

Technical Datasheet

Draft Amendments to Document L of the Building Regulations for England and Wales

This is a summary based on the draft approved document published by the Office of the Deputy Prime Minister (ODPM) on the 13th September 2005. As with all draft material it is possible that the final published document may change, although at this stage the changes are likely to be minimal and are most likely going to be corrective. This document is intended for guidance only and is not exhaustive, for more detailed information please refer to the ODPM's website.*

As with the current Approved Document L the draft amendments cover all aspects of a building and its services, not just glass and windows. The existing Approved Document L introduced many new changes, but we were always aware that this would not be the end, that it was intended to be reviewed regularly and amended as necessary in order to help the UK Government meet commitments it set down as part of the Kyoto agreement.

The format of the draft document differs to that of the current Approved Document L which, at the moment, comprises two parts: Approved Document L1 Conservation of fuel and power in dwellings; and Approved Document L2 Conservation of fuel and power in buildings other than dwellings. It is proposed that the amended Approved Document (AD) will be in four parts, these are:

- ADL1A – Work in new dwellings.
- ADL1B – Work in existing buildings (was originally 'dwellings' on the proposed document, so this may be a typographical error).
- ADL2A – New buildings other than dwellings.
- ADL2B – Work in existing buildings that are not dwellings.

New Build-Dwellings (ADL1A) & Non-Dwellings (ADL2A)

The draft amendments change the way 'New Build' is designed drastically. The original documents allowed three methods of compliance for both Approved Document L1 and Approved Document L2. These were Elemental Method, Target U-value Method and Carbon Index Method for ADL1, and Elemental Method, Whole-Building Method and Carbon Emissions Calculation Method for ADL2. All these methods have now been dropped as a way of showing compliance.

The above compliance methods have been replaced by a 'Target carbon dioxide E mission Rate' (TER). TER is the minimum energy performance requirement for a proposed building. The only way of complying with the energy requirements would be to calculate, using approved calculation software, the CO₂ emissions for the proposed building as a whole, and to show that the levels for both the designed building and the constructed building are no greater than the TER.

Non-Dwellings

The performance of a proposed building should be assessed using an approved calculation tool such as the Simplified Building Energy Model (SBEM - final publication to be decided) where it is capable of adequately modeling the relevant design features. As an alternative, other approved software such as dynamic simulation models may be used provided they are capable of adequately modeling the design features of the proposed building.

Dwellings

The calculation methodology for individual dwellings with a floor area no greater than 450m² would be the Government's Standard Assessment Procedure (SAP) software. And for individual dwellings larger than the above threshold the SBEM (final publication to be decided) should be used.

Double glazing containing SGG PLANITHERM® products will satisfy the requirements of the new ADL's whilst also offering high levels of neutrality and light transmission, for improved aesthetic performance.

Limiting U-value standards (W/m²K) Both dwellings and non-dwellings are set 'worst acceptable' U-value levels for windows, which are:

- 2.2W/m²K for area-weighted average
 - 3.3W/m²K for an individual element
- This will make it very difficult for developers to avoid using low-E glass, such as the SGG PLANITHERM® products, by the use of 'trade-off'.

Extensions

The requirement proposed by the draft document for extensions is different again and is more stringent. ADL2A states that a large extension, one with a gross floor area greater than 100m², and greater than 25% of the gross floor area of the existing building must be designed as if it were a new building.

Replacement Windows & Doors (ADL1B & ADL2B)

Dwellings

For dwellings ADL1B permits three alternative methods of compliance, (1) a 'whole window/unit' U-value of 2.0W/m²K and 2.2 W/m²K for doors (this is defined as a door, which together with its frame has more than 50% of its internal face area glazed), (2) a glass 'centre pane' U-value of 1.2W/m²K, or (3) a Window Energy Rating (WER) of band E.

Non-Dwellings

For non-dwellings ADL2B permits two alternative methods of compliance, (1) a 'whole window/unit' U-value of 2.2W/m²K (the same value of 2.2W/m²K applies to a door as defined above), and (2) a glass 'centre pane' U-value of 1.2W/m²K. For non-dwellings where the building type is essentially domestic in character, eg. student accommodation and care homes, a WER of band E is permitted. Unlike the current document, the draft indicates that the above values are irrespective of frame type i.e. it applies to Timber, PVC-u and Metal.

Extensions

For small extensions ADL1B and ADL2B permits two alternative methods of compliance, (1) a 'whole window/unit' U-value of 1.8W/m²K and 2.2 W/m²K for doors as defined above, and (2) a glass 'centre pane' U-value of 1.2W/m²K. For non-dwellings where the building type is essentially domestic in character, eg. student accommodation and care homes, a WER of band D is permitted. No individual element is permitted to have a U-value worse than 3.3 W/m²K.

The area of windows and doors permitted in small extensions of dwellings is limited to 25% of the floor area + the area of windows/ doors that, because of the extension, don't exist or are no longer exposed. In non-dwellings it is limited to 30% of the exposed wall (residential), 40% of the exposed wall (place of assembly, shops and offices), and 15% of the exposed wall (industrial and storage). In all of the above non-dwelling situations 20% of the roof area is permitted as rooflights.

Large extensions, as previously described, must be designed as if they were a new building.

Others

Conservatories

The draft Document covers conservatories with a floor area greater than 30m². It also defines what constitutes a conservatory.

For conservatories in dwellings ADL1B permits three alternative methods of compliance, (1) a 'whole window/ unit' U-value of 2.0W/m²K and 2.2 W/m²K for doors (this is defined as a door, which together with its frame has more than 50% of its internal face area glazed), (2) a glass 'centre pane' U-value of 1.2W/m²K, or (3) a Window Energy Rating (WER) of band E.

For conservatories in non-dwellings ADL2B permits two alternative methods of compliance, (1) a 'whole window/unit' U-value of 2.2W/m²K (this same value applies to a door as defined above), and (2) a glass 'centre pane' U-value of 1.2W/m²K, or (3) a Window Energy Rating (WER) of band E.

Consequential Improvements

ADL2B introduces a new element, it requires that a building with a useful floor area greater than 1,000m², when having an extension built or increased capacity of fixed building services, must have its existing windows replaced if their U-value is worse than 3.3W/m²K. The replacement windows must have a 'whole window/unit' U-value of 2.2 W/m²K or a glass 'centre pane' U-value of 1.2W/m²K.

Relaxations

In both ADL2A and ADL2B a further relaxation of the area average U-values is permitted in some instances and this can rise from 2.2W/m²K to as much as 2.7W/m²K. This applies where it can be demonstrated that the building has high internal heat gains.

Historic Properties

This covers listed properties and buildings that are in conservation areas, or that are of special architectural or historic importance. The general guidance for these areas is that, where possible, every attempt should be made to improve the energy efficiency provided the work does not prejudice the character of the building or add to its deterioration.

Display Windows

Shop display windows can continue to be single glazed, as they remain exempt from the requirements of the proposed document (the documents define a 'display window').

Timings

The new Approved Part L will probably be published late 2005/early 2006. It is intended that the changes come into effect on the 6th April 2006 (although as we know from the current Approved Document L, these dates can slip).

'Window Energy Ratings'(WERs)

Whilst the adoption of such a scheme would be acceptable to most of our industry there does appear to be some controversy surrounding the accuracy of the data used in the proposed calculation. It may also have additional cost implications for window fabricators. This may add pressure in terms of both time and money if companies choose to use this method of showing compliance instead of the simple and well established U-value method.

Summary

New build:

- No Elemental or Target U-value methods.
- Worst acceptable limits set for windows.
- Conservatories covered (over 30m²).
- Display windows exempt.
- Possibly more responsibility on fabricators to show compliance of their window (simple calculation methods will no longer suffice).

Replacements:

- Whole window U-value of either 2.0 W/m²K (dwellings) or 2.2 W/m²K (non-dwellings) irrespective of frame material.
- 1.2W/m²K centre pane option.
- Introduction of Window Energy Ratings where applicable.
- Conservatories covered (over 30m²).

Extensions:

- Extensions to existing properties detailed.
- Whole window U-value of 1.8 W/m²K, irrespective of frame material.
- 1.2W/m²K centre pane option.
- Introduction of Window Energy Ratings where applicable.



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*http://www.odpm.gov.uk/stellent/groups/odpm_buildreg/documents/page/odpm_breg_040269.hcsp