CODES OF PRACTICE

FIRST AID FACILITIES AND SERVICES

WORKPLACE AMENITIES AND FACILITIES

PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

2002

WorkSafe Western Australia COMMISSION

AUTHORITY

These codes of practice pursuant to Section 57 of the *Occupational Safety and Health Act 1984* were approved by the Minister for Consumer and Employment Protection on 5 July 2002. The approval of the *Code of Practice First Aid, Workplace Amenities and Personal Protective Equipment*, *November 1996* was revoked on 5 July 2002.

SCOPE

These codes of practice provide guidance on complying with some legislative requirements in the *Occupational Safety and Health Regulations 1996* that apply to all workplaces covered by the *Occupational Safety and Health Act 1984* and relate to:

- the provision of first aid facilities and services;
- the provision of workplace amenities and facilities;
- the selection and use of personal protective equipment.

The practical guidance in these codes should be considered in conjunction with the general duties in the *Occupational Safety and Health Act* and provisions in the regulations that relate specifically to first aid, amenities and personal protective clothing and equipment, and other relevant codes of practice or guidance notes.

Where the workplace is in a building, provisions in the *Building Code of Australia* (BCA) also apply. The BCA which covers the design, construction and modification of facilities in a building, is administered by local government.

Local government should be consulted when determining the facilities to be provided in a new building, when there is to be a change in the use of an existing building, or when an existing facility is to be altered. Employees should be involved in the consultation process.

WHO SHOULD USE THESE CODES?

The codes have been developed by the WorkSafe Western Australia Commission to assist employers, contractors, self-employed persons, persons in control of workplaces, employees and safety and health representatives to comply with the *Occupational Safety and Health Act* and *Regulations*.

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LEGISLATIVE FRAMEWORK IN WESTERN AUSTRALIA

The *Occupational Safety and Health Act* sets objectives to promote and improve occupational safety and health standards. The Act sets out broad duties and is supported by more detailed requirements in the *Occupational Safety and Health Regulations*. The legislation is further supported by approved Codes of Practice and Guidance Notes. This legislative framework is depicted below.

OCCUPATIONAL SAFETY AND HEALTH ACT ⇦

Major provisions:

- General Duties
- Resolution of Issues
- Safety and Health Representatives
- Safety and Health Committees
- Enforcement of the Act and Regulations

supported by

OCCUPATIONAL SAFETY AND HEALTH REGULATIONS ⇦

The *Occupational Safety and Health Regulations* set minimum requirements for specific hazards and work practices. They include references to National Standards developed by the National Occupational Health and Safety Commission and Australian Standards developed by Standards Australia or jointly by Standards Australia and Standards New Zealand.

and

GUIDANCE MATERIAL ⇦

- Codes of Practice approved for Western Australia in accordance with Section 57 of the Act.
- Guidance Notes developed by the WorkSafe Western Australia Commission.
- National Codes of Practice and National Standards developed by the National Occupational Health and Safety Commission.
- Australian Standards developed by Standards Australia or jointly by Standards Australia and Standards New Zealand.

The general principles for managing occupational safety and health in workplaces are set out in Appendix 1.

CODE OF PRACTICE

FIRST AID FACILITIES AND SERVICES

First aid is the immediate treatment or care given to someone suffering from an injury or illness. The initial treatment a person receives directly after an injury, accident or when a person becomes ill at work is extremely important in achieving the aims of first aid.

The aims of first aid are to:

- ❑ preserve life;
- ❑ prevent illness or injury from becoming worse;
- ❑ relieve pain, if possible;
- ❑ promote recovery; and
- ❑ protect the unconscious.

1.1 Establishing first aid facilities and services

The *Occupational Safety and Health Regulations* require the employer to provide first aid facilities.

See Appendix 7
Regulation 3.12

The provision of first aid facilities and services starts with identifying all the hazards in the work environment that could lead to injury or harm to the health of people at the workplace. This should be done in consultation with employees and their elected safety and health representatives.

An assessment of the likelihood and consequences of the hazard leading to injury or harm will assist in identifying the means of reducing the risk to employees and the first aid services and facilities appropriate for the workplace.

Hazard identification, risk assessment and risk control are covered in Appendix 1 of this code.

It is important to give consideration to "high risk" environments, such as:

- ❑ workplaces that use, manufacture hazardous substances;
- ❑ construction and demolition sites;
- ❑ timber harvesting sites;
- ❑ workplaces where hazardous processes may be used (e.g. abrasive blasting);
- ❑ where heat is used as part of any process (e.g. moulding or casting, welding and cutting);
- ❑ where people are required to work in any remote or isolated areas (e.g. agricultural, fishing or transport industry);
- ❑ workplaces that provide assistance and care to highly dependant persons.

A checklist to assist in this process is in Appendix 2.

During the planning or establishment stage there may be times when employees are not at the workplace or available for consultation such as at new construction or logging sites. The employer may then need to decide what is required to provide adequate and appropriate first aid facilities and services. In these circumstances the adequacy and appropriateness of the facilities and services should be reviewed as soon as practicable after the workplace becomes operational (See section 1.2 below).

Having identified the hazards and assessed the risks at the workplace the following matters need to be determined:

See Appendix 3 and 4

- ❑ the contents of first aid boxes (a guide for determining the contents and quantities is at Appendix 3);
- ❑ the number of first aid boxes and where the boxes should be located ensuring they will be readily available;
- ❑ any need for a simple oxygen supply;
- ❑ the number of employees to be trained in first aid and what is approved training for the particular workplace;
- ❑ the possible need for a first aid room and the equipment it should contain (see Appendix 4); and
- ❑ a system for recording and reporting occupational injuries, diseases and illness and the first aid administered. Australian Standard *AS 1885.1 Measurement of occupational health and safety performance - Describing and reporting occupational injuries and disease* (known as the National Standard for workplace injury and disease recording) may be useful as a guide in setting up such a system.

See Appendix 8 Other sources of information

Other matters to be considered are:

- ❑ the availability of trained first aid personnel during working hours e.g. on night shift;
- ❑ the availability of professional medical care (e.g. local hospital, medical centre) and emergency service (e.g. ambulance) response time.

See NOHSC: 1014(1996) for definition of a major hazard facility

Providing first aid facilities and services for a workplace identified as a major hazard facility should be done in conjunction with the development of emergency plans designed to minimise the effects of any accident or near miss that occurs at that facility. These emergency plans are covered in the *National Standard for the Control of Major Hazard Facilities [NOHSC: 1014(1996)]* and *National Code of Practice for the Control of Major Hazard Facilities [NOHSC: 2016(1996)].*

1.2 Review of first aid facilities and services

Once first aid facilities and services have been established, they should be under continual review to determine if they need to be changed or expanded.

This should be done by the employer in consultation with employees and any trained first aid personnel, safety and health representatives or safety and health committee at the workplace.

This review process is particularly important when the first aid facilities have been established before employees are at the workplace, when there is any significant change in the number of employees or where tasks, duties or processes have changed or new information becomes available which may affect the safety and health of persons at the workplace.

1.3 Occupational health service

In certain high risk situations or in workplaces where there are large numbers of employees, consideration should be given to providing an occupational health service.

An occupational health service is a specialised service for the purpose of conserving, promoting and restoring the health of a person at a workplace.

The service may include:

- ❑ provision of first aid or medical services;
- ❑ preplacement and regular ongoing physical assessment;
- ❑ counselling;
- ❑ health promotion; and
- ❑ health surveillance.

See Appendix 7 Regulation 5.23 and Schedule 5.3

Initially the service may include only some of the above components before being expanded as appropriate for the workplace, such as the health surveillance required following exposure to a hazardous substance and management of work-related injuries.

The occupational health service may be provided internally by an occupational health nurse in conjunction with other health professionals as necessary. Alternatively a contract service provider may be used, possibly in combination with employed professionals.

1.4 Communication

See Appendix 7 Regulation 3.3

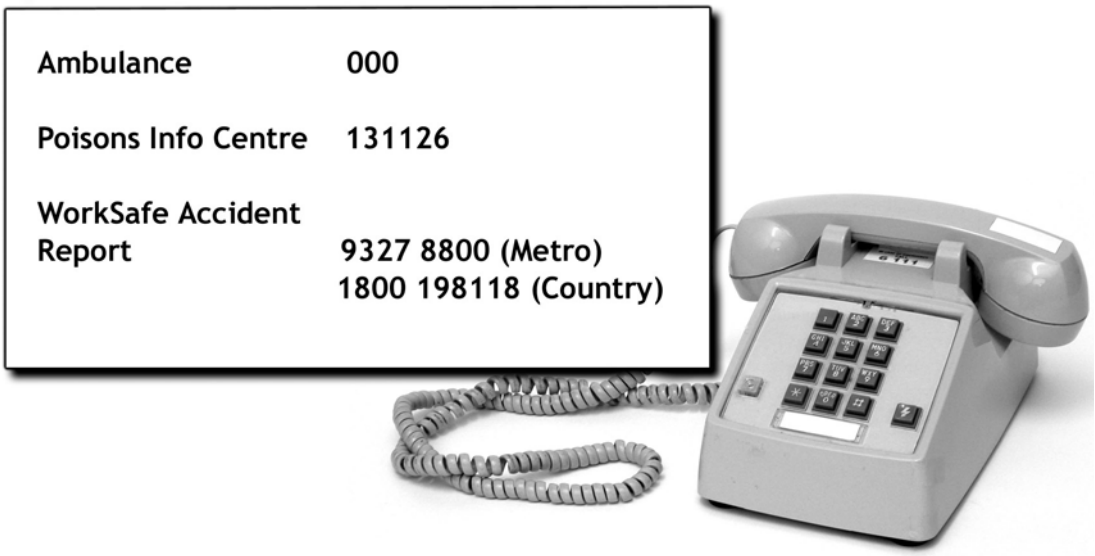
Communication is extremely important in getting first aid to an injured person in a workplace remote from available medical services.

Consideration must be given to how first aid could be provided to remote workplaces and to highly mobile employees who work away from a central base.

In an emergency, quick response is essential. An effective and readily available means of communication must be provided. All persons expected to use the means of communication should be trained in its use.

See Appendix 8 Other sources of information

The WorkSafe Western Australia Commission Guidance Note *Working Alone* describes what might be practicable in terms of providing a means of communication in certain industries. It also covers the provision of a communication system where a telephone is not available.



1.5 Reporting and recording systems

See Appendix 8 Other sources of information

A system should be developed and implemented for reporting and recording occupational injuries, diseases and illnesses and other relevant safety and health information. The system should be readily available and accessible to employees. Australian Standard *AS 1885.1 Measurement of occupational health and safety performance - Describing and reporting occupational injuries and disease* (known as the National Standard for workplace injury and disease recording) may be useful as a guide in setting up such a system.

See Appendix 7 Regulations 2.4 & 2.5

Recording information on injury and disease at the workplace is an important component in developing preventative strategies. The *Occupational Safety and Health Regulations* require certain injuries and diseases to be reported to the WorkSafe Western Australia Commissioner.

1.6 Confidentiality of information

Any information recorded about the health of a person or treatment given to a person should be treated as confidential and stored in a secure place.

1.7 Employee awareness

An employer has a duty to provide information, instruction, training to and supervision of employees to enable them to work without exposure to hazards.

Information and instruction about first aid facilities and services for employees should include:

- ❑ the location of all first aid boxes, equipment and first aid rooms (if any);
- ❑ the names, work locations and contact numbers of first aiders;
- ❑ procedures to be followed when first aid is required and for contacting external assistance when first aid is not available or further assistance is required (ie. who calls the ambulance and procedures for evacuating an injured person);
- ❑ standard precautions for the control of infection including blood-borne infections.

This information should be kept up to date and provided:

- ❑ when an employee is first employed at the workplace (ie. at induction);
- ❑ if there is a change in the location of the first aid facilities or services;
- ❑ if there are any changes in the names, locations or contact numbers of trained first aiders; and
- ❑ thereafter, at regular intervals.

Information and practical guidance on standard precautions for the control of infection is provided in the WorkSafe Western Australia Commission Code of Practice *Management of HIV/AIDS and Hepatitis at Workplaces*.

See Appendix 8 Other sources of information

As processes change or new information becomes available all employees should be advised and kept aware of any new or changed hazards in the workplace.

1.8 Providing information in an appropriate form

Information should be provided in a form that all employees can understand. Consideration should be given to the way information on first aid facilities and services may be provided for people with non-English speaking backgrounds and people with disabilities.

This could include using:

- ❑ audio and visual aids;
- ❑ graphics (e.g. posters);
- ❑ interpreters;
- ❑ simple English phrases;
- ❑ same language people to provide information; and
- ❑ interactive practical demonstrations.

Regular checks are necessary to ensure the information provided is understood by everyone at the workplace.

Signs should comply with Australian Standard *AS 1319 Safety signs for the occupational environment.*

See Appendix 8 Other sources of information

1.9 First aiders

First aid may be administered by the first person "on the spot". It is generally recognised, however, that a first aider is a person who has had some level of formal training.

First aiders may have skills that range from basic expired air resuscitation (EAR) or cardio-pulmonary resuscitation (CPR) to being able to provide more complex treatment. Selection and training of first aid personnel is most important.

First aiders should be familiar with the specific conditions and hazards at the workplace and the types of injuries likely to require treatment. The number of first aiders at a workplace and the level of training that is needed should be determined according to the hazards identified at the workplace and the assessed risks.

As far as is practicable, first aiders should have some practical experience before acting alone. They should volunteer to undertake the training and responsibilities of a first aider rather than be appointed without consultation. Where possible training should be undertaken by an accredited first aid training provider using competency-based assessments.

1.10 Selection of first aiders

In selecting and determining the number of first aiders needed at a workplace consideration should be given to:

- the hazards identified at the workplace;
- an assessment of the risks associated with the hazards;
- the size and layout of the workplace;
- the location of the workplace including whether it is an isolated or remote workplace;
- the distance from the workplace to the nearest occupational health or medical service, or ambulance service; and
- the number and distribution of employees including those employees working shiftwork.

1.11 First aid boxes

A first aid box may be of any size, shape or type providing it is large enough to contain all the items required for a particular workplace. It should also be able to protect the contents from dust, moisture and contamination. The first aid box should be kept securely closed to ensure its contents are kept clean and dry.

The first aid box should contain basic requirements and additional items appropriate to the workplace. A guide to determining the contents of a first aid box is at Appendix 3.

First aid boxes should be provided and located to ensure:

- ❑ they are immediately accessible to all employees. Access to a first aid box for people working in isolated or remote locations must be taken into account;
- ❑ all employees in mobile workplaces, such as bus and transport drivers, have immediate access to a first aid box;
- ❑ the names and contact numbers of first aiders are provided on or near the box;
- ❑ additional information such as the name, address and telephone number of the nearest medical or emergency service, is supplied on or near the box;
- ❑ instructions for emergency treatment of injuries, expired air resuscitation (EAR) and cardio-pulmonary resuscitation (CPR) are provided inside the box;
- ❑ instructions for dealing with injuries that may be specific to a workplace (e.g. eye injuries or chemical burns) are provided in or near the box; and
- ❑ instructions are provided on the care of first aid instruments such as scissors or splinter forceps for wound care.

First aid boxes should be clearly marked and the contents adequately maintained and replaced or added to as necessary.

Where a first aid box is to be located in a vehicle, the box should be of a material that minimises deterioration of its contents from heat and sunlight.

First aid boxes should not contain items likely to be toxic or open to misuse. Any first aid boxes containing prescription drugs must be securely locked and accessible only to properly trained personnel.

Where the risk assessment process indicates medical oxygen should be available, it should be stored away from any heat source or reactive work process but easily available.

Who should be responsible?

Employers should ensure at least one employee is appointed to be in charge of the first aid box and supervised access to the first aid box is available when employees are at the workplace. The person in charge of the first aid box should be responsible for making regular checks, replenishing supplies, maintaining the contents and ensuring that the contents are within their "use by" dates. The person should have an understanding of the products and their uses, and preferably be trained in first aid.

1.12 First aid rooms

Where the hazard identification and risk assessment process indicates a first aid room is needed, a room designated specifically for first aid should be provided. It must:

See Appendix 4 First aid room

- ❑ be well lit and ventilated;
- ❑ have adequate access should an injured person need to be supported or moved by stretcher or wheelchair;
- ❑ have easy access to toilets;
- ❑ be located to allow easy access and egress for ambulances or emergency vehicles;
- ❑ be able to provide privacy for persons being treated;
- ❑ have sufficient space for equipment to be placed and used effectively;
- ❑ be regularly cleaned and sanitised;
- ❑ contain a means of communication; and
- ❑ contain adequate storage for first aid equipment and supplies.

A list of items to be considered for a first aid room is at Appendix 4.

Extra Facilities

Apart from a room designated specifically for first aid, extra facilities may also be required such as:

- ❑ eye wash stations;
- ❑ drench showers; and
- ❑ specialist first aid equipment (which requires specialist training).

The hazard identification and risk assessment process will determine the need for these facilities.

Any first aid facilities and services provided should be regularly reviewed in consultation with employees, trained personnel, safety and health representatives or safety and health committees. This is particularly important if first aid facilities or services were provided before employees were present at the workplace.

Who should be responsible?

Each first aid room and its contents should be the responsibility of an appropriately qualified person. This may be a first aider who holds a current first aid certificate appropriate to the level of risk, a qualified ambulance officer, a state registered nurse or a registered medical practitioner. All these people should have relevant and recent practical experience or training in first aid.

A person in charge of the first aid room should be immediately available to attend the first aid room at all times when employees are at work.

1.13 Training for first aiders

The level of training required for first aiders at the workplace should be determined when first aid facilities and services are being planned. The Australian National Training Authority endorsed *Guidelines Competencies for First Aid* provide the basis for defining and meeting the first aid requirements for a workplace. The requirements will vary with the industry and the workplace.

The hazard identification and risk assessment process will assist in determining the training requirements. The outcome of this process should be discussed with training providers to ensure the training is appropriate for the workplace.

When choosing a training package and deciding the number of first aiders required, shiftworkers and employees located in isolated areas or mobile workplaces should be taken into account. Arrangements should also be in place to cover absences of first aiders from the workplace due to holidays or sick leave.

The four Guidelines Competencies for first aid are:

Guideline Competency A - deals with providing essential first aid in recognising and responding to an emergency using basic life support measures. The first aider is not expected to deal with complex casualties or incidents, but to provide an initial response where first aid is required.

Guideline Competency B - deals with providing advanced first aid response, life support management of casualty(s) until the arrival of medical or other assistance, and providing support to other providers.

Guideline Competency C - deals with the first aider's responsibilities in ensuring adequate supplies of first aid equipment and resources are maintained and records kept. The first aider may or may not necessarily be responsible for the ordering and purchasing of equipment and resources, depending upon the workplace organisational structure.

Guideline Competency D - encompasses the management of policy development and implementation of effectual systems for human and physical resources to ensure that first aid can be provided in the workplace.

Relevance of first aid qualification

The intent of Regulation 3.12 outlining workplace first aid requirements can only be met while the first aider's qualification remains current.

See Appendix 7 Regulation 3.12

Persons accredited in cardio-pulmonary resuscitation should be given the opportunity to renew their cardio-pulmonary resuscitation techniques every twelve months.

When renewing or obtaining further qualifications, first aiders should consult their employer and training provider to ensure the training is appropriate for the workplace and consistent with the *National Guidelines Competencies for First Aid.*

Rescue and evacuation

Rescue and evacuation procedures are extremely important and people must be trained in these procedures. This training is not usually included in a first aid course.

For serious injuries, treatment must be received as soon as possible. It may be necessary to have people who are trained first aiders, particularly in remote areas, to also be trained in rescue and evacuation procedures.

Triage

Triage is a term used to describe the allocation of patient treatment in order of priority. Some information on triage may be given in a first aid training course, however, first aiders are not trained in triage.

Triage is generally considered to be relevant to a major emergency where people, with more extensive training, would be involved in making decisions on the priority treatment of patients.

CODE OF PRACTICE

WORKPLACE AMENITIES AND FACILITIES

Providing workplace amenities is an integral part of the employer's general duty. Workplace amenities are the facilities provided for the welfare of employees while they are at work. They include, but are not limited to, air quality, temperature controls, workspace, lighting, seating, washing facilities, toilets, change rooms, dining facilities, drinking water and the provision of suitable access and egress.

In some instances, the employer may need to decide what amenities are required before employees are at the workplace, such as in the planning stages of building a new workplace or altering an existing one.

Regulations made under the *Local Government Act* require compliance with the *Building Code of Australia* (BCA). The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia. It allows for variations in climate and geological or geographic conditions.

See Appendix 8 Other sources of information

Employers should consult their local government on the provision of amenities when planning a new workplace, altering an existing one or changing the use of an existing building or structure.

2.1 Consultation with employees

If the type and number of amenities have been established before employees are at the workplace, the employer should, in consultation with the employees and safety and health representatives if any, re-examine the adequacy and maintenance of what has been provided.

This process will help determine if the amenities need to be changed or expanded. A review of existing amenities is important where tasks, duties or processes change or new information becomes available which may affect the safety and health of employees or other persons at the workplace.

2.2 Workplace amenities to be provided

In determining the amenities that should be available to employees and other persons at the workplace, consideration should be given to the type of workplace. In this code of practice distinctions are made between different types of workplaces. Workplaces may be permanent or temporary. They may be in buildings or structures, outdoors, remote and may be mobile.

Workplaces include, but are not limited to, those described in Table 1. The table refers to different types of workplaces and locations. It also provides examples of workers who may work in them. When establishing amenities appropriate for individual workplaces, it may be useful to refer to the table and identify a similar type of workplace.

As well as considering:

- ❑ whether the workplace is in a building or a structure;
- ❑ the location of the workplace;

- ❑ the nature of the work to be performed;

consideration should also be given to:

- ❑ whether there are hazards in the workplace, the type of hazard and risk;
- ❑ whether the employer is in control of the workplace;
- ❑ the number of employees at the workplace;
- ❑ providing adequate privacy and security for male and female employees;
- ❑ the distance from the workplace to the nearest available and appropriate facility;
- ❑ access for the disabled or other special needs of employees;
- ❑ the time required to access the facility; and
- ❑ whether employees travel between workplaces.

Table 1 - Nature of Workplaces

	PERMANENT BUILDING	PERMANENT NON-BUILDING	TEMPORARY (SEASONAL)	TEMPORARY
Work at a fixed location with access to amenities	Workers in factories, workshops, offices, banks, schools, libraries, hotels, restaurants, community health centres, automotive industries and warehouses.	Workers in power plants and railway depots.	Rural workers.	Road construction and maintenance workers, timber workers, construction workers.
Regularly work away from a base location and with reasonable access to amenities	Inspectors, police, council depot workers, health care workers, teachers, consultants and domiciliary workers.	Emergency services personnel, park rangers, gardeners, couriers, drivers, sales reps.	Fruit pickers, shearers.	Emergency services personnel, trades personnel, e.g. plumbers and electricians.
Regularly work away from base location in remote areas		Rural workers, truck drivers.	Rural workers.	Timber workers, road construction and maintenance workers.
Work in mobile workplaces with access to amenities		Domestic airline crews, pilots, workers on ships and trains, drivers (trucks, buses, taxis).		

As well as the duties imposed by the *Occupational Safety and Health Act*, there are a number of requirements in the *Occupational Safety and Health Regulations* that impose minimum conditions on the convenient and reasonable provision of amenities. Having regard to the *Regulations* and the points under Section 2.2, decisions will need to be made about:

- ❑ suitable air quality;
- ❑ lighting;
- ❑ suitable workspace;
- ❑ temperature control;
- ❑ drinking water;
- ❑ seating;
- ❑ suitable toilet facilities;
- ❑ suitable washing or showering facilities;
- ❑ suitable facilities for eating;
- ❑ arrangements for people who are injured or become ill at work;
- ❑ where necessary, suitable facilities for changing clothes;
- ❑ suitable facilities for personal belongings;
- ❑ suitable protection from adverse weather conditions; and
- ❑ access and egress for the disabled.

2.3 Air quality

The employer and the person in charge of the workplace must take action to ensure people at the workplace are not exposed to an oxygen deficient atmosphere or a toxic atmosphere.

See Appendix 7
Regulations
3.37
3.38
3.39

The employer is required to reduce the level of airborne contaminants generated from any process conducted in a workplace to acceptable levels as defined in the *Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note [NOHSC: 3008(1995)]* and *National Exposure Standards [NOHSC: 1003 (1995)]*. Such control may be achieved by using mechanical extraction and ventilation methods or other suitable means. If it is not possible to reduce the level of airborne contaminants by any other means, suitable respiratory protective equipment must be provided. The *Code of Practice for Personal Protective Clothing and Equipment* (included in this booklet) provides guidance on the selection of appropriate respiratory protective equipment.

See Appendix 8
Other sources of information

2.4 Evacuation procedures

See Appendix 7 Regulation 3.10

The employer must ensure evacuation procedures are developed in consultation with employees to provide for the controlled movement of people from the workplace in the event of a fire, explosion, bomb threat or structural damage within a building to a place of safety.

All employees should be trained in the procedures which should be:

- simple;
- flexible;
- written;
- distributed;
- tested; and
- reviewed.

See Appendix 8 Other sources of information

The BCA includes specific requirements designed to protect people and the building in the event of a fire. The requirements include exit doors, fire doors, fire extinguishers, emergency lighting, exit signage and smoke control.

Further information on these requirements should be sought from local government.

2.5 Lighting

See Appendix 7 Regulation 3.13

Employees must be provided with lighting appropriate for the nature of the work and the work location.

The lighting should allow employees to move about safely without risk of accident or injury and to carry out their work effectively.

Some tasks may require local lighting at a particular work station in addition to general lighting for the workplace.

Factors to consider when providing lighting include:

- the nature of the work activity;
- the work environment;
- illumination levels (both natural and artificial light);
- glare;
- contrast; and
- reflections.

The BCA should be referred to for lighting within buildings.

2.6 Emergency lighting

Emergency lighting needs to be provided for the safe movement of persons at work in the eventuality that an emergency arises and normal lighting is temporarily unavailable. Australian Standard *AS 2293 Emergency evacuation lighting for buildings (AS 2293.1 System design, installation and maintenance; AS 2293.2 Inspection and maintenance)* is the relevant standard for emergency lighting and the maintenance of emergency lighting.

See Appendix 8 Other sources of information

2.7 Workspace

Different types of work have different requirements in relation to access to the work area, the movement of people to and from the workstation, the movement of materials and equipment, storage and so on. The particular requirements of the work area should be considered to ensure that the person using the work area is not obstructed by furniture, fittings, equipment or people. The location of hazards such as noise and heat sources should be considered prior to the determination of the work area.

See Appendix 7 Regulations 3.6 3.14

The space required for any particular job should be based on a risk assessment which takes into account:

- the task;
- the physical actions needed to perform the task;
- the need to move around while working;
- whether the task is to be performed from a sitting or standing position;
- access to and egress from the workstation; and
- the equipment to be handled and personal protective equipment that might have to be worn to perform the job.

The space should allow for the full range of movements required to do the job. Workers should be able to move as they need without strain or knocking against furniture or equipment.

Overcrowding

The number of people working in a building and the way in which they are grouped must be considered and arranged to prevent risk to their safety and health. Overcrowding interferes with free movement of people, obstructs access to emergency exits, may cause stressful background noise or interrupt work performance.

2.8 Air Temperature

See Appendix 7 Regulation 3.15

Air temperature is only one factor affecting the safety and health of employees. Whether the workplace is within a building or structure or outdoors, adequate precautions should be taken to protect workers having regard to:

- temperature (ambient and radiant);
- humidity;
- air movement;
- air contaminants;
- the worker's level of physical activity;
- the worker's degree of acclimatisation (particularly important under hot work conditions); and
- whether personal protective equipment is being worn.

Protective clothing should be appropriate for the tasks being performed. Measures should be taken to ensure workers do not become chilled through excessive exposure to low temperatures.

2.8.1 Air-conditioned workplaces

An air-conditioning system should:

- provide a generally acceptable environment in terms of air temperature, humidity and air movement;
- prevent the excessive accumulation of body odours or other objectionable odours;
- reduce respiratory by-products, especially carbon dioxide, to an acceptable level;
- reduce the levels of indoor air contaminants that may arise from work activities, building materials or external sources to acceptable levels; and
- supply an amount of fresh air to the air-conditioned space, exhaust some of the stale air, as well as filter and recirculate the bulk of the indoor air.

See Appendix 8 Other sources of information

The WorkSafe Western Australia Commission Code of Practice *Prevention and Control of Legionnaires' Disease* provides practical guidance on the general principles of design, installation, operation and maintenance of cooling towers and air-handling systems.

2.8.2 Non air-conditioned workplaces

Many workplaces are not suited to be cooled by air-conditioners, or it may be impracticable to do so. In such workplaces natural ventilation, which may be assisted by mechanical ventilation (fans or extraction units), is appropriate.

Natural ventilation should ensure adequate flow-through or cross ventilation and air-quality, including sufficient air-changes and fresh air quantities.

Air movement throughout a workplace is highly desirable for the comfort of employees. Air movement in non air-conditioned workplaces is dependent upon a number of factors including building design, outside climatic conditions, presence and adequacy of fixed ventilation systems, internal partitioning and workplace layout.

2.9 Drinking water

An adequate supply of clean drinking water must be provided at all workplaces and be readily accessible to employees. Drinking points must not be located in toilets or where the drinking water could be contaminated or polluted.

See Appendix 7 Regulation 3.16

Drinking water supply points should be placed where they can be readily accessed by the people for whom they are provided. Additional drinking points should be provided where workers are likely to be exposed to excessive heat or dehydration.

Where the water is not delivered in an upward jet, a supply of clean or disposable cups or glasses must be available.

All water used for drinking should conform to the National Health and Medical Research Council *Guidelines for Drinking Water Quality in Australia (EH20, 1996*).

Temperature of the drinking water

The temperature of the drinking water should be below 24 degrees Celsius. This temperature may be achieved by refrigeration or the provision of ice. Where ice is used to directly cool drinking water, the ice must be free of contaminants. Use a scoop or automatic dispenser to transfer ice to drinking containers.

When the supply of water comes from outside a building, it may be necessary to protect pipes from the sun to maintain an acceptable water temperature.

Connection to a water supply may not be possible

Where connection to a water supply is not possible, drinking water may be provided by other means such as a flask, cool water dispenser or water bag. The most appropriate method should be selected in consultation with employees. Work situations where connection to a water supply is not possible include rural workplaces, remote work locations, delivery trucks, road construction sites and logging sites.

Labelling of water supplies unfit for drinking

Water supplied for certain industrial work processes or for fire protection may not be suitable for drinking. The employer needs to ensure that water for work processes or fire protection is not inadvertently used for drinking. To guard against the accidental use of unfit drinking water, signs "UNFIT FOR DRINKING", or words to that effect must be placed at the water supply points.

2.10 Seating

See Appendix 7 Regulation 3.19

Employees must not be forced to adopt sustained, inappropriate and awkward body positions with work heights that are too low or too high. Displays must not be placed where they cannot be easily seen, or frequently used controls, tools and materials placed beyond easy reach. Such workstation layouts may result in inappropriate positions, such as bending to one side or twisting the body, which increase the risk of injury.

Workstations should be designed so that employees can do most of their work in an upright position with shoulders lowered and upper arms close to the body. The working height and objects used in the task should be roughly level with the employee's elbows, whether the work is done sitting or standing.

If the task involves close visual work or fine movements, the work level may need to be higher. Arm support should be provided if the arms must be kept raised when performing the task. Different employees require different working heights. It is best to use adjustable workstations to make the work height suitable for the person and the task. If the workstation must be shared regularly by different employees, ensure that its height can be adjusted quickly and easily. Fixed work tables at different heights can also be used to cater for different employees and different tasks.

Where work is carried out in a seated position, the employer must provide seating of a type and design enabling the work to be performed in a safe and ergonomically sound working position. This means it should be fully adjustable, provide suitable body support and be appropriate to the type of work performed. Where work is performed from a standing position and there are long periods of inactivity, seating may need to be provided to allow employees to sit down from time to time. At no time should an employee be at risk by performing manual handling tasks while seated.

Seating may need to be provided to allow employees to sit down from time to time where the following work activities are carried out:

- ❑ light manual work such as process work on production lines;
- ❑ work involving accurate control or fine manipulation such as component assembly;
- ❑ work involving the frequent use of foot controls over a long period; and
- ❑ counter duties.

In addition, it may be worth considering the provision of an anti-fatigue surface for static standing work.

2.11 Workplace facilities

2.11.1 Toilet facilities

See Appendix 7 Regulation 3.20

See Appendix 8 Other sources of information

An employer must ensure his or her employees have access to toilet facilities when they are at the workplace and that the facilities are readily accessible to all employees.

The BCA, administered by local government, requires suitable toilet facilities be provided in a convenient location within or associated with a building to the degree necessary, having regard to:

(a) the function or use of the building;

(b) the number and gender of the occupants; and

(c) the disability or other particular needs of the occupants.

The BCA includes specifications for the construction of toilets. It also sets out the ratio of toilets to employees in a range of workplaces in buildings. Advice on calculating the number of toilets to be provided at the workplace should be sought from local government when planning a new building, adding to an existing building or altering the use of an existing building.

Separate toilets should be provided for male and female employees. In some small businesses where there may be only a few employees and the privacy of male and female employees can be assured, it may only be necessary to provide one toilet.

Where shops are situated in a shopping complex, sufficient toilets to satisfy the needs of all shops in the complex should be provided by the owner of the shopping complex. The toilet facilities need to be provided in accordance with local government requirements and having regard to the security of employees required to use them.

Consideration needs to be given to how highly mobile employees who work away from a base location, such as bus and transport drivers, police, council and government inspectors and security personnel, can access toilets.

Reasonable access to toilet facilities needs to be provided for workers at temporary or outdoor work sites such as those carrying out road maintenance, construction workers, emergency services personnel, park rangers and gardeners, bridge builders, rural workers, seasonal workers and loggers. Other examples of employees or sub-contractors who need access to toilets include cleaners, security personnel, sales representatives, and delivery personnel. This may be in the form of access to public toilets.

❑ **Toilets should:**

- be separated from any other room by a soundproof wall, or by a reasonable distance, and by a separate entrance that is clearly marked;
- be separated from another room by an airlock;
- be provided with adequate lighting and ventilation;
- be supplied with toilet paper;
- incorporate a stable toilet pan that is fitted with a seat and lid;
- provide an adequate and hygienic means for the disposal of sanitary items for female employees;
- provide an adequate means of washing and drying hands; and
- be provided with rubbish bins for the disposal of hand towels.

❑ **Workplaces other than in a building or structure**

See Appendix 8 Other sources of information

Reasonable access to toilet facilities needs to be provided for employees at temporary or outdoor work sites such as construction sites, workplaces away from base locations or remote areas where sewer connection is not available.

See Appendix 5

While the structural design of a temporary toilet must comply with the requirements of the BCA, the *Health (Temporary Sanitary Conveniences) Regulations 1997* also apply. These regulations cover the standard and construction of temporary toilets and the sanitary conveniences to be provided and maintained at construction sites.

2.11.2 Washing Facilities

Wash basins

An employer must provide access to wash basins for hand washing purposes at all times.

The washbasins should be separate from any trough, sink or basin used in connection with the work process at the workplace.

Each washbasin should be provided with an adequate supply of soap or other hand cleaning agent, and hand drying facilities.

Additional washing facilities

An employer will need to identify the hazard and assess the risk to safety and health to determine if additional washing facilities other than washbasins should be provided. Where the nature of the work or the usual working conditions are such that an employee needs to shower after work, the employee should have access to showering facilities.

When a shower is required it should:

- ❑ be separate from any trough, sink or basin used in connection with the work process at the workplace;
- ❑ be immediately adjacent to an adequate drying area;
- ❑ provide adequate privacy and security;
- ❑ be protected from the weather; and
- ❑ be provided with suitable soap.

Ratio of washing facilities to employees

An assessment should be made of the nature of the work to determine the ratio of washing facilities (showers) to employees. For every 15 employees (or part thereof) who complete work at any one time and require a shower, an employer should provide at least one showering facility.

Separate showering facilities should be provided for male and female employees.

At workplaces other than construction sites, where there are only a few employees and the privacy of male and female employees can be assured, the provision of one shower may be acceptable to the employees.

Washing facilities in permanent workplaces

Clean, hot and cold water should be supplied when the washing facilities are situated at a permanent workplace, or at any other place where more than five employees are required to work continuously for two or more weeks.

All new hot water installations shall, at the outlet of all sanitary fixtures used primarily for personal hygiene purposes, deliver hot water not exceeding:

(a) 45ºC for early childhood centers, primary and secondary schools and nursing homes or similar facilities for young, aged, sick or disabled persons; and

(b) 50ºC in all other buildings.

Compliance with these temperature limits is optional for kitchen sinks and laundry tubs.

Workers who may require access to showering facilities, in addition to hand washing facilities, at permanent workplaces include:

- ❑ foundry workers;
- ❑ those carrying out abrasive blasting; and
- ❑ boilermakers and welders.

Washing facilities in temporary workplaces

When washing facilities are at a temporary workplace, the facilities should at least be supplied with clean water and soap.

Workers who may require access to showering facilities, in addition to hand washing facilities, at temporary workplaces include:

- shearers, timber workers and other rural workers carrying out hot and arduous work;
- major building and construction site workers, road workers and maintenance workers; and
- emergency services personnel involved in long duration incidents such as a fire or rescue.

In some circumstances free standing outdoor showers may be used for wash downs, for example, after chemical clean-ups or upon completion of abrasive blasting.

2.11.3 Rest Areas

Provision of a rest area

A rest area should be provided where an employee who becomes ill at work can rest. An employer should consider the nature of the work and the number of employees to determine whether or not it is appropriate to provide a rest area with a bed or one with a comfortable chair.

Facilities for a rest room may be combined with those of a first aid room, if a first aid room is considered necessary and reasonable privacy of an employee can be assured. The first aid requisites must be relevant to the hazards in the workplace and the risk to the safety and health of the employee.

Where a first aid room or a rest room is not available, suitable arrangements, including access to medical attention if required, or transport home, should be made to ensure the well being of any person who becomes sick at work.

Employees undertaking remote or isolated work need access to some form of emergency communication device in the event that an employee becomes sick while at work. This could include provision of a mobile telephone or two-way radio or some form of regular security check.

A person such as a carer who accompanies or cares for a highly dependent person away from that person's normal residence or the carer's usual workplace should also be provided with some form of emergency communication device.

Specifications of a rest area

Where a rest area is to be provided, it should be:

- ❑ clean and hygienic;
- ❑ separate from any main working area (but not necessarily a separate room);
- ❑ furnished with a bed, pillow and blankets or a comfortable chair with a blanket as appropriate;
- ❑ quiet and well ventilated;
- ❑ able to provide some privacy; and
- ❑ able to be supervised.

Supervision of a rest area

An employer should ensure that discrete and appropriate supervision of an employee using a rest room is maintained primarily to ensure there is no deterioration in their condition while resting.

2.12 Facilities for eating

An employer should provide employees with reasonable access to hygienic facilities for eating meals at work.

The type of facility provided should be appropriate to the nature of the work, the number of employees and the working environment. A range of facilities may be considered appropriate.

In small workplaces where dining facilities cannot be accommodated in the premises, the employer needs to arrange access to alternate facilities. As a minimum requirement, access to a separate area needs to be provided that is equipped with a sink, a clean and hygienic storage cupboard, an appliance in which to boil water to make tea or coffee, and running water (preferably hot and cold) for washing utensils such as crockery and cutlery.

Seating should be appropriate for adults.

In a larger workplace, it is reasonable that a separate dining area or room should be provided.

If less than 25 employees usually eat a meal at a particular time at the workplace, an eating area should be provided that is:

- ❑ separate from the work area;
- ❑ protected from the weather, surface and airborne contaminants,
- ❑ free of tools and work materials;
- ❑ have facilities for boiling water, facilities for washing and cleaning utensils and facilities for storage of utensils free from contamination; and
- ❑ regularly cleaned.

Where insecticides, pesticides or substances used for cleaning and polishing are used in an eating area, care must be taken to ensure any residue is removed prior to surfaces being used for food preparation or consumption.

If more than 25 persons usually eat a meal at a particular time at the workplace an eating room should be provided. The eating room should:

- ❑ be hygienic and waterproof;
- ❑ be separated from any hazard produced by any work process (including noise, heat and atmospheric contaminants, including toilet facilities);
- ❑ be fitted with a sink, draining board and hot and cold running water (where reticulated water is available);
- ❑ have facilities for storing food in a cool and hygienic place, for storing utensils free from contamination and for boiling water; and
- ❑ have a reasonable number of refuse receptacles which are maintained in a clean and hygienic manner.

Local government should be consulted on the provision of eating facilities during the planning of new building or redesign of an existing one.

Access to eating facilities

An eating area, canteen or cafeteria may be available to employees in a building near the workplace. If it is proposed that these facilities are appropriate eating facilities, an employer should ensure that such a facility is available to all employees.

Eating facilities in mobile or remote workplaces

Where the work involves regularly going to different workplaces or working in a remote area, an employer should provide employees with reasonable access to facilities. The type of facility provided should be appropriate to the nature of the work, the number of employees and the working environment. A range of facilities may be considered appropriate. For example some employees such as timber workers work in remote locations where the only enclosed facility may be a vehicle.

2.13 Change rooms

Provision of change rooms

Where the work process or the employer requires employees to change clothes before or after work, a facility for changing clothes should be provided. Workers who may need to change clothes include hospital workers, meat processors or handlers, and those where a work uniform is not to be worn outside the workplace.

Where the nature of the work performed by employees involves working with hazardous substances and employees are required to wear protective clothing which must be decontaminated, additional facilities should be provided. Such additional facilities include change rooms separate from other change rooms and storage facilities for protective clothing which is separate from that provided for personal clothing.

The nature of the change rooms

Separate change rooms should be provided for male and female employees. In some cases there may be only a few employees who are required to change before or after work. If the privacy of male and female employees can be assured one change room may be acceptable**.**

Change rooms should have sufficient space and adequate seating for the maximum number of persons who are changing at any one time. They should be equipped with a reasonable number of hooks, mirrors and adequate shelving.

When calculating the size of the room required, there should be sufficient clear space allowed for each person changing clothes at any one time. This space should be in addition to that required for lockers, storage space or other facilities.

Lockers

Each person who usually makes a change of clothes at the workplace should be provided with a locker for storing clothing and personal belongings. The locker should be big enough for the clothing to be stored, well ventilated, fitted with a hook on the back of the door, have a shelf at the top of the locker compartment, a coat hanger rail below the shelf and a lockable door.

Temporary workplaces

In temporary workplaces where an employee is required to change clothes before, during or after work, an employer should provide access to facilities for changing clothes that are convenient to the workplace, hygienic and afford reasonable privacy and security.

2.14 Personal Belongings

Where work does not require a change of clothes, secure storage facilities should be provided for personal belongings.

Facilities for personal belongings in buildings or structures

Where the workplace is in a building or structure, these facilities should at least consist of hanging space with provision for safe custody of personal property. If there is communal hanging space rather than lockers, a lockable drawer may be acceptable for other personal property.

Facilities for personal belongings in temporary or mobile workplaces

Safe custody of personal property should be assured when employees are not normally working at one workplace. Where the workplace is temporary or mobile, lockable containers that can be held in a safe place may be acceptable.

Safe storage of tools

Where any work involves the use of tools provided by an employee, reasonable provision should be made for the secure and weatherproof storage of those tools during non-working hours.

2.15 Shelter

An employer should provide employees with reasonable access to shelter while weather conditions make work unsafe.

The type of shelter should be suitable for the type of work, the number of employees and the working environment. A range of facilities may be considered appropriate.

In many workplaces the facilities for eating may be suitable shelter from weather.

2.16 Communication procedures and systems

See Appendix 7 Regulation 3.3

Employees in remote workplaces must have access to emergency communication systems in case they become ill or injured while at work. An employer must ensure communication is made on a regular basis with employees working in a remote workplace to ensure their safety and health and appropriate procedures are in place for this purpose.

A person is alone at work when they are on their own, when they cannot be seen or heard by another person, and when they cannot expect a visit from another worker or member of the public for some time. The person who is working alone may be an employer, self-employed person, contractor or employee.

In some situations, a person may be alone for a short time. For example: a firefighter may work as part of a team, but others in the team may be unable to see or hear the person for an hour or more if the team has spread out in a bush fire. In other situations, the person may work on their own for days or weeks in remote locations.

In Western Australia, the size and geography of the State means that there are many situations where a person could work alone in a remote location such as on a farm or pastoral station, in a forest or exploration work.

A person may also work alone in a metropolitan area, because of the time, location or nature of their work. For example, a employee is alone when he or she:

- ❑ works in a depot or business where there are no other employees;
- ❑ works in a workplace when everyone else has gone home;
- ❑ cleans offices in high rise buildings or other facilities outside normal business hours when there is no-one else in the area being cleaned;
- ❑ is called out at night to check on security alarms or faults in business premises that are closed;
- ❑ accompanies a highly dependant person on an excursion or for treatment away from the workplace.

The WorkSafe Western Australia Commission Guidance Note *Working Alone* provides practical guidance on meeting the requirements of regulation 3.3.

See Appendix 8 Other sources of information

2.17 Accommodation

Employees working in remote areas are often obliged to make use of employer-provided accommodation, as there is no alternative. So called "found" arrangements apply where the employee is provided, either free of charge or at a nominal cost, temporary accommodation while the work is being completed. An example of such arrangements would be where accommodation is provided to shearers on a sheep station or employees engaged in construction work at an isolated location.

These situations differ from arrangements where leased or let accommodation is provided in association with employment. In those situations, employees have a choice to accept the tenancy or lease arrangements and have some protection under relevant legislation, for example, housing for a miner at a mining town.

Where:

* accommodation is essential to the performance of the work and the employee is required to live there; and
* no practicable alternative accommodation is provided or available;

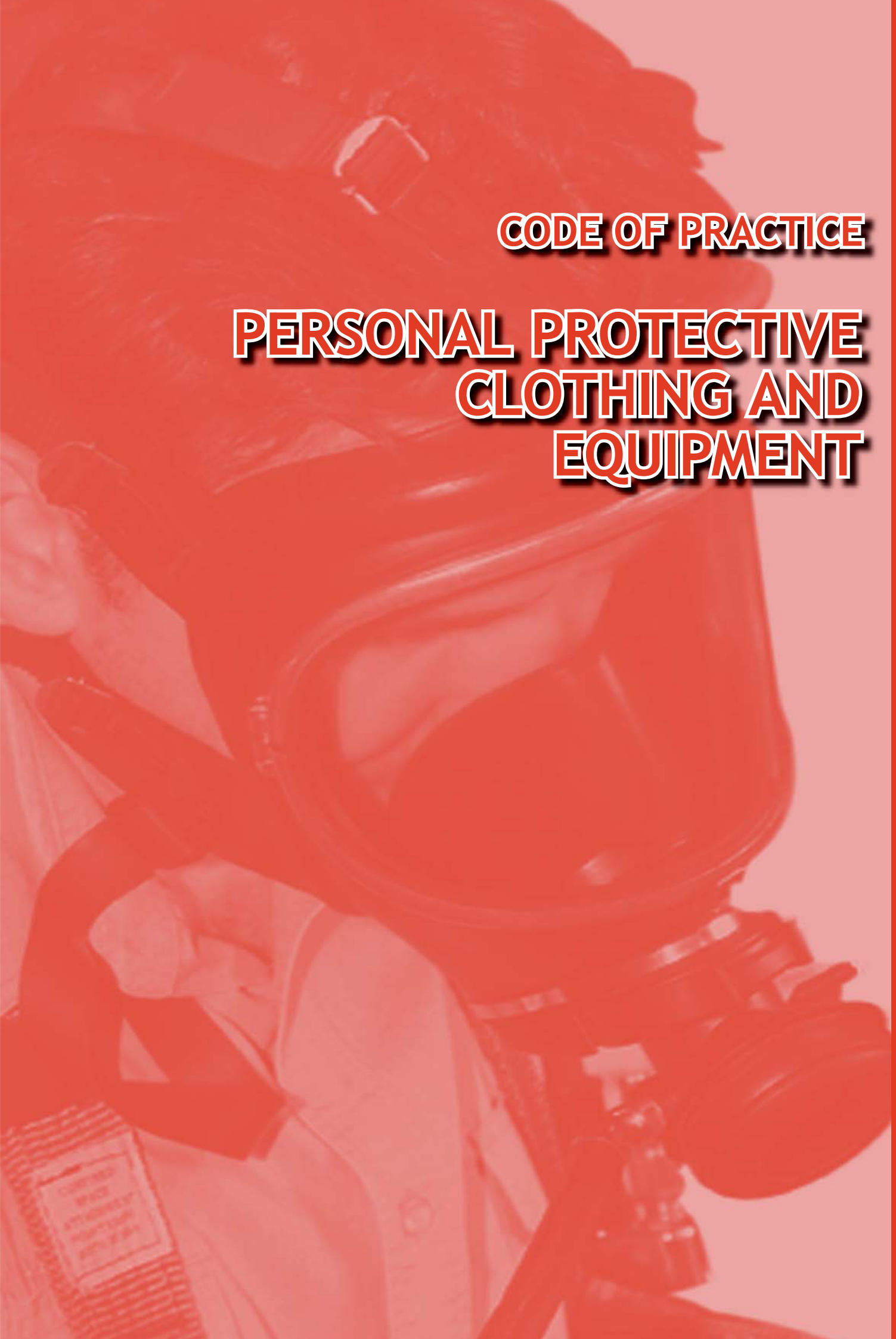
the person responsible should ensure the accommodation and equipment supplied is maintained in good repair.

Where practicable the accommodation should be separated from any hazards at the workplace likely to adversely affect the safety or health of an employee using the accommodation.

In determining what is reasonable in these circumstances, the following should be considered:

(a) safe access and egress;
(b) fire safety;
(c) electrical safety;
(d) appropriate toilets and washing facilities;
(e) cleanliness;
(f) drinking water;
(g) suitable sleeping accommodation;
(h) crockery and dining facilities;
(i) rubbish collection;
(j) heating and cooling;
(k) ventilation;
(l) lighting;
(m) clothes washing facilities;
(n) storage cupboards and other appropriate furniture;
(o) refrigerator or cool room.

It is not intended these requirements should apply in outback areas where established practices exist, such as in the pastoral and grazing industry, where it would not be reasonable for mustering and fencing camps to provide the same accommodation standards as the homestead.



CODE OF PRACTICE

PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

In this Code a reference to personal protective equipment, unless specifically stated otherwise, also refers to personal protective clothing.

This Code provides general advice about using personal protective equipment to minimise exposure to risks associated with workplace hazards. It provides guidance on selecting, using, storing and maintaining such equipment.

The use of personal protective equipment (and administrative controls) is lowest in the order of control priorities. These controls should not be relied on as the primary means of risk control until the options higher in the list of control priorities have been exhausted (See Table 2, Appendix 1). Personal protective equipment may be used in conjunction with other controls where the risk of exposure is high.

If personal protective equipment has been identified as one of the control measures to minimise exposure to a risk, the employer must make sure such equipment is provided.

The employer should also provide training and instruction in the use of personal protective equipment to ensure employees receive the desired level of protection from the equipment.

3.1 Selection of personal protective equipment

See Appendix 7
The Act s.19, s.20
Regulations 3.1, 3.32, 3.34 and 3.35

The selection of appropriate personal protective equipment requires consideration of the hazards and risks of the work processes. The hazard identification and risk assessment required by the *Regulations* should ensure hazards and risks of the work processes are clearly identified.

If, in addition to implementing control measures to eliminate or reduce the risk, it is determined there is a need for personal protection, the next step is to ensure the provision of personal protective equipment is appropriate to the hazard and the risk.

In selecting personal protective equipment it should be considered whether the protection is required for a specific risk or to control multiple risks presented by the same hazard or a combination of hazards. For example, using a power saw to cut wood presents risks to the eyes (flying chips, dust), lungs (dust), whole of body (electrical), hands (cuts) and ears (noise).

Personal protective equipment should be selected that will best protect workers in the circumstances. In some cases use of personal protective equipment may create a secondary risk not identified in the original assessment. These risks should be evaluated. An assessment of the effectiveness of the equipment chosen should be made to ensure it is providing the desired protection and is not creating any additional safety or health problems.

Personal protective equipment should be checked to ensure it fits properly and is worn correctly. Comfort of personal protective equipment is an important factor in ensuring its use. To ensure personal protective equipment is selected appropriately, the following process should occur:

- employers and employees should familiarise themselves with the potential hazards and the availability of personal protective equipment;
- employers and employees should have an understanding of the criteria for selecting appropriate personal protective equipment which provides an adequate level of protection against the risks present; and
- employers and employees should evaluate the selected equipment to ensure it fits properly, is used appropriately, can be maintained according to manufacturers' specifications and does not create secondary safety or health risks.

3.1.1 Records

Records of risk assessment should be retained at the workplace. Such records would assist the employer and employees in examining where hazards have been controlled and improvement made through design, substitution, separation or administration rather than the provision of safety equipment.

Records of use allow the maintenance and effectiveness of personal protective equipment to be monitored. Certain Australian Standards require the keeping of records, for example, the use of eye filters to protect against radiation generated in welding and allied operations (*AS/NZS 1338 Filters for eye protectors*).

See Appendix 8 Other sources of information

3.1.2 Consultation with employees

Consultation with employees is one of the easiest and most effective means of identifying hazards and establishing controls at the workplace. Employees are usually well aware of what can go wrong and why, based on their experience with a job. This consultation should be done after the initial risk assessment, which should take place during the design stage, prior to commencement of the project or process.

Where a safety and health committee exists, the committee and safety and health representatives should be part of the consultative process.

3.2 Provision of personal protective equipment

See Appendix 7
The Act s.19(1)(d)

Where it is not practicable to avoid the presence of a hazard and employees need personal protective equipment to protect them against the hazard, the employer must provide personal protective equipment. Factors to be considered in deciding the most appropriate equipment for a particular workplace include:

- the absolute requirement for personal protective equipment at that workplace;
- the availability of the personal protective equipment;
- the location of the workplace;
- the need for a personal fit;
- the training and information to be given to employees;
- industry practice, such as personal protective equipment being a normal requirement for that industry sector;
- the nature of the work and associated hazards; and
- the ability to properly maintain the personal protective equipment in the workplace.

The need for personal protective equipment at the workplace should be made known to employees before they start any new work, and before they are required to use the equipment.

Where individual fit is important for the safe use of personal protective equipment, it may be better for employees to choose their own (e.g. footwear).

3.3 Use of personal protective equipment

3.3.1 Training

See Appendix 7
The Act s.19(1)(b)

All employees exposed to workplace hazards should be trained in safe work practices including the correct use of personal protective equipment. The employer has a duty to provide this training and relevant information. Where items of personal protective equipment are to be worn by non-employees at a workplace, sufficient instruction should be provided to ensure the correct wearing of these items.

A follow-up assessment of employees' safety training should be carried out periodically to ensure the work is being done in a safe manner and personal protective equipment is being properly used and is effective. Training should also cover maintenance of the personal protective equipment where required.

Training can be separated into induction and more specific job training.

❑ **Induction Training**

General information about personal protective equipment should form an integral part of an induction training program for new employees.

An induction program relevant to personal protective equipment should include:

- duty of care under the *Act;*
- safety and health policies and procedures;
- provision, use, storage and maintenance of personal protective equipment, particularly the risks caused by incorrect use or maintenance of the equipment; and
- emergency procedures in case of special risks e.g. chemical spills or fires.

❑ **Job Training**

Training of new employees for their specific jobs should cover the hazards and risks identified in a hazard identification and risk assessment process. It should also include instruction in the use of personal protective equipment required by the job including:

- correct selection, use and wearing of personal protective equipment;
- comfort and fit requirements;
- limitations in use and effectiveness; and
- maintenance and replacement procedures.

Ongoing training should be provided to employees as work practices or equipment are up-dated or changed.

3.3.2 Consultation with the supplier

The employer must consult with the supplier to ensure personal protective equipment is suitable for the work and workplace conditions.

There is no singular form of personal protective equipment that can be used universally for all types of hazards and work conditions.

There are many different types of gloves, respiratory and hearing protective devices available on the market. For example, no one type of glove will provide hand protection from all hazards. Selecting gloves that will provide the appropriate level of protection is a complex task as is the selection of respiratory and hearing protection equipment.

See Appendix 6 Types of gloves

3.3.3 Signs

See Appendix 8 Other sources of information

Signs posted in conspicuous locations at the workplace are a useful reminder of the kind of personal protective equipment that should be worn. Signs should comply with *AS 1319 Safety signs for the occupational environment*.

3.4 Storage and maintenance of personal protective equipment

3.4.1 Storage

An employer or principal contractor should ensure that personal protective equipment is stored in a clean and fully operational condition. Storage arrangements should ensure the equipment is safe from interference and damage, and is easily accessible when needed. Personal protective equipment should also be checked regularly, both during storage and in use as specified by the manufacturer or supplier, to ensure it is in a good condition.

3.4.2 Maintenance

An employer should ensure personal protective equipment is maintained in a condition that ensures its continued effective use. Damaged or defective personal protective equipment should be discarded or repaired according to the manufacturers' specifications.

A system to ensure appropriate maintenance of personal protective equipment should be implemented.

The system should cover:

- the responsibilities for maintenance according to the manufacturers' specifications;
- the designation of personnel;
- storage procedures;
- cleaning procedures;
- checking procedures;
- protective life of gloves, respiratory canisters, etc.;
- training on correct maintenance of personal protective equipment; and
- criteria for replacement, maintenance or calibration of personal protective equipment.

3.4.3 Soiled protective clothing

Soiled protective clothing may pose a risk during laundering. To minimise the risk, laundering should preferably be done at the workplace or by a specialist laundry service. If disposable clothing is worn, suitable procedures need to be developed to ensure the clothing is appropriately disposed of without risk to the safety and health of others.

3.5 Risk protection through personal protective equipment

A risk assessment should have identified the types of hazards and risks present at the workplace. Some of the more common hazards and risks and the types of personal protective equipment used to reduce them are outlined below.

See Appendix 7 Regulation 3.1

3.5.1 Objects or persons falling from heights

Falling objects

Protective headwear is standard protection against injury from falling objects. *AS/NZS 1800 Occupational protective helmets – Selection, care and use* contains recommendations for the selection, care and use of safety helmets for head protection in building and construction work, underground work, mining, quarrying, forestry and other occupations with similar hazards.

Some circumstances may require head protection other than a safety helmet. The selection of appropriate protection will depend on circumstances. Bump hats may be appropriate, for example where small objects are likely to fall short distances on to the head.

Protective headgear is highly recommended on building and construction sites higher than one level.

Appropriate footwear to guard against objects falling on feet should be selected according to the hazards and risks identified by the risk assessment. Safety footwear that complies with *AS/AZS 2210 Occupational protective footwear* is generally required in workplaces where there is a risk of heavy objects falling and causing crush injuries to feet. Where smaller objects fall short distances, footwear that covers the foot may be sufficient.

See Appendix 8 Other sources of information

Some workers, e.g. tree pruners, may need eye protection against falling objects. Goggles or face shields may be suitable protection.

Falling persons

See Appendix 8 Other sources of information

Fall arrest systems and devices are designed to prevent falls from elevated workplaces where redesign of the work area is not practicable. In many circumstances, guard rails are effective protection against falling and provide greater mobility to workers than safety harnesses. The WorkSafe Western Australia Commission Code of Practice *Prevention of Falls at Workplaces* should be referred to for further information and guidance.

Table 2 summarises some of the risks associated with objects or persons falling from elevated workplaces. It also indicates some of the occupations commonly exposed to these risks and personal protective equipment designed to protect against them, where the other controls, e.g. design, substitution, redesign, etc. are not practicable.

Table 2 - Objects or persons falling from elevated workplaces

Area of Exposure	Risks	Protection
Head	Falling objects	Safety helmets
	Moving objects	Bump hats
Eyes	Falling fragments	Safety goggles, face shields
Hands	Falling objects	Safety gloves
Feet	Heavy falling & rolling objects	Safety footwear
	Light objects	Protective shoes
Whole Body	Falls from one level to another level	Fall injury prevention system
	Falls from slippery surfaces	Slip resistant shoes

Persons who may fall or be struck by a falling object include: painters, labourers, construction workers, agricultural workers, timber workers, roof workers, window cleaners, welders, manual handlers, storemen and packers, metal workers, shipping and receiving clerks, assemblers, machine operators, freight handlers, maintenance workers and demolition workers.

3.5.2 Non-mechanical penetration or impact injuries

Non-mechanical moving objects likely to strike against or penetrate the body include hand tools (ie. hammers, spanners, knives and screw drivers), materials being worked on or handled, and debris from work processes.

A variety of protective headwear may be used depending on the mass, velocity, and texture of the moving object. Bump hats, for example, may provide adequate protection against injury caused by slowly moving objects on an assembly line. A safety helmet may be required where objects are larger and are moving more quickly. A risk assessment will identify the particular risks associated with such hazards. Separation of people from the hazard is better than personal protective equipment.

Protective gloves are useful to prevent cuts where knives or other sharp tools are used. Arm guards may be required in hazardous tasks such as meat cutting.

Protective footwear can prevent sharp objects from penetrating and injuring the foot. It can also be effective protection from knocks and against items and materials used in the work process. See *AS/NZS 2210 Occupational protective footwear.*

See Appendix 8 Other sources of information

Table 3 summarises some of the risks associated with non-mechanical objects striking or penetrating the body. It also indicates some of the occupations commonly exposed to these risks and appropriate personal protective equipment designed to protect against them, where other controls, e.g. design, substitution, redesign, etc. are not practicable.

Table 3 - Non-mechanical penetration or impact injuries

Area of Exposure	Risks	Protection
Head	Cutting, flying, protruding objects, sharp objects	Safety helmets, protective headwear
Eyes	Protruding, flying objects	Eye protectors, face shields
Hands	Cutting, flying, protruding objects, sharp objects	Safety gloves
Feet	Cutting, flying, protruding objects, sharp objects	Safety shoes
Whole Body	Cutting, flying, protruding objects, sharp objects	Protective clothing

Persons who may incur impact and penetration injuries caused by a non-mechanical object include: timber or logging workers, agricultural workers, mechanics, labourers, carpet layers, welders, cloth cutters, metal workers, carpenters, cabinet makers, chefs and cooks, butchers, abattoir workers, doctors, nurses, veterinarians, gardeners, groundsmen and cleaners.

3.5.3 Being crushed or caught in or between moving machinery and equipment

Injuries associated with the operation of machinery and equipment include being caught between moving parts, or being struck by moving machinery, or striking against an object while operating machinery and equipment.

Due to the serious risks posed by moving parts of many industrial machines, guarding devices are usually a more appropriate form of protection than personal protective equipment. Risks associated with industrial presses, for example, can only be controlled effectively by guarding of the pinch point on the machine, rather than by the use of personal protective equipment by the operator.

Some mechanical equipment may present a risk of striking a worker. In some cases, the danger is that the operator will be struck by the equipment. In other cases, materials or debris associated with the operation of machinery will present the risk. In both these cases, a combination of redesign and personal protective equipment may be necessary to protect workers from injury.

See Appendix 8 Other sources of information

Safety eyewear is required in many industrial processes involving chipping, grinding, drilling, sawing, etc. Spectacles with side protection, goggles or face shields may be required depending on the hazards and risks involved in the work process. *AS 1336/NZS Recommended practices for occupational eye protection* contains recommendations for safe work practices for eye protection, and *AS/NZS 1336 Eye protectors for industrial applications* outlines the requirements for industrial eye protection.

Face shields may be more appropriate than either spectacles with side protection or goggles where there is risk of facial injury. In any event, guarding of the work process may prevent the risk at the source, thereby reducing the possibility of injury.

Another common type of risk associated with the operation of machinery and equipment is the risk of collision. Drivers of vehicles may be thrown from the vehicle on collision, or crushed if the vehicle overturns. Other workers are exposed to the risk of being hit by vehicles or by materials being lifted, moved or carried. The design of vehicles and the provision of operator protective devices (e.g. seat belts, roll bars, etc.) should, for the most part, protect drivers of vehicles. Reflective clothing will make other workers more visible to the driver of vehicles.

Other hazards related to machinery and equipment (e.g. noise emissions) will be covered in the relevant hazard and risk categories.

Table 4 summarises some of the risks associated with the operation of machinery and equipment. It also indicates some of the occupations commonly exposed to the risks and appropriate personal protective equipment designed to protect against them, where the other controls, e.g. design, substitution, redesign, etc. are not practicable.

Table 4 - Being crushed or caught in or between moving parts of machinery and equipment

Area of Exposure	Risks	Protection
Head/Hair	Moving, swinging parts of machinery	Safety helmets, hairnets
Eyes	Projected debris, off-cuts	Safety goggles, face shields
Hands	Crushing	Machine guards are an effective means of preventing crushing of hands by machines in general and presses in particular.
Feet	Moving, swinging parts of machinery	Safety shoes
	Crushing	Safety shoes
Whole body	Collisions, crushing	Seat belts, ROPS, reflective coats
Persons who may be caught in or between, or crushed by moving machinery or equipment include: drivers, construction and building workers, labourers, machine operators, mechanics, process workers, shipping and receiving clerks, maintenance workers, lathe and press operators, agricultural workers and demolition workers.		

3.5.4 Hazardous Substances

Hazardous substances generally affect the skin, eyes, respiratory system or body. Splashes from chemical substances may result in burns to the skin or eyes. Harmful vapours may harm the eyes or the respiratory system. Substances handled without protection may result in contact dermatitis. Other substances may be carcinogenic and could lead to long term health effects.

The use of Material Safety Data Sheets (MSDS) in the control of hazardous substances is critical. The MSDS, which must be made available by manufacturers and suppliers, will list both the harmful properties of these substances as well as the range of control measures required to control their effects. Control measures outlined in the MSDS should be assessed with regard to the work environment in which the substance is used. Product labels are also a valuable primary source of information.

See Appendix 8 Other sources of information

The National Occupational Health and Safety Commission publication *Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note [NOHSC: 3008(1995)]* and *National Exposure Standards [NOHSC: 1003 (1995)]* contains information regarding the upper levels for airborne concentrations of a large number of individual hazardous substances.

A wide variety of personal protective equipment is available to guard against risks from hazardous substances. Basic equipment includes respirators, goggles, face masks, gloves, footwear and aprons.

More extensive protection will be required where the risk of exposure is great due to working in confined spaces or in emergency conditions such as chemical fires or accidental spillages of hazardous substances. In such cases, self contained breathing apparatus or hazardous chemical suits may be required.

In many working environments, employees are exposed to a variety of substances that may be in the form of gas, vapour, dust, mist, fume or smoke. Not all substances in working environments have been tested for their toxicological effects, however most substances are capable of causing harm if exposure is sufficiently high. For airborne substances with defined properties and known toxic effects, reference should be made to *NOHSC: 3008 (1995)* and *NOHSC: 1003 (1995)* to ensure employees are not exposed beyond acceptable limits.

A substance may have a harmful effect if it comes into contact with a susceptible site in or on the body. The basic routes of entry into the body of gaseous substances are inhalation, skin absorption and ingestion.

Respiratory protection

See Appendix 8 Other sources of information

See Appendix 7 Regulation 3.40, 3.41

Inhalation is by far the most common route by which substances enter the body. Where it is not practicable to prevent employees being exposed to toxic atmospheres the employer must provide respiratory equipment. Respiratory equipment must be selected in accordance with *AS/NZS 1715 Selection, use and maintenance of respiratory protective devices* and comply with *AS/NZS 1716 Respiratory protective devices*.

Before selecting a respirator, the physical characteristics of the contaminant or combination of contaminants needs to be known, i.e. whether it is particulate, a gas, vapour or a combination of them, and such conditions as the boiling point and vapour pressure. In some cases gas detectors may be required to ensure that levels of toxic, noxious or explosive gases remain within acceptable limits.

Where the type or extent of atmospheric contamination (gaseous or particulate) remains unknown and a safe level of oxygen cannot be assured, respirators designed to give protection against all three types of hazard, gas, particulate matter or oxygen depletion, should be used.

There are two ways of providing personal respiratory protection. These are:

- Purifying the air that the person breathes by way of the inhaled air being drawn though a filter. The type of filter will be determined by the composition and physical state of the contaminant. Filters do not provide protection in an oxygen deficient atmosphere or give protection against all contaminants.
- Supplying the person with respirable air from a source independent from the working environment, conveying respirable air to the person via an airline or a self contained breathing apparatus.

The selection process for respiratory equipment should include:

- the nature, toxicity, physical form and concentration of the contaminant, whether particulate, gas or vapour, or a combination of these;
- whether failure of the respirator could result in immediate danger to life or health;
- the need to wear other personal protective equipment e.g. eye or skin protection against irritants;
- the adequacy of the exposure warning symptoms given by the contaminant;
- the possibility of the contaminated atmosphere being flammable or explosive; and
- the ability to effectively detect the contaminants likely to be present (e.g. availability of correct detection equipment).

It is essential when selecting a respirator to determine the reduction in exposure that different respirators can be expected to provide. Australian and New Zealand Standard *AS/NZS 1994 Selection use and maintenance of respiratory protective devices* (Tables 6.1 to 6.5) sets out respirator selection considerations for mechanically generated particulates, thermally generated particulates, gases and vapours and combined particulates and gases.

See Appendix 8 Other sources of information

Consult the supplier on suitability of equipment for the level of protection required. Insist that the supplier provides equipment complying with the relevant standard and all necessary information on correctly fitting, cleaning, maintaining and storing the equipment.

Skin protection

To protect employees from the effects of hazardous substances to the skin, consideration must be given to the selection of protective equipment such as gloves, aprons and chemical suits. When selecting gloves and clothing to help protect employees from the harmful effects of toxic, corrosive or hazardous chemicals, several performance factors have to be considered.

Penetration, degradation and ***permeation*** are key factors to be considered in the selection process.

- ***Penetration*** In selecting chemical resistant clothing it is important to select material that is designed to resist penetration of a hazardous substance through seams, pores, zippers and material imperfections.
- ***Degradation*** is the reduction in the physical properties of gloves and protective equipment whereby exposure to hazardous substances, heat and sunlight may cause the protective equipment to become brittle, weak, soft, swell, shrink or lose its permeation factor and thereby reduce the level of protection.
- ***Permeation*** is the process by which hazardous substances pass through gloves or clothing without going through pinholes, seams or other openings.

Before selecting gloves and protective clothing, the employer must consult with the supplier to ensure appropriate consideration is given to each of the above.

Table 5 summarises some of the risks associated with hazardous substances. It also indicates some of the occupations where persons are commonly exposed to the risks and refers to appropriate personal protective equipment designed to protect them, where other controls, e.g. design, substitution, redesign, etc. are not practicable.

See Appendix 6 Types of gloves

Appendix 6 covers the suitability of certain types of gloves for handling a range of hazardous substances.

Table 5 - Hazardous substances		
Area of Exposure	**Risks**	**Protection**
Head	Splashes, burns to the face	Face shields
Eyes	Burns, splashes, irritation	Face shields, goggles. Irritation to the eyes from harmful vapours may be effectively controlled by changing work methods to isolate harmful chemicals from workers.
Hands	Burns, dermatitis, absorption into body tissue and blood, defatting	Impervious safety gloves
Feet	Burns	Safety footwear, impervious footwear
Whole body	Respiratory vapours, inhalation, ingestion	Respirators, breathing apparatus
	Burns, absorption into body tissue and blood, defatting	Impervious, hazardous chemical suit
Persons who may be exposed to hazardous substances include: gardeners and groundkeepers, agricultural workers, laboratory technicians, storemen and packers, freight handlers, painters, labourers, maintenance workers, chemical process operators, emergency workers, firefighters, manufacturing workers, metal workers, paper workers, textile workers and plastics workers.		

3.5.5 Temperature extremes

Burns, scalds, spills or splashes

Foundry and furnace operations are examples where workers are exposed to heat for which protective suits, face masks and complete skin protection may be required. Plant and substances at cryogenic temperatures can also create the risk of burns. Fire fighters should have clothing that is both fire retardant and thermally insulating, for protection against burns.

Hazards in this category include spills or splashes of hot substances and contact with hot surfaces. These hazards may be found in foundries, galvanising works, welding workshops and a variety of other workplaces.

In addition to the provision of personal protective equipment against burns, consideration must be given to the design of such protective clothing so that it does not present a hazard in itself. Fire proof clothing, for example, worn by a worker who is very active may lead to an increase in metabolic heat to dangerous levels, thereby contributing to a secondary effect of temperature hazard.

Table 6 summarises some of the hazards and risks associated with heat. It also indicates some of the occupations that are commonly exposed to these hazards and risks, and appropriate personal protective equipment designed to protect against them and where the other controls, e.g. design, substitution, redesign, etc. are not practicable.

Table 6 - Burns, scalds, splashes

Area of Exposure	Risks	Protection
Head	Burns, scalding, splashes, contact with heat	Face masks, fire protective clothing, protective headwear
Eyes	Splashes, sparks, burns	Eye protectors, protective eyewear
Hands	Burns, scalding, splashes, contact with heat, spills	Protective gloves
Feet	Burns, scalding, splashes, contact with heat, spills	Protective footwear, gaiters
Whole body	Burns, scalding, splashes, contact with heat, spills	Respiratory equipment, fire protective clothing including aprons

Persons who may receive burns or be scalded include: welders, foundry workers, mechanics, metal process workers, chemical process operators, agricultural workers, labourers, glass and ceramic workers, boilermakers, chefs and cooks, train drivers and engineers, and firefighters, plumbers and maintenance workers, boiler attendants, engineering workshops, auto and heavy equipment mechanics using steam cleaners etc.

Excessive heat or cold

Extremes of heat and cold can create direct hazards to workers in the form of heat exhaustion, heat stress, hypothermia and frostbite. Indirect hazards may be created by continuous and energetic activity by a worker in an environment of high ambient temperature.

Foundry and furnace operations and boiler rooms are examples where workers are exposed to extreme heat for which protective suits, hooded respiratory equipment and complete skin protection may be required.

Workplaces where hazards in this category exist include those in which mechanical equipment generates heat by its operation, or where the ambient temperature is typically high or low. These hazards may be found in a variety of workplaces, from bakeries to boiler rooms to cold stores.

Table 7 summarises some of the hazards and risks associated with extremes of temperature. It also indicates some of the occupations commonly exposed to these hazards and risks and appropriate personal protective equipment designed to protect against them, where the other controls, e.g. design, substitution, redesign, etc. are not practicable.

Table 7 - Extremes of temperature hazards

Area of Exposure	Risks	Protection
Whole body	Heat exhaustion, heat stress, burns, scalding, contact with hot surfaces	Respiratory equipment, fire protective clothing, gloves
	Contact with cold surfaces, frostbite, hypothermia	Thermal clothing, footwear, headwear, gloves
Persons who may be exposed to extremes of temperature include: welders, foundry workers, electricians, mechanics, metal workers, chemical process operators, agricultural workers, machine operators, labourers, transport drivers, glass and ceramic workers, boilermakers, chefs and cooks, train drivers and engineers, drycleaners, firefighters, cold store workers, mechanical services plumbers, and all persons working in high or low ambient temperatures.		

3.5.6 Radiation hazards

Electromagnetic radiation includes ultraviolet radiation, lasers and microwaves. A range of risks are associated with electromagnetic radiation including cancer, skin burns, reproductive toxicity, and changes to the nervous or cardiovascular systems. Radiation can lead to long term health problems.

Due to the wide range of the spectrum of electromagnetic radiation, the risk assessment must identify the type of radiation that workers are exposed to and the risks presented by that exposure. Various types of shields, aprons and masks are available where it is not practicable to protect workers from radiation by other means.

It is often possible, and always preferable, to isolate workers from radiation through controls other than personal protective equipment. For example, medical workers have adopted the simple procedure of leaving the room where a patient is undergoing an X-ray.

See Appendix 8 Other sources of information

Ultra violet radiation from the sun is recognised as a hazard to the health of outdoor workers. The risk of exposure to sunlight should preferably be reduced by providing shade or scheduling outdoor work to hours other than the middle of the day.

Where this is not practicable, personal protection should be provided by protective clothing (e.g. broad brimmed hat, long sleeve shirt) and sunscreen lotion (SPF 15+) in accordance with *AS/NZS 2604 Sunscreen products - Evaluation and classification*.

Light may present a hazard whether it originates from natural or artificial sources. Continuous exposure to glare from the sun reflecting off surfaces may cause irritation and swelling of the eyes. It can also lead to accidents resulting from poor vision. Sunglasses can reduce the risk to the eyes.

Intense forms of light from welding operations are another source of hazard. Electric arc welding flash can cause damage to the eyes so welding operations should be shielded by suitable flash-resistant screens to protect workers other than the welder. The welder will require a welder's helmet or other appropriate shield to protect the eyes.

Table 8 summarises some of the risks associated with radiation hazards. It also indicates some of the occupations commonly exposed to these risks and appropriate personal protective equipment designed to protect against them, where the other controls, e.g. design, substitution, redesign, etc. are not practicable.

Table 8 - Radiation hazards

Area of Exposure	Risks	Protection
Head	Cancer, skin burns	Face shields, protective headwear (wide brims)
Eyes	Optical radiation, glare, corneal damage, cataracts	Eye filters, protective eyewear
Hands	Cancer, skin burns	Protective gloves
Feet	Cancer, skin burns	Protective footwear
Whole body	Cancer, skin burns, reproductive toxicity, damage to nervous or cardio-vascular system	Shields, aprons, protective clothing, sunscreen lotions
Persons who may be exposed to radiation include: welders and foundry workers, electricians, medical staff, health workers, glass and ceramic workers, agricultural workers, laboratory technicians, luminous paint workers, electronic equipment workers, transport drivers, outdoor workers, machine operators, metal workers, illuminating engineers and electrical engineers.		

3.5.7 Noise

Many workplaces generate noise. In some, this will be to a level of noise leading to hearing loss and tinnitus. A risk assessment should identify sources of noise, assess noise exposure levels and evaluate the risk to exposed workers. The WorkSafe Western Australia Commission *Code of Practice – Managing Noise at Workplaces* should be referred to for further information relating to noise control and hearing protection. Noise can lead to long term hearing problems, and a variety of hearing protectors are available where exposure cannot be controlled by other means.

Personal hearing protectors should be selected in accordance with Australian and New Zealand Standard AS/NZS *1269.3 Occupational noise management – Hearing Protection Program.*

When selecting suitable hearing protectors the following should be considered:

- *type of working environment* - for example, ear muffs can be more uncomfortable than ear plugs in hot environments or, alternatively, ear plugs can be difficult to keep clean in situations where they are inserted or adjusted with dirty hands;
- *comfort, weight and clamping force* - a hearing protector with unnecessarily high attenuation sound reduction may cause communication difficulties and ultimately be rejected by the wearer on the grounds of discomfort and inconvenience. High values of sound reduction are generally achieved at the expense of wearer comfort, for example, by increasing the clamping force of earmuffs;
- *combination with other items of personal protective equipment* (e.g. safety glasses, hard hats, etc.) - these may affect the performance of the protector;
- *safety of the wearer* - hearing protectors should not mask or hide warning sounds. Visible warning devices (such as flashing lights) may also need to be considered in situations where hearing protection is required; and
- *opportunity for individual choice* - a selection of two or three hearing protectors should be provided where possible, provided the choices available are suitable to the protection required.

See Appendix 8 Other sources of information

Table 9 summarises some of the risks associated with noise. It also indicates some of the occupations commonly exposed to these risks and appropriate personal protective equipment designed to protect against them, where the other controls, e.g. design, substitution, redesign, etc. are not practicable.

Table 9 - Noise

Area of Exposure	Risks	Protection
Ears	Over exposure to noise (hearing damage, loss)	Personal hearing protectors
Persons who may be exposed to noise hazards include: construction and building workers, demolition workers, explosives workers, miners, heavy machinery operators, agricultural workers, process workers, sanding and grinding machine operators, timber and logging workers, jackhammer operators, excavation equipment operators, transport drivers, metal workers, sawmillers, carpenters, assemblers, maintenance workers, labourers, lathe and press operators and music concert technicians.		

3.5.8 Biological hazards

Biological hazards that can occur in workplaces, are predominantly infectious agents or micro-organisms such as viruses and bacteria. Such infections may be transmitted through exposure to human or animal secretions, blood, body fluids or waste matter.

Persons who may be exposed to biological hazards include doctors, nurses, ambulance workers, dentists, other health workers, prison officers, abattoir workers, stock handlers, farmers, shearers, butchers, veterinarians, laboratory technicians, sanitation and sewerage workers.

Health care workers may be at risk from hepatitis, HIV/AIDS and tuberculosis (TB). Routes of transmission may be faecal-oral (e.g. Hepatitis A), blood-borne (e.g. HIV/AIDS, Hepatitis B and C), or air-borne (aerosol) (e.g. TB). Meat industry workers are at risk of acquiring diseases from animals, e.g. Q fever, through inhalation of infected aerosols or dust; leptospirosis by entry through open wounds. Penetrating wounds also present an opportunity for entry of bacteria that cause tetanus.

Prevention of infectious diseases is not reliant on personal protective equipment, as the higher level controls, elimination, substitution, isolation, engineering and administrative controls, are more effective. These include vaccination and immunisation, standard precautions and personal hygiene which are covered in the WorkSafe Western Australia Commission *Code of Practice on the Management of HIV/AIDS and Hepatitis at Workplaces, 2000*. Table 10 summarises some of the associated risks and personal protective equipment that may be used where higher level controls are not practicable or where there is a need to increase the level of protection.

Table 10 - Biological hazards

Area of Exposure	Risks	Protection
Head	Inhalation, ingestion, irritation, needlestick, absorption through cuts, open sores, skin pores	Masks, shields, protective head coverings
Eyes	Splashes, squirts, irritation	Protective eyewear
Hands	Absorption, irritation, needlestick, absorption through cuts, open sores, skin pores	Protective gloves, protective barrier substance (cream, lotion)
Feet	Irritation, needlestick, absorption through cuts, open sores, skin pores	Protective footwear
Whole body	Inhalation, ingestion, irritation, needlestick, absorption through cuts, open sores, skin pores	Protective clothing, aprons, gaiters
Persons who may be exposed to biological hazards include: doctors, nurses, ambulance workers, health workers, dentists, abattoir workers, stock handlers, animal waste handlers, butchers, veterinarians, laboratory technicians, prison officers, cleaners, sanitation workers and sewer workers.		

See Appendix 8 Other sources of information

3.5.9 Electricity

Electricity can result in burns, shocks and electrocutions. Proper maintenance of equipment and training in the proper use of tools will substantially reduce risks from electricity.

Risks from electricity are present in all workplaces where electrical equipment is used, and in workplaces where contact with overhead or buried conductors may occur. Apart from obvious risks at workplaces where electricity is generated, electrical hazards are present at any workplace where portable or semi-portable electrical equipment is used. All electrical equipment must be isolated or de-energised for repair and repaired only by authorised personnel.

Electrical hazards pose common risks where power tools are subject to rough handling and used at various locations of a workplace.

Protective footwear may provide some protection against electric shock. In situations where contact with overhead wires is possible, for example by a linesman, head protection is available that provides protection, from electric shock and burns. When selecting head protection, knowledge of potential electrical hazards is important as different helmets provide different levels of protection.

See Appendix 8 Other sources of information

An important way of preventing injuries from electricity is to ensure electrical equipment is properly insulated. *AS/NZS 3100 Approval and test specification - General requirements for electrical equipment* specifies approval and test specification, definitions and general requirements for electrical materials and equipment.

Table 11 summarises some of the risks associated with electricity. It also indicates some of the occupations commonly exposed to these risks and appropriate personal protective equipment designed to protect against them, where the other controls, e.g. design, substitution, redesign, etc. are not practicable.

Table 11 - Electricity

Area of Exposure	Risks	Protection
Head	Burns, electric shock	Protective headwear
Eyes	Sparks, glare	Eye protectors
Hands	Burns, electric shock	Safety gloves
Feet	Burns, electric shock	Protective footwear
Whole body	Burns, electric shock	Protective clothing

Persons who may be exposed to electrical hazards include: electricians, linesmen, welders, machine operators, lathe and press operators, labourers, electric equipment operators, electrical engineers, maintenance workers, illuminating engineers and agricultural workers.

3.5.10 Vibration

Reduction of vibration through personal protective equipment is limited to localised body parts, such as the hands. Continuous vibration of the hands can cause *white finger* or Raynaud's Syndrome. Gloves designed to minimise the transmission of vibration to the hands are available. Most are not very effective over the whole range of damaging frequencies, and their bulkiness can reduce manipulative efficiency.

Their main advantage appears to be in maintaining normal hand temperature which in itself appears to reduce the risk from Raynaud's syndrome.

Whole body vibration can lead to long term health problems. Equipment re-design can eliminate or reduce the risk of whole body vibration.

Table 12 summarises some of the risks associated with vibration. It also indicates some of the occupations commonly exposed to these risks and appropriate personal protective equipment designed to protect against them, where the other controls, e.g. design, substitution, redesign, job rotation, work-rest regimes are not practicable.

Table 12 - Vibration

Area of Exposure	Risks	Protection
Hands	Raynaud's Syndrome (from continuous vibration)	Protective gloves (anti-vibration)
Whole body	Spine disorders, gastro-intestinal disturbance, circulation, muscle and joint disorders	Redesign of work process, equipment, work practices
Persons who may be exposed to vibration hazards include: jackhammer operator, timber and logging workers, machine operators, heavy equipment operators, transport drivers, agricultural workers, sanding and grinding machine operators and metal workers.		

3.6 Design and manufacture of personal protective equipment

3.6.1 Design and construction

A person who designs, manufactures, imports or supplies personal protective equipment for use at a workplace has a duty of care to ensure that the equipment is so designed and constructed as to be safe and without risk to safety or health when used properly. Personal protective equipment is "used properly" when it is used in accordance with the manufacturer's instructions, provided such instructions contain adequate information about conditions for which the equipment is designed and has been tested and examined, as well as any other information necessary to ensure that the equipment is without risks to safety or health of any person.

3.6.2 Information

A person who designs, manufactures, imports or supplies personal protective equipment has a duty to ensure the availability of adequate information about the use for which the equipment is designed and manufactured and has been tested and examined, as well as any other information necessary to ensure that the equipment may be used without risks to safety or health of any person.

3.6.3 Testing and examination

A person who designs, manufactures, imports or supplies personal protective equipment has a duty to ensure that the appropriate tests and examinations have been carried out on the equipment.

3.6.4 Applicable standards

Items of personal protective equipment should be manufactured, selected and used according to an appropriate Australian or equivalent overseas standard. Relevant Australian Standards covering the selection and manufacture of personal protective equipment include:

AS 1067	*Sunglasses and fashion spectacles*
AS/NZS 1269	*Occupational noise management*
AS/NZS 1270	*Acoustics - Hearing protectors*
AS 1319	*Safety signs for the occupational environment*
AS/NZS 1336	*Recommended practices for occupational eye protection*
AS/NZS 1337	*Eye protectors for industrial applications*
AS/NZS 1338	*Filters for eye protectors*
AS 1558	*Protective clothing for welders (Incorporating Amendment 1)*
AS/NZS 1715	*Selection, use and maintenance of respiratory protective devices*
AS/NZS 1716	*Respiratory protective devices*
AS/NZS 1800	*Occupational protective helmets - Selection, care and use*
AS/NZS 1801	*Occupational protective helmets*
AS/NZS 1891	*Industrial fall arrest systems and devices*
AS/NZS 2161	*Occupational protective gloves*
AS/NZS 2210	*Occupational protective footwear*
AS 2225	*Insulating gloves for electrical purposes*
AS 2375	*Guide to the selection, care and use of clothing for protection against heat and fire*
AS/NZS 2604	*Sunscreen products - Evaluation and classification*

APPENDIX 1
GENERAL PRINCIPLES FOR MANAGING OCCUPATIONAL SAFETY AND HEALTH IN WORKPLACES

1. ACCESS TO ACT, REGULATIONS AND OTHER RELEVANT DOCUMENTS

See Appendix 7
Regulation 3.2

Employers are required to provide information to employees, to alert them to areas where hazards may exist and to improve their understanding of safe work practices. *Regulations* specify documents that must be made available upon request for perusal by employees at the workplace.

2. THE GENERAL DUTIES - AN OVERVIEW

See Appendix 8
Other sources of information

The *Act* contains general duties that describe the responsibilities of people who affect safety and health at work. Employers must, so far as is practicable,

- provide a workplace and safe system of work so that, as far as practicable, employees are not exposed to hazards;
- provide employees with information, instruction, training and supervision to enable them to work in a safe manner;
- consult and co-operate with safety and health representatives in matters related to safety and health at work;
- provide adequate protective clothing and equipment where hazards cannot be eliminated; and
- ensure plant is installed or erected so it can be used safely.

Employees are required to take reasonable care to ensure their own safety and health at work and the safety and health of others affected by their work.

Self-employed persons also must take reasonable care to ensure their own safety and health at work and, as far as practicable, ensure their work does not affect the safety and health of others.

Designers, manufacturers, importers and suppliers of plant must ensure the plant is safe to install, maintain and use at workplaces. Safety and health information must be supplied with all plant and substances used at work.

Designers or builders of a building or structure for use as a workplace must ensure, so far as is practicable, that persons constructing, maintaining, repairing, servicing or using the building or structure are not exposed to hazards.

The WorkSafe Western Australia Commission Guidance Note *The General Duty of Care in Western Australian Workplaces* provides detailed information on the 'duty of care'.

3. HAZARD IDENTIFICATION, RISK ASSESSMENT AND RISK CONTROL

See Appendix 7
Regulation 3.2
The Act S19

Under Section 19(1)(a) of the *Occupational Safety and Health Act*, employers have a duty to ensure, as far as practicable, that employees are not exposed to hazards at the workplace. The *Occupational Safety and Health Regulations 1996* require employers to identify hazards and assess and control risks.

The regulation outlines three basic steps:

- **Identification of hazards**

  This involves recognising things that may cause injury or harm to the health of a person, such as flammable materials, ignition sources or unguarded machinery.

- **Assessing risk**

  This involves looking at the possibility of injury or harm occurring to a person if exposed to a hazard.

- **Controlling the risk of injury or harm**

  This involves introducing measures to eliminate or reduce the risk of a person being injured or harmed.

It is important to regularly review the steps, especially if there are changes in the work environment when new technology is introduced, or standards are changed.

Employers should consult with safety and health representatives, if any, and employees during these steps.

3.1 Identifying hazards

There are a number of ways of identifying potential sources of injury or disease. Selection of the appropriate procedure will depend on the type of work processes and hazards involved.

Procedures may range from a simple checklist for a specific piece of equipment or substance to a more open-ended appraisal of a group of related work processes. A combination of methods may provide the most effective results.

Methods of identifying workplace hazards include:

- ❑ developing a hazard checklist;
- ❑ conducting walk-through surveys;
- ❑ reviewing information from designers or manufacturers;
- ❑ analysing unsafe incidents, accident and injury data;
- ❑ analysing work processes;
- ❑ consulting with employees;
- ❑ examining and considering Material Safety Data Sheets and product labels; and
- ❑ seeking advice from specialist practitioners and representatives.

A HAZARD MEANS ANYTHING THAT MAY RESULT IN INJURY OR HARM TO THE HEALTH OF A PERSON

Some hazards such as mechanical hazards, noise, or toxic properties of substances are inherent in the work process. Other hazards result from equipment or machine failures and misuse, control or power system failures, chemical spills, and structural failures.

The table below lists some types of hazards together with some specific examples.

Table 1

HAZARD	EXAMPLES	OUTCOMES (EXAMPLES OF INJURY OR HARM)
Manual handling	overexertion/repetitive movement	sprains, strains, fractures
Falls	falling objects, falls, slips and trips of people	fractures, bruises, lacerations, dislocations, concussion, permanent or fatal injuries
Electricity	electrical current, lightning	shock, burns, electrocution
Machinery and equipment	being hit, hitting objects, being caught in or between, over-turning vehicles	cuts, bruises, dislocations, fractures, amputation, permanent or fatal injuries
Hazardous substances	chemicals such as acids, hydrocarbons, heavy metals	toxic effects, dermatitis, respiratory illnesses, cancers
Extremes of temperature	effects of heat or cold	burns, frost bite, heat stress, heat stroke
Noise	excessive noise	permanent hearing damage
Radiation	ultra violet, welding arc flashes, micro waves, lasers	burns, cancer, damaged eye sight, blindness
Biological	viruses, bacteria, fungi, toxins	Hepatitis, Legionnaire's disease, Q Fever, tetanus, HIV/AIDS, allergies
Vibration	hands and whole of body	organ, nerve and muscle damage
Psychological stress	intimidation, organisational change, violence, conflict, time pressure	high blood pressure, headaches and migraine, anxiety, depression, absenteeism

3.2 Analysing and assessing risks

RISK, IN RELATION TO ANY INJURY AND HARM, MEANS THE PROBABILITY OF THAT INJURY OR HARM OCCURRING.

A risk assessment of the hazards identified in the first step should result in a list of potential injuries or harm and the likelihood of these occurring. The potential for fatal injury should be considered for each identified hazard. If hazards are listed, they should be in the order of the most to the least serious, e.g. from fatal to minor injury.

In assessing risks, consideration should be given to the state of knowledge about the frequency of injury or disease, the duration of exposure to injury or disease sources and the likely severity of the outcomes. Knowledge gained from similar workplaces or similar processes may be relevant to this risk assessment. Matters to be considered include:

- **frequency of injury** - how often is the hazard likely to result in an injury or disease?
- **duration of exposure** - how long is the employee likely to be exposed to the hazard?
- **outcome** - what are the consequences or potential severity of injury?

Assessing these three factors will indicate the probability or likelihood of injury or harm occurring to workers involved in a particular work process. It will also indicate the likely severity of this harm.

Risk assessment requires good judgement and awareness of the potential risks of a work process. A person undertaking a risk assessment must have knowledge and experience of the work process. Risk assessment will be more complicated or difficult if the data or information regarding hazards of a work process is incomplete.

In some cases it may be necessary to break down the activity or process into a series of parts and assess each part separately.

Risk assessment should include:

- assessing the adequacy of training or knowledge required to work safely;
- looking at the way the jobs are performed;
- looking at the way work is organised;
- determining the size and layout of the workplace;
- assessing the number and movement of all people on the site;
- determining the type of operation to be performed;
- determining the type of machinery and plant to be used;
- examining procedures for an emergency (e.g. accident, fire and rescue); and
- looking at the storage and handling of all materials and substances.

This step should provide information where and which employees are likely to be at risk of incurring injury or disease, how often this is likely to occur, and the potential severity of that injury or disease risk.

3.3 Identifying control measures

The final step in risk assessment is to determine the control measures that need to be taken and the ongoing review of those measures. There is a hierarchy or preferred order of control measures ranging from the most effective to the least effective. The preferred order is outlined in the table below.

The control of occupational injury and disease risks should preferably be dealt with by design, substitution, redesign, separation or administration. These controls generally eliminate, reduce or minimise risk in a more reliable manner than personal protective equipment.

Controls involve implementing measures that reduce the hazard and risk in the workplace.

Where regulations require specific methods to control the risk, these must be complied with.

TABLE 2 - Hierarchy or preferred order of control
elimination - removing the hazard or hazardous work practice from the workplace. This is the most effective control measure;
substitution - substituting or replacing a hazard or hazardous work practice with a less hazardous one;
isolation - isolating or separating the hazard or hazardous work practice from people involved in the work or people in the general work areas from the hazard. This can be done by installing screens or barriers or marking off hazardous areas;
engineering control - if the hazard cannot be eliminated, substituted or isolated, an engineering control is the next preferred measure. This may include modifications to tools or equipment, providing guarding to machinery or equipment;
administrative control - includes introducing work practices that reduce the risk. This could include limiting the amount of time a person is exposed to a particular hazard; and
personal protective equipment - should be considered only when other control measures are not practicable or to increase protection.
Control measures are not mutually exclusive. That is, there may be circumstances where more than one control measure should be used to reduce exposure to hazards.

In some instances, a combination of control measures may be appropriate. Control measures should be designed:

- ❑ to eliminate or reduce the risks of a hazardous work process and to minimise the effects of injury or disease; and
- ❑ to reduce the risk of exposure to a hazardous substance.

4. THE MEANING OF PRACTICABLE

Some of the general duty provisions in the *Act* and some requirements in the *Regulations* are qualified by the words "so far as is practicable".

"Practicability" applies to general duties for employers, self-employed people, people with control of workplaces, designers, manufacturers, importers, suppliers, erectors and installers, and to certain requirements in the *Regulations*.

These people are expected to take practicable and reasonable measures to comply with the requirements.

If something is practicable, it is capable of being done. Whether it is also reasonable takes into account:

- the severity of any injury or harm to health that may occur;
- the degree of risk (or likelihood) of that injury or harm occurring;
- how much is known about the hazard and the ways of reducing, eliminating or controlling it; and
- the availability, suitability and cost of the safeguards.

The risk and severity of injury must be weighed up against the overall cost and feasibility of the safeguards needed to remove the risk.

Common practice and knowledge throughout the relevant industry are taken into account when judging whether a safeguard is "reasonably practicable". Individual employers could not claim that they did not know what to do about certain hazards if those hazards are widely known by others within industry, and safeguards were available.

The cost of putting safeguards in place is measured against the consequences of failing to do so. It is not a measure of whether the employer can afford to put the necessary safeguards in place.

While cost is a factor, it is not an excuse for failing to provide appropriate safeguards, particularly where there is risk of serious, or frequent but less severe, injury.

Where a regulation exists and is not qualified by the words "as far as is practicable", the regulation must be complied with as a minimum requirement.

See Appendix 8 Other sources of information

The WorkSafe Western Australia Commission Guidance Note *The General Duty of Care in Western Australian Workplaces* provides detailed information on the 'duty of care'.

APPENDIX 2
CHECK LIST FOR ASSESSING THE REQUIREMENTS FOR FIRST AID FACILITIES

This check list should be used to assess first aid facilities required at the workplace.

- ❑ How many persons are employed in the workplace?
- ❑ Is the workplace isolated?
- ❑ What specific hazards are in the workplace?
- ❑ Where is the nearest available and appropriate occupational health, medical or ambulance service? What is the distance involved? What is the expected response time in a worse-case situation (e.g. peak traffic)?
- ❑ What types of injury, disease or illness are occurring at the workplace?
- ❑ What first aid supplies are needed?
- ❑ Is a simple oxygen supply needed?
- ❑ How many first aid boxes are needed?
- ❑ Who will have responsibility for the contents of first aid boxes?
- ❑ Are supplies specific for identified hazards included?
- ❑ Which first aid competencies are needed?
- ❑ Which training packages will deliver the competencies needed?
- ❑ Is a first aid room needed?
- ❑ Who will be responsible for the first aid room?
- ❑ Has contact or consultation taken place with:

  – employees at the workplace?
  – safety and health representatives, if any, at the workplace
  – first aiders at the workplace?
  – the nearest available ambulance service?
  – the nearest available emergency medical service or hospital?
  – an appropriate occupational health service?

- ❑ Is there an effective means of communication for employees in the event of an emergency?
- ❑ How will an injured person be transported to medical help (e.g. ambulance service, RFDS, site ambulance)?
- ❑ Is specialist training required to deliver any service or administer any first aid supplies?
- ❑ How will first aid be provided if trained first aid personnel are not available at work (e.g. on work shifts or week ends)?

APPENDIX 3
FIRST AID BOXES

This list should be used as a guide for determining the contents and quantities for a basic first aid box. Individual items and quantities may vary according to identified hazards.

- ❑ Adhesive dressing strips individually wrapped
- ❑ Gauze squares 75 millimetre x 75 millimetre sterile packets
- ❑ Eye pads sterile
- ❑ Triangular bandages
- ❑ Safety pins
- ❑ Scissors (blunt or universal)
- ❑ Splinter probe or forceps
- ❑ Torch (small pencil type)
- ❑ Paracetamol or similar analgesics
- ❑ Saline disposable 10 or 30 millilitre bottle for eye wash and wound dressing
- ❑ Wound dressings
- ❑ Dressing sterile, non-adherent, small
- ❑ Dressing sterile, non-adherent, large
- ❑ Cleansing swabs
- ❑ Cotton tipped applicators
- ❑ Gauze bandages 5 centimetres
- ❑ Conforming bandages (crepe or cotton)
- ❑ Non-stretch adhesive tape hypo-allergenic 1.25 centimetres wide
- ❑ Disposable gloves
- ❑ Cold packs (ice or chemical)
- ❑ Note pad and pencil
- ❑ Instruction booklet for emergency treatment
- ❑ Expired air resuscitation (EAR) and cardio-pulmonary resuscitation (CPR) guides
- ❑ Face shields

APPENDIX 4
FIRST AID ROOMS

This list should be used as a guide for determining the contents of a first aid room.

- ❑ Telephone and backup communications (e.g, radio, mobile phone)
- ❑ List of emergency/medical contact numbers
- ❑ Wash basin with hot and cold water supplied
- ❑ Disposable hand towels, nail brush and soap
- ❑ Work bench or dressing trolley
- ❑ Refrigerator or immediate access to a refrigerator for the storage of cold packs and medical supplies
- ❑ Examination couch or bed, and pillow with appropriate blankets and covers
- ❑ Stretcher
- ❑ Chairs (2)
- ❑ Cupboards for storage of supplies
- ❑ Lockable cabinet for storage of records
- ❑ Lockable storage container for poisons/prescription drugs
- ❑ Refuse containers (e.g. bucket with plastic liner and lid)
- ❑ Electric power outlets
- ❑ Electric kettle
- ❑ Additional quantities of the basic requirements for a first aid box, together with other supplies relevant to specific hazards identified in the workplace
- ❑ Disposable gloves and protective glasses
- ❑ Torch/back-up emergency lighting
- ❑ Critical spares for specialist equipment (e.g. oxy viva replacement bottles)

Subject to risk assessment consideration should be given to including:

- ❑ stretcher
- ❑ biohazard container
- ❑ movable screen
- ❑ angle poise lamp or other suitable lamp
- ❑ recommended treatments for known hazards in the workplace

If it is determined by a hazard identification and risk assessment process that more sophisticated resuscitation equipment such as automatic external defibrillation equipment and simple oxygen administration equipment is required in a workplace, ensure appropriately trained staff and first aiders are available to use and maintain such equipment.

In larger workplaces or workplaces where there is a particular hazard, additional space, rooms and equipment may be necessary.

APPENDIX 5
HEALTH (TEMPORARY SANITARY CONVENIENCES) REGULATIONS 1997

PART 1 — INTRODUCTORY

1. Citation

These regulations may be cited as the *Health (Temporary Sanitary Conveniences) Regulations 1997*.

2. Interpretation

In these regulations, unless the contrary intention appears —

"temporary toilet" means a toilet that is designed and constructed so that —

(a) it may be connected to the sewerage system on a temporary basis; or

(b) it is connected to a sewage storage tank.

PART 2 — STANDARD AND CONSTRUCTION OF TEMPORARY TOILETS

3. Interpretation

In this Part —

"approved form" means a form approved by the Executive Director, Public Health.

4. Standard and construction of temporary toilets

For the purposes of section 107A of the Act, a temporary toilet is to be of a standard and construction —

(a) that complies with the requirements of this Part; or

(b) that is approved by the Executive Director, Public Health under regulation 5.

5. Approval by the Executive Director, Public Health

(1) The Executive Director, Public Health may approve the standard and construction of a temporary toilet or type of temporary toilet that does not comply with the requirements of this Part.

(2) A person may, in an approved form, apply to the Executive Director for an approval under subregulation (1).

6. Certification by the Executive Director, Public Health

(1) The Executive Director, Public Health may certify a temporary toilet or type of temporary toilet as being of a standard and construction —

(a) that complies with the requirements of this Part; or

(b) that is approved by the Executive Director, Public Health under regulation 5.

(2) The Executive Director may certify a temporary toilet under subregulation (1) for a particular area only.

(3) A person may, in an approved form, apply to the Executive Director, Public Health for a certification under subregulation (1).

7. Construction of temporary toilets generally

(1) The structural design of a temporary toilet is to comply with the requirements of the Building Code of Australia 1990, as from time to time amended and for the time being in force, issued by the Australian Uniform Building Regulations Coordinating Council.

(2) Every part of a temporary toilet is to be constructed to a trade finish.

(3) A temporary toilet is to be constructed so that no features can give rise to injury to a person or damage to clothing.

8. Construction of toilets for lifting

(1) In this regulation —

"the formula" means the formula specified in clause 4.5.3.2 (a) of the standard;

"the standard" means the standard designated AS 1418.1 — 1994, as from time to time amended and for the time being in force, published by the Standards Association of Australia.

(2) A temporary toilet is to be able to safely withstand an increased weight during lifting of the toilet and all its equipment including any storage tank at full capacity.

(3) Subject to subregulation (4), the increased weight during lifting of a toilet is to be calculated in accordance with the formula.

(4) If the dynamic multiplier for hoisting referred to in the formula is determined under the standard to be a value less than 1.8, that value is taken to be 1.8.

(5) A temporary toilet is to be fitted with suitable lifting loops or points to facilitate the loading of the temporary toilet onto and off a delivery vehicle.

9. Walls

The walls of a temporary toilet are to be —

(a) impact and corrosion resistant;

(b) impervious;

(c) smooth;

(d) washable; and

(e) opaque.

10. Floor

(1) The floor of a temporary toilet is to be constructed of a material that is —

(a) corrosion resistant;

(b) impervious;

(c) rigid; and

(d) washable.

(2) The floor surface of a temporary toilet is to be unbroken and slip resistant.

(3) The floor of a temporary toilet is to be raised above ground level and sloped to allow outward drainage.

(4) A temporary toilet is to have a minimum useable floor area of 0.35 m^2.

(5) The floor of a temporary toilet is to be capable of withstanding a working load of 1.8 kN, applied over an area of 100 mm x 100 mm in any location within the floor area, in addition to any equipment and floor dead loads.

11. Roof

The roof of a temporary toilet is to be constructed of a material that is —

(a) impact and corrosion resistant;

(b) impervious; and

(c) washable.

12. Door

(1) The door of a temporary toilet is to be constructed of material that is —

(a) impact and corrosion resistant;

(b) impervious;

(c) washable;

(d) opaque; and

(e) fitted to ensure privacy.

(2) A temporary toilet door is to be capable of being latched closed both internally and externally.

13. Height

A temporary toilet is to have a minimum, effective internal height of 1 900 mm, measured from the base of the floor area to the lowest part of the roof structure.

14. Ventilation

A temporary toilet is to have a minimum total of 320 cm^2 of fixed, cross ventilation.

15. Lighting

A temporary toilet is to be provided with natural lighting to a minimum of 350 lux service illuminance, measured on the floor when the door is in a closed position.

16. Toilet roll holder

A temporary toilet is to be fitted with a toilet roll holder.

17. Toilet bowl, seat and cover

(1) A temporary toilet is to be fitted with a toilet bowl, seat and cover.

(2) The toilet bowl, seat and cover are to be constructed of material that is —

(a) impact and corrosion resistant;

(b) impervious;

(c) smooth; and

(d) washable.

(3) The toilet bowl is to be fitted with a water seal.

18. Flushing facility

A temporary toilet is to have a flushing mechanism which is —

(a) effective;

(b) watertight;

(c) of durable quality; and

(d) capable of —

(i) providing a minimum of 200 ml per flush; and

(ii) washing the entire bowl.

19. Hand basin and tap

(1) A temporary toilet is to be fitted with a hand basin and a tap.

(2) Where water supply is from a holding tank, the tap is to provide a minimum flow of water of 50 ml per action of the tap.

(3) The hand basin is to be capable of holding water to facilitate hand washing.

(4) The hand basin is to have a waste outlet which is suitably trapped.

20. Sewage storage tank

(1) Where a temporary toilet is connected to a sewage storage tank, the tank is to be constructed and equipped in accordance with this regulation.

(2) A sewage storage tank is to be moulded in one piece from material which is —

(a) impact and corrosion resistant;

(b) impervious; and

(c) finished to provide a smooth surface both internally and externally.

(3) A sewage storage tank is to be constructed so that it does not leak.

(4) A sewage storage tank is to have a minimum useable capacity of 200 l.

(5) A sewage storage tank is to be vented through the roof of the unit by a vent pipe that —

(a) has a minimum diameter of 40 mm; and

(b) is fitted with a cowl.

(6) A sewage storage tank is to be fitted with a draw off point for the emptying of the tank.

(7) Where the draw off point for a sewage storage tank is situated externally —

(a) it is to be fitted with a device to enable emptying of the tank without causing spillage; and

(b) it is to be capable of being secured so that it cannot be tampered with or opened by a person who is not authorized to do so.

PART 3 — SANITARY CONVENIENCES IN RELATION TO CERTAIN SITES OF WORKS

Division 1 — General

21. Application

(1) The regulations in this Part apply to all districts as if they were local laws made under the Act.

(2) This Part applies to a site of works on the construction, erection, installation, alteration, repair, maintenance, cleaning, painting, renewal, removal, excavation, dismantling or demolition, of, or in addition to, any building or structure that does not exceed 3 storeys.

(3) For the purposes of subregulation (2), —

"storey" includes any storey which is under the ground level.

Division 2 — Sanitary conveniences to be provided and maintained for the purposes of section 102 of the Act

22. Sanitary conveniences to be provided and maintained

For the purposes of section 102 of the Act, the number, situation, construction, dimensions and equipment of sanitary conveniences to be provided and maintained on a site of works are those specified in this Division.

23. Number of sanitary conveniences

One sanitary convenience is to be provided and maintained on a site of works, for the use of every 20 persons, or fraction of 20 persons, engaged on the work.

24. Situation of sanitary conveniences generally

A sanitary convenience on a site of works is to be situated within 90 m of the work place of the persons for whom it is required.

25. Contiguous sites of works

Where the same person undertakes work on contiguous sites of works, sanitary conveniences may be provided and maintained in relation to the sites as if the sites were one site.

26. Types of sanitary convenience

A sanitary convenience on a site of works is to be —

(a) a temporary toilet; or

(b) a bore hole privy, in the case where the relevant local government has approved the use of a bore hole privy on the site in accordance with regulation 27.

27. Local government may approve a bore hole privy

A local government may approve the use of a bore hole privy on a site of works in the district of the local government if it is of the opinion that by virtue of the remoteness or isolation of the site, it is not practicable for a temporary toilet to be provided on the site.

28. Temporary toilets

(1) A temporary toilet on a site of works is to comply with the requirements of this regulation.

(2) A temporary toilet is to be situated —

(a) on a level and stable site;

(b) in such a manner so that it is accessible at all times;

(c) at least 2 m from any property boundary; and

(d) in the case where the toilet is connected to a sewage storage tank, so as to allow collection of sewage from the tank.

(3) A temporary toilet is to be of the standard and construction specified in Part 2.

(4) A temporary toilet is to be certified or of a type certified under regulation 6 for the relevant area.

(5) A temporary toilet is to be equipped with a supply of toilet paper.

(6) The bowl and any taps fitted in a temporary toilet are to be supplied with potable water from —

(a) a water supply service provided under the *Water Services Coordination Act 1995*; or

(b) from a water supply holding tank having a capacity of not less than 50 l.

(7) The design and construction of a water supply holding tank is to be such as to prevent contamination from any sewage storage tank.

(8) The bowl and basin fitted in a temporary toilet are to discharge waste water —

(a) to the sewerage system; or

(b) to a sewage storage tank.

(9) Where a temporary toilet is connected to a sewage storage tank, additives of the type and quantity approved by the Executive Director, Public Health are to be added to the tank.

29. Bore hole privies

(1) A bore hole privy on a site of works is to comply with the requirements of this regulation.

(2) A bore hole privy is to be situated —

(a) at least 30 m from any underground water supply which is intended or available for human consumption; or

(b) at least 2 m from any property boundary.

(3) The bore hole of a bore hole privy is to be —

(a) not less than 1.2 m nor more than 2.4 m deep; and

(b) not less than 150 mm nor more than 205 mm in diameter.

(4) A bore hole privy is to have an enclosure which is —

(a) structurally sound;

(b) fitted with a lockable door;

(c) fly proof; and

(d) made of material which is —

(i) impact and corrosion resistant;

(ii) impervious;

(iii) smooth; and

(iv) washable.

(5) A bore hole privy is to be constructed so that no feature poses a risk of injury to a person, or damage to property.

(6) A bore hole privy is to be fitted with the following equipment, namely —

(a) a pedestal type pan, seat and cover constructed of material that is —

(i) impact and corrosion resistant;

(ii) impervious;

(iii) smooth; and

(iv) washable;

(b) a slab into which the pan fits; and

(c) a toilet roll holder and a supply of toilet paper.

30. Sanitary facilities for women

A sanitary convenience on a site of works is to include sanitary facilities that cater for the particular needs of women engaged on the work.

Division 3 — Maintenance and removal of sanitary conveniences

31. Interpretation

In this Division —

"responsible person" in relation to a sanitary convenience on a site of works means —

(a) a person who undertakes work on the site; or

(b) in the case where the sanitary convenience or any part of the sanitary convenience is hired —

(i) a person undertaking work on the site; or

(ii) the person from whom the toilet was hired.

32. Maintenance of a temporary toilet

(1) A responsible person must ensure that a temporary toilet on a site of works is maintained in a clean and serviceable condition.

(2) Without limiting subregulation (1), a responsible person must ensure that a temporary toilet on a site of works is serviced once in every 2 weeks, or in such shorter period as directed by an environmental health officer.

(3) For the purposes of subregulation (2), a temporary toilet is serviced by —

(a) checking the operation of the toilet and replacing any damaged or broken parts;

(b) replenishing the toilet paper;

(c) effectively sanitizing the internal area of the toilet, including —

(i) the floor; and

(ii) the seat and bowl;

(d) in the case where the toilet is supplied with water from a holding tank, replenishing the water supply; and

(e) in the case of a toilet connected to a sewage storage tank —

(i) emptying the sewage storage tank via a draw off point provided in accordance with regulation 20 (6);

(ii) effectively and thoroughly washing out the sewage storage tank; and

(iii) adding to the sewage storage tank additives of the type and quantity approved by the Executive Director, Public Health.

(4) If sewage is spilled during the emptying of a sewage storage tank under subregulation (3) (e) (i), a responsible person must ensure that the spilled sewage is cleaned up immediately.

(5) A person undertaking work on a site must ensure that a temporary toilet on the site is securely locked during a time when it is not being used.

(6) A responsible person must ensure that the draw off point on the sewage storage tank of a temporary toilet on a site of works is secured during a time when the sewage storage tank is not being emptied under subregulation (3) (e) (i).

33. Maintenance of a bore hole privy

(1) A responsible person must ensure that a bore hole privy on the site is maintained in a clean and serviceable condition.

(2) Without limiting subregulation (1), a responsible person must ensure that a bore hole privy on the site is serviced once in every 2 weeks, or in such shorter period as directed by an environmental health officer.

(3) For the purposes of subregulation (2), a bore hole privy is serviced by —

(a) checking the bore hole privy and replacing or repairing any damaged or broken parts of the enclosure or equipment;

(b) replenishing the toilet paper; and

(c) effectively sanitizing the pan, seat, cover and slab of the bore hole privy.

34. Removal of a bore hole privy

(1) A responsible person must remove a bore hole privy from the site immediately after the bore hole privy ceases to be required.

(2) Where a bore hole privy is removed from a site of works, a responsible person must ensure that —

(a) the pan is thoroughly cleansed; and

(b) the bore hole is filled with clean earth.

35. Offences and penalties

A person who contravenes a provision of this Division commits an offence and is liable to —

(a) a penalty which is not more than $1 000 and not less than —

(i) in the case of a first offence, $100;

(ii) in the case of a second offence, $200; and

(iii) in the case of a third or subsequent offence, $500;

and

(b) if that offence is a continuing offence, a daily penalty which is not more than $100 and not less than $50.

APPENDIX 6
TYPES OF GLOVES

TYPE OF GLOVE	EXAMPLES OF USAGE	NOT SUITABLE FOR
Natural rubber	acetonitrile, ethylene glycol, butyl alcohol, sodium hydroxide (caustic soda)	benzene, sulphuric acid, mineral spirits
Neoprene	ethylene glycol, ammonium fluoride, nitric acid, sodium hydroxide (caustic soda), hydrochloric acid	methylene chloride, carbon disulfide, toluene
Nitrile	butyl alcohol, sodium hydroxide (caustic soda), hydrofluoric acid, hydrochloric acid	Freon TMC, trichloroethylene, nitric acid
PVA	styrene, xylene, benzene, methylene chloride	water, sodium hydroxide (caustic soda), hydrochloric acid, sulphuric acid, ethyl alcohol
PVC	cyclohexanol, sulphuric acid, nitric acid	acetone, acrylic acid, xylene

It is essential to contact your supplier to ensure gloves are selected appropriately. Depending on the nature of the chemical hazard, a number of other types of gloves are also available such as Butyl, Viton, Viton-Neoprene, Nitrile-PVC, Butyl-Neoprene gloves, etc. The use, thickness, chemical make-up and manufacturing process can have a bearing on the level of protection.

APPENDIX 7
REFERENCED SECTIONS OF THE ACT AND REGULATIONS

The Act: Section 19 states (in part)

(1) An employer shall, so far as is practicable, provide and maintain a working environment in which his employees are not exposed to hazards and in particular, but without limiting the generality of the foregoing, an employer shall —

(a) provide and maintain workplaces, plant, and systems of work such that, so far as is practicable, his employees are not exposed to hazards.

(d) where it is not practicable to avoid the presence of hazards at the workplace, provide his employees with, or otherwise provide for his employees to have, such adequate personal protective clothing and equipment as is practicable to protect them against those hazards, without any cost to the employees.

The Act: Section 20 states (in part)

(1) An employee shall take reasonable care —

(a) to ensure his own safety and health at work; and

(b) to avoid adversely affecting the safety or health of any other person through any act or omission at work.

(2) Without limiting the generality of subsection (1), an employee contravenes that subsection if he —

(b) fails to use such protective clothing and equipment as is provided, or provided for, by his employer as mentioned in section 19 (1) (d) in a manner in which he has been properly instructed to use it.

Notification under section 19 of certain injuries

Regulation 2.4 states

(1) For the purposes of section 19(3) of the *Act*, the kinds of injury incurred by an employee to be notified by an employer to the Commissioner are —

(a) a fracture of the skull, spine or pelvis;

(b) a fracture of any bone —

(i) in the arm, other than in the wrists or hand;

(ii) in the leg, other than a bone in the ankle or foot;

(c) an amputation of an arm, a hand, finger, finger joint, leg, foot, toe or toe joint;

(d) the loss of sight of an eye;

(e) any injury other than an injury of a kind referred to in paragraphs (a) to (d) which, in the opinion of a medical practitioner, is likely to prevent the employee from being able to work within 10 days of the day on which the injury occurred.

(2) Notification of an injury to which section 19(3) of the *Act* applies is to be made —

(a) in the form of Form 1 in Schedule 2; or

(b) by telephone.

(3) The prescribed particulars for the purposes of the notification of an injury to which section 19(3) of the *Act* applies are —

(a) name and business address of the employer;

(b) name, sex and occupation of the employee;

(c) address of the place at which the injury was incurred;

(d) date and time the injury was incurred;

(e) brief description of how the injury was incurred and the type of machine or equipment, if any, involved;

(f) nature of the injury or, where applicable, report of death; and

(g) the place to which the employee has been taken.

Notification under section 19 of certain diseases

Regulation 2.5 states

(1) For the purposes of section 19(3) of the *Act*, the kinds of disease affecting an employee to be notified by an employer to the Commissioner are the diseases set out in column 1 of the Table to this regulation that have been contracted in the course of the kind of work set out opposite that disease in column 2 of the Table.

Table	
Disease	**Work**
1. *Infectious diseases:*	
tuberculosis viral hepatitis legionnaires' disease HIV	Work involving exposure to human blood products, body secretions, excretions or other material which may be a source of infection
2. *Occupational zoonoses*:	
Q fever anthrax leptospiroses brucellosis	Work involving the handling of or contact with animals, animal hides, skins, wool, hair, carcasses or animal waste products

(2) Notification of a disease to which section 19(3) of the *Act* applies is to be made —

(a) in the form of Form 2 in Schedule 2; or

(b) by telephone.

(3) The prescribed particulars for the purposes of the notification of a disease to which section 19(3) of the *Act* applies are —

(a) name and business address of the employer;

(b) name, sex and occupation of the employee;

(c) name and address of the workplace where the employee works;

(d) name of the disease; and

(e) date of diagnosis of the disease.

Identification of hazards, and assessing and addressing risks, at workplaces

Regulation 3.1 states

A person who, at a workplace, is an employer, the main contractor, a self-employed person, a person having control of the workplace or a person having control of access to the workplace must, as far as practicable —

(a) identify each hazard to which a person at the workplace is likely to be exposed;

(b) assess the risk of injury or harm to a person resulting from each hazard, if any, identified under paragraph (a); and

(c) consider the means by which the risk may be reduced.

Persons at workplaces to have access to the *Act* etc.

Regulation 3.2 states

A person who, at a workplace, is an employer or the main contractor must ensure that, as soon as practicable following a request from a person who works at the workplace, there is available for that person's perusal an up to date copy of —

(a) the *Act*;

(b) these regulations;

(c) all Australian Standards, Australian/New Zealand Standards and NOHSC documents or parts of those Standards or documents referred to in these regulations that apply to that workplace;

(d) all codes of practice approved under section 57 of the *Act* that apply to that workplace; and

(e) guidelines or forms of guidance referred to in section 14 of the *Act* —

(i) the titles of which have been published in the *Government Gazette* and which are set out in Schedule 3.1; and

(ii) which apply to that workplace.

Communication with isolated employees

Regulation 3.3 states

If an employee is isolated from other persons because of the time, location or nature of the work then the employer must ensure that —

(a) there is a means of communication available which will enable the employee to call for help in the event of an emergency; and

(b) there is a procedure for regular contact to be made with the employee and the employee is trained in the procedure.

Movement around workplaces

Regulation 3.6 states

A person who, at a workplace, is an employer, the main contractor, a self-employed person or a person having control of the workplace must, where practicable, ensure that the workplace is arranged so that —

(a) persons are able to move safely within the workplace; and

(b) passages for the purpose of enabling persons to move within the workplace are at all times kept free of obstructions.

Evacuation Procedures

Regulation 3.10 states

A person who, at a workplace, is an employer, the main contractor, a self-employed person or a person having control of the workplace must ensure that —

(a) there is an evacuation procedure to be followed in the event of fire or other emergency at the workplace;

(b) where practicable, the evacuation procedure is clearly and prominently displayed at the workplace;

(c) where practicable, a diagram showing the location of exits and the position of the diagram in relation to the exits is clearly and prominently displayed at the workplace;

(d) where practicable, the evacuation procedure is practised at the workplace at reasonable intervals; and

(e) persons at the workplace who would be required to help control or extinguish a fire at the workplace are appropriately trained and provided with appropriate protective clothing and equipment.

First aid

Regulation 3.12 states

(1) In this regulation —

"first aid" means the immediate treatment or care of a person who is injured or who becomes ill at a workplace.

(2) A person who, at a workplace, is an employer, the main contractor or a self-employed person —

(a) must provide such first aid facilities as are appropriate having regard to —

(i) the type of hazards to persons at the workplace and the risk of those hazards; and

(ii) the number of persons at the workplace; and

(b) must ensure that, as far as practicable, persons trained in first aid are available to give first aid at the workplace having regard to -

(i) the type of hazards to persons at the workplace and the risk of those hazards; and

(ii) the number of persons at the workplace.

Lighting

Regulation 3.13 states

A person who, at a workplace, is an employer, the main contractor, a self-employed person, a person having control of the workplace or a person having control of access to the workplace must ensure that lighting for the workplace from natural or artificial sources or both —

(a) is adequate having regard to the nature and location of the work being done; and

(b) without limiting regulation 3.6, is adequate for the movement of persons about the workplace.

Work space generally

Regulation 3.14 states

An employer must, as far as practicable, provide each employee with sufficient space in which to work without risk to the employee's safety and health.

Air temperature

Regulation 3.15 states

An employer must ensure —

(a) that work practices are arranged so that employees are protected from extremes of heat and cold; and

(b) if the workplace is in a building or structure that, as far as practicable, heating and cooling are provided to enable employees to work in a comfortable environment.

Water

Regulation 3.16 states

(1) A person who, at a workplace, is an employer or the main contractor must ensure that a supply of clean, cool, drinking water is provided for, and is readily accessible to, persons working at the workplace, and that the outlet is in a place —

(a) where the water supply is unlikely to be contaminated; and

(b) other than a place in which a toilet is located.

(2) If, at a workplace —

(a) water is provided for use in industrial processes or for fire protection;

(b) the water is unfit for drinking; and

(c) it is not readily apparent that the water is unfit for drinking,

then a person who, at the workplace, is an employer or the main contractor or a person having control of the workplace must ensure that conspicuous notices are posted at points of supply clearly marked “UNFIT FOR DRINKING” or with words having a similar effect.

Seating

Regulation 3.19 states

(1) If an employee's work is done from a sitting position or is of a kind that can be satisfactorily done from a sitting position then the employer must provide and maintain seating —

(a) that is designed having regard to the nature of the work to be performed and the characteristics of the work station;

(b) that is strongly constructed, stable, comfortable and of suitable size and height for the employee; and

(c) if practicable, has a backrest or is otherwise designed to provide back support.

(2) If an employee's work is done from a standing position and the employee's work allows the employee to sit from time to time then, to the extent practicable, the employer must provide and maintain seating so that the employee may sit down for the periods when the employee is not working.

Workplace facilities

Regulation 3.20 states

(1) In this regulation —

"other facility" means an area for the changing of clothes, showering, eating, drinking or resting;

"sanitary facilities" means toilets (including urinals), hand-wash basins and units for the disposal of sanitary items.

(2) A person who, at a workplace, is an employer, the main contractor, a self-employed person or a person having control of the workplace must ensure that there are provided at the workplace for the use of persons working at the workplace —

(a) reasonable sanitary facilities, having regard to the reasonable requirements of the persons working at the workplace;

(b) convenient access to sanitary facilities; and

(c) any other facility if the safety or health of a person working at the workplace would be at risk if the facility were not provided.

Risks to be reduced in first instance by means other than protective clothing and equipment

Regulation 3.32 states

When a person is considering, for the purposes of regulation 3.1(c), the means by which a risk may be reduced, the person is to —

(a) firstly consider the means other than the use of protective clothing and equipment by which the risk might be reduced; and

(b) then consider the use of protective clothing and equipment to the extent that it is not practicable to reduce the risk by means other than the use of protective clothing and equipment.

Responsibilities of persons who require personal protective clothing and equipment to be used

Regulation 3.34 states

(1) If a person is required under any of these regulations to identify a hazard at a workplace and to assess the risk of injury or harm to a person resulting from the hazard and the person concludes from the assessment process that personal protective clothing or equipment should be used at the workplace then the person must ensure that —

(a) the person who uses the clothing or equipment is instructed in relation to the correct fitting, use, selection, testing, maintenance and storage of the clothing or equipment;

(b) the person who uses the clothing or equipment is informed of the limitations in the use of the clothing or equipment;

(c) the clothing or equipment is maintained in good working order;

(d) the clothing or equipment is replaced —

(i) when it no longer provides the level of protection required to protect the wearer or user against the particular hazard;

(ii) when the safe working life, as specified by the person who manufactured the clothing or equipment, has expired; or

(iii) subject to subregulation (2), when it is damaged and cannot be repaired;

and

See Appendix 8 Other sources of information

(e) the area of a workplace at which the clothing or equipment is required to be used by a person other than the person who provides the clothing or equipment is identified by signs in accordance, and complying, with *AS 1319*.

(2) A person does not commit an offence under subregulation (1)(d) if, proof of which is on the person, the clothing or equipment is repaired rather than replaced and —

(a) the repair is done by a competent person;

(b) the repair is done according to the specifications of the manufacturer of the equipment; and

(c) any replacement part used in the repair is that which is specified by the manufacturer of the equipment as the correct replacement part.

Responsibilities of users of personal protective clothing and equipment

Regulation 3.35 states

A person to whom personal protective clothing or equipment is provided or made available for use at a workplace —

(a) must use the protective clothing or equipment in a manner in which he or she has been properly instructed to use it;

(b) must not misuse or damage the clothing or equipment; and

(c) must, as soon as practicable after becoming aware of any —

(i) damage to;

(ii) malfunction of; or

(iii) need to clean or sterilize,

the clothing or equipment, notify the person providing the clothing or equipment of the damage, malfunction or need to clean or sterilize the clothing or equipment.

Definitions

Regulation 3.37 states (in part)

"oxygen deficient atmosphere" means an atmosphere containing less than 19.5% oxygen.

"toxic atmosphere", in relation to a workplace, includes —

(a) an atmosphere in which there is an atmospheric contaminant in a concentration exceeding the exposure standard for the contaminant specified in the *National Exposure Standards* [NOHSC: 1003 (1995)];

See Appendix 8 Other sources of information

(b) where an inspirable dust or respirable dust is not within the scope of the Exposure Standards referred to in paragraph (a), an atmosphere in which a person at the workplace would be exposed to —

See Appendix 8 Other sources of information

(i) the inspirable dust that, when measured in accordance with *AS 3640*, exceeds 10 milligrams per cubic metre of air; or

(ii) the respirable dust that, when measured in accordance with *AS 2985*, exceeds 5 milligrams per cubic metre of air,

as an average over a work period of 8 hours;

and

(c) an atmosphere containing gas, vapour, dust or any other particle which is, or is in a concentration that is, a risk to the safety and health of a person at the workplace.

Identification and assessment of hazards in relation to atmosphere

Regulation 3.38 states

Without limiting regulations 3.1 and 3.32, a person who, at a workplace, is an employer, the main contractor or a self-employed person must —

(a) identify each hazard arising from an oxygen deficient atmosphere or a toxic atmosphere to which a person at the workplace is likely to be exposed;

(b) assess the risk of injury or harm to a person resulting from each hazard, if any, identified under paragraph (a); and

(c) consider whether the risk may be reduced by any of the means referred to in regulation 3.39.

Possible means of reducing risks

Regulation 3.39 states

The means referred to in regulation 3.38(c) are —

(a) the use of an effective ventilation system for the workplace;

(b) the provision of an exhaust system that effectively extracts any contaminant and which is arranged so as to prevent re-entry of the extracted air into the workplace; and

(c) such other means as would prevent persons at the workplace from being exposed to an oxygen deficient atmosphere or a toxic atmosphere,

as is appropriate to the particular case.

Respiratory protective equipment generally

Regulation 3.40 states

(1) In this regulation —

"toxic atmosphere" means any toxic atmosphere that is of a kind other than a kind referred to in any of paragraphs (b) to (f) of regulation 3.41.

(2) To the extent that it is not practicable to prevent, by any of the means referred to in regulation 3.39, a person at a workplace from being exposed to a toxic atmosphere a person who, at the workplace, is an employer, the main contractor or a self-employed person must ensure that each person who may be so exposed is provided with respiratory protective equipment —

See Appendix 8 Other sources of information

(a) selected in accordance with AS/NZS 1715 to suit the circumstances of the case and that is used and maintained in accordance with that Standard; and

(b) complying with the relevant requirements of AS/NZS 1716.

(3) Nothing in regulation 3.41 prevents a person from concluding, for purposes of subregulation (2), that the appropriate respiratory protective equipment in a particular case is equipment of a kind referred to in regulation 3.41.

(4) A person who, at a workplace, is an employer, the main contractor or a self-employed person and who provides for use at a workplace respiratory protective equipment of any kind must ensure that the equipment is readily accessible to persons at the workplace who may need to use the equipment.

Supplied air respirators required for certain atmospheres

Regulation 3.41 states

To the extent that it is not practicable to prevent, by any of the means referred to in regulation 3.39, a person at a workplace from being exposed to —

(a) an oxygen deficient atmosphere;

(b) an atmosphere in which the level of toxic gases or vapours exceeds the capability of an air-purifying device;

(c) a toxic atmosphere where the level of contamination is not known;

(d) a toxic atmosphere in which the person is required to remain for a period longer than the estimated life of a filter;

(e) an atmosphere that presents an immediate danger to life or health; or

(f) a toxic atmosphere which contains a contaminant against which there is no suitable filter,

a person who, at the workplace, is an employer, the main contractor or a self-employed person must ensure that each person who may be so exposed is provided with a supplied air respirator.

Health surveillance in relation to hazardous substances

Regulation 5.23(1) states

(1) If the health of a person is at risk as a result of the person's exposure at a workplace to a hazardous substance set out in column 1 of Schedule 5.3 then a person who, at the workplace, is an employer, the main contractor or a self-employed person must ensure that health surveillance of the type set out opposite the substance in column 2 of that Schedule is provided for, and at no cost to, the first-mentioned person and is supervised by an appointed medical practitioner.

SCHEDULE 5.3 — HAZARDOUS SUBSTANCES FOR WHICH HEALTH SURVEILLANCE IS REQUIRED

[Regulation 5.23 (1)]

HAZARDOUS SUBSTANCE	TYPE OF HEALTH SURVEILLANCE
acrylonitrile	. Demography, occupational and medical history and health advice. . Physical examination if indicated. . Records of personal exposure.
inorganic arsenic	. Demography, occupational and medical history and health advice. . Physical examination with emphasis on the peripheral nervous system and skin. . Urinary total arsenic. . Records of personal exposure.
asbestos	. Demography, occupational and medical history and health advice. . Physical examination if indicated. . Records of personal exposure.
benzene	. Demography, occupational and medical history and health advice. . Baseline blood sample for haematological profile. . Records of personal exposure.
cadmium	. Demography, occupational and medical history. . Health advice, including counselling on additional cadmium burden from smoking. . Physical examination with emphasis on the respiratory system. . Completion of a standardized respiratory questionnaire. . Standardized respiratory function tests such as FEV_1, FVC and FEV_1/FVC. . Urinary cadmium and $_2$-microglobulin. . Records of personal exposure.

inorganic chromium	. Demography, occupational and medical history and health advice. . Physical examination with emphasis on the respiratory system and skin. . Weekly skin inspection of hands and forearms by a responsible person.
creosote	. Demography, occupational and medical history. . Health advice, including recognition of photosensitivity and skin changes. . Physical examination with emphasis on the neurological system and skin, noting any abnormal lesions, and evidence of skin sensitisation. . Records of personal exposure, including photosensitivity.
isocyanates	. Demography, occupational and medical history and health advice. . Completion of a standardized respiratory questionnaire. . Physical examination of the respiratory system and skin. . Standardized respiratory function tests such as FEV_1 FVC and FEV_1/FVC.
inorganic mercury	. Demography, occupational and medical history and health advice. . Physical examination with emphasis on neurological, renal and gastrointestinal systems and skin. . Urinary inorganic mercury.
4,4'- methylene bis 2- chloroaniline (MOCA)	. Demography, occupational and medical history and health advice. . Urinary total MOCA. . Dipstick analysis of urine for haematuria. . Urine cytology.
organophosphate pesticides	. Demography, occupational and medical history and health advice. . Physical examination. . Baseline estimation of red cell and plasma cholinesterase activity levels by the Ellman method. Estimation of red cell and plasma cholinesterase activity towards the end of the working day.

pentachlorophenol (PCP)	. Demography, occupational and medical history and health advice. . Physical examination with emphasis on skin, noting any abnormal lesions or effects of irritancy. . Urinary total pentacholorophenol. . Dipstick urinanalysis for haematuria and proteinuria. . Records of personal exposure.
polycyclic aromatic hydrocarbons (PAH)	. Demography, occupational and medical history. . Health advice, including recognition of photosensitivity and skin changes. . Physical examination if indicated. . Records of personal exposure, including photosensitivity.
crystalline silica	. Demography, occupational and medical history and health advice. . Completion of a standardized respiratory questionnaire. . Standardized respiratory function tests such as FEV_1, FVC and FEV_1/FVC. . Chest X-ray, full size PA view. . Records of personal exposure.
thallium	. Demography, occupational and medical history and health advice. . Physical examination if indicated. . Urinary thallium.
vinyl chloride	. Demography, occupational and medical history and health advice. . Physical examination if indicated. . Records of personal exposure.

APPENDIX 8
OTHER SOURCES OF INFORMATION

1. *Occupational Safety and Health Act 1984* and *Regulations*

The *Occupational Safety and Health Act 1984* and the *Occupational Safety and Health Regulations 1996* can be purchased from WorkSafe Westcentre, 1260 Hay Street, West Perth [Tel. (08) 9327 8777] or State Law Publisher, 10 William Street, Perth [Tel. (08) 9321 7688]. These documents are also available via the Internet Service on [www.safetyline.wa.gov.au]. Copies are also held in the WorkSafe library.

2. WorkSafe Western Australia Commission Publications

The following WorkSafe Western Australia Commission codes of practice, guidance note and other publications can be purchased from WorkSafe, Westcentre, 1260 Hay Street, West Perth [Tel. (08) 9327 8777]. It is also available via the Internet Service on [www.safetyline.wa.gov.au] and copies are also held in the WorkSafe library.

- **Codes of practice referenced in these codes**

  - *Prevention and Control of Legionnaires' Disease*
  - *Management of HIV/AIDS and Hepatitis at Workplaces*
  - *Prevention of Falls at Workplaces*
  - *Managing Noise at Workplaces*

- **Guidance notes referenced in these codes**

  - *General Duty of Care in Western Australian Workplaces*
  - *Working Alone*

3. Australian and Australian/New Zealand Standards

Australian Standards and jointly developed Australian and New Zealand Standards can be purchased from Standards Australia, Ground floor, 165 Adelaide Terrace Perth [Tel. (08) 9221 6700]. Copies are also held in the WorkSafe library.

Standards referenced in these codes

AS 1067	*Sunglasses and fashion spectacles*
AS/NZS 1269	*Occupational noise management*
AS/NZS 1270	*Acoustics - Hearing protectors*
AS 1319	*Safety signs for the occupational environment*
AS/NZS 1336	*Recommended practices for occupational eye protection*
AS/NZS 1337	*Eye protectors for industrial applications*
AS/NZS 1338	*Filters for eye protectors*
AS/NZS 1715	*Selection, use and maintenance of respiratory protective devices*
AS/NZS 1716	*Respiratory protective devices*
AS/NZS 1800	*Occupational protective helmets - Selection, care and use*
AS/NZS 1801	*Occupational protective helmets*
AS 1885	*Measurement of occupational health and safety performance*
AS/NZS 1891	*Industrial fall arrest systems and devices*
AS/NZS 2161	*Occupational protective gloves*
AS/NZS 2210	*Occupational protective footwear*
AS 2225	*Insulating gloves for electrical purposes*
AS/NZS 2293	*Emergency evacuation lighting for buildings*
AS 2375	*Guide to the selection, care and use of clothing for protection against heat and fire*
AS/NZS 2604	*Sunscreen products - Evaluation and classification*
AS 2985	*Workplace atmospheres - Method for sampling and gravimetric determination of respirable dust*
AS/NZS 3100	*Approval and test specification - General requirements for electrical equipment*
AS 3640	*Workplace atmospheres - Method for sampling and gravimetric determination of inspirable dust*

4. National Occupational Health and Safety Commission (NOHSC) Publications

The following and other National Occupational Health and Safety Commission publications can be purchased from Info Access Network Albert Facey House 469 Wellington Street Perth WA 6000.

- **NOHSC publications referenced in these codes**
  - *Exposure Standards for Atmospheric Contaminants in the Occupational Environment:*
    - *Guidance Note [NOHSC: 3008 (1995)]*
    - *National Exposure Standards [NOHSC: 1003 (1995)]*
  - *National Standard for the Control of Major Hazard Facilities [NOHSC: 1014(1996)]*
  - *National Code of Practice for the Control of Major Hazard Facilities [NOHSC: 2016(1996)].*

5. *Building Code of Australia*

The Building Code of Australia (BCA) is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia. It allows for variations in climate and geological or geographic conditions. The BCA is produced and maintained by the Australian Building Codes Board (ABCB) on behalf of the Commonwealth Government and each State and Territory Government. The BCA is available as a stand-alone product or with value-added products included. The stand-alone versions are available from the ABCB's Principal Publishers, Standards and CanPrint, in electronic and hard copy formats.

6. Contacts for further information

Chamber of Commerce and Industry of Western Australia
180 Hay Street EAST PERTH WA 6000
Tel.: (08) 9365 7555 Fax: (08) 9365 7500
E-mail: osh@cciwa.com Website: www.cciwa.com

UnionsWA
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WorkSafe
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Website: www.docep.wa.gov.au E-mail address: safety@worksafe.wa.gov.au
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