The Harwood guide to 2022 Building Regulation changes

Domestic extensions and alterations

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BUILDING CONTROL

The Government's Future Homes Standard has taken its first step, with the implementation of the 2022 changes to Parts F and L of the Building Regulations. These changes affect all applications submitted to building control bodies on or after the 15th of June 2022.

There are transitional arrangements for applications submitted before the 15th of June where the previous versions of the Parts F and L will apply to the work. However, if the work has not commenced before 15th June 2023, the work will automatically be subject to the new requirements on that date.

Headline issues to note

There are some headline issues that we think you should be aware of. It is important to note that this only affects projects you have submitted to your Building Control Body on or after the 15th of June.

This document is centred around the changes to Part F, dealing with ventilation, and Part L, dealing energy efficiency issues. We have focused on these as they relate to the extension and alteration of domestic dwellings only.

Key changes to Part F: Ventilation in dwellings

1. Trickle (background) ventilators must have been "equivalent area" performance tested to BS EN 13141. The ventilators must be marked with their equivalent area to aid verification.
2. Windows with secondary opening, for example, night latches, cannot be used in place of trickle (background) vents.
3. Open plan kitchen dining areas will need a minimum of 3 trickle ventilators in the room.
4. Minimum requirement for trickle ventilators to habitable rooms in extensions and loft conversions is now 12000mm2.
5. Minimum requirement for wet rooms in extensions and loft conversions is the required mechanical extract fan rate and 5000mm2 of tickle ventilator.
6. All replacement windows must have trickle ventilators with equivalent area of 8000mm2 in habitable rooms and kitchens and 4000mm2 in bathrooms. Doors should be undercut by 10mm to the finished floor level.
7. Flexible ducts for extractors are now limited to a maximum of 1.5m in length and must be installed to ensure flow resistance is minimised.
8. Improving energy efficiency measures in existing dwellings requires an assessment of ventilation provision and a new checklist is provided in the approved document.
9. Information about new ventilation systems must be provided to the homeowner when work is undertaken to an existing dwelling. The Governments Home User Guide can be used for this https://www.gov.uk/government/publications/home-user-guide-template

Key changes to Part L: Energy efficiency in dwellings

1. New, replacement, thermal elements, and glazing need to meet new U-values.
2. The maximum opening areas limit of 25% of the floor area of an extension, plus any existing covered openings, remains in place.
3. Where sub-glazed SAP calculations or area weighted U-value calculations are required, these must be submitted before starting works.
4. Ground floor perimeter upstand insulation is required as 25mm standard.
5. There are changes to efficiency requirements when replacing or extending the existing space heating systems in an existing dwelling. A minimum gas boiler SEDBUK rating of 92% is required, alongside enhanced controls and including additional requirements for combi boilers.
6. Replacing a flat roof waterproofing membrane now requires upgrading of the insulation to achieve a 0.16 U value.
7. Exempt structures, such as conservatories and porches under 30m2, will not be classed as exempt if they are provided with any form of fixed heating.

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Changes to U-values for extensions and loft conversions

U-values remain one of the principal tools that the building regulations use to limit heat loss. Unlike new build dwellings, where U-values are expressed as a target in a wider energy efficiency calculation for the dwelling, U-values for extensions and alterations to existing dwellings are given as fixed figures which must, in general, be achieved.

Thermal element	Value for applications submitted <15th June	Value for applications submitted >14th June
External wall	0.28	0.18
Floor	0.22	0.18
Roof	0.16-0.18	0.15
Windows (including roof windows and curtain walling)	1.6	1.4
Timber windows	N/A	1.6
External doors >60% glazed	1.8 (Band E)	1.4 (Band C)
Other external doors	1.8 (Band E)	1.4 (Band B)
External fire doors	N/A	1.8
Roof light and any kerb/upstand	1.6	2.2
Rooflight upstand built on site	N/A	0.35

Indicative insulation thicknesses for various standard thermal elements

The tables below provide some general guidance as to material requirements to achieve the new U-values for extensions and alterations to existing dwellings. These are indicative only and should not be relied upon. Installers must satisfy themselves as to whether a product is fit to achieve the required standard.

Thermal element and Insulation type	Element type and Insulation thickness
Ground floor	**Concrete slab/beam and block, assuming a P/A ratio of 1 (other ratios may require additional insulation)**
PIR (2.02 conductivity)	100mm
EPS	100mm plus 60mm
Ground floor	**Timber, as above for P/A ratio, with Joists at 400mmc/c**
PIR (0.02 conductivity)	150mm
Mineral wool (0.04 conductivity)	200mm
External walls	**Masonry, assuming inner leaf lightweight blocks maximum 0.15 conductivity and plasterboard on dabs internal finish**
PIR (0.02 conductivity)	100mm + 50 mm residual cavity
Mineral wool batts (0.032 conductivity)	150mm or 100mm with 52.5 insulated plasterboard
Mineral wool batts (0.37 conductivity)	150mm with 10mm PIR internally
External Walls	**Timber Frame, with any external finish with a 12.5mm plasterboard internal finish and 100mm studs**
PIR (0.02 conductivity)	100mm between and 50mm over
Mineral wool (0.032 conductivity)	100mm between and 60mm PIR over

Thermal element and Insulation type	Element type and Insulation thickness
Roofs	**Warm deck flat roof**
PIR (0.02 conductivity)	140mm
	Cold deck flat roof
PIR (0.02 conductivity)	100mm between and 60mm under
Mineral wool (0.04 conductivity)	100mm between and 90mm under
	Pitched roof with insulation at rafter level
PIR	100mm between and 60mm under
	140mm over rafters
	75mm between and 75mm over
Multifoil & PIR	Dependant on type and location of multifoil
	Pitched roof with insulation at ceiling joist level
Mineral wool (0.04 conductivity)	300mm; 150mm between and 150mm over
PIR (0.02 conductivity)	100mm between and 60mm under