LOMAX +WOOD

Made-to-order timber windows and doors

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# An Illustrated Guide to Sash Windows

2018

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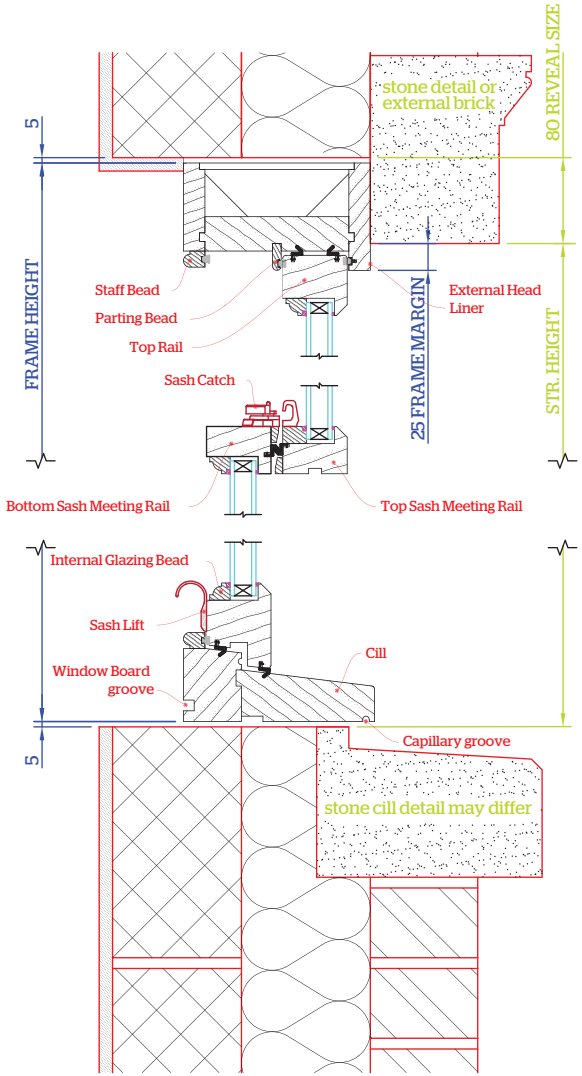
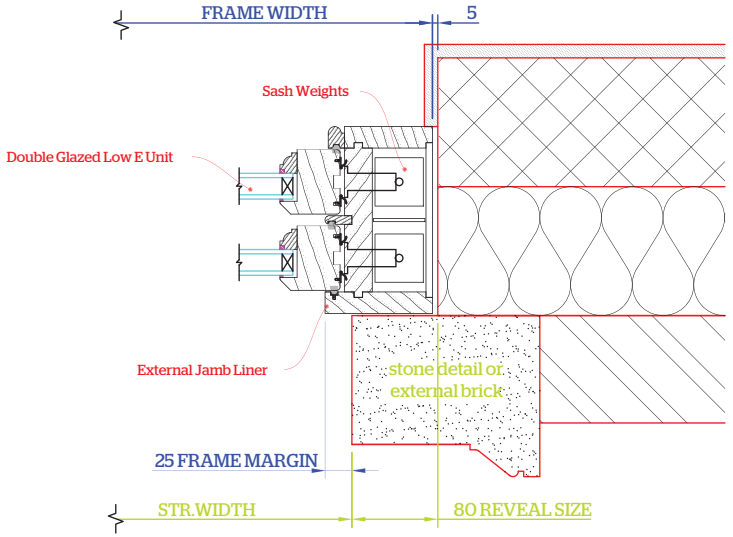
This general guide on sash windows is intended, through the use of photos and CAD drawings, to provide a brief guide as to the terminology, type and detailing when referring to sash windows. It is not a history as this has been covered by others in detail. The photos used are from a mixture of Lomax + Wood projects and snap shots taken when out and about in order to capture a range of period details.

# Typical Details - Box Sash Window in Recessed Reveal

The frame margin is critical for Box Sash windows. Usually 25mm externally and the remainder of the lining, in this case 75mm, is recessed at the head and each jamb.

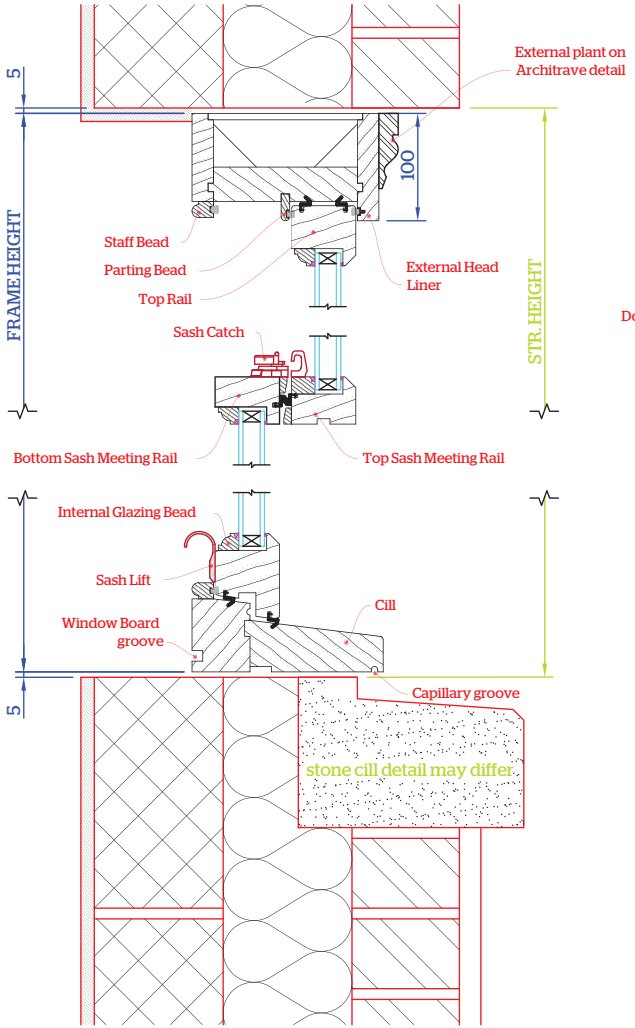
The recessed reveal is the best window detail and why the Sash windows have endured.

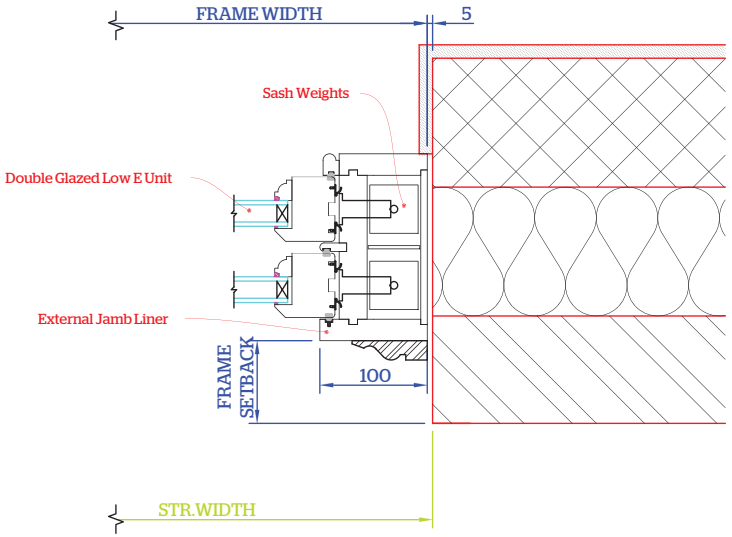


# Typical Details - Box Sash Window in a Flush Reveal

Not as common as the recessed reveal, it is simply not as good performance wise or aeasthetically.

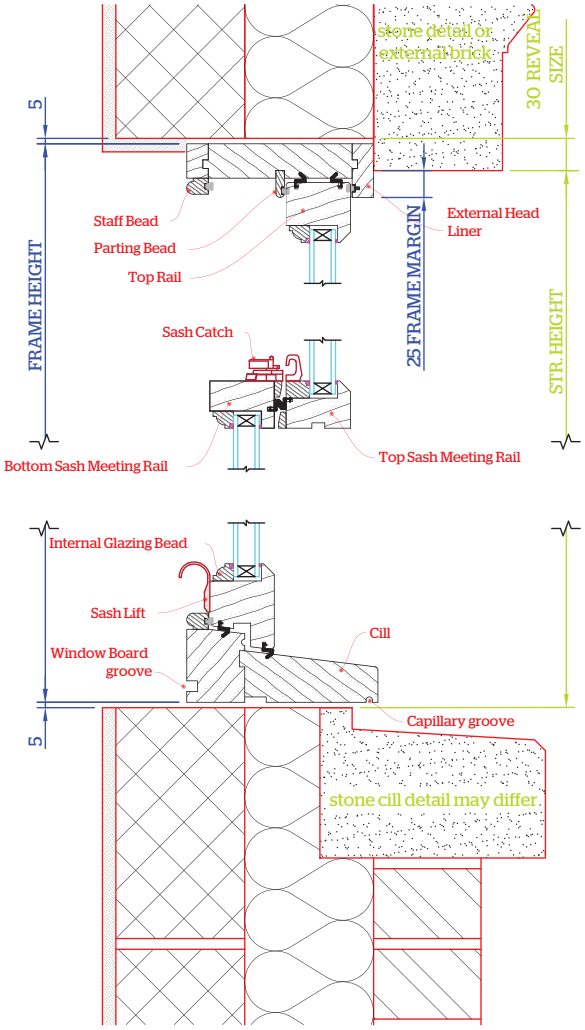


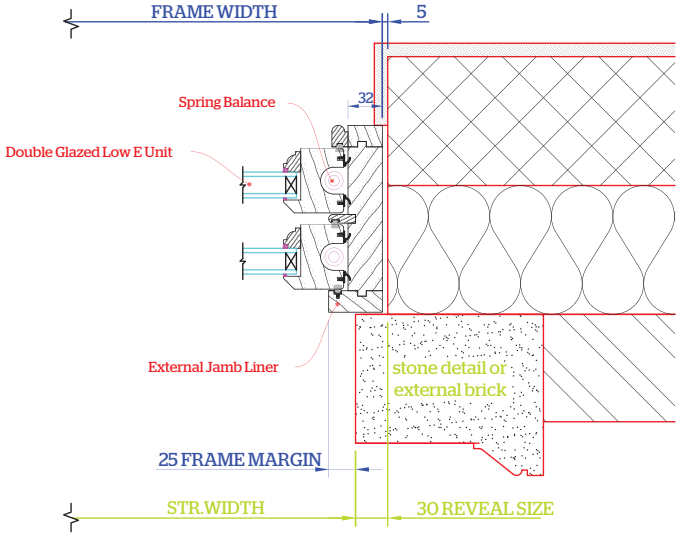



# Typical Details - Spring Sash Window in a Recessed Reveal

The Spring Sash window can offer the same external sightlines as the Box frame more economically.

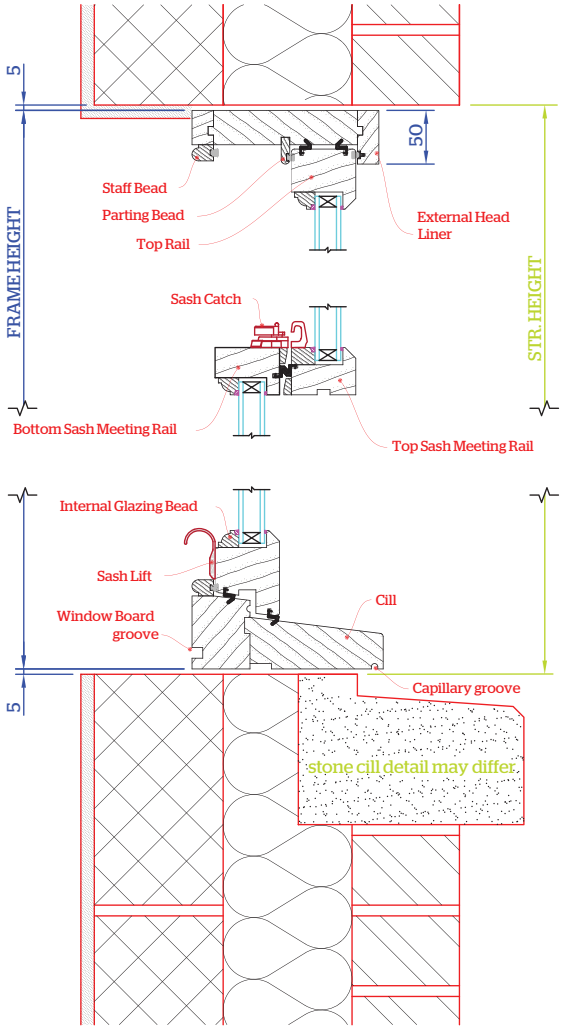
The recessed reveal is the best window detail and why the Sash windows have endured.

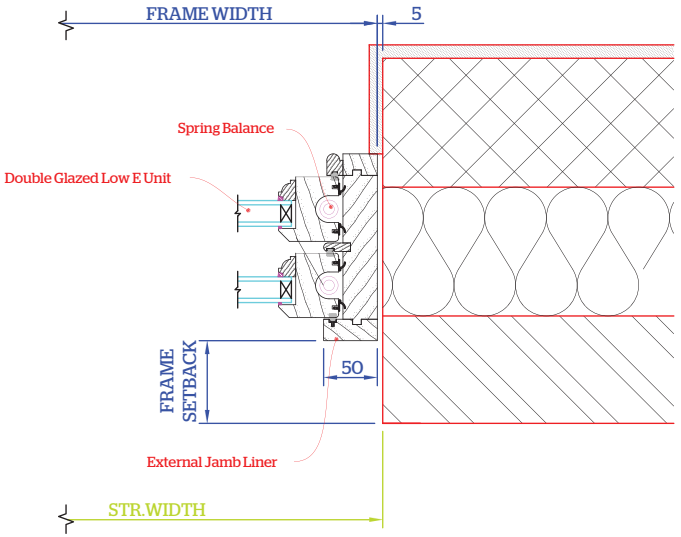


# Typical Details - Spring Sash Window in a Flush Reveal

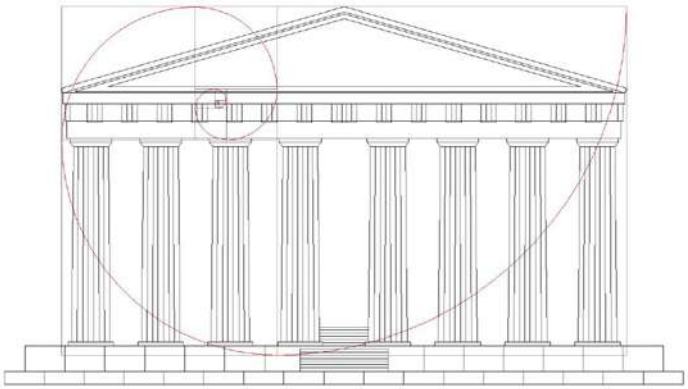
The Spring Balanced Sash window in a flush reveal ensures the aperture has a higher proportion of glass than frame, as apposed to the 100mm Box Sash frame head and jamb liners.

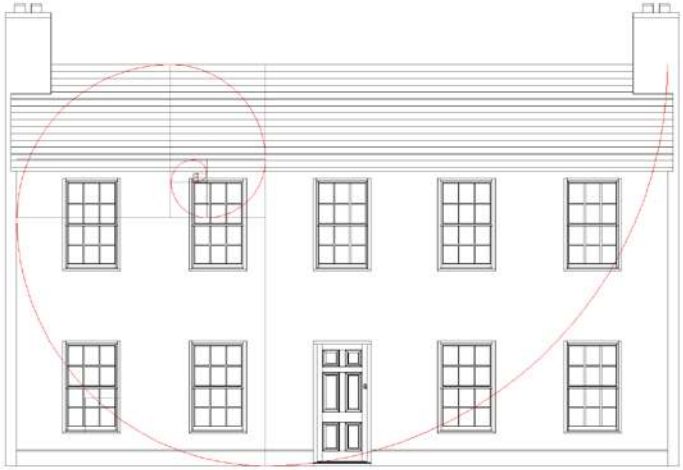


# The Golden Ratio in Windows

The golden ratio, also known as the divine proportion, golden mean, or golden section, is a number often encountered when taking the ratios of distances in simple geometric figures. The golden ratio has been used as early as 430 BC and is still being used today in modern architecture.



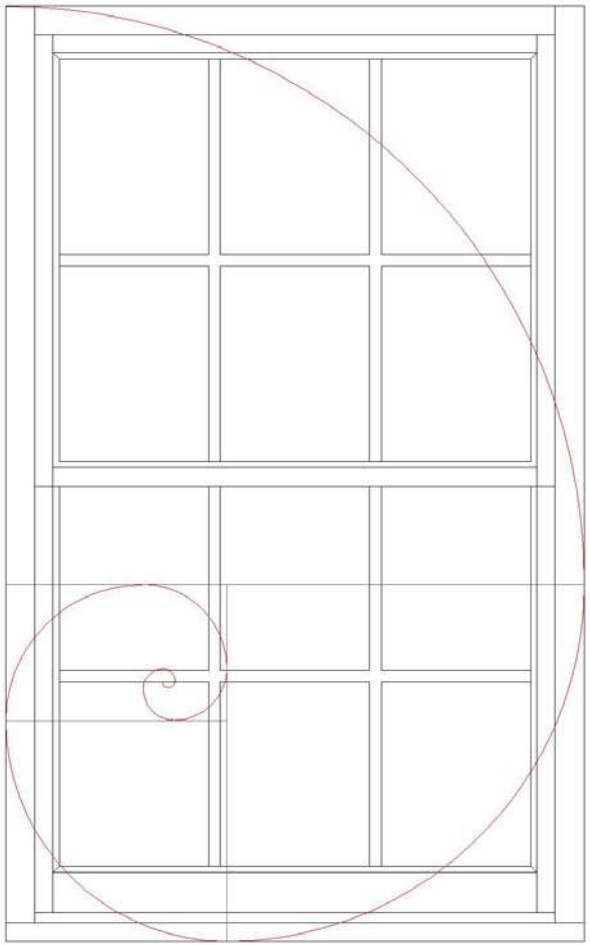


The Greeks referred to the golden ratio as Phi. While the more widely known “pi” is the ratio of the circumference of a circle to its diameter, “phi” is the ratio of line segments that occur when a line is divided in a specific way. Unlike “pi”, which is a transcendental number, “phi” is the solution to a quadratic equation. It creates an ideal rectangle. Phi or the Golden Ratio consists of two quantities (1 and 1.168). The ratio between the sum of those two quantities and the larger one of them is the same as the ratio between the larger one and the smaller. In architectural terms this takes the form of the Golden Rectangle, where the ratio of the shorter side to the longer is 1:1.618.

In windows this would mean that if an opening was to be 1000mm wide the opening height would need to be 1618mm.

# The Golden Ratio in Windows

The Wood family, through Dennis Wood who worked in partnership with Derek Mumford, have designed and supplied quality timber windows and doors for over sixty years.  Our in house knowledge and customer service means we are repeatedly specified by architects, developers and contractors. With many orders also being received through private recommendation.



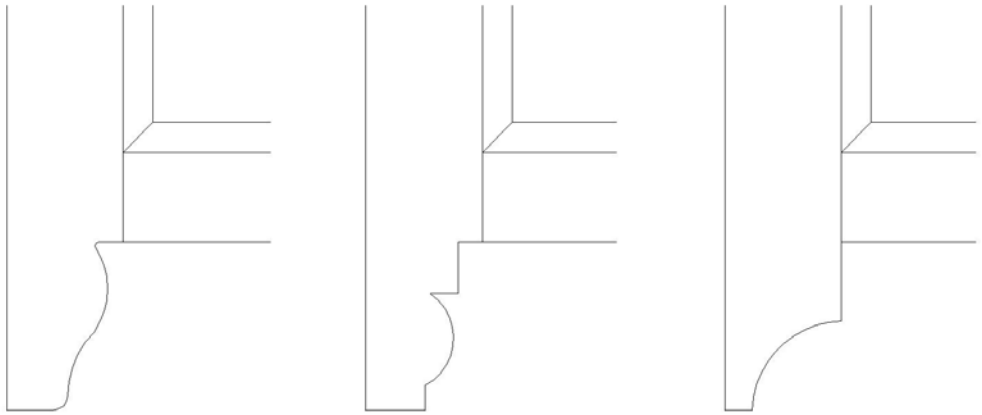
Lomax+Wood supply made-to-order timber sash windows, casements and wooden doors to the commercial and consumer-based heritage and contemporary markets. All the ranges of these stylish, high performance timber windows and wooden doors are designed in house and are manufactured to suit your requirements.

# History of the Sash Horn

The sash horn was introduced to the top sash in the mid-Victoria period.

The reason for the horn being incorporated in the sash was due to ever practical Victorian engineering, following the introduction of cylinder glass manufacturing which started to be used around the 1850's.

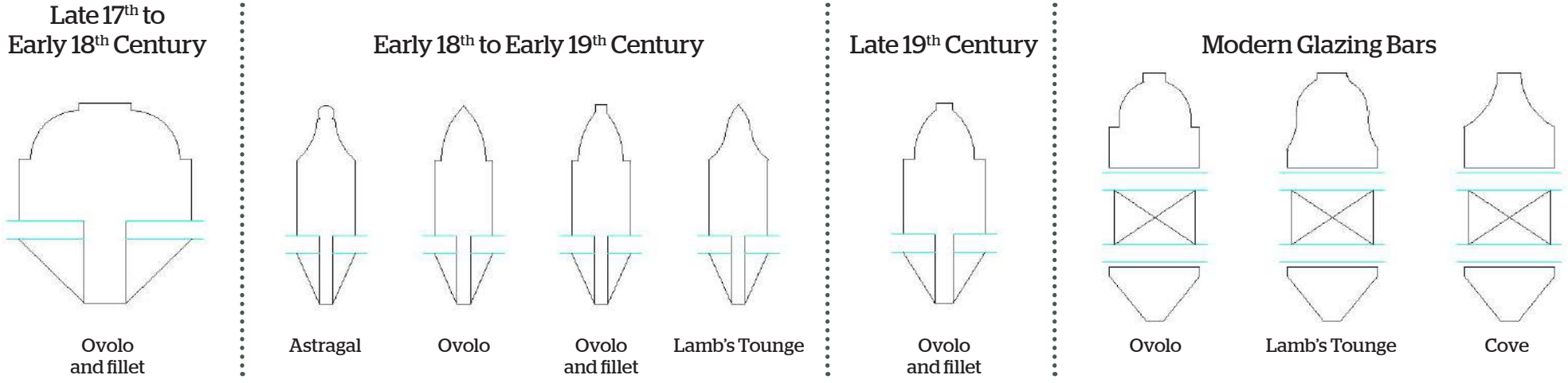
Cylinder glass allowed the introduction of larger panes of glass, which also reduced the necessity for glazing bars. Without the glazing bars the sash frame became too weak and the mid-rails started to drop. These short decorative protrusions, sash horns, allowed joiners to have a closed tenon joint which solved the problem.



# Glazing Bars

Glazing bars were originally incorporated to accommodate the maximum size glass panes available, as glass technology improved it became more cost effective to produce larger panes without glazing bars. Hence the variation in patterns from the classic 6/6 Georgian pattern through to the non-bar Victorian sash windows.

The table below illustrates the different types of glazing bars, varying in width, depth and structure. Glazing bars today are introduced for aesthetic reasons to recreate period sightlines. The bars are applied onto single double-glazed units with a spacer sitting inside the unit to create an illusion of individual double-glazed units. Thin double-glazed units are available on the market, which purport to allow individual units separated by true glazing bars, but their long-term performance is in doubt. They certainly do not offer the same acoustic and thermal performance of the deeper technically superior glass units.



# Gallery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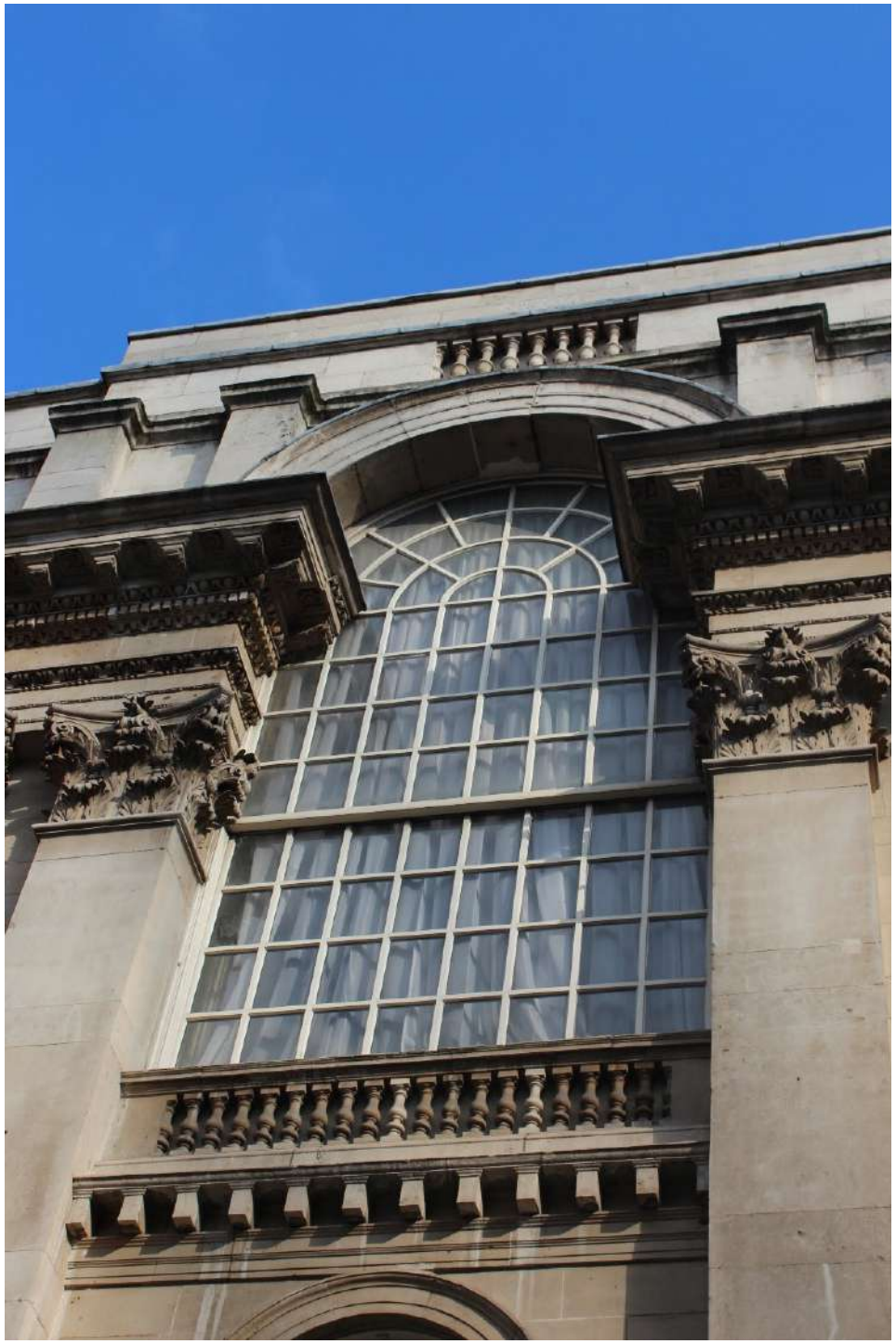


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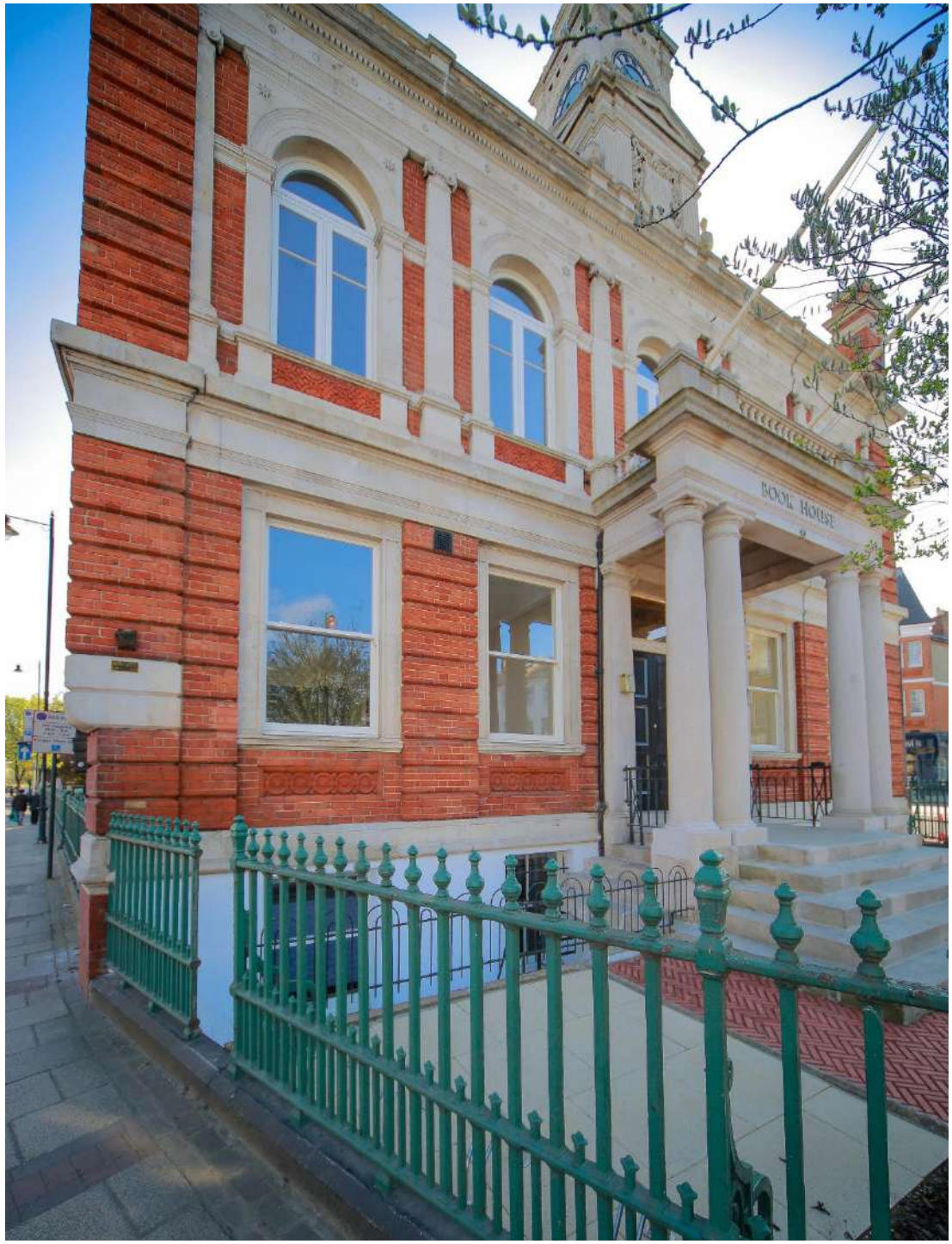
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