

INFORM

INFORMATION FOR HISTORIC BUILDING OWNERS

Timber Window Shutters

Introduction

This INFORM provides information on the history of timber window shutters in Scotland and highlights the benefits of their retention and reuse. It describes the methods of their construction and considers the option of bringing shutters back into use. Along with discussing the possibility of reinstatement, it will briefly explain how to care for, repair and maintain these features.

Traditional timber window shutters have formed part of the fabric of many Scottish houses since the late 17th century. In more recent times they have fallen out of fashion with many either being fixed in place or removed altogether.

The history of shutters in Scotland

Timber has been used as a cover for window openings to keep out wind and rain throughout Scotland for centuries. Windows only became glazed in the 16th century when glass became more affordable. Even then, a half-glazed shutter board style of window was common. Technological advances in glass production in the late 17th century led to the introduction of the sash and case window. The detailed design of shutters subtly evolved to compliment this type of glazing and follow ongoing architectural fashions. This further developed to deal with new window configurations such as bays. Shutters of principal rooms would often be highly decorative and panelled to match adjacent mouldings or window configuration, commonly following a splayed window reveal alignment.

The benefits of shutters

Shutters were designed to give a number of benefits. As an original feature they can add to the aesthetic appeal of a room, however they offer an additional list of practical advantages. When in use, shutters can eliminate or allow light as required and help prevent draughts; thus providing better heat retention. They can prevent direct sunlight fading furniture and fabrics within rooms, provide privacy and a degree of security. In addition, shutters can also help reduce external noise levels.

Shutters can also reduce heat loss through a window by up to 50%. This can be demonstrated with thermal imaging which records the amount of heat emitted from a building (Fig. 1).



Fig. 1 Thermal imaging of an elevation. The windows on the bottom left have the shutters closed and are showing a reduced heat loss compared to the open shutters above.

Front cover image Exterior view of timber window shutter, varnished, decorated and panelled, typically to match adjacent interior mouldings.

Shutter construction

Shutters were typically made from high quality imported softwood, although some were made from hardwoods such as oak and mahogany. While the details of the mouldings may vary, most shutters in Scotland were formed of fielded timber panels, made in a similar fashion to panelled doors. The standard construction is a pair of panelled sections, or leaves, fastened to the edges of the window, sometimes with a narrower inner leaf to cover the gap in the middle (Fig. 2). Leaf edges are often rebated to exclude light penetration when shutters are closed (Fig. 3).

Each leaf consists of vertical timbers or stiles which extend its height with horizontal pieces, or rails, at the top and bottom. The mid rail is to strengthen the construction and complement the proportions of the sash window (Fig. 4).

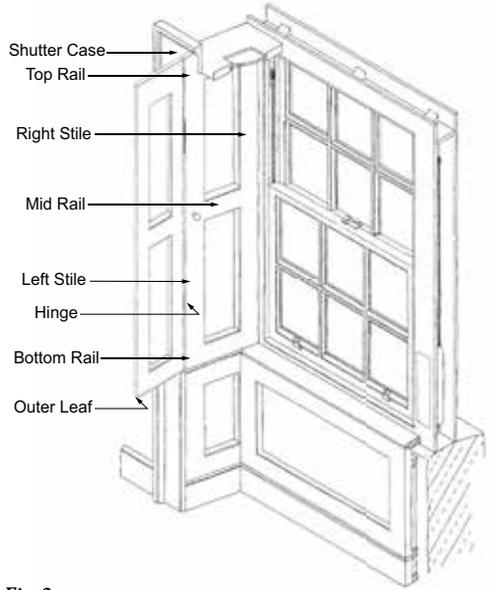


Fig. 2



Fig. 3 Shutter half open showing the outer panelled leaf and the middle leaf, with rebated joints to reduce light penetration when closed.



Fig. 4 A pair of window shutters in the closed position. Note the mid rail is placed to match the centre of the sash window.



Fig. 5 Shutter divided horizontally into two separate hinged sections, designed to allow light into the room whilst maintaining a level of privacy.

The rails and the stiles are fastened with traditional mortice and tenon joints. The panel between the stiles and rails are filled with thinner recessed panels. Earlier shutters typically had flush mouldings at the join between the stiles and recessed panel, and later 19th century ones had raised mouldings.

Occasionally shutters were divided horizontally into two or sometimes three separate hinged sections (Fig. 5). This allowed the householder to close the bottom section whilst leaving the top section open; letting light into the room whilst maintaining a level of privacy.

When open or not in use, the shutter leaves are concealed in boxes called cases (or the housing), making them an unobtrusive fixture of the room (Fig. 6). Today, many householders are unaware that their property is fitted with working shutters due to this neat design feature.

Ironmongery

Window shutters were constructed and installed using simple ironmongery manufactured by a blacksmith or a brass worker. Where possible old fittings should be retained; often their appearance can be improved by removing layers of paint, and in the case of brass fittings, a polish up.

Fastenings

There are two main ways of securing shutters in the closed position. Where security was needed, a flat iron stay bar (or shutter bar) was used. The bar would slot into brackets screwed to the rear side of the shutters and span the width of the window opening (Fig. 7). Another simpler method of less secure closure was the use of a small latch attached to the shutters at meeting stiles to hold the shutters in position when closed (Fig. 8).



Fig. 6 Both leaves of the shutter, (outer and secondary) folded and concealed within recessed housing.



Fig. 7 Iron stay bar in position, spanning the width of the window opening.



Fig. 8 Small latch used to hold shutters in the closed position at the stiles.



Fig. 9 Butt-hinge connection between the shutter and the shutter case.

Hinges

Shutters are fitted using a variety of hinge types. Early Scottish shutters were installed using hinges named after their shape such as H-hinges, L-hinges, T-hinges and butterfly hinges. Since the late 19th century the most common type used was the butt-hinge (Fig.9). Dependant on the height and the weight of the shutter, either two or three butt-hinges would be fitted to each individual shutter leaf, normally held in place with slot headed iron or steel screws.

Certain problems encountered when operating shutters (such as difficulty in opening, or misalignment at the meeting point) can be caused by a fault with the hinges. Often this is simply due to excess paint layers on the metal. This can normally be scraped off in situ, although sometimes the shutters may have to be taken off. Should the shutter still not function properly after hinge repair, it may be that slight movement over the years has led to the shutter becoming tight. This can easily be rectified by planing down the edge of the shutter.

Accessories

The opening and closing of timber shutters was achieved by the use of simple knobs or handles fitted to the shutter's outer leaves. These knobs and handles were initially made of a turned hardwood (Fig. 10), however cast metal and brass were also used (Fig. 11). Ceramic materials were also sometimes used in bathrooms.

Replacement ironmongery

It may be necessary to renew shutter ironmongery due to either wear and tear or loss. Replacement hinges, handles and knobs can be obtained relatively easily, however attention should be paid in trying to match like for like where possible. Missing shutter bars and brackets are simple to make and can be manufactured by a blacksmith.

Bringing shutters back into use

Shutters that survive out of use have often become inoperable due to years of over-painting, sealing the shutters into the case. This may be simply remedied by the careful use of a craft knife, cutting through the paint at the shutter edges and gently prising it open. If this is not successful it may be that a previous owner has nailed or screwed the shutters to their housing; close inspection should reveal if this is the case. Once again great care should be taken by gently unscrewing or slowly withdrawing any existing nails, making sure not to damage surrounding timberwork. It should be noted that not all moulded shutters were designed to be used; by the late 19th century in some buildings they were simply decorative panels. The absence of hinges will quickly show whether they are operable.



Fig. 10 Painted timber shutter knob fitted to shutter's outer leaf.



Fig. 11 Brass shutter knob fitted to shutter's outer leaf.



Fig. 12 Newly instated insulated timber shutters.

Shutter reinstatement

Should it be found that the original shutters no longer exist, the option of having replacement shutters custom made can be considered. A joiner should be able to manufacture and install new shutters designed to complement the style and period of the house. The correct design should be informed by surviving original joinery in the property and comparable contemporary houses nearby. New timber shutters can be insulated (Fig. 12), and in conjunction with draught proofing measures to the window, will improve the energy efficiency of the opening.

Care and maintenance

Fully operational window shutters require little care and maintenance. Hinges can be kept in good working order by the application of a little oil. As with all internal timber the need for re-painting is occasionally necessary. Careful consideration should be given before re-painting, especially on the backs, as original paint schemes may survive, including wood graining and other effects. Historically, shutters would have been painted using paints that contained lead, so caution must be taken if previous layers of paint are to be removed. If paint removal is planned, shutters should not be 'dipped' in tanks of paint stripper; this removes the colour from the wood, shrinks and distorts the panels, and degrades the glue in the joints.

Shutter panels can occasionally be susceptible to cracking or splitting which can normally be attributed to changes in moisture levels within the timber. Small cracks should be filled with a wood filler, with wider cracks filled with slivers of timber and then sanded smooth before re-decoration.

Conclusion

Historic timber window shutters are a valuable asset to any property and their retention and reuse is encouraged. Their care and maintenance will greatly benefit any householder. Shutters properly looked after provide an attractive feature to any window, reduce energy loss and greatly enhance the appeal and character of our traditional Scottish homes.

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Historic Scotland. *Short Guide: Sash and Case Windows*. Edinburgh: Historic Scotland, 2009.

Historic Scotland. *Short Guide 1: Fabric Improvements for Energy Efficiency in Traditional Buildings*. Edinburgh: Historic Scotland, 2012.

Jackson, A. and D. Hay. *Period House: Complete Care, Repair and Restoration*. London: HarperCollins UK, 2005.

Macey, W., ed. *Specifications in Detail*. Dorset: Donhead Publishing Ltd, 2009.

Roche, N. *Research Report: The Historical Development of the Sash and Case Window in Scotland*. Edinburgh: Historic Scotland, 2001.

Historic Environment Scotland's INFORM Guide and Short Guide series contain further information on the conservation and maintenance of traditional buildings. These publications are free and available from our technical conservation website, address above.

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