

Contents

Foreword by Helen Ryan	ix
Acknowledgments	xi
1 Health, Safety and Welfare Legislation in Ireland	1
2 Safety, Health and Welfare at Work (General Application) Regulations	21
3 Health Issues in the Workplace	54
4 Safety in the Workplace	104
5 Safety in the Construction Industry	129
6 Welfare Issues in the Workplace	150
7 Safety Culture	184
8 Health and Safety Authority	201
9 Farm Safety	213
10 Occupiers' Liability and Insurance	233
11 Health and Safety in Childcare <i>by Caroline Quinn with revision by Ann Fanning</i>	248
Index	263

2

Safety, Health and Welfare at Work (General Application) Regulations

This chapter is concerned with the promotion of safety in the workplace, in particular accident prevention, and examines the role of the Regulations made under the Acts of 1989 and 2005 in promoting a safe place of work.

On 22 February 1993, the Safety, Health and Welfare at Work (General Application) Regulations came into force. These Regulations were made by virtue of the powers conferred on the Minister for Enterprise and Employment by Section 28 of the 1989 Act. The 2005 Act provides that breaches of any Regulation made under this legislation shall be considered a breach of that Act and treated accordingly.

The Regulations provide a number of important definitions. For example:

- *fixed-term employee*: an employee working for a fixed period of time or employed to perform a specific function of limited but imprecise duration
- *personal protective equipment*: designed to be worn to protect an employee against hazards to health and safety in the workplace, it includes overalls or uniforms not specifically designed to provide protection at work
- *temporary employee*: an employee in a temporary employment business who is assigned to work under the control of another undertaking.

These provisions apply to members of the permanent Defence Forces except when engaged in active service. The Regulations apply with equal force to self-employed, temporary, fixed-term and full-time workers.

GENERAL PRINCIPLES OF PREVENTION

Part 2 of the Regulations sets out the general principles of prevention, now incorporated in the 2005 Act, as follows:

- avoid risks
- evaluate unavoidable risks
- combat risk at source
- adapt and design places of work to suit the individual worker
- avail of technical progress
- substitute the less dangerous for the dangerous
- develop a policy and ethos of accident prevention
- give priority to collective prevention measures
- suitably train all employees
- adequately cater for emergencies.

EMERGENCY PLANNING

It is essential that planning for emergencies take place. An example of this would be properly planned emergency evacuation procedures, the appointment of competent persons to plan and coordinate emergency evacuation and ensuring that such persons be properly trained and equipped for this purpose. Steps must be taken to warn employees of imminent danger, to stop work and to leave the premises by the nearest and safest emergency exit. Employees should not be requested to return to work until all danger has passed. Only employees who have been specifically trained to do so should be allowed access to an area where danger exists.

VENTILATION

Under Regulation 17 of the General Application Regulations 1993 (as amended in 2001 and 2003), a working area must be properly ventilated. If natural air is not sufficient to provide adequate ventilation in the place of work, then artificial ventilation must be provided. In most cases natural air provided by windows is sufficient, however ventilation will be required in working conditions that involve constant dust or high temperatures. The following factors are relevant in deciding on ventilation systems:

- processes, substances and materials involved
- space involved
- number of occupants, where relevant animals to be included
- physical activity involved
- location within the building.

Mechanical systems, where used, must be maintained in good order. In this regard regular cleaning and maintenance of the system is vital; dirt

deposits in the system should be removed before they in turn pose an additional hazard for the workforce.

ROOM TEMPERATURE

The temperatures required in indoor places of work depend on a number of factors, such as level of physical activity and radiant heat. Special working conditions are faced by those who work in very hot or cold temperatures, such as those working with either furnaces or refrigeration, and in those situations localised heating or cooling may be necessary. It is essential in this regard that the danger from contact burns and fume emission be addressed.

With regard to light physical work, the recommended room temperature is 16 degrees Celsius which should be reached within one hour of the commencement of activity. Sedentary occupations such as office work require a room temperature of 17.5 degrees Celsius, again to be reached within one hour of activity commencing. The recommended room temperature for manual work is 10 degrees Celsius but issues such as frequency and location of work involved plus physical effort required will have to be taken into account.

LIGHTING

Natural light is the preferred option but all places of work must be fitted with adequate artificial lighting. The type of lighting fitted should not of itself cause a hazard to workers through glare. In order to make maximum use of natural light, all windows must be cleaned internally and externally on a regular basis. Levels of shading and brightness should be arranged to avoid reflecting the glare from the light into workers' eyes. The standard of lighting provided obviously depends on the type of work activity involved and if any doubt exists as to the quality of lighting required for a particular work activity the advice of an appropriate professional should be sought.

FLOORS, WALLS AND CEILINGS

Floors and traffic routes must be kept free from holes, uneven surfaces and slopes and not be the source of a slip hazard thereby causing a worker to slip and fall, or cause instability in a load carried thereby causing loss of vehicle control. Slopes in traffic routes, where they exist, should be no

steeper than absolutely necessary. Where steep slopes exist, a handrail must be provided. Floor surfaces wherever possible must be of the non-slip variety, and should be easy to clean and refurbish. Walls and ceilings need regular cleaning to maintain high standards of hygiene in the building. Walls and ceilings also need regular repainting. Cleaning when conducted should not itself pose a hazard and warning signs in strategic places must be utilised to warn of the cleaning activity.

USE OF WARNING SIGNS

In any area of the workplace where there exists an increased risk of injury to a worker exposed to that risk, prominent signs must be erected adjacent to the place of danger warning employees of the threat posed. These signs are especially apt in areas where there are fragile roofs; working on or in the vicinity of such roofs is prohibited unless that employee is specially trained to do so.

LOADING BAYS AND RAMPS

Loading bays and ramps must be suitable in size for the loads being transported. Loading bays need at least one exit point to allow any employee in danger of being struck by a vehicle to escape, and the provision of a ladder to a higher area or a side opening will satisfy this requirement. Larger loading bays need an exit point at each end. To avoid accidents, a one-way traffic system is recommended.

ROOM DIMENSIONS

Overcrowding is a major health and safety concern and in order to reduce the problems associated with it, adequate provision must be made both to access and exit the place of work and a minimum amount of space must be provided for each worker. For example, in the case of an office worker the minimum space required including the office chair is 4.65 metres squared. For employment that is not office-related, the minimum requirement is 11.3 cubic metres per person in any room at any given time. The measured space should not take account of any space more than 4.3 metres from the floor.

USE OF WORK EQUIPMENT

The proper use of work equipment is dealt with under Part IV (18 and 19) of the 1993 Regulations. The range of work equipment in use is almost infinite and the precautions necessary will depend on the type of equipment used and the manner of its use. Equipment can pose a danger to workers in one of two ways: moving machine parts or the actual use of the equipment. All places of work are covered by these Regulations regardless of the work activity conducted.

Accidents in the workplace involving machinery may occur for any one of the following reasons:

- machinery was not properly guarded
- machine guards were not properly maintained
- machine guards were poorly designed
- workers did not receive adequate training
- shortcuts were taken in work practice
- supervisors turned a blind eye to potentially hazardous practices.

In choosing work equipment, health and safety must be a priority; work equipment must be adapted to ensure safe use, all routine maintenance must be carried out and instruction and information on the safe use of the equipment must be provided.

European Community Directive 95/93 imposes additional obligations on employers in regard to the safe use of mobile machinery including fork-lift trucks. The use of lifting equipment now requires more stringent examination as to its safety, and full instruction must be provided in the use of lifting equipment.

Danger zones mean any areas where an employee is subject to any risk to his/her health or safety and in the case of moving machinery this includes the immediate area of that machine. Where gases or vapours are emitted by work equipment a risk assessment is necessary to determine the parameters of the danger zone. In this context an exposed employee is defined as an employee wholly or partially in a danger zone. It is important to note that workers can be at risk from work equipment from start-up time right through its use to servicing and maintenance.

When purchasing work equipment employers must match that equipment to the work required to be done. In this context suitability of equipment means suitable in every foreseeable way and not likely to pose risks to the health and safety of employees.

As part of normal on-the-job training, written, easily understandable instructions will be given on the safe use of equipment. Written instructions on the safe use of equipment should take account of three basic issues:

- the conditions under which the equipment will be used
- foreseeable abnormal conditions
- conclusions where appropriate to be drawn from previous use of similar equipment.

In some instances it may also be necessary to consult manuals supplied with that equipment. If highly technical language is used in instruction manuals, the employer must supply an easily understood interpretation of those instructions.

The European Community Machinery Regulations 1994, in force in Ireland since 1 January 1995, require all machinery to be safe in its design and not to pose a health risk whilst in use. All equipment carrying the European Community safety logo meets the requirements of these Regulations. The National Standards Authority of Ireland will, on request, issue information on the safety standards required for the safe use of equipment. The 1994 Regulations also apply to equipment imported into the European Community. Employers are required under these Regulations to show due diligence in sourcing only equipment that complies with the European Community Safety Standard.

Work equipment must be maintained efficiently and kept in a state of good repair at all times. Experience shows that lack of essential maintenance has caused many work-related accidents. A maintenance log should be kept that should record all servicing and repairs carried out on the equipment. It is essential that all equipment should continue during its working life to meet safety standards. Because of the wide range of work-related equipment, not all safety standards will apply in each case, only those relevant to the particular work equipment will apply.

CONTROL DEVICES ON MACHINERY

All control devices on machinery must be clearly visible and marked where necessary (see Fifth Schedule, Regulation 20). Such devices, if possible, should be located outside danger zones and must not give rise to any additional risk by virtue of unintentional operation. Control devices essential to the operation of equipment must not pose any risk to the operator by reason of the use of the incorrect control or for any other

reason. The preferred aim in locating controls is to position them so that the operator of the equipment is able to see from the control position that nobody is at risk when the equipment is started up, and has a clear view of the part of the workplace likely to be affected by the use of that equipment. Direct sight is the best option but may need to be supplemented by mirrors, television monitors or sensing equipment such as mats which give off warnings. In some instances an audible and/or visible warning device may be more practical, these devices may give warning on start-up and continue for as long as deemed necessary.

Control systems fitted to equipment must be safe and failure of any part of the system should not be a source of danger but should either shut down the equipment or alternatively continue its safe use. It should be possible to start up equipment only by the deliberate act of the operator. The ideal situation is for all equipment to be fitted with fail-safe devices which would result in a failure to start up equipment manually without all safety devices in place.

All equipment should have a device to restart them after stoppage and a device to control a significant change in operation. Neither of these controls should place employees at additional risk. It is crucial that the stop device fitted to equipment have priority over the start-up system. Localised and readily accessible stop controls must be provided at each work station. Where appropriate an emergency stop control should be fitted to equipment, depending on the hazard presented and the normal stopping time of that equipment. Emergency controls, where fitted, must be easily reached and activated; common types in use are mushroom head buttons, bars or levers and sometimes pressure-sensitive cable.

Work equipment presenting hazards due to falling objects or flying projectiles should be fitted with suitable safety devices. If the equipment is emitting gases, vapours or dust, a suitable mechanical extraction system should be fitted to the equipment.

All equipment in use in the workplace should be stabilised if necessary before use. Where items such as abrasive wheels or pressurised containers are in use, and there is a likelihood that while in use the wheel or container will either disintegrate or burst, the supplier's instructions should be fully followed when in use. When dealing with pressurised containers, pressure-release valves may be necessary. Appropriate personal protective equipment must be worn and the abrasive wheel, when in use, must be either fitted with a suitable guard or encased. Regular inspection and maintenance of this type of equipment is essential.

MACHINE GUARDING

Where a risk of injury could arise from contact with the moving parts of machinery, guards should be fitted and regularly checked. Any measure taken must prevent access to danger and stop the movement of a part before danger is posed by the employee reaching that part. As a protective device, a machine guard must:

- be robust
- not give rise to more hazards
- not be easily overcome
- be at a sufficient distance from the danger zone
- not unduly restrict operation
- allow, if possible, for replacement without removal
- be sufficiently strong to take account of both normal and abnormal wear and tear
- in the case of fixed guards, require a deliberate act to remove them.

In certain situations it may be necessary to introduce a viewing window into the guard.

SAFETY IN WORK OPERATIONS

It is essential to operate equipment only in the conditions that it is suitable for. Areas where work is carried out must have adequate lighting, and work equipment operating at high and low temperatures must be protected against operator contact. There are two main methods of addressing this problem:

- reduce surface temperature, insulate the equipment and/or erect screens or barriers
- use easily understood warning signs or signals.

If possible, maintenance on machinery should only be carried out when the machine has been shut down. Any maintenance log supplied with machinery must be updated as necessary; a log is recommended where machinery requires regular maintenance. A clearly identifiable means to isolate equipment from its energy source must be fitted; any reconnection to the energy source must present no risk of injury to the operator. All work equipment shall carry warnings essential to ensure the health and safety of the operator. Those operating, adjusting or maintaining equipment must

have safe access to it. All employees must be protected against risk of fire and/or explosion from equipment.

PERSONAL PROTECTIVE EQUIPMENT

The five principles for eliminating work-related hazards are:

- eliminate the risk
- reduce the exposure to risk
- isolate the risk
- bar access to risk source
- use of personal protective equipment.

As a general principle, personal protective equipment should only be used when all other methods of accident prevention have failed. The safety, health and welfare of employees must be protected by measures that eliminate workplace hazards at source through technical or organisational means that provide protection to the entire workforce. Measures provided to protect the workforce as a whole are known as collective safety measures and must be given priority over individual safety measures. It is only where collective measures either prove impossible to implement or are inadequate that individual safety measures are needed.

Personal protective equipment only affords protection to the wearer. Furthermore, the theoretical level of protection provided is never reached in practice. For example, the level of protection afforded by a face mask depends on such matters as facial contour and hair. It is therefore very important that when personal protective equipment is being purchased that more than one size be ordered. The use of personal protective equipment will always restrict the wearer to some extent – movement, visibility, hearing and breathing may all be affected – or the equipment may simply be uncomfortable to wear. Finally workers may feel psychologically more protected than they actually are, which may lead to risk-taking behaviour.

The legislation imposes a duty on employers to supply suitable personal protective equipment and a duty on employees to use that equipment correctly. Part V of the Regulations emphasises the importance of selection and training of the workforce and enforces the duty on employees to make full and proper use of personal protective equipment, to use it as directed, to return it when not in use or to store it correctly. Employees should always be consulted about personal protective equipment. Where provided, personal protective equipment shall be appropriate for the level of risk involved and shall not of itself increase that risk in any way. Such equipment must take account of existing work practices and of the

employee's physique and state of health and it must fit properly. When selecting personal protective equipment both the physical features of the workplace and the health of the employee must be taken into account.

Factors to be considered include:

- *movement*: some equipment can be both cumbersome and heavy thereby restricting movement
- *visibility*: ventilated goggles could overcome misting – a perennial problem with goggles – but the field of vision could still be restricted
- *breathing apparatus*: the filters may clog thereby causing breathing difficulties and necessitating frequent change. Workers with sensitive skin may experience skin problems and it may be necessary to change to a different apparatus
- *earplugs*: employees suffering with ear infections will be unable to wear earplugs
- *special needs*: workers suffering from diseases such as asthma, bronchitis and heart-related illnesses need to take special care with the use of personal protective equipment and employers are required to seek medical advice when informed of these complaints by employees.

SAFETY AND DESIGN

Personal protective equipment must conform to European Union safety standards and must contain the necessary design approval (see Part V, Regulation 21). Employers are obliged to assess the suitability of equipment before purchase. This assessment must include an analysis of the level of risk present that cannot be avoided by other means. It must consider what characteristics the personal protective equipment must have to render it effective as well as possible hazards created. A simple test is to compare the characteristics of available equipment with the risk attendant in the place of work. Any assessment that takes place must be reviewed if a significant change in work practices takes place. The level of actual risk must be determined so that the performance required of the equipment can be established. Account needs to be taken of:

- physical effort required
- visibility
- mobility
- duration of use
- possible discomfort – proper fitting is imperative and employees should be consulted.

ASSESSMENT

Personal protective equipment needs periodic review, particularly where there may be reason to believe the original assessment is no longer valid (see Part V, Regulation 22). Replace personal protective equipment when necessary. The conditions for the use of the equipment depend on seriousness of risk, frequency of exposure, characteristics of workstations and duration of use. It is essential that personal protective equipment only be used for the purpose specified. Depending on the level of risk exposure, the employer may be obliged to rearrange work processes in order to reduce the length of workers' exposure. Personal protective equipment selected must have the characteristics necessary to combat the risk during the exposure period. Workers who are required to wear several items of equipment, for example firemen, must be issued with equipment designed to fit properly together, otherwise additional hazards may be created.

STORAGE AND MAINTENANCE

Employers, through proper storage, maintenance, repair and replacement, must ensure that equipment is in good working order and is not a hygiene hazard (see Part V, Regulation 24). Personal protective equipment must be subject to regular examination by trained personnel before being issued for use. In this regard the supplier's instructions should always be followed. Health, safety and welfare legislation requires suppliers of such equipment to provide additional information on its care and use if requested; if in doubt employers should simply request additional information. The wearer of such equipment should also check it before use and report defects found. Defective equipment should not be used but should be repaired or replaced as appropriate.

As a general rule, the more frequent the use, the more frequent the maintenance. Very often maintenance will simply involve cleaning or disinfecting the equipment, and such simple maintenance can be carried out by the user. Equipment supplied for high-risk use should only be maintained by properly trained personnel.

Personal protective equipment due for repair or cleaning should be clearly identified by markings and separated from other such equipment. Where a risk of contamination exists, those items should be stored separately in waterproof bags to provide containment of the hazard; the markings on the bags should clearly indicate hazardous waste.

USE

Personal protective equipment is mostly issued for use by a single individual, however in some cases, particularly for more expensive items such as respirators, it is issued to more than one user. In such cases, the equipment must be properly cleaned after each usage and disinfected after use by each user. The employer has a twofold duty in relation to personal protective equipment (see Part V, Regulation 25):

- to warn employees of the risks that the equipment is issued to combat
- to instruct properly on, and if necessary to demonstrate, correct use.

Two issues are paramount: the reasons for the supply of the equipment and the level of protection that it affords the wearer.

TRAINING AND INSTRUCTION

Where necessary, training and instruction must include the following:

- an in-depth knowledge of the type of risk present and why personal protective equipment is necessary
- an understanding of the factors that affect the equipment such as working conditions, bad fitting, accidental damage, wear and storage
- practice in the correct use of the equipment, inspection, testing and maintenance where the user can do this.

See Part V, Regulation 26.

LIST OF AVAILABLE EQUIPMENT

- *Protective helmets*: used mainly in the construction industry, they should be worn always when overhead work is in progress.
- *Safety shoes with puncture-proof soles*: particularly suitable in warehouses and builders' yards and for scaffolding work.
- *Safety shoes without puncture-proof soles*: suitable for maintenance work, metal assembly, shipbuilding, transport and ceramics businesses.
- *Protective shoes*: suitable for work with very hot or cold materials (insulated).
- *Easily removable shoes*: suitable for any work where there is a risk of penetration by molten metal.
- *Protective goggles and screens*: suitable for welding and work with lasers, liquid sprays, acids, caustic materials and corrosives.

- *Respirators*: suitable for use in containers or other restricted areas where gas or insufficient oxygen exists, also for use in spray painting and in areas where dust, fumes or asbestos are present.
- *Ear protectors*: must be used where the daily noise level exceeds eighty-five decibels, for example for ground staff at airports and users of pneumatic drills and metal presses.
- *Special protective clothing*: this may be needed to cover arms, body and hands from such processes as shot blasting, use of acids and deep-freeze rooms. It may be necessary to issue fire-resistant equipment in certain circumstances like welding in restricted areas. Other examples include: pierce-proof aprons for boning meat, special gloves for welding and for slaughtering in the meat trade, weatherproof clothing to protect from inclement weather, reflective clothing to ensure visibility on or near public roads, safety harnesses and ropes for working either above or below ground level, and, in certain situations, barrier creams may be required.

See Sixth Schedule, Regulation 21.

VISUAL DISPLAY UNITS

The use of visual display units should not pose a threat to users (see Part VII of the Regulations). Characters on the display screen should be legible with adequate spacing between them. It is recommended that users be at least 600 millimetres from the display screen. The height range of characters displayed should be between 3.1 and 4.2 millimetres. The image displayed must be stable and there should be no flickering; in order to achieve this stability the screen must be constantly refreshed (rewritten) and the recommended refresh rate is fifty hertz. Brightness and contrast must be easily adjustable by the user, this will assist the operator in two ways: it will reduce eyestrain and it will produce better quality work.

The display screen should be non-reflective. Its work surroundings should have a low-reflective finish. The keyboard should have a matt finish to avoid a reflective glare and it should be designed to allow the operator to work in reasonable comfort. It is important that sufficient space is provided in the vicinity of the keyboard to allow the operator to rest his/her hands and wrists; the keyboard itself should be detachable to allow the operator maximum wrist and arm comfort and to avoid injury from strain. The worker should be able to see the most frequently used parts of the keyboard without having to bend his/her head. Two matters are of importance in relation to the keyboard: the keys themselves should be non-reflective and concave to fit fingertips and the symbols must be adequately contrasted with the keys; British Standard 71/79 meets these requirements.

SPACE

Sufficient space is required for the operator to change position and vary movements. Adequate lighting, both spot and work lighting, should be provided.

GLARE AND REFLECTION

Glare and reflection should be prevented by coordinating workstations with the lighting system within the place of work. Correct lighting is essential to prevent both eyestrain and glare on the screen. A visual display unit should not be placed under overhead lights. Where fluorescent lights are in use, these should be parallel to the sides of the unit and not its screen. The workplace windows should be fitted with suitable blinds to reduce the glare effect of the natural light.

RADIATION

With regard to the threat of radiation emissions from the screen of the unit, the World Health Organization has stated that no special protection is needed to protect workers from the effects of the radiation from the screen as it is well below the internationally recognised danger limit.

DISPLAY SCREEN

The display screen should be able to swivel and/or tilt easily. It should be possible to use a separate base for the screen unit. See Tenth Schedule, Regulation 31.

WORKSTATION

The workstation area must be sufficiently large to allow flexibility of movement. The desktop must allow for knee clearance, be adjustable, have adequate storage space, be easily accessible and be of a matt finish to avoid reflective glare.

WORK CHAIRS

A work chair must be stable, adjustable and have a back rest. Instruction in the correct use of the chair should be given to the operator to avoid both back and thigh strain.

NOISE

Noise must be taken into account. For example, if printers cause noise and distract operators the rehousing of those printers in a separate area must be considered.

HEAT AND HUMIDITY

Visual display units generate heat so these areas must be properly ventilated. Where a number of units are in use, the heat will dry the air causing a lack of humidity which in turn may cause both eye fatigue and irritation of the eyes; trays of water strategically placed in the work area will combat this problem.

SOFTWARE

This must be suitable to use, facilitate feedback to operators and display information in an easily read format. The employer is not permitted to carry out any tests on the operator without his/her knowledge. Software must be adaptable to the worker's ability to use it.

FIRST AID

Part IX, Regulation 54 of the General Application Regulations deals with first aid. First aid means attention to a person awaiting treatment by a doctor or nurse or, in the case of minor injury, attention to that injury.

OCCUPATIONAL FIRST-AIDERS

An occupational first-aider is a person who holds a certificate in first aid issued within the previous three years by a person recognised as a first-aid instructor. In order to be certified a period of training of at least three days must be undertaken, including a two-hour examination. At the minimum, the training must be based on the approved syllabus of the Health and Safety Authority in first aid and the assessment of students must be conducted by another competent instructor. To maintain a qualification as an occupational first-aider, a refresher course must be undertaken every three years. The Health and Safety Authority has put in place a system for training and approval of first-aid instructors and for training and certifying occupational first-aiders.

When selecting employees for first-aid training, account must be taken of gender balance in the workplace. In the absence of the occupational first-aider, the employer may nominate another person to take charge of the injured worker until medical help arrives. This person's function is confined to summoning medical assistance and attempting to ensure that the worker's condition does not worsen. All first-aid details, including the names of occupational first-aiders, must be included in the safety statement and in addition a written record of all persons treated must be kept adjacent to the first-aid box and be available if required for inspection by a health and safety inspector.

FIRST-AID EQUIPMENT

It is the duty of every employer to provide and maintain suitable first-aid equipment, suitably marked, easily accessible and appropriate for the particular place of work. Different work activities involve different hazards and as a result different first-aid equipment is necessary. Some work activities such as those that are office-based can be said to pose a low level of risk from hazards, others such as construction have a high risk level, requirements can be said to depend on the:

- size of the undertaking
- numbers employed
- hazards arising
- access to medical services
- dispersal of employees
- extent of employees working away from the employer's place of work
- extent of workers in isolated areas.

First-aid equipment supplied must be conveniently located and kept up to date. A first-aid box should, depending on the number of employees served, have the following contents: adhesives plasters, sterile eye patches, triangular bandages, sterile dressings both large and small, sterile wipes, latex gloves and a paramedic shears. In the absence of a supply of clean running water, sterile eye wash must be supplied. Where workers are exposed to special hazards such as risk of poisoning, burns or exposure to toxic chemicals, one first-aid box with specialised items such as poison antidotes must be provided at a place adjacent to the area of special hazard.

Where workers work away from their place of employment and there are no special risks attaching to that employment no first-aid kit need be supplied, but where special hazards exist a first-aid travel kit must be

provided. Workers employed in places more than one hour distant from medical attention must be provided with a first-aid travel kit.

Employers jointly operating at the same location should arrange for one of them to provide the first-aid equipment. First-aid boxes must be kept under the control of the occupational first-aider or other person named in the safety statement.

FIRST-AID ROOMS

All places of work are required to have one or more first-aid rooms if the risk assessment undertaken for the safety statement requires it. The need for first-aid rooms will be based on the following criteria:

- size of premises
- type of business activity carried on therein
- frequency of accidents arising
- existence of special hazards
- distance from nearest appropriate medical facility.

Any workplace which presents a high risk from hazards should have a suitably equipped first-aid room. Where occupational health services exist on the premises the surgery suffices as the first-aid room.

The entrance to the room must be large enough to take a stretcher, trolley or wheelchair and must be fitted with a suitable communications system. This room must be adequately signposted, easily accessible to the workforce and equipped with all essential first-aid equipment. An occupational first-aider should be made responsible for the upkeep and stocking of the first-aid room.

There is no requirement for a first-aid room in means of transport, fishing vessels and outlying agricultural land.

ELECTRICITY

Part VIII, Regulation 33 of the General Application Regulations concerns the use of electricity in the workplace. Employees are entitled to be consulted by the employer when protective measures against risk from electrical hazards are being taken. Under this part of the Regulations the carrying out of certain defined tasks is left to an authorised person. The authorised person will be engaged in electrical installation work and must be adequately trained and have the necessary level of expertise to carry out

the task. Danger under these Regulations means risk of death or serious injury to health from electric shock, burns or explosion. Such risks may also be presented by the movement of electrically driven vehicles.

OVERHEAD LINES

As electricity can flash from overhead power lines, do not work under them or allow any part of a machine, crane, lorry or ladder within ten metres of such a line without seeking advice.

UNDERGROUND CABLES

Assume there are live electricity cables buried before digging the pavement, street or in the vicinity of buildings. Consult in advance with the Electricity Supply Board (ESB) before working under or digging where power lines or cables are likely to be located. A sufficient number of persons in each employment should be trained to deal with victims of electric shock.

OUTDOORS

Pneumatic tools should be preferred to electric ones when working outdoors. If the latter are used outdoors, a current circuit breaker should be used to enable a power switch-off if an employee receives a shock. Each machine in use must be capable of being switched off either by a switch or circuit breaker situated close to the machine. Power cables to machines must be covered in thick, flexible rubber or PVC or installed in conduits. When in use, light bulbs must be protected from damage; sockets must not be overloaded. It is recommended that a multi-plug socket should be used if needed, not an adaptor. Outdoor sockets need specialist installation and must be protected from weather elements. Plugs must be undamaged and the flex must be firmly clamped to avoid being pulled out from the terminals. It is absolutely necessary that all worn or frayed cables and damaged plugs be taken out of use and replaced; no attempt should be made to repair them. Cables should only be joined with proper cable couplers. All electric fittings should be obtained from a reputable supplier and bear the European Conformity safety logo. Items must be sufficiently robust for business use. Fuses and circuit breakers must be correctly rated for the circuit they protect. The main switches of the system must be readily identified and accessible to all. All employees should know how to switch off the mains in the event of an emergency.