

Vacuum Glazing Guide

The Complete Homeowner's Guide to Vacuum Glazing



Preserve Character.

Improve Performance.

Respect Traditional Craftsmanship.

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The Heritage Sash Standard

Every recommendation made by Heritage Sash is guided by three simple principles.

Preserve Character

Original timber windows are an important part of Britain's architectural heritage. Wherever practical, our objective is to preserve original joinery rather than replace it.

Improve Performance

Traditional windows can often be significantly improved through sympathetic restoration and modern glazing technologies without compromising their original appearance.

Respect Traditional Craftsmanship

Every project should reflect the quality of the original workmanship. Modern materials and technologies should enhance traditional windows, never diminish their character.

"Knowledge creates confidence. Confidence creates trust."

Introduction

Preserving Character Without Compromising Comfort

If you own a period property, you've probably been told that you must choose between preserving your original windows and making your home warmer, quieter and more energy efficient.

For many years, that was largely true.

Traditional single glazing performs poorly by modern standards, yet replacing original timber sash windows with modern alternatives often compromises the character, craftsmanship and historical significance of the building.

Vacuum glazing has changed that.

By combining exceptionally slim glazing with outstanding thermal performance, vacuum insulated glass can often be installed within existing timber windows whilst preserving their original appearance.

This guide has been written to help homeowners understand how vacuum glazing works, where it can be used and, just as importantly, where it may not be suitable.

Our objective is not to sell a product.

Our objective is to help you make an informed decision based upon knowledge rather than marketing.



Glossary of Vacuum Glazing Terms

Understanding the Language of Vacuum Glazing

The world of high-performance glazing uses several technical terms that may be unfamiliar to homeowners. This glossary explains the most common terminology used throughout this guide.

Acoustic Performance

A measure of how effectively a glazing unit reduces external noise entering a building. Higher acoustic performance can significantly improve internal comfort, particularly in busy urban areas or near roads, railways and airports.

Edge Seal

The perimeter seal around a vacuum glazing unit that maintains the vacuum between the two panes of glass. Modern edge seals are extremely durable and are designed to retain the vacuum for many decades under normal operating conditions.

Emissivity (Low-E)

Emissivity describes how easily heat passes through a material by radiation. A Low-Emissivity (Low-E) coating is an almost invisible metallic coating applied to the glass that reflects heat back towards its source, improving thermal insulation without noticeably reducing natural daylight.

Hermetic Seal

An airtight seal that prevents air and moisture from entering the vacuum cavity. Maintaining this seal is essential for preserving the thermal performance and longevity of the glazing unit.

Low-E Coating

A microscopic transparent coating applied to one surface of the glass to reduce heat loss while allowing visible light to pass through. Low-E coatings are one of the key technologies responsible for the exceptional thermal performance of modern vacuum glazing.

Solar Gain (g-value)

Solar gain refers to the amount of heat from the sun that passes through the glazing into a building. Higher solar gain can help warm a property during colder months, while lower values may be preferable where overheating is a concern.

Support Pillars

Microscopic support pillars positioned between the two panes of glass. These tiny spacers prevent atmospheric pressure from forcing the panes together while maintaining the vacuum cavity. They are typically only visible under certain lighting conditions and are an essential feature of all vacuum glazing units.

Toughened Glass

Glass that has been heat-treated to increase its strength. If broken, it fractures into small blunt fragments rather than sharp shards, improving safety. Toughened glass is commonly specified where building regulations require safety glazing.

U-value

A measurement of how much heat passes through a building element such as a window. The lower the U-value, the better the insulation.

For comparison:

- Traditional single glazing: approximately 5.8 W/m²K
- Modern double glazing: approximately 1.2–1.6 W/m²K
- Vacuum insulated glazing: typically, 0.49–0.7 W/m²K

Vacuum Cavity

The ultra-thin gap between the two panes of glass from which virtually all air has been removed. As there is almost no air remaining to transfer heat, the vacuum cavity provides exceptional thermal insulation despite being only a fraction of a millimetre thick.

Visible Light Transmission (VLT)

The percentage of natural daylight that passes through the glazing. High VLT allows rooms to remain bright while still benefiting from excellent thermal performance. Most modern vacuum glazing achieves visible light transmission of around 69–72% depending on the specification.

Heritage Sash Note

Throughout this guide, technical terminology has been kept to a minimum wherever possible. Where specialist terms are used, they are intended to help homeowners and professionals better understand how vacuum glazing works and why it has become an increasingly popular solution for improving the thermal performance of traditional timber windows while preserving their historic character.

What Is Vacuum Glazing?

Vacuum glazing is a high-performance insulated glass unit that uses a microscopic vacuum between two panes of glass instead of the air or argon gas found within conventional double glazing.

Because almost all the air has been removed from the cavity, there is very little opportunity for heat to transfer from the warm side of the glass to the cold side.

The result is exceptional thermal performance within an incredibly slim glazing unit.

Unlike conventional double glazing, vacuum glazing does not require large cavities between the panes.

Many modern vacuum glazing units are approximately 8 mm thick, allowing them to be installed into a wide range of traditional timber windows where conventional double glazing would simply be too thick.

For many heritage properties this provides an opportunity to significantly improve comfort and energy efficiency whilst retaining the original windows that define the character of the building.

FIGURE 1

WHAT IS VACUUM GLAZING?

Vacuum glazing is a high-performance insulating glass unit that uses a microscopic vacuum between two panes of glass instead of a conventional gas-filled cavity.

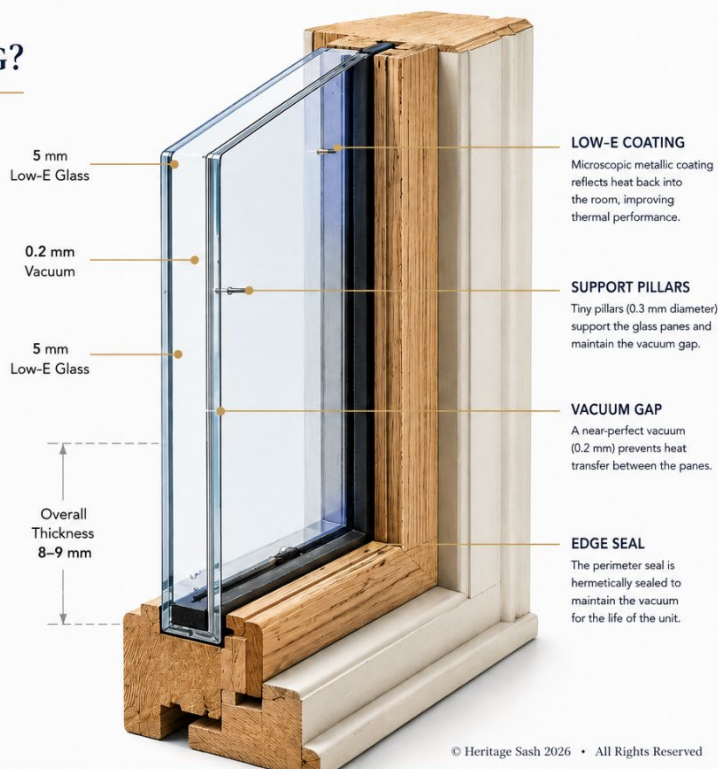
Because heat cannot easily travel through a vacuum, these units achieve exceptionally low heat loss whilst remaining remarkably thin.

At approximately 8–9 mm overall thickness, vacuum glazing can often be installed into existing heritage sash windows, preserving the original appearance and character.

KEY BENEFITS



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Heritage Insight 01

Vacuum glazing is not simply "thin double glazing." Although both products contain two panes of glass, the technology used to achieve insulation is completely different.

How Does Vacuum Glazing Work?

It looks simple because, in many ways, it is.

Vacuum glazing achieves exceptional thermal performance by combining advanced engineering with a remarkably simple principle: remove the air between two panes of glass and heat has far fewer ways to escape.

Using the illustration opposite, let's look at each component individually.

Two panes of toughened glass

Two 5 mm panes provide the strength of the glazing unit whilst maintaining the elegant appearance expected within traditional timber windows.

Microscopic vacuum cavity

Instead of filling the space with air or argon gas, the cavity is almost completely evacuated. With virtually no air remaining, heat has far fewer paths through which it can escape.

Support pillars

Tiny transparent support pillars prevent atmospheric pressure from forcing the two panes together. These pillars are extremely small and are generally unobtrusive during everyday use, although they may be visible under certain lighting conditions.

Hermetic edge seal

The perimeter edge seal permanently maintains the vacuum inside the glazing unit throughout its service life.

Low-Emissivity coating

A transparent Low-E coating reflects radiant heat back into the room whilst still allowing excellent levels of natural daylight to pass through the glass.



FIGURE 2

WHAT IS VACUUM GLAZING?

Vacuum glazing is a high-performance insulating glass unit that uses a microscopic vacuum between two panes of glass instead of a conventional gas-filled cavity.

Because heat cannot easily travel through a vacuum, these units achieve exceptionally low heat loss whilst remaining remarkably thin.

At approximately 8–9 mm overall thickness, vacuum glazing can often be installed into existing heritage sash windows, preserving the original appearance and character.

1 TWO PANES OF TOUGHENED GLASS

Two 5 mm panes provide the strength of the unit while maintaining the elegant appearance expected in traditional timber windows.

Although incredibly slim, the two panes work together to provide rigidity, durability and long-term performance without changing the appearance of the original window.



TURN THE PAGE
to see what happens
between the glass.

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Heritage Insight 02

Many homeowners assume the thickness of the glazing unit determines whether vacuum glazing can be installed.

The glazing rebate depth is often sufficient.

More commonly, the deciding factor is whether the existing glazing bars are wide enough to sympathetically conceal the perimeter edge seal. Every Heritage Sash survey carefully assesses both dimensions before any recommendations are made.

Assessing Suitability

Can Vacuum Glazing Fit My Existing Windows?

One of the most common questions we are asked is whether vacuum glazing can be installed into existing timber sash or casement windows.

The answer is often yes, but every window should be individually assessed before a recommendation is made.

Unlike conventional double glazing, vacuum glazing is exceptionally thin and is therefore suitable for many traditional timber windows. However, successful installation depends on more than just the overall thickness of the glazing unit.

The Three Things We Assess

1. Rebate Depth

The glazing rebate is the recess within the timber that supports the glass.

In most traditional timber windows, there is sufficient depth to accommodate modern vacuum glazing without altering the overall frame.

Depth is rarely the limiting factor.

FIGURE 3

GLAZING REBATE DEPTH

How Vacuum Glazing Fits Within Traditional Timber Windows

Many traditional timber windows have sufficient rebate depth to accommodate vacuum glazing without altering the overall frame.

WHAT IS A GLAZING REBATE?

The glazing rebate is the stepped recess in the window frame that holds the glass in place and helps shed water away from the window.

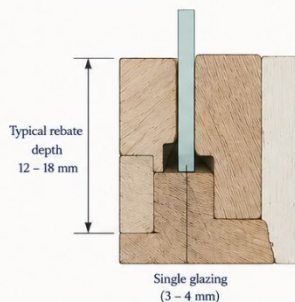


Proper rebate design ensures the glass is securely supported and that water runs away from the glazing and frame.

TYPICAL REBATE DEPTH COMPARISON

A. TRADITIONAL SINGLE GLAZING

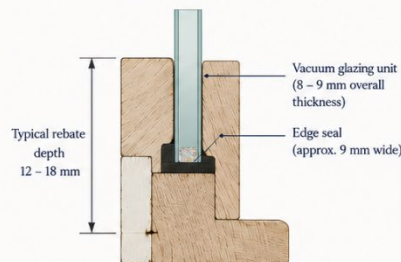
Typical rebate depth: 12 – 18 mm



Traditional single glazing typically requires 3 – 4 mm of glass thickness.

B. VACUUM GLAZING (8 – 9 mm UNIT)

Fits comfortably within the existing rebate



Vacuum glazing (8 – 9 mm) fits within most traditional rebates without the need to reduce the glazing pocket.



Depth is rarely the limiting factor.

In most heritage windows, the rebate depth is sufficient to accept vacuum glazing. The key consideration is usually the width of the glazing bar rather than the depth of the rebate.

Note: Dimensions are typical. Each window should be surveyed individually.

2. Glazing Bar Width

This is usually the most important consideration.

Vacuum glazing units incorporate a hermetic edge seal around the perimeter of each pane. On the Heritage Sash system, this concealed border measures approximately 9 mm.

Where two panes meet within a glazing bar, both edge seals must be hidden within the width of the timber glazing bar.

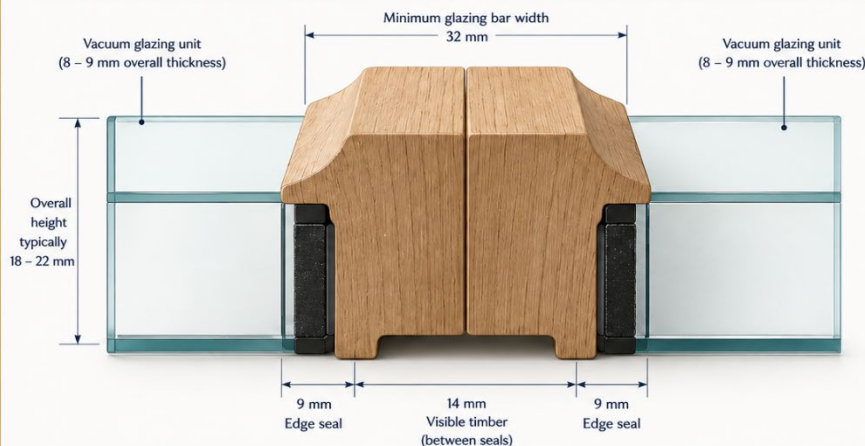
If the glazing bar is too narrow, part of the edge seal may remain visible.

FIGURE 4

GLAZING BAR CROSS-SECTION

Concealing the Edge Seal Within Traditional Timber Glazing Bars

When two vacuum glazing units are installed within a glazing bar, the perimeter edge seals must be hidden within the width of the timber bar to maintain the original appearance.



Glazing bar dimensions vary from property to property. This diagram shows the ideal relationship between edge seals and glazing bar width to ensure the seals are fully concealed and the traditional appearance is preserved.

Key Points



Sufficient Width

The glazing bar must be wide enough to conceal both edge seals.
Minimum recommended width: 32 mm.



Concealed Edge Seals

Each vacuum glazing unit has a perimeter edge seal approximately 9 mm wide. These must be hidden within the timber.



Preserving Original Appearance

Where existing glazing bars are not wide enough, Heritage Sash can often replace individual bars with faithful reproductions that conceal the edge seals while matching original profiles.

Note:
Dimensions shown are typical.
All windows are assessed individually.
Not to scale.

3. Timber Condition

Vacuum glazing should always be installed into sound timber.

Where decay or deterioration is present, the affected sections should be repaired or replaced before new glazing is installed.

In many cases, only isolated repairs are required, allowing the original sash and frame to be retained.

When Glazing Bars Are Too Narrow

Not every historic window was manufactured using the same dimensions.

Where existing glazing bars are too narrow to conceal the edge seal, Heritage Sash can often manufacture replacement glazing bars that accurately match the original profile while allowing the vacuum glazing unit to be installed correctly.

This approach preserves the original sash and frame while maintaining the traditional appearance of the window.

Support Pillars

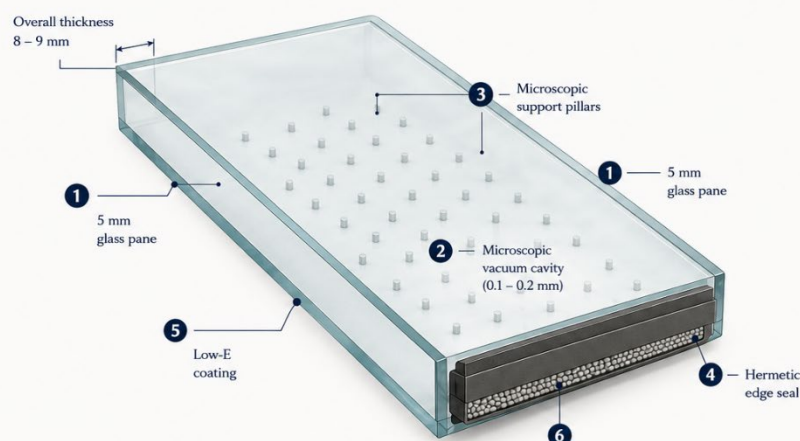
All vacuum glazing contains microscopic support pillars positioned between the two panes of glass. These pillars prevent atmospheric pressure from forcing the glass together once the air has been removed.

Although extremely small, they may be visible under certain lighting conditions or when viewed at close range. This is a normal characteristic of all vacuum glazing products and does not affect performance.

FIGURE 5

ANATOMY OF A VACUUM GLAZING UNIT

Vacuum glazing combines advanced materials and precision engineering to deliver exceptional thermal performance in a slim profile.



The combination of these elements results in a glazing unit that achieves outstanding thermal performance in a thickness of just 8–9 mm, making it ideal for heritage timber windows where space is limited but performance matters.

- 1 Glass Panes**
Two panes of high-quality glass, typically 5 mm each, provide structural strength and clarity.
- 2 Microscopic Vacuum Cavity**
The space between the panes is evacuated to a near vacuum, eliminating air as a conductor of heat.
- 3 Microscopic Support Pillars**
Thousands of tiny pillars, less than 0.3 mm in diameter, keep the panes perfectly separated and prevent collapse.
- 4 Hermetic Edge Seal**
A precision-engineered seal maintains the vacuum for many decades, even under temperature fluctuations.
- 5 Low-E Coating**
A nearly invisible metallic coating reflects radiant heat while allowing natural daylight to pass through.
- 6 Spacer with Getter Material**
A special material within the spacer absorbs any residual gases to help maintain a stable, long-lasting vacuum.

Note: Diagram not to scale. For illustrative purposes only.

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Every Window Is Different

No two heritage windows are identical.

Before recommending vacuum glazing, Heritage Sash carries out a detailed survey of each window to assess:

- Existing timber condition
- Rebate depth
- Glazing bar dimensions
- Existing glass
- Listed Building or Conservation Area requirements

This ensures the proposed solution balances thermal performance, heritage appearance and long-term durability.

Heritage Recommendation

Vacuum glazing is suitable for many traditional timber windows and often provides one of the best opportunities to improve energy efficiency while retaining original joinery.

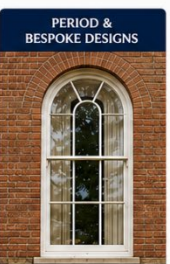
Where minor alterations are required, these can frequently be limited to individual glazing bars rather than replacing the entire window, preserving both the character and historic significance of the building.

FIGURE 6

SUITABLE WINDOW TYPES – PRESERVING HERITAGE, ENHANCING PERFORMANCE

Vacuum glazing can be used in a wide range of traditional timber windows, including those in listed and conservation properties.

COMMON TRADITIONAL WINDOW TYPES THAT CAN BE UPGRADED

SASH WINDOWS	CASEMENT WINDOWS	FRENCH DOORS & BALCONY DOORS	BAY WINDOWS	PERIOD & BESPOKE DESIGNS
				
Single or double-hung sash windows are ideal candidates for vacuum glazing upgrades.	Traditional timber casement windows can be upgraded without altering their design.	Full-height timber doors and French windows can benefit from vacuum glazing.	Vacuum glazing can be used in multi-panel bay windows of various configurations.	Arched, circular and other bespoke timber windows can be considered on a case-by-case basis.
- Retains original operation and appearance - Improves comfort and energy efficiency - Reduces outside noise	- Preserves original opening mechanism - Enhances thermal performance - Ideal for heritage properties	- Maintains original style and detail - Improved acoustic insulation - Better comfort all year round	- Suitable for angled and curved bays - Reduces heat loss across large areas - Preserves period character	- Made to measure glazing units - Custom solutions available - Heritage integrity respected



PRESERVE WHAT MATTERS, IMPROVE WHAT COUNTS.

Vacuum glazing is a discreet, reversible and conservation-friendly solution that helps you meet modern comfort and efficiency standards without compromising heritage.

IMPORTANT CONSIDERATIONS

-  **Each window is unique**
A detailed survey is essential to confirm suitability.
-  **Accuracy is key**
Precise measurements ensure the perfect fit.
-  **Structural condition**
The existing timber must be in acceptable condition.
-  **Planning & conservation**
Vacuum glazing is ideal for listed and conservation properties.
-  **Expert guidance**
We advise on the best solution for your windows.



HERITAGE SASH INSIGHT

Our goal is always to improve performance while preserving the authentic beauty and value of your windows and property.



PLEASE NOTE

Final suitability is confirmed following a professional on-site survey and assessment. Images are for illustrative purposes only. Not to scale.

Choosing the Right Glazing

There is no single glazing solution that is right for every property. The best option depends on the building, the condition of the existing windows, conservation requirements and the homeowner's priorities.

The table below compares the most common glazing systems used in traditional timber windows.

FIGURE 7

CHOOSING THE RIGHT GLAZING

There is no single glazing solution that is right for every property.
The table below compares the most common glazing systems used in traditional timber windows.

FEATURE	SINGLE GLAZING	SLIM DOUBLE GLAZING	VACUUM GLAZING
 Typical Thickness	3–4 mm	10–16 mm	6–10 mm
 Thermal Performance	★☆☆☆☆	★★★★☆☆	★★★★★★
 Heat Loss	High	Moderate	Very Low
 Energy Efficiency	Low	Good	Excellent
 Noise Reduction	Low	Good	Excellent
 Suitable for Heritage Windows	Yes	Sometimes	Excellent
 Suitable for Listed Buildings	Often	Sometimes	Often*
 Weight	Light	Heavy	Similar to Single Glazing
 Appearance	Original	Slightly Thicker	Very Close to Original
 Condensation Reduction	Low	Good	Excellent
 Lifespan	Excellent	Good	Excellent

* Subject to individual building constraints, conservation guidance, glazing bar dimensions and local authority requirements.

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Heritage Recommendation

Vacuum glazing offers one of the closest visual replacements for traditional single glazing while delivering thermal performance comparable to modern insulated glazing.

However, every heritage window should be individually assessed before specifying vacuum glazing. Existing glazing bar dimensions, rebates, timber condition and planning requirements all influence whether vacuum glazing is suitable without alteration.

Where existing glazing bars are too narrow to conceal the edge seal, Heritage Sash may recommend carefully replacing individual glazing bars while retaining the original sash and frame. This approach preserves the character of the window while allowing the vacuum glazing unit to be installed correctly.

Important Note

No glazing system is suitable for every property.

The objective should never be to fit vacuum glazing wherever possible. Instead, the correct solution is the one that balances thermal performance, heritage significance, planning requirements and long-term durability.

A professional survey is always recommended before specifying replacement glazing.

Why Is It Different?

From a distance, vacuum glazing may appear similar to conventional double glazing. Both consist of two panes of glass separated by a cavity.

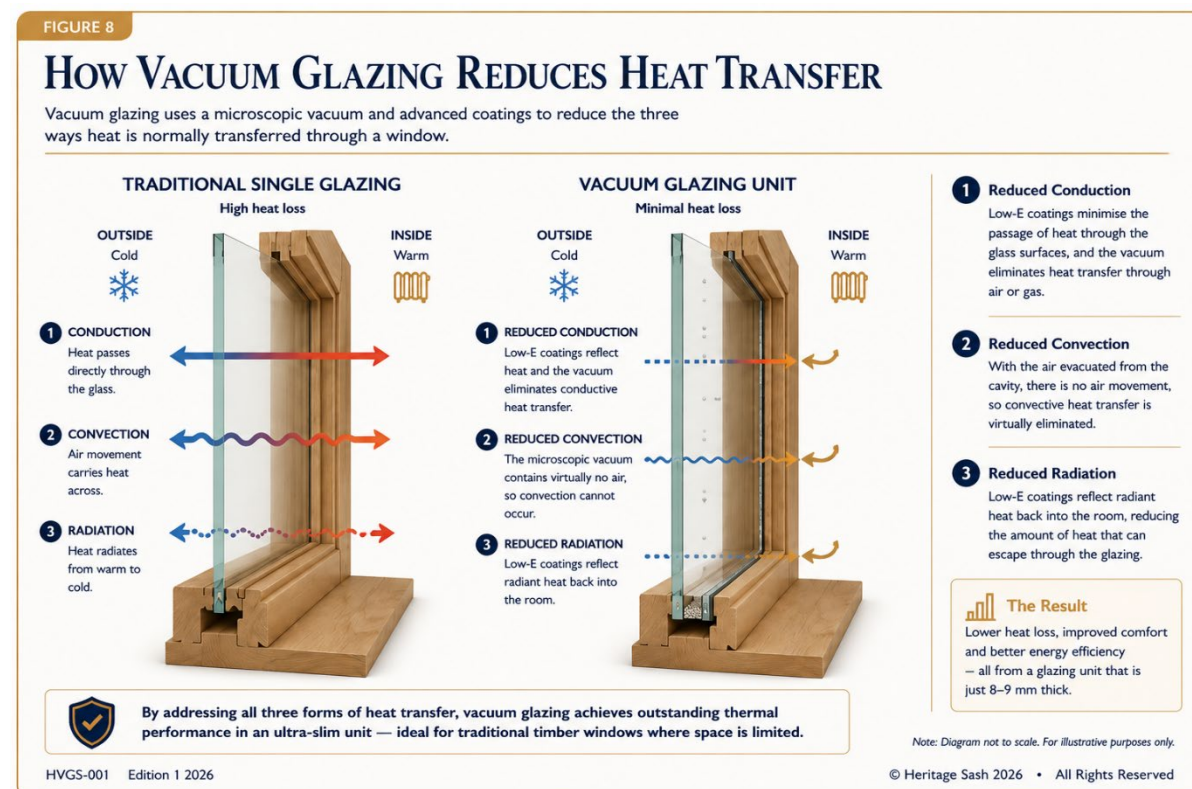
The difference lies within that cavity.

Traditional double glazing relies on air or argon gas to slow the transfer of heat. Vacuum glazing removes almost all the air, creating a microscopic vacuum that provides significantly greater thermal insulation within a much thinner glazing unit.

For many period properties, this difference is critical.

Conventional double glazing often requires wider glazing bars and deeper rebates that can alter the appearance of traditional timber windows.

Vacuum glazing achieves comparable or superior thermal performance whilst retaining much slimmer sightlines, making it particularly suitable for many heritage applications.



Heritage Insight 03

Vacuum glazing should never be selected simply because it is thinner.

The correct glazing solution should always be based upon the individual window, its condition, its heritage significance and the customer's objectives

Understanding Existing Timber Windows

No two heritage windows are identical.

Even within the same property, glazing bar widths, rebate depths and timber profiles often vary considerably due to historic repairs, previous alterations or the original methods used by the joiner.

This is why Heritage Sash surveys every window individually rather than assuming every opening can accept the same glazing specification.

Our assessment considers far more than the thickness of the glass.

We examine the condition of the timber, the construction of the sash, the width of the glazing bars, the available glazing rebate, the existing putty line and the overall appearance of the finished window.

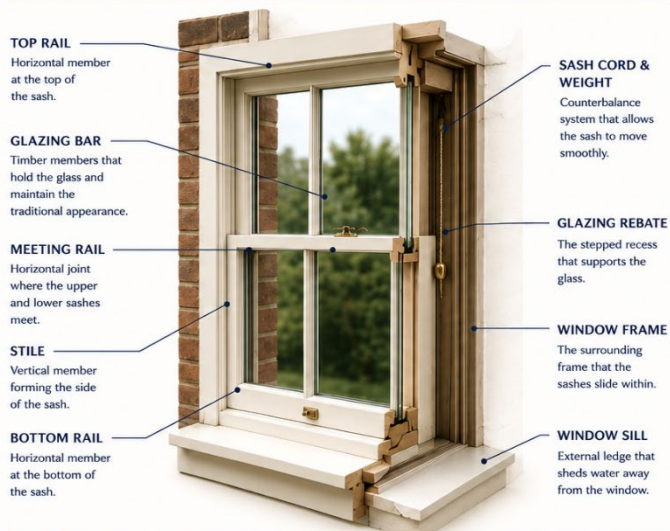
Only once these factors have been assessed can the most appropriate glazing solution be recommended.

FIGURE 9

ANATOMY OF A TRADITIONAL TIMBER SASH WINDOW

Understanding the key components and dimensions that influence vacuum glazing suitability.

Traditional sash windows were crafted long before modern double glazing existed. Each element plays a role in how successfully vacuum glazing can be installed while preserving the original character.



Every window is unique.

A professional survey ensures these dimensions are assessed accurately so the correct solution can be specified without compromising the character of your home.

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KEY DIMENSIONS TO CONSIDER

1 GLAZING REBATE DEPTH



The depth of the rebate must be sufficient to accept the thickness of the vacuum glazing unit (typically 8 – 9 mm).

2 GLAZING BAR WIDTH



Must be wide enough to conceal both perimeter edge seals (approx. 9 mm each). Minimum recommended: 32 mm.

3 PUTTY LINE / BEADING



Existing putty line depth and beading profile affect how the edge seal is concealed.

4 SIGHTLINE



The internal and external sightlines determine how much of the edge seal may be visible.

5 SASH THICKNESS



Affects overall stability, strength and the ability to accommodate new glazing.

6 OVERALL CONDITION



Sound timber is essential before installing vacuum glazing. Repairs may be required.

Note: Dimensions are typical. All windows should be surveyed individually.

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Heritage Insight 04

The objective is never simply to install new glass.

The objective is to improve performance whilst preserving the proportions, detailing and character that make traditional timber windows special.

Why Glazing Bar Width Matters

This is one of the most important aspects of a successful vacuum glazing installation. Many homeowners assume that if the glazing unit is thin enough, it will fit their existing windows. The overall thickness of the glazing unit is often not the limiting factor.

The more significant consideration is whether the existing glazing bars are wide enough to conceal the perimeter edge seal around each individual pane.

If the edge seal remains visible after installation, it can affect the appearance of the window and reduce the sympathetic nature of the upgrade.

For this reason, Heritage Sash carefully measures every glazing bar during the survey. Where sufficient width already exists, the original glazing bars can often be retained.

Where additional width is required, new glazing bars can be manufactured to match the original profile whilst retaining the existing sash and surrounding frame.

This approach preserves the character of the window whilst achieving the best possible visual result.



Heritage Sash Insight 05

In many projects, glazing bar width—not glazing unit thickness—is the deciding factor when assessing whether vacuum glazing is appropriate.

Understanding the Perimeter Edge Seal

Every vacuum glazing unit incorporates a hermetic edge seal that permanently maintains the vacuum between the two panes of glass. This seal is an essential part of the glazing unit and should not be confused with traditional glazing putty or timber beading.

Whilst the edge seal is a functional component, careful design allows it to be sympathetically concealed behind the glazing bars and glazing system in many traditional timber windows.

Depending upon the existing window construction, Heritage Sash may achieve this through:

- Existing glazing bar widths
- Traditional linseed putty
- Internal paint sightlines
- Carefully manufactured replacement glazing bars matching the original profiles

Every property is assessed individually to achieve the best possible balance between performance and appearance.

FIGURE 11

EDGE SEAL PLACEMENT – CONCEALED FOR TRADITIONAL APPEARANCE

Vacuum glazing incorporates a hermetic edge seal around its perimeter. Careful consideration of window construction allows this essential component to be concealed from view in most cases.

CONCEALED EDGE SEAL ✓
Traditional appearance preserved



Traditional linseed putty

Glazing bar (sufficient width)

Edge seal (concealed)

Vacuum glazing unit (8 – 9 mm)

Internal paint sightline

When the glazing bar is wide enough, the edge seal sits fully behind the bar and putty line, maintaining the original appearance.

VISIBLE EDGE SEAL ✗
Edge seal may be visible



Traditional linseed putty

Narrow glazing bar (insufficient width)

Edge seal (visible)

Vacuum glazing unit (8 – 9 mm)

Internal paint sightline

Where the glazing bar is too narrow, the edge seal may be visible, affecting the traditional appearance.

Key Considerations

- Glazing Bar Width**
Sufficient width is essential to conceal the edge seal (approx. 32 mm minimum recommended).
- Putty Line**
Traditional linseed putty helps hide the edge seal and maintains authentic sightlines.
- Internal Sightlines**
Careful alignment ensures the edge seal remains out of sight from inside the property.
- Replacement Bars**
Where necessary, new glazing bars are manufactured to match the original mouldings and conceal the edge seal.

Heritage Sash Insight
The goal is always the same: modern performance, traditional appearance.

Note: Images are representative close-ups. Actual detailing may vary depending on window type. Not to scale.

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Heritage Insight 06

Our objective is not simply to install vacuum glazing. Our objective is to install it in a way that respects the original appearance of the window.

Support Pillars – What Should I Expect?

One characteristic unique to vacuum glazing is the presence of microscopic support pillars positioned between the two panes of glass. Without these pillars, atmospheric pressure would force the glass together.

The pillars are extremely small and are distributed evenly across the glazing unit to provide structural support.

They are generally unobtrusive during normal everyday use but may become visible when viewed closely or under certain lighting conditions. Different manufacturers use different pillar designs and spacing, meaning visibility can vary between products.

At Heritage Sash, we believe homeowners should understand these characteristics before making any decisions.

By explaining the technology openly, there are no unexpected surprises following installation.

FIGURE 12

SUPPORT PILLARS – WHAT SHOULD I EXPECT?

Vacuum glazing uses thousands of microscopic support pillars to maintain the precise gap between the two panes of glass. These are a normal and essential part of the technology.

HOW SUPPORT PILLARS WORK
Microscopic pillars support the outer pane against atmospheric pressure.



Outer glass (5 mm toughened)

Microscopic support pillar (typically 0.3 – 0.5 mm diameter)

Vacuum cavity (0.2 mm)

Inner glass with Low-E coating (5 mm toughened)

Hermetic edge seal (approx. 9 mm)

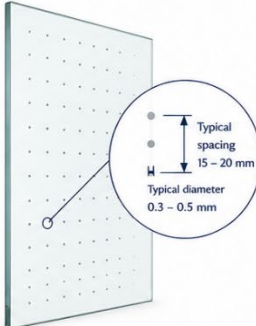
WHAT THEY LOOK LIKE
Pillars are tiny and discreet – virtually invisible at normal viewing distances.



Actual size (circles enlarged)

At typical viewing distances, support pillars are extremely difficult to see and do not affect clarity.

TYPICAL PILLAR PATTERN
Pillars are evenly spaced to ensure stability and long-term performance.



Typical spacing 15 – 20 mm

Typical diameter 0.3 – 0.5 mm

Pillar patterns vary by manufacturer and size of unit. All patterns meet international performance standards.

Key Points

- Essential for Performance**
Support pillars are essential to maintain the vacuum and prevent the panes from collapsing.
- Tiny and Discreet**
Typically 0.3 – 0.5 mm in diameter and spaced 15 – 20 mm apart.
- Hardly Noticeable**
At normal viewing distances, pillars are extremely difficult to see and do not affect appearance.
- Built to Last**
Manufactured from high-strength materials to ensure long-term stability and durability.

Heritage Sash Insight
Support pillars are a mark of advanced engineering, not a fault. They are a small detail that delivers exceptional performance.

Note: Pillar size, spacing and pattern vary by manufacturer and unit size. Images are for illustrative purposes only. Not to scale.

A small detail with a big impact.
Support pillars are a tiny but vital part of vacuum glazing technology. They ensure the unit delivers outstanding thermal performance while remaining thin and elegant – ideal for traditional timber windows.

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Heritage Insight 07

The support pillars are a sign that the vacuum glazing is doing exactly what it has been designed to do. Most homeowners quickly stop noticing them during everyday living, but we believe it is important that every customer understands exactly what to expect before proceeding.

Can My Existing Windows Be Upgraded?

One of the most common questions we are asked is whether existing timber sash windows can be upgraded to accept vacuum glazing. The answer is often yes, but every window should be assessed individually. Whilst many traditional windows have sufficient glazing rebate depth to accommodate modern vacuum glazing, every installation should consider the complete construction of the window rather than the glass alone.

During every survey Heritage Sash assesses:

- Overall condition of the timber
- Glazing rebate depth
- Glazing bar width
- Existing putty lines
- Historic repairs
- Structural movement
- Previous glazing alterations
- Listed Building requirements

By assessing each window individually, we can recommend the most sympathetic solution for your property.

FIGURE 13

CAN MY EXISTING WINDOWS BE UPGRADED?

In many glazes, yes. But every window is different.
Vacuum glazing can often be installed into existing timber windows without altering their appearance.
Suitability depends on the condition, dimensions and construction of each window.

MOST WINDOWS CAN BE UPGRADED
When the key criteria are met.



- ✓ **Sufficient rebate depth**
Typically 8 – 12 mm minimum.
- ✓ **Adequate glazing bar width**
Typically 32 mm minimum.
- ✓ **Good overall condition**
Sound timber ensures a long-lasting result.
- ✓ **Acceptable sightlines**
Allows the edge seal to be concealed.
- ✓ **Glazing system compatible**
Putty line or beading must accommodate the unit.
- ✓ **Professional survey required**
Every window is assessed individually.

When these criteria are met, vacuum glazing can deliver outstanding performance improvements while preserving the character of your windows.

SOME WINDOWS MAY NOT BE SUITABLE
Where key criteria cannot be achieved.



- ✗ **Insufficient rebate depth**
Cannot accommodate the glazing unit.
- ✗ **Narrow glazing bars**
Edge seals would remain visible.
- ✗ **Poor condition**
Requires repair or restoration first.
- ✗ **Incompatible construction**
May require alternative solutions.

Where these issues exist, Heritage Sash will advise on the best alternative solution for your windows.

WHAT HAPPENS NEXT?
Heritage Sash will:

- Conduct a thorough survey of your windows.
- Assess all key dimensions and conditions.
- Provide clear, honest recommendations.
- Recommend the most suitable solution.

Heritage Sash Insight
Our priority is always to preserve your windows and improve performance.
If vacuum glazing is not the right solution, we will tell you.
Honest advice. Better outcomes.

Note: Final suitability is confirmed following a detailed on-site survey.

KEY TAKEAWAY
Vacuum glazing is suitable for many traditional windows, but not all.
A professional survey ensures the right solution is chosen for your home.

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Heritage Insight 08

Every window tells a different story. Even two windows beside one another may require completely different recommendations.

Typical Upgrade Options

Not every project requires the same solution.

Our objective is always to preserve as much original timber as possible whilst delivering the performance improvements the homeowner is looking for.

Typical recommendations include:

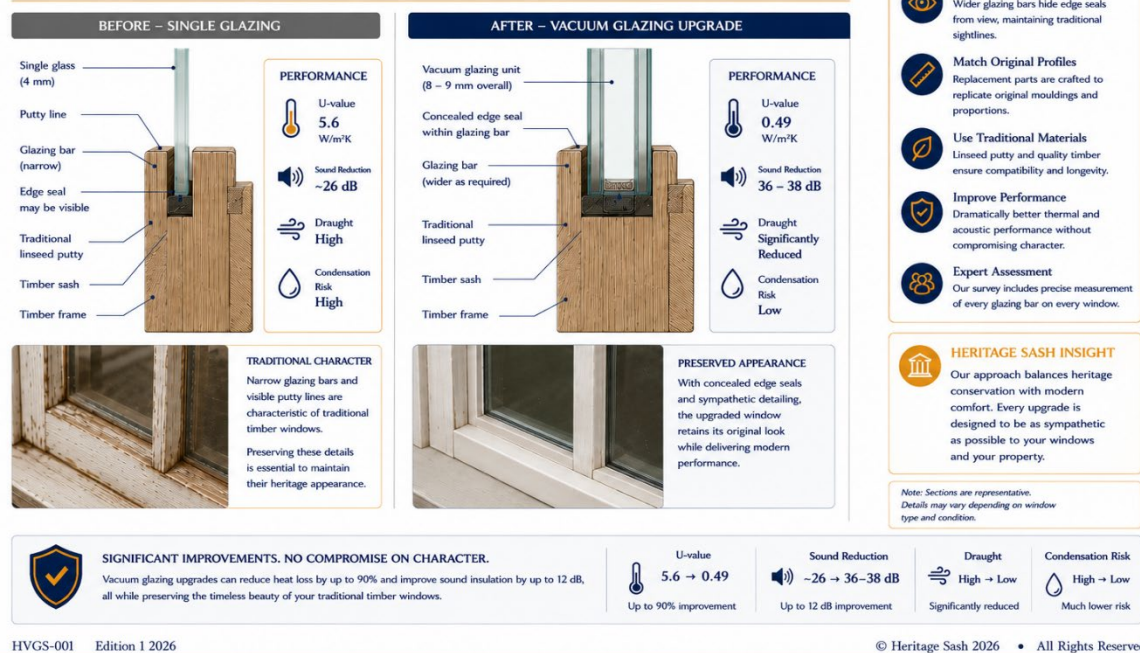
Option 1

- Original glazing bars retained.
- Vacuum glazing installed.
- Minimal intervention.
- Ideal outcome.

FIGURE 14

TYPICAL WINDOW SECTION – BEFORE & AFTER UPGRADE

Vacuum glazing can be installed within your existing timber windows, preserving their traditional appearance while dramatically improving thermal and acoustic performance.



Option 2

- New matching glazing bars.
- Original sash retained.
- Original box frame retained.
- Improved concealment of the perimeter seal.

FIGURE 15

GLAZING BAR WIDTH ASSESSMENT

Ensuring a perfect fit for vacuum glazing.

Glazing bar width is a key factor in determining the suitability of your windows for vacuum glazing.

A careful assessment ensures we maintain the original appearance while achieving the best performance.



Option 3

- Timber repairs completed.
- Loose joints repaired.
- Vacuum glazing installed.
- Draught proofing incorporated.

FIGURE 16

COMPREHENSIVE WINDOW REFURBISHMENT WITH VACUUM GLAZING

Preserving the original window through expert repair and enhanced performance.

This approach retains all original components while completing essential repairs and incorporating vacuum glazing to improve thermal comfort, acoustic performance and long-term durability.

WHAT THIS APPROACH INVOLVES



- Timber repairs completed**
Decay is carefully removed and repaired using like-for-like timber and traditional techniques.
- Loose joints repaired**
Joints are tightened and reinstated to restore strength, stability and smooth operation.
- Vacuum glazing installed**
High performance vacuum glazing is installed without altering the original appearance.
- Draught proofing incorporated**
Concealed draught seals are fitted to improve comfort and reduce unwanted air movement.

BEFORE AND AFTER COMPARISON

BEFORE

AFTER



- Decayed timber and worn finishes
- Loose joints and poor operation
- Single glazing with high heat loss
- Draughts and external noise ingress
- Timber repaired and finishes renewed
- Joints tightened for smooth operation
- Vacuum glazing for high performance
- Draught proofed for comfort and quiet

KEY BENEFITS OF THIS APPROACH

- Preserves Heritage**
All original components are retained, maintaining the character and value of your windows.
- Improved Performance**
Vacuum glazing and draught proofing deliver excellent thermal and acoustic performance.
- Sustainable Solution**
Repairing and upgrading extends the life of your windows and supports sustainable conservation.
- Enhanced Comfort**
Reduced heat loss, draughts and noise create a more comfortable living environment.
- Expert Craftsmanship**
Traditional skills and materials are used to ensure the highest quality restoration and performance.

TYPICAL REFURBISHMENT WORKS

- Decay repair**
Remove and repair damaged timber using like-for-like materials.
- Joinery repairs**
Tighten loose joints and restore structural integrity.
- Surface preparation**
Prepare, treat and redecorate for lasting protection.
- Draught sealing**
Install concealed seals to limit air movement.
- Vacuum glazing**
Fit high performance vacuum glazing units.

TRADITIONAL CHARACTER PRESERVED



Repairs are carried out using traditional methods and materials to ensure your windows retain their authentic look and timeless appeal.

HERITAGE SASH INSIGHT

A comprehensive refurbishment with vacuum glazing is the ideal solution when your windows require attention. It delivers outstanding performance improvements while fully preserving your property's heritage.

A COMPLETE SOLUTION FOR HERITAGE WINDOWS

By combining skilled refurbishment with vacuum glazing and discreet draught proofing, we restore your windows to full health while delivering modern comfort and efficiency – without compromising their heritage.

PLEASE NOTE

Every window is unique. Final works and approach will vary depending on condition and requirements. A detailed on-site survey will confirm the best solution for your windows.

Option 4

Where the existing sash has deteriorated beyond economical repair, sympathetic replacement sashes may be recommended whilst retaining the original box frame where practical.

FIGURE 17

FULL WINDOW REPLACEMENT

A sympathetic solution when windows are beyond repair.
Where the existing sash has deteriorated beyond economical repair, sympathetic replacement sashes may be recommended whilst retaining the original box frame where practical.

WHEN FULL REPLACEMENT IS RECOMMENDED



- Extensive Decay**
Irreversible rot or timber loss affecting structural integrity.
- Poor Operation**
Sashes no longer operate smoothly or safely.
- High Maintenance**
Ongoing repairs become costly and unsustainable.
- Performance Limitations**
Unable to meet modern comfort and efficiency expectations.

BEFORE AND AFTER COMPARISON

BEFORE



- Severe decay and timber loss
- Poor operation and gaps
- Draughts and noise ingress
- Low thermal performance

AFTER



- New matching sash installed
- Smooth, reliable operation
- Vacuum glazing for high performance
- Draught proofed for comfort and quiet

WHAT'S INCLUDED

- Careful Removal**
Existing sashes are carefully removed with minimal impact to the box frame.
- New Matching Sashes**
New sashes are constructed to match the original profiles and detailing.
- Vacuum Glazing**
High performance vacuum glazing installed for thermal and acoustic benefits.
- Draught Proofing**
Perimeter seals and draught proofing incorporated for comfort.
- Finishing**
Expert finishing and decoration to match original appearance.

RETAINING WHAT MATTERS



Where practical, the original box frame is retained, preserving the character of the installation, internal linings and external surrounds.

KEY BENEFITS OF FULL REPLACEMENT

- Sympathetic Replacement**
New sashes are crafted to match the original design, maintaining heritage character.
- Improved Performance**
Vacuum glazing and draught proofing deliver excellent thermal and acoustic performance.
- Built to Last**
High quality materials and construction ensure long-term durability and reduced maintenance.
- Original Frame Retained**
The existing box frame is retained where practical, preserving the original installation and internal finishes.
- Heritage and Value**
A considered approach that protects heritage value while enhancing comfort and property performance.

HERITAGE SASH INSIGHT

Full replacement is recommended only when existing sashes cannot be reliably restored. Our approach ensures new sashes are visually indistinguishable from the originals once installed.

A CONSIDERED SOLUTION FOR LASTING PERFORMANCE

When repair is no longer viable, full replacement provides a long-term solution that respects your windows' heritage while delivering modern comfort, efficiency and peace of mind.

PLEASE NOTE

Every window is unique. Final recommendations are based on a detailed on-site assessment to identify the best solution for your property.

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Heritage Insight 09

The best solution is not always the one involving the most work. Our role is to recommend the least invasive solution that delivers the desired outcome.

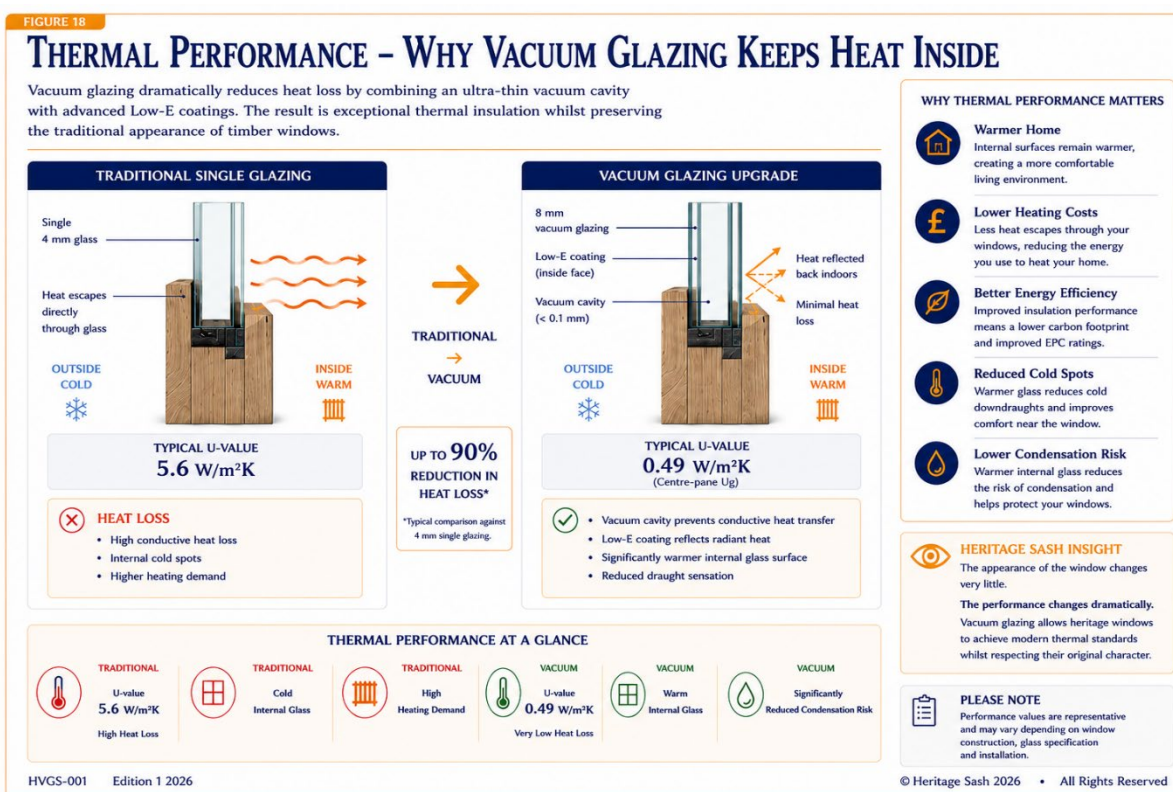
Thermal Performance

Traditional single glazing provides very little resistance to heat loss. This often results in cold internal glass surfaces, uncomfortable draughts and increased heating costs during the winter months. Vacuum glazing significantly improves thermal performance by reducing heat transfer through the glass whilst maintaining an exceptionally slim glazing profile.

Benefits may include:

- Warmer internal glass surfaces
- Improved thermal comfort
- Reduced heat loss
- Lower energy consumption
- Reduced carbon emissions

The precise level of improvement depends upon the existing window construction, installation quality and the overall condition of the surrounding timber frame.



Good to Know

Even the highest performance glazing cannot compensate for significant air leakage around poorly fitting sashes. For the best overall performance, glazing improvements should always be considered alongside draught proofing and restoration where appropriate.

Acoustic Performance

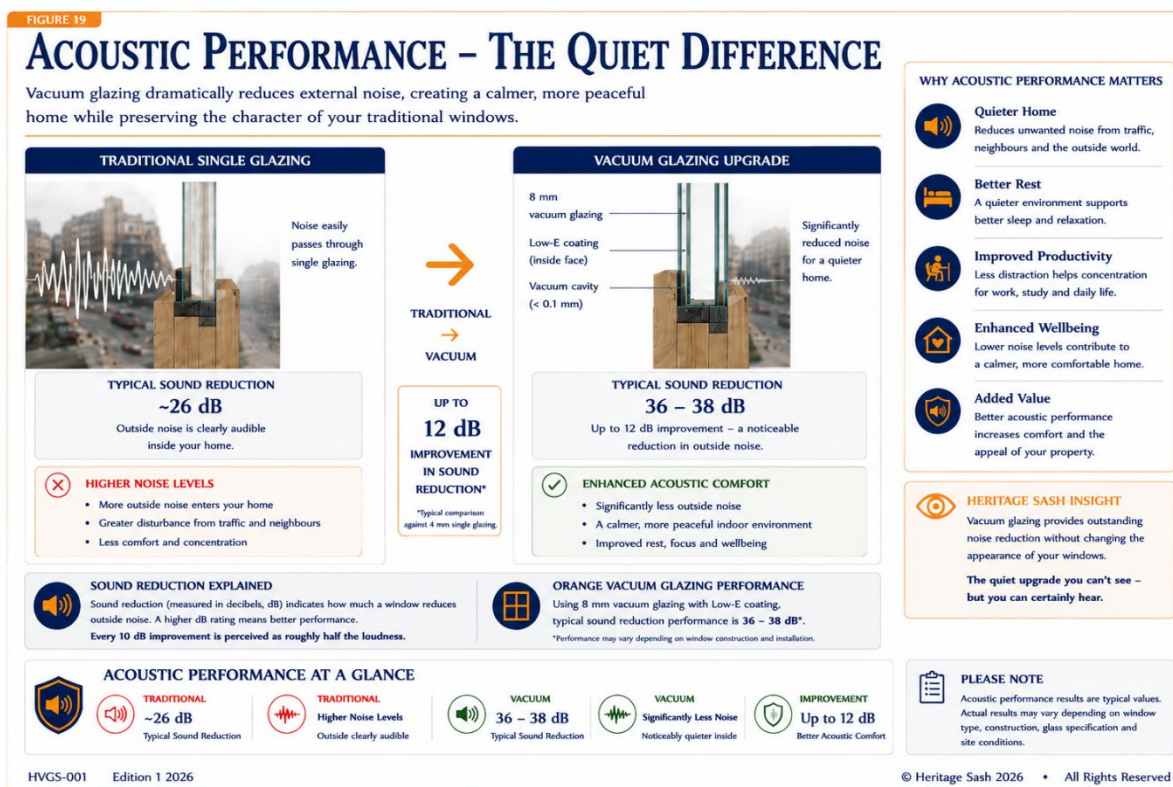
Many homeowners first enquire about vacuum glazing because they want a warmer home.

They are often pleasantly surprised by the improvement in acoustic comfort.

The vacuum cavity helps reduce the transmission of external noise, making vacuum glazing particularly attractive for properties located near busy roads, railway lines or within city centres.

The level of sound reduction depends upon the glazing specification, pane thickness and the existing window construction.

Where additional acoustic performance is required, different glass build-ups may be specified to improve performance further.



Heritage Insight 10

Noise does not only travel through glass.

Poorly fitting sashes, open joints and missing draught seals often contribute significantly to the overall sound experienced within the home.

Condensation

Condensation forms when warm, moisture-laden air meets a cold surface.

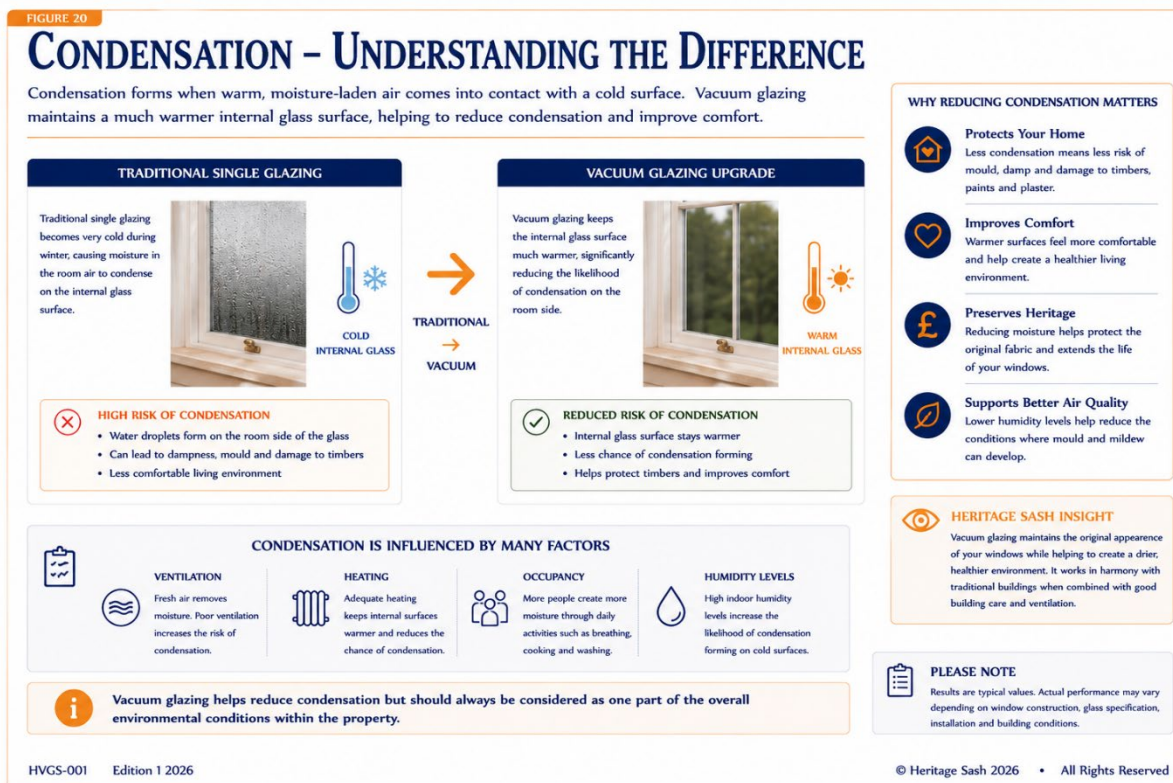
Traditional single glazing often becomes extremely cold during winter, making condensation a common problem in many period properties.

Because vacuum glazing maintains a much warmer internal glass surface, condensation on the room side of the glass is often significantly reduced. This not only improves comfort but can also help reduce moisture-related problems such as mould growth around window reveals.

It is important to remember that condensation is influenced by many factors including:

- Ventilation
- Heating
- Occupancy
- Humidity levels

Vacuum glazing helps reduce condensation but should always be considered as one part of the overall environmental conditions within the property.



Heritage Insight 11

Reducing condensation is often one of the first improvements homeowners notice following installation.

Listed Buildings & Conservation Areas

Many period properties are located within Conservation Areas or are formally Listed.

This often creates uncertainty for homeowners wishing to improve the energy efficiency of their windows.

Vacuum glazing has become an increasingly attractive solution because it offers exceptional thermal performance whilst maintaining a remarkably slim glazing profile that can often preserve the original appearance of traditional timber windows.

However, every property should be considered individually.

Planning requirements vary between local authorities, and Listed Building Consent may still be required depending upon the significance of the building and the extent of the proposed works.

For this reason, Heritage Sash never assumes vacuum glazing is automatically appropriate.

Instead, we assess each property individually, considering:

- Heritage significance
- Existing window construction
- Planning constraints
- Conservation guidance
- Long-term preservation

Where appropriate, we can provide supporting technical information to assist discussions with conservation officers and heritage professionals.



FIGURE 21

HERITAGE COMPATIBILITY – DESIGNED FOR CONSERVATION

Vacuum glazing is the ideal solution for listed buildings and conservation areas.

It delivers modern performance while preserving the original character, materials and appearance of your windows – inside and out.

PRESERVE THE PAST. IMPROVE THE FUTURE.

Vacuum glazing upgrades the performance of traditional windows without changing their appearance or historic value.



- Retains Original Character**
No change to your windows' appearance – inside or out.
- Conservation Friendly**
Does not require altering frames, profiles or joinery.
- Reversible Upgrade**
Vacuum glazing can be removed in the future if required.
- Approved Materials**
High quality components suitable for heritage use.
- Trusted by Professionals**
Architects, surveyors and conservation officers recommend vacuum glazing.

APPEARANCE PRESERVED

Vacuum glazing is virtually indistinguishable from single glazing.

EXISTING SINGLE GLAZING



- ✓ Visible glazing bars maintained
- ✓ Traditional putty lines retained
- ✓ Original timber profiles preserved
- ✓ Authentic appearance unchanged

AFTER VACUUM GLAZING



- ✓ Visible glazing bars maintained
- ✓ Traditional putty lines retained
- ✓ Original timber profiles preserved
- ✓ Authentic appearance unchanged

CONSERVATION WITHOUT COMPROMISE

Vacuum glazing is the discreet, high-performance solution trusted for listed buildings, period homes and conservation projects.

IDEAL FOR

Listed Buildings

Conservation Areas

Period Homes

Heritage Properties

Vacuum glazing is widely accepted by conservation professionals as one of the most sympathetic ways to improve historic windows.

THE BENEFITS FOR HERITAGE PROPERTIES

- Improved Thermal Performance**
Significantly reduces heat loss while maintaining the integrity of your heritage windows.
- Superior Acoustic Insulation**
Reduces outside noise for a quieter, more comfortable indoor environment.
- Reduced Condensation**
Warmer glass surface helps minimise condensation and protects timber from moisture damage.
- Energy Efficient**
Lower energy bills and a more sustainable home without compromising heritage.
- Protects Property Value**
Enhances comfort and performance while preserving the historic value of your property.

HERITAGE SASH INSIGHT

We understand the importance of getting it right for heritage buildings.

Our solutions are respectful, reversible and proven.

Your heritage. Our expertise.

PLEASE NOTE

Approval may be required for listed buildings. We recommend consulting your conservation officer before works commence.

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Heritage Insight 12

The objective is not simply to improve thermal performance.

It is to improve performance whilst preserving the architectural character that makes heritage buildings so special.

The Heritage Sash Survey Process

Every successful project begins with a thorough survey. Rather than recommending a glazing specification immediately, we first seek to understand the construction, condition and character of each individual window.

Our survey typically includes:

- Measuring glazing rebate depth
- Measuring glazing bar widths
- Assessing timber condition
- Identifying previous repairs
- Inspecting existing glazing
- Assessing putty condition
- Photographing key details
- Discussing customer priorities

This information allows us to recommend the most sympathetic solution for each individual window.

- No assumptions.
- No standard specification.
- Every recommendation is based upon evidence gathered during the survey.

FIGURE 22

OUR SURVEY PROCESS

Expert assessment. Tailored recommendations.

Every property is unique. Our detailed survey process ensures we understand your windows, your home and your goals – so we can recommend the perfect solution.

A THOROUGH SURVEY. THE RIGHT SOLUTION.

1 INITIAL DISCUSSION



We discuss your needs, your property and your goals to understand what matters most.

Outcome:
Clear understanding of your requirements.

2 ON-SITE ASSESSMENT



We inspect each window carefully, assessing condition, measurements and suitability for vacuum glazing.

Outcome:
Accurate assessment and measurements.

3 TECHNICAL EVALUATION



We evaluate glazing bar widths, frame depths, access and any specific considerations for your property.

Outcome:
Technical review and feasibility confirmed.

4 TAILORED RECOMMENDATION



We provide a clear recommendation, bespoke to your property, including options and next steps.

Outcome:
Recommended solution and proposal.

5 PROPOSAL & NEXT STEPS



We present your detailed proposal and guide you through the process, timelines and installation.

Outcome:
Confidence to proceed at your pace.

WHAT WE ASSESS



Window Condition
We assess the condition of frames, sashes and existing glass.



Measurements
Precise measurements ensure the perfect vacuum glass fit.



Glazing Bars
We check glazing bar widths and sightlines for compatibility.



Heritage Considerations
We consider heritage value, planning requirements and building regulations.



Performance Goals
We discuss thermal, acoustic and comfort goals for your home.



EXPERTISE YOU CAN TRUST

Our survey is carried out by experienced heritage window specialists who understand both traditional craftsmanship and modern performance solutions.



HOW LONG DOES A SURVEY TAKE?

Most surveys take between 45 minutes and 1.5 hours, depending on the number of windows and complexity.



SURVEY COST

Our survey is free with no obligation. Travel charges may apply outside our local area.

THE BENEFITS FOR YOU



Bespoke to Your Home

Every recommendation is tailored to your windows and your property.



Expert Assessment

Decades of experience in heritage windows and vacuum glazing.



Clear & Transparent

We explain all options clearly, with no pressure and no jargon.



Right First Time

Our thorough process ensures the best solution from the start.



Peace of Mind

You can be confident you're in safe, knowledgeable hands.



HERITAGE SASH INSIGHT

A proper survey is the foundation of a successful project. It ensures the right solution is specified, protects the integrity of your windows and delivers the performance you expect.



PLEASE NOTE

A survey is required before any proposal is provided. This allows us to fully understand your windows and recommend the best solution for your needs.

Heritage Insight 13

A successful installation begins long before the glass is ordered. The quality of the survey often determines the quality of the finished result.

Frequently Asked Questions

Can vacuum glazing be fitted into my existing sash windows?

Often yes, but every window should be individually assessed to confirm glazing bar widths, rebate depth and overall condition.

Will I lose the original appearance of my windows?

Our objective is always to preserve the original appearance wherever practical. In some cases, sympathetic modifications such as replacement glazing bars may provide the best overall result.

Can I see the support pillars?

The support pillars are extremely small and may be visible under certain lighting conditions or at close range. Most homeowners quickly stop noticing them during everyday use.

Can I see the perimeter edge seal?

The edge seal may be visible if it cannot be fully concealed within the existing glazing system. During every survey we assess the most sympathetic method of minimising its visibility.

Is vacuum glazing better than slim double glazing?

Both products have their place. The most appropriate solution depends upon the individual property, the existing windows and the customer's objectives.

Does vacuum glazing reduce condensation?

Yes. By maintaining a warmer internal glass surface, condensation is often significantly reduced.

Does it reduce outside noise?

Vacuum glazing can improve acoustic comfort, although the overall performance also depends upon the condition and draught proofing of the existing windows.

Do I need planning permission?

Some Listed Buildings and Conservation Areas may require consent. Every project should be considered individually.

How long does installation take?

Most projects are completed over several days, with windows removed in carefully planned phases to minimise disruption to the home.

Will my windows still open and operate as before?

Yes. Our objective is to retain the original function and character of the window whilst improving its overall performance.

Why does vacuum glazing cost more?

Vacuum glazing is a highly engineered product manufactured to extremely fine tolerances using specialist vacuum sealing technology. Although the initial investment is higher than conventional glazing, it delivers exceptional thermal performance, reduced condensation, improved acoustic comfort and helps preserve traditional timber windows without altering their character.

FIGURE 23

FREQUENTLY ASKED QUESTIONS

Your questions. Expert answers.

Here are answers to the questions we're asked most often about vacuum glazing for heritage windows.

COMMON QUESTIONS. CLEAR ANSWERS.

1  Can vacuum glazing be fitted into my existing sash windows? Often yes, but every window should be individually assessed to confirm glazing bar widths, rebate depth and overall condition.	2  Will I lose the original appearance of my windows? Our objective is always to preserve the original appearance wherever practical. In some cases, sympathetic modifications such as replacement glazing bars may provide the best overall result.	3  Can I see the support pillars? The support pillars are extremely small and may be visible under certain lighting conditions or at close range. Most homeowners quickly stop noticing them during everyday use.	4  Can I see the perimeter edge seal? The edge seal may be visible if it cannot be fully concealed within the existing glazing system. During every survey we assess the most sympathetic method of minimising its visibility.	5  Is vacuum glazing better than slim double glazing? Both products have their place. The most appropriate solution depends upon the individual property, the existing windows and the customer's objectives.	6  Does vacuum glazing reduce condensation? Yes. By maintaining a warmer internal glass surface, condensation is often significantly reduced.
7  Does it reduce outside noise? Vacuum glazing can improve acoustic comfort, although the overall performance also depends upon the condition and draught proofing of the existing windows.	8  Do I need planning permission? Some Listed Buildings and Conservation Areas may require consent. Every project should be considered individually.	9  How long does installation take? Most projects are completed over several days, with windows removed in carefully planned phases to minimise disruption to the home.	10  Will my windows still open and operate as before? Yes. Our objective is to retain the original function and character of the window whilst improving its overall performance.	11  Why does vacuum glazing cost more? Vacuum glazing is a highly engineered product manufactured to extremely fine tolerances using specialist vacuum sealing technology. It delivers exceptional performance while preserving your original windows.	12  Do you provide a guarantee? Yes. All vacuum glazing units come with a 20-year performance warranty, and our installation work is covered by our workmanship guarantee.

WHAT WE ASSESS DURING EVERY SURVEY

 Window Condition We assess the condition of frames, sashes and existing glass.	 Measurements Precise measurements ensure the perfect vacuum glass fit.	 Glazing Bars We check glazing bar widths and sightlines for compatibility.	 Heritage Considerations We consider heritage value, planning requirements and building regulations.	 Performance Goals We discuss thermal, acoustic and comfort goals for your home.
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EXPERTISE YOU CAN TRUST

Our survey is carried out by experienced heritage window specialists who understand both traditional craftsmanship and modern performance solutions.

HOW LONG DOES A SURVEY TAKE?

Most surveys take between 45 minutes and 1.5 hours, depending on the number of windows and complexity.

SURVEY COST

Our survey is free with no obligation. Travel charges may apply outside our local area.

THE BENEFITS FOR YOU

- Bespoke to Your Home**
Every recommendation is tailored to your windows and your property.
- Expert Assessment**
Decades of experience in heritage windows and vacuum glazing.
- Clear & Transparent**
We explain all options clearly, with no pressure and no jargon.
- Right First Time**
Our thorough process ensures the best solution from the start.
- Peace of Mind**
You can be confident you're in safe, knowledgeable hands.

HERITAGE SASH INSIGHT

A proper survey is the foundation of a successful project. It ensures the right solution is specified, protects the integrity of your windows and delivers the performance you expect.

PLEASE NOTE

A survey is required before any proposal is provided. This allows us to fully understand your windows and recommend the best solution for your needs.

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VIG Cost Comparison Guide

Every window is individually manufactured.

Vacuum glazing is not an off-the-shelf product. Every glazing unit is made specifically for your window size and specification.

Typical quotation includes consideration of:

- Individual glass sizes
- Heritage requirements
- Edge seal concealment
- Manufacturing complexity
- Installation requirements
- Window condition

WHY THE DIFFERENCE?

- ✓ Specialist vacuum manufacturing process
- ✓ Microscopic vacuum cavity with hermetic edge seal
- ✓ Low-E coated toughened safety glass
- ✓ Bespoke manufacture for each opening
- ✓ Exceptional thermal performance (Ug 0.49 W/m²K)
- ✓ Designed to preserve traditional timber windows

Heritage Insight 14

Like-for-like quotations matter.

When comparing prices, ensure quotations include:

- Manufacture of the vacuum glazing units
- Survey and technical assessment
- Heritage-compatible installation
- Timber adaptations where required
- Reinstatement and finishing
- Warranty and aftercare

Every window is unique.

Following our survey, we provide a detailed fixed quotation based on the condition, dimensions and requirements of your individual windows.

FIGURE 24

UNDERSTANDING YOUR VACUUM GLAZING QUOTATION

Every quotation is tailored to your individual windows.
No two period properties are the same. Every quotation is prepared following a detailed survey to ensure the most appropriate solution is specified for each window.



Hi, I'm **Buddy**.
Let me explain what influences the cost of vacuum glazing.

WHAT DETERMINES COST?

- Window Size**
Larger glazing units require more material and specialist manufacture.
- Window Condition**
Repairs, timber restoration or refurbishment may be required before vacuum glazing can be installed.
- Installation Method**
Some windows can accept vacuum glazing directly, while others benefit from sympathetic glazing bar modifications or restoration.
- Heritage Requirements**
Listed Buildings and Conservation Areas often require additional consideration to preserve original detailing.
- Quantity of Windows**
Larger projects often allow installation to be completed more efficiently.
- Access Requirements**
Scaffolding, upper floors and specialist access equipment may influence installation costs.

THREE EXAMPLES OF PROJECT TYPES



SIMPLE UPGRADE

- Existing sash suitable
- Minimal preparation
- Vacuum glazing installed

Typical complexity
LOW ●●●○○



RESTORATION & UPGRADE

- Timber repairs
- Draught proofing
- Vacuum glazing
- Original sash retained

Typical complexity
MEDIUM ●●●○○



REPLACEMENT SASH

- New matching sash
- Original box frame retained
- Vacuum glazing installed

Typical complexity
HIGHER ●●●●○

WHAT EVERY QUOTATION INCLUDES

- Detailed property survey
- Window-by-window assessment
- Suitability report
- Recommended upgrade option
- Full installation costs
- Clear explanation of any repairs
- No hidden extras

TRANSPARENT QUOTATIONS. HONEST RECOMMENDATIONS.
Every proposal is based on a detailed survey of your windows, ensuring the solution is appropriate for your property, your conservation requirements and your budget.



HERITAGE SASH INSIGHT

Our aim is simple:
Recommend the least intrusive solution that delivers the best possible performance for your windows.
Sometimes this is a straightforward glazing upgrade.
Sometimes careful repairs or replacement glazing bars provide the better long-term outcome.
If vacuum glazing is not the right solution, we will tell you.

PLEASE NOTE

Vacuum glazing is individually manufactured.
Every period property is different.
Every window is different.
Providing a fixed price without surveying the windows would often be misleading.

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Why Heritage Sash?

Vacuum glazing is only one part of the solution.

The quality of the survey, the joinery, the glazing installation and the understanding of traditional timber windows are equally important.

At Heritage Sash we specialise in preserving original timber windows through careful craftsmanship, sympathetic repairs and considered upgrades.

Every recommendation is guided by three principles.

- Preserve Character.
- Improve Performance.
- Respect Traditional Craftsmanship.

We believe knowledge should come before recommendations. Every customer deserves to understand the options available before deciding. Whether vacuum glazing proves to be the right solution or not, our objective remains the same:

To help homeowners make informed decisions that respect both their property and its heritage.

FIGURE 25

WHY CHOOSE HERITAGE SASH

The perfect balance of heritage, innovation and service.
We specialise in vacuum glazing for traditional windows. Our focus on quality, expertise and customer care sets us apart.

THE HERITAGE SASH DIFFERENCE

 SPECIALISTS IN HERITAGE WINDOWS  • Decades of experience in traditional windows and listed properties. • Deep understanding of conservation requirements and best practice. • Solutions that respect the past while improving the future.	 ADVANCED PERFORMANCE VACUUM GLAZING  • Up to 3x better thermal performance than double glazing. • Excellent sound reduction and comfort. • Slim, discreet units that maintain the original appearance.	 EXPERT CRAFTSMANSHIP & INSTALLATION  • Skilled installers with heritage expertise. • Careful, respectful workmanship. • Attention to detail at every stage.
 TAILORED SOLUTIONS FOR EVERY PROJECT  • No two properties are the same. • We design the right solution for your windows, your home and your goals. • Honest advice and clear options.	 QUALITY YOU CAN RELY ON  • Premium materials and rigorous quality control. • 20-year performance warranty. • Built to deliver long-term value and peace of mind.	 CUSTOMER CARE YOU CAN TRUST  • Clear communication and regular updates. • We respect your home and time. • Ongoing support and aftercare.

PROTECTING HERITAGE. ENHANCING COMFORT. ADDING VALUE.
Vacuum glazing from Heritage Sash is the smart choice for homeowners, property professionals and conservation specialists who demand the best.

EXPERTISE YOU CAN TRUST
Our survey is carried out by experienced heritage window specialists who understand both traditional craftsmanship and modern performance solutions.

GET IN TOUCH
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THE BENEFITS FOR YOU

- 

Energy Efficient
Lower energy use and reduced carbon emissions.
- 

Quieter Homes
Excellent sound reduction for a more peaceful living environment.
- 

Preserve Heritage
Maintain the original look and character of your windows.
- 

Add Property Value
Improve comfort and efficiency while enhancing the value of your home.
- 

Long-Term Protection
Quality materials, expert installation and a 20-year performance warranty.
- 

Peace of Mind
A trusted local company with a reputation for integrity and outstanding service.

HERITAGE SASH INSIGHT
Choosing the right partner is just as important as choosing the right product. We are here to deliver results you can see, feel and rely on.

PLEASE NOTE
Always use a specialist vacuum glazing company with proven heritage experience. The right choice protects your home, your investment and your peace of mind.

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Heritage Insight 15

The best restoration is often the one that goes unnoticed.

Continue Your Heritage Journey

The Heritage Sash Knowledge Library has been created to help homeowners, architects, surveyors and conservation professionals better understand traditional timber windows and sympathetic modern upgrades. Every guide has been written using practical experience gained from restoring heritage windows throughout the UK. This guide forms part of the Heritage Sash Knowledge Library.

Additional publications include:

- The Complete Guide to Sash Window Restoration
- Understanding Draught Proofing
- Timber Repairs Explained
- The Homeowner's Maintenance Guide
- Repair, Restoration or Replacement?
- Listed Buildings & Traditional Windows

Future editions of these guides, together with interactive resources, will also be available through the Heritage Sash website.

HERITAGE INSIGHT 16

Good decisions start with good information. Every property is different. Every window deserves the right solution.

FIGURE 26

THE HERITAGE SASH KNOWLEDGE LIBRARY

Technical guidance for today's homeowners. Heritage expertise for generations to come.

The Heritage Sash Knowledge Library has been developed to provide clear, practical and technically accurate guidance for owners of traditional timber windows.

Whether your windows require repair, restoration or sympathetic performance upgrades, our guides are designed to help you make informed decisions whilst preserving the character of your property.

EXPLORE OUR KNOWLEDGE LIBRARY



Complete Guide to Sash Window Restoration



Understanding traditional sash window construction, common defects, repair techniques and sympathetic restoration.



Understanding Draught Proofing



How discreet draught proofing improves comfort, energy efficiency and operation whilst preserving heritage character.



Timber Repairs Explained



When repairs are appropriate, repair methods available and how structural timber can often be preserved.



Listed Buildings & Traditional Windows



Understanding conservation principles, Listed Building considerations and sympathetic glazing upgrades.



Repair, Restoration or Replacement?



Helping homeowners understand the most appropriate solution for every window.



Homeowner Maintenance Guide



Simple maintenance advice to maximise the life and performance of traditional timber windows.



Vacuum Insulated Glass Technical Guide (Current Guide)



Everything you need to know about vacuum glazing for heritage windows, from technology to installation.



More Guides Coming Soon



Future publications will continue to expand the Heritage Sash Knowledge Library.

OUR COMMITMENT

We believe every homeowner deserves honest technical guidance rather than sales-driven advice.

Every recommendation made by Heritage Sash is based upon:

- ✓ The condition of the existing windows
- ✓ The historic significance of the property
- ✓ Long-term performance
- ✓ Conservation best practice
- ✓ The individual needs of every customer

Our objective is always to recommend the least intrusive solution capable of delivering the required performance.

THE BENEFITS FOR YOU

-  **Independent Technical Guidance**
Unbiased advice focused on your best outcome.
-  **Heritage Specialists**
Decades of experience with traditional windows.
-  **Conservation-Led Solutions**
Respecting heritage while improving performance.
-  **Modern Performance with Traditional Appearance**
The best of both worlds.
-  **Long-Term Value**
Quality solutions that protect your home and investment.



HERITAGE SASH INSIGHT

Traditional windows have often survived for well over a century. With sympathetic repair, careful restoration and appropriate modern upgrades, they can continue performing for generations to come.



PLEASE NOTE

Future editions of the Heritage Sash Knowledge Library, together with interactive technical resources and updated guidance, will be available through our website:
<https://idsash.co.uk>

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The information contained within this publication is provided for general guidance only and should not replace an individual property survey or professional technical advice.

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Case Study – Upgrading a Traditional Sash with Vacuum

Existing Window

This traditional timber sash window had reached the point where improved thermal performance was becoming a priority, while retaining the original character of the property remained essential.

Following a detailed survey, the existing timber frame was found to be suitable for restoration and capable of accommodating vacuum glazing with only minor modifications.

Our Solution

Rather than replacing the entire window, the existing timber frame and sash were retained and carefully restored.

The original glazing was removed and replaced with slim vacuum insulated glazing units, preserving the appearance of the historic window while significantly improving its thermal performance.

Where necessary, glazing bars were carefully adapted to accommodate the vacuum glazing edge seal while maintaining the original proportions and visual character.

Outcome

- ✓ Original timber window retained
- ✓ Significantly improved thermal performance
- ✓ Reduced draughts
- ✓ Improved acoustic comfort
- ✓ Minimal visual difference from the original glazing
- ✓ Suitable for many heritage properties

FIGURE 27

REAL HERITAGE PROJECT

Upgrading a Victorian Sash Window with Vacuum Glazing

This case study demonstrates how vacuum glazing can dramatically improve comfort and efficiency while preserving the original character of a traditional home.

BEFORE



Original single glazed sash – cold, draughty and noisy.

AFTER



Vacuum glazing installed – warmer, quieter and discreet.

THE PROJECT JOURNEY

1 BEFORE

Original single glazed sash windows.

- Cold rooms
- Condensation
- Traffic noise
- Draughts

2 SURVEY

- Individual assessment
- Measurements taken
- Heritage considerations

3 RESTORATION

- Repair timber where required
- Replace cords and linings
- Draught proof and adjust
- Prepare rebates for new glazing

4 VACUUM GLAZING

- Install bespoke vacuum units
- Retain original appearance
- No change to external look

5 AFTER

A transformed window with outstanding performance.

- Warmer
- Quieter
- Reduced condensation
- Original character preserved

6 CUSTOMER RESULT

★★★★★

"Our house feels completely different while still looking exactly the same."

HERITAGE RETAINED

Original character preserved with no change to appearance.

ENERGY IMPROVED

Significant thermal improvement in efficiency and comfort.

NOISE REDUCED

Noticeably quieter home with less external noise.

CONDENSATION REDUCED

Warmer internal glass surface reduces condensation.

TIMBER RESTORED

Careful repairs protect and extend the life of original timber windows.

FULLY SURVEYED

Every project begins with a detailed survey and report.

PROJECT SUMMARY

- PROPERTY**
Victorian Terrace
- LOCATION**
Conservation Area
- WINDOWS**
12 Original Sash Windows
- SERVICE**
Restoration + Vacuum Glazing
- COMPLETED**
5 Days
- GUARANTEE**
20 Years

HERITAGE SASH INSIGHT

Every project is different. Sometimes only glazing is required. Sometimes sympathetic restoration provides the best long-term result. Every recommendation begins with an individual survey.

PLEASE NOTE

Images shown are representative of Heritage Sash workmanship. Every property is individually assessed before recommendations are made.

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Thank You

Thank you for taking the time to read this guide.

We hope it has helped you better understand vacuum glazing and the considerations involved when upgrading traditional timber windows.

Every property is unique.

Every window tells a different story.

If you would like Heritage Sash to assess your windows, we would be delighted to help.

FIGURE 28

LET'S TRANSFORM YOUR WINDOWS

The next step to comfort, efficiency and heritage.

Discover how vacuum glazing from Heritage Sash can enhance your home while preserving its timeless character.

Ready to take the next step?

Contact Heritage Sash today to arrange your no-obligation survey and expert advice.

- 07428 489692
Call or WhatsApp
- hello@ldnsash.co.uk
Email us
- Book your free survey
At a time that suits you
- www.ldnsash.co.uk
Learn more online

“

We combine traditional craftsmanship with advanced technology to deliver outstanding results for your home and for generations to come.

”

HERITAGE SASH
HERITAGE WINDOWS.
MODERN PERFORMANCE.

WHY ACT NOW?

- Improve Comfort**
Enjoy a warmer, quieter home all year round.
- Reduce Energy Bills**
Lower heat loss means lower energy usage and running costs.
- Protect Your Home**
Prevent condensation and damp helping to protect your windows and interiors.
- Add Long-Term Value**
A high-performance upgrade that enhances comfort and property value.
- Preserve Heritage**
Keep the original appearance and character of your windows.

HERITAGE SASH INSIGHT

Vacuum glazing is a long-term investment in your home. The sooner you start, the sooner you benefit from improved comfort, efficiency and peace of mind.

PLEASE NOTE

Every property is unique. A professional survey ensures the right solution for your windows and your home.

EXPERTISE YOU CAN TRUST
Decades of experience in heritage windows and conservation.

TAILORED SOLUTIONS
Every project is designed around your windows, your property and your goals.

QUALITY ASSURED
Premium materials, skilled craftsmanship and a 20-year performance warranty.

LOCAL & RELIABLE
A dedicated team providing personal service and ongoing support.

HERITAGE SASH KNOWLEDGE LIBRARY

This guide forms part of the Heritage Sash Knowledge Library.

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