



Llywodraeth Cymru
Welsh Government

PUBLICATION, DOCUMENT

Approved Document O (Wales): Overheating frequently asked questions

Answers to frequently asked questions on Approved Document O - 2022 edition (Wales).

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Approved Document O - 2022 edition (Wales) sets standards for reducing overheating risk in new residential buildings. (Please note that from time to time this document may be revised to include any new frequently asked questions)

Section 1 (Mitigating the risk of summer overheating)

1. Can you elaborate on the definition of 'Free Area' in respect of Part O please?

Further to the definition in Appendix A this will typically be the geometric open area provided by an open window (fully open windows typically having a coefficient of discharge (Cd) of 0.62). Other opening types such as acoustically attenuated louvres or restricted openings would likely have a much lower coefficient of discharge and therefore the provided geometric open area would need to be proportionally larger to equate to the same free area as that provided by the geometric free area of a typical window. Designers/developers may wish to use equivalent area if it meets or exceeds the required free area % and the reference Cd value is still 0.62.

2. For Dynamic modelling, are current day weather files used for compliance?

The Regulations are a minimum requirement and designs can consider site specific implications and incorporate further mitigating factors thereby addressing potential future changes to weather and adapting to future climate ahead of expected change. This is not required for compliance with the

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Regulation.

Section 2 (Usability)

3. **How can both the standards for escape windows and guarding for ADO be met in practice?**

Some build tolerance is acceptable when building a window that is a means of escape, with an opening at a height of 1100mm above the floor. While it is expected that the 1100mm guarding height in Approved Document O is achieved, a reasonable build tolerance is +0 / - 100mm.

4. **Approved Document O does not include any limits on noise but states it should be minimised in bedrooms at night?**

There are no stated noise limits within Approved Document O (Wales). External noise is a material consideration considered when applying for Planning permission. The guidance in AD-O for noise at night requires that the overheating design/strategy does not conflict with documentation provided to the local planning authority to satisfy external noise issues.

5. **Paragraphs 2.8 and 2.9 of section 2 provide guidance for openings that are part of the overheating strategy, however, where compliance with guidance in section 1 has not required paragraphs 1.2 and 1.3 to be followed, which openings are considered part of the overheating**

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strategy?

Requirement O1(2)(a) states “account must be taken of the safety of any occupant, and their reasonable enjoyment of the building”. The guidance in section 2 contains a note which accompanies paragraph 2.1 which states “This section is applicable to any residential buildings within the scope of requirement O1 as detailed in Table 0.1 including those where paragraphs 1.2 to 1.3 in Section 1 do not apply.”.

Therefore, the designer/developer will need to ensure requirement O1(2)(a) is satisfied, along with the building control body. For openings in buildings that are not designed with consideration to paragraphs 1.2 to 1.3, the designer/developer will still need to consider the guidance in paragraphs 2.8 and 2.9, and (in agreement with the Building Control Body) assess which openings should be used for heat release (openings that facilitate cross-ventilation i.e. across two or more parallel aspects), likely to be open for long periods, and pose a risk for a fall from height. Typically, these could be openings in bedrooms and/or principal habitable rooms (e.g. living room) which are above ground floor level. The above information can then also be used for section 3 (providing information).

Please note the guidance in paragraph 2.10 where the guarding for the purposes of Approved Document - O (not Approved Document - K) may include shutters with a child proof lock.

6. **Where the windows are not part of the Overheating strategy what are the guarding standards?**

The guidance in paragraph 2.8 states that openings which are intended to be open for long periods to reduce overheating risk might pose a higher risk of falls from height. Only the proportion of openings which can be opened with a very low risk of occupants falling from height should be considered to form part of the

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overheating mitigation strategy. This only applies to windows used in the overheating strategy (including openings identified for heat release where paragraphs 1.2 to 1.3 are not followed – see question 5 above).

Where a window is not used as part of the overheating strategy the minimum guarding heights of Approved Document K should be followed. The homeowner should be informed, as part of providing information (section 3) about the overheating strategy, of any windows that are not intended to be open as part of the strategy and therefore are not built to the guarding standards of Approved Document O.

7. How do I apply the 650mm window handle standard to protect people from falling?

The 650mm standard is the dimension that should be used to calculate the safe opening angle of a window. This opening angle should be used in the free area calculations (with a limit of 60°). It is not necessary to use a physical restrictor to meet this standard.

Section 3 (Providing information)

8. Where compliance with guidance in section 1 has not required paragraphs 1.2 and 1.3 to be followed, what information is required for section 3 (providing information)?

Much of the guidance in paragraph 3.2 of Approved Document O may not be applicable where paragraphs 1.2 and 1.3 have not been followed, however, in

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addition to highlighting openings to be used for effective heat release (see question 5 and 6), designers and/or developers should still provide general mitigating overheating information that is applicable to the design of the building. A Home Energy Guide (HEG) template is provided with example text for the benefit of the designer/developer to tailor to suit the needs of the prospective homeowner.

[Home Energy Guide Template \(gov.wales\)](#)

Appendix B (Checklist)

9. **Where compliance with guidance in section 1 has not required paragraphs 1.2 and 1.3 to be followed, does the compliance checklist in appendix B need to be completed?**

The compliance checklist is intended to help designers/developers demonstrate to the building control body that the building has been constructed as designed to reduce the risk of overheating in line with the simplified approach or the dynamic thermal modelling approach. Therefore, where these approaches are not used (i.e. where paragraphs 1.2 and 1.3 are not followed) the compliance checklist is not applicable.

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