

Wood windows

Today's high performance wood windows come double- or triple-glazed and pre-finished under factory controlled conditions. They carry some of the best warranties in the sector – typically 30-35 years for the frame and up to 10 years for the paint finish and glazing units. They provide a long-lasting, high quality product that enhances the value of a property, requires little maintenance and it is more simple to repair, has exceptional thermal performance, and the highest environmental credentials.

A wood window is an engineered product, designed and manufactured to withstand extremes of weather. Only fit windows independently assessed to meet British Standards. For maximum durability and maintenance intervals, fit wood windows that have been fully painted or stained and glazed in the factory.

Energy efficiency

- This mainly depends on the glazing unit, although wood, as a good insulator, helps energy-efficiency by reducing 'cold-bridging'
- There are 2 ways to measure energy efficiency, U values & the British Fenestration Ratings Council's (BFRC) Window Energy Ratings (WER)
- For new build, the average U value of all windows must be 2.2 or lower
- WER ratings range from A (best) to G based on performance, with higher ratings increasingly common
- Check Building Regulations (Part L Conservation of Fuel & Power, or equivalent in Scotland or Ireland). Requirements vary by building type.

Security

- Most insurance companies demand ground floor window locks
- Their security can be enhanced by using laminated glass
- Wood Window Alliance windows come with security ironmongery and comply with BS: 7950: 1997 for enhanced security
- Look for 'Secured by Design' (SBD) windows, which comply with BS644 2003, the BMTRADA Q Mark scheme, or the BWF Timber Window Accreditation Scheme, and have third party accreditation of compliance with BS: 7950: 1997.



Sustainable timber

Timber is the most sustainable building product available. It is naturally renewable - over 97% of softwood timber used in the UK comes from Europe, where the forest area is increasing by the equivalent of 90 football pitches every hour of the day and night.*

For reassurance for softwoods and hardwoods look for certification labels like FSC (Forest Stewardship Council) or PEFC (Programme for the Endorsement of Forest Certification).

Always ask your supplier about their responsible purchasing policies.

*IIED & ECCM, Using Wood to Mitigate Climate Change, 2004 and UNECE-FAO, State of the Europe's Forests, 2011.



This information sheet provides general advice only and is not specific to the requirements of a particular building project. It is the builder's responsibility to check compliance with Building Regulations and standards.



The right window type

Side hung casement

- The most common type; outward opening; 100% openable area
- Normal max w: 600mm, h: 1500mm
- Hinges attach sash directly to frame
- Available with different hinge mechanisms, some allowing window to be cleaned from inside.



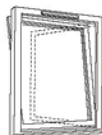
Projecting top hung casement

- Popular in flats and medium to high rise buildings; 100% openable area
- 'Topswing' or 'H-type' hinge mechanism allows sash to rotate on outside of frame, for easy cleaning and painting
- The mechanism often incorporates an 'espagnolette' locking system and child safety locks which restrict opening to 100mm, but can be overridden.



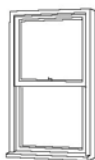
Tilt and turn

- Popular in Europe, and increasingly in the UK; 100% openable area
- Tilts from bottom, allowing secure ventilation
- Turning the handle in the opposite direction opens window as a casement inside room
- Makes cleaning easy, useful if external shading, e.g. louvres, is required. Check with your client to ensure compatibility with curtains or blinds.



Vertical sliding sash

- Traditional type; 50% openable area
- Often required for older buildings and conservation projects where like-for-like replacements are required
- Both sashes open by sliding within frame
- Traditional lead counterweight needs space in sash box; modern spring counterweight compact
- External access required for redecoration and cleaning.



Pivot hung

- Popular in the '60s and '70s
- Simple centre pivot allows sash to turn through 180 degrees; 90% openable area
- Can conflict with curtains/sills and need restraint to prevent uncontrolled rotation.



Other types

- Multi-light windows combine different opening types, for example a sidehung sash and a top-hung vent with a fixed light or direct glazed window below.
- Other combinations may include projecting casement and fixed light, or tilt and turn and fixed light.



Choose the right style

The right window style makes a big difference to the look of a building and can enhance its value. Each different window type can present different styles, depending on the design of the glazing bars.

Modern methods of surface fixing timber glazing bars allow single double glazing units to be used without compromising the aesthetic features of traditional windows. This is important in some Grade II listed buildings and in conservation areas, where local planning departments or Building Control often insist on the need for single glazing sightlines. Discuss the alternatives with your client.

Georgian

- Glazing bars are used to divide the sash into a number of smaller panes; typically six, each taller than they are wide
- If replacing individual windows, match the proportions with other windows in the house or neighbourhood.

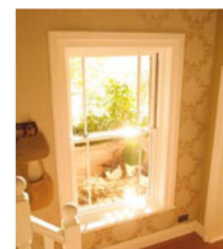


Cottage or horizontal style

- The sash is divided in half by a horizontal glazing bar
- Each half is individually glazed.

Marginal bar

- A traditional style, where the sash is divided into three sections: one central pane bordered by two narrow panes created by vertical glazing bars.





Sills

Avoid projecting timber sills. Use stone, brick or tile sub-sills which allow the windows to be recessed to provide protection for the window and brickwork (now a requirement of Approved Document L of the Building Regulations). Stone sills should not be used in timber frame constructions.

Whether you are installing fully factory finished and glazed windows, or windows with a primer or base coat stain which require glazing, they still need careful handling and storage.

Taking care before installation will reduce remedial work and costs.

The following points can apply equally to both factory-finished and bespoke windows.

Storage and Handling:

- Check the delivery complies with the order and there's no damage
- Where possible store windows upright in clean, dry and covered conditions
- If outside, stack on level bearers and cover with a tarpaulin; don't use polythene as it can cause condensation
- Store in the sequence of use
- Use spacers between frames with projecting sills or hardware
- Don't lift frames by their fittings.

Fitting windows:

- Use durable packings between windows and the structure to avoid distortion to the frames when securing them. Position side fixings 150mm from top and bottom of the frame and at maximum 450mm centres. Add fixings to the head and sill for windows exceeding 1800mm in width, or two frames together
- Take care with packings to sash windows not to distort the sliding mechanism
- Damp proofing should be fitted in accordance with Building Regulations
- For fixing to the structure, and gap sealing, use specialised proprietary fixings and foams, in accordance with the manufacturer's instructions.

Bespoke windows:

- Bead glazing must be used with insulated glazed units
- When preparing and finishing, ensure surfaces, edges, and primer/base coats are in good condition
- On external surfaces, use a vapour permeable paint or a high build stain
- Second coats or undercoats must be applied to primed/base coated windows before exposure to the elements
- Fit double glazing units onto appropriate setting blocks (to protect against moisture ingress) with distance pieces whenever non-setting glazing compounds are specified
- Use only the recommended glazing materials in accordance with the manufacturer's details.



Many manufacturers offer pre-glazed and factory-finished windows which meet independently assessed standards. One way to be sure, however, is to choose a quality mark window from the Wood Window Alliance, which claims a 60-year minimum estimated service life*, and will:

- Meet the minimum standards set out in BS 644, or equivalent standards from other countries
- Meet the wind and weather resistance performance standards of BS 6375 Part 1
- Meet the minimum performance standards for operational aspects of BS 6375 Part 2, or equivalent standards from other countries
- Are accredited by an independent UK or European body to prove compliance with those standards
- Are manufactured from timber, sourced legally from sustainably managed forests
- Have service life warranties for durability, paint life, ironmongery, insulated glass units, weather seals and glazing materials
- Meet or better the UK Building Regulations recommendations for energy efficiency.



*Wood Window Alliance Window Estimated Service Life - ISO 15686-8, life cycle assessment research, Dr R. Murphy, Imperial College London



Further information and advice

High performance wood windows are available at timber and builders' merchants or direct from manufacturers.

Go to www.woodwindowalliance.co.uk

Go to www.bmtrada.co.uk for further advice on the Q-Mark certification scheme for windows.

A technical guide on wood windows: designing for high performance is available from www.trada.co.uk.

The Specifier's Guide to Timber Windows is available at www.woodwindowalliance.co.uk

Information on maintenance and re-decoration can be found at www.woodwindowalliance.co.uk and at www.bwf.org.uk

The latest information on Building Regulations can be found at www.trada.co.uk

Visit www.woodforgood.com for further information about wood.

Choose and Use is a series of information sheets for builders produced by TRADA, The Timber Research and Development Association.

They offer up-to-date advice on how to select the right timber and timber products for different applications.

You can often save time and money by choosing the correct timber material or timber products as well as ensuring you comply with current Building Regulations and Building Codes. For more information about specific products visit www.trada.co.uk or contact your local supplier.

Arnold Laver

enquiries@laver.co.uk

laver.co.uk