

## HOW TO GUIDES

# BUILDING REGULATIONS PART L (CONSERVATION OF FUEL AND POWER)



In the process of development, whether it is the erection of a new building, extending or altering an existing building, or changing the way a building is used, you will normally need to seek Building Regulation approval and possibly Planning approval.

Planning approval establishes that the building or proposed use of land is acceptable in principal. Building Regulations specifically relate to the technical aspects of construction and cover such matters as structural stability, fire resistance, means of escape, disabled access, weather resistance, thermal insulation, drainage etc. Building Control is the part of Environmental Services which ensures that buildings are constructed and altered so that they comply with the Building Regulations, that dangerous structures are made safe and that demolitions are done in as safe a manner as possible.

The purpose of the regulations is to protect the health and safety of people in or around buildings. They also deal with conserving energy and with access and facilities for disabled people. Building Control Surveyors manage the Building Regulations. Building Control Surveyors have a wide knowledge of materials and building methods, and will assist at all stages throughout the building process.

The building and services contained within the premises must promote the conservation of fuel and power, whilst reducing the amount of CO<sub>2</sub> produced, whilst the fabric of the building must contain insulation to limit heat loss, heating appliances, associated equipment and lighting systems must prevent wasted energy use, whilst pipes and storage vessels are insulated to reduce the waste of energy.

Part L refers to the requirements with regards to conservation of fuel and power. Since the inception of these regulations in 1984, quite a lot has changed, so this guide to Part L of the building regulations will take you through the main changes builders must now adhere to in order to be in accordance with part L regulations. As with most government documents, the new UK Building Regulations Part L is made up of around 600 pages of information, but the main changes can be boiled down to two rather simple points:

- ▶ The method of measurement has shifted from elemental U-values to actual CO<sub>2</sub> emissions
- ▶ All domestic buildings need to show a 25% improvement on CO<sub>2</sub> emissions over the 2006 standard

The 25% improvement in Dwelling Emission Rate (DER) is part of the plans to reach zero carbon houses by 2016. In order to reach this target, certain measures need to be put into place to ensure properties are built in a more CO<sub>2</sub> friendly way. This means a shift in the design stage towards more information, detail and calculations, as well as handing over more powers to Building Control Officers. Without these building regulations the chances of us meeting the 2016 goal would be very unlikely.

## How do I meet Part L of the building regulations?

The main requirement is to reduce the DER by a minimum of 25%. You can see the planning portal website for more details on what that means for you.

Using the building regulations insulation as an example; The cavity wall construction building regulations now state that simply insulating and sealing them does not count towards the 25% reduction target. This means that other measures must be used in addition to simply insulating and sealing cavity walls. For example, typical cavity block wall with 70mm insulations batts and a 50mm cavity will now need at least 90mm batts. Our Cavalok cavity closers feature a pre-installed core of polystyrene insulation, providing enhanced thermal efficiency for compliance with Part L Building Regulations. The integral insulation also saves time on site because no additional insulation has to be fitted.

Cavalok is a leading cavity closure specialist in the UK, and is part of the Eurocell group. Cavalok offers a range of solutions, which both meet and exceed building regulations.

Building regulations roof insulations now needs to be a U-value of 0.15. For further information, visit the government's planning portal website.

## What about renewable energy?

Part L of the building regulations encourages the use of renewable energy; however it is worth checking out what you install. For example heat pumps are no longer considered an environmentally friendly option and the CO<sub>2</sub> emissions have skyrocketed by 40%, meaning they could potentially have a negative impact on the DER.

Easy ways to reach the 25% improvement could include adding a solar PV system, as it would be contributing to the electricity demand which goes a long way. Another option could be installing a biomass boiler, which has a net zero CO<sub>2</sub> emissions.

## U-values v WERs?

Both methods of compliance with Building Regulations. U-values appropriate for New Build – consistent unit of measurement.

WERs better for replacement – easier for consumers to understand.

## Eurocell helping you achieve Part L

All of our window systems comply with Part L of the Building Regulations. The performance of our window systems can be improved greatly by using very low-emissivity glazing, gas filled units, warm edge spacer bars and other enhancements to satisfy the most stringent requirements. At Eurocell we have BFRC-certified simulators who are fully qualified to calculate U-Values and WER's and give advice on requirements for compliance. Please contact our technical department for more information and support.

Sources: Approved Document L, Planning Portal

## Standard for controlled fittings

Fitting	Standard
Replacement Windows	WER Band C or better or, U-value 1.6 W/m <sub>2</sub> .K or lower
New Build Windows	Dictated by SAP calculations – U-value of 2.0 W/m <sub>2</sub> .K or lower
Replacement Doors	U-value of 1.8 W/m <sub>2</sub> .K or lower
New Build Doors	Dictated by SAP calculations – U-value of 2.0W/m <sub>2</sub> K or lower

Building Standards Section 6 Domestic – Energy in Scotland

