HEALTH AND SAFETY AUTHORITY

Guide to the Safety, Health and Welfare at Work (General Application) Regulations 2007

Chapter 1 of Part 2: Workplace

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Guide to Chapter 1 of Part 2 of the General Application Regulations 2007

Chapter 1 of Part 2: WORKPLACE

Introduction

This Guide is aimed at safety and health practitioners, employers, managers, employees, safety representatives and others to give general guidance on Chapter 1 of Part 2 (Regulations 4 to 26) of the Safety, Health and Welfare at Work (General Application) Regulations 2007 (S.I. No. 299 of 2007) relating to the workplace. *It is not intended as a legal interpretation of the legislation.*

From 1 November 2007, Chapter 1 of Part 2 of the General Application Regulations 2007 re-transposes Directive 89/654/EEC and replaces Part III (Regulations 16 and 17) of the Safety, Health and Welfare at Work (General Application) Regulations 1993 (S.I. No. 44 of 1993), which are revoked from that date.

In this Guide the text of the Regulations is shown in italics.

The General Application Regulations 2007 are made under the Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005) referred to elsewhere in this Guide as "the Act" or the "2005 Act".

In summary, Chapter 1 of Part 2 of the General Application Regulations deals with the physical environment at the place of work and sets out the welfare facilities which should be provided as standard facilities for a premises used as a workplace.

Working in fields or forestry undertakings is not covered by the Regulations, except for workshops and buildings associated with them. The provisions apply to all buildings used as places of work with the following exemptions:

- Means of transport used outside the undertaking
- Mobile or temporary work sites including construction sites
- Extractive industries
- Fishing boats.

Several of these are covered, or will be covered, by other Regulations.

The employer must ensure that the physical environment of the place of work is adequate. Work areas should be large enough to be safe and healthy and be adequate with regard to stability, ventilation, fresh air, temperature and lighting.

Pedestrians and vehicles must be able to circulate safely. Traffic routes, entrances and exits must be kept clear. Floors, walls, ceilings, roofs, doors, gates, loading bays and ramps must be safe.

Adequate toilet, washing and welfare facilities must be provided.

Employees working outdoors should be protected against bad weather, noise, slippery conditions etc.

Arrangements for pregnant and breastfeeding employees to lie down must be available.

Where necessary, the workplace must be organised to take account of workers with disabilities.

As it is not possible for this Guide to address all the issues that may arise in respect of a workplace, references to further sources of information are provided in the Appendix to assist persons to make practical judgments where the Regulations have been framed in general terms.

Regulation 4: Interpretation for Chapter 1

4. *In this Chapter—*

"place of work" means a place of work intended to house workstations on the premises of an undertaking and any other place within the area of the undertaking to which an employee has access in the course of his or her employment but does not include—

(a) means of transport used outside the undertaking or a place of work inside a means of transport,

(b) temporary or mobile work sites, including construction sites,

(c) extractive industries,

(d) fishing boats,

(e) fields, woods and land forming part of an agricultural or forestry undertaking but situated away from the undertaking's buildings.

The requirements of Chapter 1 of Part 2 of the General Application Regulations apply to all places of work which are located within a premises in which work is carried out on or within the boundaries of the premises, except those places listed at (a) to (e) above.

This particular definition of "place of work" is for Chapter 1 of Part 2 only and covers not only the place where the work actually takes place but also rest areas, toilets, changing rooms etc. The broader definition found in the 2005 Act applies where the term is used elsewhere.

In respect of the places which are excluded from this Chapter, it should be noted that there is still a general duty to ensure the safety, health and welfare of workers arising from the 2005 Act, the other provisions of the General Application Regulations 2007 and other relevant legislation.

The exemption related to agriculture or forestry does not extend to the buildings used by workers in those sectors.

Regulation 5: Stability and Solidity

5. *An employer shall ensure that buildings which house places of work shall have a structure and solidity appropriate to the nature of their use.*

The employer must be satisfied that the floors, walls etc. of the place of work are able to support both the weight of equipment and the pressures of additional forces which its use imposes on the structure.

The structure's materials, where possible, should also be suitable for the work undertaken so that over time it does not fail; for example, floors rotting due to moisture or corrosion of structural steel supports. Where such risks have been identified, ongoing periodic examination will be necessary to detect any signs of deterioration.

In some workplaces there will be risks to the structure from impact damage caused by moving vehicles and measures need to be taken to protect vulnerable areas and to repair any damage before it poses a hazard to safety.

The installation of new equipment in existing buildings may require an analysis to determine if structural changes are necessary.

If cracks occur in the structure, they need to be investigated to ascertain if there is a risk to safety.

Regulation 6: Ventilation of enclosed places of work

6. *An employer shall ensure that—*

(a) sufficient fresh air is provided in enclosed places of work, having regard to the working methods used and the physical demands placed on the employer's employees,

In most cases the natural ventilation provided through windows and doors will be adequate. In cases where, for instance, there are high dust levels or high temperatures or where the workplace is isolated from the outside air, mechanical or forced ventilation may be necessary.

The provision of natural or forced ventilation will depend on the:

- Processes, materials and substances which are liable to contaminate the atmosphere, released heat or humidity
- Design of the building
- Volume of the workplace itself
- Number of occupants, including any animals

- Physical activity of the occupants or any animals
- Location of a workstation within a building.

(b) if a forced ventilation system is used, it is maintained in working order and any breakdown is indicated by a control system if necessary for the safety and health of employees,

Mechanical ventilation systems should be maintained in good working order as part of a plant maintenance system.

The requirement for a device to give warning of breakdowns applies where necessary for reasons of safety and health. It could apply particularly to "dilution ventilation" systems used to reduce concentrations of dust or fumes in the atmosphere. It could also apply to any other situation where a breakdown in the ventilation system would be likely to result in harm to employees.

The system should be designed so that the breakdown is readily detected by those liable to be affected. Alarms in rarely visited plant rooms would not be adequate.

(c) if air-conditioning or mechanical ventilation installations are used, they operate in such a way that employees are not exposed to draughts which cause discomfort, and

The sensation of draughts is related to air speed and temperature, a person's activity and level of clothing. It can also be related to the sensitivity of the individual concerned. Draughts may be caused by inadequate design or control of the ventilation system or poor workstation layout arrangements.

(d) any deposit or dirt likely to create an immediate danger to the safety and health of employees by polluting the atmosphere is removed without delay.

Systems should be free from any substance or organism which may contaminate the air passing by it, thereby affecting the safety and health of employees. Hazards may arise from spillages of work-related materials, bird/bat droppings near air intakes or the growth of microbial contamination in ductwork.

Detailed advice on the cleaning of ventilation systems has been published by a number of bodies including the Chartered Institution of Building Services Engineers (CIBSE).

Regulation 7: Room temperature

7. *(1) An employer shall ensure that—*

(a) during working hours, the temperature in rooms containing workstations is appropriate for human beings, having regard to the working methods being used and the physical demands placed on the employees,

(b) for sedentary office work, a minimum temperature of 17.5° C, so far as is reasonably practicable, is achieved and maintained at every workstation after the first hour's work,

(c) for other sedentary work, at every workstation where a substantial proportion of the work is done sitting and does not involve serious physical effort, a minimum temperature of 16°C is, so far as is reasonably practicable, achieved and maintained after the first hour's work,

(d) means are available to enable persons at work to measure the temperature in any workplace inside a building,

The temperature in rooms in which employees work must be adequate having regard to the:

- Indoor or special work clothing normally worn by the employees
- Physical activity involved in the work
- Other elements of the thermal environment, such as radiant heat, humidity and air movement
- Need for any special conditions arising from, or required for, the work being carried out, such as heat, cold, humidity etc.

In cases where it is difficult to maintain an adequate overall temperature, it may be necessary to provide effective local heating, protective clothing or cooling at individual workstations.

Care needs to be taken with temporary heaters so as to prevent burns from contact with hot surfaces. No heating method should be employed which results in the escape into the air of any workroom of any fume of such character and to such extent as to be likely to be injurious or offensive to employees therein.

The General Application Regulations 1993 (S.I. No. 44 of 1993) did not cite specific temperatures, leading to some uncertainty as to what was legally required or enforceable when dealing with temperature issues; the situation has been clarified by the specification of some values in these Regulations.

The fact that a maximum temperature has not been specified in the Regulations does not mean that any temperature is acceptable. At high or uncomfortable temperatures, especially when not caused by temporary weather conditions, a means of cooling should be provided.

The temperature levels in Regulation 7(1)(b) and (c) are not comfort temperatures and do not represent temperatures at which people can work most efficiently.

The determination of appropriate temperatures is addressed in ISO standard 7730 – "Ergonomics of the thermal environment – Analytical determination and interpretation of thermal comfort using calculation of the PMV and PPD indices and local thermal comfort criteria" – which is available as an Irish standard I.S. EN ISO 7730:2005. This is a complex document most likely to be used at the design stage or during a technical investigation of a complaint.

It is suggested that for most people an acceptable temperature for office work lies within the range of 18 to 23°C. Recommendations for different building uses are available in guidance from CIBSE. Advice on dealing with heat and cold stress is available from the American Conference of Governmental Industrial Hygienists (ACGIH) or the British Occupational Hygiene Society.

Workers are entitled to have some means readily available to them to measure the temperature. In practice, this means that if an employee wants to measure the temperature there will be a thermometer readily available.

> *(e) the temperature in rest areas, rooms for duty staff, sanitary facilities, canteens and first-aid rooms is appropriate to the particular purpose of such areas, and*

In parts of the workplace other than workrooms, such as sanitary or rest facilities, the temperature should be reasonable in all the circumstances including the length of time people are likely to be there. Changing rooms and shower rooms should be adequately heated.

> *(f) in relation to windows, skylights and glass partitions, excessive effects of sunlight are avoided in places of work, having regard to the nature of the work and the characteristics of the place of work.*

Excessive heat from the sun shining through windows, skylights or glass partitions must be avoided. This can be achieved by various means including internal blinds, external blinds, use of low-emissivity glass, whitewashing of windows etc.

> *(2) The temperature referred to in paragraphs (1)(b) and (c) shall be a dry bulb temperature taken at the working position of the employee at 1.1 m above the floor surface.*

This provision standardises the method for measuring the air temperature as there is likely to be a temperature gradient in any room between the floor and the ceiling. A dry bulb temperature is one measured by a liquid-in-glass or digital thermometer.

> *(3) Where, due to process requirements, a workplace temperature below 16°C is necessary, the employer shall assess the risks and take any necessary measures to ensure the safety, health and welfare of the employer's employees.*

Legislation for food hygiene may result in work at low temperatures and in such, or similar, circumstances the employer needs to determine how to minimise such exposures. Where this is not possible, the employer must conduct a risk assessment to determine what is necessary for employee protection. Issues for consideration include degree of exposure, task rotation, local heating, heated rest facilities, insulation from cold surfaces, personal protective clothing and equipment etc. Finally, whatever work practices are adopted must provide a safe work environment.

The ACGIH recommends special protection of the hands to maintain manual dexterity and prevent accidents if fine work has to be performed with bare hands for more than 10 to 20 minutes in an environment below 16°C. Clearly, the precautions must take account of the work hazards, i.e. gloves may be appropriate for some applications but not others.

Regulation 8: Natural and artificial lighting

8. *An employer shall ensure that—*

(a) places of work receive, as far as possible, sufficient natural light and are equipped with artificial lighting adequate for the protection of the safety and health of the employer's employees,

Whilst the provision of natural lighting takes precedence over artificial lighting, in practice both will be required. Artificial lighting should be adequate and properly maintained for the safety and health of persons at work. To maximise the use of natural lighting, windows, skylights and glass partitions used for lighting workrooms should be kept clean on both inner and outer surfaces.

The lighting levels should be sufficient to enable persons to detect obvious hazards as well as being able to work without experiencing eyestrain.

Lighting arrangements should be made so that brightness, unsuitable shading or poorly placed light sources or workstations cannot cause discomfort or injury from glare or from reflection of light into the eyes of the employees.

Determining what is good and correct lighting depends on the visual demands of the task to be performed and the nature of the work to be performed, i.e. office work, hospital work, inspection of minute work (jewellery and watch-making), fine bench and machine work, rough bench work etc. Standards set by recognised professional bodies, such as CIBSE, should be referred to as regards determining the correct level of lighting.

(b) lighting installations in rooms containing workstations and in passageways are placed in such a way that there is no risk of accident to the employer's employees as a result of the type of lighting fitted, and

Lights and light fittings should be of a type, and so positioned, that they do not cause a hazard (including electrical, fire or collision hazards). Glare and dazzle should be avoided. Light switches should be positioned for easy access and use without risk.

Lights should not be allowed to become obscured, for example by stacked goods or appliances, in such a way that the light level is inadequate.

In some cases extra physical protection of light sources may be necessary to prevent the possibility of electrocution where there is a risk of physical impact, e.g. if located in pits or areas where metal tubing is being handled.

(c) places of work in which the employer's employees are especially exposed to risks in the event of failure of artificial lighting are provided with emergency lighting of adequate intensity.

Emergency lighting is necessary if employees are put at risk in the event of any failure of the normal lighting system. Such risks include panic, falling down stairs, tripping, collision with objects and loss of sense of direction.

Guidance on emergency escape lighting can be found in the following publications:

(a) Technical Guidance Document B to the Building Regulations

(b) Lighting Applications Emergency Lighting, I.S. EN 1838:1999

(c) Code of Practice for Emergency Lighting, I.S. 3217:1989.

Regulation 9: Floors, walls, ceilings and roofs of rooms

9. *(1) An employer shall ensure that—*

(a) the floors of rooms have no dangerous bumps, holes or slopes and are fixed, stable and, so far as is reasonably practicable, not slippery,

The surfaces of floors and traffic routes should be free from any hole, slope or uneven or slippery surface which is likely to cause:

- A person to slip, trip or fall
- A person to drop or lose control of anything being lifted or carried
- Instability or loss of control of vehicles or their loads (or both).

Slopes should not be steeper than necessary. Moderate and steep slopes should be provided with a secure handrail, where necessary.

Floor surfaces which are likely to become wet or to be subject to spillages should be of a type which does not become unduly slippery. Where there is likely to be danger, protection should be provided, for example through protective footwear, slip-resistant floor surfaces, barriers around areas being cleaned, proper cleaning techniques and adequate maintenance.

The report *Safer surfaces to walk on – reducing the risk of slipping*, published by the UK Construction Industry Research and Information Association (CIRIA), provides useful information for designers and building maintenance managers.

(b) the surfaces of floors, walls and ceilings in rooms are such that they can be cleaned or refurbished to an appropriate standard of hygiene,

Floors, ceilings and interior walls should be painted, tiled or otherwise treated so that they can be kept clean. The surface treatment should be renewed when it can no longer be cleaned properly. Absorbent floors, such as untreated concrete or timber, which are likely to be contaminated by oil or other substances which are difficult to remove, should be sealed or coated, for example with a suitable non-slip floor paint. Interior walls, floors, ceilings and work surfaces must be cleaned at suitable intervals. The intervals will depend on the type and level of work activity and the frequency of use. Cleaning

should be carried out by an effective and suitable method and without creating a health or safety risk for employees.

For some places of work, the selection and cleaning of floors and walls may also be subject to food hygiene requirements, set by the Food Safety Authority of Ireland.

> *(c) access to roofs and suspended ceilings made of materials of insufficient strength is not permitted unless—*
> *(i) equipment is provided to ensure that the work can be carried out in a safe manner, and*
> *(ii) appropriate warning signs in accordance with Part 7, Chapter 1 are placed at such access points,*

Roofs containing fragile materials include the following:

- Profiled plastic cladding
- Glass reinforced plastic (GRP) daylight sheets
- Asbestos cement sheets
- Fibre cement sheets (non-asbestos)
- (v) Glass-wired or plain
- Light-gauge steel sheets
- Other fragile materials used for roofing.

Access to roofs is often a feature of maintenance work and the provisions of Part 4 of the General Application Regulations 2007 relating to work at height will be relevant.

Persons at work may not be allowed to:

- Pass across or work on or from a fragile surface where it is reasonably practicable to carry out work safely without their doing so
- Enter onto any roof which incorporates fragile material and which would be liable to fracture under weight, unless protective measures are taken, for example use of ladders, crawling ladders, crawling boards or duck boards
- Work near, or to pass by, fragile parts of a roof unless suitable protective measures are taken, for example guard rails, coverings or other suitable means to prevent them stepping on or falling through the roof should they lose their balance.

Prominent warning notices must be posted where there is access to, or where any person at work passes across or near, any fragile roof. In addition, a verbal warning must be given to any employees who may require such access.

(d) transparent and translucent walls, in particular all-glass partitions, in rooms or in the vicinity of workstations and traffic routes are—

(i) clearly indicated,

(ii) made of safety material, or

(iii) shielded from such places or traffic routes,

to prevent employees from coming into contact with the walls or being injured should the walls shatter, and

A translucent wall is one that is semi-transparent.

The first requirement is to ensure that persons will be able to note the presence of a transparent wall and not confuse it for an opening through which they may expect to pass.

Transparent or translucent walls and partitions should be made of materials which are safe or they should be adequately protected against breakage, particularly where any part of the transparent or translucent surface is at waist level (800 mm from floor level) or below.

Detailed guidance related to glazing and human impact can be found in BS 6262-4:2005 "Glazing for buildings: Code of practice for safety related to human impact".

As an alternative to the use of safety materials, transparent or translucent surfaces may be adequately protected against breakage. This may be achieved by means of a screen or barrier which will prevent a person from coming into contact with the glass if he or she falls against it.

A transparent or translucent surface should be marked, where necessary, to make it apparent. Where it is needed, marking may take any form (for example coloured lines or patterns) provided that it is conspicuous and at a conspicuous height.

In all glass structures, such as glasshouses, employees should be instructed in the necessary safety precautions to avoid contact and injury from glass.

(e) places of work containing workstations are adequately thermally insulated, bearing in mind the type of undertaking involved and the physical activity of the employees.

(2) Paragraph (1)(e) does not apply to places of work in use prior to 31 December 1992 except as regards modifications, extensions or conversions made after that date.

Adequate thermal insulation in the context of these Regulations relates to securing an appropriate temperature for employees. The application of this Regulation depends on determining the adequacy of the existing arrangements and, if inadequate, what impact any change in thermal insulation would have. In buildings where, of necessity, large doors are kept open for most of the time, a change in thermal insulation would have little impact on worker wellbeing though there may still be options for local draught reduction.

(From a regulatory point of view this is a separate matter from the issue of thermal insulation related to fuel and energy conservation.)

Regulation 10: Windows and skylights

10. *An employer shall ensure that—*

(a) where it is possible for employees to open, close, adjust or secure windows, skylights and ventilators—

(i) it may be done safely, and

(ii) when open, such windows, skylights and ventilators are not positioned so as to constitute a hazard to employees, and

It should be possible for employees to open, close, adjust or secure windows, skylights and ventilators in a safe manner. Where necessary, suitable equipment should be available to employees for opening/closing windows from floor level or from a secure platform, without having to use chairs or tables etc.

Windows, when open, should be such that they do not project into passageways at a height where they are liable to be struck by passers-by nor should they be located where persons could accidentally fall through them.

Whilst this Regulation only covers the protection of employees, in those workplaces where children are liable to be present the hazards of window access should also be considered.

(b) windows and skylights can be cleaned without risk to the safety, health or welfare of persons carrying out this work or of other persons present—

(i) by design,

(ii) by being fitted with devices, or

(iii) in conjunction with the use of equipment.

The age, design and location of a building will determine the most appropriate method for cleaning buildings. Options include:

- Self-cleaning glass
- Windows that can be safely cleaned on both sides from within the building
- Permanent walkways
- Suspended cradles
- Rope access
- Mobile, elevated working platforms
- Tower scaffolding
- Long-pole cleaning systems.

In some instances the use of ladders or safety harnesses may be acceptable but their use should be reviewed in the context that there may be safer options.

BS 8213-1:2004 provides useful information when considering access options for window cleaning.

Regulation 11: Doors and gates

11. *An employer shall ensure that—*

(a) the position, number and dimensions of doors and gates, and the materials used in their construction, are determined by the nature and use of the rooms or areas and are appropriate for the safety, health and welfare of employees,

Doors and gates installed in places of work should be suitable for the number of persons employed and the nature of the work carried on. Factors which should be taken into account are the traffic routes used by pedestrians and vehicles, access for people with disabilities, requirements in the event of an emergency, visibility issues, nature of vehicular traffic, the numbers of employees requiring access or egress, the size and quantity of material moving in and out of the workplace and the effort required to open/close gates.

In some instances doors may require a certain fire rating to maintain a secure means of escape in case of fire.

The Building Regulations Technical Guidance Document B: Fire Safety sets out a range of criteria that will influence the siting of doors.

(b) swing doors and swing gates are transparent or have see-through panels,

(c) transparent doors are appropriately marked at a conspicuous level,

So as to prevent employees walking through them, the markings on transparent doors should be conspicuous and not easily removable.

The Building Regulations Technical Guidance Document M: Access for People with Disabilities advises that permanent markings be placed 1,200 to 1,500 mm above finished floor level.

(d) if transparent or translucent surfaces in doors and gates are not made of safety material and, if there is a danger that employees may be injured if a door or gate should shatter, the surfaces are protected against breakage,

Transparent or translucent surfaces in doors and gates should be made of materials which are safe or they should be adequately protected against breakage, particularly where any part of the transparent or translucent surface is at shoulder level (1,500 mm from floor level) or below.

BS 6262-4:2005 on glazing for buildings may be a useful reference.

(e) sliding doors and sliding gates are fitted with a safety device to prevent them from being derailed or falling over,

Sliding doors should have effective means to prevent them from coming off their tracks. They should have a retaining rail to prevent them falling should their suspension system fail or the rollers leave the track.

> *(f) doors and gates opening upwards are fitted with a mechanism to secure them against falling back,*

Upward opening doors should be fitted with an effective device, such as a counter balance or ratchet mechanism, to prevent them falling back in a manner likely to cause injury.

> *(g) there are doors or gates for pedestrian traffic in the immediate vicinity of gates intended primarily for vehicle traffic, unless it is safe for pedestrians to pass through, and such doors or gates are clearly marked and kept unobstructed at all times, and*

Where the speed and/or volume of traffic creates a risk to the safety of persons, separate pedestrian and vehicular routes should be provided at any entrance or exit point in a workplace. Account should be taken of the greatest volume of traffic, the number of persons likely to use the route at any given time, the width of the gateway and the degree of visibility from both sides.

Some form of traffic control may be necessary to secure pedestrian safety.

The boundaries of pedestrian and vehicular routes should be clearly defined, for example by the use of raised footpaths or kerbs.

In respect of frequently used doorways fitted with plastic curtains, unless the doorway is wide enough to facilitate the safe passage of both pedestrians and vehicles on clearly marked routes, alternative access arrangements for pedestrians should be provided. Plastic curtains become opaque over time from wear and tear.

Regulation 14 also addresses pedestrian safety.

> *(h) mechanical doors and gates—*
>
> *(i) function in such a way that there is no risk of accident to employees,*
>
> *(ii) are fitted with easily identifiable and accessible emergency shut-down devices, and*
>
> *(iii) can be opened manually where they operate as an emergency exit, unless they open automatically in the event of a power failure.*

Power-operated doors and gates should be designed, installed and maintained to prevent injury as a result of being struck by the door or gate or being trapped between parts of it or between it and a wall or floor. Some examples of safety devices for controlling mechanical doors and gates are:

- A sensitive edge or other suitable detector and associated trip device which is designed to stop, or stop and reverse, the motion of the door when obstructed

- Devices which limit the closing force to ensure that it is insufficient to cause injury if a person is trapped

- An operating control which must be held in the operating position (hold to run) during the whole of the closing motion. This will only be suitable where the risk of injury is low and the speed of closure is slow. This type of control, when released, should cause the door to stop or reopen immediately and should be positioned so that the operator has a clear view of the door throughout its movement.

Power-operated doors and gates should have a readily identifiable and accessible control switch or device so that they can be stopped quickly in an emergency.

Employers need to determine if a mechanical door/gate is, or is likely to be, used as an emergency exit. If it is not designed to open automatically in the case of power failure then the means or tools necessary to open it manually must be readily available. In the event of the power supply being restored, there should be no danger to persons using tools to open a door.

Practice in opening such doors should form part of the programme for fire or emergency evacuation drills.

Regulation 12: Emergency routes and exits

12. *Without prejudice to section 11 of the Act, the Fire Services Acts 1981 and 2003 (No. 30 of 1981 and No.15 of 2003) and other relevant legislation, an employer shall ensure that—*

(a) emergency routes to emergency exits and the exits themselves are kept clear at all times and lead as directly as possible to the open air or to a safe area,

(b) in the event of danger, it is possible for employees to evacuate all workstations quickly and as safely as possible,

(c) the number, distribution and dimensions of the emergency routes and exits are adequate for the use, equipment and dimensions of the place of work and the maximum number of persons that may be present,

(d) emergency exit doors open outwards,

(e) any sliding or revolving doors that are fitted are not used, or intended to be used, as emergency exits,

(f) emergency doors and gates are not so locked or fastened that they cannot be easily and immediately opened by any person who may need to use them in an emergency

(g) specific emergency routes and exits are indicated by signs in accordance with Part 7, Chapter 1 and such signs are placed at appropriate points and are adequately durable,

(h) emergency routes and exits, and the traffic routes and doors giving access to them, are free from obstruction so that they can be used at any time without hindrance, and

(i) emergency routes and exits requiring illumination are provided with emergency lighting of adequate intensity in case the lighting fails.

People often fail to appreciate how quickly a fire can spread. It is vital that fire exits are not blocked or obstructed and that any such obstructions are removed without delay. Floor markings and signs should indicate the areas to be kept clear.

The Building Regulations Technical Guidance Document B: Fire Safety provides useful information but where there is a conflict between that Guidance and these Regulations, these Regulations must be followed.

Regulation 13: Fire detection and fire fighting

13. *Without prejudice to section 11 of the Act, the Fire Services Acts 1981 and 2003 (No. 30 of 1981 and No.15 of 2003) and other relevant legislation, an employer shall ensure that—*

(a) a place of work is equipped with appropriate fire-fighting equipment and, as necessary, fire detectors and an alarm system, taking account of—

(i) the dimensions and use of the buildings,

(ii) the equipment they contain,

(iii) the physical and chemical characteristics of the substances present, and

(iv) the maximum potential number of people present,

(b) non-automatic fire-fighting equipment is—

(i) easily accessible and simple to use, and

(ii) indicated by signs in accordance with Part 7, Chapter 1 and the signs are placed at appropriate points and are adequately durable, and

(c) fire detection equipment and fire-fighting equipment is—

(i) inspected and maintained as frequently as necessary to ensure that it is in good working order, and

(ii) serviced by a competent person as frequently as necessary.

Fires are classified as:

Class A – Fires involving solid materials such as wood, paper or textiles.

Class B – Fires involving flammable liquids.

Class C – Fires involving gases.

Class D – Fires involving metals, for example aluminium, magnesium, sodium.

Class F – Fires involving cooking oils.

The materials available for fire fighting have to be appropriate for the type of fire likely to be encountered. Table 1 is a general guide and specialist advice may be necessary for particular situations.

Clear access to fire-fighting equipment must be provided and maintained and signs indicating the location of the equipment must be posted. (See Schedule 9 to these Regulations.)

Table 1: Fire-Fighting Equipment

Class	Suitable material
A	Water, foam, multi-purpose powder extinguishers
B	Foam
C	Dry powder, but seek specialist advice. In some instances it may be better to leave the fire burn until fuel supply can be cut off
D	Specialist fire-fighting issue
F	Fire blankets

Fire detectors and alarms are necessary in many situations such as where:

- Fires could break out without being detected
- Workers are isolated and may not be aware of incidents elsewhere in the building
- There is a risk of rapid fire spread
- Evacuation of large numbers of people would be required
- Means of escape are not ideal
- People will not be able to make their own way out of the building
- There are legal requirements for such equipment.

I.S. CEN/TS 54-14:2004, from the National Standards Authority of Ireland, provides guidelines for the design, installation, commissioning, use and maintenance of fire detection and fire alarm systems.

The use of fire-fighting equipment should be given careful consideration in the context of preparing plans for emergencies. Failure to do so could result in:

- Failure to raise the alarm properly
- Equipment being used by untrained persons, making the situation worse
- Failure to escape safely.

The nature of the enterprise will determine the particular approach to be adopted.

Regulation 14: Movement of pedestrians and vehicles in danger areas

14. *An employer shall ensure that—*

(a) outdoor and indoor places of work are organised in such a way that pedestrians and vehicles can circulate in a safe manner,

(b) traffic routes, including stairs, fixed ladders and loading bays and ramps, are designed, located and dimensioned to ensure easy, safe and appropriate access for pedestrians or vehicles in such a way as not to endanger employees employed in the vicinity of such routes,

(c) routes used for pedestrian traffic or goods traffic, or for both, are dimensioned in accordance with the number of potential users and the type of undertaking,

(d) sufficient safety clearance is provided for pedestrians if means of transport are used on traffic routes,

(e) sufficient clearance is allowed between vehicle traffic routes and doors, gates, passages for pedestrians, corridors and staircases,

(f) pedestrian routes and traffic routes are clearly identified for the protection of employees, where the use and equipment of places of work so require, and

Passageways should be wide enough and the surfaces suitable for the safe movement of the largest vehicle liable to use them. Allowance should be made for the size and design of vehicles coming into the premises from outside.

Sharp bends and blind corners should be eliminated as far as possible. Where they otherwise remain, warning signs and mirrors should be used to reduce the risk of accidents. Traffic routes for heavy traffic should avoid the areas mainly used by pedestrians.

The need for vehicles to reverse when collecting or delivering goods should, where possible, be avoided. Where forklift trucks, lorries, vans etc. have to reverse, markings on the ground in the area frequently used for reversing should be provided to aid the driver. The person giving instructions to the driver should avoid doing so from behind the vehicle. A realistic speed limit should apply for trucks making deliveries etc. and an appropriate speed limit should also apply within buildings.

When necessary, barriers should be placed outside doorways giving access to roadways used by vehicles. Suitable pedestrian crossings should be marked out.

Vehicles should be provided with flashing lights, reversing alarms etc. as an effective means of warning pedestrians of their approach where the driver's view is restricted.

All passageways should be adequately lit, particularly:

- Near buildings
- In pedestrian areas
- At junctions
- Where there is regular movement of vehicles and other mobile plant.

Traffic routes should be suitably designed and maintained for the traffic to be carried:

- Roads or floor surfaces should be constructed and surfaced with suitable material and surfaces should be even and properly drained
- Excessive gradients should be avoided
- Routes for pedestrians between floors should be by properly constructed stairs, elevators, lifts or suitably constructed ramps
- The use of fixed ladders for access should be avoided unless access is not needed very often and no other means is possible.

(g) if the places of work contain danger areas in which, owing to the nature of the work, there is a risk of an employee or objects falling, these are—
(i) equipped, as far as possible, with devices preventing unauthorised employees from entering those areas, and
(ii) clearly indicated, and
appropriate measures are taken to protect employees authorised to enter danger areas.

Ideally, people should not be working in areas where there is a risk from falling objects and, if possible, these areas should be fenced off.

Secure fencing should be provided to prevent people falling from edges and the fencing should also be adequate to prevent objects falling onto people. Where fencing cannot be provided, or must be removed temporarily, other measures need to be taken to prevent falls.

Particular attention should be paid to those locations at a height to which forklift trucks deliver goods for onward movement and where such openings can be left unprotected.

Pallets with loose goods or heavy unstable loads should not be stored at a height if the goods are liable to fall whilst the pallet is being handled or if struck by an adjoining pallet.
If a passageway is located beside storage racking, it may be necessary to provide additional fencing to reduce the risk of items falling into the passage.

Signs should be provided to warn employees entering such areas of the hazards.

Regulation 15: Specific measures for escalators and travelators

15. *An employer shall ensure that escalators and travelators—*

(a) function safely,

(b) are equipped with any necessary safety devices, and

(c) are fitted with easily identifiable and accessible emergency shutdown devices.

This Regulation places an obligation on the employer to have in place suitable arrangements to deal with potential trapping risks.

The following references may be helpful:

- Health and Safety Executive (UK), *Ergonomic aspects of escalators used in retail organisations*
- BS 5656-2:2004 Escalator and moving walks. Safety rules for the construction and installation of escalators and moving walks. Code of practice for the selection, installation and location of new escalators and moving walks
- Health and Safety Executive (UK), *Safety in the use of escalators*.

Regulation 16: Loading bays and ramps

16. *An employer shall ensure that—*

(a) loading bays and ramps are suitable for the dimensions of the loads to be transported,

(b) loading ramps are, as far as possible, safe enough to prevent employees from falling off,

Loading bays and ramps must be adequate to cater for the size, shape and weight of the goods being loaded or unloaded and the amount of traffic using them.

If necessary, to reduce the risk of employees falling or driving off ramps, guard rails should be provided. This will depend on the degree of gradient, the width of the ramp, the number and type of vehicles or the number of employees (or both) using the ramp. Guarding may not be essential where the total difference in levels is 600 mm or less.

(c) loading bays have at least one exit point, and

(d) loading bays longer than the width of 5 vehicles have an exit point at each end where technically feasible, or alternatively an appropriate refuge is provided which may be used to avoid persons at work being struck or crushed by a vehicle.

The purpose of the above provisions is to minimise the risk of persons being crushed by reversing vehicles.

A safe system of work should be in place to avoid accidents in loading bays. A one-way system should be used if possible. Markings should be provided on the ground to aid the driver reversing into a loading bay. A helper, if required, should stand well clear and towards the front of the vehicle to give instructions and should wear a high visibility jacket.

Regulation 17: Room dimensions and air space in rooms and freedom of movement at the workstation

17. *An employer shall ensure that—*

(a) workrooms have sufficient surface area, height and air space to allow employees to perform their work without risk to their safety, health or welfare, and

Overcrowding and uncomfortable conditions are to be avoided if employees are to work safely and without risk to health. Because of the sheer variety of workplaces it would be very difficult to specify the space which should be provided for every situation. The figures below should be used in the places of work mentioned and also as a guide for comparable places of work. Guidance to the Building Regulations and codes issued by professional bodies should be referred to.

When calculating the allocation of space available it should be remembered that, in general, overcrowding can increase the risk of accidents. Adequate space around the workstation is necessary to provide suitable access and egress for the general wellbeing of the person at work; to facilitate maintenance, adjustment and cleaning of equipment; and to provide space for work in progress.

The following should be used as a guide for factories, offices and other similar workplaces:

In calculating the allocation of space a reasonable approach should be taken as regards discounting any large spaces taken up by unusual fittings, furniture, machinery etc. In a room containing a counter, the space up to and under it should be included when calculating the space available for each person behind the counter.

In offices, 4.65 square metres should be the minimum amount of floor space allowed for every person employed in any room, including the area occupied by the office desk and chair but excluding filing cabinets and other office furniture.

At least 11.3 cubic metres should be provided for each person at work in a room other than an office at any one time. When calculating the volume, no space more than 4.3 metres from the floor should be taken into account.

(b) the dimensions of the free unoccupied area at a workstation are calculated to allow employees sufficient freedom of movement to perform their work and, where this is not possible for reasons specific to the workstation, the employee is provided with sufficient freedom of movement near his or her workstation.

Sufficient space should be available to employees at their workstations to carry out their work safely and comfortably.

Each workstation should allow the employee adequate freedom of movement and the ability to stand upright. When work must be carried out in cramped conditions, the duration should be kept as short as possible and sufficient space provided nearby to allow for freedom of movement

Regulation 18: General welfare requirements

18. *An employer shall ensure that—*

(a) every place of work is kept in a clean state and accumulations of dirt, refuse, trade refuse and waste are removed by a suitable method as frequently as necessary to maintain an appropriate level of safety and health,

(b) the floor of every workroom is cleaned by a suitable method as frequently as necessary to maintain an appropriate level of safety and health,

The employer has a responsibility to ensure that any place of work is maintained in a clean and hygienic condition and that any rubbish, dirt, refuse and waste is not allowed to accumulate and is removed on a regular basis. Employers must also ensure that the floor of any workroom is kept clean and that a suitable cleaning regime is in place.

The choice of cleaning methods is determined by the:

- Effectiveness of the cleaning regime
- Suitability for the materials involved. An inappropriate method can destroy a floor surface, including destruction of its anti-slip properties
- Nature of the contaminant, for example dry sweeping is not appropriate for hazardous dusts.

(c) where any employees have in the course of their employment reasonable opportunities for sitting without detriment to their work or, where a substantial proportion of any work done by employees can properly be done sitting,

(i) suitable facilities for sitting are provided and maintained for their use, or

(ii) if this is not practical, they are otherwise ergonomically supported,

Working in a standing position for a long period can cause sore feet, swelling of the legs, varicose veins, muscular fatigue, lower back pain and stiffness in the neck and shoulders.

Seating is required where most of the job can be carried out while seated or where there may be opportunities for workers for sitting down between tasks without detriment to their work. If seating is not practical, some other form of support is required so that workers are protected from the health effects of prolonged standing. Other means of ergonomic support include foot-rails/rests and elbow supports for precision work. Examples of where this may be practical and should be given consideration by employers are in retail outlets at sales points or cash registers, or where employees are demonstrating products within a retail outlet. Other examples include service industries, such as bar work, at periods when there are no customers awaiting service.

Any seating provided should be a suitable chair with a back and not a bench.

(d) an adequate supply of potable drinking water is provided and maintained at suitable points conveniently accessible to all employees,

The employer is required to provide an adequate supply of wholesome drinking water at locations within the workplace that are accessible to employees. The number of locations would be dependent upon the size of the workplace, the number of persons employed, the nature of the work and any requirement for the employee to remain at the workstation for sustained periods.

Where drinking fountains are used, they should be of such design that the nozzle is shielded to protect it from contamination by the mouths of users.

(e) suitable and adequate facilities for boiling water and taking meals are provided and maintained for the use of employees, or that employees have reasonable access to other suitable and adequate facilities for the taking of meals, and

The employer is required either to provide suitable and adequate facilities to allow employees to eat and drink any meals or beverages, or to have arrangements in place to allow employees access to other suitable and adequate facilities (such as where there is a common facility shared by employees of a number of employers in or at the same location).

Any facilities provided or made available for use by employees must have means for boiling water.

Table surfaces should be easy to clean. Sitting facilities should have back supports. The area should have adequate lighting and heating.

Damaged tables or chairs should be replaced without delay.

(f) the taking of meals by employees is prohibited at any location in the place of work where there is likely to be a risk to safety, health or welfare.

Meals must not be taken in areas where there is a risk of contamination from substances used at work, vehicle fumes or other risks from hazards such as physical impact or explosion.

Regulation 19: Rest rooms and rest areas

19. *An employer shall ensure that—*

(a) where, because of—

(i) the type of activity carried out, or

(ii) the presence of more than a certain number of employees, and

(iii) the safety, health and welfare of employees so requires, employees are provided with an easily accessible rest room or appropriate rest area, except where the employees are employed in offices or similar workrooms providing relaxation during breaks,

(b) rest rooms are large enough and equipped with tables with easily cleaned surfaces and seats with backs, adequate for the number of employees, and

(c) if working hours are regularly and frequently interrupted and there is no rest room, other rooms are provided in which employees can stay during such interruptions, wherever this is required for the safety, health or welfare of employees.

The need to provide rest rooms would arise where arduous physical activity is involved or where work is conducted in a hostile environment involving exposure to dust, fumes, noise or excessive heat or cold. The underlying principle is that employees should not spend all their time at work in damaging environments.

Where the workstations or workrooms are dirty, contaminated, noisy or subject to disturbances, for example in chemical plants, foundries or abattoirs, rest rooms should be provided away from work areas. This requirement does not apply to employees in offices or similar workstations where relaxation during breaks is provided for.

If a canteen is used, employees who wear contaminated work clothes during their rest period should use a dedicated rest room rather than the canteen to avoid contaminating the canteen facilities.

Canteens or restaurants may be used as rest facilities, provided that there is no obligation to purchase food in order to use them.

If workers must frequently leave their work area for short periods, for example resetting of equipment, there should be a suitable rest area provided where they may wait.

Regulation 20: Sanitary and washing facilities

20. *An employer shall provide and maintain and keep in a clean state—*

(a) adequate and suitable sanitary and washing facilities for the use of employees,

(b) an adequate number of lavatories and washbasins, with hot and cold running water, in the vicinity of workstations, rest rooms, changing rooms and rooms housing showers,

(c) separate use of lavatories or washbasins for men and women, when so required for reasons of propriety,

(d) adequate and suitable showers for employees if required by the nature of the work or for health reasons related thereto, and in such case—

(i) separate shower rooms or separate use of shower rooms for men and women,

(ii) shower rooms which are sufficiently large to permit each employee to wash without hindrance in satisfactory conditions of hygiene, and

(iii) showers which are equipped with hot and cold running water, and

(e) easy access between the rooms housing showers or washbasins where they are separate from the changing rooms.

BS 6465-1:2006, "Code of practice for the design of sanitary facilities and scales of provision of sanitary and associated appliances" provides guidance for determining an adequate number of lavatories and washbasins. Tables 2 and 3 below, which relate to staff facilities in offices, shops, factories and other non-domestic premises, are taken from the this standard. Other types of workplaces are also addressed in the publication.

The numbers of employees mentioned in Tables 2 and 3 refer to the maximum number likely to be in the place of work at any one time. Where separate facilities are provided for a group of employees, for example men or women, office workers or manual employees, a separate calculation should be made for each group.

Table 2: Sanitary Facilities for Males and Females (if there are no urinals)

Number of people at work	Number of water closets	Number of washbasins
1 to 5	1	1
6 to 15	2	2
16 to 30	3	3
31 to 45	4	4
46 to 60	5	5
61 to 75	6	6
76 to 90	7	7
91 to 100	8	8
Above 100	8 + 1 WC and washbasin per 25 persons or fraction thereof	

Table 3: Sanitary Facilities for Males Only (if urinals are provided)

Number of men at work	Number of water closets	Number of urinals	Number of washbasins
1 to 15	1	1	1
16 to 30	2	1	2
31 to 45	2	2	2
46 to 60	3	2	3
61 to 75	3	3	3
76 to 90	4	3	4
91 to 100	4	4	4
Above 100	4 + 1 WC, urinal and washbasin per 50 males or fraction thereof		

If the work leads to heavy contamination of hands or forearms, the number of washbasins may need to be increased to one per ten persons at work up to 50 persons and one per twenty thereafter.

Sanitary facilities which are not suitably mechanically ventilated must not exit into any workroom except through the open air or through an intervening ventilated space.

Sanitary facilities should be located either on the same floor in a place of work or one floor above or below the place of work unless a passenger lift gives access to other floors.

Separate sanitary facilities should be provided for men and women except when the facilities are in a room, lockable from the inside and accommodating one person only at a time.

Toilets for staff should be in addition to and separate from toilets for other users.

Doors to WC compartments should be equipped with locks that can be easily operated by the user and readily released from outside in case of an emergency.

WC compartments and urinals should not be visible from outside the toilets.

WC compartments should be supplied with toilet paper and hooks so that clothing does not have to be placed on the floor.

Female toilet compartments should be supplied with a suitable sanitary disposal unit.

If WC bowl fittings become loose, they need to be secured to prevent them from falling over.

The Building Regulations Technical Guidance Document M provides advice on sanitary conveniences designed for use by people with disabilities. The National Disability Authority is another source of information.

Washing facilities
To be adequate and suitable, facilities for washing should include running hot and cold, or warm, water as well as soap and clean towels (the single towel for use by many should be discouraged) or other suitable means of cleaning or drying. Washing facilities should be conveniently located, be near to the sanitary facilities and large enough to facilitate washing of face, hands and forearms.

Separate washing facilities and/or showers should be provided for men and women except when the facilities are provided in a room intended to be used by only one person, the door of which is capable of being secured from the inside. Separate facilities are not necessary for washing the hands, forearms and face only.

Hot water temperatures must be controlled so as to prevent scalding.

Showers are necessary where workers are exposed to heavy physical work or to offensive/harmful substances where ongoing skin and hair contamination must be prevented.

The provision of emergency showers is sometimes required under other legislation for first-aid purposes such as when handling acids or alkalis.

Washing facilities should have adequate lighting, be sufficiently ventilated, adequately protected from the weather, appropriately maintained and kept clean.

Employers may arrange amongst themselves to jointly provide facilities – an example of this would be the sharing of facilities in shopping centres.

Regulation 21: Changing rooms and lockers

21. *(1) An employer shall provide or cause to be provided—*

(a) appropriate changing rooms for persons at work if they have to wear special work clothes and if, for reasons of health or propriety, they cannot be expected to change in another area, which are—

(i) easily accessible,

(ii) of sufficient capacity, and

(iii) provided with seating,

(b) separate changing rooms or separate use of changing rooms for men and women, and

(c) adequate provision for drying wet or damp work clothes.

(2) If circumstances so require where work clothes are likely to be contaminated by dangerous substances, atmospheric conditions or the conditions of the place of work, an employer shall provide, or cause to be provided, facilities in changing rooms to enable working clothes to be kept in a place separate from personal clothing and effects.

(3) If changing rooms are not required as referred to in paragraph (1), the employer shall ensure that every person at work is provided with a place to store his or her own clothes and personal effects.

Changing rooms should be sufficiently large and have facilities to enable each person at work to lock away his or her clothes during working hours and if the nature of the work so requires (e.g. laboratory, chemical works, electroplating) separate lockers for work clothes should also be provided.

When changing rooms are provided, they should:

- Be readily accessible from workrooms
- Be provided in conjunction with any shower or bathing accommodation, and have easy communication with it
- Have easy communication with the clothing accommodation
- Contain adequate seating
- Be conveniently situated for the use of employees using facilities for taking meals.

For offices and for certain industries, satisfactory changing facilities may consist of separate pegs or hooks at least 31 cm apart laterally for each employee for outer clothing such as coats, overalls or aprons, which can be changed in workrooms where there are no risks to health and safety. In addition, some provision for personal effects must be made.

Provision needs to be made to dry clothing or overalls that have become damp due to the nature of the work.

Where extensive changing is necessary, separate cloakroom facilities must be provided for men and women except when the facilities are provided in a room intended to be used by only one person, the door of which is capable of being secured from the inside.

Regulation 22: Accommodation areas at a place of work

22. *An employer shall ensure that fixed living accommodation areas provided for employees at a place of work—*

(a) are safe and without risk to health, and

(b) unless used in exceptional cases—

(i) have sufficient sanitary equipment,

(ii) are equipped with beds, cupboards, tables and seats with backs, taking account of the number of persons at work, and

(iii) are allocated taking account, where appropriate, of the presence of persons of both sexes.

Living accommodation is sometimes provided at a place of work. It may be for those who work at or travel from the site. Fixed living accommodation refers to facilities which are not moved during the course of their use.

Like a workplace, the accommodation should be safe, for example electrical and gas supplies should be properly installed and the structure should be in good order. Sanitary equipment is necessary unless the accommodation is part of a building such as a hotel that has accessible toilets etc.

The accommodation should not be overcrowded and separate provision should be made for males and females.

Regulation 23: Outdoor places of work, special provisions

23. *An employer shall ensure that when employees are employed at outdoor workstations, the workstations are, as far as possible, arranged so that employees—*

(a) are protected against inclement weather conditions,

(b) are not exposed to harmful influences such as gases, vapours or dust, in compliance with the relevant statutory provisions, and

(c) cannot slip or fall.

These requirements apply to workstations which are essentially linked to the premises of an undertaking. Examples would include crushing plants, boiler houses, car parks, warehousing and container yards, which are normally separate from the main place of work. The requirements are almost self-explanatory and existing good standards as reflected in other regulations or codes of practice should be applied. Please see also comments made under earlier relevant provisions.

Regulation 24: Pregnant, postnatal and breastfeeding employees

24. *An employer shall ensure that pregnant, postnatal and breastfeeding employees are able to lie down to rest in appropriate conditions.*

The facility for pregnant women and nursing mothers should, when possible, be situated near the welfare facilities (i.e. toilet and washing facilities) and be equipped to allow persons to lie down. Adequate space, heating and lighting are required.

Regulation 25: Employees with disabilities

25. *An employer shall ensure that places of work, where necessary, are organised to take account of persons at work with disabilities, in particular as regards doors, passageways, staircases, showers, washbasins, lavatories and workstations used or occupied directly by those persons.*

Employees should ensure that, as far as is reasonable and practicable, buildings are usable by people with disabilities. Accessibility for persons with disabilities is covered by Part M of the Building Regulations entitled “Access for People with Disabilities”. It comes in three sections, which cover

access and use, sanitary conveniences and audience and spectator facilities. The Building Regulations apply to construction of new buildings after 1 January 2001 and any extension work or renovations carried out after that date. In addition, certain parts of those Regulations apply to existing buildings where a material change of use takes place. Otherwise, the Building Regulations do not apply to buildings constructed prior to 1 June 1992. Egress in the event of an emergency for people with disabilities is referred to in Technical Guidance Document B.

Where the Building Regulations do not apply to existing buildings, safe access to, egress from and circulation within the workplace for employees with disabilities should be provided, as necessary. Access to all welfare areas should also be provided.

Employers should ensure that adequate assistance is provided for the safe evacuation of those with a disability in the event of an emergency.

Guidance is also available in BS 5588: "Fire precautions in the design, construction and use of buildings, Part 8: Code of practice for means of escape for disabled people".

Due to the variety of design options in facilitating access and safety for people with disabilities, and the wide range of disabilities and their varying degrees of effect, specialist advice should be sought.

The National Disability Authority has issued guidelines for the built and external environment in a publication entitled *Building for Everyone*. The Authority may be contacted at its offices at 25 Clyde Road, Ballsbridge, Dublin 4 (Tel: (01) 608 0400) or through its website at www.nda.ie

Regulation 26: Agreements as to a premises used as a place of work

26. *(1) If, by reason of an agreement between the owner of a premises used as a place of work and an employer, the owner or employer is prevented from carrying out any structural or other alterations in the premises which are necessary to enable the employer to comply with these Regulations,*

(a) the owner or employer may apply to the Circuit Court for an order under this Regulation, and

(b) the Court, after hearing the parties and any witnesses whom they desire to call, may make an order setting aside or modifying the terms of the agreement, as the Court considers appropriate in the circumstances of the case.

(2) Where, in any premises, the whole or any part of which has been let as a place of work,

(a) any structural or other alterations are required in order to comply with any provision of these Regulations, and

(b) the owner or employer, as the case may be, alleges that the whole or any part of the expenses of the alterations ought to be borne by the employer or owner, the owner or employer may apply to the Circuit Court for an order under this Regulation and, after hearing the parties and any witnesses whom they desire to call, the Court—

(i) may make such an order concerning the expenses, or their apportionment, as the Court considers appropriate in the circumstances of the case, regard being had to the terms of any contract between the parties, or,

(ii) in the alternative, at the request of the owner or employer, may determine the lease on such terms, having regard to the provisions of the lease, as the Court considers appropriate.

This provision has been incorporated from the Factories Act 1955 to provide a mechanism for resolving disputes between building owners and users that may arise in meeting the requirements of the Regulations.

APPENDIX

Sources of Further Information and Bibliography

General

Although this bibliography is extensive, it is not intended to be exhaustive. Dates are current at time of publication. The most recent/current standard/publication should be obtained in each instance.

The *Irish Standards Catalogue* published by the National Standards Authority of Ireland (NSAI) may be purchased from: NSAI, Glasnevin, Dublin;
Tel: (01) 857 6730; Fax: (01) 857 6729; Website: www.standards.ie

The ILO (International Labour Organization) *Encyclopaedia of Occupational Health and Safety* provides an excellent general overview of safety, health and welfare issues. Contact the Publications Unit at ILO, London;
Tel: +44 20 7828 6401; Website:

Information concerning the Regulations implementing the Construction Products Directive may be obtained from the Construction Industry Section, Department of the Environment, Heritage and Local Government, Custom House, Dublin 1.

Building Regulations Technical Guidance Documents may be purchased directly from the Government Publications Office, Sun Alliance House, Molesworth Street, Dublin 2; by mail order from Government Publications, Postal Trade Section, 51 St Stephen's Green, Dublin 2 (Tel: (01) 647 6834/5/6/7; Fax: (01) 647 6843); or through any bookseller.

The European Agency for Safety and Health at Work can be contacted at: Gran Via 33, E-48009 Bilbao, Spain; Tel: +34 944 794 360; Fax: +34 944 794 383;
Website: http://osha.europa.eu

Health and Safety Executive (HSE) priced and free publications are available by mail order from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA, England; Tel: +44 1787 881165; Fax: +44 1787 313995;
Website: www.hsebooks.co.uk

The Chartered Institution of Building Services Engineers (CIBSE) may be contacted at 222 Balham High Road, Balham, London SW12 9BS, England; Tel: +44 20 8675 5211; Fax: +44 20 8675 5449; Website: www.cibse.org

The BRE (Building Research Establishment Ltd) may be contacted at Bucknalls Lane, Watford WD25 9XX, England; Tel: +44 1923 664000;
Fax: +44 1923 664010; Website: www.bre.co.uk

The American Society of Heating, Refrigeration and Air-Conditioning Eng Inc (ASHRAE) may be contacted at 1791 Tullie Circle NE, Atlanta, GA 30329, USA;
Tel: +1 404 636 8400; Fax: + 1 404 321 5478; Website: www.ashrae.org

Stability and Solidity

See Building Regulations and associated Technical Guidance Document A, issued by the Department of the Environment, Heritage and Local Government, Custom House, Dublin 1.

Ventilation of Enclosed Places of Work

Building Regulations and associated Technical Guidance Document F: Ventilation.

Chartered Institution of Building Services Engineers Standard 62-2001: *Ventilation for acceptable indoor air quality* [AS62 (2001) ISBN: 10412336].

Chartered Institution of Building Services Engineers Design Guide B: Heating, ventilating, air conditioning and refrigeration.

Chartered Institution of Building Services Engineers Design Guide A: Environmental design.

Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations 2006 (S.I. No. 386 of 2006).

Health and Safety Executive (HSE): *General ventilation in workplace – guidance for employers* [HS(G) 202 HMSO 2000 ISBN: 0717617939].

Chartered Institution of Building Services Engineers: *Minimising the risk of legionnaire's disease* [TM 13 2002 ISBN: 1903287235].

Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 (S.I. No. 619 of 2001).

2007 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 (S.I. No. 619 of 2001).

Health and Safety Authority: *Guidelines for safe working in cellars of pubs and other licensed premises* [ISBN: 1844960137].

Health and Safety Authority: Code of practice for working in confined spaces 2001.

Health and Safety Executive (HSE): *Legionnaires' – control of legionella bacteria in water systems – approved code of practice and guidance* [L8 HMSO 2004 ISBN: 0717617726].

Radiological Protection Institute of Ireland (RPII): *Radon in workplaces* – guidance booklet available from the RPII, 3 Clonskeagh Square, Dublin 14.

Room Temperature

Chartered Institution of Building Services Engineers Design Guide A: Environmental design.

Health and Safety Executive (HSE): *Thermal comfort in the workplace* [HSG194 1999 ISBN: 0717624684].

Natural and Artificial Room Lighting

Health and Safety Executive (HSE): *Lighting at work* [HS(G) 38 2003 ISBN: 0717612325].

Chartered Institution of Building Services Engineers: *Guide, daylight and window design* [LG10 1999 ISBN: 0900953985].

Chartered Institution of Building Services Engineers: *Code for lighting* [CLBCD 2002 (with 2004 addendum) ISBN: 0750656379].

Chartered Institution of Building Services Engineers: *Emergency lighting design guide* [LG12 2004 ISBN: 1903287510].

Chartered Institution of Building Services Engineers: *Lighting guide: the visual environment for display screen use* [LGO3 1996 ISBN: 0900953713].

IS EN 1838: 1999 "Lighting Applications-Emergency Lighting"

IS 3217:1989 "Code of Practice for Emergency Lighting"

Floors, Walls, Ceilings and Roofs of Rooms

See Building Regulations and associated Technical Guidance Documents A and D.

Slips and Trips: See UK's Health and Safety Executive (HSE) publications for a range of documents.

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