





Quietly Confident







We are a specialist designer, manufacturer and installer of aluminium secondary glazing.

Our discreet systems lead the fight against noise pollution, whilst delivering improved building energy performance and efficiency.

As the UK's largest manufacturer of secondary glazing, we support a huge variety of awardwinning construction and renovation projects, specialising in heritage and listed buildings.

This experience is backed up by accreditations from both the Achilles Building Confidence and Constructionline schemes, in addition to longstanding BBA, CHAS and ISO 9001 awards.

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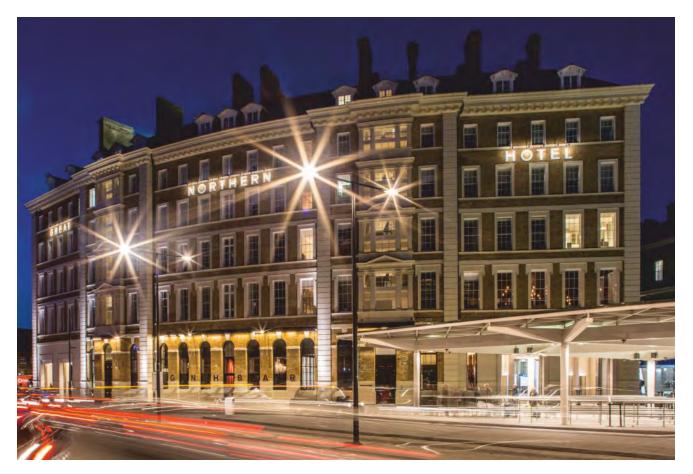


# Quietly Confident

Successful glazing is about so much more than glass. Windows define a building; bringing air and light in, and keeping the outside world at bay.

On heritage and traditional properties, the styling speaks volumes. Yet modern regulations demand ventilation, sound and energy efficiency, as well as respect for tradition. Thankfully, *Granada* delivers the ultimate answer, with a portfolio of products that retain original characteristics, whilst taking advantage of design, material and production advances.

Strong, discreet and high performing, these are the product attributes that make us leaders in our field. And we're quietly confident that we can support your next building project.

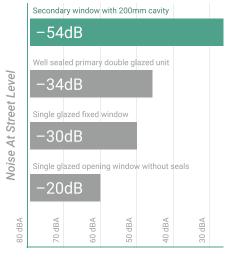




Granada's secondary glazing has provided a unique solution to the acoustic issues
 presented, whilst remaining sympathetic to the renovation of this Grade II listed building.

Simon Lord, Project Manager, Houston Cox, commenting on the custom balanced vertical sliders installed at the Great Northern Hotel, Kings Cross.





Sound Pressure Level (dBA)

### Acoustic Performance

Our systems have been independently tested and proven to reduce noise levels by up to 54dB.

Thanks to its unique soundproofing capabilities, secondary glazing can significantly reduce the noise caused by various sources. Sound is transmitted through the primary window by a direct vibration of the glass. When secondary glazing is installed, a cavity is created which helps to reduce resonance, as well as providing an additional barrier for sound to travel through.

Insulation increases as the gap widens between primary and secondary glazing. A minimum of 100mm is recommended, with optimum performance achieved between 150mm and 200mm.

A noise reduction of 48dB is easily achievable, and over 54dB has been registered when used in combination with double glazing.



<sup>44</sup> The Granada team have fully achieved their part of the brief. Their discreet secondary glazing has helped to resolve the thermal issues faced at Leeds.

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David Oldroyd, Project Manager, University of Leeds, commenting on the transformation of energy ratings at the Parkinson Building.

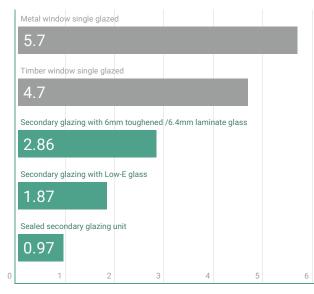
# Thermal Insulation

Secondary glazing can eliminate draughts and reduce heat loss by up to 65 percent.

Warmth is a valuable commodity, and creating a second barrier to the elements is an ideal way to reduce wasteful thermal heat loss. In fact, there are few better ways.

A well sealed independent frame ensures minimum air leakage, creating an insulating layer of air that reduces heat loss by 40-50%. Low-E glass will lower u-values further, whilst sealed hinged units can be fitted to provide a triple glazed system.

With commercial pressures to reduce energy costs, combining with strengthening legislative requirements to reduce carbon, all businesses must now tackle the energy use in their buildings. Our windows provide a solution that is both sympathetic and energy-efficient.



Typical U Values (W/m<sup>2</sup>K)





Partnering with Interserve, we installed a suite of high specification double glazed hinged units at *Nottingham QMC*. The refurb formed part of an energy efficiency programme rolled-out by the NHS, with our windows achieving the required thermal and solar control values, and ultimately saving costs.

## Secondary Benefits

Beyond acoustic and thermal performance, there are plenty of other reasons to specify secondary glazing.

#### **Enhanced Security**

Windows are often seen as the weak point in building security. Secondary glazing offers a discreet and highly effective solution to counter this problem. Frames are made from tough aluminium and securely fixed, making them extremely difficult to open from the outside.

### **Condensation Control**

Our systems provide a complete internal seal, allowing balanced ventilation within the window reveal cavities. This stops the inner glass from becoming too cold and helps to tackle condensation.

#### **Environmentally Responsible**

Replacing a primary window with new double or triple glazing requires approximately three times the materials used to install a secondary window. Little decoration is required, plus the enhanced thermal performance vastly reduces C02 emissions and future energy use.

#### **Cost Efficient**

Secondary glazing is less expensive than many primary systems. Quick installation, simple maintenance and reduced building life cycle costs, means the return on investment is significant for most clients.





Former home to the BBC, and now luxury office space, *Bush House* was renovated as part of a two-year, £60 million project back in 2012. A BREEAM environmental assessment target of 'Excellent' was set, making our secondary glazing a vital aid to achieving a grade 'A' rated environment.

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# A Range Of Unobtrusive Styles

Our comprehensive product range caters for most property types and window styles. All frames utilise a slim aluminium profile, offering minimal sight lines and easy access to the primary window for cleaning and maintenance.

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Horizontal sliding windows are available in 2, 3, 4 and 5 panels. Individual windows can be linked with mullions and transoms, allowing large and ribbon windows to be treated.

Vertical sliding units are ideal for treating traditional sash windows. Spring balances support the weight of the sash in all positions, and tilt-in versions enable easy cleaning.



**Fixed** windows are aluminium frame sections that can be attached to an existing glazing panel. They're our most economical product, and ideal when there's minimal fixing area.

Hinged units allow full and easy

access to the outer window. With no

transoms or mullions to impede the

view, these unobtrusive systems also

provide increased levels of security.

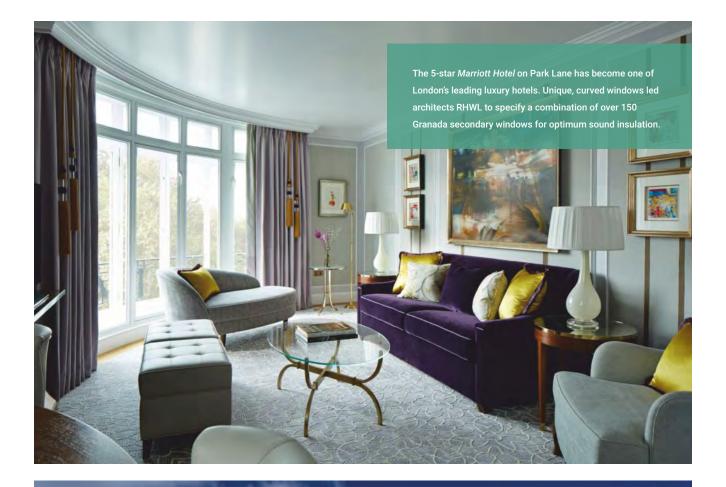


### Arched, curved and bespoke

windows can also be manufactured and installed, by shaping of the timber sub frame and using a range of bespoke finishing trims.



Lift out windows are ideal when primary window access is only an occasional requirement. As with all products, a range of frame colours and glazing options can be specified.



We proudly supported Galliford Try's refurbishment of Woolwich Barracks, installing a suite of high specification balanced vertical sliders to meet thermal and security requirements.



# Sectors Supported

As the UK's largest manufacturer of secondary glazing, we support a huge variety of award-winning renovation projects, specialising in heritage and listed properties.

Our portfolio spans most sectors, with contracts varying enormously in both size and type — ranging from a single installation through to hundreds of windows.

National partners include hotel chains, museums, housing associations, the NHS and other commercial bodies. We've also gained a considerable reputation amongst heritage and residential customers.

Whether it's the listed buildings of Historic Scotland or the national treasures of English Heritage, our products are helping to shut out noise and seal in warmth.







Defence

















We were delighted with Granada's continued technical support. The flexibility of their secondary glazing has allowed us to retain the aesthetics required by the design team.

Mark Spanner, Director, John Mowlem Specialist Works, commenting on the refurbishment of the Marriott Hotel, Park Lane.

## Why Granada?

We specialise in secondary glazing, and regularly work with architects, specifiers and contractors to develop solutions for high profile projects across the UK.

Our aim is to provide a bespoke, tailored service to ensure both design aesthetics, and thermal and acoustic functionality is achieved. We encourage our partners to think outside of the box and we are regularly challenged to meet difficult briefs, involving bespoke design and build details.

As members of the RIBA CPD Providers Network, we run CPD seminars to support specifiers. We also welcome visitors to our Dinnington showroom to meet our experts and view our products first-hand.

For over 20 years, our discreet systems have been enhancing heritage and listed properties across the UK. To learn more about how we could support your next project, please get in touch...

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