



# STORM

BESPOKE SECONDARY GLAZING



Bringing the comforts  
of modern living  
to **YOUR** property

HANDCRAFTED BESPOKE SECONDARY  
GLAZING FOR HISTORIC, PERIOD  
AND LISTED PROPERTIES



# STORM

BESPOKE SECONDARY GLAZING

## HAND CRAFTED BESPOKE SECONDARY GLAZING FOR HISTORIC, PERIOD AND LISTED PROPERTIES

Storm Windows is a family-run company with 21 years experience specialising in the manufacture and installation of custom-made secondary glazing.

We work on historic, period and listed properties,  
both commercial and residential nationwide.

Our skilled team is trusted by conservationists, architects and homeowners to help preserve original and feature windows, however unusual or out of shape they may be.

We guarantee the same care and attention to detail,  
whether we're working on one window or 100.

## GLAZING MATTERS

We recognise the increasing pressure on listed property owners to meet tighter planning regulations and ever-increasing conservation regulations and requirements. Because we manufacture each individual product ourselves, we can make units which are out-of-square, shaped, arched or curved, and suitable for many different types of windows, including sash, casement and York sliders.

The system we use makes the visual impact minimal, both internally and externally, whilst helping to cut draughts from ageing primary windows, considerably improving thermal efficiency and providing noise reduction.

Our clients range from private homeowners to organisations such as English Heritage, the National Trust, The Landmark Trust, Historic Scotland and Cadw.





*Our glazing will ensure you reap the rewards of modern glazing with a warmer, quieter and more energy-efficient space while preserving your property's character.*

## BENEFITS OF OUR GLAZING SYSTEM



Boosts thermal efficiency and eliminates draughts.



Provides outstanding acoustic protection from outside noise.



Discreet, virtually invisible design preserves the character of your property.



Bringing the comforts of modern living to historic, period and listed properties.



SPECIALIST SHAPE WINDOW WITH BESPOKE SECONDARY GLAZING



CASEMENT WINDOW



## THERMAL EFFICIENCY

Listed and classic properties are often poorly insulated and suffer from heat loss, particularly because of their primary windows.

Older, ill-fitting frames and thin glass leads to draughts and a lack of thermal efficiency.

**BUT IT DOESN'T HAVE TO BE LIKE THAT!**

Owning a listed property and being subject to various planning restrictions doesn't preclude you from making your home more energy efficient

Our bespoke secondary glazing is virtually invisible, so it does not contravene listed restrictions. Our magnetic system helps create an excellent thermal barrier preventing cold transferring from the primary glazing, as good as or better than double-glazing.

### THERMAL BENEFITS OF OUR GLAZING INCLUDES:

Warmer and cosier property.

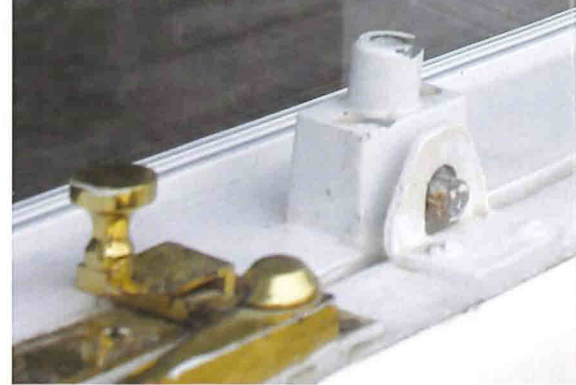
Elimination of draughts.

Reduction in heating bills.

Improved carbon footprint.

# WARMER & COSIER

**INSTALLING  
OUR BESPOKE  
SECONDARY  
GLAZING CAN  
HELP YOU  
TO ACHIEVE  
EFFICIENCY  
SAVINGS OF UP  
TO 60% IN YOUR  
PROPERTY!**





## EXPERTLY PRECISE

Accurate measuring by our fitters and precise glazing by our skilled craftsmen ensures that our secondary glazing fits exactly, even in irregularly shaped frames.

## GLASS MATTERS

Glazing the units with Pilkington K glass, which has a hard coating on one side reflects heat back into the room, helping to achieve optimum thermal performance.

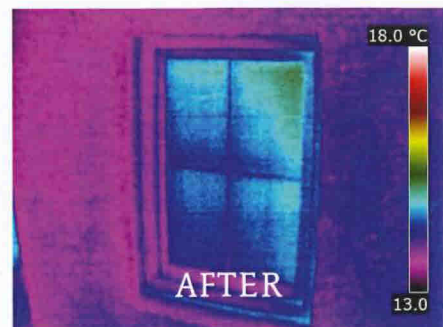
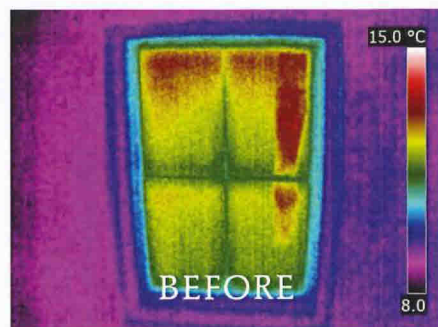
## PERFORMANCE TESTING

Under the instruction of Historic Scotland's Technical Conservation Group an independent test was conducted by Paul Baker of Glasgow Caledonian University to discover the performance of traditional windows.

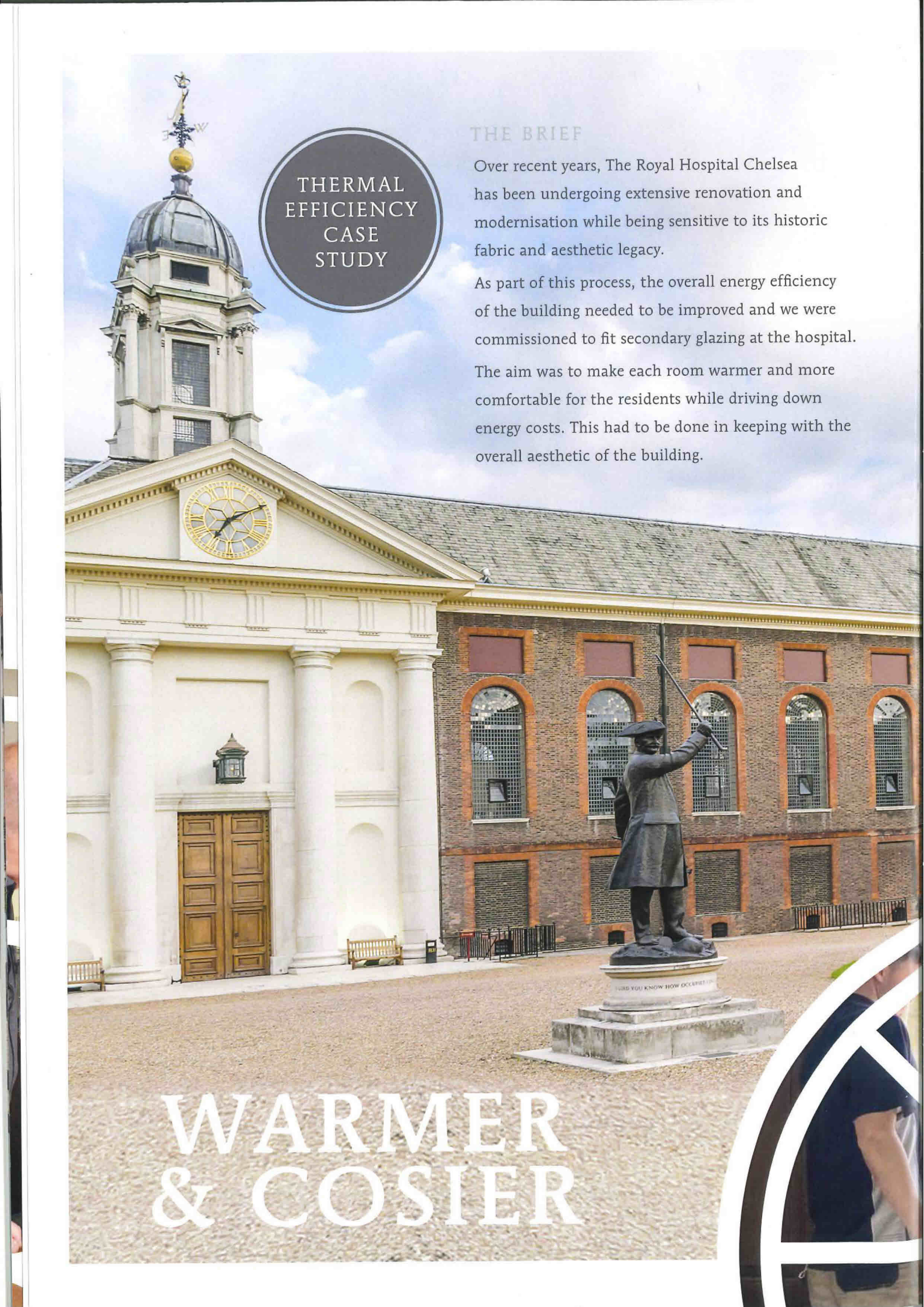
The table below summarises the results of the research on the thermal performance of traditional windows through the installation of Storm Windows bespoke secondary glazing. The thermal image clearly shows the heat loss through the primary glazing before and after secondary glazing is installed.

GLAZING OPTION	U-Value W/m <sup>2</sup> K achieved
Single glazing only	5.5
Single glazing with secondary glazing - 4mm toughened safety glass	2.3
Single glazing with secondary glazing - 4mm Pilkington K glass (low emissivity)	1.6

The thermal images below clearly shows the heat loss through the primary glazing before secondary glazing is installed, and the effect afterwards.



SECONDARY GLAZING  
INSTALLED INTO A  
SASH WINDOW WITH  
ORIGINAL SHUTTERS



THERMAL  
EFFICIENCY  
CASE  
STUDY

## THE BRIEF

Over recent years, The Royal Hospital Chelsea has been undergoing extensive renovation and modernisation while being sensitive to its historic fabric and aesthetic legacy.

As part of this process, the overall energy efficiency of the building needed to be improved and we were commissioned to fit secondary glazing at the hospital.

The aim was to make each room warmer and more comfortable for the residents while driving down energy costs. This had to be done in keeping with the overall aesthetic of the building.

WARMER  
& COSIER

“We were exploring how to reduce the heat loss from the building, and the various options we had to bear in mind was that it should be a minimal intervention and appearance on the inside and that you shouldn't be aware that there was secondary glazing from the outside. Of all the ones we looked at, the Storm Windows system seemed to be the best. There is no doubt it works very well, you can stand outside the building, and you have no idea that there is any difference to the appearance of the window, and inside you have draught-proofing and thermal reduction that secondary glazing gives you”  
*Peregrine Bryant Architects*



## OUR WORK

Working with London-based architects Peregrine Bryant, we were asked to make the living quarters of the Chelsea Pensioners' Grade I and II listed home more comfortable, warmer and quieter.

Our glazing system required rigorous testing, passing through numerous stages of approval, and we made a number of adaptations to our design to create units that perfectly fit their requirements. We also used a new, non-reflective glass which we imported from Germany.

## THE RESULT

The new glazing unit design allows the windows to be fully opened, which wasn't possible before. It also has better ventilation and is spring adapted, so it's a more balanced system and easier to control.

## BENEFITS OF OUR GLAZING INCLUDE:



Warmer and more comfortable rooms for the residents.



Reduction in energy costs and improvement in the overall thermal efficiency of the building.



A reduction in outside noise making the rooms more peaceful for residents.



Easy access to original windows for cleaning and ventilation.



CHELSEA  
PENSIONERS

# THE ROYAL HOSPITAL CHELSEA



# ACOUSTIC PROTECTION

Outside noise can be a real nuisance and seriously affect your quality of life, especially in an older building where the original glazing may be quite thin.

With restraints of living in a listed building, standard double glazing is not usually a suitable option when dealing with noise reduction - but secondary glazing is.

Adding an additional internal layer of Storm's bespoke secondary glazing to a primary window can vastly improve the noise reduction in your building.

## ACOUSTIC BENEFITS OF OUR GLAZING INCLUDES:

Reduction in outside noise.

Quieter more peaceful property.

Improved quality of life.

Improved carbon footprint.

# PEACEFUL & QUIET







SECONDARY GLAZING  
BEING INSTALLED INTO A  
CASEMENT WINDOW

## RIGOROUS TESTING

Following stringent acoustic testing at Salford University, we now have irrefutable proof of their auditory protective properties and can confidently declare our sealed glazing units are the slimmest on the market to offer such high-performance protection from both drafts and noise.

The test involved installing Storm's glazing units in an aperture between two rooms, producing a known sound field in the source room and then measuring the resultant sound level difference in the receiving room. The tests covered a frequency range of 50Hz to 5,000Hz.

Slimline unit - 39dB	Installed into staff bead
Horizontal sliding unit - 41dB	Installed into the reveal
Lower vertical unit - 40dB	Installed into staff bead

*The above readings were achieved in conjunction with an original sash window.*



TEST RESULTS  
SHOWED  
STORM'S GLAZING  
CONSISTENTLY  
REDUCES NOISE  
LEVELS

ACOUSTIC  
PROTECTION  
CASE  
STUDY



PEACEFUL & QUIET



“I really cannot praise Storm Windows enough. My house is warmer, quieter, brighter and altogether more comfortable. Everyone was so helpful and efficient.”

Owner, Mrs Gillian

## THE BRIEF

This beautiful property dates back to around 1730 and having been painstakingly renovated, it is now considered to be one of the most important buildings in the conservation area to which it belongs. The original casement windows remain intact and form an important part of the overall look and style of the house but unfortunately, they are glazed with very thin glass. This meant that the house could be very draughty and occasionally very noisy.

## OUR WORK

The current owners were not prepared to part with the attractive small-paned casements, so they decided that secondary glazing was the best solution for the problems they were facing. We installed our horizontal sliding units into all of the beautiful casement windows. Not only is the secondary glazing virtually invisible, but the primary windows are also still accessible.

## THE RESULT

With secondary glazing in place, the house is noticeably quieter, warmer and comfortable. Furthermore, the owner no longer has to wipe up condensation every morning as she used to, and the house feels considerably brighter.

## BENEFITS OF OUR GLAZING INCLUDE:



Quieter, more peaceful home for the owner.



Reduction in draughts.



Less condensation on original casement windows.



Warmer and more energy-efficient property.

## BROOK HOUSE COTTAGE



# DISCREET AND VIRTUALLY INVISIBLE DESIGN

Our system has been designed to be virtually invisible inside and out – perfect for listed buildings and period and historic properties.

Storm's unique approach to secondary glazing provides a discreet and sensitive solution to achieving a more efficient property both thermally and acoustically.

Our skilled craftsmen are trusted by conservationists, architects, and homeowners across the UK to design and install glazing that does not contravene listed restrictions.

## AESTHETIC BENEFITS OF OUR GLAZING INCLUDES:

Discreet design that preserves the character of your property.

Unique glazing that complies with planning and listed building regulations.

Simple magnetic system that reduces the need for visible fixings.

A property that reaps all the benefits of modern glazing.

# DISCREET & UNOBTRUSIVE





SECONDARY GLAZING  
INSTALLED INTO A SASH  
WINDOW WHICH ALLOWS  
ACCESS FOR VENTILATION  
AS WELL AS FULL USE OF THE  
ORIGINAL SHUTTERS



### A PLEASING FINISH

Our system is predominantly a magnetic system, making it easy to operate and remove for cleaning and maintenance. It also reduces the need for visible fixings, helping us maintain an aesthetically pleasing finish.

We do not use bulky wooden sub-frames – the whole idea of our system is to make it virtually invisible – both internally and externally.

### MADE TO MEASURE

Our windows are individually measured and individually hand crafted – not mass produced – and are also engineered to extremely close tolerances.

### A QUESTION OF COLOUR

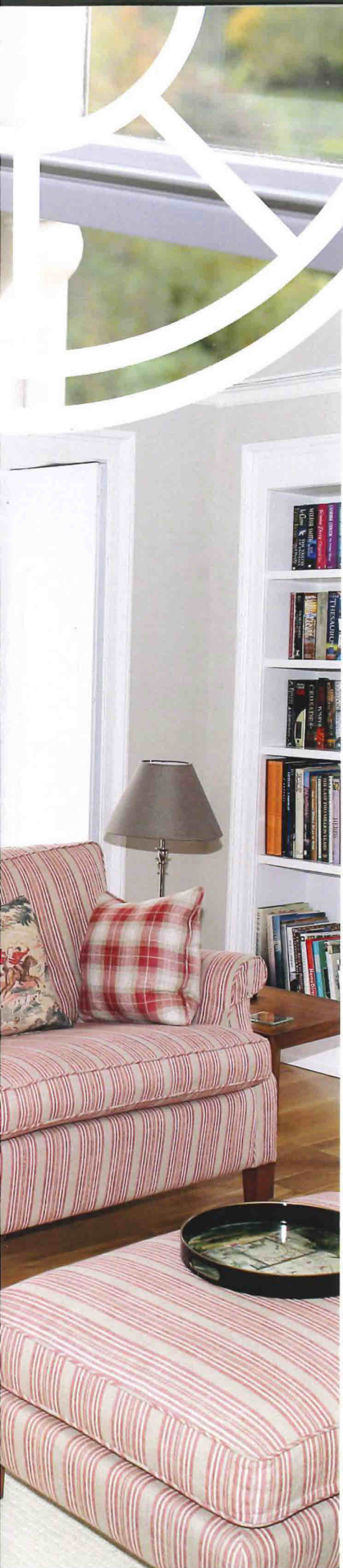
The light-gauge aluminium framework is powder-coated in a selection of RAL or BS number to compliment the interior decor and/or existing primary windows.





AESTHETIC  
DESIGN  
CASE  
STUDY

DISCREET &  
UNOBTRUSIVE



## THE BRIEF

This stunning property was built around 1700, with some older parts which probably date back as far as the Tudor period. When the current owners bought it in 2013, the property needed refurbishing, having issues with damp and certain structural decay. None of the windows were the same or indeed square, so the owners were delighted to find Storm Windows on the internet, as making the glazing ourselves means we can customise it to fit perfectly in older properties.

## OUR WORK

Secondary glazing was fitted across the property, making sure that the shutters were still able to close properly after fitting. Our magnetic system makes access to the primary windows easy too.

## THE RESULT

"We always had a beautiful house, and now we have one that is warm with no draughts. The slimline frame means the glazing is unobtrusive, and the fact that the frames are made to the actual shape and size of each window means that they have not spoilt the look of the rooms at all indeed you don't notice them."

*Owner, Mr Fern*

## BENEFITS OF OUR GLAZING INCLUDE:



Glazing that allows access to the original windows and the shutter to function.



Discreet and unobtrusive design preserves the character of the property.

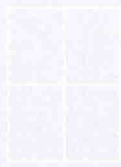


Bespoke glazing hand crafted for each.



Warmer and more energy-efficient property.

## THE MANOR HOUSE

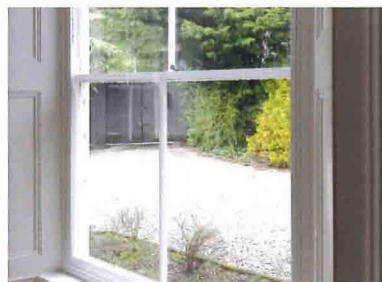
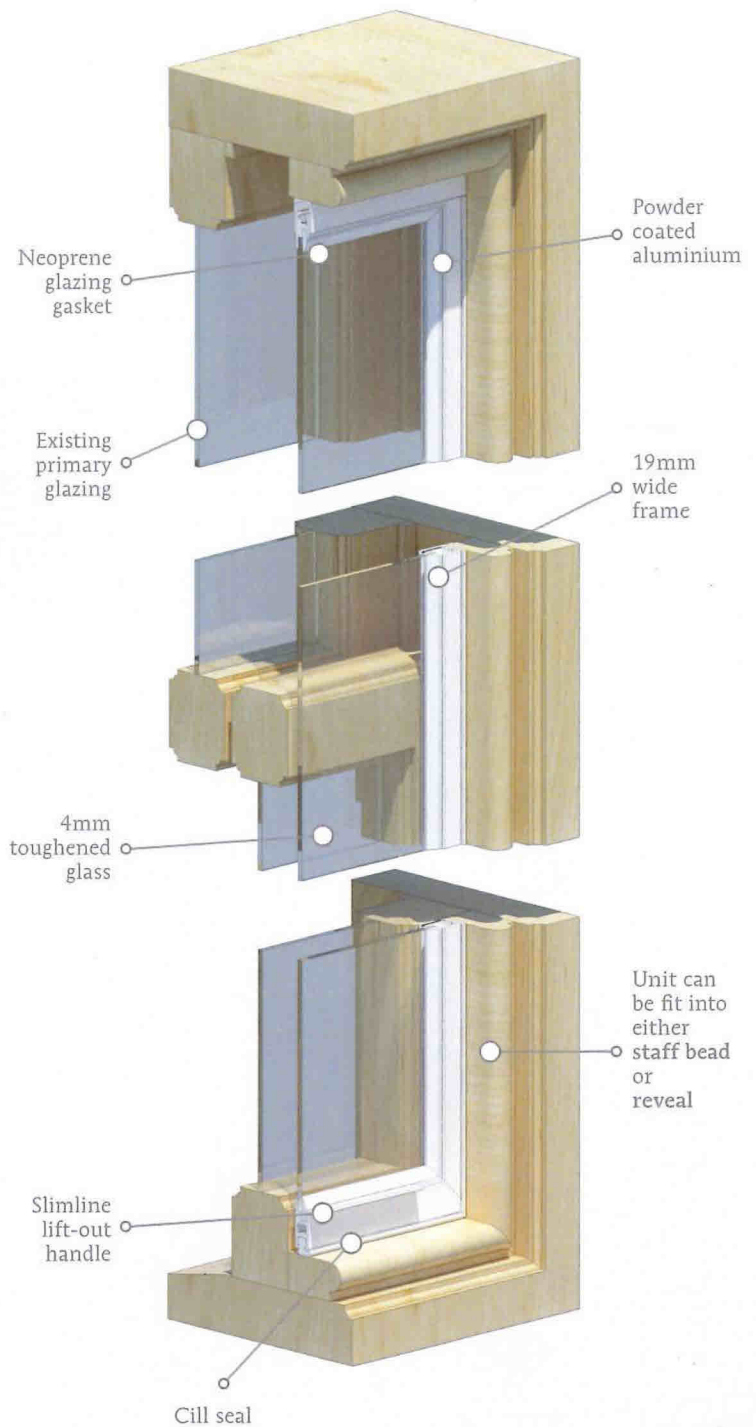


## SLIMLINE UNIT

A single-pane non-opening unit is held in place using our magnetic system, which is easily removable for cleaning and maintenance purposes.

### FEATURES

- ✔ Adapted to be face fixed to provide a solution for French doors and fanlights.
- ✔ Made to accommodate the idiosyncrasies of primary windows and can be engineered to facilitate arch/bow tops, curved-in-plan, circular and many other shapes.
- ✔ Installed into the reveal or inset into the staff beads of a sash window to enable the retention of working internal shutters - often a requirement of conservation officers.
- ✔ Powder-coated to a selection of RAL, BS number or wood effect finish to complement your existing decor and provide you with an aesthetically pleasing result, which is practically invisible both internally and externally.



Warwick  
& Carter



Plaster  
& Putty



Discreet  
& Inobtrusive

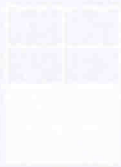
### SPECIFICATIONS

Toughened glass to BS EN 12150 as standard

Aluminium - 6063T6 alloy to BS EN 755

Neoprene gasket and cill seal to BS738b



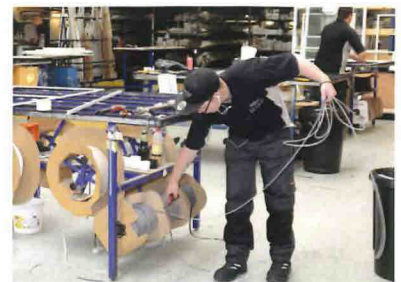
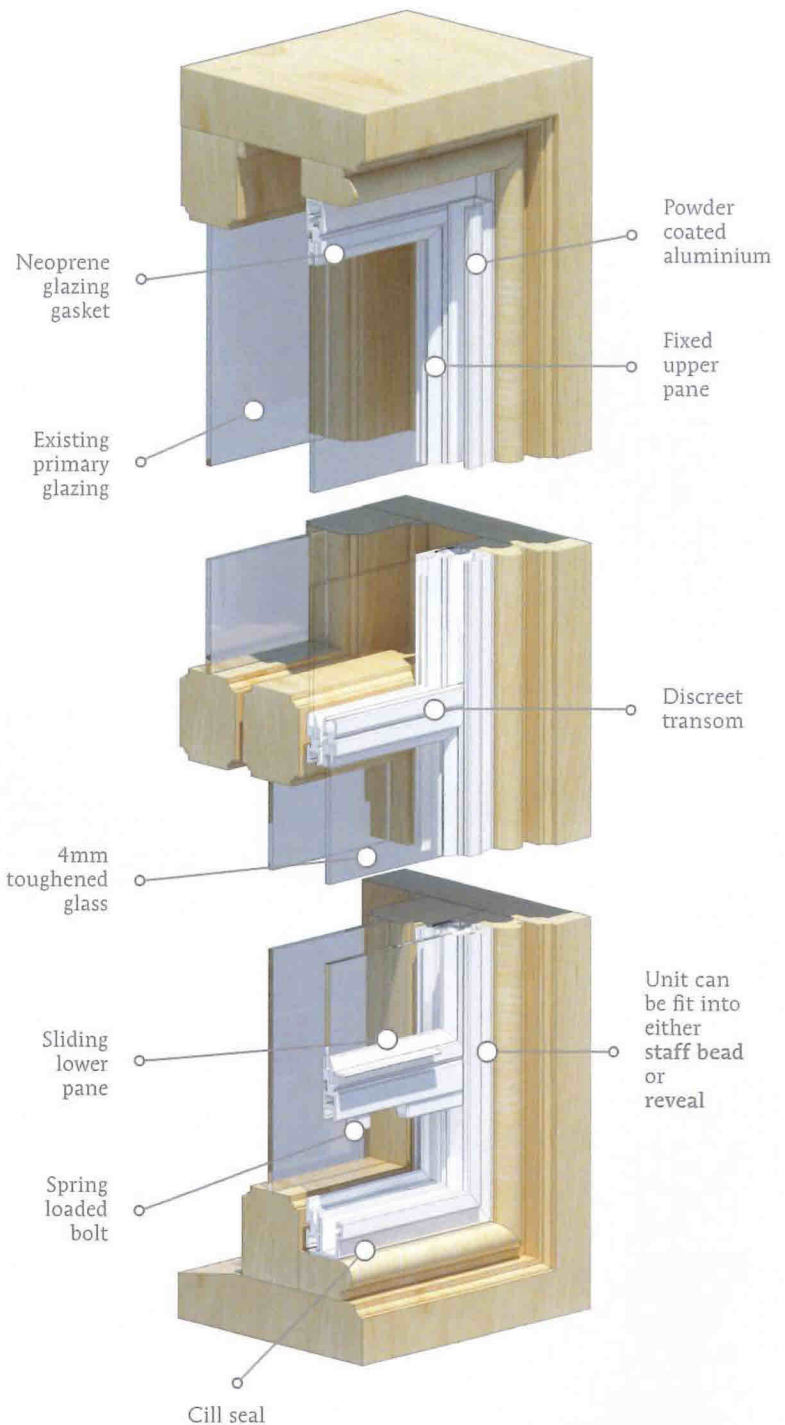


## LOWER VERTICAL SLIDING SASH UNIT

The lower vertical sliding sash unit is an ideal solution for original sash windows which require regular access or ventilation. It allows the lower pane to be opened, whilst the upper pane remains fixed.

### FEATURES

- ✔ Internal hidden mechanism providing spring-assisted opening for easy access.
- ✔ Made to accommodate the individuality of primary windows and can be engineered to facilitate arch/bow tops and even curved in-plan.
- ✔ Glazing sight lines matched up with your existing bars to ensure windows retain their period features without being compromised.
- ✔ Mounted within the staff beads of a sash window enabling the retention of working internal shutters.
- ✔ Powder-coated to a selection of RAL, BS number or wood effect finish to complement your existing decor and provide you with a perfect finish, virtually invisible inside and out.

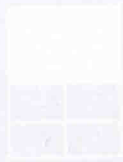


### SPECIFICATIONS

Toughened glass to BS EN 12150 as standard

Aluminium - 6063T6 alloy to BS EN 755

Neoprene gasket and cill seal to BS738b



## UPPER VERTICAL SLIDING SASH UNIT

An ideal solution for original sash windows which require regular access or ventilation. It allows the upper pane to be opened whilst the lower pane remains fixed.

### FEATURES

- ✔ Held in place using our magnetic system and is easily removable for cleaning and maintenance.
- ✔ Made to accommodate the idiosyncrasies of primary windows and can be engineered to facilitate arch/bow tops, curved-in-plan, circular and many other shapes.
- ✔ Virtually invisible glazing which can hardly be seen inside the building, or from outside.
- ✔ Installed into the reveal or inset into the staff beads of a sash window to enable the retention of working internal shutters.
- ✔ Powder-coated to a selection of RAL, BS number or wood effect finish to complement your existing decor.



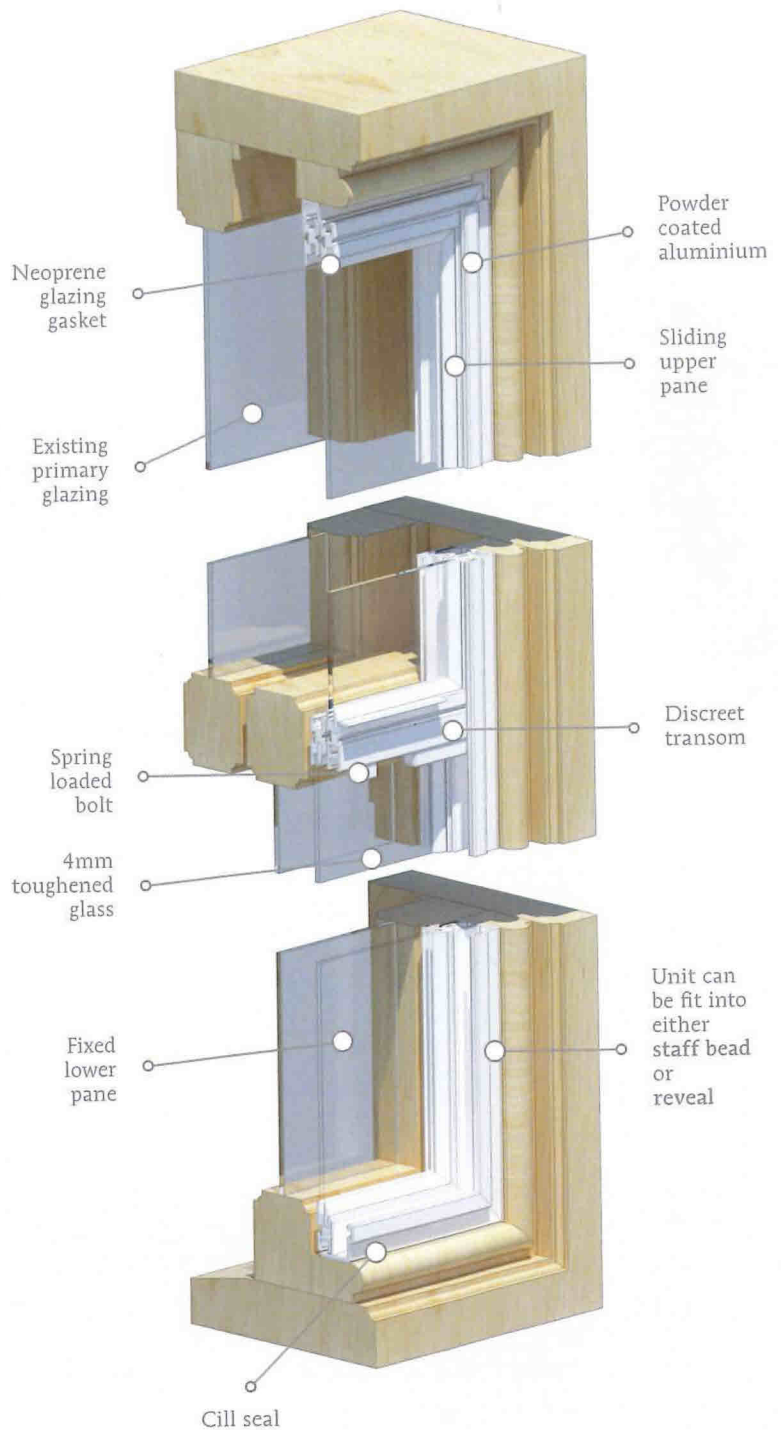
warmer  
& color



peaceful  
& quiet



discreet &  
unobtrusive

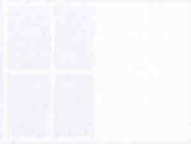


### SPECIFICATIONS

Toughened glass to BS EN 12150 as standard

Aluminium - 6063T6 alloy to BS EN 755

Neoprene gasket and cill seal to BS738b



## HORIZONTAL SLIDING UNIT

Ideal for casement windows that require regular ventilation.



Available in casement



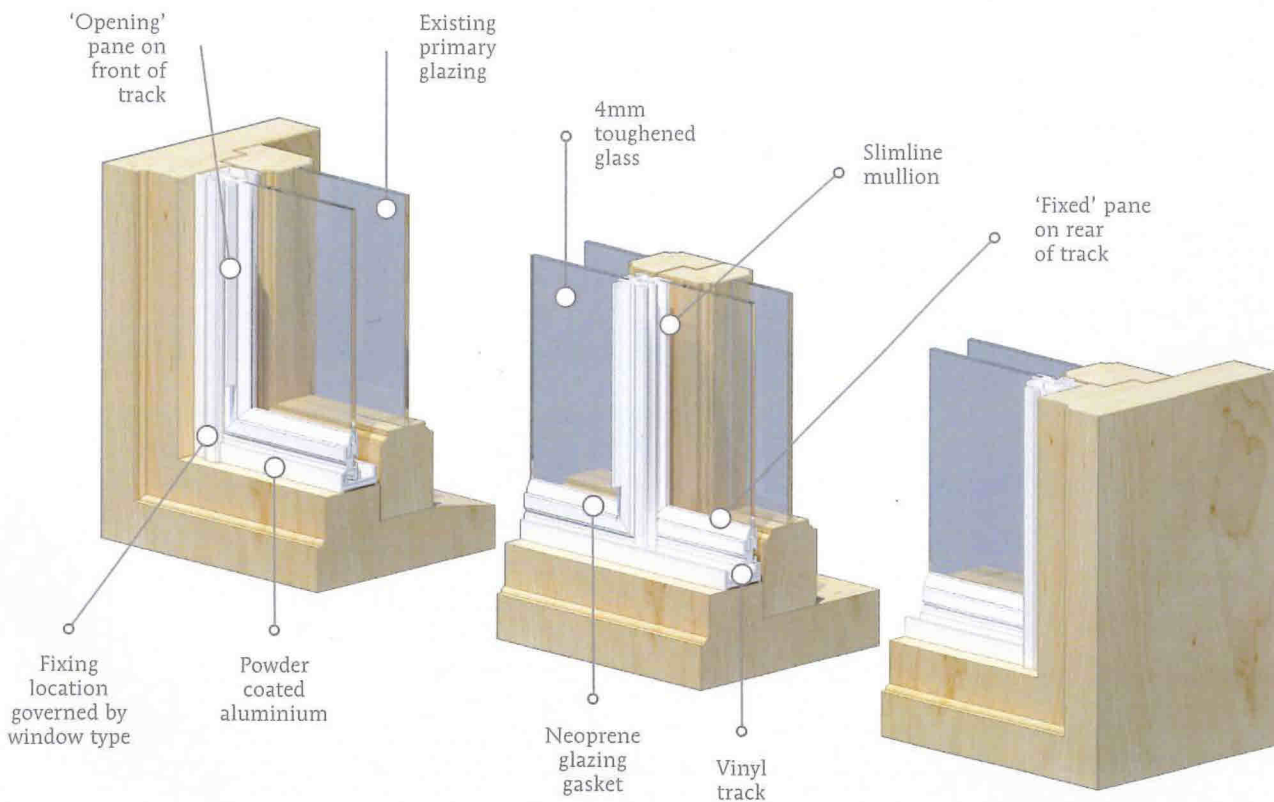
General purpose



Discreet & unobtrusive

## FEATURES

- Installed into the reveals, ensuring minimal impact on the primary windows whilst maintaining full functionality.
- Secondary glazing sight lines matched up with existing mullions to ensure that windows retain their period features without being hindered by secondary glazing - a priority when preserving the character of your historic property whilst improving thermal efficiency.
- Can be manufactured from two, three or more panes to suit the primary window.
- Made to fit the exact nature of your primary windows and can be engineered to accommodate out of true cills and heads and even splayed reveals.
- Easily removable to allow cleaning and maintenance of primary windows.
- Powder-coated to a selection of RAL, BS numbers or wood effect finish to complement your existing decor and provide you with a perfect finish, which is virtually invisible, outside and in.

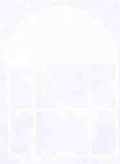


### SPECIFICATIONS

Toughened glass to BS EN 12150 as standard

Aluminium - 6063T6 alloy to BS EN 755

Neoprene gasket and cill seal to BS738b



## SPECIALIST SHAPES

Storm's engineering background has enabled us to push the boundaries of secondary glazing manufacture and create secondary glazing, which accommodates primary windows of almost any shape.

### FEATURES

- Accurate measuring to very tight tolerances and create templates for our production department to use during the manufacture of the shaped units.
- Our hand crafted techniques and fabrications using aluminium section mean we can manipulate our materials to follow the lines of the primary window.
- Confidently create a vast range of shaped units including, but not limited to, Gothic arches, Norman arches, ogee, circular, archtops and curved-in-plan.
- Powder-coated to a selection of RAL, BS numbers or wood effect finish to complement your existing decor and provide you with an aesthetically pleasing result, which is practically invisible both internally and externally.



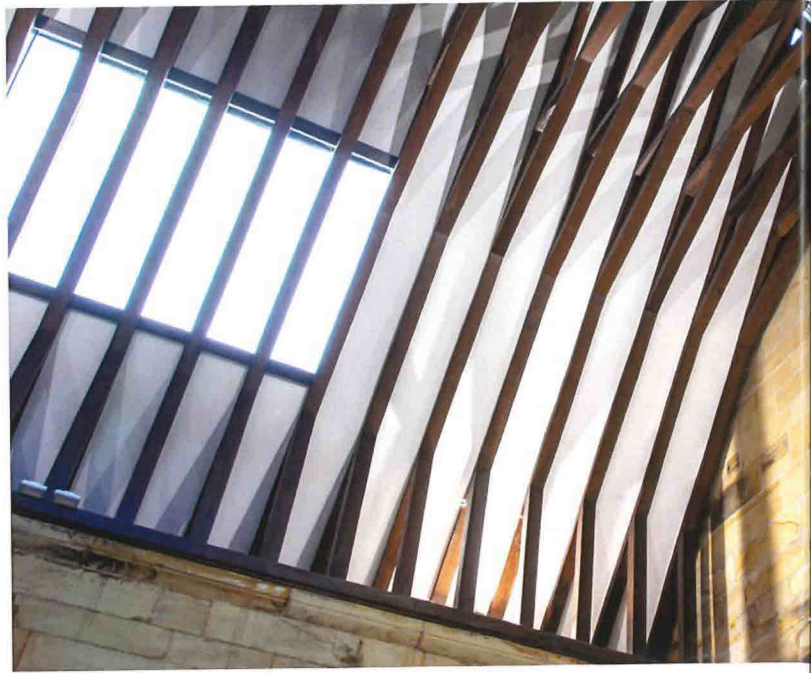
Warmer  
Weather



Peaceful  
Autumn

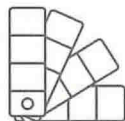


Stronger &  
Durable



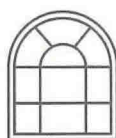


# CHOOSE YOUR FINISHING TOUCHES



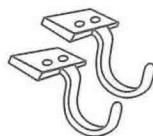
## COLOUR

As standard, our secondary glazing is powder-coated white (RAL9910 satin) and we are able to powder-coat our section to complement your interior decor to a selection of RAL or BS numbers.



## GLASS

All Storm Windows secondary glazing is glazed with 4mm toughened safety glass as standard. We also offer a low emissivity glass ( Pilkington 'K' glass) for optimum thermal insulation.



## IRONMONGERY

When installing our secondary glazing into the staff beads of the primary glazing, we often need to change the ironmongery because of the projection of the sash lifts from the primary glazing. We have various different finishes to suit your current decoration, including antique bronze, brass, chrome and brushed chrome.



## FILM

We can offer a full range of films such as UV, solar rejection, privacy and safety bomb-blast films to our secondary glazing.



## FINANCE OPTIONS

Now you don't have to wait or save up before having a home that's warm, cosy and draught-free!

### HOW THE PROCESS WORKS

- ✔ Our payment plan is available for secondary glazing system installations between £1,500 and £25,000.
- ✔ A third of the total supply and installation cost is required as a deposit with the remaining two-thirds financed interest free for a year.
- ✔ We submit an application to our finance partner, Novuna Personal Finance, a trading style of Mitsubishi HC Capital UK PLC, who then manages all aspects of the credit application and agreement process from start to finish. It can take as little as 30 minutes to receive confirmation of eligibility.
- ✔ The work is then scheduled into our workshop on receipt of a deposit and installation will normally take place within 8 weeks.
- ✔ Interest free payments only begin once installation is complete.

*Sounds easy...and it is!*

For more information call us on  
01384 636365 and speak to the team.

Authorised and regulated by the Financial Conduct Authority. All credit is subject to application and status and available to UK residents aged 18 or over. All finance is supplied by Mitsubishi HC Capital UK PLC. For full terms and conditions visit our website at [www.stormwindows.co.uk/payment-plan](http://www.stormwindows.co.uk/payment-plan).



Storm Directors Oliver Parkes,  
Jayne Griffiths and Mitchell Reece



## HOW WE WORK

### PROJECT MANAGEMENT

From initial contact with our sales and estimating representatives in our office, through to production in our workshop and finally the installation, all orders are dealt with solely by our in-house team, who work closely together to deal with your enquiries and manage the progression of your order.

### SURVEYING

We have our own dedicated team of surveyors who work nationwide, offering a free consultation service.

This initial survey ensures we fully understand your requirements and therefore offer the most appropriate secondary glazing products to suit your primary windows and retain their operation.

### INSTALLATION

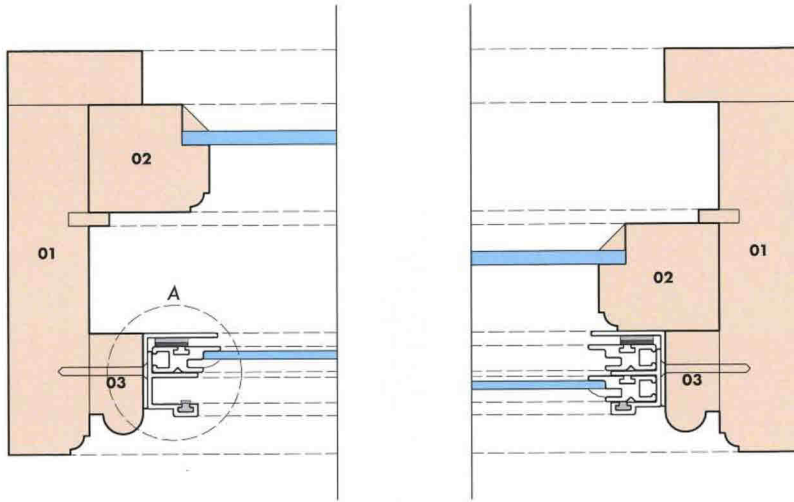
Our surveyors carry out the installations of our secondary glazing, allowing continuity of service from start to finish of your project, and helping achieve trusted working relationships with our customers.

### PEACE OF MIND

All our installations come with a 5-year guarantee.

# TECHNICAL LIBRARY

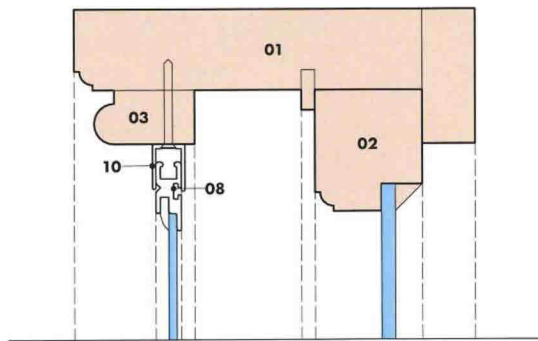
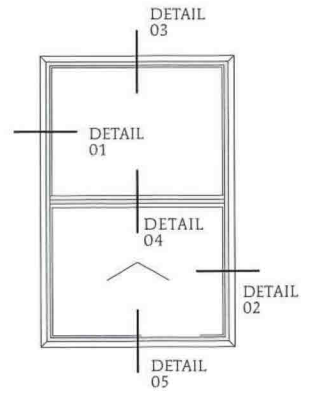
## LOWER VERTICAL SLIDING SASH UNIT STAFF BEADS



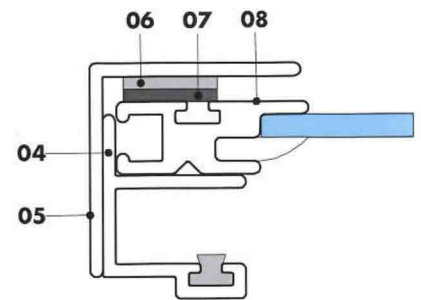
DETAIL 01

DETAIL 02

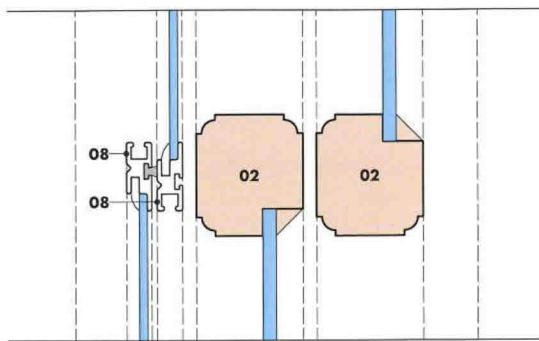
### DETAIL KEY



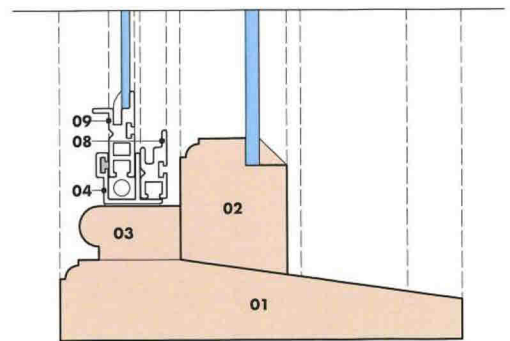
DETAIL 03



DETAIL A - SCALE 1:1



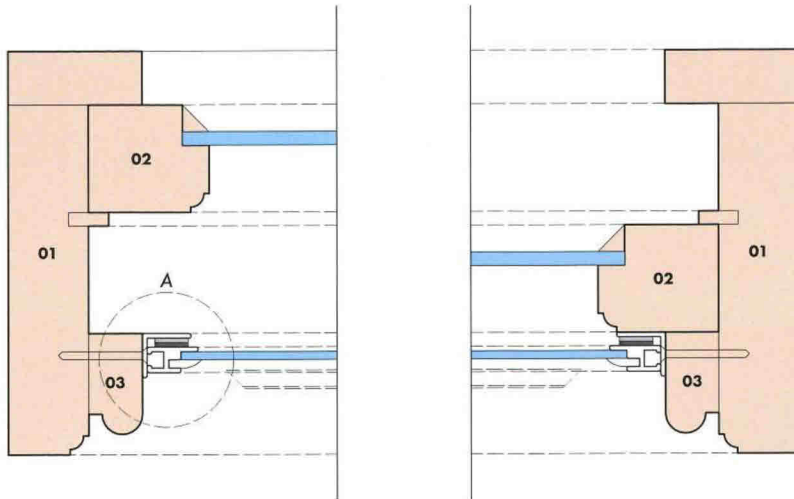
DETAIL 04



DETAIL 05



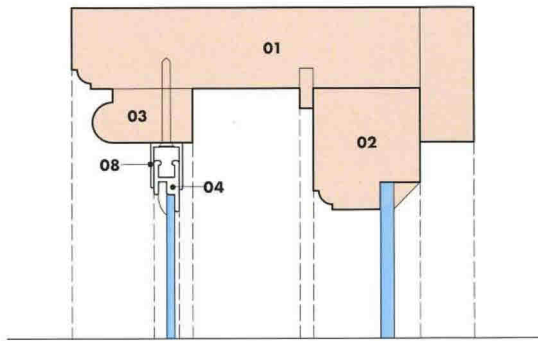
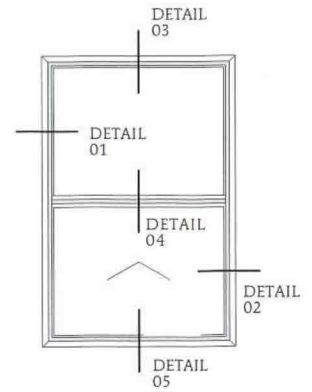
# SLIMLINE UNIT STAFF BEADS



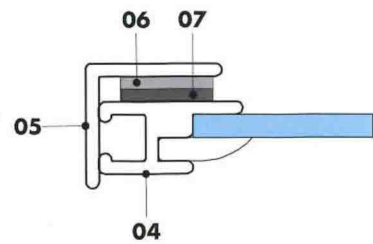
DETAIL 01

DETAIL 02

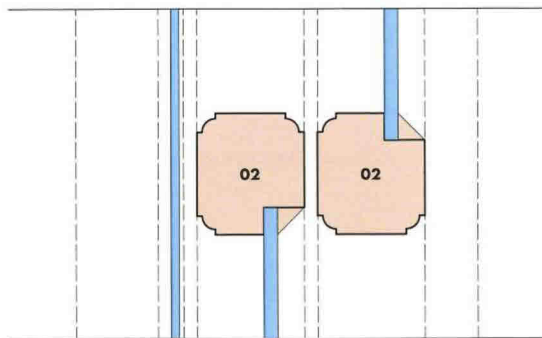
## DETAIL KEY



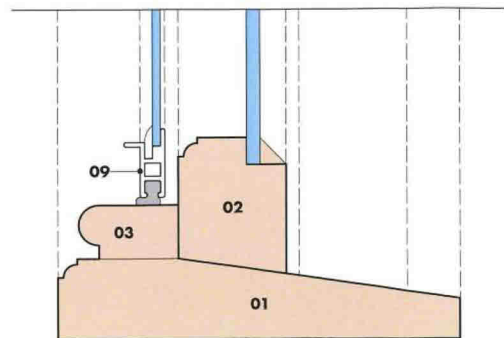
DETAIL 03



DETAIL A - SCALE 1:1



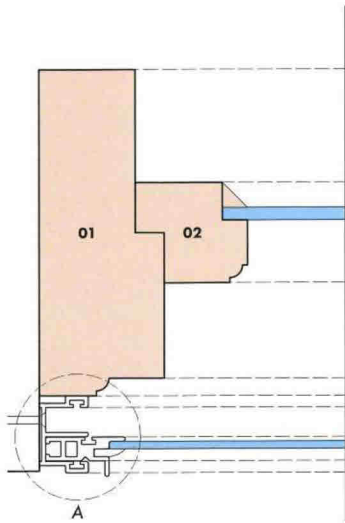
DETAIL 04



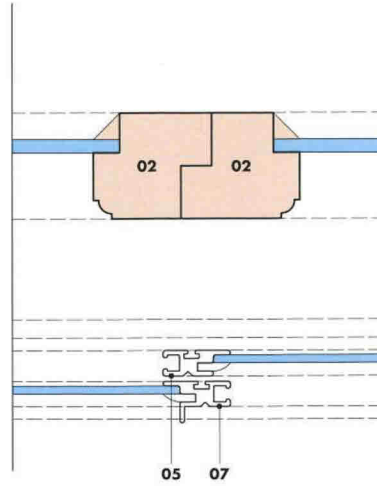
DETAIL 05

# TECHNICAL LIBRARY

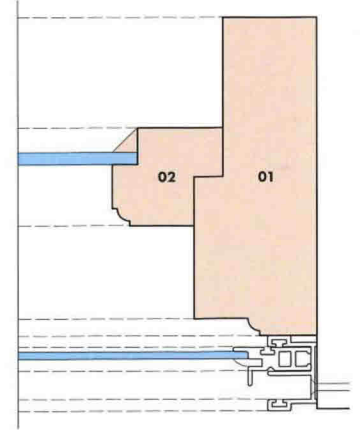
## HORIZONTAL SLIDING SASH UNIT IN THE REVEAL



DETAIL 01

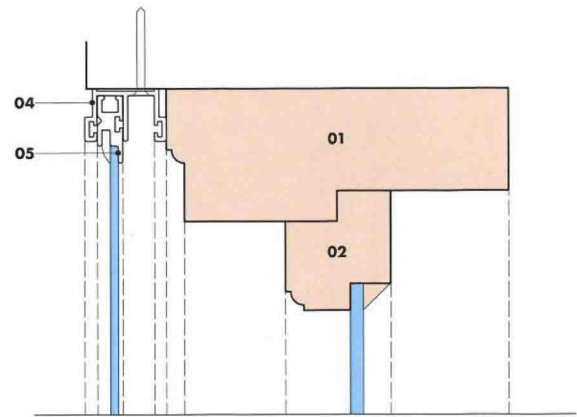
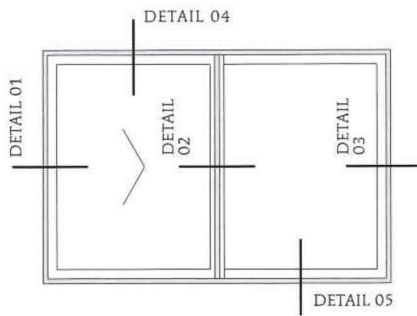


DETAIL 02

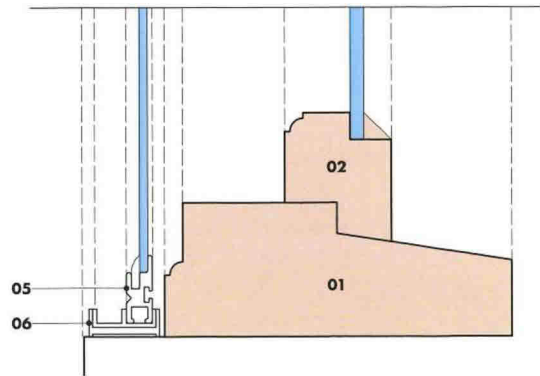


DETAIL 03

### DETAIL KEY



DETAIL 04





# WHY CHOOSE STORM?

With 20 years experience specialising in the manufacture and installation, we are trusted by conservationists, architects and homeowners to help preserve original windows.

We recognise the increasing pressure on listed property owners to meet tighter planning regulations, along with ever-increasing conservation regulations and requirements.

Our expertise and the continual development of our products ensure that all of our glazing works seamlessly with the fabric of the original building.

## CLIENTS INCLUDE:



For more information about how we can help your home or property, call us on 01384 636365 or email us at [sales@stormwindows.co.uk](mailto:sales@stormwindows.co.uk).

[WWW.STORMWINDOWS.CO.UK](http://WWW.STORMWINDOWS.CO.UK)



FOURTH EDITION



For more information about how we can help  
your home or property, call us on 01384 636365  
or email us at [sales@stormwindows.co.uk](mailto:sales@stormwindows.co.uk).



[WWW.STORMWINDOWS.CO.UK](http://WWW.STORMWINDOWS.CO.UK)

James Scott Road, Halesowen, West Midlands, B63 2QT  
Telephone 01384 636365  
Email [sales@stormwindows.co.uk](mailto:sales@stormwindows.co.uk)