

How to Buy Windows and Doors A Homeowner's Guide



The Right Choice for Your Home



Your house is likely to be the biggest investment you'll ever make, so choosing the right windows and doors is important. Having chosen the product to install, the quality of the installation is critical to the performance of your windows and doors and will depend on your choice of installer.

This guide has been created to help you make the best decision for your property. Whether it's acoustic, security or thermal performance, unless it's fitted correctly, these benefits – that you want (and will pay for) could be reduced. And because windows and doors are part of the main fabric of a building, it's also vital that you protect the structure of your home.

Choosing an installer that has third party certification from Bluesky means that they have been vetted by us, a UKAS accredited certification body, no. 9413. It's a voluntary scheme that's designed to give you an extra level of confidence when choosing the installer to fit your windows and doors.

We hope this guide helps you choose the best possible windows and doors for your home.

Simon Beer

Bluesky Certification

Keep up-to-date with all the latest information from Bluesky Certification on: www.blueskycert.com

How to Choose the Right Installer



Competent Person Schemes and Local Authority Building Control

As a homeowner, you are responsible for compliance with Building Regulations, and if your windows don't comply you could be made to put them right.

By law, installations of windows and doors must be registered with Local Authority Building Control (LABC). For replacement windows, most installers will use a government approved Competent Person Scheme (e.g. Assure, Certass or FENSA) to register the installation on your behalf. With these schemes, homeowners get the added benefit of deposit insurance and an insurance backed guarantee.

If the installer is not a member of a Competent Person Scheme, the work will need to be registered directly with LABC, which will cost more.

It's not just the quality of the actual installation of your windows and doors that you've got to look out for, it's the little things too. Like whether the installer takes appropriate care of your property, for example, by keeping it clean with dustsheets and carefully removing your old windows.

Mythbuster

Competent Person Schemes only demonstrate that the installer meets the minimum legal requirements for installing windows and doors in England or Wales and are not intended to give assurance of the quality of the installation.

False Economies:

You may be tempted to save money with your installation but it could cost you in the long run. Here are some things to consider:

- Don't use an installer who doesn't register your installation with LABC. This would render the installation illegal and you could be made to fix any issues. It could also cause problems when you come to sell the house.
- Products that aren't 3rd party certified to PAS 24 for security could allow an opportunist thief to break into your house in seconds, using basic tools.
- Products that aren't certified for general performance, weather tightness and durability (i.e. BS 644 for timber, BS 7412 for PVCU or BS 4873 for aluminium) may have been made with sub-standard components and could therefore fail early.
- An installer who does not provide consumer protection to cover the deposit and guarantee may lose all your money if their business fails.
- Products which don't meet the minimum energy requirements in the Building Regulations will not only be illegal but may result in increased heating bills.
- Products that have not been certified for noise reduction performance might reduce the saleability of your property if you live in a noisy area.

How to Choose the Right Installer



Top Questions for Your Installer

- 1 Are the windows and doors certified to PAS 24 for security?
- 2 Are the windows and doors certified for noise reduction?
- 3 Are the windows and doors certified for general performance, weather tightness and durability?
- 4 How will the installation be registered with Local Authority Building Control, i.e. will it be directly with them, or through a Competent Person Scheme, e.g. Assure, Certass, FENSA?
- 5 Does the installer provide access to an ombudsman to deal with any disputes?
- 6 Will your deposit and guarantee be insurance backed?
- 7 Have both the surveyor and the lead installer been assessed against the Minimum Technical Competence standards for windows and doors? (Ask for the installer and surveyor's MTC cards when they are on site to demonstrate this, and check that they are up to date).
- 8 Does the installer have their operational procedures and the quality of their onsite work regularly audited by an external body?
- 9 What steps will the installer take to avoid damage to your home and avoid upsetting your neighbours?

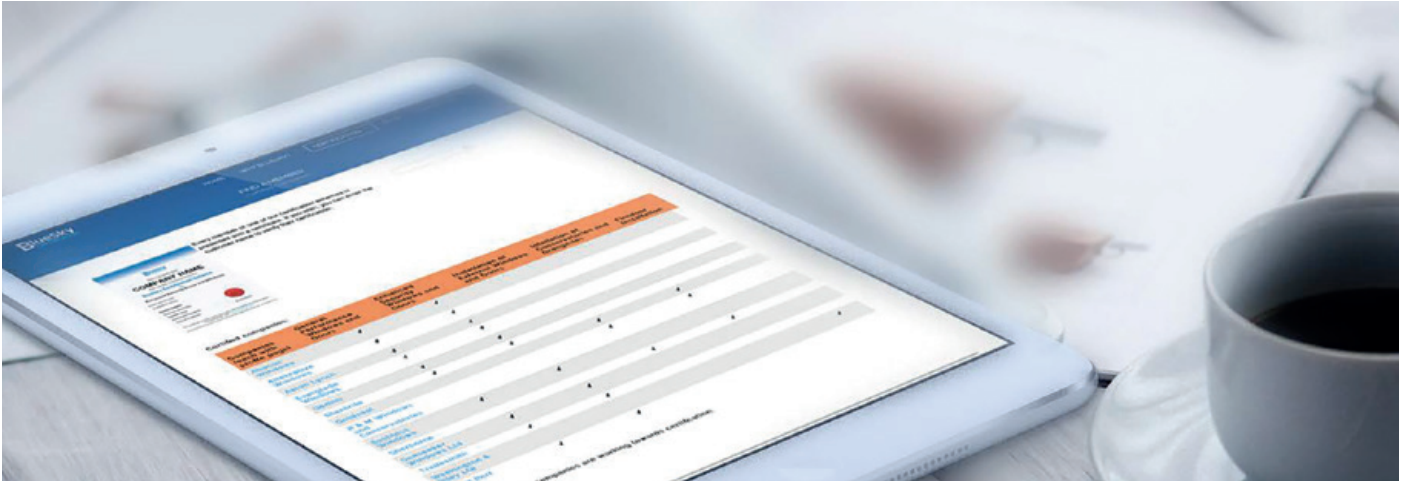
Online Checks

You can also check online to see whether the company you choose is reputable by looking at comments and reviews and checking out their website to see if they've worked on houses like yours.

However, we all know that sometimes reviews can be misleading, so it may be better to choose an installation company that is a member of the Bluesky scheme.



Why Choose an Installation Company...



...That's Part of the Third Party Certification Scheme by Bluesky?

Bluesky are experts in windows and doors, with years of experience in certification. Bluesky Certification is a UKAS accredited certification body, no. 9413. We chose to gain this accreditation in order to demonstrate our credibility.

Choosing an installer who is a member of the Bluesky Certification scheme means you'll be choosing a company that's been independently verified by us.

The Bluesky scheme is a voluntary scheme which attracts only the most professional installation companies. It includes independent audits to check the company's procedures and processes, the workmanship on site and the competency of staff. This is done as part of the joining requirements and then on an ongoing basis.

Ongoing training is another important feature to maintain the highest of standards for members. Whether they work in the office, as surveyors or installers, we look for evidence that they keep up to date with best practice in the industry.

To complement this scheme, we also have a scheme for the installation of conservatories and orangeries.

Our certified installers are listed on our website www.blueskycert.com, so you can either select an installer from the site or check that the installer you intend to use is certified.

Bluesky Certification checks that its members:

- Work to suitable installation procedures.
- Have appropriate procedures for the overall operation of their business (e.g. purchasing, surveying, internal and external communication, etc).
- Have procedures to ensure that your home is looked after during the installation.
- Have appropriately trained and monitored staff.
- Have considerate working practices.
- Provide insurance backing for any deposits that are taken.
- Provide a guarantee for their installations.

Security



For many people security is a top consideration when buying windows and doors. You want to feel safe and secure when you're inside your home and that your possessions are safe when you're away.

Most modern windows have security features built in to them – but not all do. If you want security, ask for evidence that your windows and doors are covered by UKAS accredited third party certification to PAS 24.

Can Your Windows and Doors Resist an Attack?

Opportunistic theft is the biggest security threat to homes, so it's important that windows and doors are tested to withstand an attack. Putting windows and doors through their paces in a test to PAS 24 means that they are proven to resist the methods commonly used by burglars.



Secured by Design



Secured by Design (SBD) is a police initiative to design out crime on new build developments. As part of SBD requirements, all accessible windows and doors must be third party certified to PAS 24. For more details see www.securedbydesign.com

It has been demonstrated that a Secured by Design development can reduce the risk of crime by up to 75%.

In order to verify the security of windows and doors you could look for Secured by Design recognised third party certification, such as the Bluesky scheme to PAS 24.



Energy Efficiency



When you're choosing new windows, the chances are that you'll want to increase the energy efficiency of your home.

The overall efficiency of a building is limited by the weakest point, so if the walls are poor, there's no point choosing highly energy efficient windows. For example, there can be a lot of difference between a Victorian villa and a modern built insulated house.

If you have uninsulated cavity walls or poor loft insulation, it's a good time to deal with this when you're installing new windows as you'll get far greater energy efficiency all round. That way you will get better value from the energy efficiency of your newly installed windows and doors.

How Windows and Doors are Rated

Building Regulations set a minimum level of energy efficiency for windows of either a U-Value of $1.6 \text{ W/m}^2\text{K}$ or a Window Energy Rating (WER) of C. But what are the differences between U Values and WERs?

U-Values

Windows and doors are part of the insulation of your home, but they will still transfer heat. This transfer of heat is called thermal transmittance, which is measured in Watts (W).

To compare the thermal transmittance of different products, the amount of heat that is transferred per square meter is calculated i.e. the heat loss in Watts divided by the surface area (m^2), with the temperature being expressed in degrees Kelvin – $\text{W/m}^2\text{K}$. This value is called the U-Value of the product.

You want less transfer of heat for better insulation, so a lower U-Value means better performance:

$1.6 \text{ W/m}^2\text{K}$ = Building regulations compliant window

$1.2 \text{ W/m}^2\text{K}$ = Window with high thermal performance

$0.8 \text{ W/m}^2\text{K}$ = Window for use in Passive House (extremely low energy usage) or equivalent building

For doors, Building Regulations require a U-Value of $1.8 \text{ W/m}^2\text{K}$ or better.

Energy Efficiency



Window Energy Ratings

Heat is not only lost through thermal transmittance, but also through air leakage.

You can also have positive gains of heat, through heating by the sun - if you stand by a window that is in direct sunlight, you can normally feel this effect, which is called solar gain.

Window Energy Ratings take the thermal transmittance, air leakage and solar gain into account, giving an overall energy efficiency value.

Just like the label on a fridge or washing machine, the rainbow colours show the Window Energy Rating from the worst, G, to the best, A++.

There is a Door Energy Ratings scheme (DERs), but unlike windows, only U-values are included in the Building Regulations.

Mythbuster

An A-rated window is not always the best to fit. This is because the WER calculation includes solar gain, which only works when the sun is shining on the window. If your window or door is not in the line of the sun, only the U-Value and the air leakage is important.



Solar Gain



Why Solar Gain Only Works
When The Sun Shines!

>> Solar gain >> Reduced solar gain



Solar gain



Shaded by trees



Cloudy days



Shaded by buildings

Noise Reduction



Shh... It's Oh So Quiet

Reducing the noise levels that enter into your home could have a positive effect on your health as well as making it a more pleasant place to live.

Whether it's noise from traffic, a nearby airport, or if you live near local bars and clubs, the peace and tranquillity of your home could be disrupted.

Walls usually provide considerably better sound insulation than windows and doors, so upgrading your windows and doors will normally make a big difference. Some manufacturers use glass values to prove the acoustic performance, but the whole window performance (including the seals, frames etc.) is important.

Sound Reduction Measurement

The performance of noise reducing windows should be determined through laboratory testing. A sample window is built and the sound reduction is measured over a range of frequencies, with the result given in decibels (dB). The higher the number the more sound is reduced. Most window designs on the market would be expected to achieve around 25 dB R_w (weighted sound reduction), whereas a window that has been designed to reduce noise is likely to achieve around 40 dB R_w .

Mythbuster...Sound Advice!

It's not just the window or door that matters, but its installation as well. To get the full benefit of acoustic windows, they **MUST** be installed properly.



Noise Ratings

Bluesky Noise Ratings make it easy to choose noise reducing windows and doors. Only companies that have joined the Bluesky scheme for acoustic windows and doors can use this label, giving you confidence that products with this rating have been checked by us.

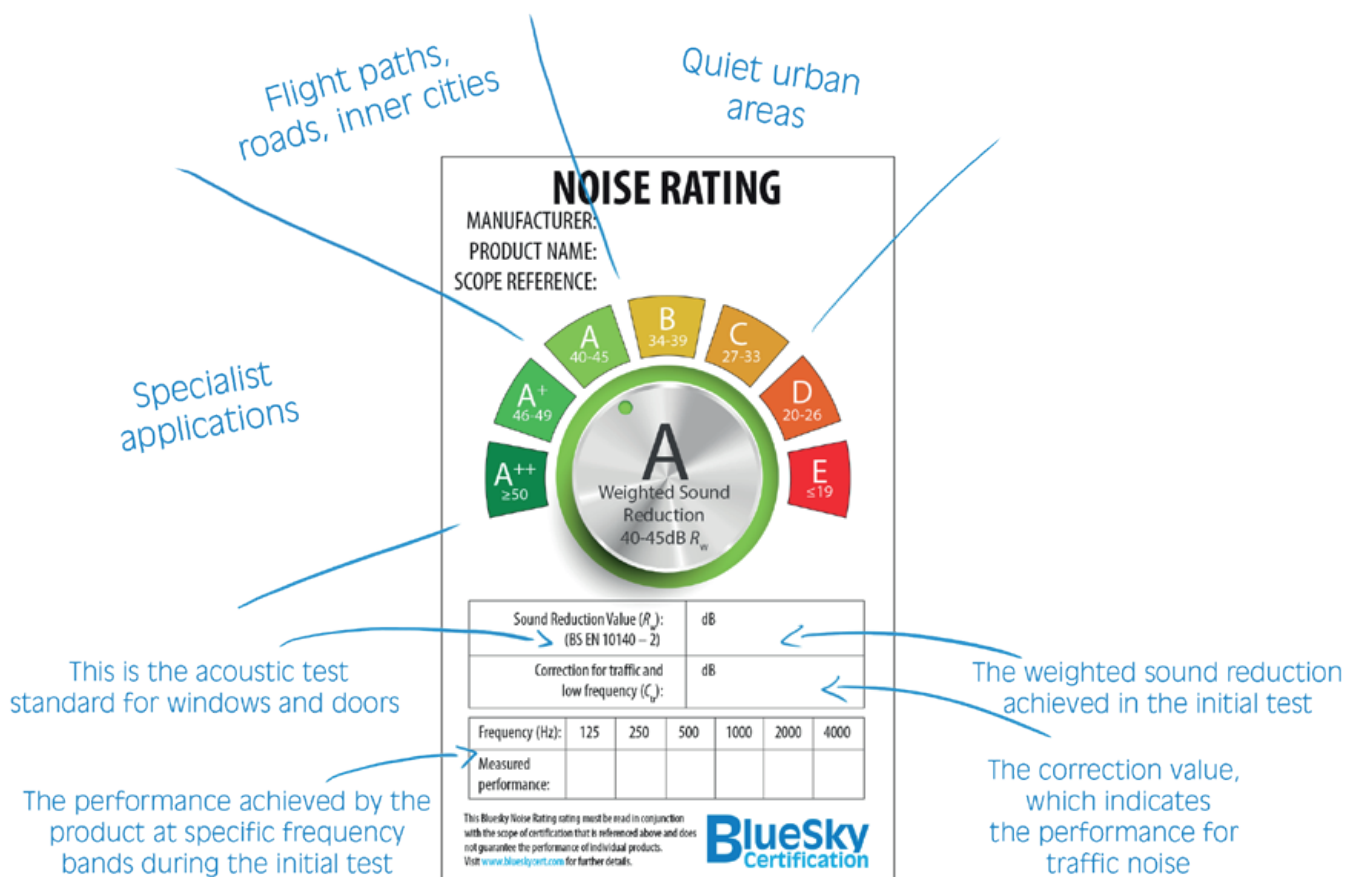
Which Rating Should I Choose?

Fitting an A rated product will normally be enough, but if you are looking to remove a specific type of noise, the table at the bottom of the rating will allow an acoustic consultant to help you.

Having chosen a noise reducing window or door, it is important that it is installed correctly, in order that it can perform as intended. Choose a Bluesky certified installer to fit your noise reducing window or door to ensure that it is properly fitted.

Did You Know?

Noise that regularly disturbs your sleep can damage your health, even if you are not aware of the disturbance.



Fire Safety



It's important that you can get out of your home in the case of fire. For new build, Building Regulations say that each habitable room (i.e. not a kitchen bathroom or cupboard) above the ground floor needs a fire escape window.

Regulations for the ground floor also apply for any room that doesn't either directly open onto the hallway or have an external door unless there is a protected fire escape route.

When replacing windows, it's advisable to fit escape windows that meet the requirements of the Building Regulations for a new build property where possible. If the current windows are smaller than the required size, you must not reduce the size of the openings.

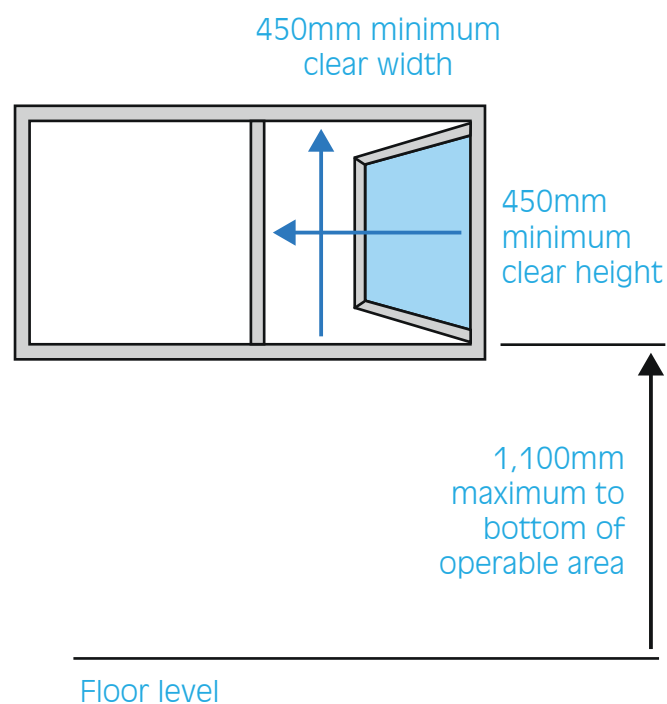
No one wants to be trapped in a fire however, so it would always be better to increase the size for every habitable room to at least the minimum dimensions required by Building Regulations. We would recommend that you confirm that your installer intends to do this, especially as double glazing will be difficult to break if you need to get out in an emergency.

It's worth considering your escape strategy when you're installing your windows and once they're installed, make sure that you always keep the route clear.

What is a Fire Escape Window?

A fire escape window has an unobstructed opening big enough for an adult to climb out of. That's because in the event of a fire, your windows act as a means of escape if you can't use the normal way out.

How Big Should the Window Be?



The overall clear opening area must be bigger than 0.33m²

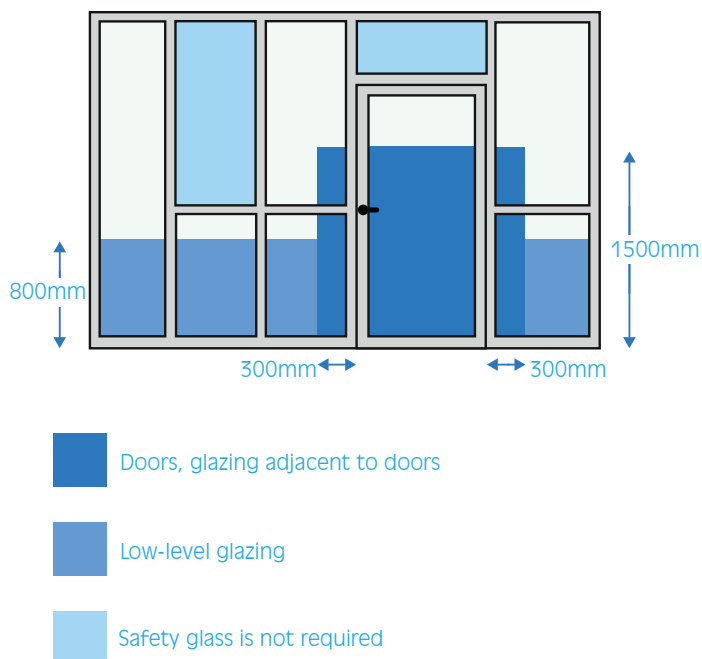
Safety Glass



Safety glass must be used in doors and low-level glazing to comply with Building Regulations.

It is designed to either break into small pieces, or to stay together after breaking to prevent injury from sharp shards of glass. If you want more information on this, we would suggest that you speak to your installer.

The diagram below shows where safety glass is required:



Materials and Glazing



Which Material to Choose?

The material choice is down to personal preference, but it is important that the whole window or door design has proven performance characteristics.

PVCU often has a lower initial cost and can have low maintenance requirements, but there is little scope for repair. Opening casements are more likely to flex, and the product will expand more in the heat.

Timber may have a higher initial cost, but a properly made product is likely to have a longer life span. Modern timber windows that are manufactured and finished well are likely to be very durable with minimal maintenance. They are also easier to repair if required.

Aluminium often has a higher initial cost, but is normally stronger than PVCU, so is better for larger windows and doors (e.g. bi-folding doors), and can be used for structural applications. It is often low maintenance, but also has little scope for repair.

Mythbuster...Double or Triple Glazing?

There's a perception that adding an extra pane of glass to make triple glazing will give a big improvement on heat retention and noise reduction. However, this will not necessarily be the case. Our tip is to ask for evidence of the thermal and noise reduction performance that has been measured for the whole window or door design.



Building Regulations



Do I Need Planning Permission?

If you're replacing windows in your home the chances are you won't need planning permission. However, you are likely to need planning permission if you live in a conservation area or have a listed home.

Speak to your local authority to check – or ask your installer to check for you.

If you're building an extension or a new build property, the planning permission for the windows will come within the overall scheme.

Document Q

Under Building Regulations, windows and doors fitted into new buildings now need to have a level of security built into them. This required level of security doesn't apply to the refurbishment of existing buildings.

So, if you're replacing your windows or doors, it might make sense to install windows and doors that meet the same requirements as that for new build.

To do this, insist that they comply with the requirements of the Approved Document Q – as if it were an installation into a new build. The additional cost will be small in comparison to replacing the windows later to add security.



Security – Dwellings

APPROVED DOCUMENT



For more information, or for a list of companies that are
certified by us, visit **www.blueskycert.com**