

Local Authority Building Control

Technical Information Note 5 Replacement Windows

Purpose

This guidance note is based upon information available at the time of issue and may be subject to change. The Approved Documents should be consulted for full details in any particular case.

Introduction

Part L of schedule 1 to the Building Regulations, imposes requirements for a controlled service or fitting. Approved document (A.D.) L1B gives guidance on carrying out work in existing buildings, including 'provision of a controlled service'. The term 'provision' here is considered to include the installation of a new or a replacement window or door.

Regulation 4 further requires that any work in connection with a controlled service or fitting, complies with the applicable requirements of schedule 1 and does not make a situation more unsatisfactory than that which may currently exist in respect of all other parts.

Key Issues

B1 – Means of escape

The A.D. to B1 recommends provision of emergency egress windows (*see diagram*) to habitable rooms in the following locations:-

- at first floor level
- at ground floor level where the room does not open directly onto a hall leading to the entrance or other suitable exit
- in basements unless a protected stairway is provided.

Dwellings approved and constructed in accordance with the 1991 regulations (or later) should have suitable escape windows. The design of replacement windows and doors should have no adverse effect on means of escape regardless of the age of the property. Wherever possible replacement windows should include an opening as specified in the diagram at the end of this document. Where an existing window does not meet these requirements, the replacement should be no less compliant or be within a few millimetres. If escape windows are required, and cannot be provided, compensatory measures should be considered, e.g. protected routes, alternative exits, smoke detection/residential sprinklers or any such combination. Each situation would need to be assessed and a solution agreed prior to carrying out of any work.

Listed below are some typical situations that may arise where guidance is needed to assist in accepting reductions in opening sizes. Reference to egress window means an opening satisfying the recommendations of the Approved Document to B1.

Bungalow

1. Where all habitable rooms open directly onto a hall leading to the entrance door there is **no requirement to provide an egress window**.
2. If a habitable room opens into an access room then an egress window **should** be provided.
3. In the situation cited at 2 it would be reasonable to consider whether the **provision of a mains powered smoke detection system** would allow the acceptance of a window that fell below the size required for an egress window. In addition the

distance to the final exit door should not exceed 9m. When considering this option the area of escape window should not fall below 0.33m² with a cill height no greater than 1100mm and a minimum width dimension of no less than 405mm.

4. For an open plan layout, where the window dimensions are reduced significantly below the minimum requirements suggested, the provision of detection and limiting the travel distance may not be considered adequate. In such cases a **bespoke design for a suitable egress window or an alternative solution** may be required.

Two storey dwellings with a floor no more than 4.5m above ground level and conventional hallways at both levels

1. Where all habitable rooms at ground storey open directly onto a hall leading to the entrance door there is **no requirement to provide an egress window to those rooms.**
2. Where a basement storey contains a habitable room and it is not possible to provide a compliant window consideration should be given to **providing a protected stairway leading to the exit door OR provide a mains powered smoke detection system and ensure maximum travel distance to exit door does not exceed 9m.**
3. Where an egress window has been reduced below the minimum cited in the approved document, but the ground and first floor stairway are separated from habitable rooms and the kitchen, it may be reasonable to provide a linked hard wired smoke detection system to each landing level, with a heat detector to the kitchen and self closers to all existing doors. Any glazing to doors or fanlights to be replaced with suitable fire resistant glass.

Two storey dwellings with open plan ground floor

1. The requirement for an egress window is more critical in this type of design. The occupants at first floor level require access to a suitable egress window.
2. The minimum standards recommended (no dimension less than 450mm and a minimum of 0.33m²), give an equivalent opening of 450mm x 733mm. A minor reduction in height of the window opening is not expected to create a problem for the majority of potential users. However reduction of the width dimension could have a significantly impact on the usability of the egress. Any reduction should not exceed a of ten percent below that recommended in the approved document for dimension one only. The minimum area of 0.33m² should be maintained. i.e. Width of no less than 405mm height of opening 815mm. **In addition a linked mains smoke detection system should be provided at ground and first floor level.**
3. Where the dimensions fall below those suggested in 2 a bespoke design should be provided to include a compliant window.

Flats with floors no more than 4.5m above ground level

1. Where provided with internal corridors leading to flat entrance door no requirement for egress windows.
2. Where a habitable room passes through an access room an egress window should be provided.
3. However, if the travel distance to the flat entrance door is less than 9m and the

kitchen is remote from the flat entrance door it is reasonable to consider the provision of a hard wired linked smoke detection system to provide early warning in the event of a fire to occupants of the inner room. i.e. a bedroom.

4. Otherwise a bespoke window should be installed in full compliance with the requirements for egress windows.

It should be noted that there may be rare circumstances when it is not possible to consider alternative methods of providing a satisfactory means of escape

Other considerations

Part F – Ventilation

Background Ventilation

Where the existing window is fitted with trickle ventilators, the replacement should include them and they should be sized in accordance with the recommendations of the A.D.

A.D. F, recommends that windows should include background (trickle) ventilators with accessible controls having an equivalent area of 5000mm² for habitable rooms and 2500mm² for kitchen, utility and bathrooms

Purge Ventilation (Previously referred to as ‘rapid ventilation’)

Where the replacement window has a hinged or pivot sash opening 30° or more, or a sliding sash, the total area of openings should be not less than 1/20th of the floor area of habitable rooms.

Hinged or pivot windows opening between 15° & 30°, the total area of openings should be not less than 1/10th the floor area of habitable rooms.

Replacement windows to wet rooms should have an openable area no worse than before.

Part L1B – Conservation of fuel and power in existing dwellings

Replacement windows, roof windows, rooflights or doors should be draught-proofed units with a performance no worse than that shown in the table below:

FITTING	PERFORMANCE
Window, roof window and rooflight	U value = 1.6 W/m ² K; or Window energy rating = Band C: Centre-pane U-value = 1.2W/m ²
Doors with more than 50% of their internal face area glazed	U value = 1.8 W/m ² K: or
Other doors	U value = 1.8 W/m ² K

Note. Centre pane U-values can only be used where it may be necessary to maintain the façade or external character of the building

Part A – Structure

When installing replacement windows it is recommended that suitability of existing lintels is assessed by a competent person. Defective lintels should be replaced.

Part J – Combustion appliances and fuel storage systems

It is essential to assess the combustion air requirements of any open flued appliance in a room where a replacement window is to be fitted and ensure that adequate permanent combustion air ventilation is provided.

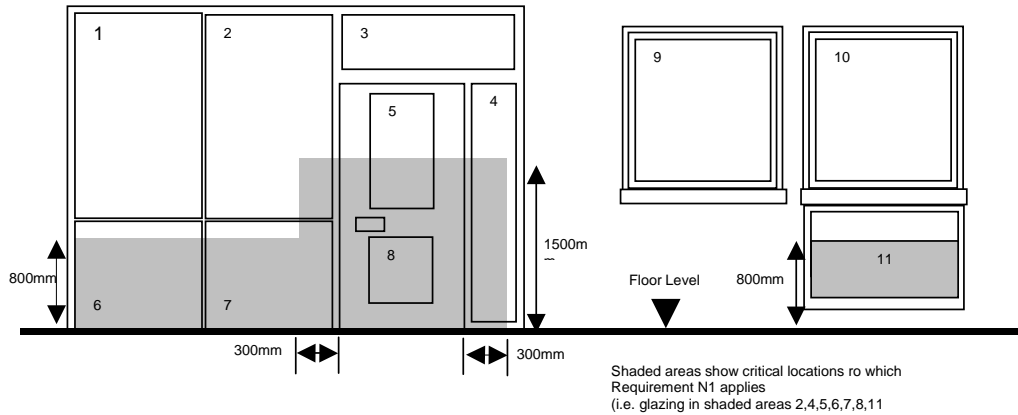
Part M – Access to and use of buildings

Where a dwelling, when erected was subject to requirements of part M, widths and threshold heights of doors should not be adversely affected.

Part N – Glazing

Glazing in critical locations should either:

- Break safely in the event of damage
- be robust or in small panes
- be permanently protected



Typical details to meet the requirement for means of escape

