

# Health & Safety



## Essentials



## INTRODUCTION

Unite believes the health, safety and welfare of our members is the highest priority. This updated version of "Essentials" emphasises Unites commitment to negotiating a healthier and safer working environment for our members.



We have a dedicated health and safety department that deals with every issue around this very important topic, including, campaigns, advice, national committee work, training and essential site visits.

Unite provides professional advice to members, and makes full use of all modern communication methods. We are striving to improve and develop our service with the use of the information technology and direct communication with our representatives.

Don't forget we are only a letter, e-mail, fax or phone call away, so keep in touch with your officials and staff; they value your input and are there to support you.

In the meantime we hope you find this publication useful in our continuing strategy of improving the Health Safety and Welfare of our members their families and friends.

Derek Simpson and Tony Woodley  
Joint General Secretaries  
Unite the union



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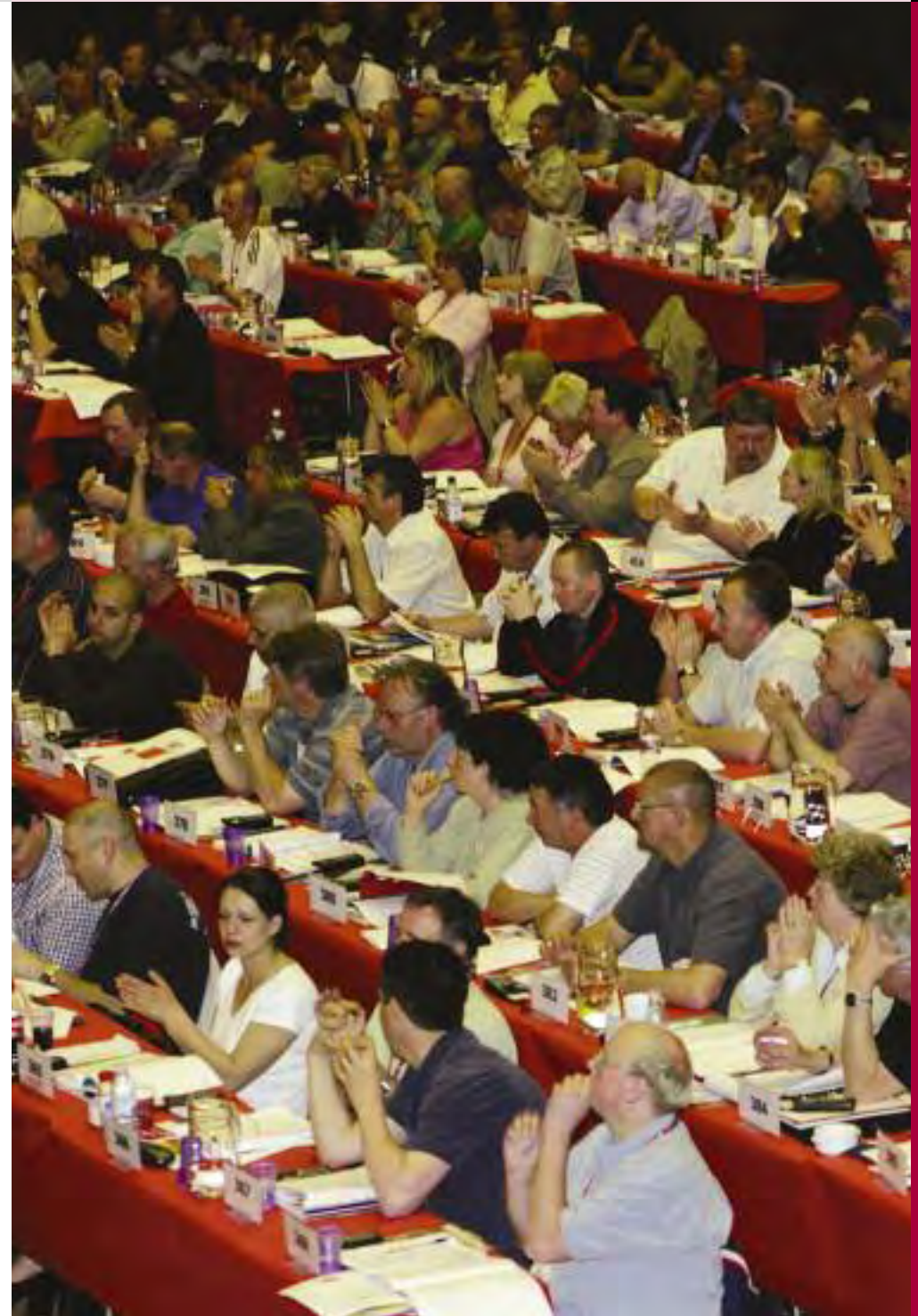
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## CHAPTER ONE

### Safety Representatives and Safety Committees

Employers who consult their employees over health and safety issues involve the whole of their organisation in a health and safety culture. In human and financial terms, this benefits everyone. In legal terms, this consultation is now compulsory. The Safety Representatives and Safety Committees Regulations 1977 (SRSCR) gave trade unions the legal right to appoint workplace safety representatives. As a result, Unite now has more than 40,000 safety reps. In 1996, the Health and Safety (Consultation with Employees) Regulations (HSCER 1996) came into force. Domestic servants and the masters and crews of sea-going ships excepted, these regulations oblige employers to consult with all those employees not represented by union safety representatives. Consequently, most employees in Britain today have the right to be consulted in good time, directly or indirectly through their representatives, regarding:

- (a) Any proposed new measures that may substantially affect their health and safety
  - (b) The appointment of people competent to advise employers under the Management of Health and Safety at Work Regulations 1999
  - (c) Required health and safety information
  - (d) Health and safety training arrangements
  - (e) Health and safety consequences of introducing new technology
- Under the SRSCR 1977, which still apply in their entirety, union safety reps have a wide range of rights and functions. These include rights to:

#### Representation and consultation

- (a) Make representations on behalf of their members to the employer on any health, safety and welfare matter
- (b) Represent their members in consultations with HSE inspectors or other enforcing authorities and
- (c) Require their employer to set up a safety committee within three months of the request

## Inspection

- (a) Inspect designated workplace areas at least every three months and
- (b) Make additional inspections if work practices change or new information arises

## Investigation

- (a) Investigate potential hazards
- (b) Investigate complaints by members
- (c) Investigate the causes of accidents, dangerous occurrences and diseases

## Assistance, information and training

- (a) Receive help and facilities from the employer to enable them to carry out inspections
- (b) Receive legal and technical information from inspectors
- (c) Receive information from the employer to enable them to carry out their functions and
- (d) Receive time off with pay to carry out their job as safety reps and to undergo TUC or union approved training

## Facilities for safety reps

Every employer must provide any help and facilities reasonably required by safety reps to enable them to carry out their functions. Although the law gives basic rights to safety reps, these are only put into practice through negotiation and agreement with employers. This is recognised by the Health and Safety Commission (HSC) Guidance on Safety Reps and Safety Committees. This states that employers and unions should make full and proper use of existing agreed industrial relations machinery to reach agreement on implementation of the SRSCR. Good union organisation makes it possible to secure improvements that go beyond the minimum rights and entitlements in the SRSCR. But, when negotiations fail, health and safety inspectors could intervene:

- (a) When an employer has not accepted the appointment of a safety rep by a recognised trade union
- (b) When an employer has not provided information and facilities
- (c) In spite of requests by at least two safety reps, an employer has not taken steps to set up a safety committee.

## Who appoints safety reps?

Independent trade unions recognised by employers have the right to appoint safety reps. Each union has to decide on their own arrangements for appointment. It is not a matter for employers. In most cases, safety reps are elected by the members they are to represent. Unite of course, has to approve their election and must advise the employer in writing of their appointment. The employer must also be told in writing which group or groups of employees the appointed safety rep represents.

## Who can be a safety rep?

In Unite, workplace representatives can be appointed as safety reps. However, Workplace reps or not, all safety representatives should work closely with their trade union colleagues and ensure that they do not take decisions without the support of the members they represent.

Unite provides their appointed safety reps with credentials. Employers have no role in this, although they should always be informed of any changes. **Always notify your regional official if you have been elected/appointed as an Unite health and safety representative.**

## How many safety reps are necessary?

SRSCR do not lay down the numbers of safety reps to be appointed. Unions and employers should negotiate this in the light of local needs and circumstances. The Health and Safety Executive (HSE) view is that each safety rep should ideally be responsible for a clearly defined group of workers.

The size of these groups will vary from union to union and from workplace to workplace.

Numbers of employees, variety of occupations, shift systems, the type of work activity and the degree and character of workplace hazards are all factors that will determine how many safety reps are necessary. Unions usually relate their arrangements for appointing safety reps to their arrangements for dealing with other industrial relations matters.

### When there is more than one union involved

Sometimes, for health and safety purposes, unions favour joint representation. The guidance on SRSCR specifically allows for this, stating that the regulations do not preclude the possibility of a safety rep representing, by mutual agreement between the appropriate unions, more than one group or groups of employees (e.g. in a small workplace or within the organisation of a small employer when the number of recognised trade unions is high relative to the total number employed).

### Replacement of safety reps

Employees cease to be safety reps when Unite notifies their employer in writing that their appointment has been terminated. The appointment of a safety representative is also terminated if the employer dismisses them or transfers them from the workplace or workplaces covered by SRSCR.

### The role of a safety rep

Safety reps are health and safety problem solvers taking up any matters that relate to health and safety on behalf of employees with the employer. They have the right to the following:

- (a) To investigate potential hazards and dangerous occurrences at the workplace (whether or not they are drawn to her/his attention by the employees s/he represents) and to examine the causes of accidents at the workplace

- (b) To investigate complaints by an employee s/he represents relating to the employees health, safety or welfare at work
- (c) To make representations to the employer on matters arising out of the sub-paragraphs above
- (d) To make representations to the employer on general matters affecting health, safety or welfare at work of the employees at the workplace
- (e) To carry out inspections
- (f) To represent the employees s/he was appointed to represent in consultations at the workplace with inspectors of the HSE or any other enforcing authority;
- (g) To receive information from inspectors in accordance with section 28(8) of the Health and Safety at Work Act (HASAWA)
- (h) To attend meetings of safety committees where s/he attends in her/his capacity as a safety rep in connection with any of the above functions; but without prejudice to sections 7 and 8 of HASAWA, no function given to a Safety Rep by this paragraph shall be construed as imposing any duty on her/him Safety reps do not merely react to problems. They also have broad powers to monitor health and safety in their workplace, keep members health and safety interests under review and discuss all matters arising with their employer. But although the employer must listen to and consult the safety rep, there is no legal means to insist that an employer acts upon the safety reps advice.

### Inspections

A major part of the safety reps job is carrying out inspections. These inspections are in two main areas:

- Carry out inspections of the workplace at least once a quarter.
- Inspect any documents the employer is legally required to keep on matters of health, safety and welfare at work Arrangements for three-monthly and other more frequent inspections will need to be agreed with employers. These matters are often best dealt with at the workplace level. Issues to be discussed include:

- (a) The need for more frequent inspections of high risk or rapidly changing areas of work activity
- (b) Notice and timing of formal inspections by safety reps and how many safety reps will be involved
- (c) The possibility of breaking up plant-wide formal inspections into smaller, more manageable inspections
- (d) The need for different groups of safety reps to carry out inspections of different parts of the workplace
- (e) The type of inspection to be carried out, such as safety tours, sampling or surveys (including consulting employees)
- (f) The enlistment by safety reps of independent technical advisers

Formal inspections are no substitute for daily observation. However, they provide a useful opportunity to carry out a full-scale examination of all or part of the workplace, including the inspection of documents required by health and safety legislation such as certificates concerning the testing of equipment. During these inspections, safety reps can network with other safety reps and discuss remedial action with their employers.

During inspections following notifiable accidents or dangerous occurrences, employers are not legally obliged to be present, while safety reps consult their members. There may of course be occasions when safety reps do not wish employers to be present. However, the regulations do not preclude them or their representatives from being present. (Regulation 6 (2)).

Though considerable care needs to be taken during collection, safety reps should also be permitted to take samples of any substance used at work for independent analysis outside the workplace.

Following an inspection, safety reps should complete an inspection report, recording the date, time and details of an inspection. One copy of the completed form should be sent to the employer and one copy should be retained by the safety rep for their own records and for reference during safety committee discussions.

## Risk assessments

Safety reps should not confuse workplace inspections with risk assessments. Inspections only seek to identify hazards and problems. Risk assessments are more wide ranging and identify hazards, evaluate the risks, record the findings, recommend precautions and review progress. Management is legally responsible for carrying out risk assessments, but Unite encourages safety reps to participate in all stages of risk assessments to ensure that procedures and improvements are working effectively.

## Investigations

Under the SRSCR, safety reps are also allowed to investigate:

- (a) Potential hazards
- (b) Dangerous occurrences
- (c) Causes of accidents and occupational ill-health
- (d) Complaints from their members.

Safety reps could therefore, immediately, and without formal notice of an inspection, investigate imminent risks. Following the investigation of a serious mishap, the safety rep should also complete a hazard report form, retain one copy and send the other to the employer.

The employer should complete and return to the safety rep the part of the form that describes any proposed remedial action or offers an explanation. The safety committee should refer to this during their discussions of the incident.

Inspection and report forms can be drafted to an agreed format to meet local needs.

## Making representations

Once safety reps have investigated unsafe conditions or hazards to health in their workplace, the SRSCR gives them the right to make representations as follows:

- (a) To the employer about potential hazards or about members complaints
- (b) To the employer on behalf of all employees as regards general health, safety or welfare matters at work
- (c) To bring to the notice of the employer their findings and complaints after inspections
- (d) To represent members in workplace consultations with HSE inspectors

### Receiving information

Under the SRSCR, safety reps are entitled to receive full information from their employers to enable them to carry out their functions. However, their employers can refuse information if giving it:

- (a) Endangers national security
- (b) Breaks the law
- (c) Breaks confidentiality without permission from the individual concerned
- (d) Harms the business (excepting its impact on health and safety)
- (e) Is in connection with legal proceedings

Under Section 28 (8) of HASAWA, HSE inspectors and local authority environmental health officers have a duty to disclose specific kinds of information to employees or their representatives concerning their health or safety or welfare at work. This information includes any measurement testing, the results of sampling or monitoring and any action that the inspector takes or proposes to take; for example, prosecutions, the issue of Improvement or Prohibition Notices or warning letters to employers.

Safety reps should ensure that they are informed by the employer when an HSE inspector or an Environmental Health Officer (EHO) is expected to visit the premises. When the HSE inspector or the EHO are actually in the workplace, safety reps should ensure that they are given the opportunity to speak privately with the inspectors.

### Absence of legal liability

Under SRSCR, safety reps are given a number of legal functions, which their employers should allow them to carry out. However, Regulation 4 also states that they can not be legally penalised if they do not, or only partly, carry them out.

As safety reps are not legally responsible for health, safety or welfare at work under these regulations they cannot be liable in either criminal or civil law for anything they may do, or fail to do.

This protection does not absolve safety reps from their general responsibility as an employee, but it does ensure that their responsibility has not increased because of their appointment.

### Protection for safety reps and employees

The Employment Rights Act 1996 (Section 44 and 100) strengthens the position of safety reps and employees. Safety reps are protected from detriment or dismissal for carrying out their designated functions. They and other employees are also protected:

- (a) If they leave, or propose, to leave the workplace in circumstances of serious and imminent danger
- (b) If they take or propose to take action against serious and imminent danger

This section of the Act adds Sections 22A and 57A to the Employment Protection (Consolidation) Act 1978. Protection is available regardless of length of service, hours of work or age. The rights are enforceable through industrial tribunals.

### Facilities for safety reps

During formal inspections, employers are required to furnish reasonable facilities and assist safety reps. These are not specified in the SRSCR, the ACoP or Guidance. Unite believes the following facilities, recommended by the Advisory, Conciliation and Arbitration Service (ACAS) Code of Practice on Time Off for Trade Union Duties and Activities, should be made available:

- (a) Accommodation – e.g. use of suitable room for reporting back to and consulting with members
- (b) Equipment – e.g. a room and desk at the workplace, facilities for storing correspondence, access to internal and external telephones, typing and duplicating facilities, provision of noticeboards)
- (c) The names of new workers – other facilities should include the provision of copies of all relevant Acts, Regulations, ACoPs and Guidance and copies of all legal or technical standards that are relevant to the workplace, information on plant, equipment and substances used in the workplace.

Most of this information is available over the internet and all legislation since 1996 is freely available from open government sites.

You should have access to this source of information. These facilities should be the subject of negotiation.

### The right to paid time off work

Under the SRSCR, all safety reps have the right to paid time off work in order to:

- (a) Carry out their safety functions
- (b) Undergo union training courses for safety reps in accordance with the ACoP

The SRSCR do not give safety reps the right to demand a specified period off work. This has to be negotiated with employers, but the ACoP is designed to assist safety reps in these negotiations.

Safety reps should also note that employers under HASAWA have the duty to train all employees in basic job safety. The regulations affected by European Directives emphasise the importance of this. Safety reps should be allowed to attend in-company training so they can understand workplace hazards met by those they represent.

If your employer appears unwilling to allow you this right, contact your Unite Regional Official immediately.

### Details of the code on time off

As soon as possible after their appointment, safety reps should be allowed paid time off work to attend basic training approved by Unite. Further training should be undertaken when the need arises. This may involve refresher courses or further training on specific hazards such as noise, chemicals or new technology.

The amount of time required for training cannot be rigidly prescribed. But basic training should teach new safety reps about their functions under the SRSCR, helping them understand their role and that of safety committees. It should also instruct them about trade union policies and practices regarding:

- (a) Legal requirements relating to health and safety at work, with particular reference to the groups whom they represent
- (b) Nature and extent of workplace hazards, and measures available to eliminate or minimise them
- (c) The health and safety policy of their employer and the arrangements for fulfilling that policy

### Safety committees

When at least two safety representatives have put their request for a safety committee in writing, an employer must set one up within three months.

During this process, the employer must consult the safety reps that made the request and the representatives of recognised trade unions whose members work in any workplace to be covered by the committee.

A notice must be prominently displayed, stating the composition of the committee and the work areas that it will cover.

The Guidance to the SRSCR states that the size, shape and terms of reference of a safety committee must depend on discussion and agreement between employers and unions. It recommends:

- (a) Committees be compact
- (b) There should be 50/50 management and union representation
- (c) Safety advisers, doctors and other health and safety professionals should be ex-officio members
- (d) Safety committees could also provide a link with the enforcing authorities

#### Agendas for safety committee meetings could usefully include:

- (a) Studying accident and ill health trends
- (b) Examining safety inspection reports
- (c) Considering information from inspectors, unions, employer and industry bodies
- (d) Discussing reports from safety reps
- (e) Developing safe systems of work
- (f) Examining the health and safety implications of new plant, equipment and processes
- (g) Reviewing the health and safety content of employee training
- (h) Monitoring the effectiveness of the employer's health and safety services
- (i) Reviewing risk assessments
- (j) Reviewing the operation of the employers health and safety policy and making an annual assessment of health and safety performance, problems and future priorities
- (k) Reviewing the effectiveness of health and safety information and publicity materials

#### Making decisions

The measure of a good safety committee is whether or not it can secure change. If it is only talking shop, or never takes any decisions, or the same items appear again and again on this agenda, safety reps should take action to put this right by, for example:

- (a) Making sure meeting dates are agreed in advance and only postponed by joint agreement
- (b) Making sure that a senior person with managerial health and safety responsibility is committed to being present.

- (This person should be named in the employers health and safety policy. Unite would suggest a Board member or Director)
- (c) Seeing that the right items are regularly on the agenda
- (d) Making sure that named people are given the responsibility for actions and are committed to a completion date
- (e) Making sure the minutes are issued promptly, are well displayed and reflect fairly discussions, decisions and agreed timetables for action.

One of the most frustrating experiences for a safety rep is to be part of a weak or poorly-organised safety committee. Safety reps should make sure that safety committees have the power to improve health and safety at the workplace. Committees should not be used as a means for employers to avoid taking action.

### Changes needed to Health and Safety Regulation.

Unite wants changes to the SRSC to make them more relevant to the present day, we are campaigning for; giving the safety representative the right to inspect all premises where we have members a duty on employers to respond and act to issues raised by our safety representatives a greater clarity and better enforcement of the right to time off with pay for duties and training as a safety representative.



## CHAPTER TWO

### The construction Industry

In 2007 the Construction (Design and Management) Regulations 1994 (CDM 94) and the Construction (Health Safety and Welfare) Regulations 1996 (CHSW) and existing Approved Code of Practice (ACOP), were combined. The title of new regulations is: The Construction (Design and Management) Regulations 2007 (CDM 07) and have an accompanying ACOP.

Until now, the construction industry has had a variety of Complex health and safety regulations which date back more than 30 years. The new regulations combine, to further consolidate, modernise and simplify the older requirements and implement more effectively the EC Directive on construction.

The regulations are split up to cover all the areas of the previous two regulations as follows: Part 1 Introduction, Part 2 General Management Duties Applying to Construction Projects, Part 3 Additional Duties Where a project is Notifiable, Part 4 Duties Relating to Health and Safety on Construction Sites, Part 5 General. There are also several Schedules attached to the regulations, and the duty to provide welfare facilities has been moved to one of these.

In this section we will look at all aspects around health safety and welfare on construction sites, and include an additional regulation, which now covers working at height. We will cover other requirements of CDM 07 in a later chapter on law

### **Part 4 Duties Relating to Health and safety on Construction Sites**

#### **Who has duties under Part 4?**

Every contractor carrying out construction work that, affects himself or others carrying out the work under his control. This would also apply to anyone who controls the work not just contractors. There is also a duty on everyone working on construction sites, to report defects that may endan-

ger himself or another person. The only derogation to these general responsibilities is where a specific named person is required to inspect excavations, cofferdams and caissons. Note: part 4 applies to all construction work whether notifiable or not.

### Safe places of work

A general duty to ensure a safe place of work and safe means of access to and from that place of work. This Regulation sets out a general requirement applying to all construction work. It applies equally to places of work in the ground, at ground level and at height. In essence, it

requires that 'reasonably practicable' steps should be taken to provide for safety and to ensure risks to health are minimised. This means that action to be taken should be proportionate to the risk involved.

### Good order and site security

Every part of a construction site shall, so far as is reasonably practicable, be kept in good order and every part of a construction site which is used as a place of work shall be kept in a reasonable state of cleanliness.

Have its perimeter identified by suitable signs and be so arranged that its extent is readily identifiable; or be fenced off, or both. No timber or other material with projecting nails (or similar sharp object) can be used in any work; or be allowed to remain in any place.

### Stability of structures

All practicable steps must be taken to ensure that any new or existing structure or any part of such structure that may become unstable or in a temporary state of weakness or instability does not collapse.

Any buttress, temporary support or temporary structure must be designed, installed and maintained as to withstand any foreseeable loads.

### Demolition or dismantling

The demolition or dismantling of a structure must be planned and carried out to prevent danger or if not practical reduce the risk as low as possible.

The arrangements for carrying out such demolition or dismantling must be recorded in writing before the demolition or dismantling work begins.

### Explosives

So far as is reasonably practicable, explosives must be stored, transported and used safely and securely.

An explosive charge must only be used or fired if suitable steps have been taken to ensure that no one is exposed to risk of injury from the explosion or from projected or flying material.

### Excavations, cofferdams and caissons

Prevent collapse of ground both in and above excavations Prevent persons, work equipment, accumulation of materials falling in excavation, or sides becoming overloaded.

Ensure where needed the sides are supported Ensure cofferdams and caissons are properly designed, constructed equipped so workers can gain shelter or escape if water or materials enter it. All the above must be inspected by a competent person to a specific criteria

### Reports of inspections

If the person who carries out an inspection of the above, finds unsafe condition, this must be reported before the end of the shift. He must prepare a report within 24 hours and gave a copy to the appropriate person

### Energy distribution installations

Where necessary to prevent danger, energy distribution installations shall be suitably located, checked and clearly indicated. Where there is a risk from electric power cables they must be directed away from the area of risk, or isolated, if not reasonably practicable provide suitable warning notices and barriers.

Suspended protections must be provided where there is a risk from passing vehicles. No construction work should be undertaken if it is likely to damage underground services and cause a risk

### Prevention of drowning

during construction work, steps should be taken to prevent anyone from falling into a liquid, and as a precaution provide suitable rescue equipment.

Suitable and sufficient steps shall be taken to ensure the safe transport of

any person conveyed by water to or from any place of work, ensuring vehicles are not overloaded

### **Traffic routes and Vehicles**

Pedestrians and vehicles should be allowed to move safely and without risks to health. To this end traffic routes must be suitable for all traffic including persons, sufficient in number, size. Doors or gates for pedestrians which leads onto a traffic route must be separated from that traffic route to enable pedestrians to see any approaching vehicle or plant from a place of safety;

Sufficient separation between vehicles and pedestrians to ensure safety or, where this is not reasonably practicable other suitable controls, together with effective warnings

Loading bays should have at least one exit point for the exclusive use of pedestrians; Every traffic route should have suitable signs, be regularly checked and properly maintained and where reasonably practicable allow traffic to pass without obstruction and sufficient clearance.

Vehicles must be controlled so they do not endanger any person, this includes competent drivers aware of pedestrians and able to give them appropriate warning. Vehicles must be loaded safely and driven in a safe place provide for that purpose.

### **Prevention of risk from fire etc.**

Risk of injury should be prevented from fire, explosion, flooding, or any substance liable to cause asphyxiation.

### **Emergency procedures and exit routes**

Sufficient arrangements must exist for dealing with any foreseeable emergency, including procedures for any necessary evacuation of the site. Account must be taken of the type of work, size and numbers on site, equipment and importantly the physical and chemical properties of any substances or materials site.

Other factors include: persons being familiar with any arrangements, arrangements are tested at suitable intervals.

Sufficient numbers of suitable emergency routes must be available to ensure persons reach an identified place of safety quickly. They must be signed, kept clear and free from obstruction and, where necessary, provided with emergency lighting.

### **Fire detection and fire-fighting**

Ensure provision of suitable and marked fire-fighting equipment, fire detection and alarm systems, suitably located. Equipment should be examined and tested at suitable intervals and properly maintained. Any fire-fighting equipment, which is not designed to come into use automatically, has got to be easily accessible.

It is important that every person is instructed in the correct use of any fire-fighting equipment, which it may be necessary for him to use. Where a work activity gives rise to a risk of fire, a person shall not carry out such work unless he is suitably instructed.

### **Fresh air, temperature and weather protection**

Every site should have fresh or purified air, plant must include an effective device to give visible or audible warning of any failure of the plant.

During working hours the temperature at any place of work indoor's should be reasonable having regard to the purpose for which that place is used. Every place of work outdoors shall so far as is reasonably practicable provide protection from adverse weather conditions, taking into account protective clothing

### **Lighting**

Every workplace and approach to, must be provided with suitable and sufficient lighting, where reasonably practicable, by natural light. The colour of any artificial lighting mustn't impede any sign or signal. Secondary lighting should be provided if any risk could occur from failure of artificial lighting.

## Schedule 2 Welfare Facilities

### Sanitary conveniences

Suitable and sufficient sanitary conveniences shall be provided and be adequately ventilated and lit and kept clean. Separate sanitary conveniences shall be provided for men and women when appropriate, or where a door can be locked from inside.

### Washing facilities and drinking water

Suitable and sufficient washing facilities, including showers if required by the nature of the work or for health reasons, shall so far as is reasonably practicable be provided. They need to be in the immediate vicinity of every sanitary convenience in the vicinity of any changing room.

They must have a supply of clean hot and cold, or warm, water, soap or other suitable means of cleaning and towels or other suitable means of drying. They are to be sufficiently ventilated, lit and regularly cleaned.

An adequate supply of wholesome drinking water with cups or fountain shall be provided and marked as such.

### Changing rooms, lockers and Rest facilities

Changing rooms for men and women must be provided if a worker has to wear special clothing for the purposes of his work. Have seats, drying facilities and lockers

### Facilities for rest

Rest rooms or rest areas must be provided, equipped with an adequate number of tables and seats adequate seating with backs.

Include suitable facilities for any person at work who is a pregnant woman or nursing mother to rest lying down;

Include suitable arrangements to ensure that meals can be prepared and eaten, means for boiling water, and maintained at an appropriate temperature.

### Work at Height Regulations 2005

The Work at Height Regulations came into effect on 6 April 2005. The

Regulations apply to all work at height where there is a risk of a fall liable to cause personal injury. They place duties on employers.

The self-employed, and any person that controls the work of others (for example facilities managers or building owners who may contract others to work at height).

The Regulations do not apply to the provision of paid instruction or leadership in caving or climbing by way of sport, recreation, team building or similar activities. As part of the Regulations, duty holders must ensure: all work at height is properly planned and organised; those involved in work at height are competent; the risks from work at height are assessed and appropriate work equipment is selected and used; the risks from fragile surfaces are properly controlled; and equipment for work at height is properly inspected and maintained.

There is a simple hierarchy for managing and selecting equipment for work at height.

Duty holders must:

avoid work at height where they can;

use work equipment or other measures to prevent falls where they cannot avoid working at height; and where they cannot eliminate the risk of a fall, use work equipment or other measures to minimise the distance and consequences of a fall should one occur.

The Regulations include schedules giving requirements for existing places of work and means of access for work at height, collective fall prevention (eg guardrails and working platforms), collective fall arrest (eg nets, airbags etc), personal fall protection (e. work restraints, fall arrest and rope access) and ladders.



## CHAPTER THREE

### Office Hazards

More than 5,000 serious injuries are sustained in offices every year. Many thousands of less serious injuries go unreported and often unrecorded. Office work may be less hazardous than a construction site, but millions of people work in offices, and the health hazards can still leave people disabled for life.

Cramped, unventilated and badly lit offices are a real source of hazards. Work pressures can also put you at risk. New technology has brought a whole new range of hazards into the office. The office environment may include fumes, eye-strain, more shiftwork and more pressure. Equipment is often added to the office without consideration for the people who use it, nor its effects on noise, heat or space available.

Cramped conditions not only cause discomfort, but also increase the hazards of office workers tripping over wires or bumping into equipment. Overcrowding is usually worse when the office is in an unsuitable building, but even purpose-built offices can be outgrown and need careful planning to avoid accidents, and ensure that workers' health is not put at risk.

Electrical safety is as important in offices as in factories. Faulty electrical equipment can cause shock to users and may be a fire hazard. All electrical equipment should be regularly maintained and any unsafe equipment immediately taken out of service. No one other than a trained mechanic should attempt to investigate the internal workings of any piece of equipment. Fire precautions are poor in many offices. Fire exits may be locked or obstructed, extinguishers may be old and fire drills, non-existent.

Overcrowding increases the hazards by making it more difficult to escape, should a fire occur. Many offices are too hot, too cold, draughty and airless. People who work in such conditions talk of always feeling below par and having headaches, lethargy, dry throats and skin problems.

Some cannot wear their contact lenses comfortably in the office and many say that their eyes are sore and itchy. In some cases, this general malaise can be identified as sick building syndrome.

Such offices are likely to be air-conditioned and open-plan, with screens, partitions and banks of filing cabinets blocking the flow of air. They are also likely to be overcrowded and depend on artificial lighting and the jobs done there will be the repetitive type of clerical work. It is worth remembering that 49% Of major injuries in the office industry are caused by slips, trips and falls and 11% were caused by being struck by a moving object.

Many legal standards and controls embrace the office environment including lone working, noise and vibration and workingtime legislation, because a law is not specifically named for your industry it still might apply.

## Display screen equipment

Ever since its introduction to the office, the health and safety aspects of Display Screen Equipment Regulations 1992 (DSE) have been the subject of much conjecture. It has been estimated that in the UK there were around 8.5 million workstations in regular use at the end of 1992.

When the use of DSE began to proliferate in the late 1970s/early 1980s, initial concerns were centred on the belief that there may be a radiation risk, particularly to the unborn child of a pregnant worker. Since then, there has been no confirmed scientific evidence to support this fear.

Since the mid 1980s, conditions thought to be caused by intensive keyboard use and affecting the musculoskeletal system began to gain prominence in the UK. The term 'repetitive strain injury' or RSI, now more accurately referred to as work-related upper limb disorders (WRULD), entered the popular vocabulary.

The possible effects of continual DSE use upon eyes and eyesight has also raised questions from the user population. Employers began to recognise the importance of providing suitable furniture, equipment and job design and began to adopt an ergonomic approach to these issues.

## Photocopier and laser printer hazards

If photocopiers and laser printers are badly positioned, poorly maintained and used frequently or for long runs, there are risks to health, ranging from irritated eyes, nose and throat to dermatitis, headaches and reproductive and cancer hazards. Proper ventilation and maintenance are essential.

## Chemicals

Ozone is a gas produced during the high voltage electrical discharge in photocopiers and laser printers. If you can smell ozone the levels are too high. Ozone breaks down in air quite quickly, though this can be slowed by high humidity, temperature and some effects of office furnishings. Health effects are eye, nose, throat and lung irritation, dermatitis, headaches and nausea, premature ageing and potential reproductive dangers. When mixed with nitrogen oxide in certain proportions it can have an effect on the central nervous system.

**Selenium and cadmium sulphide** some copiers use a drum impregnated with these chemicals. The gas they emit, especially when hot, can cause throat irritation and sensitisation to exposed workers. This is mostly a risk to maintenance staff when cleaning or grinding the surface of the drum.

**Nitrogen oxide** may be produced when there is a spark in electrostatic photocopiers. Symptoms are similar to those produced by carbon monoxide.

**Carbon monoxide** is produced when toner (containing Carbon Black) is heated in an inadequate air supply. Some copiers can reach half the OEL even in well-ventilated rooms. In poorly ventilated conditions the effects include headaches, drowsiness, faintness and increased pulse rate. Carbon monoxide can cross the placenta and affect the unborn child.

**Toners** are generally a mixture of plastic resin and Carbon Black often with other additives. Carbon Black is classified as a nuisance dust

(i.e. only mildly toxic in itself), but will contain impurities known to be carcinogens. Toners should be handled with care, protective gloves should be worn, and dust release minimised. Contact with the tongue, i.e. by touching copied papers with a wetted finger, can lead to small growths on the tongue. Other health effects may be irritated eyes, headache and itching skin. Maintenance workers are at risk from repeated exposure which can lead to skin and eye sensitisation.

**Ultra violet light** photocopier lids should be kept closed when the machine is in use. Ultra violet light can cause eye irritation and burns.

**Noise levels** can reach up to 65dB (A) for ordinary copiers. Care should be taken in siting copiers with noisy collators as far from workers as possible.

**Fire hazards** excessive dust in electrical equipment will cause sparking. Provision of carbon dioxide extinguishers near machines is essential.

**Jams** even though most machines cut out when opened, they should be switched off before removing jammed paper. Avoid hot surfaces and wash hands immediately afterwards.

**Laser printers** Unlike photocopiers they are usually placed on desktops beside workers. However, they produce ozone like conventional copiers. There must be regular checks on filters, which may need to be replaced as often as once a month.

## Noise

Many offices are built on streets where there is constant heavy traffic. Others may be next to a major building site or factory. The increasing use of machinery in offices can make noise levels intolerable.

Noise interferes with concentration and makes working stressful. One survey found that 80 per cent of workers in an open-plan office were disturbed by noise.

There are several ways to make offices quieter:

- (a) Double-glazing can reduce noise coming in from the street
- (b) Safety Reps can negotiate an agreement with employers to ensure that they will not purchase any equipment which produces more than a certain maximum level of noise
- (c) Acoustic hoods can be purchased for any noisy printers
- (d) The amount of shiny surfaces which reflect noise can be reduced.
- (e) Decisions about the number of people, the amount of furniture and equipment to be in any room must take account of the effect on the noise level

## Lighting

Lighting can cause many problems and consideration must be given to the amount and type of lighting and where desks and working areas are placed in relation to the lighting fitments. In some offices, people work totally in artificial lighting and very far away from windows.

Lighting fitments may be broken, flicker or be dirty, and can be inadequate in store rooms and on staircases. Many offices do not have an emergency system for staircases and corridors in the event of a power cut. Some office jobs require extra task lighting to provide sufficient light to do the job well.

Visual Display Unit Screens (VDUs) are too often placed in offices without any understanding of the importance of avoiding glare and reflection from windows, lights and other screens. This means that the image on screen could be unclear and much harder to read.

## Using the law

HASAWA applies to all workplaces including offices. Section 2 says that employers have a general duty to ensure the health and safety of their employees. Workplace (Health, Safety and Welfare) Regulations 1992 apply to all workplaces, covering overcrowding, temperature, ventilation, lighting, toilets, washing facilities and seating. There is also specific regulations covering Display Screen Equipment and VDUs.



## CHAPTER 4

### General hazards in the manufacturing workplace

#### Skin hazards

Nearly a million working days are lost per year due to injury to workers' skins from burns, cuts, abrasions, work-induced skin cancer and dermatitis. The many causes of injury include:

- (a) Mechanical damage due to injury, friction or pressure
  - (b) Corrosive substances e.g. acids and alkalis
  - (c) Solvents
  - (d) Oils and petroleum products
  - (e) Resins
  - (f) Physical agents e.g. heat, cold, sunlight, radiation
- The face, neck, hands and forearms are most affected because they are the most exposed, and thus most easily contaminated. But, other areas can be affected if they are in contact with tight, contaminated clothing. The skin is the largest organ of the body – the total skin area of an average person is about 100 square feet and the skin can provide natural protection, as long as it is not damaged by cuts or subjected to irritation or injury.

Many substances can, in contact with the skin, cause irritation.

The resulting condition (known as dermatitis) may be just a reddening of the skin with a mild itching, a rash, or in some cases, open weeping sores. Substances that cause dermatitis can be gases, liquids or solids. Workers dealing with plating, adhesives, solvents, enzymes, detergents, photographic developers, bleachers or paints are at risk. Solvents used for degreasing and other cleaning operations will remove the skin's natural oils leaving it unprotected.

Some chemicals not only irritate the skin, but also cause an allergic rash. This is called 'sensitisation'. Sensitised workers can develop a severe reaction if subsequently exposed to even a tiny amount of the chemical involved.

**Mechanical damage**

This includes cuts and grazes caused by sharp edges, splinters or fragments. Friction or pressure on parts of the skin can also cause blisters, 'friction burns' and patches of hard skin. Besides being painful, any breaks in the skin can allow infections and chemicals to get in. These hazards can be avoided by improved work systems, the use of guards and protective equipment.

**Corrosive substances**

Some chemicals, such as strong acids and alkalis, cause chemical burns when in contact with skin that are very similar to those caused by heat. Both destroy skin tissue. Corrosive chemicals cause damage until removed or neutralised or the corrosive reaction is complete.

Corrosive-resistant protective clothing and ventilation are needed to prevent chemical burns. The first treatment for every chemical burn is to flood the affected area as quickly as possible with water; even a few seconds delay can be very serious. Contaminated clothes should be taken off immediately. It is extremely important that emergency showers are available near to where they might be required, for example chemical manufacture. Eye burns are very serious and no time should be lost in washing with large quantities of water; preferably by a properly designed eyewash fountain using large amounts of low-pressure water because a forceful jet could cause mechanical damage.

To prevent infection of the wound, loss of body fluid and shock medical attention should be sought for treatment of all but the most trivial of burns. Corrosive chemicals need not necessarily be liquids – they can also be gases or solids.

**Physical agents**

Burns can also be caused by extreme heat, cold (frostbite) and radiation, including sunlight. People working in hot conditions may suffer from heat rashes caused by blocked skin pores and friction. Overexposure to the natural radiation in sunlight can even cause skin cancer. Protective equipment should be provided to prevent skin contact with hot surfaces or radiations, for example ultra violet light.

**Solvents**

Solvents are used to clean things by dissolving grease and oils. They will also dissolve the protective coating of oil in the skin when in direct contact. Unfortunately, the more efficient the solvent, the more harmful it is to your skin. Many substances act as solvents: water, soaps, detergents, metal degreasers, cleaning fluids and thinners.

Direct contact between skin and solvent should be avoided by using impermeable protective clothing and good ventilation to get rid of vapours. Strong solvents are the most damaging to the skin, so the weakest solvent that will still do the job should be used. Never use solvents to clean oil etc. off your skin. After cleaning with a mild soap, conditioning cream will replace natural oil in the skin and prevent chapping.

Oils and petroleum products also act as solvents or have solvents added to them. The most serious effect on the skin is cancer, but dermatitis and acne are also caused by skin contact with these resins, both natural and synthetic are among many hundreds of chemicals that cause skin irritation or sensitisation. Epoxy resins can irritate the skin and can cause an allergic reaction in some workers.

**Prevention**

Preventing skin damage entails controlling exposure to any of the above harmful agents either by selecting a less harmful substance or changing working methods, by isolating the operators by use of protective clothing or by ensuring high standards of personal hygiene.

More damage can be done to workers' hands by removing contaminants after work than by anything else, where strong solvents are used to clean up. Only mild soaps and special cleansers should be used. Cleansing is a balancing act: try to remove the contamination without removing all the natural oil in the skin.

After cleansing clean towels or hot air driers should be provided and conditioning creams help to replace natural oil in the skin.

**Protection: gloves**

For complete protection, guards, enclosures and mechanical handling devices may be necessary for safe working with damaging substances. Personal protection should be regarded as a second line of defence, but where necessary, it should be the correct type.

Gloves are the most common form of protection against skin diseases. Guidance in the Personal Protective Equipment (PPE) at Work Regulations 1992 gives details of processes and activities that involve risk of injury to hands with an explanation of suitable protection and standards for gloves.

Among the main types are heat resistant leather, chrome leather and asbestos-substitute for intensely hot work. Where there is a risk of severe abrasions and cuts, chrome leather reinforced with chain mail mesh is necessary. For work involving acids, alkalis and other corrosive oils and solvents, gloves made from PVC, natural rubber, Neoprene or Nitrile should be used. Expert advice should be obtained on the right type of glove for the job, including, where necessary, when to replace disposable gloves and methods of repair and use of non-disposables. When working with toxic substances that can be absorbed through the skin, particular attention should be paid to permeability and 'break through' times for protective gloves.

The PPE Regulations and Guidance also cover:

- (a) Application to non-employees i.e. school self-employed workers (Reg 3), children on work experience and trainees
- (b) Appropriateness of the PPE to suit the job, ergonomic requirements and state of persons health, to fit the wearer correctly (Reg 4)
- (c) Compatibility of different sorts of PPE (Reg 5)
- (d) Employers to make an assessment of risks and select 'suitable' protection (Reg 6)
- (e) Employers must ensure that all PPE is maintained, cleaned or replaced as appropriate, in efficient working order and in good repair (Reg 7)

- (f) Accommodation to be provided for PPE to protect it from contamination, dirt, loss or damage (Reg 8)
- (g) Employers to provide employees with information and training about why PPE is being used and how it should be used and how to maintain it (Reg 9)
- (h) Employers to ensure that PPE is used properly. It is not enough just to make PPE available (Reg 10)
- (i) Employees to report loss or defect of PPE (Reg 11). There have always been doubts about the degree of protection given by barrier creams. Some swear by them, others contend that they are ineffective or even harmful if they give a false sense of security or are used as a cheap alternative to more expensive forms of protection. There are so many complex creams manufactured that expert advice is necessary to choose the right type for the particular job. The companies that manufacture barrier creams supply dozens of different types. Some of them supply a skin care service to give advice and meet specialist needs. Two examples of common skin hazards are outlined: mineral oils and epoxy resins. Both illustrate general preventive principles, which can be applied to the prevention of skin-disease.

**Mineral oils**

Millions of workers run the risk of skin health problems like acne and dermatitis from mineral oils. There is also a risk (to a lesser degree) of scrotal cancer and to respiratory health from inhalation of oil mists. 'Mineral oil' is used to describe all oil extracted from the earth, such as petrol, white spirit, paraffin, diesel oil, lubricating oil, paraffin wax, asphalt and bitumen. All mineral oils present some danger to health.

**Types of oil**

Apart from fuel, the commonest use of oil in industry is for cooling and lubricating the cutting edges of tools and to prevent heat welding the metal and the tool tip together. Oils are used in turning, grinding, milling and honing, and for the working of different metals. Cutting oils are used either neat or as an emulsion in a watery medium. These oils may be blended with vegetable or animal oil, and additives may also be

used. Some of these additives may also present problems. Soluble oils are mixtures of oils and emulsifying agents such as petroleum soaps. With constant use increasing quantities of breakdown substances form in the high temperature zone between the cutting tool and the workpiece. Some of these substances may have cancer-inducing properties.

The concentration of carcinogenic substances in mineral oils can be reduced by solvent refining: washing oils in petrol, benzene or other solvents. This reduces the concentration of carcinogens, but solvent washed oils are not entirely safe. Breakdown products will still build up over a period of time, additives may be present that are harmful or can cause sensitisation, and the danger of dermatitis is always present.

#### **Skin hazards**

The mineral oils such as paraffin, naphtha, diesel and other lubricating light oils are more likely to provoke dermatitis and acne rather than skin cancer (affecting the hands and arms). However, cutting oils present a greater risk, particularly neat oils and unrefined oils. The latter are often used for cheapness, but are less safe than solvent washed oils.

Whatever type of oil is used, the degree of risk is increased by greater contact of the oil with the skin. For example, operators of certain types of machines are liable to have hands and arms continually exposed to cutting oils. The outer layer of the skin is softened, broken down, and the way opened for infections.

Other parts of the body may be contaminated by splashes or contact with machines, particularly the lower half of the body that can be affected by oil-soaked overalls. When a male operator bends over or straddles machines, his scrotum can be at risk from contamination. The keeping of oily 'wipers' in trouser pockets and failure to wash oily hands before going to the lavatory, are common ways in which the lower parts of the body can be exposed to oil.

Although cancer of the scrotum is an uncommon disease, it is invariably cured by prompt treatment. The first stage, a rough patch of skin or wart on the scrotum, requires immediate medical attention. The fatality rate amongst those who contract cancer of the scrotum is high because

many fail to report to their doctors early. The rate of cure is over 90 per cent in cases diagnosed early. Women can also develop genital cancer from contact with mineral oils. Precautions apply to everyone working with these oils.

#### **Other hazards**

Working in oily conditions frequently means being exposed to oil mist. This can be produced from a machining process itself; from the fumes given off at the cutting point (which contain breakdown products of the oil itself); from air compressors; and from lubrication systems that deliberately produce a spray of coolant directed onto the workpiece.

The breathing of oil mists and fumes not only gives rise to coughs, sore throat, and other respiratory problems. It also increases the risk of cancer of the lung. Control of oil mist entails either preventing the formation of mists or controlling its release into the atmosphere, for example by using local exhaust ventilation.

#### **Prevention**

The first approach must be prevention of physical contact with the substance, ensuring that machinery is provided with adequate splashguards, which prevent oil being thrown onto the operator. Guards should provide total enclosure with effective sealing to prevent leakage from the guarded area.

Where this is difficult to achieve, protective clothing must be used, particularly to prevent contamination of the lower parts of the body. Protective equipment is often clumsy and uncomfortable, but where oil contamination cannot be combated by other means, it may be the only answer.

Regular solvent dry cleaning of overalls and rags is also essential. In contrast to ordinary washing, this can remove most of the oil from a contaminated garment. Weekly issue of dry cleaned overalls is recommended for all persons exposed to oil.

Washing facilities (and sometimes showers) must be provided together with a suitable range of waterless hand cleaners. On no account should

hands be washed in oil or suds. The use of barrier creams on hands and forearms is a useful preventive measure. However, care should be taken to make sure that the correct type is provided in relation to the oil in use. Hand conditioning creams should also be available for use after washing. Finally, periodic medical examinations have proved useful in the past in detecting problems at an early stage. If any health problem is suspected, medical advice should be sought immediately.

There are four golden rules for safe working with oil:

- (a) Make use of protective facilities, clothing, splash guards, impermeable aprons, barrier creams
- (b) Change into working clothing and make sure that overalls are cleaned regularly
- (c) Pay attention to personal cleanliness: wash your hands before going to the toilet, as well as afterwards, and wash your genital areas regularly
- (d) Obtain immediate first-aid treatment for all skin injuries and seek early advice for skin rashes or itching areas

### Epoxy resin

Many Unite members are exposed to various types of resins and hardeners in their workplace, they are a hazard, but their risks can be controlled by being aware and taking precautions.

The major problem in handling these materials comes from the curing agents used to harden epoxies: some are harmful in themselves and it is from these that most skin related problems arise. Epoxy resins are divided into two categories: cured and uncured. Most cured resins have little or no toxic effect unless curing is incomplete, when there may be some hazard. With uncured resins there is much more potential danger to anyone handling them. The degree of toxicity of uncured epoxy resins varies, and is partly dependent on the extent of uncreated curing agents. In the case of both cured and uncured epoxy resins, they are dangerous when heated to decomposition, as they emit highly toxic fumes.

### Safety precautions

Whenever undertaken indoors, the mixing of epoxy resins should be carried out only in properly ventilated areas, fitted with extraction fans, or in fume cupboards. Use of prepared mixtures should be confined to areas provided with efficient exhaust ventilation. Whenever the fully cured or hardened material is to be machined (sawn, filed, etc.), the work area should be ventilated effectively.

### Handling techniques

Handling techniques should ensure that no uncured resin or other epoxy material comes in contact with the eyes or skin. The wearing of goggles is strongly advised and it may be necessary to mount a transparent shield between the operator and workpiece. Benches should be covered with replaceable paper for removal and destruction when contaminated. Containers should be kept in a clearly marked-off area. Spillage and the contamination of tools and equipment, or the outsides of containers, should be avoided. If spillage or contamination does occur, the affected area must be cleaned up immediately.

### Protective equipment

Workers should be provided with equipment to minimise personal contact with uncured resins and hardeners. Protective clothing and neoprene gloves suitable for the materials being handled should be worn by those working with such materials. The insides of gloves must be kept clean. Damaged gloves must be replaced. Care is needed to keep cuffs free from contamination and, when necessary, protection should be provided for the sleeves and upper arms. When powder fillers or glass-fibres are in use, clothing should be designed to prevent any risk of these materials lodging between clothing and the skin.

Overalls are essential for all operators engaged in continuous processes involving the use of epoxy resin materials, and in some instances, heavy-duty plastic or rubber aprons may be required for added protection. Contaminated clothing should be replaced and thoroughly cleaned before reissue. All the hazards and risks should be identified in a suitable risk assessment only if the risk cannot be reduced by other methods should PPE be used.

**Skin cleaning**

If, despite all these precautions, the skin does become contaminated, the affected area should be washed immediately with warm soapy water. Disposable paper towels or warm air driers should be used for drying.

Special creams should be kept for removing epoxy material still adhering to the skin. Do not use powerful solvents. Routine cleansing of the skin should be carried out thoroughly at the end of each working period and sufficient time allowed for 'cleaning-up' before all break periods.



## CHAPTER FIVE

### Protection of eyes

#### Eye injuries

All incidents involving possible eye injuries are potentially serious because there is no certainty that a minor eye injury will not turn into impairment or loss of sight. There are over 10,000 accidents to the eyes each year at work which cause people to be absent for more than three days. The risks to which the eyes may be exposed and for which protection may well be necessary include:

- (a) Impact of flying particles
- (b) Splashing of liquids, including molten metal
- (c) Irritation by dust, gases and vapours
- (d) Exposure to non-ionising radiation's – infra-red, ultra-violet and visible light and lasers; and eye-strain from display screen equipment

The presence of a foreign body is the most common form of minor eye injury. Most small particles are washed out by tears, but some will be retained, and may cause irritation. If not removed, they may produce an ulcer or infection.

Major injuries to the eye occur when the eyeball is perforated, burnt by heat or chemicals or disrupted by a blow. Severe blows can cause fractures of the bones around the eye, which may produce subsequent double vision. Occasionally, the whole eyeball may be torn out of its socket with injury to the muscles and the optic nerve. There is also the possibility of retinal detached or internal bleeding.

One of the possible consequences of eye injury is the development of cataract. Traumatic cataract can develop fairly rapidly after a penetrating injury, which damages the lens of the eye. On the other hand heat cataract can take years to develop and may occur even after the worker has left the industry that caused it.

## High risk industries

Heat cataract affects workers in industries such as steel making, furnace and foundry work, glassmaking and ceramics, but may be caused by any exposure to heat and glare, rays from molten metal or red-hot materials.

Cataracts can also affect workers exposed to ionising radiations such as gamma rays or X-rays. In industry, foundry work, engineering, building construction and work in the chemical industry are the chief causes of eye accidents, of which one-half may be caused by particles of splashes.

Special dangers arise from the dry grinding of metal, the turning of non-ferrous metals or cast iron and from the use of hand tools, portable electric power tools, or pneumatic tools for the cleaning and fettling of metal castings. The use of compressed air for clearing dust is a major source of danger.

Ultra-violet light produced by welding and cutting or oxyacetylene burning produces acute inflammation of the eyes (arc eye), particularly in bystanders who may fail to wear personal protective equipment. The use of contact lenses, whether plastic or glass, does not present any additional hazard to the cornea and may reduce the penetration of ultra-violet light.

Chemical burns are not unusual and burns from alkalis are the most serious because they penetrate more easily than acids. Ammonia is a particular risk owing to its widespread use. Work in the iron and steel industry and foundries leads to a risk of severe burns from molten metal.

Eyestrain and irritation from using display screen equipment is becoming a widespread problem as more and more people are using computers in their work. It must also be said that security, bank and finance personnel are also at risk from injury to their eyes through robbery and attack. When risk assessments are made of people from these professions remember to take into account the chances of acids or solvents being used against them in the event of robbery and other criminal violence.

## Laws and standards

Eye protection is covered by the PPE Regulations. Regulation 4(1) requires PPE provided to employees who may be exposed to a risk to their health or safety, to be suitable. This includes being appropriate to the risks and fitting the wearer correctly. This is particularly important for eye protection.

### British Standard 2092

This Standard sets out the requirements for eye protection (spectacles, goggles and face-shields) for use where danger arises from contact with objects and flying particles, molten metal, liquid splash, dust and gases.

To protect against mechanical hazards and occasional small impacts the General Purpose grade of spectacle may be used, using lenses made of toughened glass or plastic, which are more robust than a normal pair of spectacles. They will not be suitable where exposure to fast-moving particles is likely, or where other risks may be present. Lenses and frames of General Purpose spectacles will be marked BS 2092.

Where exposure to more serious mechanical hazards is likely such as when grinding, drilling, hammering, or using lathes, eye protectors manufactured to impact Grade 1 or 2 are essential.

The grade to use depends on the job, but Grade 1 gives the best protection and should be used if in doubt. Grade 1 provides seven times the protection of Grade 2, which gives 14 times the protection of General Purpose protectors. These impact grade protectors are marked BS 2092.1 or BS 2092.2. Frames will not necessarily be the same grade as the lens, so it is important to check the mark on both lenses and frame.

Goggles or visors can be obtained to both levels of impact protection but spectacles are not available to Grade 1. All protectors of Grade 1 or Grade 2 impact performance will have lateral protection, but again not necessarily to the same standard as the lens itself.

Eye protectors for use against molten metal splash, dust and gases/vapours are subject to additional test and they will be marked with these additional letters: protection against molten metal splash – M;

against liquid splash and droplets – C; against dust – D; and against gases, vapours etc. – G. Only goggles and faceshields are considered suitable for these duties and it may be possible to get eye protectors complying with almost any combination.

### British Standards 1542 and 679

BS 1542 gives a specification for goggles, faceshields, hand-shields etc. for use during welding and similar industrial operations where harmful radiations, visible light, infra-red and ultra-violet may be generated. The equipment needs to comply with the same mechanical strengths test as the General Purpose eye protectors in BS 2092. The filters that actually reduce the amount of light entering the eyes are specified in BS 679.

### Prescription safety spectacles

There is a considerable demand by workers for the provision of prescription safety spectacles as eye protectors, and many employers already provide optically ground safety lenses for spectacle wearers. Care needs to be taken to ensure that such lenses are suitable for the type of work being undertaken and the level or risk involved. **If it is decided that prescription safety spectacles must be used to protect our members, then the employer must bear the full cost of this PPE.**

Where greater levels of protection are required, box-type goggles or face-shields need to be worn over the spectacles. Where eye protection is worn over untoughened spectacles, it is necessary to ensure that there is an adequate gap between the outer surface of the spectacle lens and the inner surface of the goggle or face-shield lens shattering when the outer lens is struck. Six millimetres will almost certainly be sufficient.

### Employee responsibility

Every employee provided with eye protection must use it when engaged in any of the processes outlined in the Regulations. There is also a general duty to cooperate with the employer. Failure to comply with these duties may render an offender liable to prosecution.

There are a few cases where the wearing of eye protectors may be made unnecessary by the use of fixed shields. In general, however, an employee cannot legitimately argue that he/she cannot wear a particular kind of eye protector for some reason (headaches, vision problems etc.). The aim should not be to dispense with eye protection, but to find a type that is suitable. It is generally desirable for a choice of equipment to be available as questions of comfort and wearability can be much influenced by personal taste.

Regulation 11 states that 'every employee who has been provided with PPE shall forthwith report to his employer and loss of or obvious defect in that personal protective equipment'. **No charge can be levied by the employer for the issue, upkeep or replacement of eye protection equipment that is required to be provided in accordance with the Regulations.**

### Choosing the right eye protector

A wide range of eye protectors are available: spectacles (with or without side shields), goggles (box type and cup type), and face-shields. The hazards involved in the job will determine the grade of eye protection necessary. All-round coverage of the eyes may be required where there may be exposure to injurious fumes and only complete enclosure of the eyes is acceptable. Closeness of fit to the face also needs to be considered and this varies considerably from person to person – it may not be possible to obtain a good fit on all users from a single equipment manufacturer. For molten metal and chemical splash, full face-shields

are also allowed, and in some cases preferable due to the misting problems associated with goggles. Where protection of the lungs is also necessary respiratory and eye protection can be provided by using an air-fed helmet. Where full all round protection is not necessary, spectacles with or without side shields may be considered.

If eye protection is to be worn over glasses, eye protectors should be suitable – ensuring adequate gap over untoughened spectacles where these are also used. If other head protective equipment is required, the

various items need to be compatible. This may be difficult to achieve and may involve trying out a range of equipment from different manufacturers. Eye protectors should be issued on a personal basis and only used by the person they are issued to. If eye protectors are reissued they should be thoroughly cleaned and disinfected.

### Spectacles

Safety spectacles appear similar to prescription spectacles but usually incorporate side shields. They provide protection against lesser impacts, with lenses made from toughened glass or tough optical quality plastic such as polycarbonate. They are light in weight and available in a range of styles, some of the latest offer almost goggle type protection from splashes. The range allows spectacles to be matched to the wearer.

Currently, safety spectacles will only comply with BS 2092 in general or BS 2092 Grade 2 impact. Most manufacturers are able to supply a range of safety spectacles fitted with prescription lenses. When prescription lenses need to be incorporated into safety spectacles, the cost falls on the employers, under PPE Regulation 4.

### Eyeshields

Eyeshields are like safety spectacles, but with a frameless, one piece moulded lens. Vision cannot be corrected as with safety spectacles, but certain designs of eyeshield may be worn over prescription spectacles.

Eyeshields will only comply with BS 2092 in general or BS 2092 Grade 2 impact.

### Goggles

These usually consist of an elastic headband and a flexible plastic frame into which a one-piece lens is fitted. They give a greater degree of protection than spectacles or eyeshields as the tough plastic frame should be in contact around its whole periphery with the face. Lenses may be made of plastic or toughened glass and are usually replaceable.

They are prone to misting and many designs have been developed to reduce this. Baffle type ventilators to provide indirect ventilation will protect against splashes, but not dusts, gases or vapours. For protection

against these, goggles where the frame is a softer construction without any ventilation would be required to allow a complete seal with the contours of the wearer's face.

Some goggles may contain separate eye lenses, especially those provided for use during welding. Goggles fitted with only a welding filter lens may offer no impact protection. This will be inconvenient if a second pair of impact protection eye protectors is necessary. None of these are suitable for use during electric arc welding where full-face protection is required against the intense ultra-violet radiation.

### Faceshields

Faceshields are heavier and bulkier than the other forms of eye protection and usually consist of an adjustable headband or harness fitted with either a one piece clear shield protecting the whole face, a metal mesh screen or an opaque shield into which lenses are fitted (typically used for welding). They protect the face, but do not protect against dusts, gases, mists or vapours. With brow guards and a shield, they may protect against direct liquid splashes (BS 2092 C) and a high level of impact protection (BS 2092.1).16



## CHAPTER 6

### Temperature

Temperature is certainly a health and safety issue. We deal with many hundreds of enquiries every year on this subject alone. Too much heat can cause fatigue, extra strain the on heart and lungs, dizziness and fainting, or heat cramps due to loss of water and salt. Hot, dry, air can increase the risk of eye and throat infections. Above a blood temperature of 102 F there is a risk of heat stroke. Collapse can occur above 106 F with symptoms of delirium and confusion. This condition can prove fatal and survivors may suffer from organ damage.

Tiredness and loss of concentration can also lead to increased accident risk (such as burns) Too much cold can mean chilblains, Reynaud's disease, white finger or frostbite. The body keeps the blood supply to the extremities closed at lower temperature to conserve heat. Cold conditions can also lead to fatigue since the body uses energy to keep warm. There is increased accident risk from numb fingers, obstruction by some kind of protective clothing, slipping on ice etc. Extreme cold for long periods can lead to hypothermia, loss of consciousness and eventual comma. If the body temperature drops below 64F, the heart beat stops.

While these are problems caused mainly by extremes of temperature, for all workers the wrong temperature can cause problems even if they are just discomfort, loss of concentration, irritability, tiredness or discomfort.

### What is an acceptable temperature?

There are various informal guides to a safe working temperature, generally, the acceptable area of comfort for most types of work lies between 16C to 24C (61F to 72F).

Acceptable temperatures for heavier types of work are concentrated at the lower end of this range, while sedentary tasks may still be performed with reasonable comfort towards the opposite extreme.

The Chartered Institute of Building Services Engineers recommends the following temperatures for different working areas:

Heavy work in factories 13C  
Light work in factories 16C  
Shops 18C  
Office and dining rooms 20C

### What the law says – cold

The Approved Code of Practice under the Workplace (Health, Safety and Welfare) Regulations 1992 states that work rooms should normally be at least 16C for most types of work and at least 13C for work involving 'severe physical efforts'. Where maintaining these standards would be impractical, employers must provide a warm working station within a room where the overall

temperature may be lower – using localised heating, draught exclusion and so on. Personal protective equipment should be a last resort. However, most of these additional steps only apply where it is actually a part of the job that the workplace be kept cold e.g. in keeping food at below a certain level. They do not apply to general occupational temperatures, or workplaces in buildings made cold by the weather.

In more common circumstances, the 13C and the 16C levels are a legally enforceable minimum, and workers have the effective right to refuse to work where the workplace temperature is below these levels.

There is usually an assumption that no action should be taken if the correct temperature is achieved within an hour of starting work.

### What this means in practice – cold

Where exposure to cold is unavoidable, workers must be provided with cold weather clothing. When the body is working the production of heat increases. To maintain a balance between heat production and heat loss, insulation must be decreased. Properly designed cold weather clothing allows the wearer to remove layers or open vents and let the excess heat escape.

This prevents overheating, which can be a serious problem in the cold: sweat accumulates in clothes and continues to evaporate during rests, chilling the body. The Personal Protective Equipment at Work Regulations 1992 describes processes and activities where thermal protective equipment should be used.

The HSE has issued an information sheet with guidance on acceptable temperature levels where food chilling processes and handling are taken. The guidance sheet explains how employers can comply with both the Food Hygiene (Amendment) Regulations 1990 and 1991, and Regulation 7 of the Workplace Regulations.

The Food Regulations stipulate temperatures at which certain foods must be maintained in the interests of public health. They apply to the control of the temperature of the food, but not the workplace atmosphere.

Regulation 7 of the Workplace Regulation states that the 'temperature in all workplaces inside buildings shall be reasonable during working hours.' A 'reasonable temperature' is defined in the accompanying Approved Code of Practice as that which provides reasonable comfort without special clothing and should normally be at least 16C or at least 13C where much of the work involves physical effort (such as repeated exertion to the extent that a temperature of 16C would be uncomfortably warm). The Approved Code of Practice stipulates that where maintaining these standards is impractical, employers must take all reasonable steps to achieve a comfortable temperature as close to the standards as possible.

The HSE guidelines say that the health and safety requirements of both sets of legislation can be met by 'maintaining a 'reasonable' temperature of a least 16C (or at least 13C if the work involves physical effort) throughout the workroom.' This can be achieved by

- (a) Enclosing or insulating the product, by using localised refrigerated enclosures to insulate the product such as enclosed chill hoppers or conveyers
- (b) Keeping chilled areas as small as possible

- (c) Pre-chilling the product
- (d) Exposing the product to workroom temperatures as briefly as possible. If this is not 'practicable', then the employer should provide a warm working station within a room where the overall temperature may be lower. This can be achieved by the provision of:
  - (a) Local heating for the worker with minimum effect on the produce
  - (b) Insulated cleanable duckboards (or other floor coverings) if workers would otherwise have to stand for long periods on cold floors – unless special footwear is provided which prevents discomfort
  - (c) Draught exclusion (including fitting self-closing doors). Where, despite the application of these measures a reasonable temperature cannot be maintained the employer should ensure that the individual is kept warm. This can be achieved by:
    - (a) Providing suitable protective equipment (Personal Protective Equipment at Work Regulations 1992)
    - (b) Providing suitable heated rest facilities (e.g. heated areas) and allow workers ready access to them
    - (c) Institute systems of work to minimise the length of time of exposure to uncomfortable temperatures and by job rotation, give workers the opportunity to go to heated areas

### What the law says – heat

There is no maximum temperature. However, under the law the employer must provide a working environment, which as far as is reasonably practicable, is safe and without risks to health, and must provide welfare facilities (s2 (2)(e) of the Health and Safety at Work Act 1974). Employers must assess risks and introduce prevention and control measures based on those assessments (The Management of Health and Safety at Work Regulations 1999).

During working hours, the temperature inside workplace buildings must be reasonable Regulation 7 of the Workplace Health, Safety and Welfare Regulations 1992. The Code of Practice to the Workplace Regulations

says, 'all reasonable steps should be taken to achieve a comfortable temperature', for example:

- (a) Insulating hot pipes and equipment
- (b) Providing air cooling plants
- (c) Shading windows
- (d) Siting workstations away from hot areas
- (e) Using fans and increased ventilation in hot weather
- (f) Providing local cooling at individual workstations
- (g) As a last resort in unavoidably hot work areas, providing rest facilities and limiting the amount of time individuals spend in the heat Whilst this leaves the safety rep to argue about the definition of 'reasonable' and about the risk to health, it does mean that an employer who does nothing to control high temperatures is probably breaking the law.

### The Code of Practice

The Code of Practice also says that:

- (a) Other factors such as protective clothing, physical activity, radiant heat, humidity, air movement, and the length of time a person is doing a job must all be taken into account when assessing what a 'reasonable temperature' is
- (b) Methods of cooling must not produce harmful or offensive fumes, gases or vapours
- (c) Sufficient number of thermometers must be provided to enable workers to check temperatures in indoor workplaces. Thermometers need not be provided in each workroom, but if the temperature in a particular workroom is uncomfortable, insist that the temperature in that room is measured.

Regulation 6 of the Workplace Regulations requires employers to provide 'effective and suitable ventilation'. Regulation 22 requires employers to provide an adequate supply of wholesome drinking water and cups, readily accessible and conspicuously marked.

## Heat from VDU equipment

The Display Screen Equipment Regulations 1992 require that 'equipment belonging to any work stations shall not produce excess heat which could cause discomfort to operators or users'.

## Manual handling

Risk assessments carried out under the manual Handling Operations 1992 require employers to take account of risks from various factors listed in Schedule 1, which includes hot and humid conditions.

## Wearing protective clothing in hot weather

The Personal Protective Equipment (PPE) at work Regulations 1992 require employers to select PPE that is suitable for the risks, for the employees who will be using it, and for the working environment. So where PPE has to be used in hot weather, it should be designed to allow workers to keep as cool as possible. Workers should not just be expected to use the cheapest thing available.

## Pregnant workers

Employers must specifically assess the risks to pregnant women, including extremes of heat (The Management of Health and Safety at Work Regulations 1999). The Health and Safety Executive's Guide 'New and expectant mothers at work' says:

- (a) When pregnant, women tolerate heat less well and may more readily faint or be more liable to heat stress. The risk is likely to be reduced after birth but it is not certain how quickly an improvement comes about
- (b) Breastfeeding may be impaired by the heat dehydration. To avoid the risks, the HSE says:
  - (a) Pregnant workers should take great care when exposed to prolonged heat at work'
  - (b) Rest facilities and access to refreshments would help

- (c) poor physical working conditions, including extremes of temperature, contribute to stress

For further information see the HSE's guide 'Stress at work'.

## Heat and outdoor workers

The Workplace Regulations do not apply to outdoor workplaces, but employers still have general duties to ensure health and safety under the Health and Safety at Work Act 1974; and duties to assess and control risks from work in hot temperatures under the Management of Health and Safety at Work Regulations 1999.

Outdoor workers exposed to high temperatures for long periods are at risk from sunstroke, sunburn, and heat exhaustion. Sun or heat stroke is more likely when heavy physical work is being done.

To avoid these effects working hours should be kept short; clothing, including protective clothing, should not be tight and restricting and should allow body heat to escape; plenty of rest periods in a cool place should be taken; and cool, clean water should be provided for frequent drinks. It is important to replace water lost through sweating.

Exposure to excessive sunlight can cause skin rashes or skin burns. Ultraviolet radiation in sunlight can also cause skin cancer. Fair-skinned people, who do not develop a suntan quickly, are most at risk. Avoid excessive exposure to sun by covering bare skin with lightweight material and take frequent rest breaks in the shade. Sun protection creams may also help.

## What this means in practice – heat

Whatever thermometers read, if most people are complaining of the heat, common sense says that it is too hot and something must be done immediately. Note that the effect of heat on the body will also depend on the weight and age of a person.

You should also remember that air temperature is only a rough guide because humidity, wind speed, radiant heat sources, clothing etc. all have

an effect, which an ordinary thermometer does not take into account. It is possible to get a more accurate assessment using a wet bulb global thermometer or electronic equivalent, which measures humidity. The comfort range for humidity is between 40 per cent and 70 per cent.

There are a lot of steps that employers can take to assess risk and provide more comfortable working conditions in hot weather. These include:

Carrying out a survey that takes account of temperature, humidity, air movement and workload (carried out at the hottest part of the day, and the hottest part of the year) Providing adequate ventilation, fans and windows that can be opened (but above 26.7 C/80F fans are ineffective at cooling the air)

Providing portable air cooling cabinets, which may reduce the air temperature by up to 6 C/11F Providing properly designed ventilation air conditioning will be most effective, and ensuring it is properly maintained so it does not break down in the middle of a heat wave

Re-designing the job or work area to isolate staff from the source of heat as much as possible. For example, reducing heat gain via windows by reflective film or blinds, and by reducing window area; and moving desks and workstations away from windows.

Getting a competent heating and ventilation engineer to do a full survey of temperatures, heat stress, and ventilation systems etc., and then to recommend a permanent solution to problems. Engineers should be registered with an authoritative body such as the Chartered Institute of Building Services.

NB

- (a) Training and information for relevant staff in recognising heat stress symptoms
- (b) Allowing staff to dress appropriately for hot weather, e.g. allowing ties, tights or jackets to be removed or shorts to be worn;
- (c) If it is impossible to provide a comfortable air temperature, or as a temporary measure until a permanent solution is put in place, staff

- exposure to hot work must be reduced. For example: through rest breaks in a cool area where cold drinks are provided, job rotation, or altering work in the hottest part of the day
- (d) Pregnant women and those with medical conditions should be given priorities for rests and early leave from work
- (e) Taking the hottest rooms out of service is another temporary measure



## CHAPTER 7

### Maintenance hazards

Safe systems of work are absolutely essential to protect workers who are carrying out maintenance work. The need was highlighted in a special HSE report 'Deadly maintenance', which analysed 106 fatal maintenance accidents involving plant and machinery. This emphasised that maintenance whether emergency repairs, routine servicing or cleaning, usually involves access to hazardous areas not normally approached. Such work is more than likely to be done under pressure and the combination of circumstances can prove fatal if a properly planned approach to safety is not adopted.

### Employer responsibility

HSE have concluded that well over 75 per cent of fatal maintenance accidents taking reasonably practicable precautions could have prevented accidents. About two thirds of such accidents occur during breakdowns or scheduled repairs. The remainder tend to happen during cleaning operation or during examination, lubrication and painting.

'Deadly Maintenance' states 'It is clear that the main responsibility for reducing the death toll lies with management. If people are not to die in what, in a lot of cases, are tragic and horrific circumstances, management must plan and control its plant and machinery work.'

### Key principles

Many pieces of health and safety legislation contain both general and specific requirements to maintain premises, plant and equipment. The general duty is contained in Section 2(2)(d) of HASAWA, which requires employers to provide and maintain a safe place of work.

The Management of Health and Safety Regulations 1999 state quite clearly that it is the employers responsibility to make sure that work is

always done safely and to see that specific precautions apply equally to maintenance operations carried out by a contractor and to those carried out by workers employed directly by a company.

#### **Design:**

Good initial design can minimise maintenance problems. The need to approach dangerous parts may be reduced by proximity guards or translucent materials, and the provision of external lubrication points or adjustment devices. Means of isolating hazards are important, such as lockable electrical isolators or props to prevent gravity fall.

Safe access and working platforms for maintenance may require permanent walkways, or fixtures for attaching temporary structures. Tanks should be provided with large enough manholes to aid the entry and escape of people, possibly wearing breathing apparatus.

#### **Accidents associated with maintenance**

(From 'Deadly Maintenance' HSE)

Accident Type Number

Machinery 60

Crushed by gravity fall machine parts or residual energy motion: 11

Crushed between fixed and powered moving parts of machines 12

Entanglement in powered moving parts of machines 17  
Crushed between moving machines and structure 10

Falls (from) 21

Work platforms 7

Ladders 2

Plant or machinery 8

Plant due to rupture of vessel 2

Fragile roof/ceilings 2

Burns 10

Gassing 9

Electrocution 6

Asphyxiation 5

Struck by falling materials 5

Total 106

Any maintenance system should take account of:

#### **Management**

Maintenance needs to be properly managed. High-risk activities require supervision by suitably experienced staff if failure and death are to be avoided. There will undoubtedly be occasions when specialist assistance is needed. The tendency for maintenance departments to attempt to cope must be avoided.

#### **Information**

Clear information about safe procedures should be available to the people doing maintenance work.

#### **Training**

Maintenance often involves work in situations where normal production safeguards no longer apply. Training should pay particular attention to safe working practices in hazardous environments.

#### **Risk Assessment**

The hazards associated with each maintenance task must be listed and the risks of each considered (frequency of the task and possible consequences of failure to carry it out correctly). Unite has found that some employers do not understand the need for assessment for maintenance tasks. Clear and appropriately detailed procedures should be drawn up for all foreseeable maintenance operations. The extent of those plans will obviously vary from a simple manufacturer's manual, to a basic plant isolation procedure or a full permit-to-work procedure. A system should define the extent of the maintenance activity and not only the precautions required to safeguard the people involved, but also any others working in the premises. Whatever system is adopted, it is essential that the hazard remains isolated for the full duration of the work.

#### **Equipment**

A wide variety of special purpose testing or maybe safety equipment may be necessary for maintenance operations. Homemade devices can be deadly. Safety equipment should be compatible with the type of work and appropriate to the hazard or it should not be used.

If it is to function as designed it must be kept in good working order. It is equally important that personnel are trained in the correct procedures for its use. The correct equipment should be readily available for use so that the temptation to make do is avoided.

### Implementation

The benefits of planning can only be gained if procedures are fully implemented. The laid down systems must be applied in every detail and checks made to ensure that safe conditions have been achieved before work commences. If the planned procedures have not isolated the hazards, then work should stop immediately, until the problem is resolved.

### Monitoring

People must be protected during maintenance work. Conditions should be monitored periodically, or in some cases continuously. Inspection by experienced management with appropriate authority should be adequate, but more exhaustive checks may be necessary, e.g. atmospheric testing;

### Rescue

The meticulous application and monitoring of a planned safe working procedure should make the need for emergency rescue systems superfluous. But, mistakes happen and the rapid removal of unconscious or badly injured people from still dangerous situations may be needed.

If a fatality is to be avoided, the range of possible failures must be considered and plans laid to stabilise the situation, to achieve a rescue without risking further lives. It is essential that training in rescue procedures be given if people are to act calmly when required.

## Permit-to-work systems

The use of effective 'permit-to-work systems' is an important part of a planned approach to safe maintenance. Some Statutes and Regulations state specifically that this should be done. A permit-to work system may well be considered an acceptable control measure in certain situations which come under the provisions of COSHH.

Boiler-furnaces: a factory occupier must not allow any work to be undertaken inside a boiler furnace or boiler flue until it has been sufficiently cooled, ventilated or otherwise to make work safe for the persons employed.

Welding, blazing or soldering: No plant, tank or vessel that contains, or has contained, any explosive or flammable substance, may be subjected to any form of welding, brazing or soldering operation, or to any cutting or similar operation involving the applications of heat, until all practical steps have been taken to remove the substance and many fumes arising from it, or to render them non-explosive or non-flammable.

Any such tank, plant or vessel must first be allowed to cool before any explosive or flammable substance is reintroduced. Again, a permit-to-work issued to a responsible person would be a sensible precaution.

Under the Ionising Radiation's Regulations 1999 detailed working arrangements, or systems of work, must be adopted for any work with ionising radiations – Regulations 7 and 12 require a full risk assessment to be carried out prior to any maintenance task being commenced. It is a requirement that the working arrangements be formalised by means of a permit-to-work

system involving the issue of a certificate detailing and specifying the method of work and conditions governing both entry to the area and persons permitted to use the certificate. Under the Regulations a detailed written system of work is also necessary to permit the entry of non-classified persons to controlled areas:

A permit is usually a form completed by the person in overall charge of maintenance at the workplace or with special knowledge of the hazards. Its purpose is to:

- (a) Grant authority to certain individuals to carry out maintenance
- (b) Identify plant or equipment and its associated hazards
- (c) Identify the nature and extent of work to be carried out
- (d) Ensure precautions are taken before work starts
- (e) Provide basic information to maintenance staff on safe working procedures

A permit-to-work may stipulate that the following general precautions should be taken before work is started:

- (a) Electrical and/or mechanical isolation of plant from all possible sources of danger
- (b) Locking off isolating valves and blanking off of steam, acid, water, gas and compressed air supplied and pipework;
- (c) Erection of scaffolding or other means required to give safe access to all work areas
- (d) Provision of temporary guards or other action required to make the job safe, i.e. guard rails around the holes in floors
- (e) Isolation of machine areas, indication of limits of safe working i.e. danger notices on adjacent equipment
- (f) An efficient permit-to-work system will include all these precautions, and ideally
- (g) The signature of the person authorised to release the plant from production
- (h) The time period from which the permit is valid
- (i) Details of isolation and other procedures or prerequisites necessary for the job to be done safely to be filled in and signed by the plant engineer responsible
- (j) The signature of the person who carried out de-isolation procedures preparatory to the restoration of power supplies after checking that all work has been completed and signed off
- (k) The signature of the person authorised to accept the plant back for production

Persons should not issue permits-to-work to themselves unless they are the sole person responsible for carrying out the work. The contents for each permit-to-work should be clearly drawn to the attention of the person receiving it and assurance received that it is understood.

No one should be expected to receive permits-to-work if he/she has any misgivings. If they have, such misgivings should be referred to a higher authority than the person issuing the permit-to-work. The whole system of permit-to-work is based on a formal document.

The format and details of the document will vary according to circumstances. It would be a worthwhile exercise for safety reps to examine any documents used in their own workplace to see if they fulfil the principles outlined above.

### Multi key 'locking off'

Where equipment has only one source of power (e.g. a machine driven by a single electric motor), it is often possible to adapt the isolation switch to the motor so that it can be locked in the 'off' position with a multi-key locking device.

Each person employed in this equipment is then supplied with a key, which they keep in their possession and the lock cannot be opened until all the keys have been turned. This enables several people to work on equipment without fear of one of them finishing their work and switching in the machine, thus avoiding the need for a full permit-to-work procedure.

However, for this system to be safe it is essential to adhere to the following rules:

- (a) Each machine and isolation box must be numbered
- (b) The special padlocks and keys should be kept under control, e.g. of the plant engineer and only be issued to people authorised to lock equipment off
- (c) Each lock must have only one key, which must be given to the person working on the equipment and each key must be kept by them until the job is finished, when it must be returned to the person in control
- (d) Where more than one trade works on equipment, a separate lock must be used for each trade

### Overhead cranes

Often maintenance and other work must be carried out near to overhead travelling cranes. In these circumstances, a reliable permit-to-work or lock off system will ensure that the law is sufficiently observed

and safe working conditions are achieved. There are two main ways in which an overhead travelling crane can be prevented from entering a particular zone: complete electrical isolation of both the crane area in which the maintenance work is to be done, and when necessary, of adjacent bays in which cranes operate; and electrical isolation of the zone affected plus the fitting of stop blocks on the crane tracks to restrict any excessive overrun due, for instance, to faulty brakes.

However, stop blocks must be used with discretion – the abrupt halting of the crane might endanger people working below. Records of accidents suggest that to be reliable at all times, the safety system must prevent an overhead travelling crane from entering the 'danger area'. Methods that have failed include use of signallers or lookout men, warning lights or flags, the use of detonators placed on the track to warn of an approaching crane, and the issuing of verbal or written instructions to crane drivers.

Any system of work designed for use during maintenance of overhead cranes must, therefore, make it clear that it is forbidden to approach the crane, under any circumstances, until a permit has been issued or a lock off procedure implemented. All cranes must be kept out of the operation zone and all bare electrical conductors must remain dead until the permit has been cleared and cancelled.

## Control

Overseeing and monitoring of maintenance systems throughout a workplace should be in the hands of a suitably experienced person, who should be identified in the safety policy. They should have the authority to coordinate the duties and responsibilities of everyone involved or affected by maintenance activities, and must make sure everyone understands that the permit-to-work system must be followed in every detail.

Occasionally, it may be impossible for one nominated person to be responsible at any given time for all maintenance activities. In this case some other responsible person should be able to assume authority.

Separate people may be needed to deal with different classes of risk (mechanical, electrical, chemical or radiological) so that there is time not only to draw up the safe systems, but also to check that all necessary precautions have been taken and the people controlling the work know exactly what they have to do.

## Confined spaces

Entry into confined spaces can be highly dangerous with no outward sign of hazard. Tests are normally carried out to ensure that there are no dangerous gases, explosive atmospheres present or a lack of oxygen.

The results decide whether the area is safe, or whether protective equipment must be worn. Such information may be recorded on a permit-to-work.

Section 2 of the Health and Safety at Work Act 1974 (HSW Act) requires employers to ensure the health and safety at work of their employees 'so far as is reasonably practicable'. Work in confined spaces is potentially dangerous and Section 2 clearly requires employers to take appropriate precautions to ensure that employees are not at risk.

The HSW Act duties are complemented by the provisions of the Management of Health and Safety at Work Regulations 1999, especially the requirement to carry out a risk assessment associated with the employers (or self-employed persons) activities and undertaking.

The Confined Spaces Regulations 1997 repeal and replace earlier provisions contained in Section 30 of the Factories Act 1961.

## The Confined Spaces Regulations 1997

### Definition of confined space

This is any enclosed space, where there is a reasonably foreseeable specified risk associated with that enclosed space, and includes chambers, tanks, vats, silos, pits, trenches, pipes, sewers, flues, wells, or other similar spaces.

**Free-flowing solid:** This is any substance made up of solid particles, which has a flowing or running consistency, and includes flour, grain, sugar, sand or similar materials.

**Specified risk:** This includes a risk of: serious injury from fire or explosion; increased body temperature resulting in unconsciousness; unconsciousness or asphyxiation resulting from work exposure to gas, fume, vapour, lack of oxygen; drowning from a rising liquid level, and asphyxiation from a free flowing solid, or, entrapment in the free flowing solid which prevents escape to a respirable environment.

**System of work:** This includes the provision of equipment which is suitable, and maintained in good working order.

### Duties (Regulation 3)

Employers must comply with these Regulations with respect to their employees and non-employees, although the duty to non-employees is to the standard of 'so far as is reasonably practicable' and is limited to matters that are within the employers' control. Similar duties are placed on self-employed persons.

### Work in confined spaces (Regulation 4)

Work in confined spaces may only be undertaken if it is not reasonably practicable to perform the necessary work in any other way, and so far as is reasonably practicable, where there is a system of work in place to ensure such work is safe and without risks to health.

### Emergency arrangements (Regulation 5)

In addition to the duties under Regulation 4, no work in confined spaces may be carried out unless there are suitable and sufficient arrangements in place to rescue workers in an emergency ó such arrangements must be able to be put into immediate operation.

In order to be suitable and sufficient, the arrangements must reduce any risks to the health and safety of the person putting those arrangements into operation, so far as is reasonably practicable, and must include, where necessary, the provision and maintenance of resuscitation equipment.

## Maintenance checklist

- Make a list of all maintenance activities and hazards.
- Who is responsible for safety of maintenance activities? Are they competent? When are specialist maintenance contractors needed?
- How can maintenance hazards reduced through design?
- How are maintenance activities planned?
- Are permits-to-work needed? Do they provide the necessary information and conditions to ensure a safe system of work?
- If entry is being made into a confined space, have tests been carried out to find out if the work area is free from fumes and gas?
- Is adequate information and adequate training provided for all maintenance staff?
- What special safety equipment is required e.g. safety equipment, monitoring equipment etc?
- How is maintenance work monitored?
- What rescue arrangements are necessary? Have all maintenance staff been trained in rescue techniques?

## Hazards from hand tools

Accidents through the use of hand tools run into tens of thousand a year. In factories alone there are over 20,000 a year. These tools include hammers, chisels, drifts, spanners, screwdrivers, knives, files, scrapers and hand tools used on lathes. While it is important that tools are used properly it is extremely difficult to work safely with faulty or worn equipment. Tools that are not in good condition should be returned to the stores or supplier, and the defects pointed out.

A number of Regulations apply to the use of work equipment of which hand tools are a part, such as:

- Provision and Use of Work Equipment Regulations PWER
- The Workplace Health, Safety and Welfare Regulations
- The PPE Regulations
- The Electricity At Work Regulations

**Safety precautions**

Safe working with hands tools is a mixture of common sense, safe procedures and intelligent observation. These are four golden rules:

- (a) Use the correct tool for each type of job
- (b) Use only tools which are in good condition
- (c) Stow all safely, particularly at heights
- (d) Wear eye protectors when provided

**Tool and equipment use**

- (a) Are women using tools designed for men? Tools designed for men are often too large for women or require high activating forces.
- (b) Do the tools vibrate, without having a vibration absorbing grip? Vibration at particular frequencies can cause vascular problems and could affect muscle and tendon blood supply, exacerbating force and motion problems.
- (c) Do the tools impose shock loading upon the user? If used inappropriately, tools may generate shock loadings, which can increase muscle tension as well as imparting mechanical loads to the wrist and hands.
- (d) Do tools need to be held firmly to resist reaction torque's when operated? Having to grip the tool tightly increases the muscular load and prevents smooth operation.
- (e) Do the tools have a jerky action? Smooth operations are preferable for ease, muscular movement, strength application and control.
- (f) Is considerable pressure required to hold or operate the tool? Pressure can cause compression of tissues in the hand or wrist unless handle design is perfect. Pressure also represents an additional static load on the arm muscles.
- (g) Are the handles:
  - too large or small in diameter to be gripped easily?
  - too short to extend across the palm?
  - excessively shaped, preventing good contact?
  - relying upon the hand grip to oppose motion along the length of the tool?
  - excessively slippery?

**Tool-handle combination**

The tool-handle combination affects static and dynamic muscle loads, freedom of wrist movement, compression of the hand tissues and ease of use. The handle is often the easiest item to change, but the worst designed!

- (a) How are the controls on the tool operated? Control operation affects the tension in the flexor muscles and control should probably be used by the thumb in most instances but there are some occasions where use by the fingers is better. Control positioning needs to be examined carefully.
- (b) Are the tools traditional or domestic in design? Tools not designed for repeated or prolonged use rarely have suitable characteristics and can give risk to grip, pressure and force problems.
- (c) Have the tools been modified by the operators or are improvised tools in use? These are frequently good indicators of problems with the tool design. Improvisation rarely overcomes the fundamental problems, and can sometimes make them worse.
- (d) Do operators have to twist and turn to reach frequently needed items? Twisting, turning and arm elevation are often caused by the workspace being poorly laid out.
- (e) Do operators wear gloves and, if so, do they affect grip or manual dexterity? A good tool or handle design can be rendered useless by poor gloves.

**Tools and equipment design principles**

These principles need to be interpreted carefully as, if applied inappropriately, they can cause further problems.

- (a) Avoid sharp edges on any equipment or fixtures that come into contact with the body.
- (b) Keep repetitive reaching as close as possible to the body and always within 450 mm of the front of the operator.
- (c) Tilt the work surface and fixtures towards the operator, particularly those above the elbow height of the individual.
- (d) Avoid a pinch grip and use a power grip whenever possible (the pinch grip, between thumb and forefinger, is five times more

stressful than the power grip where most of the palm of the hand and fingers can clasp the object).

- (e) Minimise hand force requirement.
- (f) Make workstation height adjustable if possible.
- (g) Avoid repetitive pounding with the palm.
- (h) Avoid flexing the wrist (toward or away from the palm) more than about 15 degrees while performing hand activities.
- (i) Avoid bending the wrist more than 5 degrees toward the thumb or 15 degrees toward the little finger while performing hand activities.
- (j) Avoid raising the elbow above chest height.
- (k) Avoid reaching below seat or waist level.
- (l) Avoid reaching behind the centre-line of the body.
- (m) Avoid repetitively rotating the hand and forearm by more than about 90 degrees.
- (n) Design repetitively pushed control buttons to be a nominal 75 mm in diameter and avoid button guards with sharp edges.
- (o) Provide adequate spacing between repetitively accessed button (nominal 50 mm clearance) in multiple control situations.
- (p) Provide padded body support surfaces when awkward body postures must be maintained for extended periods.
- (q) Avoid exposure to cold ambient temperatures or to local cold air sources such as exhaust from a powered tool.
- (r) If gloves must be worn, provide adequate sizes to fit all workers' hands.

Avoid equipment and/or tools that transmit vibration to the hands.

- (a) Design or select handles, tools or parts of machinery that must be grasped according to the following ergonomic criteria:
- (b) The nominal diameter of single handles should be approximately 40mm and if the hand must span two handles, the span should be between 50mm and 75mm
- (c) The handle should be made of some material other than metal, which tends to be cold

- (d) Handle material should be soft, compliant and textured rather than hard and smooth
- (e) The handle should be oriented to prevent excessive wrist bending and torque
- (f) For vertically oriented handles, provide a lower support surface to prevent the handle from sliding out of the hand
- (g) Tools and surfaces that contact the hand should be thick or long enough so that forces are not concentrated in the centre of the palm

**Hammers:** The head should be securely attached to the shaft. The head should be in good condition, and the face free from chipped edges and not rounded from wear. The shaft should be in good condition and, if it is split, broken or loose, the hammer should not be used.

**Spanner and wrenches:** Do not use set spanners or wrenches with splayed jaws, or box spanners that show signs of splitting. Use a fixed spanner – rigid jawed or ring – of the correct size wherever possible rather than an adjustable one. Do not use a tube to obtain extra leverage, or hammer the end of a spanner, or use a spanner as a hammer. See that the hand will clear any obstructions when the nut turns. Never pack the gap between the spanner and the nut with shims or washers. Never use a spanner as a wedge.

**Chisels and drifts:** Never use a chisel with a mushroomed head. At the first sign of mushrooming, the chisel head should be correctly dressed on a grinding wheel. Use the chisel to cut away from the body. Cutting edges must always be kept sharp so that the original shape and angle of the cutting edges is maintained. The resharpened chisels should be suitably hardened and tempered.

**Screwdrivers:** A frequent cause of accidents is holding the workpiece in the palm of the hand while tightening up screws, a slip can result in a serious injury. The piece being worked upon should not be held in one hand and the screwdriver used in the other - work should be secured in a vice or held on other firm support. Never use a screwdriver as a chisel or strike with a hammer. Do not use a screwdriver with a split handle, even if bound with string or tape: scrap the tool or fit a new handle.

**Files:** Never use a file with an exposed tang: have a handle fitted. Do not use a file as a lever or toggle-bar, as it will easily snap. If filing in a lathe do not place your hand or file near the chuck, it is safer and more efficient to learn to do filing left-handed. Always check that the handle of the file is secure. Using a file on lathe work can often be done more safely and efficiently by a tool mounted in the tool post.

**Knives:** When used for cutting greasy materials, the handle should be designed to offer a firm grip and a shield should be fitted between the handle and the blade. It may also be necessary to wear a stout apron to protect the abdomen in case the knife should slip. So far as possible, the cut should always be away from the body.

### Training and supervision

Adequate training and supervision is needed to ensure:

- (a) that hand tools are used correctly
- (b) that the correct ones are used for specific work
- (c) that they are maintained in a fully serviceable condition
- (d) that they are properly guarded and stowed safely when not being used
- (e) that they are scrapped and replaced when worn

### Ergonomic design of hand tools

From an ergonomic point of view a number of basic requirements for the design of an efficient hand tool have been specified:

- (a) It should perform its intended function effectively
- (b) it should be properly proportioned to the dimensions of the user
- (c) It should be appropriate to the strength and endurance of the user
- (d) It should minimise user fatigue



## CHAPTER 8

### Health and safety law

This chapter is included to give some idea on the scope of legislation that exists to control and legislate hazards in the workplace. There is legislation covering every aspect of health and safety and the Unite will always uphold and encourage others to uphold the law of the land. We cannot include all the various legislation within this book so we have chosen a few of the more relevant/popular pieces to illustrate what they contain. The explanations are by no means exhaustive but carry the main points for your perusal and use.

#### Part 1

##### Requirements of health and safety law

**The basis of British health and safety law is the Health and Safety at Work etc Act 1974.**

The Act sets out the general duties that employers have towards employees and members of the public, and employees have to themselves and to each other.

These duties are qualified in the Act by the principle of 'so far as is reasonably practicable'. In other words, the degree of risk in a particular job or workplace needs to be balanced against the time, trouble, cost and physical difficulty of taking measures to avoid or reduce the risk.

The law requires what good management and common sense would lead employers to do anyway. i.e. to look at what the risks are and take sensible measures to tackle them. (See appendix 1)

##### The Management of Health and Safety at Work Regulations

1999 (the Management Regulations) generally make more explicit what employers are required to do to manage health and safety under the Health and Safety at Work Act. Like the Act, they apply to every work activity.

The main requirement on employers is to carry out a risk assessment. (See risk assessment guide). Employers with five or more employees

need to record the significant findings of the risk assessment.

Risk assessment should be straightforward in a simple workplace such as a typical office. It should only be complicated if it deals with serious hazards such as those on a nuclear power station, a chemical plant, laboratory or an oil rig.

Besides carrying out a risk assessment, employers also need to:

- (a) Make arrangements for implementing the health and safety measures identified as necessary by the risk assessment
- (b) Appoint competent people (often themselves or company colleagues) to help them to implement the arrangements
- (c) Set up emergency procedures
- (d) Provide clear information and training to employees
- (e) Work together with other employers sharing the same workplace

Other regulations require action in response to particular hazards, or in industries where hazards are particularly high.

## European law

In recent years much of Britain's health and safety law has originated in Europe. Proposals from the European Commission may be agreed by Member States, who are then responsible for making them part of their domestic law.

Modern health and safety law in this country, including much of that from Europe, is based on the principle of risk assessment described above.

## Guidance

Guidance can be specific to the health and safety problems of an industry or of a particular process used in a number of industries. The main purposes of guidance are:

- (a) To interpret – helping people to understand what the law says – including, for example, how requirements based on EC Directives

- fit with those under the Health and Safety at Work Act
- (b) To help people comply with the law
- (c) To give technical advice

Following guidance is not compulsory and employers are free to take other action. But, if they do follow guidance they will normally be doing enough to comply with the law

## Approved Codes of Practice

Approved Codes of Practice offer examples of good practice. They give advice on how to comply with the law by, for example, providing a guide to what is 'reasonably practicable'. For example, if regulations use words like 'suitable and sufficient', an Approved Code of Practice can illustrate what this requires in particular circumstances.

Approved Codes of Practice have a special legal status. If employers are prosecuted for a breach of health and safety law, and it is proved that they have not followed the relevant provisions of the Approved Code of Practice, a court can find them at fault unless they can show that they have complied with the law in some other way.

## Regulations

Regulations are law, approved by Parliament. These are usually made under the Health and Safety at Work Act, following proposals from HSC. This applies to regulations based on EC Directives as well as 'home-grown' ones.

The Health and Safety at Work Act, and general duties in the Management Regulations, are goal-setting and leave employers freedom to decide how to control risks that they identify. Guidance and Approved Codes of Practice give advice, but employers are free to take other measures provided they do what is reasonably practicable. However, some risks are so great, or the proper control measures so costly, that it would not be appropriate to leave employers discretion in deciding what to do about them. Regulations identify these risks and set out specific action that must be taken. Often these requirements are absolute – to do something without qualification by whether it is

**Summary of duties under the Construction  
(Design and Management) Regulations 2007****CDM 2007**

	<b>All construction projects (Part 2 of the Regulations)</b>	<b>Additional duties for notifiable projects (Part 3 of the Regulations)</b>
Clients (excluding domestic clients)	<ul style="list-style-type: none"> <li>• Check competence and resources of all appointees</li> <li>• Ensure there are suitable management arrangements for the project welfare facilities</li> <li>• Allow sufficient time and resources for all stages</li> <li>• Provide pre-construction information to designers and contractors</li> </ul>	<ul style="list-style-type: none"> <li>• Appoint CDM co-ordinator*</li> <li>• Appoint principal contractor*</li> </ul> <p>Make sure that the construction phase does not start unless there are suitable welfare facilities and a construction phase plan is in place.</p> <ul style="list-style-type: none"> <li>• Provide information relating to the health and safety file to the CDM co-ordinator</li> <li>• Retain and provide access to the health and safety file</li> </ul> <p>* There must be a CDM co-ordinator and principal contractor until the end of the construction phase)</p>

	<b>All construction projects (Part 2 of the Regulations)</b>	<b>Additional duties for notifiable projects (Part 3 of the Regulations)</b>
CDM co-ordinators		<ul style="list-style-type: none"> <li>• Advise and assist the client with his/her duties</li> <li>• Notify HSE</li> <li>• Co-ordinate health and safety aspects of design work and cooperate with others involved with the project</li> <li>• Facilitate good communication between client, designers and contractors</li> <li>• Liaise with principal contractor regarding ongoing design</li> <li>• Identify, collect and pass on pre-construction information</li> <li>• Prepare/update health and safety file</li> </ul>
Designers	<ul style="list-style-type: none"> <li>• Eliminate hazards and reduce risks during design</li> <li>• Provide information about remaining risks</li> </ul>	<ul style="list-style-type: none"> <li>• Check client is aware of duties and CDM co-ordinator has been appointed</li> <li>• Provide any information needed for the health and safety file</li> </ul>

	All construction projects (Part 2 of the Regulations)	Additional duties for notifiable projects (Part 3 of the Regulations)
Principal contractors		<ul style="list-style-type: none"> <li>• Plan, manage and monitor construction phase in liaison with contractor</li> <li>• Prepare, develop and implement a written plan and site rules (Initial plan completed before the construction phase begins)</li> <li>• Give contractors relevant parts of the plan</li> <li>• Make sure suitable welfare facilities are provided from the start and maintained throughout the construction phase</li> <li>• Check competence of all appointees</li> <li>• Ensure all workers have site inductions and any further information and training needed for the work</li> <li>• Consult with the workers</li> <li>• Liaise with CDM co-ordinator regarding ongoing design</li> <li>• Secure the site</li> </ul>

	All construction projects (Part 2 of the Regulations)	Additional duties for notifiable projects (Part 3 of the Regulations)
Contractors	<ul style="list-style-type: none"> <li>• Plan, manage and monitor own work and that of workers</li> <li>• Check competence of all their appointees and workers</li> <li>• Train own employees</li> <li>• Provide information to their workers</li> <li>• Comply with the specific requirements in Part 4 of the Regulations</li> <li>• Ensure there are adequate welfare facilities for their workers</li> </ul>	<ul style="list-style-type: none"> <li>• Check client is aware of duties and a CDM co-ordinator has been appointed and HSE notified before starting work</li> <li>• Co-operate with principal contractor in planning and managing work, including reasonable directions and site rules</li> <li>• Provide details to the principal contractor of any contractor whom he engages in connection with carrying out the work</li> <li>• Provide any information needed for the health and safety file</li> <li>• Inform principal contractor of problems with the plan</li> <li>• Inform principal contractor of reportable accidents, diseases and dangerous occurrences</li> </ul>

	All construction projects (Part 2 of the Regulations)	Additional duties for notifiable projects (Part 3 of the Regulations)
Workers/ everyone	<ul style="list-style-type: none"> <li>• Check own competence</li> <li>• Co-operate with others and co-ordinate work so as to ensure the health and safety of construction workers and others who may be affected by the work</li> <li>• Report obvious risks</li> </ul>	

## Construction Regulations 1989 (Head Protection)

Head protection must be suitable, must fit securely and comfortably and be provided where there is a foreseeable risk of injury from falling objects. Damaged head protection must be replaced. Workers must wear any head protection provided, store it in appropriate accommodation provided and report any losses, defects or damage.

## Provision and Use of Work Equipment Regulations, 1998

PUWER covers everything from a photocopier to a combine harvester. It places duties on employers in all industries to provide work equipment that is safe, irrespective of how old it is or where it has come from.

Introduced to implement an EU Directive, the HSE says it has taken the opportunity to 'simplify and clarify' Britain's own laws, which dealt with work equipment and 17 different sets of Regulations.

The PUWER legislation will prove to be one of the most important regulations that will affect Unite safety representatives. These included requirements of the Abrasive Wheels 1970, the Woodworking Machines Regulations 1974 and the Construction (General Provisions) Regulations 1961, seven of the Factories Act 1961 (including Sections 12-16), one section of the Offices, Shops and Railway Premises Act 1963 (S17) and two sections of the Mines and Quarries Act 1954.

### Scope of the regulations

'Work equipment' covers any machines, appliances, apparatus, tools or plant used at work. 'Use' covers starting, stopping, modifying programming, setting, transporting, maintaining, servicing and cleaning. These wide definitions mean that the Regulations apply to an extensive range of workplaces and work activities.

### Definitions and applications (Regulations 1-4)

Almost all employment relationships and the places of work involved,

where HASAWA applies, are within the scope. This includes all industrial sectors, offshore operations and service occupations. All activities involving work equipment are dealt with in the Regulations, and any machine, appliance, apparatus or tool used at work or made available for use in non-domestic premises is covered. All the requirements apply to employers, the self-employed in respect of personal work, persons holding obligations under Section 4 of HASAWA (control of premises) in connection with the carrying on of a trade, business or other undertaking, and persons occupying factories as defined by Section 175 of the Factories Act 1961.

#### **Suitability (Regulation 5)**

The most important requirement of the Regulations is that the equipment is 'suitable' for the job it has to do. Employers must look at the design, construction or adaptation of the equipment. They must also take into account the working conditions and hazards in the workplace.

For example, a petrol generator discharging exhaust fumes should not be used in an enclosed space. Finally, they should ensure that equipment is used only for operation for which it is suitable.

For example, knives with unprotected blades are often used for cutting operations where scissors could be used more safely. The risk assessment required under the Management Regs will help employers to select work equipment and assess its suitability for particular tasks.

#### **Maintenance (Regulation 6)**

This Regulation requires that equipment be maintained 'in an efficient state, in efficient working order and in good repair.' Maintenance work should only be done by those who have received adequate information, instruction and training relating to that job. A record of maintenance should be kept.

#### **Restricted Use (Regulation 7)**

Restricts use of equipment to persons given the task of using it, and where maintenance or repairs have to be done, those doing it must be nominated.

#### **Information, instruction and training (Regulations 8 and 9)**

Employers must give adequate and easily understood information and, as appropriate, written instructions to employees on the 'conditions in which and the methods by which work equipment may be used; foreseeable abnormal situations and the action to be taken if such a situation were to occur; and any conclusions to be drawn from experience is using the work equipment'.

They must also check that written instructions from manufacturers and suppliers are made available both to those directly using the equipment, to supervisors and manager. Training is required for any employee not competent enough to use, supervise or manage work equipment safely.

#### **Compliance with other EU Directives (Regulation 10)**

All work equipment taken in to use for the first time after 1992 will have to comply with any other relevant Directive, for example, the Machinery Safety Directive, and those on simple pressure vessels, tractors, noise and industrial trucks.

#### **Hazards or work equipment (Regulations 11-24)**

Deal with specific hazards associated with the use of work equipment. In most cases the requirements are aimed at the provision of equipment

which is safe and without risks to health and the need to ensure that work equipment is provided with appropriate safety devices or protected against failure.

Specific requirements are designed to reduce the risk to employees from dangerous parts of machinery (Regulation 11). This includes measures to prevent access to dangerous parts of machinery and to stop movement of any dangerous part before someone enters the danger zone. These measures must consist of guards or protection devices as far as practicable, and detailed requirements relating to them are also established. In working out the existence, size and position of a danger zone, account is only taken of the risk of contact with dangerous parts of machines.

**Examples of work equipment covered by the regulations****Machines**

dumper truck  
 harvesting machines  
 X-ray baggage detectors  
 laser check out machines  
 air compressors  
 automatic car wash  
 computer  
 crane  
 power press  
 road tanker  
 tractor  
 fork lift truck  
 lawn mower  
 crampers  
 overhead projector  
 slide projector

**Tools**

portable drill  
 stapler  
 syringe  
 shotgun  
 butcher's knife  
 drill bit  
 hammer  
 socket set  
 torch  
 handlamp  
 portable saw

**Apparatus/Appliances**

ladders, access platforms  
 beer pumps  
 laboratory apparatus  
 pipettes  
 bunsens  
 glassware  
 heating mantle  
 safety cabinets  
 knapsack sprayer  
 photoelectric device  
 work benches  
 detonators  
 circus trapeze  
 resuscitator  
 fire engine  
 turn table  
 hydraulic platform

**Other equipment**

milking parlour  
 drilling rig  
 pit winding gear  
 reactors  
 scaffolding  
 cooling towers  
 pressure vessel  
 body store  
 blast furnace  
 robot line  
 degreasing bath

In selecting preventive measures, the Regulation sets out a hierarchy:

- (a) Fixed, enclosing guards to the extent practicable, but where not...
- (b) Other guards or protection devices to the extent where practicable, but where not...
- (c) Protection appliances (jigs, push bikes etc) to the extent practicable, but where not.
- (d) Provision of information, instruction, training and supervision  
 Guards and devices are to be:
- (e) Suitable for the purpose and of good constructions, sound material and adequate strength
- (f) Adequately maintained, in good repair and efficient working order
- (g) Not the source of additional risk
- (h) Not easily bypassed or disabled
- (i) Situated at sufficient distance from the danger zone
- (j) Not unduly restrictive of any necessary view of the machine
- (k) Constructed or adapted to allow maintenance or part replacement without removing them

**Control of hazards (Regulation 12)**

Exposure of a person to specified hazards must be prevented by the employer as far as is reasonably practicable, or adequately controlled where it is not. The specific hazards are:

- (a) Ejected or falling objects
- (b) Rupture or disintegration of parts of the work equipment
- (c) Fire or overheating of the work equipment
- (d) The unintended or premature discharge or ejections of any article or of any gas, dust, liquid, vapour or other substance produced, used or stored in the work equipment
- (e) The unintended or premature explosion of the work equipment or any material produced, used or stored in it This Regulation does not apply where other specified Regulations apply, on COSHH, noise, ionising radiations, asbestos, lead and head protection in construction activities.

**High or very low temperature (Regulation 13)**

Measures must be taken to ensure that people do not come into contact with work equipment, parts of work equipment or any article or substance produced, used or stored in it that are likely to burn, scald or sear.

**Provision and use of control systems (Regulations 14-18)**

These set out specific requirements related to the provision, location, use and identification of control systems and controls on work equipment.

They relate to controls for starting or making a significant change in operating conditions, stop controls emergency stop controls, controls in general and control systems.

**Isolation for sources of energy (Regulation 19)**

All work equipment is to have a means to isolate it from all its source of energy. The means will have to be clearly identifiable and readily accessible. Reconnection of equipment to any energy source must not expose people to any risk.

**Stability (Regulation 20)**

Work equipment is to be stable by clamping or otherwise where necessary to avoid risks.

**Lighting (Regulation 21)**

Places where work equipment is used have to be suitably and sufficiently lit, taking into account the kind of work being done.

**Maintenance operations (Regulation 22)**

As far as is reasonably practicable, maintenance operations are to be done while the work equipment is stopped. Otherwise, other protective measures are to be taken, unless maintenance people can do the work without exposure to risk.

**Markings and warnings (Regulations 23 and 24)**

Employers must ensure that all work has clearly visible markings where appropriate and any warnings or warning devices appropriate for health and safety. Warnings will be inappropriate unless they are unambiguous, easily perceived and easily understood.

**The Supply of Machinery 1992 (amended 1994) (Safety) Regulations**

These regulations provide useful 'leverage' against suppliers or manufacturers who supply equipment below an acceptable safety standard. Knowledge of the regulations is essential for those who advise on the safety requirements for equipment used and built-in-house either in a production, or a research environment.

Because the Regulations are far more specific than the general duties imposed on manufacturers and suppliers of plant and equipment used at work, an overall tightening of machinery safety standard should be achieved.

Since 1995, new machinery supplied within the UK has been required to carry the CE mark, to indicate compliance with EU safety

**Machinery maintenance**

Sections 2(1) and (2)(a) of HASAWA and Regulation 22 and Guidance to PUWER cover maintenance. Regular maintenance and inspection of machines and their safeguards are essential in order to discover potential problems and put them right.

Safeguards should not be installed and then left without preventative maintenance by a competent person.

The Guidance states:

'Ideally there is no risk associated with the maintenance operation. For example, lubrication points on machines may be designed so that they can be used safely even while the machine is in motion, or adjustment points positioned so that they can be used without opening guards.

If, however, the maintenance work might involve a risk, this Regulation requires that the installation should be designed so that work can, so far as is reasonably practicable, be carried out with the equipment stopped or inactive. This will probably be the case for most equipment.

If equipment has to be running or working during a maintenance operation and this presents risks, measures should be taken to enable the operation of the equipment in a way that reduces the risk. These measures include further safeguards or functions designed into the equipment, such as limiting the power, speed or range of movements that is available to dangerous parts during maintenance operations.'

Regulation 9 of PUWER states:

Every employer shall ensure that all persons who use work equipment have received adequate training for purposes of health and safety, including training in the methods which may be adopted when using the work equipment, any risks which such use may entail and precautions to be taken.

Every employer shall ensure that any of his employees who supervises or manages the use of work equipment has received adequate training for purposes of health and safety, including training in the methods which may be adopted when using the work equipment, any risks which such use may entail and precautions to be taken.

Training and instruction is a central requirement of both HASAWA and of many specific Regulations. Regulation 11 of the Management Reg requires employers to provide their employees with general health and safety training. This should be supplemented as necessary with more specific training on the use of work equipment. The detailed training requirements in, for example, the Woodworking Machines Regulations 1974 and the Abrasive Wheels Regulations 1970 are not replaced by PUWER and continue to apply.

## Control Of Substances Hazardous to Health Regulations 2002 (COSHH)

The COSHH Regulations 2002, is the main piece of legislation covering control of risks from chemicals, respiratory sensitisers and toxic substances generally. The Regulations set out, within a single legislative framework, the steps which employers must take to control the exposure of workers to substances hazardous to health.

The definition of carcinogens takes into account the Chemicals (Hazard Information and Packaging) Regulations 1994 CHIP2.

The broad scope to COSHH 2002 requires employers to make an assessment of the risk to health that may arise from the use of substances at the workplace, establish and maintain the necessary control measures, and provide monitoring of exposure and health surveillance.

### What is a substance hazardous to health under COSHH?

Under COSHH there are a range of substances regarded as hazardous to health: Substances or mixtures of substances classified as dangerous to health under the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP). These can be identified by their warning label and the supplier must provide a safety data sheet for them. Many commonly used dangerous substances are listed in the HSE publication **Approved Supply List. Information approved for the classification and labeling of substances and preparations dangerous for supply**, as part of the CHIP package. Suppliers must decide if preparations and substances that are not in the **Approved Supply List** are dangerous, and if so, label them accordingly.

Substances with workplace exposure limits are listed in the HSE publication **EH40/2005 Workplace exposure limits**.

Biological agents (bacteria and other micro-organisms), if they are directly connected with the work, such as with farming, sewage treatment, or healthcare, or if the exposure is incidental to the work (e.g. exposure to bacteria from an air-conditioning system that is not properly maintained).

Any kind of dust if its average concentration in the air exceeds the levels specified in COSHH. Any other substance which creates a risk to health, but which for technical reasons may not be specifically covered by CHIP including: asphyxiants (i.e. gases such as argon and helium, which, while not dangerous in themselves, can endanger life by reducing the amount of oxygen available to breathe), pesticides, medicines, cosmetics or substances produced in chemical processes.

**What is not a substance hazardous to health under COSHH?**

COSHH applies to virtually all substances hazardous to health except: asbestos and lead, which have their own regulations; substances which are hazardous only because they are:

radioactive;  
at high pressure;  
at extreme temperatures; or have explosive or flammable properties (other regulations apply to these risks);  
biological agents that are outside the employer's control, e.g. catching an infection from a workmate.

For the vast majority of commercial chemicals, the presence (or not) of a warning label will indicate whether COSHH is relevant. For example, there is no warning label on ordinary household washing-up liquid, so if it's used at work you do not have to worry about COSHH; but there is a warning label on bleach, and so COSHH does apply to its use in the workplace.

**Step 1: Assess the risks**

The first step is to decide whether there is a problem with the substance(s) your employer is using, or those to which your employees are incidentally exposed. This is called a risk assessment.

He must :  
identify the hazardous substances present in your workplace; consider the risks these substances present to people's health.

**Identify the hazardous substances present in the workplace**

Remember to think about substances, which have been supplied to the workplace; those produced by your work activity, e.g. fumes, vapours, aerosols, final products and waste materials; and those naturally or incidentally present in your workplace, e.g. infectious agents carried by farm animals.

**Consider the risks these substances present to people's health**

Assessing the risk involves making a judgment on how likely it is that a hazardous substance will affect someone's health.

Take into consideration :

How much of the substance is in use or produced by the work activity and how could people be exposed to it?

Who could be exposed to the substance and how often?

Include all groups of people who could come into contact with the substance, i.e. contractors, visitors and members of the public, as well as employees.

Do not forget those involved in cleaning and maintenance tasks – high exposures can occur during this type of work. Also, certain groups of people could suffer more from exposure than others, e.g. pregnant women, individuals with a suppressed immune system.

Is there a possibility of substances being absorbed through the skin or swallowed (e.g. as a result of a substance getting into the mouth from contaminated hands during eating or smoking)?

Are there risks to employees at other locations if they work away from your main workplace?

**Who should do the assessment?**

The employer, has legal responsibility for the assessment, but others can do some or even most of the work of preparing it.

Except in very simple cases, whoever carries out the assessment will need to: have access to and understand the COSHH Regulations and relevant Approved Codes of Practice or to someone else who does; be able to get all the necessary information and have the knowledge and experience to make correct decisions about the risks and the actions needed. You and your employees have the most knowledge of what really happens in the

**Step 2: Decide what precautions are needed**

If significant risks are identified, decide on the action needed to be taken to remove or reduce them to acceptable levels.

**Recording and reviewing the assessment**

If there are five or more employees a record of the main findings of

the assessment must be kept, either in writing or on computer. The record should be made as soon as practicable after the assessment and contain enough information to explain the decisions taken, about whether risks are significant, and the need for any control measures.

Also record the actions of employees and others need to take to ensure hazardous substances are adequately controlled. If it is decided that there is no risk to health or the risk is trivial, it may need to record and identify of the substance, the control measures taken, and the fact that it poses little or no risk.

If a generic risk assessment using COSHH essentials has been carried out, the completed forms or print outs could be used as a basis for the record of the risk assessment.

The assessment should be a 'living' document, which you revisit if circumstances change. It should definitely be reviewed when:

- there is reason to suspect the assessment is no longer valid;
- there has been a significant change in the work;
- the results of monitoring employees' exposure shows it to be necessary.

The assessment should state when the next review is planned.

### **Step 3: Prevent or adequately control exposure** **Prevent exposure**

The COSHH Regulations require an employer to prevent exposure to substances hazardous to health, if it is reasonably practicable to do so.

The employer might:

- change the process or activity so that the hazardous substance is not needed or generated;
- replace it with a safer alternative;
- use it in a safer form, e.g. pellets instead of powder.

### **Adequately control exposure**

If prevention is not reasonably practicable, the employer must adequately control exposure. He should consider and put in place measures appropriate to the activity and consistent with the risk assessment, including, in order of priority, one or more of the following:

use appropriate work processes, systems and engineering controls, and provide suitable work equipment and materials e.g. use processes which minimise the amount of material used or produced, or equipment which totally encloses the process; control exposure at source (e.g. local exhaust ventilation), and reduce the number of employees exposed to a minimum, the level and duration of their exposure, and the quantity of hazardous substances used or produced in the workplace; provide personal protective equipment (e.g. face masks, respirators, protective clothing), but only as a last resort and never as a replacement for other control measures that are required.

### **Meaning of 'adequate control'**

Under COSHH, adequate control of exposure to a substance hazardous to health means: applying the eight principles of good practice set out in Schedule 2A to COSHH; not exceeding the workplace exposure limit (WEL) for the substance (if there is one); and if the substance causes cancer, heritable genetic damage or asthma, reducing exposure to as low a level as is reasonably practicable.

HSC has established WELs for a number of substances hazardous to health.

These are intended to prevent excessive exposure to specified hazardous substances by containing exposure below a set limit.

A WEL is the maximum concentration of an airborne substance, averaged over a reference period, to which employees may be exposed by inhalation. WELs are listed in **EH40/2005 Workplace exposure limits**.

Correctly applying the principles of good practice will mean exposures are controlled below the WEL. Advice on applying the principles can be found in the COSHH ACOP.

### **Adequate control of carcinogens, mutagens and asthmagens**

COSHH acknowledges the particular hazards of substances that cause cancer, heritable genetic damage or asthma by requiring that exposure to these is reduced to as low a level as is reasonably practicable

For carcinogens (substances which may cause cancer) or mutagens (substances which may cause heritable genetic damage) special requirements apply. These are in regulation 7(5) of COSHH and explained in Appendix 1 of the COSHH ACOP.

### **Skin absorption**

Some substances can damage the skin itself while others can readily penetrate it, become absorbed into the body and cause harm, so you must consider the need to protect skin when deciding on control measures. The guide **COSHH essentials: Easy steps to control chemicals** contains useful advice on skin protection.

### **Step 4: Ensure that control measures are used and maintained Using the controls**

COSHH requires employees to make proper use of control measures and to report defects. It is the employer's responsibility to take all reasonable steps to ensure that they do so. This is why employees must receive suitable training, information and appropriate supervision.

### **Maintain controls**

COSHH places specific duties on employers to ensure that exposure controls are maintained. The objective being to ensure that every element of the control

measure continues to perform as originally intended. This applies to items of equipment such as local exhaust ventilation and to systems of work, which will have to be regularly checked to make sure that they are still effective. Respiratory protective equipment should also be examined and, where appropriate, tested at suitable intervals. COSHH sets specific intervals between examinations for local exhaust ventilation equipment, and the employer must retain records of examinations and tests carried out (or a summary of them) for at least five years.

### **Step 5: Monitor exposure**

Under COSHH, the employer has to measure the concentration of hazardous substances in the air breathed in by workers where your assessment concludes that:

there could be serious risks to health if control measures failed or deteriorated; exposure limits might be exceeded; or control measures might not be working properly.

However, he does not need to do this if you can show by another method of evaluation that you are preventing or adequately controlling employees' exposure to hazardous substances, e.g. a system which automatically sounds an alarm if it detects hazardous substances. The COSHH ACOP provides examples of other alternative methods of evaluation.

Air monitoring must be carried out when employees are exposed to certain substances and processes specified in Schedule 5 to the COSHH Regulations.

Where it is appropriate to carry out personal air monitoring, the air to be sampled is the space around the worker's face from where the breath is taken, i.e. the breathing zone.

The employer should keep and maintain a record of any exposure monitoring you carry out for at least five years. Where an employee has a health record (required where they are under health surveillance) any monitoring results relevant to them as an individual must be kept with their health record. They should be allowed access to their personal monitoring record.

### **Step 6: Carry out appropriate health surveillance**

COSHH requires the employer to carry out health surveillance in the following circumstances: where an employee is exposed to one of the substances listed in Schedule 6 to COSHH and is working in one of the related processes, e.g. manufacture of certain compounds of benzene, and there is a reasonable likelihood that an identifiable disease or adverse health effect will result from that exposure; where employees are exposed to a substance linked to a particular disease or adverse health effect and there is a reasonable likelihood, under the conditions of the work, of that disease or effect occurring and it is possible to detect the disease or health effect.

Health surveillance might involve examination by a doctor or trained nurse. In some cases trained supervisors could, for example, check employees' skin for dermatitis, or ask questions about breathing difficulties where work involves substances

known to cause asthma. The employer must keep a simple record (a 'health record') of any health surveillance carried out. COSHH requires the employer to keep health records for at least 40 years. (If a business ceases to trade, its health records should be offered to HSE for safe keeping.)

### **Step 7: Prepare plans and procedures to deal with accidents, incidents and emergencies**

This will apply where the work activity gives rise to a risk of an accident, incident or emergency involving exposure to a hazardous substance, which goes well beyond the risks associated with normal day-to-day work. In such circumstances, the employer must plan his response to an emergency involving hazardous substances before it happens.

That means preparing procedures and setting up warning and communication systems to enable an appropriate response immediately any incident occurs, and ensuring that information on your emergency arrangements is available to those who need to see it, including the emergency services. It also requires these 'safety drills' to be practiced at regular intervals.

If any accident, incident or emergency occurs you must ensure that immediate steps are taken to minimise the harmful effects, restore the situation to normal and inform employees who may be affected. Only those staff necessary to deal with the incident may remain in the area and they must be provided with appropriate safety equipment.

However, the employer does not have to introduce these emergency procedures if: the quantities of substances hazardous to health present in the workplace are such that they present only a slight risk to the employees' health; and the measures you have put in place under Step 3 are sufficient to control that risk.

However, the requirements described in Step 7 must be complied with in full where either carcinogens, mutagens or biological agents are used.

### **Step 8: Ensure that employees are properly informed, trained and supervised**

COSHH requires the employer you to provide the employees with suitable and sufficient information, instruction and training that should include: the names of the substances they work with or could be exposed to and the risks created by such exposure, and access to any safety data sheets that apply to those substances; the main findings of the risk assessment; the precautions they should take to protect themselves and other employees; how to use personal protective equipment and clothing provided; results of any exposure monitoring and health surveillance (without giving individual employees' names); emergency procedures which need to be followed.

The employer should update and adapt the information, instruction and training to take account of significant changes in the type of work carried out or work methods used. He should also ensure that the employee is provided with information etc that is appropriate to the level of risk identified by the assessment and in a manner and form in which it will be understood by employees.

These requirements are vital. The employer must ensure that employees understand the risks from the hazardous substances they could be exposed to. The control measures will not be fully effective if the employees do not know their purpose, how to use them properly, or the importance of reporting faults.

## **COSHH Essentials**

Easy steps to control health risks from chemicals

About COSHH Essentials

COSHH Essentials has been developed to help firms comply with the Control of Substances Hazardous to Health Regulations (COSHH).

COSHH requires employers to:

- assess the risks to health from chemicals and decide what controls are needed;
- use those controls and make sure workers use them;
- make sure the controls are working properly;
- inform workers about the risks to their health;
- train workers.

COSHH Essentials provides advice on controlling the use of chemicals for a range of common tasks, eg mixing, or drying.

COSHH essentials and how to use it can be viewed on the HSE site at: <http://www.coshh-essentials.org.uk/>

COSHH Essentials was developed by HSE, in collaboration with the TUC and CBI.

## The Health and Safety Regulations 1981 (First Aid)

The Health and Safety (First-Aid) Regulations 1981 require the employer to provide adequate and appropriate equipment, facilities and personnel to enable first aid to be given to employees if they are injured or become ill at work.

What is adequate and appropriate will depend on the circumstances in the workplace and the employer should assess what are the first aid needs.

The minimum first-aid provision at any workplace is:

- (a) A suitably stocked first-aid box
- (b) An appointed person to take charge of first-aid arrangements

It is also important to remember that accidents can happen at any time.

### First-aid provision needs to be available at all times people are at work

An appointed person is someone the employer chooses to take charge

when someone is injured or falls ill, including calling an ambulance if required. The appointed person must look after the first-aid equipment, e.g. by restocking the first-aid box.

Appointed persons should not attempt to give first aid for which they have not been trained, though short emergency first-aid training courses are available. Remember that an appointed person should be available at all times people are at work on site. This may mean appointing more than one person.

A first aider is someone who has undergone a training course in administering first aid at work and holds a current first aid at work certificate. **The training has to have been approved by HSE.** Lists of local training organisations are available from HSE Offices. You may decide, following your first-aid assessment, that you need one or more first aiders. A first aider can undertake the duties of an appointed person.

It is not possible to give hard and fast rules on when or how many first aiders or appointed persons might be needed. This will depend on the circumstances of each particular organisation or worksite. The following table offers suggestions on how many first aiders or appointed persons might be needed in relation to categories of risk and number of employees. The details in the table are suggestions only – they are not definitive nor are they a legal requirement. It is for your employer to assess your first-aid needs in the light of your particular circumstances.

### The employer must inform employees of the first aid arrangements.

Putting up notices telling staff who and where the first aiders or appointed persons are and where the first-aid box is will usually be sufficient. They will need to make special arrangements to give first-aid information to employees with reading or language difficulties.

### Suggested numbers of first-aid personnel

First-aid personnel should be available at all times to people who are at work, based on assessments of risk and number of workers. This table is based upon the recommendations of the HSE.

**Category of risk Numbers Suggested employed at number of any location first-aid personnel****Lower risk**

e.g. shops and offices, Fewer than 50 At least one appointed person  
libraries 50-100 At least one first aider  
More than 100 One additional first aider for every 100 employed

**Medium risk**

e.g. light engineering Fewer than 20 At least one appointed person  
and assembly work, 20-100 At least one first aider for every food  
processing, 50 employed (or part thereof) warehousing More than  
100 One additional first aider for every 100 employed

**Higher risk**

e.g. most construction, Fewer than five At least one appointed person  
slaughter houses, chemical 5-50 At least one first aider manufacture,  
extensive work More than 50 one additional first aider for with  
dangerous machinery every 50 employed or sharp instruments

**The Lifting Operations and Lifting Equipment Regulations 1998**

Employers have duties under these Regulations in situations where lifting equipment is used by employees at work. Self-employed persons have a similar duty with regard to lifting equipment they use at work.

In addition, persons who have any control of lifting equipment, or who use, supervise or manage the use of lifting equipment also have a duty under the Regulations, but only to the extent of their control.

These duties do not apply in cases where the lifting equipment has been supplied by way of sale, agreement for sale or hire purchase agreement.

**Strength and Stability (Regulation 4)**

Lifting equipment must be of adequate strength and stability for each individual load raised or lowered. Particular attention must be paid to

the stresses incurred at the mounting or fixing points. Load parts and any attachments used in the lifting operation must also be of adequate strength.

**Lifting equipment for lifting persons (Regulation 5)**

Lifting equipment used for lifting people must prevent anyone using it from being crushed, trapped or struck, and from falling from the carrier. Similar precautions are required for work activities being carried out from the carrier, as far as reasonably practicable. There must also be suitable devices to prevent the risk of a carrier from falling. If this risk cannot be prevented, the carrier must have an enhanced safety coefficient suspension rope or chain which must be inspected on each working day. People trapped inside a carrier must be protected from danger and be able to be freed.

**Positioning and installation (Regulation 6)**

Lifting equipment must be positioned and installed so as to be safe, and minimise the risks, as far as reasonably practicable, of the lifting equipment or its load striking a person, or its load drifting, falling freely or being unintentionally released.

Suitable devices must be provided to prevent people from falling down lift shafts or hoist ways.

**Marking of lifting equipment (Regulation 7)**

Lifting equipment must be clearly marked with its safe working loads. In situations where the safe working load is reliant on the equipment configuration, the safe working load for each configuration must be clearly marked on the lifting equipment. Alternatively, information containing these details must be kept with the lifting equipment.

Accessories used in lifting operations must be marked with any information necessary to ensure their safe use. Lifting equipment intended for lifting people must be clearly marked as such. Any lifting equipment not intended for lifting people, but which may be mistakenly used as such, must also be clearly marked to this effect.

**Organisation of lifting operations (Regulation 8)**

Lifting operations involving lifting equipment must be properly planned by a competent person, appropriately supervised and carried out in a safe way.

**Thorough examination and inspection (Regulation 9)**

Lifting equipment must be thoroughly examined for defects before it is put into service for the first time. This does not apply in situations where the lifting equipment has not been used before and there is an accompanying EC declaration of conformity (where this is appropriate) that is less than 12 months old before the lifting equipment was put into service. Lifting equipment obtained from a third party must be accompanied by physical evidence of the last thorough examination before it is used in the new employer's premises.

Lifting equipment must also be thoroughly examined to ensure correct installation and safe operation after it has been installed and before being put into service for the first time, or after it has been relocated if its safety is dependent on its installation.

Where lifting equipment is exposed to conditions that may cause deterioration likely to result in danger, it must be thoroughly examined as follows:

- (a) Lifting equipment for lifting people: at least every six months
- (b) Other lifting equipment: at least every 12 months. In both cases, a competent person must draw up an examination scheme, i.e. a suitable scheme that determines the frequency of the thorough examinations.

A competent person may inspect lifting equipment at suitable intervals between thorough examinations if necessary. Lifting equipment that was required to be thoroughly examined under specified legislation that has been repealed or revoked by these Regulations, must undergo another thorough examination before the date on which the previous thorough examination is due for renewal.

**Reports and defects (Regulation 10 and Schedule 1)**

The person undertaking the thorough examination must notify the employer immediately of any defects that are, or could be, a danger to people. As soon as practicable they must submit a written and signed report to the employer and, if appropriate, the person hiring or leasing the lifting equipment.

The enforcing authority must also receive a copy of any report where there is an existing or imminent risk of serious personal injury due to a defect in the lifting equipment. For lifting equipment that has been hired or leased, the enforcing authority is the HSE, in other cases it is the enforcing authority for the premises.

The employer must be notified immediately of any defects noted during an inspection of the lifting equipment that pose, or may pose, a danger to people. A written record of the inspection must be made.

Employers may not use any lifting equipment notified as having a defect before the defect is corrected. In cases where the defect could become a danger, the lifting equipment may not be used after the time specified in the report (i.e. the time after which the defect is deemed by the competent person to be dangerous) until the defect is corrected.

Employers must retain EC declarations of conformity that relate to lifting equipment obtained after 5 December 1998 for as long as they operate the lifting equipment.

Thorough examination reports for lifting equipment must be retained until the lifting equipment ceases to be used. The thorough examination reports for lifting equipment accessories must be kept for two years.

Thorough examination reports relating to the installation or assembly of lifting equipment must be kept until the equipment ceases to be used at the location where it was installed or assembled. Finally, thorough examination reports that relate to the deterioration in condition of lifting equipment must be kept either until the next report is made, or for two years, whichever is the later.

Records relating to the inspection of lifting equipment must be kept until the next record is made.

## Noise at Work Regulations 2006

The Noise at Work Regulations 2006 apply to all workers in Great Britain, and to those offshore activities within the scope of the Health and Safety at Work etc Act 1974, except the crews of sea-going ships, aircraft, or hovercraft moving under their own power. Employers (and mine or quarry managers) are responsible for action at the workplace, and employees must cooperate with their employers' programme to prevent hearing damage. Machine designers, manufacturers, importers and suppliers also have duties.

The Noise at Work Regulations deal only with people at work and with risks to hearing, not other aspects of health, safety and welfare. The duties set out in the Health and Safety at Work etc Act 1974, and the Management of Health and Safety at Work Regulations 1999, are more general in scope. This means that employers will need to take action if noise causes risks other than hearing damage, or creates risks to people other than workers. For example:

- (a) If background noise reduces the audibility of a warning sound
- (b) Where people who are not at work are exposed to noise risk

## The Noise at Work Regulations 2006 and Guidance on the Noise at Work Regulations (L108)

### Action levels (Regulation 2)

Three 'action levels' are defined:

- (a) The first action level refers to a daily personal noise exposure of 80dB(A)
- (b) The second action level refers to a daily personal noise exposure of 85dB(A). The daily total personal exposure to noise at work at action levels 1 and 2, takes no account of any ear protectors worn
- (c) The third level is a peak action level of 140 pascals

### Assessment of exposure (Regulation 4)

Employers are required to make adequate arrangements for the assessment of exposure where this is likely to be at or above either the first or peak action levels. A 'competent person' should make the assessment.

Noise assessments must be reviewed when there has either been a significant change in the work to which the assessment relates, or wherever there is reason to suspect that the assessment is no longer valid.

The noise assessment will help the employer to:

- (a) Identify the daily noise exposure of all employees who might be at risk of hearing damage
- (b) Obtain information necessary to control the noise exposure
- (c) Draw up an informed action plan to reduce the risk of hearing damage.

### Five steps to noise assessment (Guidance 20)

**Step 1** Look to see whether there is likely to be a noise hazard

**Step 2** Identify all workers likely to be exposed to the hazard

**Step 3** Evaluate the risks arising from the hazard

**Step 4** Record the findings

**Step 5** Review the assessment and revise it if necessary

### Competent persons (Guidance 109-111)

A competent person should be capable of bringing together and presenting enough information about the noise exposures. They do not need detailed knowledge and experience of selecting and designing control measures to complete a noise assessment, but will need to indicate where other further specialist assistance is required.

This will enable the employer to make correct decisions on complying with the legislation, and whether additional specialist support is necessary. Knowledge alone is not sufficient, the competent person should also possess appropriate experience and skills including:

- (a) Being clear about the purpose of assessments

- (b) A good basic understanding of what information needs to be obtained
- (c) An appreciation of his or her own limitations
- (d) How to make measurements
- (e) How to record results, analyse and explain them to others
- (f) The reasons for using various kinds of instrumentation and how to use and look after the instruments involved
- (g) How to interpret information

#### Records (Regulation 5)

Employers must ensure that an adequate record of the assessment and of any review is kept. The best person to complete the noise assessment record is the competent person.

#### Reduction of risk of hearing damage (Regulation 6)

Employers are obliged to reduce the risk of damage to the hearing of employees from exposure to noise, to the lowest level reasonably practicable, ie eliminated at source or reduced to a minimum irrespective of action levels.

#### Reduction of noise exposure (Regulation 7)

Where employees are exposed:

- (a) At or above the second action level – a daily personal exposure level of 85dB(A)
- (b) Or the peak action level (peak sound pressure of 140 pascals)  
Employers are required to ensure that exposure is reduced to the lowest level reasonably practicable other than by the provision of ear protectors. The most reliable way of limiting exposure is to reduce the level of workplace noise. The noise assessment should have identified the sources of noise in the workplace, and the ways noise levels can be reduced.

Employers should develop a plan of action to:

- (a) Identify steps that are reasonably practicable to reduce the noise level by engineering means
- (b) Establish priorities

- (c) Ensure action is taken
- (d) Reassess noise exposure.

#### Control of noise exposure

##### Design of workplaces for low noise emission

Noise emissions and noise exposure can be limited by careful choice of design, layout and construction materials used for a building.

##### Substitution of a quieter process or machine

Changes in technology can alter the machine or process resulting in a lower noise exposure to the workforce. Sometimes a different way of working might avoid the need for a noisy operation.

Some changes may produce better quality control, design and manufacturing procedures, reducing the need for noisy assembly practices and the need to rectify faults.

Purchasing low-noise machines through a positive purchasing policy is often the most cost-effective, long-term measure that can be taken. The introduction of a local noise limit, that is a realistic low-noise emission level for incoming plant and equipment, can be very helpful.

#### Engineering control

It is good practice to establish the contribution from all sources in the total noise field, and to establish which is the most dominant. Methods of limiting noise generation include:

avoiding impacts or making arrangements to cushion them

- (a) Damping involving adding material to reduce induced vibrations and the tendency of machine parts to 'ring'
- (b) Isolation involving separating the machine from its surroundings
- (c) Silencers which are attachments fitted to the inlet or exhaust of a moving air or gas stream emitted from machines
- (d) Active noise control that is an electronic-controlled noise reduction method, which involves the reduction or cancellation of one sound by the introduction of a second sound having equal amplitude
- (e) Machine maintenance which can be very effective in limiting noise emission.

**Modification of the routes by which noise reaches workplaces**

The path between the points at which the noise is generated and the workplace can sometimes be modified by the following means:

- Enclosure involving placing a sound-proof cover over the noise source. Noisy machines can be enclosed fully, or a partial enclosure or an acoustic cover can be placed around a noisy part of a machine
- Screens and barriers involving the placing of a physical obstacle between the noise source and the employees. These measures have limitations, but their performance can be enhanced by the use of sound absorbing materials
- Noise refuges where the employee workstation is surrounded by an acoustically designed enclosure
- Increasing the distance between a person and the noise source. Reduction The final approach in the control hierarchy is reduction of exposure times. This can be achieved by job design, where noisy devices are only used when they are actually needed. Job rotation can also reduce exposure, where employees move between noisy and quieter machines.

**Ear protection (Regulation 8)**

Where employees are likely to be exposed to:

- The second action level of 85dBA or above, in circumstances where the daily personal noise exposure is likely to be less than 85(A), suitable and efficient personal ear protectors must be available to those who request them
- The second action level of 95dBA or above, or to the peak action level of 140 pascals or above, suitable personal ear protectors must be provided

**It is made absolutely clear in the Guidance to the Noise at Work Regulations that 'the use of ear protection is a last resort to control noise exposure. It should only be considered where it is not reasonably practicable to control exposure by other means' it goes on to give detailed guidance on the selection and use of personal ear protection.**

**Ear protection zones (Regulation 9)**

Where employees are likely to be exposed to the second action level of 85dBA, or to the peak action level of 140 pascals, the employer should designate an ear protection zone. This should be demarcated and identified by a sign indicating that this is an ear protection zone, and that employees must wear personal ear protectors whilst in the zone.

**Maintenance and use of equipment (Regulation 10)**

Employers are required to ensure that anything that is provided is:

- Fully and properly used
- Maintained in an efficient state, in efficient working order, and in good repair

Employers should introduce a planned programme of maintenance which includes:

- Inspecting noise control equipment periodically
- Monitoring the equipment's effectiveness
- Reporting the results to a responsible person for action

**Employees' duties (Regulation 10(2))**

Employees are required to make full and proper use of ear protectors provided at or above the second action level of 85dBA, or to the peak action level of 140 pascals, and any other protective measures. Defects should be reported to the employer.

**Provision of information to employees (Regulation 11)**

Employers must provide employees who are likely to be exposed to the first action level of 80dBA or above, with adequate information instruction and training on:

- The risk of hearing damage that exposure may cause
- Steps to minimise that risk
- Steps to be taken by employees in order to obtain personal ear protection
- Employees' obligations

**Safety representatives (Guidance 71)**

Employers are reminded under this guidance, to make information available to safety representatives. This includes entitlement to inspect employer's documents, including records of noise assessments.

Employers should also make sure that union safety representatives know how information can be obtained.

**Audiometry**

The appropriate technique for noise health surveillance is audiometry. It involves asking the subject to listen to a range of pulsed pure tones over a chosen range of frequencies and recording hearing response on a chart called an audiogram. Assessment of the audiogram then enables conclusions to be drawn about the subject's hearing status. It can be used to measure hearing capability, or if used periodically, it can be used to detect deterioration of hearing in the individual.

**Health surveillance using audiometry or other techniques, is not a substitute for the employer's obligation to control noise.**

**Personal Protective Equipment Regulations 1992**

PPE is defined in the Regulations as 'all equipment (including clothing affording protection against the weather), which is intended to be worn or held by a person at work and which protects him against one or more risks to his health or safety', e.g. safety helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses.

Waterproof, weatherproof or insulated clothing is subject to the Regulations only if its use is necessary to protect employees against adverse climatic conditions that could otherwise adversely affect their health or safety.

A few types of equipment are not covered by the Regulations, mainly ordinary working clothes and uniforms that don't specifically protect against risks to health and safety, and protective equipment worn by professional sports people during competition.

**Provision and use of PPE**

The main requirement of the PPE at Work Regulations 1992 is that personal protective equipment is to be supplied and used at work wherever there are risks to health and safety that cannot be adequately controlled in other ways.

Because the effectiveness of PPE can be compromised easily, e.g. by not being worn properly, it should always be considered as the last resort and used only where other precautions cannot adequately reduce the risk of injury.

However, where PPE is the only effective means of controlling the risks of injury or ill health, then employers must ensure that it is available for use at work – free of charge.

**The self-employed**

The self-employed also have a duty to obtain and use the appropriate PPE wherever there is a risk to their health and safety that cannot be controlled adequately by alternative measures. The only exception to this is for those who are classified as self-employed for tax reasons, but who otherwise work in an employee-employer relationship. In this case it will be for the employer to provide suitable PPE.

**Assessing suitable PPE**

To allow the right type of PPE to be chosen, the different hazards in the workplace need to be considered carefully. This will enable an assessment to be made of which types of PPE are suitable to protect against the hazard and for the job to be done. Your supplier should be able to advise you on the different types of PPE available and their suitability for different tasks. It may be necessary in a few particularly difficult cases to obtain advice from specialist sources – and of course from the PPE manufacturer.

The following factors should be considered when assessing the suitability of PPE:

- (a) Is it appropriate for the risks involved and the conditions at the place where exposure to the risk may occur? For example, eye

- protection designed for providing protection against agricultural pesticides will not offer adequate face protection for someone using an angle grinder to cut steel or stone.
- Does it prevent or adequately control the risks involved without increasing the overall level of risk?
  - Can it be adjusted to fit the wearer correctly?
  - Has the state of health of those who will be wearing it been taken into account?
  - What are the needs of the job and the demands it places on the wearer? For example the length of time the PPE needs to be worn, the physical effort required to do the job and the requirements for visibility and communication
  - If more than one item of PPE is being worn, are they compatible? For example, does the use of a particular type of respirator make it difficult to get eye protection to fit properly?

#### Personal protective equipment

**Eyes:** Hazards: chemical or metal splash, dust; projectiles, gas and vapour, radiation. Choices: spectacles, goggles, face-screens

**Head and neck:** Hazards: impact from falling or flying objects, risk of head bumping; hair entanglement. Choices: helmets, bump caps, hats; caps, sou'westers and cape hoods, skull-caps

**Breathing:** Hazards: dust, vapour, gas; oxygen deficient atmospheres. Choices: disposable filtering face piece or respirator, half/full face respirators, air-fed helmets, breathing apparatus.

**Protecting the body:** Hazards: temperature extremes; adverse weather; chemical or metal splash; spray from pressure leaks or spray guns, impact or penetration, contaminated dust, excessive wear or entanglement of own clothing. Choices: conventional or disposable overalls, boiler suits; donkey jackets, specialist protective clothing, e.g. chain-mail aprons, high visibility clothing

**Hands and arms:** Hazards: abrasion; temperature extremes, cuts and punctures, impact, chemicals; electric shock; skin infection, disease

or contamination, vibration. Choices: gloves, gauntlets, mitts, wristcuffs, armlets

**Feet and legs:** Hazards: wet, electrostatic build-up, slipping, cuts and punctures, falling objects, metal and chemical splash, abrasion. Choices: safety boots and shoes with steel toe caps (and steel mid sole), gaiters; leggings; spats

A chain-saw operator may need all the following equipment:

- A safety helmet – replace at intervals recommended by the manufacturer, e.g. every two to three years
- Ear defenders
- Eye protection
- Clothing – should be close fitting
- Gloves – with protective pad on the back of the left hand
- Protection for legs – incorporating loosely-woven long nylon fibres or similar material. All round protection is recommended;
- Chain-saw operator boots – the casual user may obtain adequate protection by a combination of protective spats and industrial steel toe-capped safety boots

#### Training

Make sure the user is aware of why PPE is needed, when it is to be used, repaired or replaced and its limitations. Instruct, train, and supervise its use. Because PPE is the last resort after other methods of protection have been considered, it is important that users wear it all the time they are exposed to the risk. Never allow exemptions for those jobs which take 'just a few minutes'. Check regularly the use of PPE and investigate fully any reasons for non-use. Safety signs can be useful reminders to wear PPE.

Since 1 July 1995, all PPE needs to have been 'CE' marked in accordance with the requirements of the amended Personal Protective Equipment (EC Directive) Regulations 1992. The CE mark signifies that the PPE satisfies certain basic safety requirements, and in most cases will have been type-tested and certified by an independent body.

Non-CE-marked PPE supplied before 30 June 1995 can continue to be used after that date providing it still offers adequate protection.

## Other regulations

The PPE at Work Regulations do not apply where PPE is provided under six sets of existing Regulations. These Regulations already require the use of some types of PPE to protect against certain risks, for example, the Noise at Work Regulations require the use of hearing protection where necessary. The six sets of Regulations are:

**Control of Lead at Work Regulations**  
**Ionising Radiations Regulations**  
**Control of Asbestos Regulations**  
**Control of Substances Hazardous to Health Regulations**  
**Construction (Head Protection) Regulations**  
**Noise at Work Regulations**

## Key points to remember

Are there ways (other than PPE) in which the risk can be adequately controlled, e.g. engineering controls? If not, check that:

- PPE is provided
- It offers adequate protection for its intended use
- Those using it are adequately trained in its safe use
- It is properly maintained and defects reported
- It is returned to its proper accommodation after use

## Workplace Health, Safety and Welfare Regulations 1992

### Employer's Responsibility

Employers must comply with the WHSW Regulations for premises they control. Tenant employers must ensure that facilities required by the Regulations, e.g. sanitary conveniences, are provided. The facilities need not be within the employer's own workplace but it is the employer's

responsibility to provide them. Landlords should ensure that common parts of buildings, common facilities, common services and means of access comply with the Regulations. Tenants should co-operate with each other and with the landlord. (Regulation 4)

### Maintenance

Employers must maintain the workplace and any equipment required by the WHSW Regulations, including mechanical ventilation systems, in safe working order. Regular maintenance should be carried out, potentially dangerous defects should be remedied, and records should be maintained. (Regulation 5)

### Ventilation

Workplaces need to be adequately ventilated. Fresh, clean air should be drawn from a source outside the workplace, uncontaminated by discharges from flues, chimneys or other process outlets, and be circulated through the workrooms.

Ventilation should also remove and dilute warm, humid air and provide air movement which gives a sense of freshness without causing a draught. If the workplace contains process or heating equipment or other sources of dust, fumes or vapours, more fresh air will be needed to provide adequate ventilation.

Windows or other openings may provide sufficient ventilation but, where necessary, mechanical ventilation systems should be provided and regularly maintained. (Regulation 6)

### Temperatures in indoor workplaces

Environmental factors (such as humidity and sources of heat in the workplace) combine with personal factors (such as the clothing a worker is wearing and how physically demanding their work is) to influence what is called someone's 'thermal comfort'. Individual personal preference makes it difficult to specify a thermal environment which satisfies everyone. For workplaces where the activity is mainly sedentary, for example offices, the temperature should normally be at least 16 °C. If work involves physical effort it should be at least 13 °C (unless other laws require lower temperatures). (Regulation 7)

**Lighting**

Lighting should be sufficient to enable people to work and move about safely. If necessary, local lighting should be provided at individual workstations and at places of particular risk such as crossing points on traffic routes. Lighting and light fittings should not create any hazard.

Automatic emergency lighting, powered by an independent source, should be provided where sudden loss of light would create a risk. (Regulation 8)

**Cleaning**

Workplaces should be kept clean, indoor surfaces should be capable of being cleaned, and waste material should not be allowed to accumulate outside suitable containers. Floors should be cleaned at least once a week. Cleaning should be carried out by a safe method. (Regulation 9)

**Space**

Workers should be able to get to and from workstations and move about freely. The recommended minimum space is 11 cubic metres per person, including the space occupied by furniture, and the minimum area is 3.7 square metres per person. More space per person may be required by the contents and layout of the room and by the nature of the work. (Regulation 10)

**Workstations**

Workstations must be suitable both for the users and for the work so that all operations can be performed safely. Where work can be done sitting down, a seat must be provided, together with a footrest where necessary. The particular requirements of disabled workers must be considered. (Regulation 11)

**Floors and stairs**

Floors and traffic routes should not have holes and slopes or be uneven or slippery. Defects in floors should be guarded against. Floors likely to get wet should have a slip-resistant coating. Leaks and spills should be dealt with promptly. There should be no obstructions particularly at any place which is likely to cause slips, trips or falls. Handrails or guards should be provided on at least one side of staircases unless this obstructs access. (Regulation 12)

**Falls from Heights****Falls into dangerous substances**

The consequences of falling into dangerous substances are so serious that a high standard of protection is required. Dangerous substances in tanks, pits or other structures should be securely fenced or covered. Traffic routes associated with them should also be securely fenced. Duties to prevent falls from height in general are covered by the Work at Height Regulations 2005.

**Windows**

Transparent or translucent surfaces (e.g. windows) shall be made of safety material if necessary or protected against breakage and incorporate features to make them apparent. This refers to clear surfaces where there is a danger that someone might walk into them. If a window, skylight or ventilator can be opened, then it must be possible to do it in a safe manner. When open, the window should not create a hazard (e.g. of collision). Windows must be able to be cleaned safely. This entails either a safe method of cleaning them from the inside or the provision of safe access equipment for cleaning them from the outside. (Regulation 15 & 16)

**Movement**

Pedestrians and vehicles must be able to move about workplaces in a safe manner and without danger to people working near by. It should be possible to separate pedestrians and vehicles safely. Traffic routes should have suitable signs. Traffic routes include stairs, staircases, fixed ladders, doorways, gateways, crossings, loading bays or ramps. (Regulation 17)

**Doors and gates**

Doors and gates must be suitably constructed and fitted with necessary safety devices. These should be fitted to sliding doors to prevent them coming off tracks and to upward opening doors to prevent them falling back. Powered doors should be prevented from trapping people and if the power fails should be operable manually or open automatically. Doors which can be pushed open from either side should allow a clear view of the space close to both sides. (Regulation 18)

**Escalators**

Escalators and moving walkways should have safety devices and at least one emergency stop control which is easily identifiable and readily accessible. (Regulation 19)

**Toilets and washing**

Toilets and wash stations (basins, showers) should be in adequately ventilated and lit rooms and the toilets and rooms should be kept in a clean and orderly condition. There should be separate toilets and wash stations for men and women unless each is in a separate room which can be locked from the inside. Toilets need not be in the workplace or even in the building but must be available at all material times. Toilet paper in a dispenser and a coat hook must be provided.

For women, suitable means should be provided for the disposal of sanitary dressings. Wash stations should be provided in the immediate vicinity of toilets. Clean hot and cold or warm water should be provided (preferably running water) together with soap and towels or other suitable means of cleaning and drying. Privacy must be protected in toilets and wash stations.

The minimum number of facilities is specified (broadly - up to 5 people, 1 toilet and wash station; 6-25 people, 2 toilets and wash stations; 1 extra toilet and wash station for each subsequent 25 people). For men a mixture of toilets and urinals can be provided. On temporary sites toilets and wash stations should be provided as far as possible. On remote sites water in containers and chemical closets should be provided. Toilets should never communicate directly with a room in which food is prepared or eaten. (Regulations 20 and 21).

**Water**

Employers must provide wholesome drinking water and vessels from which to drink it. The water should normally be from the mains and if refillable containers are used the water should be changed daily. Drinking water taps should not be installed where contamination is likely. Drinking water or non-drinkable water should be clearly marked. Washing facilities should be provided for non-disposable cups. (Regulation 22).

**Lockers & changing rooms**

Accommodation should be provided for workers' clothing not worn at work and special work clothing which is not taken home. The facilities should enable clothing to be dried. Changing facilities should be provided for special clothing needed at work and to safeguard health and propriety. For the latter purpose separate facilities for men and women are needed. (Regulations 23 and 24).

**Meals and restrooms**

Facilities should be provided to eat meals at work where meals are regularly eaten, though your desk can count as a suitable facility. Eating facilities should enable hot drinks to be obtained or prepared. Rest rooms and areas should protect non-smokers from discomfort caused by tobacco smoke. Rest facilities must be provided for pregnant women and nursing mothers. These last two points are new and not found in previous legislation. (Regulation 25)

**Action**

These Regulations cover the staples of workplace safety but many employers will fail to comply fully with them and they are very rarely enforced by the authorities. Workers can protect their conditions by: \* ensuring safety representatives carry out regular inspections \* calling on the employer to ensure that suitable training and education is provided on health and safety \* bringing all departures from the legal standards to the attention of their employers and asking for remedial action to be taken \* ensuring all incidents, accidents and injuries are reported in the accident book \* calling in the enforcement authorities if the management persistently fails to meet the minimum standards \* organising through their union to demand satisfactory conditions

**Part 2****The law and accidents**

When accidents happen at work the law requires most of them to be reported and recorded. Safety Reps have important legal rights to investigate accidents.

The Social Security (Claims and Payments) Regulations require injured workers to report accidents and employers to investigate and keep records of reported accidents. The main requirements of these regulations are:

## **Social Security Regulations 1979 (Claims and Payments)**

### **Requirements on the employee**

Injured workers, or persons acting for them, to give employer specific details of accidents for which DSS benefits may be claimed. Particulars required need to be no more than:

- (a) Full name, address and occupation of injured person
- (b) Date and time of accident
- (c) Place where accident happened
- (d) Cause and nature of injury
- (e) Name, address and occupation of person giving the notice, if other than the injured person

### **Requirements on employers**

- (a) Employers to investigate the circumstances of every accident reported.
- (b) Records to be kept for a minimum of three years.
- (c) Accident book to be readily accessible.

## **Reporting of Injuries Diseases and Dangerous Occurrences Regulations 1995**

Accidents that cause serious or fatal injuries, or lead to more specified period of work, have to be notified to the HSE under the new Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 1995. These require employers to notify information direct to the HSE, and to keep records. They also cover certain dangerous occurrences and a range of industrial diseases.

The main requirements of the Regulations are:

### **Notification requirements**

The following injuries and occurrences must be notified by the employer to the relevant enforcing authority by the 'quickest practicable means'. Following this, a written report on form F2508 must be made within seven days.

- (a) The death of any person as a result of an accident arising out of or in connection with work
- (b) Any person suffering any of the following injuries or conditions as a result of an accident arising out of or in connection with work
- (c) Fracture of the skull, spine or pelvis
- (d) Fracture of any bone – in the arm or wrists, but not a bone in the hand; or in the leg or ankle, but not a bone in the foot
- (e) Amputation of a hand or foot; or a finger, thumb or toe, or any part thereof if the joint or bone is completely severed
- (f) The loss of sight of an eye, a penetrating injury to an eye, or a chemical or hot metal burn to an eye; either injury (including burns) requiring immediate medical treatment, or loss of consciousness resulting in either case from an electric shock from any electrical circuit or equipment, whether or not due to direct contact
- (g) Loss of consciousness due to lack of oxygen
- (h) Decompression sickness (unless suffered during an operation to which the Diving Operators at Work Regulations 1981 apply) requiring immediate medical treatment
- (i) Either acute illness requiring treatment, or loss of consciousness, resulting in either case from absorption of any substance by inhalation, ingestion or through the skin
- (j) Acute illness requiring medical treatment where there is reason to believe that this resulted from exposure to a pathogen or infected material
- (k) Any other injury that results in the person injured being admitted immediately into hospital for more than 24 hours.

Dangerous occurrences must also be notified, these are listed in a schedule to the Regulation as follows:

**SCHEDULE 1 REGULATION 2 (1)****Dangerous occurrences Part 1 – general**

**Lifting machinery:** The collapse of, the overturning of, or the failure of any load-bearing part of:

- (a) Any lift, hoist, crane, derrick or mobile powered access platform, but not any winch, teagle, pulley block, gin wheel, transporter or runway
- (b) Any excavator
- (c) Any pile driving frame or rig having an overall height, when operating, of more than seven metres

**Passenger carrying amusement device**

The following incidents at a fun fair (whether or not a travelling fun fair) while the relevant device is in use or under test:

- (a) The collapse of, or the failure of any load bearing part of, any amusement device provided as part of the fun fair which is designated to allow passengers to move or ride on it or inside it
- (b) The failure of any safety arrangement connected with such a device, that is designed to restrain or support passengers.

**Pressure vessels**

Explosion, collapse or bursting of any closed vessel, including a boiler or boiler tube, in which the internal pressure was above or below atmospheric pressure, which might have been liable to cause the death of, or any of the injuries or conditions by Regulation 3(2) to, any person, or which resulted in the stoppage of the plant involved for more than 24 hours.

**Electrical short circuit**

Electrical short circuit or overload attended by fire or explosion which resulted in the stoppage of the plant involved for more than 24 hours and which, taking into account the circumstances of the occurrence, might have been liable to cause the death of, or any of the injuries or conditions covered by Regulation 3(2) to, any person.

**Explosion or fire**

An explosion by fire occurring in any plant or place leading to

suspension or normal work in that place for more than 24 hours, where such explosion or fire was due to the ignition of process materials, their by-products (including waste) or finished products.

**Escape of flammable substances**

The sudden, uncontrolled release of one tonne or more of highly flammable liquid, within the meaning of regulation 2(2) of the Highly Flammable Liquids and Liquefied Petroleum Gasses Regulations 1972, flammable gas or flammable liquid above its boiling point from any system or plant or pipe-line.

**Collapse of scaffolding**

A collapse or partial collapse of any scaffold that is more than five metres high, which results in a substantial part of the scaffold falling or overturning, and where the scaffold is slung or suspended, a collapse or part collapse of the suspension arrangements (including any outrigger), which causes a working platform or cradle to fall more than five metres.

**Collapse of building or structure**

Any unattended building or structure:

- (a) Any building or structure under construction, reconstruction, alteration or demolition, or of any false work, involving a fall or more than 5 tonnes of materials
- (b) Any floor or wall of any building being used as a place of work, not being a building under construction, reconstruction, alteration, or demolition.

**Escape of a substance or pathogen**

The uncontrolled or accidental release or the escape of any substance or pathogen from any apparatus, equipment, pipework, pipe-line, process plant, storage vessel, tank, in-works conveyance tanker, land-fill site or exploratory land drilling site, which have regard to the nature of the substance or pathogen and the extent and location of the release or escape, might have been liable to cause the death of, any of the injuries or conditions covered by Regulation 3(2) to, or other damage to health of any person.

**Explosives**

Any ignition or explosion of explosives, where the ignition or explosion was not intentional

**Freight containers**

Failure of any freight container or failure of any load bearing part thereof while it is being raised, lowered or suspended.

**Pipe lines**

Either of the following incidents in relation to a pipeline as defined by the Pipe-Line Act 1962:

- (a) The bursting, explosion or collapse of a pipe-line or any part thereof; or
- (b) The unintentional ignition of anything in a pipe-line or of anything that immediately before it was ignited was in a pipe-line.

**Conveyance of dangerous substances by road**

Any incident:

- (a) In which a road tanker or tank container used for conveying a dangerous substance by road overturns or suffers serious damage to the tank in which the dangerous substance is being conveyed
- (b) In which there is no relation to such a road tanker or tank container
  - i) An uncontrolled release or escape of the dangerous substances being conveyed
  - ii) A fire that involves the dangerous substance being conveyed

Any incident involving a vehicle conveying a dangerous substance by road, other than a vehicle to which paragraph 13 applies, where there is:

  - (a) An uncontrolled release or escape from any package or container of the dangerous substance being conveyed
  - (b) A fire that involves the dangerous substance being conveyed

**Breathing apparatus**

Any incident where breathing apparatus while being used to enable

the wearer to breathe independently of the surrounding environment malfunctions in such a way as to be likely either to deprive the wearer of oxygen or, in the case of use in the contaminated atmosphere, to expose the wearer to the contaminant to the extent in either case of posing a danger to his health, except that this paragraph shall not apply to such apparatus while it is being used in a mine; or maintained or tested.

**Overhead electric lines**

Any incident in which plant or equipment either comes into contact with any uninsulated overhead electric line in which the voltage exceeds 200 volts, or causes an electrical discharge from such an electric line by coming into close proximity to it, unless in either case the incident was intentional.

**Locomotives**

Any case of an accidental collision between a locomotive and a train and any other vehicle at a factory or a dock premises, which might have been liable to cause the death of, or any of the injuries or conditions covered by Regulation 3(2) to, any person.

In some cases, it is enough to report in writing to the enforcing authority within seven days – for example, injuries caused by accidents at work resulting in more than three days incapacity for work (including non-work days), or a death after a work injury that is not immediate, but happens within a year of injury.

**Diseases**

Since April 1996, the diseases reportable under RIDDOR have been as the list of Prescribed Diseases under the DSS industrial injuries scheme.

These diseases must also be reported to the HSE on a special form (F2508A) when a relevant diagnosis has been provided by a doctor. It is most important that workers undertaking relevant jobs understand the symptoms of these diseases so that they can draw this information to the attention of their doctor if they think they are suffering from a notifiable condition.

**Records**

Under RIDDOR, employers are obliged to keep records of all notifiable injuries, dangerous occurrences and diseases and this information must be made available for safety reps and safety committees. Particulars of records to be kept are set out in the following schedule.

**SCHEDULE 3, REGULATION 7****Records – Part 1**

Particulars to be kept in records of any event, which is reportable under Regulation 3:

- (a) Date and time of accident and dangerous occurrence.
- (b) The following particulars of the person affected
  - i Full name
  - ii Occupation
  - iii Nature of injury or condition
- (c) Place where the accident or dangerous occurrence happened
- (d) A brief description of the circumstances

**Records – Part 2**

Particulars to be kept in records of instances of any of the diseases specified in Schedule 2 and reportable under regulation 5:

- (a) Date of diagnosis of the disease
- (b) Occupation of the person affected
- (c) Name or nature of the disease

**The Corporate Manslaughter & Corporate Homicide Act 2007**

The Act received Royal assent on 26th July 2007, as a result of ten years of campaigning by Unite, other Unions and interested groups such as the CCA. The Government originally committed themselves to introducing a legislation relating to this area of law in their manifesto which led to their election in 1997.

The new Act creates an offence called "corporate manslaughter" in

England, Wales and Northern Ireland and "corporate homicide" in Scotland. The offence is committed where an organisation owes a duty to take reasonable care for a person's safety, but the way in which its activities have been managed or organised amounts to a gross breach of that duty and causes death.

A Company and other unincorporated organisations will face an unlimited fine if they are found to have caused death due to gross corporate failures in health and safety.

To date, to secure a conviction for manslaughter against a company there has been a need under the common-law to show a failing on the part of a directing mind within the Company. This will no longer be the case although the law relating to manslaughter by gross negligence will remain unchanged.

In order for a prosecution to succeed it will need to be shown that the failure within an organisation came from the way in which its activities are managed or organised, that this causes a person's death and amounts to a gross breach of a relevant duty of care owed by the organisation to the deceased.

The prosecution will need to prove that the failures came substantially from "senior management". The new Act defines "senior management" as persons who play significant roles in the making of decisions about how the whole or a substantial part of the organisation's activities are to be managed or organised, or the actual managing or organisation of the whole or a substantial part of those activities.

The Act does not provide for personal liability for individual directors and managers (see Chapter 9 regards Unite aspirations on directors' duties). However individuals will continue to be vulnerable under the existing law relating to manslaughter by gross negligence. Recently a Company's Sole Shareholder and Managing Director were jailed for twelve months and the Company's Area Manager jailed for nine months, both for gross negligence manslaughter. The Company which had an annual turnover of

£11m and 104 employees was convicted of manslaughter and fined £75,000. They were ordered to pay £89,000 costs.

The new legislation is likely to result in pressure being brought upon the Regulatory Authorities to institute such proceedings in relation to any death which may be attributable to the actions of an organisation.

However it will still need to be proved that there was

1. a causal link between the death and the activities of the organisation,
2. that there was a gross failing of senior management
3. that there is sufficient evidence to support a charge
4. that such a charge is in the public interest.

A jury asked to decide upon such allegations must consider if the conduct fell far below what could reasonably have been expected of the organisation in the particular circumstances. They are permitted to take into account "the extent to which the evidence shows that there were attitudes, policies, systems or accepted practices within the organisation" – more generally known as, the corporate culture

It may be sensible for companies to carry out a review of health and safety policies to ensure to the standards set are achievable rather than merely statements of intent. The intention of Management should be for pragmatic and manageable aims.

It is essential that organisations re-assess the competence of "senior management" and ensure that they understand their health and safety liabilities and responsibilities. They should undergo regular health and safety training. Culturally, health and safety must be given equal importance with quality and production

A new Code of Practice for Directors and other Senior Management is to be issued by the HSE in 2007 in conjunction with the Institute of Directors. The Ministry of Justice intends to produce further guidance before the new legislation comes into force on 6th April 2008.

Deaths in custody have been added to the Bill and it was controversy over this matter with disagreements between the Commons and the

Lords which almost caused the Bill to fail. It now contains the ability to extend the Act to deaths in custody, however implementation of this will be delayed, check current information.

The Bill lifts Crown immunity from prosecution and Crown bodies such as Government Departments will be liable for prosecution for the first time. Certain unincorporated bodies such as partnerships are also now liable.

The Act imposes new penalties. Courts will be able to make Publicity Orders requiring convicted organisations to publicise its conviction for manslaughter. This will include details of the offence, the amount of any fine and direction as to the media in which such publicity should take place. Courts will also be able to make remedial orders requiring Companies to take certain steps to remedy failings and provide evidence of compliance to an Enforcement Authority. Failure to do either would result in a further unlimited fine.

The new Act will be likely to result in increased penalties for Companies facing prosecution for health and safety failings as a result of a death. The record fine already stands at £15m the new legislation means that this is likely to increase.

When combined with Publicity Orders the risks to Companies and their brands are considerable should there be a failing in this area.



## CHAPTER 9 Cross Workplace Issues.

### Women workers

#### BASIC FACTS ABOUT WOMEN WORKERS

A recent European Agency for Safety and Health at Work report reviewed gender differences in workplace injury and illness, gaps in knowledge and the implications for improving risk prevention. It shows how the design of work, its organisation and equipment are often based on the model of the 'average' man, although the principle of matching work to workers is enshrined in EU legislation. In general, the report concludes that women suffer more from work-related stress, infectious diseases, upper limb disorders, skin diseases and asthma and allergies, while men suffer more from accidents, back pain and hearing loss (see the European Agency for Safety and Health at Work web page <http://europe.osha.europa.eu/good-practice/person/gender/>).

Using figures from a previous self-reported work-related illness (SWI) survey, it has been identified that:

- one in ten 25- to 34-year-old women workers has been physically attacked by a member of the public in the course of their work. Rates for women generally were a third higher than for men
- more than a quarter of women have to lift or move heavy loads at work. Musculo-skeletal disorders associated with heavy lifting, awkward postures and repetitive tasks are by far the most commonly reported work-related illness
- stress is the second most commonly reported condition among working women but the source of the most concern
- one in five women said they were exposed to breathing fumes, dust or other harmful substances at work
- twice as many females as males reported suffering from work-related headache and eyestrain — an estimated 50,000 workers. Nearly three-quarters of these workers attributed the cause to the use of DSEs

- the highest rates for work-related skin diseases were in jobs like hairdressing and repetitive assembly two occupations highly concentrated with women workers.

Unite believes that women, who make up half the workforce, do not have their concerns about health and safety properly addressed:

- the law on occupational safety and health does not distinguish between women and men's jobs other than in very specific areas. A gender-sensitive health and safety approach should replace the current gender-neutral system
- not enough account is taken of the physical differences between men and women that have an impact in the workplace
- women's employment is concentrated in health, education, hotels and restaurants and the retail trade and in three major occupations — clerical/secretarial, personal and protective services (such as catering and hairdressing) and sales. Their exposure to hazards reflects their jobs, so the health and safety problems facing men and women are different
- women face a double jeopardy because they often work a double shift of paid work and work in the home — and the one often compounds the other
- women's risks at work have traditionally been ignored by the research community, so less is known about the work risks that women face

### Employer's Action

Unite along with the TUC have examined employers action on women's health and safety by surveying safety representatives. The results showed that:

- only in a disappointing one in four cases does management always take the problems raised by women workers seriously
- employers are not adequately addressing the health and safety concerns of women workers in their risk assessments
- in relation to pregnant workers, those who have recently given

birth, and those who are breast-feeding, more than half of employers are breaking the law by not conducting any risk assessment at all for them, despite an absolutely specific requirement

- almost seven out of ten employers do not specifically address women's health and safety in their health and safety policies

A further report identified that many of the UK's two and a half million working women who are in their fifties will be going through the menopause and many of these women's jobs could be making their symptoms worse. Yet the majority of employers are ignoring the issue.

### Legal and other standards for prevention and control

Women workers are meant to be protected by the same laws as other workers.

- SRSC Regulations 1977, with reference to safety representatives' rights and consultation
- Health and Safety at Work etc. Act 1974 —see Sections 2-9 dealing with the general duties of employers and employees. Generally, the employer has a duty to ensure the health, safety and welfare of all employees, women or men. Gender issues should be mainstreamed into the requirements for a health and safety policy.

#### A model for making risk assessment more gender-sensitive

Unite considers that risk assessment should take account of gender issues, differences and inequalities. Work, its organisation and the equipment used should be designed to match people, not the other way round. This principle is enshrined in EU legislation and enacted in Regulations in the UK. The legislation requires employers to carry out risk management based on risk assessment, and this can be divided into five stages:

- hazard identification
- risk assessment
- implementation of solutions

- monitoring
- review

The European Agency for Safety and Health at Work has developed suggestions for making this process more gender-sensitive, Unite agrees with this approach.

As there are gender differences in a variety of broader issues relating to work circumstances, such as sexual harassment, discrimination, involvement in decision-making in the workplace, and conflicts between work and home life, a holistic approach to risk prevention is needed. Another aim is to identify less obvious hazards and health problems that are more common for female workers.

#### Key issues for gender-sensitive risk assessment:

- having a positive commitment and taking gender issues seriously
- looking at the real working situation
- involving all workers, women and men, at all stages
- avoiding making prior assumptions about what the hazards are and who is at risk

#### Hazard identification

For example, include gender by:

- considering hazards prevalent in both male and female-dominated jobs
- looking for health hazards as well as safety hazards
- asking both female and male workers what problems they have in their work, in a structured way
- avoiding making initial assumptions about what may be trivial
- considering the entire workforce, e.g. cleaners, receptionists
- not forgetting part-time, temporary or agency workers and those on sick leave at the time of the assessment
- paying attention to diverse populations and adapting work and preventive measures to workers. For example, selection of protective equipment according to individual needs, suitable for women and 'non-average' men

- involving female workers in the decision-making and implementation of solutions
- making sure female workers as well as male are provided with Occupational Safety and Health information and training relevant to the jobs they do and their working conditions and health effects. Ensure part-time, temporary and agency workers are included

#### Monitoring and review

Include gender by:

- making sure female workers participate in monitoring and review processes
- being aware of new information about gender-related occupational health issues

Health surveillance can be part of both risk assessment and monitoring:

- include surveillance relevant to jobs of both male and female workers
- take care about making assumptions, for example, based on job title, about whom to include in monitoring activities

Accident records are an important part of both risk assessment and monitoring:

- encourage the recording of occupational health issues as well as accidents

The full guide to making risk assessments more gender sensitive and other excellent resources can be found on the European Agency's women and health at work web resource pages at <http://europe.osha.europa.eu/nt/good-practice/person/gender/>

#### Measures a Safety Representative Should Take.

There are a number of positive steps that safety representatives can take to ensure that women workers are treated equally in any workplace. Examples of measures that can be taken include:

**Membership awareness**

Use posters and leaflets to bring up the issue of women's health and safety with members, and take the opportunity of discussing it with them to see if they think that there are any problems. Safety representatives should report their concerns and those of their members to management in writing.

**Surveys and inspections**

Safety representatives could conduct a survey to find out what health and safety problems members have. It is important that all members are consulted, including part-time workers, temporary workers and so on. There should not be assumptions about what hazards are deemed to be 'trivial' or 'important'. Surveys, body mapping, risk mapping and so on can be done on a confidential basis as some members may be reluctant to contribute otherwise.

Safety representatives can use their routine inspections or undertake special inspections to speak to women and men about health and safety problems that they face at work.

**Risk assessment**

Employers should consult and work with trade union safety representatives to: identify hazards; assess the risks; implement solutions; review and monitor. Using the European Agency for Safety and Health at Work guidelines, it is important that safety representatives ensure that the employer carries out the risk assessment process in a gender-sensitive way

**Health and safety policy and procedure**

Safety representatives can put pressure on the employer so that gender sensitivity is promoted in all aspects of OHS management. For example:

- reviewing safety policies, specifically including a commitment to gender mainstreaming
- ensuring that occupational health services and competent people will take a gender-sensitive approach
- providing relevant training and information on gender issues

- regarding health and safety risks to risk assessors, managers and supervisors, safety committees, etc.
- linking OHS into workplace equality actions
- ensuring that women are actively involved in health and safety strategies and action
- deciding whether a special action plan is needed for women's health and safety

**Young workers****Basic facts about young workers****According to the HSE, between 1996 and 2001:**

- 54 young people below the age of 18 were killed in the workplace
- there were 12,599 serious injuries involving broken limbs, amputations and burns
- there were 46,495 injuries leading to at least three days off work

For more details, see the HSE risk education web page at [www.hse.gov.uk/education/statistics.htm](http://www.hse.gov.uk/education/statistics.htm)

Research commissioned by the HSE into data derived from the Labour Force Survey (LFS) on the relative risk of injury between different age groups after allowing for the effects of occupations, hours of work and other job characteristics concluded that:

- men aged 16—24 have a substantially higher risk of all workplace injury (including injuries with less than three days' absence) than older male workers (40 per cent higher than the 45—54 age group)
- workers of all ages in the first few months with their employer have the highest rate of injury (once annualised to a 12-month period)
- having to carry out repetitive tasks at speed
- needing to use a good deal of force when working
- not being able to choose or change the order of monotonous tasks
- having to work in awkward positions

A recent report show that workers aged 16—24 score the highest on every single count.

The report also showed that 37 per cent of 15—24 year olds had not had any health and safety training even though employers are required by law to offer it. In addition part-time workers are even less likely

to have had any training — one in four said they had not had any in their current job.

For many young people, the workplace is a new environment where the lack of experience and trained judgment can put them at particular risk. Historically the law has recognised this by restricting employment of young persons in certain high-risk activities and requiring higher standards of instruction, training and supervision than for adults.

Many students aged 14—18 take part in work experience schemes in their last two years of compulsory education. Work experience generally lasts for two weeks during the academic year but in some cases the curriculum can be suspended to allow longer periods with an employer according to individual pupil need. Each summer more than 500,000 pupils in Key Stage 4 go on work placements.

## Legal and other standards for prevention and control

The same laws as other workers should protect young workers. See the following Regulations and Legislation in this book:

- SRSC Regulations 1977 see Chapter 1, with reference to safety representatives' rights and consultation
- Health and Safety at Work etc. Act 1974, dealing with the general duties of employers and employees under Sections 2–9. Generally, the employer has a duty to ensure the health, safety and welfare of all employees, including young workers
- Working Time Regulations 1998 and the Working Time (Amendment) Regulations 2003, with regard to the specific requirements regarding young people and working time.

See Unite website also the TUC WorkSmart web page which covers many aspects of working time for young people.

[www.worksmart.org.uk/rights/viewsubsection.php?sun2o](http://www.worksmart.org.uk/rights/viewsubsection.php?sun2o)

There is also some specialist legislation dealing with young people at work, such as the Children and Young Persons Act 1933.

## Checklists for young people

### 1. Working with machinery

only operate machines you have been trained to use always follow the procedures that you have been trained in if guards are fitted, use them know how to stop your machine and how to disconnect it from the power supply wait until a machine is switched off, stopped and disconnected from the power supply before you maintain or clean it

if there is something wrong with your machine, switch it off and call your supervisor straight away wear any gloves, goggles or other protective clothing provided (if there are none and you think there should be some, ask about it) electricity can cause severe burns and fires. It can also kill. It is swift, silent and deadly. Do not tamper with plugs, sockets or cables. If you think they are faulty, get help if you are under 18 you should not be driving any lift trucks, e.g. fork lifts

### 2. Moving stuff around

avoid lifting if there are mechanical methods available, e.g. trolleys wear any protective clothing provided, e.g. safety boots if you think a load is too heavy or in an unsafe condition, call your supervisor

### 3. RSI

Lots of the same movement at work can cause damage to your body.

This is known as repetitive strain injury (RSI). Examples are checkout operators in a supermarket or keyboard users in an office.

Identify any parts of your job where there is constant repetition check whether the area where you work could be adjusted to take more

account of you as an individual, e.g. adjustable workstations to cater for your body shape take advantage of any work breaks to give your body a chance to recover from any strain it has been put under try to rotate the type of work you do

#### 4. Bullying

Most people have come across examples of this at school. Unfortunately, it can happen at work too. As a young worker you maybe on the receiving end as part of some notion about 'licking you into shape' (Do not let yourself be bullied by managers or anyone else in the workplace. You have the right to respect as a worker and it should never be seen as just part of the job.

Remember:

keep a written record of any examples of bullying or harassment

try to find someone who you feel comfortable with to talk about it

report it to your supervisor. If it is the supervisor who is doing it, then go to the next level of management

training must be given in any job where there are risks from manual handling

#### Management of health and safety at work regulations 1999

In addition to the requirements of these Regulations, there are some special duties that relate to children and young persons, as follows.

Definition of a child and a young person  
(Regulation 1)

- a young person means any person who has not attained the age of 18
  - a child means a person who is not over compulsory school age
- Risk assessment (Regulation 3)

An employer should not employ a young person unless they have, in relation to risks to the health and safety of young persons, made or reviewed a risk assessment. In making or reviewing the assessment,

an employer who employs or is to employ a young person shall take particular account of

- the inexperience, lack of awareness of risks and immaturity of young persons
- the fitting-out and layout of the workplace and the workstation
- the nature, degree and duration of exposure to physical, biological and chemical agents
- the form, range and use of work equipment and the way in which it is handled
- the organisation of processes and activities
- the extent of the health and safety training provided or to be provided to young persons, and

This information can be provided directly to the parents or, in the case of work experience, via an organisation such as the school or the work experience agency.

the preventive and protective measures, and

the risks notified by other employer(s) who are sharing a workplace

This information can be provided directly to the parents or, in the case of work experience, via an organisation such as the school or the work experience agency.

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the risks notified by other employer(s) who are sharing a workplace

This information can be provided directly to the parents or, in the case of work experience, via an organisation such as the school or the work experience agency.

Protection of young persons (Regulation 19)

Every employer should ensure that young persons employed by them are protected at work from any risks to their health or safety which are a consequence of

their lack of experience

absence of awareness of existing or potential risks

the fact that young persons have not yet fully matured

No employer should employ a young person for work: which is beyond their physical or psychological capacity involving harmful exposure to agents which are toxic or carcinogenic, cause heritable genetic damage or harm to the unborn child or which in any other way chronically affect human health involving harmful exposure to radiation involving the risk of accidents which it may reasonably be assumed cannot be recognised or avoided by young persons owing to their insufficient attention to safety or lack of experience or training in which there is a risk to health from:  
extreme cold or heat  
vibration

#### Regulation 10

Information for employees (and children) If a child is at work, the employer must provide them with the same information as other employees. There is however an extra requirement on the employer before employing a child and that is to provide parents or guardians of children at work including those on work experience with comprehensible and relevant information on the risks to the child's health and safety, the protective and preventative measures, and any risk notification by other employers who share the workplace.

#### Guidance for safety representatives: training schemes and work experience

As soon as proposals for any scheme involving young people begin to be discussed at the workplace, employers should involve safety representatives. Safety representatives could draw up their own agenda for discussion with management and the organisers based on the seven points outlined below (adapted to suit local conditions).

1. Safety policy: the employer's safety policy should be examined to see what it says about the special problems which arise from employing young people. If it needs to be revised, prepare some suggestions.

2. Health and safety performance: the employer's health and safety record should be studied, including, the accident record and any enforcement action by HSE or local authority inspectors. If the attitude to improving health and safety performance is poor, this should be drawn to the attention of the placement organisers or training agency.
3. Work tasks and risks: the tasks which students or trainees are going to be required to undertake should be studied in detail. What are the inherent risks? How serious are they? Is the industry or process one which has a higher than average accident rate? Are there obvious dangers such as use of powered machinery or tools, potential exposure to toxic substances, working at heights or working with or near site transport vehicles or in confined spaces? Safety representatives must be satisfied that the tasks are safe and healthy for young people. Remember that under the Management of Health and Safety at Work Regulations 1999, no employer should employ a young person for work which is beyond their physical or psychological capacity; involving harmful exposure to agents which are toxic or carcinogenic, cause heritable genetic damage or harm to the unborn child or which in any other way chronically affect human health; involving harmful exposure to radiation; involving the risk of accident which it may reasonably be assumed cannot be recognised or avoided by young persons owing to their insufficient attention to safety or lack of experience or training; or in which there is a risk to health from extreme cold or heat, noise or vibration.

### Bullying

Workplace bullying can be defined as offensive, intimidating, malicious, insulting or humiliating behavior, abuse of power or authority which attempts to undermine an individual or group of employees and which may cause them to suffer stress. Bullying behavior can include:

- competent staff being constantly criticised, having responsibilities removed or being given trivial tasks to do

- shouting at staff
- persistently picking on people in front of others or in private
- blocking promotion
- regularly and deliberately ignoring or excluding individuals from work activities
- setting a person up to fail by overloading them with work or setting impossible deadlines
- consistently attacking a member of staff in terms of their professional or personal standing
- regularly making the same person the butt of jokes

The TUC safety representatives survey found that 27 per cent of safety representatives identified bullying as a problem in their workplace that was linked to stress. And workplace bullying is widespread, with nearly 90 per cent of personnel professionals witnessing or being aware of bullying in their organisation, and a third reporting a rise in incidents in the past two years, according to a survey released by the Andrea Adams Trust anti-bullying charity, which carried out the survey with magazine the Personnel Today, receives up to 70 calls a day with most coming from people working in target-driven organisations such as the NHS, education services and call centres.

## Effects of bullying

Stress and ill-health can become part of the daily life of those being bullied. Symptoms can include: anxiety, headaches, nausea, ulcers, sleeplessness, skin rashes, irritable bowel syndrome, high blood pressure, tearfulness, loss of self-confidence, various illnesses of the organs and thoughts of suicide.

Employers who fail to tackle bullying can pay a high price:

- in lost time — because staff are affected by stress and ill-health
- in lost incentive — because morale is low
- in reduced work output and quality of service
- in lost resources — because people who are trained, and experienced, leave the organisation and

- in financial penalties and loss of reputation if a case goes to Employment Tribunal or to court

Research has found few employers take adequate steps to safeguard against bullying in the workplace. More than 1,000 employers took part in the Chartered Institute of Personnel and Development (CIPD) survey and most admitted they did not do enough to tackle the problem. Instead, they left the causes of the bullying unchallenged, with some managers admitting they were ill-equipped to stop it.

## What can safety Representatives do?

There are a number of positive steps that safety representatives can take to raise awareness and tackle bullying in the workplace.

Use posters and leaflets to bring up the issue of bullying with members, and take the opportunity of discussing bullying with them to see if they think that there are any problems. Safety representatives should report their concerns and those of their members to management in writing

Safety representatives could also conduct a survey to find out whether bullying is a problem in the workplace. This can be done on a confidential basis, as some members may be reluctant to contribute otherwise

Safety representatives can use their routine inspections or undertake special inspections to speak to members about bullying at work.

## Bullying policy and procedure

Safety representatives can urge their employer to have procedures in place to prevent bullying at work. Establish whether the employer already has a policy and procedure for tackling bullying at work. If not, take steps to negotiate a policy with management.

Commitments are required from employers which should include:

- recognition that bullying takes place and the seriousness of the issue
- a statement saying that bullying will not be tolerated and a code of acceptable behaviour

- jointly agreed policy and procedures for investigating and dealing with bullying
- complaints to be taken seriously and confidentiality assured
- provision of support to the victim
- access to trained and confidential counselors
- training for all staff
- ensuring that all staff know what is considered to be acceptable behaviour at work

## Legal and other standards for prevention and control

There is no specific law dealing with bullying at work. However, there are a number of laws that apply to bullying at work:

- SRSC Regulations 1977 – see chapter 1, with reference to safety representatives' rights and consultation
- Health and Safety at Work etc. Act 1974, dealing with the general duties of employers and employees under Sections 2–9. Generally, the employer has a duty to ensure the health, safety and welfare of employees, and this includes mental as well as physical health

HSE management standards for work-related stress

Stress and ill-health can become part of the daily life of those being bullied. The HSE has introduced management standards for work-related stress that are closely connected with the risk assessment process.

## Disabled workers

Unite is adamant that people with disabilities must receive equal treatment at work. This includes equality regarding health and safety at work. Health and safety should not be used as an excuse for not employing or not continuing to employ disabled people. In addition, a workplace that is accessible and safe for people with disabilities is also safer and more accessible for all employees, clients and visitors. Legislation and standards should be applied to facilitate the employment of people with disabilities, not to exclude them.

Unite believes that disabled people are currently discriminated against in many ways in the workplace, but one of the worst features of that discrimination is the way some people try to use measures designed to protect people from harm as a way of excluding people with disabilities from the workplace. For example:

- people with disabilities refused jobs because they use wheelchairs which, it is claimed, would make it impossible for them to escape from a building on fire because they could not use the stairs unaided and would not be allowed to use lifts (deaf people are also discriminated against because people say they would not be able to hear fire alarms), or; even more cruelly, it is suggested that they would 'get in the way' of colleagues trying to escape the fire
- people with hearing difficulties being prevented from taking up jobs because they cannot hear and it is alleged that this is vital for safety aspects of the job (e.g. operating heavy machinery or fork-lift trucks)
- people with conditions like asthma or a genetic predisposition to develop sickle cell anaemia being refused employment as, for example, bakers or airline pilots because it is alleged that this prevents them from being able to work safely

There are also many examples of health conditions and disability being used to justify discrimination generally:

- people suffering from work-related conditions (such as RSI, or mental illness caused or exacerbated by stress at work) being sacked because they are 'not fit' for the work that caused their condition in the first place
- people with heart conditions (or a family history) being refused employment because they are considered likely to become sick and take too much time off
- counting disability-related absence as sickness absence (for example, someone with asthma), with a knock-on effect in terms of disciplinary procedures

Sometimes the discrimination is not intended or even understood. It is often the result of ignorance or prejudice, which needs to be addressed through disability awareness training.

## What safety representatives should do

There are a number of positive steps that safety representatives can take to ensure that disabled workers are treated equally.

Safety representatives should check that employers implement health and safety laws to prevent discriminatory situations. The first step an employer should take when dealing with a disabled worker is to follow the ergonomic principle of fitting the job to the worker, not the worker to the job. Using the Disability Discrimination Act (DDA), safety representatives can put pressure on employers to make reasonable adaptations to ensure that disabled people can start or continue in work, including changes to the work environment, work stations, work patterns, training, etc.

### Disability-sensitive risk assessments

According to the European Agency for Safety and Health at Work employers should comply with health and safety duties and avoid discrimination at the same time. Genuine conflicts, where complying with one makes it impossible to comply with the other, are very rare. In the Agency's opinion, risk assessments should cover:

- the task, for example, the design of the job, work activities
- the individual, for example, any specific needs with respect to disability
- work equipment, for example, assistive technologies, whether workstations are adjusted to individual requirements
- the work environment, for example, the layout of the premises, lighting, heating, access, exiting
- work organisation, for example, how work is organised and schedules
- physical hazards, such as dangerous substances, for example, asthma sufferers may be more sensitive to chemicals used at work
- psycho-social hazards such as stress and bullying, for example, disability may be used as an excuse for bullying
- information and training needs, for example, providing safety training and information in different mediums

- involving workers, including disabled workers, and their representatives about risks and their prevention. The employer should discuss preventive measures with the disabled worker; as the individual is often the best person to identify what is needed

## Legal and other standards for prevention and control

There are a number of laws that apply to disabled workers:

- SRSC Regulations 1977, with reference to safety representatives' rights and consultation
- Health and Safety at Work etc. Act 1974, dealing with the general duties of employers and employees under Sections 2–9. Generally, the employer has a duty to ensure the health, safety and welfare of all employees, including workers with a disability
- Management of Health and Safety at Work Regulations 1999, risk assessments and preventive and protective measures need to reflect the needs of workers with disabilities. To prevent discrimination from arising, the first step an employer should take is to follow the ergonomic principle and fit the job to the worker, not the worker to the job
- Workplace (Health, Safety and Welfare) Regulations 1992 Under Regulation 2(3) and Guidance paragraph 4 workplaces must meet the needs of all those who work in them, including workers with a disability. Several of the Regulations require things to be "suitable", which makes it clear that such things as traffic routes, facilities and workstations used by people with disabilities should be suitable for them to use. Regulation 25A (added the Health and Safety [Miscellaneous Amendments] Regulations 2002) requires where necessary those parts of the workplace (including in particular doors, passageways, stairs, showers, washbasins, lavatories and workstations) used or occupied directly by disabled persons at work to be organised to take account of such persons.

## The disability discrimination Act 1995

There are about 10 million disabled adults in Britain covered by the Disability Discrimination Act. Their impairments are wide-ranging and they face different barriers in employment and in accessing goods and services.

The DDA makes it unlawful to discriminate against disabled people or people who have had a disability. Section 1 of the Act defines a person as having a disability if he or she has a physical or mental impairment, which has an effect on his or her ability to carry out normal day-to-day activities. That effect must be:

- substantial (that is, more than minor or trivial), and
- adverse, and
- long-term (that is, it has lasted or is likely to last for at least a year or for the rest of the life of the person affected)

The DDA requires employers to make reasonable adjustments to the employee's working arrangements or conditions to make sure they are not treated less favourably than other employees.

Part III of the Act also requires the provision of services to be free of discrimination and this might also have an impact, because often the service user and the potential worker face the same hazards (one example might be allowing smoking in leisure facilities, which might be held to discriminate against service users and workers with asthma).

So in order to counter the discrimination against disabled workers referred to above, practical steps that employers could take under the DDA include:

- provision of flashing lights as alarms, as well as auditory devices — and making sure that people working with deaf people who are British Sign Language (BSL) users have a high level of awareness of BSL and deaf issues.
- the establishment of a 'buddy' system to ensure wheelchair users are assisted in an emergency

- the creation of allergy-free work environments
- the provision of voice-activated software
- ensuring that absence caused by a disability is treated separately from sickness absence and is excluded from disciplinary records.

## Directors H&S Duties

Unite wants to see specific health and safety duties placed upon Directors and senior managers as part of the Health and Safety at Work Act.

- Currently the duties under s.2 of the Health and Safety at Work Act are against employers as corporate entities.
- We expect to see a General Duty on Directors, supported by more specific duties based on the current guidance.
- i.e. a general duty on Directors to take all reasonable steps to ensure health and safety.
- With specific duties, e.g.
  - o Directors have a duty to ensure that health and safety risks arising from their organisations activities are properly managed
  - o Directors individually and collectively accept their responsibility to provide health and safety leadership
  - o Directors individually and collectively ensure that all board decisions reflect its health and safety intentions as articulated in the health and safety policy statement
  - o Directors individually and collectively recognise their role in engaging the active participation of workers in improving health and safety
  - o Directors individually and collectively ensure they are kept informed of, and alert to, relevant health and safety risk management issues
- Current penalties under the HSW Act do not, in effect, provide for imprisonment. It is only breach of a licensing requirement or breach of a Notice by an Inspector that could lead to imprisonment. Unite wants to see this changed so that the sanction of imprisonment can be applied against Directors for the most serious breaches.



## Unite health and safety support structure:

Unite has thousands of safety reps that are supported by branches, regions and national staff and resources. Safety reps deal with issues locally supported by their senior workplace reps. If further assistance is needed the first point of call is your Regional Officer, to access your regional office or head office details call:

Membership Department: 020 8462 7755

Or visit the Unite web site: <http://www.unitetheunion.com>

You can also access the Unite health and safety web pages via that address.

At head office there is a dedicated Unite Health and Safety team, consisting of several Health and Safety Officers and Researchers dealing with national issues around specific sectors and specialist topics, for health and safety enquires or to register for regular health and safety bulletins contact:

Unite Health and Safety team,  
email: [healthandsafety@unitetheunion.com](mailto:healthandsafety@unitetheunion.com)

## Organisations and Support Groups:

### HSE Info Line

To make contact with your local inspector or get information on a specific substance or hazard you should contact HSE Infoline by telephone, e-mail, minicom, fax or letter, whichever is most convenient for you. HSE Infoline will reply to you in the same way as you contact them.

Opening Hours	8am - 6 pm (Monday to Friday)
Telephone	0845 345 0055
Fax	0845 408 9566
Minicom	0845 408 9577
E-mail	<a href="mailto:hse.infoline@natbrit.com">hse.infoline@natbrit.com</a>
Post	HSE Infoline Caerphilly Business Park Caerphilly, CF83 3GG.

When dealing directly with the HSE or any other body let your regional officer know what you are doing and keep him updated on any advice you may receive.

#### **Hazards Magazine**

P0 Box 199, Sheffield S1 4YL.  
 Telephone: 0114 201 4265  
 E-mail: editor@hazards.org  
[www.hazards.org](http://www.hazards.org)

#### **Centre for Corporate Accountability**

Fourth Floor, 197/199 City Road, London EC1V 1JN.  
 Telephone: 020 7490 4494  
 E-mail: info@corporateaccountability.org  
[www.corporateaccountability.org](http://www.corporateaccountability.org)

#### **Action on Smoking and Health (ASH)**

102 Clifton Street, London EC2A 4HW.  
 Telephone: 020 7739 5902  
 E-mail: enquiries@ash.org.uk  
[www.ash.org.uk](http://www.ash.org.uk)

#### **Greater Manchester Hazards Centre**

23 New Mount Street, Manchester M4 4DE.  
 Telephone: 0161 953 4037  
 E-mail: gmhazards@hotmail.com  
[www.gmhazards.org.uk](http://www.gmhazards.org.uk)

#### **Royal National Institute for the Deaf (RNID)**

19–23 Featherstone Street, London EC1Y 8SL.  
 Telephone: 0808 808 0123  
 Textphone: 0808 808 9000  
 E-mail: information@rnid.org.uk  
[www.rnid.org.uk](http://www.rnid.org.uk)

#### **Simon Jones Memorial Campaign**

P0 Box 2600, Brighton BN2 0FF.  
 Telephone: 01273 685913  
 E-mail: action@simonjones.org.uk  
[www.simonjones.org.uk](http://www.simonjones.org.uk)

#### **Greater Manchester Asbestos Victims Support Group**

c/o Greater Manchester Hazards Centre,  
 23 New Mount Street, Manchester M4 4DE.  
 Telephone: 0161 953 4037  
 E-mail: asbestos.gmavsg@virgin.net

#### **Alcohol Concern, Waterbridge House,**

32–36 Loman Street, London SF1 0EE.  
 Telephone: 020 7928 7377  
 E-mail: contact@alcoholconcern.org.uk  
[www.alcoholconcern.org.uk](http://www.alcoholconcern.org.uk)

#### **TUC**

Senior Health and Safety Officei;  
 TUC, Congress House, Great Russell Street, London WC1B 3LS.  
 Telephone: 020 7636 4030  
 E-mail: healthandsafety@tuc.org.uk  
[www.tuc.org.uk](http://www.tuc.org.uk)

#### **Labour Research Department,**

78 Blackfriars Road, London SF1 8HF.  
 Telephone: 020 7928 3649  
 E-mail: info@lrd.org.uk  
[www.rd.org.uk](http://www.rd.org.uk)

#### **Clydebank Asbestos Support Group**

8 Crown Avenue, Radnor Park, Clydebank, Scotland, G81 3BW.  
 Telephone: 0141 952 1008  
[www.clydebankasbestos.org.uk/cag.html](http://www.clydebankasbestos.org.uk/cag.html)

**Clydeside Action on Asbestos**

245 High Street, Glasgow, G4 OQR.  
Telephone: 0141 552 8852

**Institution of Occupational Safety and Health (IOSH)**

The Grange, Highfield Drive, Wigston, Leicestershire LE18 1NN  
Telephone: 0116 257 3100  
E-mail: enquiries@iosh.co.uk  
www.iosh.co.uk

**Andrea Adams Trust**

Hova House, 1 Hova Villas, Hove, East Sussex, BN3 3DH.  
Telephone: 01273 704900  
www.andreaadamstrust.org

**Sheffield and Rotherham Asbestos Group**

311 Aizlewood's Mill, Nursery Street, Sheffield S3 8GG  
Telephone: 0114 282 3212 or 01709 513587  
E-mail: SARAG@Asbestos.fsnet.co.uk

**Asthma UK, Providence House,**

Providence Place, London NI ONT.  
Telephone: 020 7226 2260  
E-mail: info@asthma.org.uk  
www.asthma.org.uk

**Joint Council for the Welfare of Immigrants**

115 Old Street, London EC1V 9RT.  
Telephone: 020 7251 8708  
E-mail: info@jcwi.org.uk  
www.jcwi.org.uk

**Derbyshire Trade Union Safety Team (TRUST)**

c/o Joanne Carlin, 70 Saltergate, Chesterfield S40 1JR.  
Telephone: 01246 231 4411  
E-mail: mail@notusc.u-net.com

**Women's Environmental Network**

P0 Box 30626, London E1 1TZ.  
Telephone: 020 7481 9004  
E-mail: info@wen.org.uk  
www.wen.org.uk!

**Asbestos Awareness Wales (Ymwybyddiaeth Asbestos Cymru)**

do C Cook, 26 St Andrews Road, Pen y Coedcae, Pontypridd, CF37 JXF.  
Telephone: 07775 815705  
E-mail: help@asbestosawarenesswales.Org.LJK  
www.asbestosawarenesswales.org.uk

**Cheshire Asbestos Victims Support Group**

3 Fryer Street, Runcorn, Cheshire WA7 1ND.  
Telephone: 01928 576641  
E-mail: cavsg@btconnect.com  
www.cavsg.co.uk

**Construction Industry Training Board**

CITB-ConstructionSkills, Bircham Newton, Kings Lynn, Norfolk PF3 1 6RH.  
Telephone: 01485 577577  
E-mail: information.centre@citb.co.uk  
www.citb.co.uk/health\_safety!

**Advisory, Conciliation and Arbitration Service (ACAS)**

Brandon House, 180 Borough High Street, London SE1 1LW.  
Telephone: 020 7210 3613  
Helpline: 08457 474747  
www.acas.org.uk

## Appendix 1:

Health and Safety at Work etc. Act 1974

The Health and Safety at Work etc. Act 1974 (HASAWA) is an Act of Parliament enacted in 1974 that set basic principles which help ensure a safe working environment.

HASAWA is the main legislation covering your health and safety rights at work. The Act puts a general duty on employers to ensure so far as is reasonably practicable the health, safety and welfare of their employees. It also set up the Health and Safety Commission and the Health and Safety Executive (HSE), which are likely to become a single merged organisation.

## HASAWA the Enabling Act

The Health and Safety at Work Act is an enabling act, meaning that secondary legislation can be made under it. Most Health and Safety legislation is enacted under HASAWA, for example the Control of Substances Hazardous to Health Regulations 2002 (COSHH), the Management of Health and Safety at Work Regulations 1999, the Personal Protective Equipment (PPE) at Work Regulations 1992, the First Aid Regulations, etc. Over time, the source of UK law in this area has tended to be from the EU rather than from the UK. EU Directives are generally enacted into UK law by means of secondary (devolved) legislation made under HASAWA.

## Safety Representatives

The Act also establishes that employers recognise and allow safety reps and safety committees to function, if requested by recognised trade unions. It sets out the requirements for consultation through trade union safety reps.

**Section 2(1)** gives the general duties of all employers:

It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his/her employees.

**Section 2(2)** expands on this general duty: employers shall:

- \* Provide and maintain plant and systems of work that are safe
- \* Ensure safety with the use, handling, storage and transport of articles and substances
- \* Provide information, instruction, training and supervision as necessary
- \* Ensure maintenance of any place of work, and provide and maintain means of access and exit
- \* Provide a safe working environment

**Section 2(3)** requires employers to have a safety policy.

**Section 2(6)** gives consultation and information rights to elected safety reps in workplaces where the employer officially recognises a trade union.

**Section 3** gives the general duties owed to others, including contractors, visitors, the general public, clients, etc.

**Sections 7 and 8** details the responsibility that employees have for taking reasonable care over their own Health and Safety, including co-operating with their employers and not misusing any items providing for their safety.

The Act is enforced by the Health and Safety Executive (HSE) by inspecting workplaces, giving advice, issuing letters, issuing enforcement notices and prosecuting employers for serious failures.

**Sections 36 and 37** detail the responsibilities of managers and directors (the "directing mind" of the company), especially where they

have allowed a safety breach to occur with consent or connivance, or where the act or omission by another person allowed a breach to occur. Trade unions want wording of this changed to making directors more accountable.

Section 40 puts the burden of proof onto the accused: rather than presuming innocence, this section states that if a breach has occurred, then it is down to the company or individual responsible to prove that they had taken reasonable steps to prevent.

