



By Appointment to
Her Majesty The Queen
Manufacturer and Supplier
of Secondary Glazing
Selectaglaze Ltd.
St Albans

Prime examples of secondary glazing

A CASE STUDIES COLLECTION

selectaglaze™

What is Secondary Glazing? Secondary glazing is an independent glazed frame fitted to the room side of an existing window to form double or triple glazing. Developments in aluminium extrusion technology have led to strong, slim window frame profiles that are perfect for discreet secondary glazing. A wide range of designs and the ability to powder paint in almost any colour allows for very sympathetic treatments.



Why use secondary glazing?

WARMER

Reducing heat loss and the discomfort of draughts is a major reason for using secondary glazing. Effective seals to the frame and opening panels markedly reduce air movement across the whole window and different types of glass can be specified, including low emissivity or sealed units, to suit energy performance needs.

QUIETER

Noise nuisance can be very intrusive and affect health and wellbeing. Setting secondary glazing, at least 150mm from the primary glazing is the most effective way of controlling noise.

The seals limit airborne sound and the glass type and thickness can be varied to provide the required noise reduction.

SAFER

Windows in buildings with an elevated risk of attack are vulnerable, the glazing in particular. Secondary glazing can provide discreet protection using reinforced frames, specialist glazing and carefully chosen fixings. Using products tested to recognised intruder protection and blast mitigation standards will offer peace of mind and demonstrate duty of care.

Why Selectaglaze?

ORIGINAL DESIGNER

Selectaglaze is an original designer of secondary glazing and through its commitment to continuous development has the widest range of designs and performance capabilities in the UK.

QUALITY AND SERVICE

Quality and service have been extremely important in developing and maintaining long term client relationships. As testament to this, the company was proud to be awarded a Royal Warrant in 2004.

FAMILY COMPANY

Selectaglaze is a family company, founded in 1966 and based in St. Albans, employing approximately 100 people working in technical sales, production, installation, project management and office functions. Most projects are managed directly but a network of preferred partners will undertake projects in some parts of the UK.

EXPERIENCE

The company has successfully worked on many high profile projects with significant performance needs, a large number of which have been in Listed buildings. Selectaglaze works closely with architects, conservationists, acousticians, energy consultants, blast engineers and security specialists. The experience and knowledge gained, over the last 50+ years is applied to all projects, large and small. This helps achieve the most appropriate design and specification for each client's needs.

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Hotels must provide comfortable and peaceful room environments if they are to achieve high levels of guest satisfaction and good approval feedback ratings.



GOOD NIGHT SLEEP

Many hotels will be conveniently located in town and city centres or close to transport hubs. Inevitably noise levels will be high but well specified secondary windows fitted with a wide gap between the glass can effectively lower noise levels to WHO standards ensuring a 'good night's sleep' for the guest.

COMFORT

Room comfort requires an even temperature and minimal draughts. Many traditional and Listed buildings, that are attractive for hotel use, have ill-fitting single glazed windows. A bespoke secondary window will stop draughts and retain heat making the whole room more comfortable.

SAVING ENERGY

Hotels working 24/7, 365 days a year have more significant energy demands than most other

building users; 40% of which is attributed to heating alone. Retrofitted secondary glazing with low-E glass creates effective double glazing against traditional single glazed windows or triple glazing if double glazing already exists. Lower energy usage both improves the carbon footprint and the bottom line.

MINIMUM DISRUPTION

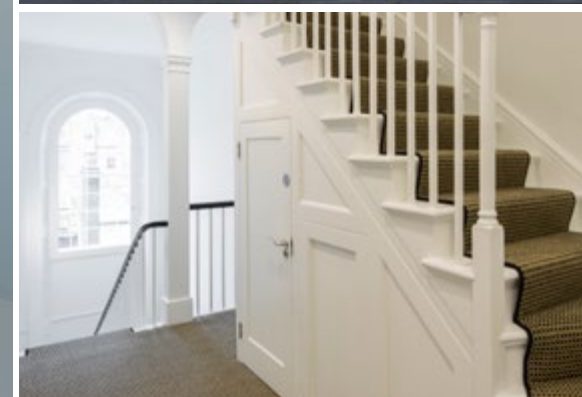
Hotels need to maximise occupancy levels so taking rooms out of service to carry out works, damages revenue. A secondary window installation can be managed between check-out and check-in times. A precise survey is first carried out; windows are fully factory fabricated, glazed and any supporting timber framing is finish painted. This allows rapid installation followed by handover to Housekeeping.





Six Grade II Listed Georgian Townhouses receive a change of use and remodelled as a hotel. Draughts, heat loss and noise ingress was addressed by the addition of secondary glazing.

Project: Z Hotels, Gloucester Place, London | Client: Portman Estate





A new-build 5* Hotel in the heart of bustling Soho, has acoustic secondary glazing installed to help provide guests with a good night sleep.

Project: Ham Yard Hotel, Soho, London | Client: Firmdale Hotels





This iconic and imposing Grade I Listed gothic revival style hotel, required high performance acoustic insulation to ensure guests were not disturbed by the relentless traffic from Euston Road nor the trains from the station behind.

Project: St Pancras Renaissance Hotel, London | Client: Manhattan Loft Corporation



Schools, colleges and universities all demand quiet working environments but many also need to provide attractive student accommodation and security for facilities such as laboratories and libraries.



QUIET LEARNING ENVIRONMENT

Unwanted noise is a distraction and has a negative influence on the learning environment; it reduces concentration levels and impacts on communication between teacher and student. Building Bulletin 93 (BB93) sets out the minimum performance standards for the acoustics of school buildings and is often used as a guide for Universities and Colleges.

STUDENT ACCOMMODATION

Universities need to provide suitable accommodation as a part of their submission to attract students. This can be provided through purpose designed new-builds, upgrading of older accommodation or 'change of use' to existing buildings. Secondary glazing provides an economic alternative to replacement windows, as well as being the most superior way to reduce unwanted noise.

SECURITY

There are many areas in schools and universities where security is important. Computer labs, libraries and music rooms with instrument stores are all vulnerable to theft. University laboratories may well need enhanced window security and secure vision windows depending on the activity. Enhanced secondary glazing accredited to Secured by Design or LPS1175 Loss Prevention Standards will assist.

INSTALLATION IN HOLIDAY PERIODS

It is important to minimise disruption to staff and students when considering work on the fabric of buildings. This is best achieved by utilising holiday periods but there must be careful forward planning and close cooperation with other contractors where more extensive works are planned. Just-in-time production and rapid installation help achieve the desired result.





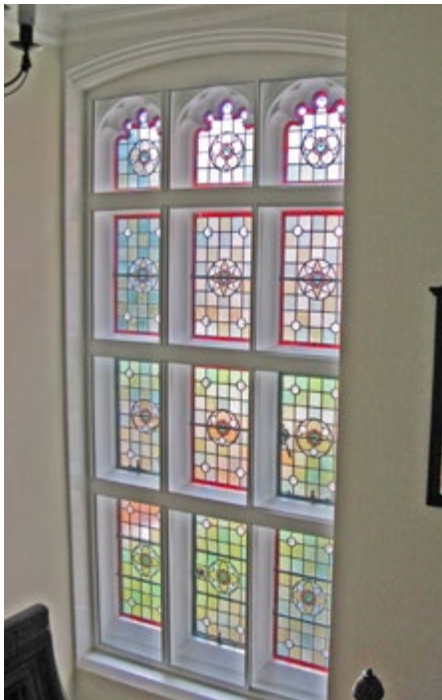
A Grade II Listed village school, had noise and thermal issues abated with discreet secondary glazing.

Project: Bladon Church of England Primary School, Oxon | Client: Bladon Church of England Primary School



Secondary glazing is extensively used in Cambridge University and College buildings to improve building energy performance and support environmental sustainability goals.

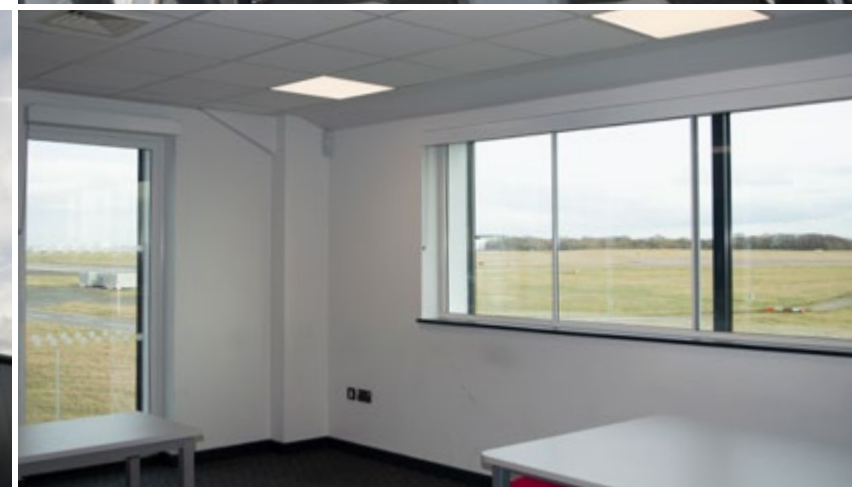
Project: Various | Client: Cambridge University and Colleges





A brand new college sitting at the end of Stansted Airport runway is fitted with high performance acoustic secondary glazing to ensure a quiet learning environment.

Project: Stansted Airport College, Essex
Client: Harlow College





The overall shortage of housing and particularly of affordable homes is leading to new types of development and greater densities. Homes can be owner occupied; private rented or social housing but all have the same environmental needs of energy efficiency and containment of noise.



CHANGE OF USE

The significant shortage of housing has led to many redundant buildings previously used as offices, factories or warehouses being converted to flats. Many will have windows in reasonable condition that can be retained and those in Listed buildings cannot be changed. Secondary glazing provides an attractive and economic solution for window upgrades both for thermal and acoustic reasons.

LISTED BUILDINGS

The number of Listed buildings in the UK is estimated to be over 600,000 and a large proportion will be homes. It is very rare to obtain Listed Building Consents for window replacement but secondary glazing, as a reversible adaptation, is almost always approved providing much improved room comfort and reduced heating costs.

ENERGY PERFORMANCE CERTIFICATES (EPC)

An EPC is required when a property is constructed, sold or let. This provides an energy efficiency rating of A-G together with recommendations for improvement. Landlords must in most cases meet a Minimum Energy Efficiency Standard (MEES) of band E. As energy performance becomes more critical properties with higher EPC's will become more marketable.

BROWNFIELD DEVELOPMENTS

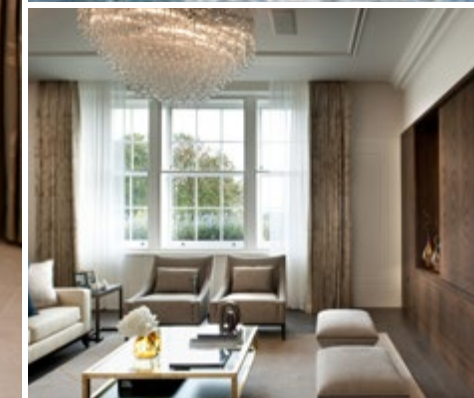
Disused industrial areas in towns and cities can, with suitable decontamination, provide locations for significant numbers of new homes. These sites are often adjacent to significant rail or road links and the management of noise nuisance is covered by National Policy Planning Framework (NPPF) 2019 and BS8233 (2014) – *"Guidance on sound insulation and noise reduction for buildings"*.

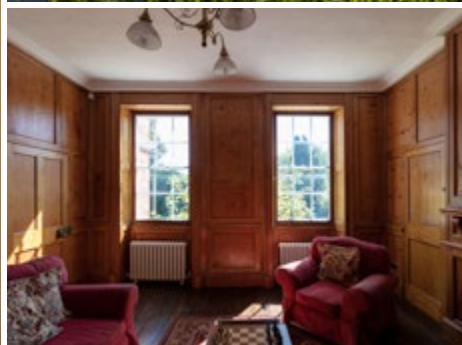




Secondary glazing helps create a quiet and peaceful interior for the transformation of 2 Grade II Listed townhouses, into exclusive luxurious apartments which won the accolade of best residential renovation in the UK 2014-2015.

Project: Connaught Place, London | Client: Redrow Homes





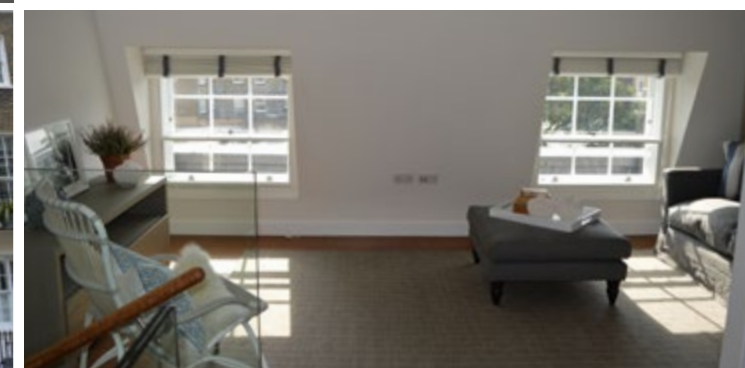
An 18th century Grade II* Listed Mill and family home is sensitively restored and refurbished with the addition of secondary glazing to improve thermal retention.

Project: Blue Mills, Essex | Client: Private



Secondary glazing helped successfully transform a Grade II Listed Georgian property into three of the most sustainable, energy efficient apartments in the UK; it was the first Listed building to receive a BREEAM 'Outstanding' rating in the UK for its proposed design.

Project: 119 Ebury Street, London | Client: Grosvenor Britain and Ireland



Wellbeing is becoming increasingly important for office providers as demands on employees rises. Many businesses have strong sustainability goals and buildings designed with high environmental performance will be very attractive to them.



WELLBEING

Managing health and wellbeing in offices helps with staff retention and productivity. Important environmental factors that influence wellbeing include thermal comfort, air quality, noise and acoustics. Older office space can incorporate well-sealed secondary glazing to limit ingress of dirt and dust from the street, provide more even temperatures across the floor and act as a barrier to external noise.

SUSTAINABILITY

Energy performance certificates identify the energy efficiency of a building with ratings from A-G. Under the Minimum Energy Efficiency Standard (MEES) regulations properties with F and G ratings must be improved to a minimum E rating before sale or lease.

BREEAM which includes social, economic and environmental sustainability performance is very attractive to businesses with a strong commitment to sustainability. Investing in the environmental performance of office buildings is therefore economically prudent but also helps with the UK's commitment to the UN sustainability goal for climate change.

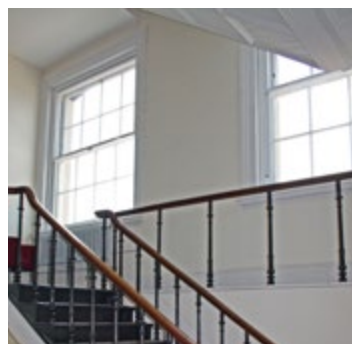
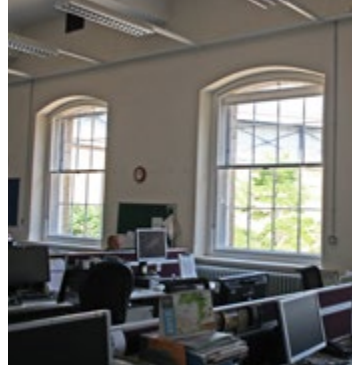




A Grade II Listed building which was on Historic England's at Risk Register, has been given a new life as 21st century offices following an extensive refurbishment, to create a warm and quiet environment in one of the noisiest intersections in London.

Project: Lighthouse, London | Client: UK Real Estate Ltd





An iconic Grade II* Listed building in Swindon was repurposed to serve as archives and offices for English Heritage. Secondary glazing was specified to assist with thermal and draught insulation.

Project: Engine House, Swindon | English Heritage





Flanked by building works for HS2 on two sides of the building and noisy traffic on the others, the Grade II* Listed Royal College of Practitioners has had windows in offices, exam rooms and guest rooms treated for thermal and acoustic insulation; with an unusual treatment to the skylights in the state room on the top floor.

Project: The Royal College of General Practitioners, London | Client: The Royal College of General Practitioners



Museums, Libraries and many Leisure facilities provide a fantastic cultural resource that attracts millions of visitors. Investments in environments to protect exhibits and provide visitors with a rewarding experience are vital.

SECURITY

Museums will have wide ranging displays which can include articles of significant local, national or international interest. Measures need to be taken to protect these against theft, however if a museum wishes to take a loan under the Government Indemnity Scheme (GIS) then they must also meet the Arts Council security requirements. Many museums are located in fine Listed buildings with vulnerable windows and secondary glazing enhanced to meet Loss Prevention Standard LPS 1175 will assist with compliance.

ENVIRONMENTAL PROTECTION

Most collections need controlled environments that manage temperature, humidity and UV light which will fade fabrics, paintings and books. In museum buildings that are Listed or in conservation areas secondary glazing will act to limit heat loss and

air movement through single glazed windows and so assist with temperature and humidity controls. Introducing laminated glass reduces UV light transmission by 97% or more but additional measures may need to be considered in some instances.

QUIET ENVIRONMENT

A visit to a museum or library allows time to reflect and switch off from everyday pressures but as these buildings are often in noisy town or city centres measures need to be taken to limit intrusive noise and provide a quiet, peaceful space that enhances the visitor experience and comfort.

NOISE MITIGATION

A vibrant leisure sector with restaurants, pubs, nightclubs and live music venues is very attractive but can make life uncomfortable for neighbours. Venues with large audiences or offering late night events require an Entertainment Licence and objections can be made if noise levels become a nuisance to the local community. Measures to contain noise, including the application of secondary glazing, can help appease objectors.





High levels of acoustic insulation were required for the monumental windows in this Grade I former Town Hall; now converted to the city's performance centre.

Project: Birmingham Town Hall | Client: Birmingham City Council





Security secondary glazing was installed to protect the invaluable artefacts in the Grade I Listed Holburne Museum in Bath.

Project: Holburne Museum, Bath | Client: Holburne Museum





The largest blast-tested casement units in the UK are installed, to replace intrusive blast net curtains at a Grade I Listed Historic Royal Palace in the heart of Whitehall.

Project: Banqueting House, London | Client: Historic Royal Palaces



The local and national government estates are immense and as heating of buildings accounts for about 10% of total UK carbon emissions the government must lead the way in minimising energy usage.



SUSTAINABILITY

The Climate Change Act 2008 seeks to reduce carbon emissions from all sources including buildings. The UK Government's Construction Strategy makes it clear that government departments must demonstrate clear leadership in the areas of whole-life cost and whole-life carbon and an 'Excellent' rating in BREEAM provides a clear commitment to this.

CONSERVATION

Many traditional local government buildings such as Town Halls are fine examples of civic architecture that are very much part of the community. Preserving these for future generations in a sustainable manner requires a careful approach to refurbishment. Windows in particular are often a key architectural feature that must be retained, so sympathetically designed secondary

glazing offers an attractive way of improving the energy performance of the building.

SECURITY

National government has responsibility for managing risk not only to its extensive estate but also for major infrastructure assets through the Centre for Protection of National Infrastructure (CPNI). Threats can require measures that provide blast mitigation and physical protection against intruders or firearms. Enhanced secondary glazing can provide significant window protection to historic buildings by using units successfully tested against ISO 16933 blast standards and LPS1175 physical attack standards.





Timber grained secondary glazing convinced Conservation Officers to approve window energy efficiency improvement works at a Grade II* Listed building of historic importance to the character of Braintree.

Project: Braintree Town Hall, Essex | Client: Braintree District Council

Secondary glazing to this high profile building on Parliament Square enhances security, reduces noise nuisance and improves thermal performance contributing towards a BREEAM 'Very Good' rating.

Project: Supreme Court, London | Client: Ministry of Justice



Churches continue to offer sanctuary for belief but also support for communities and the iconic architecture is an important part of our heritage. When deemed redundant, they can be repurposed and retained for future generations.

NOISE PROTECTION

Many functioning churches are at the centre of a community where traffic noise could have a negative impact on services. On the other hand enthusiastic congregations or special church events could lead to high noise levels affecting neighbouring properties. Secondary glazing can be shaped to sympathetically treat complex church windows and provide an acoustic barrier, to stop noise entering or leaving the building.

CHANGE OF USE

More than 100 churches and chapels are closed each year and most will find an alternative use. This includes concert venues and art galleries, with many smaller churches becoming homes. Whether they are Listed or not, the windows are an integral part of the building and usually retained. The versatility of secondary glazing can treat these windows in a sensitive way to improve thermal performance and comfort levels.

COMMUNITY SPACES

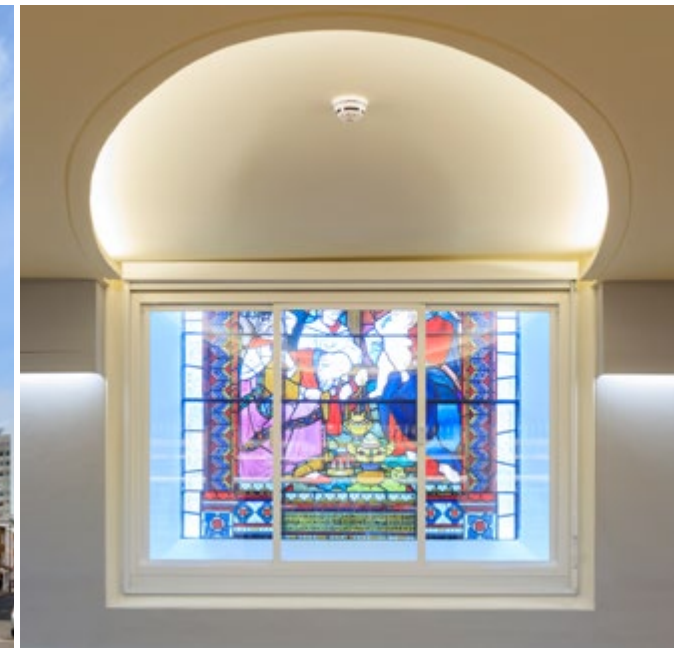
Church halls are used for a wide range of community activities so energy for heating can become a significant cost. Secondary glazing will both reduce heat loss and draughts leading to a more even temperature, making the space far more comfortable for the users.





A Grade II* Listed deconsecrated church, now Headquarters for Greenhouse Sports Charity; provides a warm, welcoming and quiet community space, in the heart of residential London.

Project: Cosway Street, London | Client: Greenhouse Sports Charity





The Rock Tower is now a quiet place of worship and multi-functional community centre, with the installation of acoustic secondary glazing for noise containment.

Project: The Rock Tower, London | Client: House on the Rock





Healthcare encompasses hospitals, clinics, surgeries and care homes; all needing a clean, safe and secure environment.



CLEAN ENVIRONMENT

Hospitals need to provide clean environments to minimise infection. Secondary glazing with high performance seals can be used in intensive care units to help control air flow and in general areas it will reduce dirt and dust entering from outside the building. Slim sections with minimal ledges are easy to clean.

PRIVACY

Many areas such as intensive care units require privacy measures and secondary glazing can assist in a number of ways. It can be supplied with switchable glass allowing instant blackout when required. Blinds can be set between the secondary and primary window to avoid dirt traps and these

can be operated electrically or using remote manual controls. Finally the secondary glazing can incorporate a sealed unit with integral blinds and remote magnetic controls.

SECURITY

Medical laboratories require secure environments. Secondary glazing can assist by providing additional sealing at the window to control air flow, positive or negative. More sensitive facilities needing protection against unauthorised access can incorporate enhanced frames meeting LPS1175 Loss Prevention Standards for both external windows and internal observation windows. Mental Health facilities can incorporate secure secondary window frames with polycarbonate glazing and anti-ligature furniture.





Secondary glazing with remote controlled blinds in the cavity provides privacy, additional security and helps provide a clean controlled environment to the Level 2 Neo-natal unit.

Project: Pembury Hospital, Kent | Client: Maidstone and Tunbridge Wells NHS Trust



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