GUIDE TO REPLACEMENT WINDOWS AND DOORS

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Guide No.14 Guide to Replacement Windows and Doors

Introduction

Since 2002, all replacement windows and doors came within the scope of the Building Regulations. Therefore, anyone replacing these elements must comply with thermal performance standards and prove compliance. In 2002, replacement windows and doors had to achieve a U-value of not more than 2.0W/m2K. A U-value is a measure of how much heat is lost through the window or door.

With the introduction of the new Building Regulations in 2010, windows required a U-value of no more than 1.6W/m2K and doors 1.8W/m2K.

From 15th June 2022 in line with the government's target for the UK to be net carbon zero by 2050 the values for replacement windows and doors have been reduced further to a U-value of I.4W/m2K.

Please note, this guidance is only relevant where the entire unit of a window or door, including the frame is replaced. Replacing glazing, or a window or door in its existing frame does not require an application.

Two ways to prove compliance.

When the time comes to sell your property, your purchaser's solicitor will ask for evidence that any replacement glazing installed after April 2002 complies with the Building Regulations. There are two ways to prove compliance:

1. Provide a certificate from the Local Authority confirming that the installation was approved under the Building Regulations.
2. Provide a certificate showing that the work was carried out by an installer registered under a suitable Competent Persons Scheme (CPS)

The Local Authority Scheme

Any installations carried out that are not registered to a self-certification scheme, or are undertaken as a DIY project, will need Local Authority Building Control approval. As the householder, you are ultimately liable for ensuring that your installation complies with the Building Regulations and is registered under one of the two schemes.

So, before you sign a contract to buy replacement glazing, be sure to check that the installer is registered with a suitable Competent Persons Scheme (CPS) and can self-certify the installation on completion. If not, you must ensure that an application and the appropriate fee are deposited with your Local Authority.

Please see Hertfordshire Building Control's Guidance Leaflet – Full Plans and Building Notices for information on how to make an application.

Competent person self-certification scheme

Only installers who are registered with a competent person scheme can self-certify that their work complies with the Building Regulations. Where necessary, they will tell your local authority about the work for you. You will receive a certificate from them within 30 days of completion of the work. This will confirm that the work complies with the Building Regulations. This certificate will also show up in property searches if you sell your home. If you don't receive a certificate within 30 days of completion, the competent person scheme operator that your installer is registered with should be able to help.

To find an up-to-date list of competent persons schemes please click on the link below and scroll down to the section on Types of Work – Replacement windows and doors in existing dwellings.

https://www.gov.uk/guidance/competent-person-scheme-current-schemes-and-how-schemes-are-authorised

Technical guidance on compliance with the Building Regulations

Structure

When installing new windows or doors an assessment should be undertaken by a suitable person as to the suitability of the support above the opening where the windows or doors are to be fitted. This is especially important where top-hung bifold doors are being fitted or bay windows replaced.

Means of Escape

Generally, all windows to habitable rooms (but not kitchens, utility rooms, dressing rooms, bathrooms, WC's or shower rooms) at first floors levels are required to be suitable for escape. In addition, habitable rooms at ground floor level whose only escape route is via another room should be provided with suitable escape windows. These windows should have a minimum openable area of 0.33m^2. A minimum height of 450mm and a minimum width of 450mm wide (e.g. a 450mm wide opening will need to be 735mm high). The bottom of the openable area should be no more than 1100mm above the floor.

Where an existing window is an escape window and is big enough to be used for escape purposes, then the replacement should comply with one of the following:
The replacement window should be sized to provide at least the same potential for escape or,
If the existing window was larger than required for escape purposes, the opening can be reduced to the minimum described above.

Where windows are replaced, it may be necessary to provide cavity barriers around the opening see Section 5 of Approved Document B for more details.

Means of Ventilation

Openable Window Area

Generally, the combined openable areas of windows and doors serving a habitable room should be a minimum of 1/20th of the floor area, or 1/10th the floor area if the window opening angle is between 15 to 30 degrees.

When windows and doors are being replaced, they should either meet the above standard or be at least equivalent to the areas of those elements being replaced unless a suitable separate mechanical ventilation system exists.

Background Ventilators

If your original windows and doors have background ventilators, the replacement should include them. These vents should not be smaller than the original and be controllable.

If your original windows and doors don't have background ventilators then replacing windows without background vents is likely to increase the airtightness of the dwelling and may reduce beneficial ventilation. In these circumstances, it is necessary to ensure ventilation provision is no worse than before the work was carried out. This may be demonstrated in the following ways:

1. Incorporating background ventilators in the replacement windows equivalent to the following:
    a. Habitable rooms – minimum 8000mm2
    b. Kitchen – minimum 8000mm2
    c. Bathroom - minimum 4000mm2

2. Confirmation that the existing dwelling has a suitable alternative mechanical ventilation system.

Combustion Appliances

Certain fires and heating appliances rely on air infiltration for them to function correctly. They may require purpose-made ventilators or may have relied on air infiltration through existing ill-fitting windows and doors. If you have an open-flued appliance in the house that does not have a separate provision of combustion air, a check should be made by a suitably qualified person to ensure that adequate combustion ventilation still exists.

Glazing Protection from falling and against Impact7

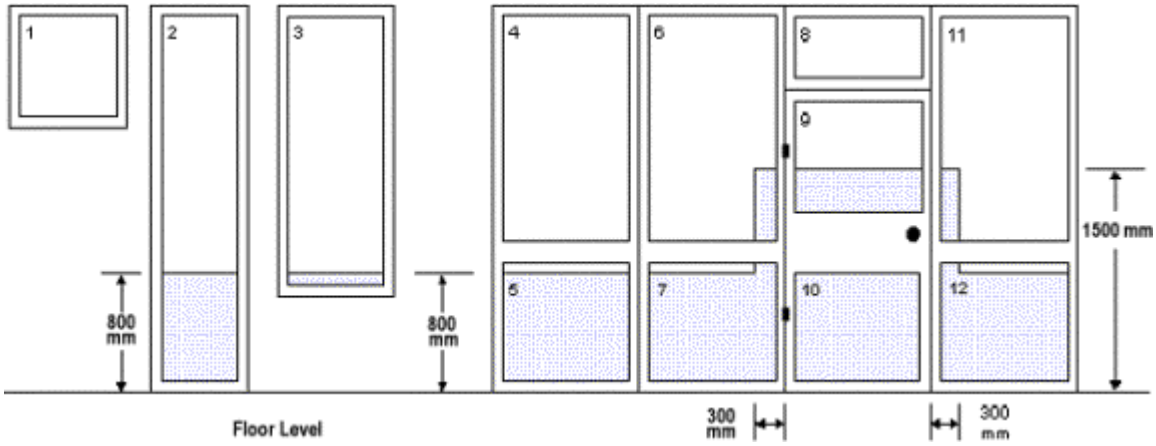
Glazing in Critical Locations at ground floor level

A critical location is defined in the diagram below.

In critical locations glazing should either:

- Break safely as defined in BS EN 12600 and BS 6206.
- Be robust, such as annealed glass, glass blocks, polycarbonate or glass that gains strength through thickness. Approved Document K gives guidance.
- Be in small panes (a maximum area of 0.5m2 with a maximum width of 250mm is acceptable
- Annealed glass should be not less than 6mm thick, except where it is in traditional leaded- or copper- lights in which 4mm glass is considered acceptable when fire resistance is not a factor.
- Be permanently protected by a suitable screen which has a minimum height of 800mm and which incorporates a gap no greater than 75mm and is not climbable.

Glazing in Critical Locations



The diagram above gives examples of glazing in windows, partitions, walls, doors and side panels. 'Critical locations' are shaded grey. Any glazing within a shaded area must comply with the above.

Glazing unit No. 10 falls wholly within a critical location and so the glazing must comply with BS 6206.

Glazing units Nos. 1, 4 and 8 fall wholly outside the critical location and need not comply with the above. Where a first-floor window height is less than 800 mm above the floor level suitable guarding should be provided to prevent a person falling through an open window.

This requirement may conflict with Regulation B1 and the provision of escape windows. One way of achieving the requirement may be to provide a restricted opening device that can be easily overridden in the event of an emergency.

Glazing on floors above ground level

Where a window height is less than 800 mm above the floor level it should have a suitably robust guarding, or the glazing and frame should be designed for containment. In this situation, the guidance in BS 6180 and BS 6262 Parts 4 and 6 should be followed and specialist advice sought.

When an openable window exists below 800mm above floor level, suitable guarding should be provided to prevent a person from falling through the open window. However, this requirement may conflict with means of escape requirements for windows. One possible way of achieving compliance may be to provide a restricted opening device that can be easily overridden in the event of an emergency. These windows will still need to achieve adequate containment as detailed above.

Conservation of Fuel and Power

For new and replacement windows and doors all the following apply:

1. Units should be draught-proofed.
2. Units should meet the minimum standards given in the Table below.
3. Insulated cavity closers should be installed where appropriate.

Element	**Maximum U-value W/m2k**
Windows	1.4 or Window Energy Rating Band B minimum
Rooflights	2.2
Doors with greater than 60% glazing	1.4 or Doorset Energy Rating Band C minimum
Other doors	1.4 or Doorset Energy Rating Band B minimum

This is one of a range of Guides available from Hertfordshire Building Control.
See the full range here.

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