

## Your computer room: it may work – but is it legal

### The legal requirements surrounding the operation of a computer room or data centre

A computer room or data centre is the engine room of most enterprises both in the public and private sector. Not surprisingly most managers are concerned about getting it all to work as their number one priority. But a computer room is a place of work like any other and is subject to the same rules, regulations, laws, Directives, Standards and codes of practice that regulate the rest of the workplace.

This article looks at the British and European requirements that have relevance to the operation of a computer room and data centre.

#### UK legislation

- The Health & Safety at Work Act 1974

This covers a wide range of subjects and more specialist legislation and Statutory Instruments are listed below. Adherence to a range of British (BS), European (EN) and IEC standards is usually the method to demonstrate compliance to the Regulations e.g. *BS EN 60825-1:1994 Safety of laser products*.

- Electricity at Work Regulations SI 1989/635
- Provision and use of Workplace Equipment Regulations SI 1998/2306
- Control of Noise at Work regulations SI 2005/1643
- Noise emission in the environment for equipment used outdoors Regulations SI 2007/1701
- The management of Health & safety at Work Regulations 1999
- Workplace (Health, safety and Welfare) Regulations 1992
- Corporate Manslaughter Act 2007
- Regulatory Reform (Fire Safety) Order 2005
- Safety Signs and Signals Regulations 1996
- Construction (Health, safety and welfare) regulations 1996
- Health and safety (Display screen equipment) regulations SI 1992/2792
- Disability Discrimination Act 2005
- Sustainable and secure Buildings Act 2004
- Civil Contingencies Act 2005
- The Energy Performance of Buildings Regulations SI 2007/991
- Climate change and sustainable energy Act 2006
- The Building Regulations 2000
  - **Part A** - Structure (2004 edition)
  - **Part B** -(Fire safety) – Volume 2 - Buildings other than dwelling houses (2006 Edition)
  - **Part C** - Site preparation and resistance to contaminants and moisture (2004 edition)
  - **Part E** - Resistance to the passage of sound (2003 edition)
  - **Part F** - Ventilation (2006 edition)
  - **Part L - Buildings other than dwellings** L2A: Conservation of fuel and power (New buildings other than dwellings) (2006 edition). Approved Document L2B: Conservation of fuel and power (Existing buildings other than dwellings) (2006 edition)
  - **Part M** - Access to and Use of Buildings (2004 edition)

Pending      The Climate Change Bill

European Legislation

- Energy Performance of Buildings Directive 2002/91/EC
- Energy services Directive 2006/32/EC
- Construction products Directive 89/106/EEC
- Electromagnetic Compatibility Directive 89/336/EEC
- Low Voltage Directive 2006/95/EC
- Measures to improve safety & health of workers Directive 89/391/EEC
- Health & safety requirements of the workplace Directive 89/654/EEC
- Minimum requirements for the proviso of safety & health signs at work Directive 92/58/EEC
- Noise at Work Directive 2003/10/EEC

Capitoline LLP audited the computer rooms of six organisations in the public sector and found serious non-compliance issues in the areas of;

<b>Problem</b>	<b>Legal requirement</b>
<ul style="list-style-type: none"> <li>• <b>Incorrect or missing earth connections in equipment racks</b></li> <li>• <b>Insufficient lighting in areas where mains voltage was present</b></li> </ul>	<ul style="list-style-type: none"> <li>• Electricity at Work Regulations SI 1989/635</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Missing or incorrectly labelled emergency power off switches</b></li> <li>• <b>Missing or incorrectly labelled UPS in racks hazard</b></li> </ul>	<ul style="list-style-type: none"> <li>• Safety Signs and Signals Regulations 1996</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Lack of access for the disabled</b></li> </ul>	<ul style="list-style-type: none"> <li>• Disability Discrimination Act 2005</li> <li>• Building Regulations Part M - Access to and Use of Buildings (2004 edition)</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Incorrect or lack of ventilation</b></li> </ul>	<ul style="list-style-type: none"> <li>• Workplace (Health, safety and Welfare) Regulations 1992</li> <li>• Building Regulations Part F - Ventilation (2006 edition)</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Missing or inadequate fire detection and suppression</b></li> <li>• <b>Flammable rubbish</b></li> </ul>	<ul style="list-style-type: none"> <li>• Regulatory Reform (Fire safety) Order 2005</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Cable trip hazards</b></li> <li>• <b>Dangerously loaded or mounted equipment racks</b></li> <li>• <b>Laser communications equipment mounted at eye level</b></li> </ul>	<ul style="list-style-type: none"> <li>• Provision and use of Workplace equipment Regulations SI 1998/2306</li> <li>• Workplace (Health, safety and Welfare) Regulations 1992</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Excessive waste of energy, particularly with air conditioning systems</b></li> </ul>	<ul style="list-style-type: none"> <li>• The Energy performance of Buildings Regulations SI 2007/991</li> <li>• The Building Regulations Part L - Buildings other than dwellings L2: Conservation of fuel and power</li> </ul>

Capitoline LLP is a specialist engineering consultancy in the field of IT infrastructure and in particular computer room and data centre audit and design. Capitoline can audit and report on computer rooms in any of the following areas;

- Adherence to health & safety requirements
- Sizing of power supply systems
- HVAC optimisation
- Energy consumption improvement plans

Capitoline also supplies complete data centre design and project management services including relocation and decant projects. We also supply customer training in data centre design and optimisation.

Some of our recent customers from the public sector are;

- University of Kent
- Cheshire County Council
- Brighton University
- Chester City Council
- King's Lynn and West Norfolk Council
- Lothian NHS
- New College Nottingham
- Anglesey County Council

Capitoline is an approved Low Carbon Consultant under the CIBSE LCC scheme.

