

CSG

*Premium Secondary Glazing For
Traditional Sash Windows.*

CONSERVATION SECONDARY GLAZING TECHNICAL DATA SHEET

01 JANUARY 2026



Minimal Design

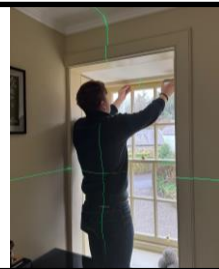
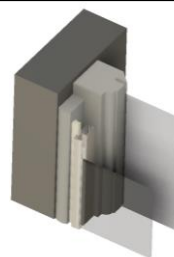
Frame depth 28mm, frame width 10mm.

The system is installed within the depth of the staff bead, our slimline aluminium frames blend seamlessly with existing window details. They are designed to be discreet, preserving the original aesthetic rather than competing with it.



Draught Proofing

Draught proofing is the most important aspect of energy efficiency. By installing on the inside of the window within the staff beads, we add another highly effective layer behind the existing windows. Our sophisticated survey methodology and software optimises the size of our frames to fit your window, tolerances are taken up by our seals to eliminate gaps.



Ventilation

Our simple, reliable hinged mechanisms make operation simple and effortless, providing quick and easy access to the primary window for ventilation and maintenance. Stays hold the top frame open to an angle of 10° giving an opening at the bottom of around 150mm. Stays on the bottom frame can hold it open at an angle of around 60° to give excellent access, a secondary set of stays is fitted to keep the lower frame open at 10° to give an opening at the bottom of around 150mm.



Working Shutters

Unlike many systems, our design allows traditional shutters to open and close fully, maintaining their original purpose and historic character.



Condensation

The frequency and severity of condensation can be reduced but it is NOT eliminated, the level of condensation depends on internal and external temperatures and humidity levels. The window on the left here is fitted with the system, the adjacent window is not.



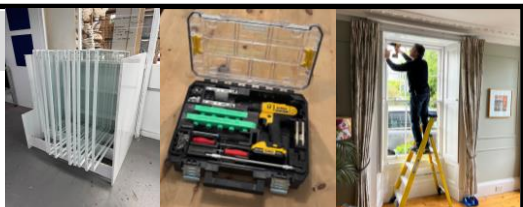
Increased Security

The additional layer of glass across the full window would delay or impede a break-in attempt – we use only toughened or laminated glass for safety and security.



Retrofit Installation

The CSG system is quick and easy to install with basic tools and jigs, there is minimal intrusion in the home or workplace and the process is entirely reversible.



Thermal Efficiency

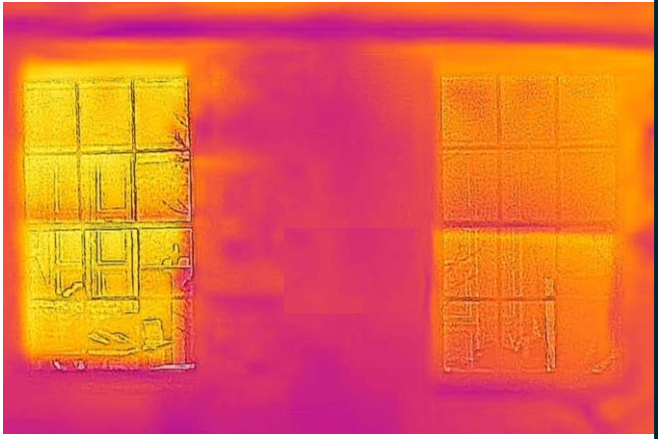
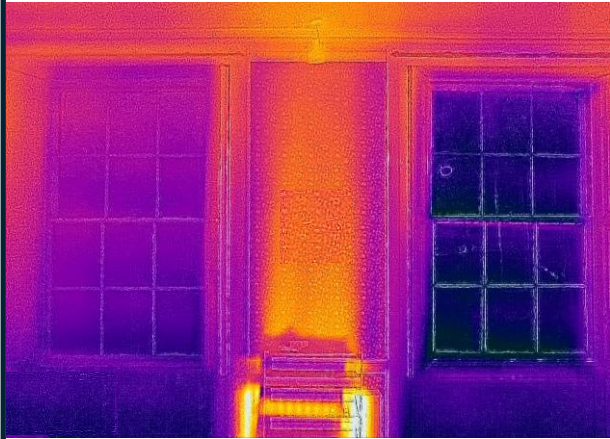
Secondary glazing creates an insulating air gap that dramatically improves heat retention. This reduces cold spots and helps stabilise room temperatures all year round. A BRE thermal modelling report concluded our system improves thermal efficiency by 47%.



Report No. P001305-01-1

Table 4: U-values for the example windows (1.2m wide x 1.8m high) without and with the CSG secondary glazing system.

Timber Frame Window	Window U-value U _w , W/m ² K
Single glazed	4.91
Single glazed with CSG system	2.62
Difference ΔU	-2.29
% improvement	47%



Thermal image from inside (left) and outside (right), the window fitted with CSG system shows temperature differential of around 4°C.

Noise Reduction

Sound levels in a city centre bedroom were independently tested, two windows were fitted with the CSG system utilising 6.8mm Pilkington Optiphon Acoustic Glass, the results showed a reduction in perceived noise of almost 50%.

Glazing	Lowest*	Highest**	Difference		Perceived Noise Reduction
Original Single Glazing	35 dB	44 dB	Baseline		
Plastic / Monolithic Glass Secondary Glazing	31 dB	42 dB	4 dB	2 dB	Up to 25%
CSG Secondary Glazing System	26 dB	37dB	9 dB	7 dB	Up to 50%

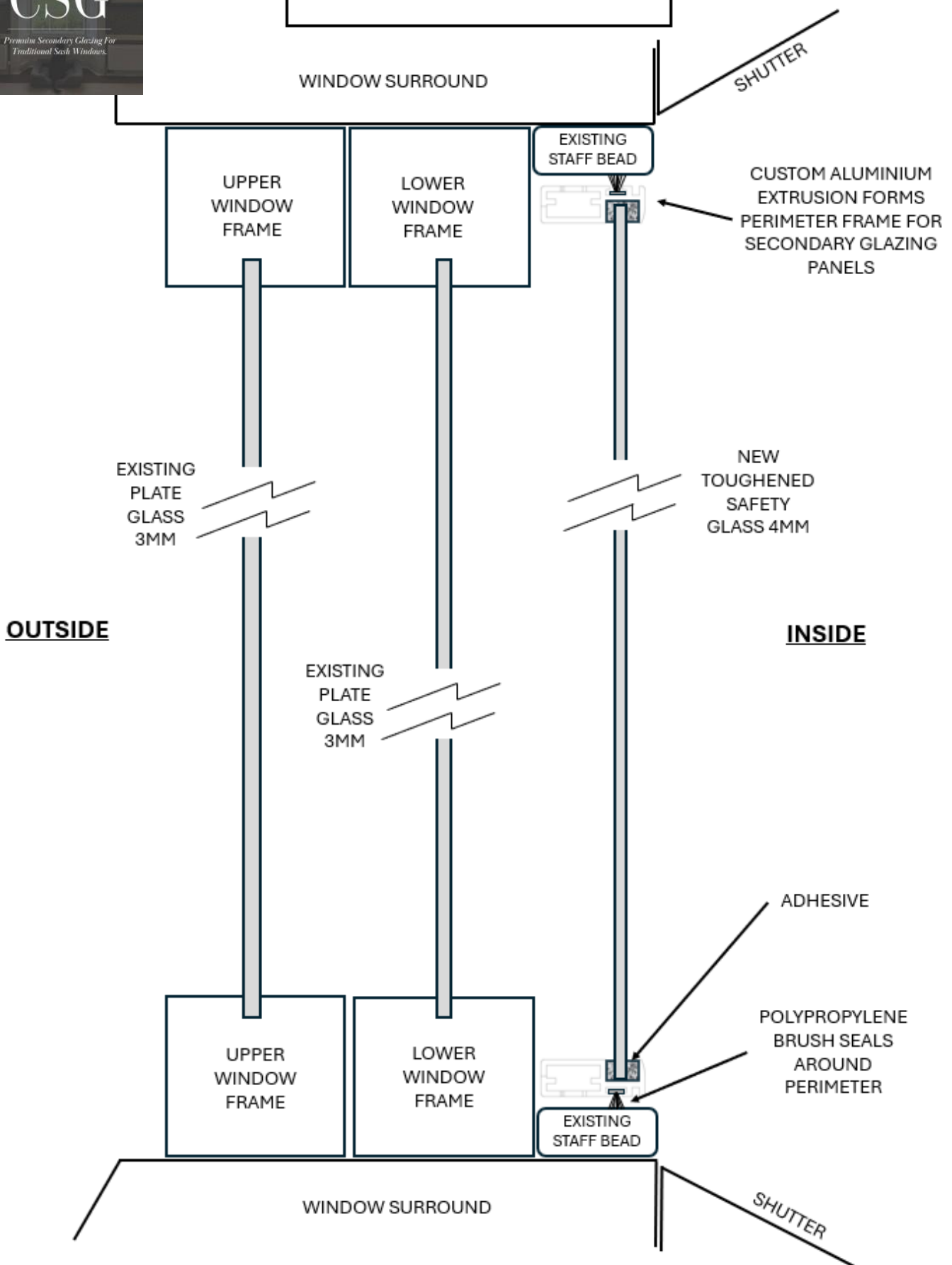
*Lowest=lulls in traffic

**Highest = loud vehicles (buses, lorries)

Materials Specifications

Element	Material Specification
Frame	Custom aluminium extrusion EN 755 6063 T6 powdercoated to RAL 9003 - other colours available upon request.
Glass Options:	4mm toughened safety glass as standard EN 12150
	4mm Low-E toughened safety glass EN 12150
	6.8mm Pilkington Optiphon Acoustic Safety Glass EN 12600 class 1(B)1
	6.7mm Vacuum Glass
Seals	11.5mm white polypropylene brush seal with fin - other colours to suit framework EN12365
Adhesive	White neutral curing silicone to EN 15651 - other colours to suit framework
Components	Mild Steel EN 10025 powdercoated to RAL 9003
Fixings	Stainless Steel A2 BS EN ISO 3506

SECTIONAL PLAN VIEW



END SECTIONAL VIEW

WINDOW SURROUND

UPPER
WINDOW
FRAME

EXISTING
STAFF BEAD

CUSTOM ALUMINIUM
EXTRUSION FORMS
PERIMETER FRAME FOR
UPPER SECONDARY
GLAZING PANEL

EXISTING
PLATE
GLASS
3MM

NEW
TOUGHENED
SAFETY
GLASS 4MM

POLYPROPYLENE
BRUSH SEALS
AROUND
PERIMETER

OUTSIDE

UPPER
WINDOW
FRAME

LOWER
WINDOW
FRAME

INSIDE

ADHESIVE

EXISTING
PLATE
GLASS
3MM

NEW
TOUGHENED
SAFETY
GLASS 4MM

LOWER
WINDOW
FRAME

CUSTOM ALUMINIUM
EXTRUSION FORMS
PERIMETER FRAME FOR
UPPER SECONDARY
GLAZING PANEL

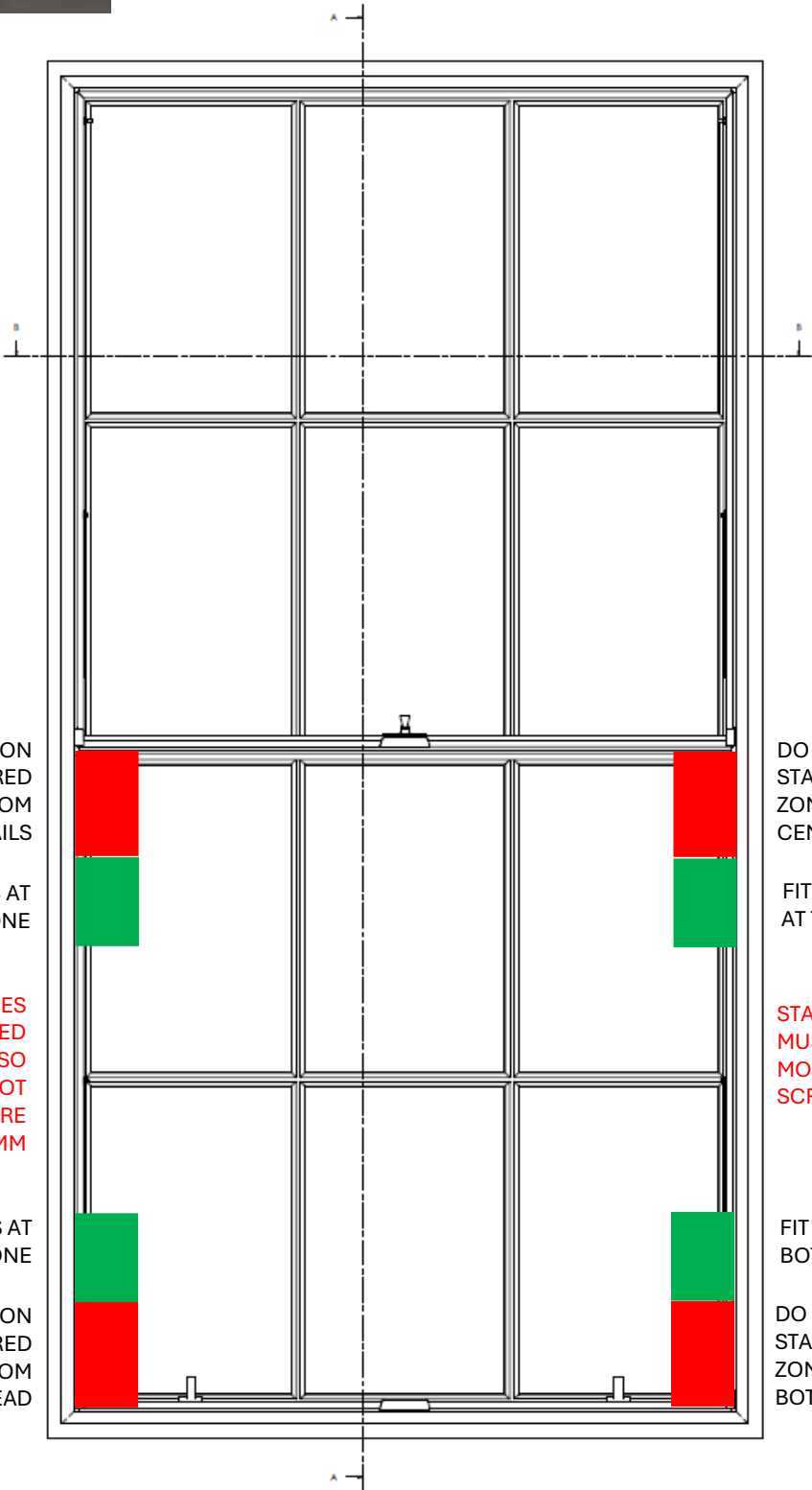
EXISTING
STAFF BEAD

WINDOW SURROUND



WINDOW REFURBISHMENT GUIDE

SIMPLEX HINGE LOCATIONS TO ALLOW **CSG SYSTEM** TO BE FITTED



DO NOT FIT ANYTHING ON
STAFF BEAD WITHIN RED
ZONE 150MM DOWN FROM
CENTRE OF MEETING RAILS

FIT SIMPLEX HINGES AT
TOP OF GREEN ZONE

SIMPLEX HINGES
MUST BE REBATED
INTO STAFF BEAD SO
THAT THEY DO NOT
PROTRUDE MORE
THAN 3MM

FIT SIMPLEX HINGES AT
BOTTOM OF GREEN ZONE

DO NOT FIT ANYTHING ON
STAFF BEAD WITHIN RED
ZONE 150MM UP FROM
BOTTOM STAFF BEAD

DO NOT FIT ANYTHING ON
STAFF BEAD WITHIN RED
ZONE 150MM DOWN FROM
CENTRE OF MEETING RAILS

FIT STAFF BEAD FIXINGS
AT TOP OF GREEN ZONE

STAFF BEAD FIXINGS
MUST NOT PROTRUDE
MORE THAN 3MM – USE
SCREWS & CUPS

FIT STAFF BEAD FIXINGS AT
BOTTOM OF GREEN ZONE

DO NOT FIT ANYTHING ON
STAFF BEAD WITHIN RED
ZONE 150MM UP FROM
BOTTOM STAFF BEAD



USER INSTRUCTIONS

Thank you for buying our **CSG SYSTEM**, please find below some instructions for use and care, please do not hesitate to contact us if you require any further information or support.

OPENING - Ensure the closer brackets at the bottom corners of the CSG panel are both lifted. Pull the central handle to hinge the panel upwards. Pull out the stays on each side and locate onto screw heads on baton rods ensuring that **both** stays are located to support the panel.

The upper panel stays pull downwards and locate on screws on the staff beads, they have one location position for ventilation.

The lower panel has two sets of stays, the shorter upper stays provide a ventilation position, the lower longer stays allow better access for opening the window and for cleaning.

CLOSING - Lift the panel upwards to release stays, fold stays back to the frame and lower panel. Push the closer brackets at each bottom corner downwards to secure.

REMOVAL - Depending on the type of glass and the size of the panel, it may weigh 10-20Kg so please ensure that you are able to safely lift the weight and size of the panel.

We recommend that you only remove the lower CSG panel, to do this:

Open the upper panel as above, then lift the closers on the lower panel and open slightly.

Grasp either side of the panel and lift about 10mm then pull forwards at the top – the hinge pins will disengage from the side hinge plates and the panel is now free to be removed.

If you require to remove the upper panel you should do so in a safe manner using a minimum of two people:

The upper panel should be opened up to almost horizontal, lift the connected end about 10mm then pull forwards – the hinge pins should disengage from the side hinge plates and the panel is now free to be removed – if the hinge pins do not come free, you may need to unscrew them slightly with a 3mm allen key, take care not to unscrew them too far as this will release the panel, keep panel fully supported at all times. If you are not confident that you can remove panels safely, please contact us.

Please store carefully – each panel has identifying labels around the edges so take a note of where each panel was fitted, it is important to re-fit to the same window and position as each window will vary slightly in size and they have been manufactured to fit.

REPLACEMENT - To replace a panel, reverse the operations above.

CLEANING – we recommend cleaning the glass with normal glass cleaner, the frame can be wiped with a warm, damp cloth and detergent.

