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DOORSTEP DIGEST

Replacement Windows & Doors

Upgrading your windows and doors can make your home much more energy efficient.

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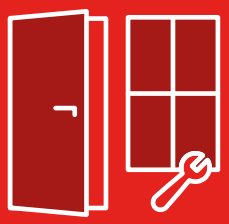

Energy efficiency in a home is very important, helping to reduce energy bills and lower carbon emissions. It is part of a Fabric First approach where the main elements of a building, such as walls, floors and the roof, are upgraded or insulated to make the home more energy efficient. This can include replacing windows and doors.

It's worth considering the replacement of relatively modern windows as older double-glazed windows installed pre-2002 can be 50% less energy efficient than windows produced today. This is because of advances in standards, design technology and materials.

Did you know?

- The UK is the worst performing country in Western Europe in terms of heat loss from dwellings - three times worse than Germany. The residential sector accounts for 24% of all UK emissions, with the slowest decline in carbon emissions over the last 30 years.
- A house that has benefited from loft, floor, wall insulation, draughtproofing, low energy lighting and solar water heating can still lose 44.3% of its heat through its windows.
- A further heat saving of 22% could be achieved in older properties that have already been retro-insulated to current best practices if pre-2002 windows are replaced. Double glazing installed pre-2002 is installed in approximately 23% of the UK's current housing stock and is 50% less energy efficient than new windows designed, manufactured, and installed to current standards. Upgrading from pre-2002 windows to the current standard could save the average household up to £395 per year.
- Replacing all pre-2002 double glazing with new double glazing to current standards could save 3.16M tonnes of CO2 - the equivalent of taking 1.88million cars off the road.
- Reducing emissions from households is critical to achieving Net Zero by 2050.
- Over 80 million windows need urgent replacement, and a further 288 million windows would benefit from being replaced.
- Windows not only provide light and rapid ventilation: modern windows can improve energy efficiency and also reduce noise transmission, increase controllable background ventilation, which controls condensation, reduce overheating from solar gain and provide enhanced security.
- If your windows and doors were replaced by an installer registered with a Competent Persons Scheme like Certass or FENSA, you may be able to check the installation date online.

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- Not all windows replaced since 2002 are registered with a Competent Person Scheme, and your local authority should retain records from Approved Inspectors and those done directly with Building Control.
- You can use an online calculator to find out your potential energy savings.
- The energy efficiency of Windows and doors are measured either by a U-value or by Window Energy Ratings (WERs) and Door Energy Ratings (DERs).

KEY ADVICE

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- U-values are a measurement for heat transfer applied to how building components conduct or transfer heat. A U-value is calculated from the rate of energy transfer through one square meter of the structure divided by the difference in temperature at either side of the structure. The value is quoted as watts per square metre per Kelvin (1°C = 1K) (W/m2K).
- For a double-glazed window with a U-value of 1.4 W/m2K, this means that 1.4 watts will be transmitted per square meter for every degree of temperature difference between the inside and outside of the window.
- A higher U-value means there is more heat transfer, and a low U-value means less heat transfer, which means a higher insulated structure.

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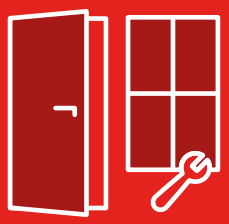

- Comparing the U-values of different branded products will help you to choose the best and most energy-efficient windows and doors for your home.
- Typically, the U-Value for a single-glazed window is between 4.8-5.8 W/m2K; for a double-glazed window, between 1.2-3.7 W/m2K and for triple glazing is less than 1 W/m2K.
- The U-value of a solid timber door is around 3 W/m2K.
- A Window or Door Energy Rating shows how energy efficient a window or door is by taking into account thermal loss, solar gain, and air leakage. Windows and doors are rated using an A++ to E scale, and you should see this on a rainbow label similar to that applied for energy efficiency of TVs and kitchen white goods such as fridge freezers and washing machines. The higher the rating, the better performance. Windows and doors with an energy rating of A to A++ are considered to be energy-positive.
- You should always ask your installer or salesperson about the U-value or WER / DER and for the information that proves this claimed value.
- Generally, window openings must be no smaller than existing openings to comply with Building Regulations for ventilation (Approved Document F) and means of escape in case of fire (Approved Document B). Some windows must be side-hinged or fully opening to be classed as an escape window.
- You can purchase windows and doors made from PVCU, aluminium or timber in a wide variety of finishes.
- If you live near a busy road, airport, or railway, you may wish to investigate windows with noise-cancelling properties.
- You should check whether your installer is a member of a Competent Person Scheme such as Certass or FENSA. Registration with a scheme means that your installer can self-certify and notify the work to Building Control. If they are not, or your windows are being installed as a DIY project, you will need to apply for Building Regulations approval before the work is carried out, and the work will be inspected. There is a charge for this. Note that doors with more than 50% glazing also require Building Regulations approval and should have safety glass installed.
- Government keeps an up-to-date list of all Competent Person Schemes, enabling residents to check the Scheme that their installer is **registered with here**.
- The installer's guarantee will also be underwritten by an insurance-backed guarantee for any issues that might arise if the company is unable to trade. You should always check what guarantees are being offered on the installation and the products.
- Other things to ask your installer include how long the installation will take, what access and facilities are required, how will they dispose of the old windows and doors, will they be recycled and what other properties and benefits do the window and doors provide e.g. enhanced security.

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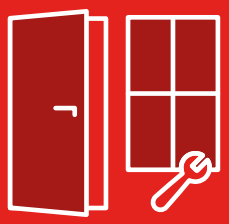

KEY ADVICE

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- You should always request a written quotation and a written contract for the work, including the method of payment and the payment schedule. Payment by credit card may afford you some financial protection.
- Always ask the installer to provide references from other homeowners and check out any credentials.
- If you are creating a new or wider opening you will always need Building Regulations approval from a building control body, which will ensure structural lintels are adequate, damp proofing is installed, and cold bridging is minimised.

The NHIC wishes to thank WG2 | Consumer Voice members for contributing to this guide.

Please note that this guidance document produced by the NHIC was correct when created. However, information and regulations may have changed since its publication. Therefore, seeking the most up-to-date information and expert advice is always advisable before making any decisions based on the information provided in this guide.

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