



**Energy Consulting**

## Building Bulletin 101

DfES Building Bulletin 101, often referred to as simply BB101 provides strict performance standards to be met concerning thermal comfort in summertime and ventilation rates to be achieved for all teaching space in new educational buildings.

### **BB101 Overheating:**

The performance standards for summertime overheating in compliance with Approved Document L2A for teaching and learning areas are:

- ÿ There should be no more than 120 hours when the air temperature in the classroom rises above 28°C during occupied times. And should also meet 1 of the following
- ÿ The average internal to external temperature difference should not exceed 5°C (i.e. The internal air temperature should be no more than 5°C above the external air temperature on average)
- ÿ The internal air temperature when the space is occupied should not exceed 32°C.



### **BB101 Ventilation:**

The performance standards for ventilation rates to teaching and learning areas are:

- ÿ When measured at seated head height continuously from start of teaching to the end of the teaching day, the average concentration of carbon dioxide should not exceed 1500ppm (parts per million).
- ÿ Purpose provided ventilation (i.e controllable devices to supply air to and extract air from a building) should provide external air supply to all teaching and learning spaces of:
  - ÿ a minimum of 3 l/s per person, and
  - ÿ a minimum daily average of 5 l/s per person, and
  - ÿ the capability of achieving a minimum of 8 l/s per person at any occupied time

At L2 Energy we use Dynamic Simulation Modelling software to create a graphical 3D model of the building to test both summertime overheating and natural ventilation rates through the opening of windows and the use of other devices such as wind catchers and ventilation louvres. This is not something that can be considered retrospectively as changes in window design or the need for supplementary devices whilst in the construction process can be extremely costly. For early advice contact us on the number below or drop us a quick email on [enquiries@L2energy.co.uk](mailto:enquiries@L2energy.co.uk)

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