

## Statutory requirements

The relevant statutory requirements applicable to the UK are as follows:

### **The Building Regulations 1991 (applicable in England and Wales)**

the functional requirements are given in Schedule 1 with regard to Part A - Structure, Part B - Fire Safety etc.

Detailed guidance approved by the Secretary of State for meeting the Building Regulations is given in the following relevant Approved Documents:

- Approved Document A Structure;
- Approved Document B Fire Safety;
- Approved Document K Stairs, ramps and guards;
- Approved Document M Means of access for the disabled.

Other approaches may provide compliance.

### **The Building (Scotland) Regulations 1990 with subsequent amendments**

- Regulation 9 Compliance with building standards. Technical Standards Part A;
- Regulation 10 Fitness of materials. Technical Standards Part B;
- Regulation 11 Structure. Technical Standards Part C;
- Regulation 12 Structural fire precautions. Technical Standards Part D;
- Regulation 13 Means of escape from fire and facilities for fire fighting. Technical Standards Part E;
- Regulation 32 Stairs, ramps and protective barriers. Technical Standards Part S.
- Regulation 33 Access and facilities for disabled people. Standards Part T.

### **The Building Regulations (Northern Ireland) 1994**

- Part D Structure;
- Part E Fire safety;
- Part EE Means of escape in case of fire;
- Part H Stairs, ramps and guarding;
- Part R Access and facilities for disabled people.

## Imposed loading

BS 6399: Part 1 gives dead loads and minimum recommended characteristic imposed loads for floors of offices, retail, industrial and warehouses etc. The Code provides uniformly distributed loads per metre height of storage as well as recommended concentrated loads assumed over the actual area of application in positions that produced the maximum stress and deflection for strength and serviceability criteria respectively.

For 'general storage' purposes other than those specifically identified (cold storage, stationery etc), the Code recommends a uniformly distributed imposed loading of  $2.4 \text{ kN/m}^2$  per metre of available storage height and a concentrated load of  $7.0 \text{ kN}$  for most of the occupancy classes that commonly relate to platform floors. However, the application of these loads for platform floors should be considered with regard to the intended use of the platform floor, the type of storage materials and type of handling conditions etc.

In some cases it may be concluded that the BS 6399: Part 1 recommended loading for 'general storage' is not appropriate for a particular installation and that a more realistic characteristic loading, commensurate with the intended use, is given in the load classification system shown in Table 1. Exceptionally, a loading higher than that given in the Code may be warranted for particularly heavy industrial use.

In the past, building control enforcement authorities have been reluctant to accept platform floors designed for carrying imposed loading other than that recommended in BS 6399: Part 1. This is because there is no provision under the current Building Regulations to allow them to monitor the use of such structures (continuing control). Without such powers, enforcement authorities have no means of ensuring that the structures were being safely used and loaded as intended by the designer and would therefore be reluctant to accept an imposed loading value less than that recommended in the Code of practice. However, with the introduction of the Management Scheme (discussed on page 12), Building Control enforcement authorities will now have the opportunity to accept the more flexible imposed loading recommendations provided in Table 1 in the knowledge that the owner and/or user of the installation have a duty to effect the monitoring procedure stipulated under the Scheme.

**Table 1 Minimum characteristic imposed loads**

Office	Uniformly distributed	$2.5 \text{ kN/m}^2$
Workroom (without storage)	Proprietary lightweight partition	$0.5 \text{ kN/m}^2$
Canteens (but not kitchens)	Concentrated load	$2.7 \text{ kN}$
<b>Light storage</b>	<b>Uniformly distributed</b>	<b><math>3.5 \text{ kN/m}^2</math></b>
	Shelving	$2.5 \text{ kN/bay}$
	Concentrated load	$3.5 \text{ kN}$
Medium storage	Uniformly distributed	$5.0 \text{ kN/m}^2$
	Shelving	$4.0 \text{ kN/bay}$
	Hand pallet truck	$7.0 \text{ kN}$
	Concentrated load	$5.0 \text{ kN}$
Heavy storage	Uniformly distributed	$7.0 \text{ kN/m}^2$
	Shelving	$5.0 \text{ kN/bay}$
	Powered pallet trucks	$12.0 \text{ kN}$
	Concentrated load	$6.0 \text{ kN}$

#### Note:

The application of the concentrated load shall be in accordance with cl. 5.1.3 of BS6399: Part 1.

The assumed area of the concentrated load shall be recorded in the *Management Document*.