construction with inset panelling retained by mouldings. Original external doors should be replaced only when repair is impractical, and only then with a joiner-made exact replica. Doors from 'DIY' chain stores and flush plywood doors with mouldings applied to resemble panelling, are not acceptable substitutes.

Required Drawings

As misunderstandings frequently arise as to what constitutes a "like for like" replacement, drawings will be normally be required showing full details of the sash and case windows to be fitted. To avoid unnecessary duplication of effort, contractors who fit sash and case windows on a regular basis are advised to deposit with Planning & Sustainable Development, a set of drawings showing details of their windows, at a scale of 1:1 or 1:2. Such details would include sections through window head, meeting rails, bottom rail and cill, window jambs and astragals (Se figure 4 and 5). In addition, an elevation of the window should be provided in every case, showing the position of the meeting rails and the arrangement of any astragals.

Grants

If your property is a listed building or is situated within a conservation area, a grant may be available from the Aberdeen City Heritage Trust, towards the cost of repair or, in exceptional circumstances, reinstatement of sash and case windows. Please contact:

Project Officer Aberdeen City Heritage Trust
PO Box 10450
Aberdeen
AB10 1WS
Telephone: 01224 522755 Fax: 01224 636181
Email: info@aberdeenheritage.org,uk
Web: www.aberdeenheritge.org.uk

In addition, grants are available for a range of repair and restoration work, including window replacement, within the Green Townscape Heritage Initiative. Please contact:

Project Manager The Green Townscape Heritage Initiative
The Green THI
Business Hub 4
Marischal College
Broad Street
Aberdeen
AB10 1AB
Telephone: 01224 523318
Email: Gryoung@aberdeencity.gov.uk
Web: www.aberdeebcity.gov.uk/greenthi

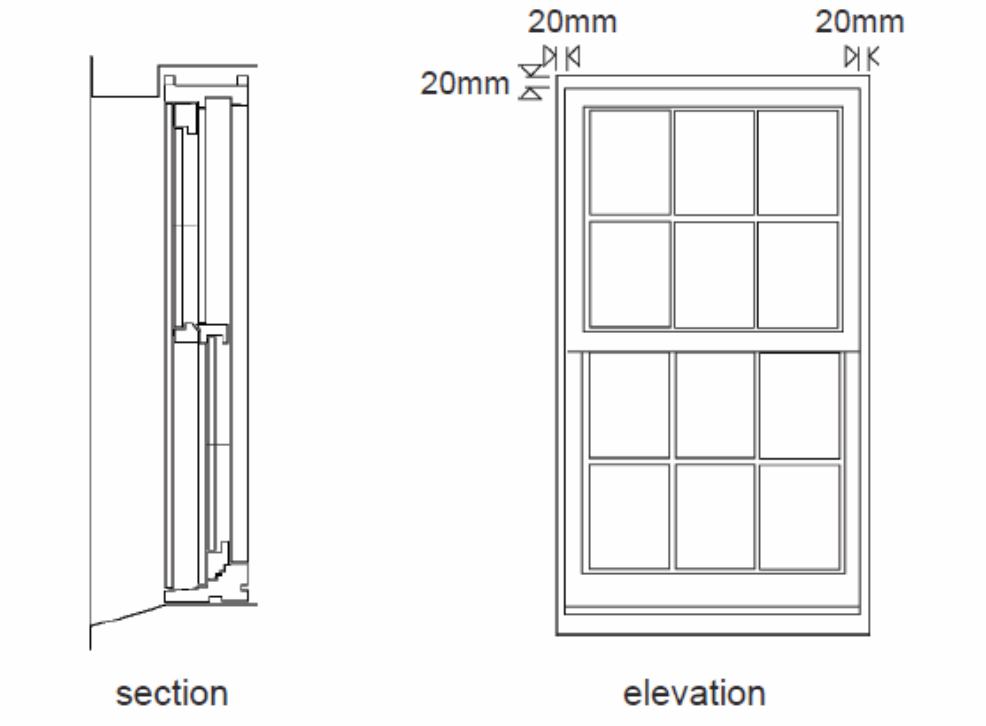
Further Information

To check if your property is listed or lies within a conservation area and for general conservation advice please contact:

Planning and Sustainable Development
Enterprise, Planning & Infrastructure
Aberdeen City Council
Business Hub 4
Ground Floor North
Marischal College
Broad Street
Aberdeen
AB10 1AB
Telephone: 01224 523470
Fax: 01224 636181
Email: pi@aberdeencity.gov.uk

Illustrations

FIGURE 1: WINDOW ILLUSTRATION



a) Sashes slide vertically for normal opening with meeting rails fully overlapping. The lower sash may be hinged to open inwards for ease of cleaning.

b) Visible face of case kept minimal (20mm) on top and sides.

c) Depth of meeting rail equal to visible depth of stiles and top rail.

d) Cill bedded directly onto granite (no sub- cill or spacing piece).

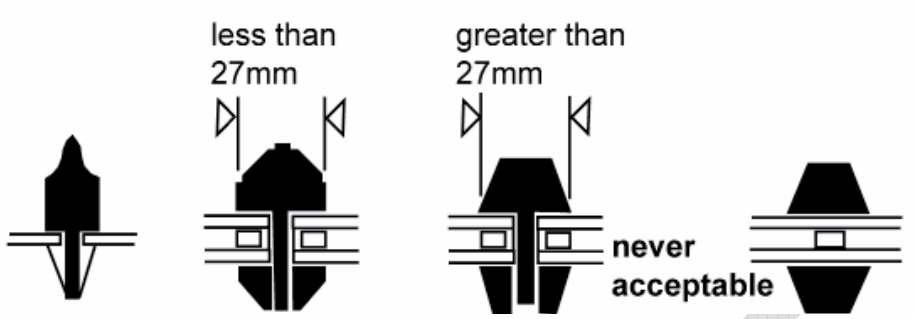
e) Bottom rail of lower sash deeper than others by at least 25mm.

f) Astragals kept slender..

g) No 'horns' on upper sashes unless present on original windows.

h) External finish on windows to be white paint or white opaque stain.

Figure 2: Astragal Illustration



a) Detail of typical 18th century astragal.

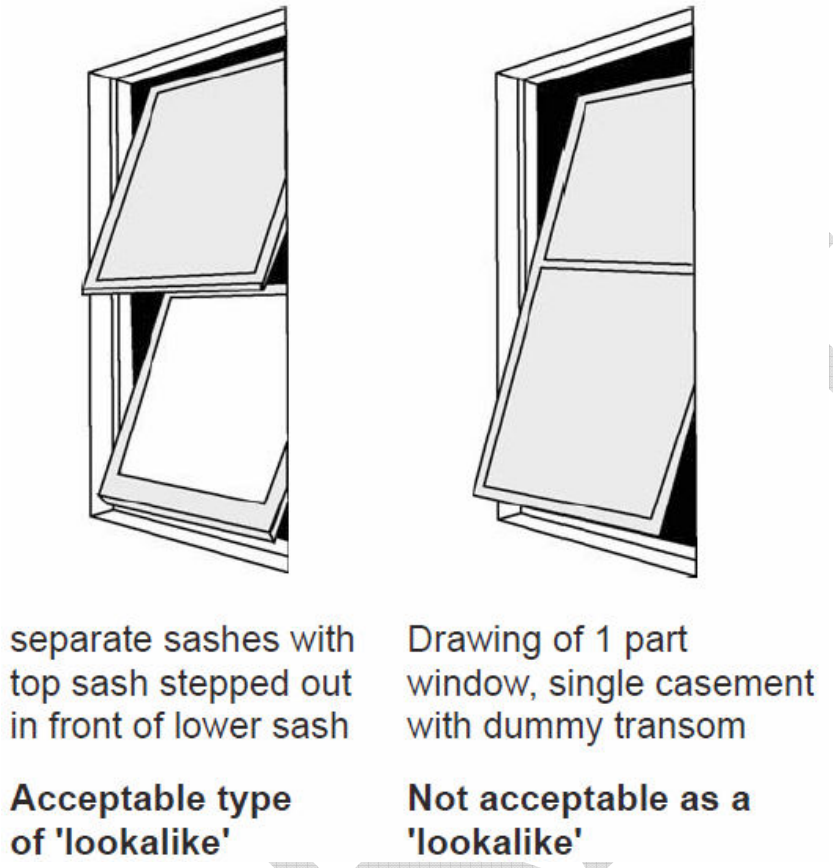
b) In some circumstances double glazed astragalled windows may be acceptable. Astragals must still be slender and if timber beads are used they must be tapered to resemble a putty fillet. This is not necessarily considered to be a 'like for like' replacement for all astragals in single glazed windows, particularly in listed buildings. Planning & Infrastructure should be consulted on every occasion such an astragal is to be employed to establish whether listed building consent is required.

c) Detail of crude, over-sized astagal with heavy and sometimes projecting beads.

d) Detail of astragal applied to surface of glass. Alternatively a spacer bar is sandwiched in the glass to imitate an astragal and is often employed in conjunction with an applied astragal.

c) and d) are never acceptable.

Figure 3: Lookalike Window Illustration



separate sashes with top sash stepped out in front of lower sash

Acceptable type of 'lookalike'

Drawing of 1 part window, single casement with dummy transom

Not acceptable as a 'lookalike'

Figure 4: Vertical section through a typical Sash and Case Window

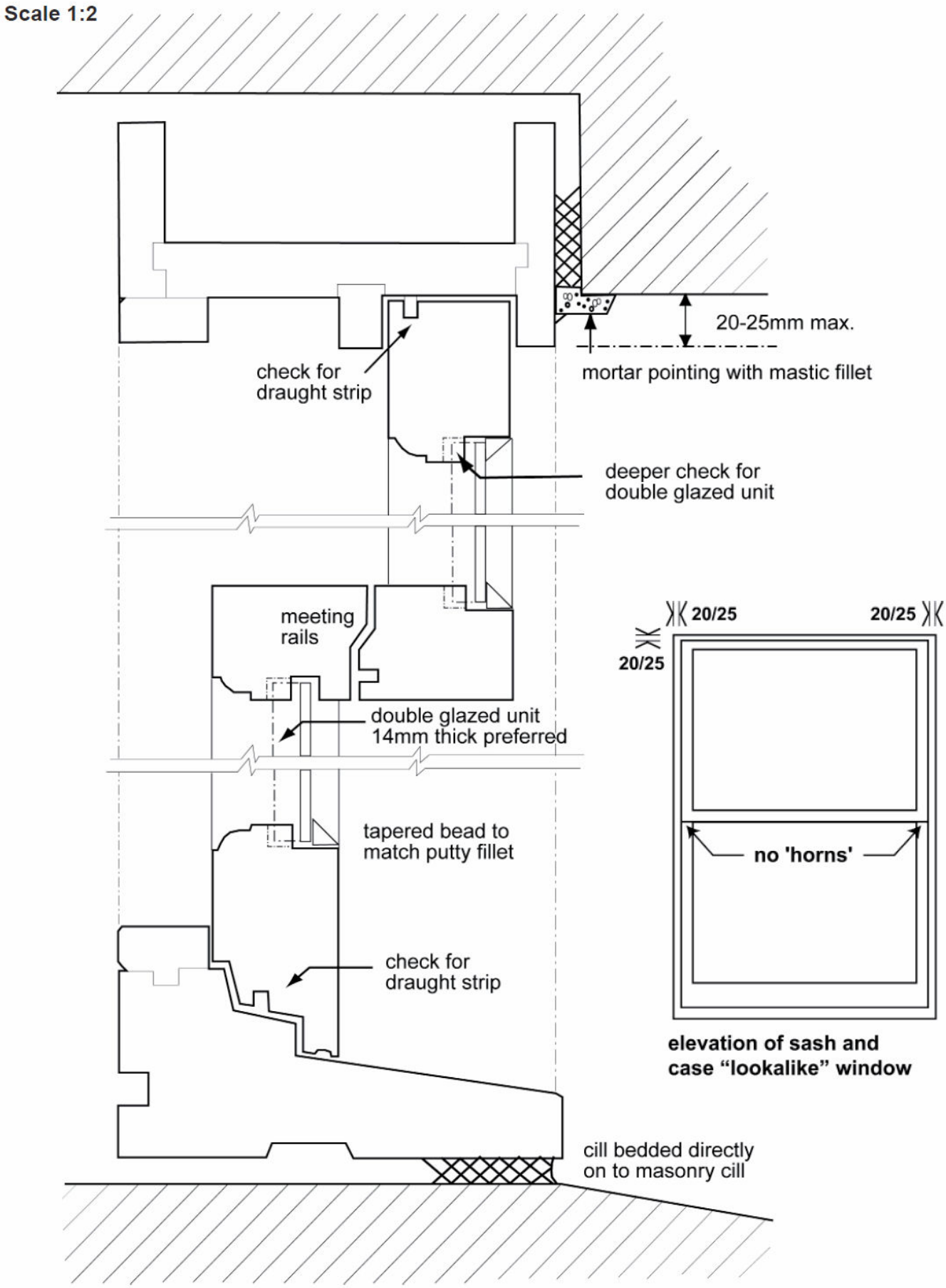


Figure 5: Horizontal section through a typical Sash and Case Window