



*This document has been produced by the Highgate Society Sustainable Homes group, to give an overview of the national building regulations.*

## **BUILDING REGULATIONS: HEAT CONSERVATION**

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Building Regulations apply to building works in England and Wales. There are fourteen Parts and several will apply to even the smallest project. The Parts which cover sustainable construction are:

- Part F: Ventilation
- Part G: Sanitation, Hot Water Safety and Water Efficiency
- Part L: Conservation of Fuel and Power

Each of these Parts was updated with effect from April 2014.

### **Conservation of Fuel and Power – Part L**

<http://www.planningportal.gov.uk/buildingregulations/approveddocuments/partl/>

For the moment, we will concern ourselves only with Part L. In previous versions the intention was to require new buildings from 2016 to be 'nearly zero carbon'. The government has deferred this to 2019. The new Infrastructure Act which came into effect February 2015 <http://www.legislation.gov.uk/ukpga/2015/7/section/37/enacted> lays the way for 'allowable solutions' as part of 'zero carbon'. The proposed definition is as shown in this Zero Carbon Hub page. <http://www.zerocarbonhub.org/zero-carbon-policy/zero-carbon-policy> In summary, where developers are not able to achieve 'zero carbon' they will be able to pay into a fund of '**allowable solutions**' that will be used for carbon reduction projects.

- [Approved Document L1A: Conservation of fuel and power in new dwellings](#)
- [Approved Document L1B: Conservation of fuel and power in existing dwellings](#)
- [Approved Document L2A: Conservation of fuel and power in new buildings other than dwellings](#)
- [Approved Document L2B: Conservation of fuel and power in existing buildings other than dwellings](#)

However the new Part L version does introduce some new requirements. Proposals for new and existing dwellings and other buildings must submit an Energy Efficiency Certificate (EPC) to the Building Control Body in the Local Authority. Proposals for new dwellings and other buildings must consider high-efficiency alternative systems, such as decentralised energy supply, co-generation or heat pumps.

### **Part L - Insulation**

Part L covers a range of things from insulation to light bulbs. We will cover windows and doors in this section. Requirements are expressed in 'U-values' which are a measure of how much heat can pass through a square metre of material, or a build-up of materials, such as a brick wall with plaster internally.

**Table 1 of L1B (P16)**  
**Standards for controlled fittings**

Fitting	Standard
Window, roof window or rooflight	WER Band C or better (see paragraph 4.22), or U-value 1.6 W/m <sup>2</sup> .K
Doors with >50% of internal face glazed	U-value = 1.8 W/m <sup>2</sup> .K
Other Doors	U-value = 1.8 W/m <sup>2</sup> .K

Planning authorities are looking for improvements on these standards. Camden, for example, will make compliance with their stated objectives a condition of planning consent.

Making these step-changes, even in new build houses and developments, is far from easy. Buildings have to be pressure tested for airtightness; airtight buildings have to be ventilated to reduce CO<sub>2</sub> in the home and fresh air needs to be carefully introduced. Materials in old buildings need to be breathable and condensation needs to be managed both in the home and within the structure. It is complicated Physics!

**GW amended by SC**  
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