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Training Manual

CPCCWHS1001

Prepare to work safely in the construction industry

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Introduction

This course is designed to meet requirements for construction workers to participate in general Work Health and Safety (WHS) induction training against the national competency CPCCWHS1001 "Prepare to work safely in the construction industry."

For the purposes of this training we will cover:

- National Codes of Practice
- Work Health and Safety Act 2011
- Occupational Safety and Health Act 1984 (WA)

Once you have completed this course you will have acquired the knowledge and skills necessary to carry out safe work practices.
You will have
Knowledge of:

- Health and safety legislative requirements of construction work
- Construction hazards and risk control measures
- Health and safety communication and reporting processes
- Incident and emergency response procedures

Demonstrated Skills to:

- Locate and recognise safety signs and symbols
- Clarify instructions and inform other workers of hazards and risks
- Follow safety instructions
- Select risk control measures and appropriate personal protective equipment

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WHS Training

The construction industry involves people working in a dynamic and ever-changing environment. Hazards and risks change frequently on a site as construction work progresses and as workers move from project to project. The instruction and training required to ensure people can work safely on construction sites needs to recognise the pattern of employment and the way the construction industry operates. Therefore, three types of WHS induction training may be required:

General Induction

Provides persons entering the construction industry with a basic knowledge of requirements under WHS laws, the common hazards and risks likely to be encountered on construction sites and how these risks should be controlled.

Site Induction

Provides information and instruction to anyone engaged on a particular construction site with knowledge of the contractor's rules and procedures for site safety, emergency management, the supervisory and reporting arrangements and other site-specific issues.

Task-Specific Induction

Provides information and instruction to anyone undertaking a particular construction activity of the risk factors and control measures relating to that task.

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Model WHS Laws

In 2011, Safe Work Australia developed a single set of WHS laws to be implemented across Australia. These laws are referred to or are known as 'model' laws. Safe Work Australia is responsible for maintaining the model WHS laws, however, they are not responsible for regulating or enforcing them in each state or territory. While the 'model' laws exist, each state or territory must separately implement the model WHS laws as their own laws in order to make them legally binding.

The model laws include the following:

- Model WHS Act
- Model WHS Regulations
- Model Codes of Practice

While there are nationally uniform laws to provide guidance on safe work practices throughout Australia, individual states or territories may have specific WHS Acts, Regulations, and Codes of Practice which govern safe operating systems in the workplace.

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Work Health and Safety Act 2011

The Work Health and Safety Act 2011 is concerned with the health and safety of all those involved with a workplace. The Work Health and Safety Act provides a framework to protect all workers at work and other people who might be affected by the work. In general the aim of WHS is to eliminate risks to the health and safety arising out of work; in other words, to make the workplace safe from risks.

The main objectives of the WHS Act are to:

- protect the health and safety of workers and other people by eliminating or reducing workplace risks
- ensure effective representation, consultation and cooperation to address health and safety issues in the workplace
- encourage unions and employers to take a constructive role in improving health and safety practices
- promote information, education and training on health and safety
- provide effective compliance and enforcement measures deliver continuous improvement and progressively higher standards of health and safety.

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Occupational Safety and Health Act 1984 WA

In Western Australia, the Occupational Safety and Health Act 1984 administers laws which relate to the safety and health of workers or visitors at a workplace. The Occupational Safety and Health Act 1984 is concerned with promoting and improving standards for occupation safety and health.

The main objectives of the OSH Act are to:

- to promote and secure the safety and health of persons at work
- protect persons at work against hazards
- assist in securing safe and hygienic work environments
- reduce, eliminate and control the hazards to which persons are exposed at work

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Occupational Safety and Health Act 2004 VIC

In Victoria, the Occupational Safety and Health Act 2004 provides the legislative framework for health and safety measures. According to the Act, "the importance of health and safety requires that employees, other persons at work and members of the public be given the highest level of protection against risks to their health and safety that is reasonably practicable in the circumstances."

The main objectives of the Act are to:

- to secure the health, safety and welfare of employees and other persons at work
- to eliminate risks to the health, safety or welfare of employees and other persons at work; and
- to ensure that the health and safety of members of the public is not placed at risk
- to provide for the involvement of employees, employers, and organisations in the formulation and
- implementation of health, safety and welfare standards

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Nationally Uniform Laws

The National WHS laws are consistent laws for the Commonwealth, Queensland and NSW states and the Australian Capital and Northern Territories.

Nationally uniform laws ensure all workers in Australia have the same standard of health and safety protection, regardless of the work they do or where they work. Nationally uniform work health and safety laws means greater certainty for employers (particularly those operating across state borders) and, over time, reduced compliance costs for business.

More consultation between employers, workers, and their representatives, along with clearer responsibilities will make workplaces safer for everyone.

The legislation includes:

- Work Health and Safety Act 2011
- Work Health and Safety Regulation 2011
- Codes of Practice

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Regulations

A regulation is a law and **MUST** be followed. Regulations are rules that are made under an Act to ensure that the general requirements of the Act are kept. The best way to think of the relationship between an Act and its Regulations is that the Act provides the general principles and the Regulations set out practical steps to follow to comply with the Act. For example Work Health & Safety Regulation 2011. A WHS Regulation prescribes certain procedural or administrative matters to support the WHS Act such as requiring high risk licenses for specific activities or requiring the keeping of records for incidents.

The WHS Regulation:

- Sets out the legal requirements to prevent or control certain hazards that might cause Injury or death in the workplace
- It prohibits exposure to risk
- It established a framework for preventing or minimising exposure to risk
- It deals with administrative matters
- It provides details of incidents that must be reported and incidents that must be recorded
- It places obligations on everyone associated with a relevant workplace to comply with WHS legislation

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Codes of Practice

- Codes of Practice provide practical guidance on how to meet the standards set out in the WHS Act and the WHS Regulations.
- You must remember that Codes of Practice are not legislation and are not mandatory. Codes of Practice are a practical guide for PCBUs and workers on how to achieve a particular objective for health and safety at work; in short, they show people in the workplace how they can fulfil the requirements of the Act from day to day.
- If a PCBU can demonstrate that they can achieve compliance with the WHS Act and the WHS Regulations by some other method not set out in the Code of Practice they have the right to do so. However, any method used must meet or exceed the standard of work health and safety suggested by the Code of Practice.

Codes of practice can be national such as those published by Safe Work Australia or they can be relevant to particular states or territories.

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Australian Standards

Standards have been developed to provide minimal levels of performance or quality for a specific hazard, work process or product. Standards are not law themselves but are often mentioned in Regulations. e.g. AS 2601 Demolition of Structures when preparing Work Method Statements for Demolition Work, and in these cases MUST be taken into account.

Standards are regularly updated. They are **NOT** developed by parliament, but by a company for profit, Standards Australia. The Standards aim to prevent occupational death, injury and disease. For Example: AS 3610-1995 Formwork for concrete.

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National Safety Standards

National Standards are developed by the Australian Safety and Compensation Commission (previously NOHSC). National Standards are not adopted automatically by each State and Territory. The respective WHS authority first investigates whether the National Standard is compatible with the relevant act in their jurisdiction and then consults with local industry and trade union bodies.

If both these processes indicate that a National Standard should be adopted, this is achieved either through an amendment to the respective regulations or as a Code of Practice, or a combination of both. National Standards may be amended in the process to take into account the nuances of a State or Territory's legislative framework or local conditions.

Standards are published documents setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently performed the way they were intended to. They establish a common language which defines quality and safety criteria

Industry Standards & Guidelines

Industry standards and guidelines provide general information and guidelines as to safe work practices. They provide detailed information on the requirements of legislation, regulations, standards and codes of practice and cover a broad range of issues, hazards and topics.

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What is Construction Work?

The WHS Act defines construction work as any work carried out in connection with the construction, alteration, conversion, fitting-out, commissioning, renovation, repair, maintenance, refurbishment, demolition, decommissioning or dismantling of a Structure.

Construction work includes the following:

- Any installation or testing carried out while undertaking construction work
- The removal from the workplace of any product or waste resulting from demolition
- The prefabrication or testing of elements, at a place specifically established for the construction work, for use in construction work
- The assembly of prefabricated elements to form a structure, or the dis-assembly of prefabricated elements forming part of a structure
- The installation, testing or maintenance of an essential service in relation to a structure
- Any work connected with an excavation
- Any work connected with any preparatory work or site preparation (including landscaping as part of site preparation) carried out while undertaking construction work
- An activity while performing construction work that is carried out on, under or near water, including work on buoys and obstructions to navigation.

Construction work does **NOT** include any of the following:

- The manufacture of plant
- The prefabrication of elements, other than at a place specifically established for the construction work, for use in construction work
- The construction or assembly of a structure that once constructed or assembled is intended to be transported to another place
- Testing, maintenance or repair work of a minor nature carried out in connection with a structure
- Mining or the exploration for or extraction of minerals.

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WHS Terms and Definitions

The model WHS Act uses terms throughout legislation, regulations and codes of practice which are applicable to day to day activities at the workplace. While the terms defined below are used consistently in the states and territories where each jurisdiction has implemented model WHS laws, there are terms used by other states such as in Western Australia that differ.

Workplace

Any place where work is carried out for a business or undertaking. This may include offices, factories, shops, construction sites, vehicles, ships, aircraft or other mobile structures on land or water such as offshore units and platforms.

Person Conducting a Business or Undertaking (PCBU)

To more adequately reflect modern workplace arrangements, the harmonised WHS laws replacing current health and safety laws use the term ‘person conducting a business or undertaking (PCBU)' instead of employer. The term ‘PCBU' includes a broader category of entities, including sole traders, principal contractors, unincorporated associations, partnerships and franchisees as well as those traditionally considered to be employers. Self-employed people and volunteer organisations that employ people are also PCBUs under the WHS legislation.

The Act defines a PCBU as: A person conducting a business or undertaking alone or with others, whether or not for profit or gain. A PCBU can be a sole trader (for example a self-employed person), a partnership, company, unincorporated association or government department of public authority (including a municipal council). An elected member of a municipal council acting in that capacity is not a PCBU.

In Western Australia, the term employer is used to reference a person that employs an employee under a contract of employment, or employs a trainee or apprentice under an apprenticeship or traineeship scheme.

Person with Management or Control of a Workplace

A person with management or control of a workplace means a person conducting a business or undertaking to the extent that the business or undertaking involves the management or control, in whole or in part, of the workplace but does not include:

- The occupier of a residence, unless the residence is occupied for the purposes of, or as part of, the conduct of a business or undertaking
- A prescribed person.

Worker

A person is a worker if the person carries out work in any capacity for a person conducting a business or undertaking, including work as:

- An employee
- A contractor or subcontractor
- An apprentice or trainee
- A student gaining work experience
- A volunteer

The person conducting the business or undertaking is also a worker if the person is an individual who carries out work in that business or undertaking.

Work group

A work group is a group of workers who share a similar work situation. For example, a work group might consist of all workers in the office part of a manufacturing complex, or it might consist of people of the same trade, or it might consist of all people on the night shift. If agreed, workers from multiple businesses can be part of the same work group which might include contractors, labour hire staff, outworkers and apprentices.

Principal Contractor (PC)

A Principal Contractor must be appointed for a Construction Project - a project that involves construction work where the cost of the construction work is $250,000.00 or more.

A person conducting a business or undertaking that commissions a construction project, or a person engaged by this person, is the principal contractor for the project.

If the owner of residential premises is an individual who directly or indirectly engages a person conducting a business or undertaking to undertake a construction project in relation to the premises, the person so engaged is the principal contractor for the project if the person has management or control of the workplace.

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Health and Safety Personnel

Health and Safety Representative (HSR)

A health and safety representative is a worker who has been elected by a work group to represent them on health and safety issues.

WHS representatives are nominated and appointed to represent your work site and its workers (including their views, interests and concerns). They can help you to raise any WHS issues or concerns that you may have.

Their responsibilities include:

- To consult with the PCBU and workers, and provide information on WHS

- To assist workers to raise WHS issues
- To secure the participation and involvement of workers in health and safety matters
- To cooperate with your PCBU in relation to WHS

A HSR represents the health and safety interests of a work group. There can be as many HSRs and deputy HSRs as needed after consultation, negotiation and agreement between workers and their PCBUs.

A PCBU must keep a current list of all HSRs and deputy HSRs and display a copy at the workplace. The list must also be given to Workplace Health and Safety Queensland (or your state regulatory body).

Health and Safety Committee

A Health and Safety Committee is a group including workers, HSRs and PCBUs that facilitates cooperation between a PCBU and workers to provide a safe place of work

A health and safety committee (HSC) facilitates cooperation between a PCBU and workers in developing and carrying out measures to ensure health and safety at work. This includes health and safety standards, rules and procedures for the workplace.

A PCBU must set up an HSC within two months of being requested to do so by an HSR, or by five or more workers in a workplace or when required by the WHS Regulation.

A PCBU can also establish an HSC on their own initiative. At least half of the members of a HSC must be workers that have not been nominated by the PCBU. A HSR can also consent to be a member of the committee and, when a workplace has more than one HSR, they can choose one or more to be members.

When agreement cannot be reached on the composition of an HSC, any party to the committee can request an inspector's assistance to decide the matter. A HSC must meet at least once every three months and at any reasonable time at the request of at least half of the members of the committee.

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Election & Eligibility

Any worker or group of workers can ask the PCBU for whom they are carrying out work to set up a work group at one or more workplaces for the purpose of electing a Health and Safety Representative (HSR).

If a request is made for the election of a HSR, a PCBU must start negotiations with workers within 14 days.

Negotiations between a PCBU and workers will determine the:

- Number and composition of the work group(s)
- Number of HSRs and deputy HSRs
- Workplace(s) to which the work group(s) apply

The members of a work group elect their own HSR, with all members eligible to vote in an election. To be eligible for election, a person must be a member of the work group and not be disqualified from acting as a HSR. Upon a request for the election of an HSR, a PCBU must provide resources and assistance to carry out the election. Members of a work group decide how to elect a HSR. Elections for a deputy HSR are carried out in the same way.

The term of office for a HSR or deputy HSR is three years. They cease to hold office if:

- They leave the work group
- They are disqualified from being an HSR
- They resign as an HSR
- The majority of members of the group agree the person should no longer represent them

HSRs can be re-elected. Elections are not needed when the number of candidates is the same as the number of vacancies. Any person adversely affected by a decision or action of a HSR can apply to the Queensland Industrial Relations Commission (or your state regulatory body) to have them disqualified.

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HSR Powers & Functions

The role of a HSR is generally limited to their work group unless there is a serious risk to the health or safety of other workers from an immediate hazard or a worker in another work group asks for their assistance, and the HSR for that other work group is found to be unavailable.

A HSR can:

- Inspect the workplace or any area where work is carried out by a worker in the work group
- Accompany a workplace health and safety inspector during an inspection of the area the HSR represents
- Be present at an interview with a worker that the HSR represents (with their consent) and the PCBU or an inspector about health and safety issues
- Request a health and safety committee be established
- Monitor compliance measures by the PCBU
- Represent the work group in health and safety matters
- Investigate complaints from members of the work group
- Inquire into any risk to the health or safety of workers in the work group.

A HSR is not personally liable for anything done, or not done, in good faith while carrying out their role.

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Issue Resolution

If there is a health and safety issue at a workplace, the relevant parties must make reasonable efforts to achieve a timely, final and effective resolution of the issue in accordance with an agreed procedure or the default procedure set out in the WHS Regulation.

Relevant parties are:

- The PCBU or their representative
- Each PCBU or their representative, if the issue involves more than one PCBU
- The HSR for that work group or his/her representative, if the worker(s) affected by the issue is/are in a work group
- The worker(s) or his/her representative, if the worker(s) affected by the issue is/are not in a work group.

A person's representative may enter the workplace for the purpose of attending discussions with a view to resolving the issue. If an issue remains unresolved, one of the parties may ask Workplace Health and Safety Queensland (or your state regulatory body) to appoint an inspector to attend the workplace and assist in resolving the issue.

Such a request does not prevent a worker from ceasing unsafe work or a HSR from issuing a PIN or directing workers to cease unsafe work. Although an inspector cannot determine the issue, the inspector may exercise any of his/her compliance powers under the WHS Act.

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Other Jurisdictions

Under the Occupational Safety and Health Act 1984, employees have the right to be represented by safety and health representatives in much the same way as other states and territories in Australia under the model WHS laws.

Some of the key differences in WA are discussed below.

Safety and Health Representatives and Safety and Health Committees represent work groups on safety and health issues in Western Australia.

An employee who works at a workplace may give notice to an employer requiring for the election of a SHR for the workplace.

Employees are then able to appoint a delegate or delegates from amongst their group to represent them. In an election the matters to be determined are:

- The number of safety and health representatives to be elected
- The matters, areas or kinds of work in respect of which each safety and health representative is to exercise functions
- The manner in which the election is to be conducted

A person who is elected as a safety and health representative holds office for a term of two years (one year less than the jurisdictions under the model WHS laws).

Key Functions:

- to inspect that workplace or any part of it
- in the event of an accident, a dangerous occurrence, or a risk of serious injury to or serious harm to the health of, any person carry out any appropriate investigation in respect of the matter
- report to the employer any hazard or potential hazard to which any person is, or might be, exposed at the workplace that comes to his or her notice
- consult and cooperate with his or her employer on all matters relating to the safety or health of persons in the workplace
- liaise with the employees regarding matters concerning the safety or health of persons in the workplace

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Other Important Personnel

Many people are involved in WHS communication and processes. Other key people (besides the WHS representative) include:

- Your supervisor
- Your workplace WHS committee
- Emergency services staff
- First aid officers
- Project manager
- People managing your company

Sometimes the designated WHS Representative for your workplace will be the PCBU or the person with management control.

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Inspectors

The main role of inspectors is to monitor and enforce compliance with the Act, and where required implement the enforcement framework.

- Each inspector is issued with an identity card containing a signature and a recent photograph, which he or she must show you before exercising any power under the Act.
- They must have the identity card displayed so it is clearly visible to the person when exercising the power.

However, if it is not practicable to comply with either of the above the inspector must produce the identity card for the person's inspection at the first reasonable opportunity.

The inspector has specific powers under the Act. They must:

- provide information and advice about compliance with the WHS Act
- Assist in the resolution of:
  - work health and safety issues at workplaces
  - issues related to access to a workplace by an assistant to a health and safety representative
  - issues related to the exercise or purported exercise of a right of entry
- Review disputed provisional improvement notices
- To require compliance with the Act through the issuing of notices
- To investigate contraventions of the Act and assist in the prosecution of offences.

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Inspectors: General Powers on Entry

An inspector who enters a workplace may do all or any of the following:

- Inspect, examine and make inquiries at the workplace
- Inspect and examine anything, including a document, at the workplace

- Bring to the workplace and use any equipment or materials that may be required
- Take measurements, conduct tests and make sketches or recordings, including photographs, films, audio, video, digital or other recordings
- Take and remove for analysis a sample of any substance or thing without paying for it
- Require a person at the workplace to give the inspector reasonable help to exercise the inspector's powers
- Exercise any compliance power or other power that is reasonably necessary to be exercised by the inspector for the purposes of the Act.

A person required to give reasonable help must not, without reasonable excuse, refuse or fail to comply with the requirements.

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Duty of Care

An individual is legally obligated to follow a standard of reasonable care while performing any duties at the workplace. His obligation is known as duty of care and it is important for everyone involved at a workplace to follow all health and safety guidelines to ensure as much as reasonable the health and safety of themselves and those around them.

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WHS Duties

The WHS Act outlines the general health and safety duties of PCBUs, officers of companies, unincorporated associations, government departments and public authorities (including local governments), workers and other people at a workplace. These general duties require the duty holder to ensure health and safety, so far as is reasonably practicable, by eliminating risks to health and safety. If this is not possible, risks must be minimised so far as is reasonably practicable. Your duty of care is to do everything reasonably practicable to protect yourself and others from harm.

Reasonably practicable means taking into account the likelihood of hazard/risk occurring, degree of harm, what the person concerned knows (or ought to know), availability and suitability of controls, and cost.

Ordinarily, cost will not be the key factor in determining what it is reasonable for a duty holder to do unless it can be shown to be 'grossly disproportionate' to the risk. If the risk is particularly severe, a PCBU will need to demonstrate that costly safety measures are not reasonably practicable due to their expense and that other less costly measures could also effectively minimise the risk.

It is the legal responsibility of everyone on site including:

- Persons conducting a business or undertaking
- Workers and sub-contractors
- Designers, manufacturers and suppliers
- Inspectors
- Supervisors

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WHS Duties: Shared duties

A person may have more than one duty. For example, the working director of a company has duties as an officer of the company and also as a worker. More than one person may have the same duty. For example, each director on the Board of Directors of a company will owe a duty. In such cases, all directors are each fully responsible for that duty.

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Duties of a PCBU

General duties

The WHS Act sets out specific duties which a PCBU must comply with as part of their general duty so far as is reasonably practicable. These include:

- Providing and maintaining a working environment that is safe and without risks to health, including the entering and exiting of the workplace
- Providing and maintaining plant, structure and systems of work that are safe and do not pose health risks (e.g. providing effective guards on machines and regulating the pace and frequency of work)
- Ensuring the safe use, handling, storage and transport of plant, structure and substances (e.g. toxic chemicals, dusts and fibres)
- Providing adequate facilities for the welfare of workers at workplaces under their management and control (e.g. washrooms, lockers and dining areas)
- Providing workers with information, instruction, training or supervision needed for them to work safely and without risks to their health
- Monitoring the health of their workers and the conditions of the workplace under their management and control to prevent injury or illness
- Maintaining any accommodation owned or under their management and control to ensure the health and safety of workers occupying the premises.

In addition, a PCBU with management or control of a workplace must ensure, so far as is reasonably practicable, that the workplace, the means of entering and exiting the workplace and anything arising from the workplace do not affect the health and safety of any person.

Duty to consult

A PCBU has a duty to consult with workers and HSRs about matters that directly affect them. This extends to consulting with contractors and their workers, employees of labour hire companies, students on work experience, apprentices and trainees, as well as with the PCBU's own employees and volunteer workers.

There may be a number of different duty holders involved in work (e.g. suppliers, contractors and building owners). If more than one person in the workplace has a health and safety duty they must consult all other people with the same duty. Each duty holder must share information in a timely manner and cooperate to meet health and safety obligations.

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Duties of Workers

General duties

- To cooperate with (or help) the PCBU on health and safety matters
- Take reasonable care for your own health and safety while at work
- Take reasonable care so your conduct does not adversely affect the health and safety of others

- Comply so far as reasonably able with instructions
- Co-operate with reasonable health and safety policies or procedures that have been notified to workers.

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Duties of Designers, Manufacturers & Suppliers of Plant

General duties

There is a general obligation on designers, manufacturers and suppliers of plant and substances for use by people at work to ensure that their products are not a risk to health and safety when properly used, and to provide information on the correct use and potential hazards associated with the use of the products in the workplace.

A person or corporation can be penalised under Work Health & Safety legislation and also under Common Law for the same workplace incident as you have OBLIGATIONS and a DUTY of CARE under WHS Legislation and Common Law at the same time.

To prove negligence a person must be able to prove that:

- A duty of care was owed to them;
- The duty was breached; and
- Breach caused a detrimental effect to them, e.g. injury.

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Duties of Other Persons

General duties

- To cooperate with (or help) the PCBU on health and safety matters
- Take reasonable care for your own health and safety while at work
- Take reasonable care so your conduct does not adversely affect the health and safety of others
- Comply so far as reasonably able with instructions

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Consultation

The WHS Act requires that where more than one person has a duty for the same matter, each person retains responsibility for their duty in relation to the matter and must discharge the duty to the extent to which the person can influence and control the matter.

In these situations, the WHS Act requires that each person with the duty must, so far as is reasonably practicable, consult, co-operate and co-ordinate activities with all other persons who have a work health or safety duty in relation to the same matter.

Such a situation can arise, for example, where more than one business or undertaking operates at a workplace and where people share responsibility for work health and safety to varying degrees, for example shopping centres, construction projects, labour hire, or multi-tenanted office buildings.

The duty to co-operate and co-ordinate activities requires PCBUs to work together in a proactive and reciprocal way without gaps or inconsistencies, so that all risks associated with the activity they are involved in are eliminated or minimised as far as is reasonably practicable.

PCBUs should consider:

- The work activity undertaken by the business;
- Others who have influence or control in that work activity;
- The interactions between that activity and those of other duty holders;
- What information should be shared; and
- What action is needed to communicate and work together with the other duty holders?

Consultation with other duty holders means:

- Contacting them and discussing the relevant health and safety matters;
- Sharing information relating to the matters;
- Finding out what the other duty holders know about the WHS risks and control measures; and
- Planning what each duty holder will do to control the risks.

The outcome of the consultation should be a shared understanding of what the risks are, which workers are affected and how the risks will be controlled.

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Co-operation & Co-ordination

Co-operating with other duty holders involves providing assistance where necessary and interacting with other duty holders to avoid interfering with another person's duty.

Co-operation also means that, if a PCBU is approached by other duty holders wanting to consult with on a health and safety matter, he or she should take care not to obstruct communication, and respond to reasonable requests from other duty holders to assist them in meeting their duty.

Co-ordination involves planning and organising activities together with the other duty holders so that each person can meet their duty of care effectively without leaving any gaps in health and safety protection.

The law states that the PCBU must consult with their site health and safety representative and committee if a change to a process, policy or procedure might affect the health or safety of a worker.

Consultation is about encouraging cooperation and partnerships between PCBU and workers to ensure health and safety. It means:

- Sharing information about health and safety issues with employees
- Giving workers the opportunity to express their opinions about resolving health and safety issues
- Valuing the opinions of workers and taking them into account when making decisions or changes to do with health and safety.

WHS laws and regulations also spell out:

- How and when consultation happen
- Minimum requirements for the establishment of health and safety committees and health and safety representative and what they should do
- Procedures for resolving matters that may be a risk to health and safety
- Training for members of H&S committees and H&S representatives.

Remember, consultation is an important way of finding out information, and raising any concerns you may have about your health and safety at work.

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Safe Work Practices

Safe working practices means working in a way that minimizes risk to yourself, other people, equipment, materials, the environment, and work processes.

Safe Work Practices are developed by Principal Contractors, PCBUs and self-employed people in order to provide a safe way of performing work activities. Safe work practices must be followed by everyone involved in the work. If the work is to be performed in a different way the safe work practice must be reviewed and revised if necessary.

You need to work safely to protect yourself and others. Here are examples of safe work practices on a construction site.

- Not taking unnecessary risks
- Always look out for hazards
- Always use Personal Protective Equipment (PPE)
- If you must smoke, do so only in designated areas
- Keep your work area clean and tidy
- Enter and leave the workplace using proper routes
- Never attend work under the influence of drugs or alcohol
- Help prevent bullying or harassment
- Use plant tools and equipment that are in a safe working order in a way the manufacturer has instructed
- Storage and removal of debris

The PCBU should provide you with information about safe systems of work. This means information about the workplace itself. This means boundaries, entry and exit points location of hazards and first aid equipment, how to move about safely, emergency exits.

You will also need to know about:

- Procedures for handling and disposing of material and waste
- How to access amenities such as drinking water and toilets

Other safety systems, methods and procedures which will help you work safely.

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Safe Work Tips

Storage of materials and equipment:

- Safe and organised manner so they can be retrieved again safely
- In accordance with SDS and legislation
- Cannot fall on a person or cause injury (e.g. through projection of sharp edges)
- Flammable and combustible materials - do not store more than is necessary!

Removal of debris:

- Should continually be removed to prevent build up
- Build up could affect entry/exit to a site and pose a fire hazard
- Disposal must not create a risk to the environment

Litter:

- Includes things such as food scraps and wrappings, paper etc.
- Must be disposed of in proper containers (e.g. garbage bins)
- Disposal must not pose a risk to the environment

Bullying and Harassment

- Bullying and Harassment in the workplace occurs when a reasonable person, considering all circumstances, would anticipate that the person being harassed would be offended, humiliated or intimidated by the action or comment e.g. gender or race base insults or taunts.

Site disturbance:

- Vehicles should always use nominated routes to limit mud soil etc. tracking onto public roads
- Loads should be covered to prevent materials or rubbish from escaping

Dust:

- Needs to be controlled
- Water should be applied to roads and stockpiles to limit dust and pollution of stormwater systems

Good housekeeping:

- Essential to a safe work site
- Every-day cleanliness, tidiness and good order in your work area
- Machinery and equipment maintenance so they are in safe and efficient working order

Smoking:

- Passive smoking is known to carry health risks and the risk should be eliminated as much as possible on site
- Smoking should not be allowed in enclosed areas
- If smoking on site is permitted there should be designated areas, no enclosed and at least 15 metres from any flammable or combustible goods

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Alcohol & Drug Use

Alcohol and drug use is a serious concern for those working in the construction industry. Statistics taken from a report of alcohol and drug consumption by tradesmen, reveal that 50 percent of adult workers and 60 percent of apprentices drink alcohol at levels that put them at risk. Alarmingly, statistics also indicate that 20 percent of workers report use of cannabis and 5 percent report the use of methamphetamine.

Why is this important? Alcohol and drug use in any industry can be a cause for serious injury and carry significant negative impacts on the individuals and those who work around them. Some of the negative impacts of alcohol and drug use include:

- Accidents and injury
- Absenteeism
- Lower productivity
- Staff turnover
- Poor morale and working relationships

What can you do to prevent alcohol and drug related harm in the workplace?

The key factor for the success of any alcohol and drug harm prevention program is the cooperation between all workers in the industry. This includes management, employees and visitors on any construction site. When working together to prevent harm related to alcohol and drug abuse, the goal is attainable.

The four components to an effective alcohol and drug program are:

- A written drug and alcohol policy
- Education and training to inform managers and workers of the policy
- Available counselling and treatment for workers with alcohol or drug problems
- Regular evaluation of the policy to determine its effectiveness

Most importantly, an alcohol and drug program is only effective if it is meeting the specific needs of the workplace. Programs should be tailored to suite the specific conditions, needs and resources of each workplace.

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How to Raise WHS Issues

It is important that you have an opportunity to raise issues about health and safety in your workplace and that you take the opportunity to do so. You can raise WHS issues verbally (e.g. by speaking to your supervisor or WHS representative), or in writing if you wish.

Simple ways to raise a WHS issue may be during:

- Toolbox talks (an informal briefing or short talk on WHS issues)
- WHS meetings (formal meetings which usually aim to provide workers with specific information about WHS)
- Discussion with a WHS representative (this could be face to face, by telephone or by email)
- Workplace consultation relating to WHS issues and changes (this would be initiated by your PCBU or site manager).

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Where to get WHS Information

You can get information on health and safety from a range of places. Your PCBU, H&S committee, and WHS representatives are good starting points.

You can find out information about workplace health and safety by:

- Reading (SDS, safe work method statements, site and industry newsletters, bulletins, policies and procedures, manufacturer's instructions for equipment and tools, hazard reports, job safety analyses, safety meeting minutes, etc.)
- Listening (WHS meetings, toolbox talks etc.)
- Asking questions (supervisor, other workers, H&S representatives, first aid officer, suppliers, inspectors etc.).

You can also talk to people who are not at your work site, for example your state or territory workplace safety authority and the Australian Safety Compensation Council (ASCC). Your site H&S representative should be able to assist you.

Note: Written information is available on the Internet by searching for “WHS + construction + the specific information required”

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Types of WHS Documentation

There are several types of WHS documents at your workplace. They generally do two things: provide you within information about health and safety, and provide a way for hazards, incidents, injuries etc to be reported.

Here are some examples:

- **Construction documentation and plans**
  These provide important detail about construction specifications and design. They include excavation plan and emergency information contact details.
- **Safe work method statements**
  These statements provide agreed information to all staff in a work group on safe work practices. They are developed only after a full risk assessment has been completed and after all reasonable practicable risk control measures have been put into place.

- **Safety Data Sheets (SDS) and Labels**
  SDS exist for materials that are hazardous. The sheets are supplied by the manufacturer or product supplier. They identify how the materials should be handled. A SDS covers health, handling, ingredients and first aid, safe handling and storage requirements. You should have ready and visible access to them and always check them before product use. You should also check product label for additional information.
- **Job Safety Analyses (JSA)**
  A JSA is a detailed and systematic written record of a job process. A job approach is analysed or studied to look at the activity, the hazards involved, and any controls which will be needed. JSAs also list the people who are responsible for conducting activities and the process that needs to be followed. They are most important for high risk tasks.
- **Accident, incident and injury reports and proformas**
  These are the forms on which you should write any workplace injuries incidents or accidents. They need to be processed correctly and given to the appropriate person (such as your supervisor or WHS representative). This usually needs to be done within a specified timeframe (you may need to check this - it will probably vary depending on the type of report, and procedures for reporting at your work site).
- **Report of dangerous occurrences or near misses**
  Dangerous occurrences and near misses do not cause injury, but may be a big risk to people or property, for example collapse or failure of a building or structure, electrical short circuit etc. These must be reported promptly to the correct authority. You will need to check which proformas need to be used, who the report should go to, and the timeframe for reporting. Again, this might vary from site to site.
- **Risk assessments**
  A risk assessment will list the factors which have contributed to a risk in a particular task or job. It will also provide a review of health and safety information available and evaluate the likelihood and severity of injury or illness. It will also identify actions to control or eliminate the risk, and requirements for keeping records. Site Safety Inspections can assist in identifying risk and all details are documented in a Site Safety Inspection Report.

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WHS Documents: JSA

JOB SAFETY ANALYSIS (JSA) TEMPLATE			
Company name:	**Date:**	**JSA Number:**	
Site name:	**Supervisor name:**	**Permit to work required?**	**Yes / No**
Plant / Area:		**Location:**	
Scope of JSA:			
JSA team member names:			

Overall risk associated with JSA: *Highest residual risk – this can only be determined after the rest of the JSA is complete*			
Approved by: *Have the appropriate approval levels been obtained?*	**Position of approving person:**	**Date:**	

Activity *Provide a step-by-step breakdown of the task*	**Hazards** *List all hazards associated with each step*	**Inherent Risk** *Risk associated with each hazard before any control measures are put in place*	**Controls** *Measures that need to be taken to eliminate or minimise the risk associated with each hazard*	**Residual Risk** *Remaining risk associated with each hazard once the control measures have been put into place*

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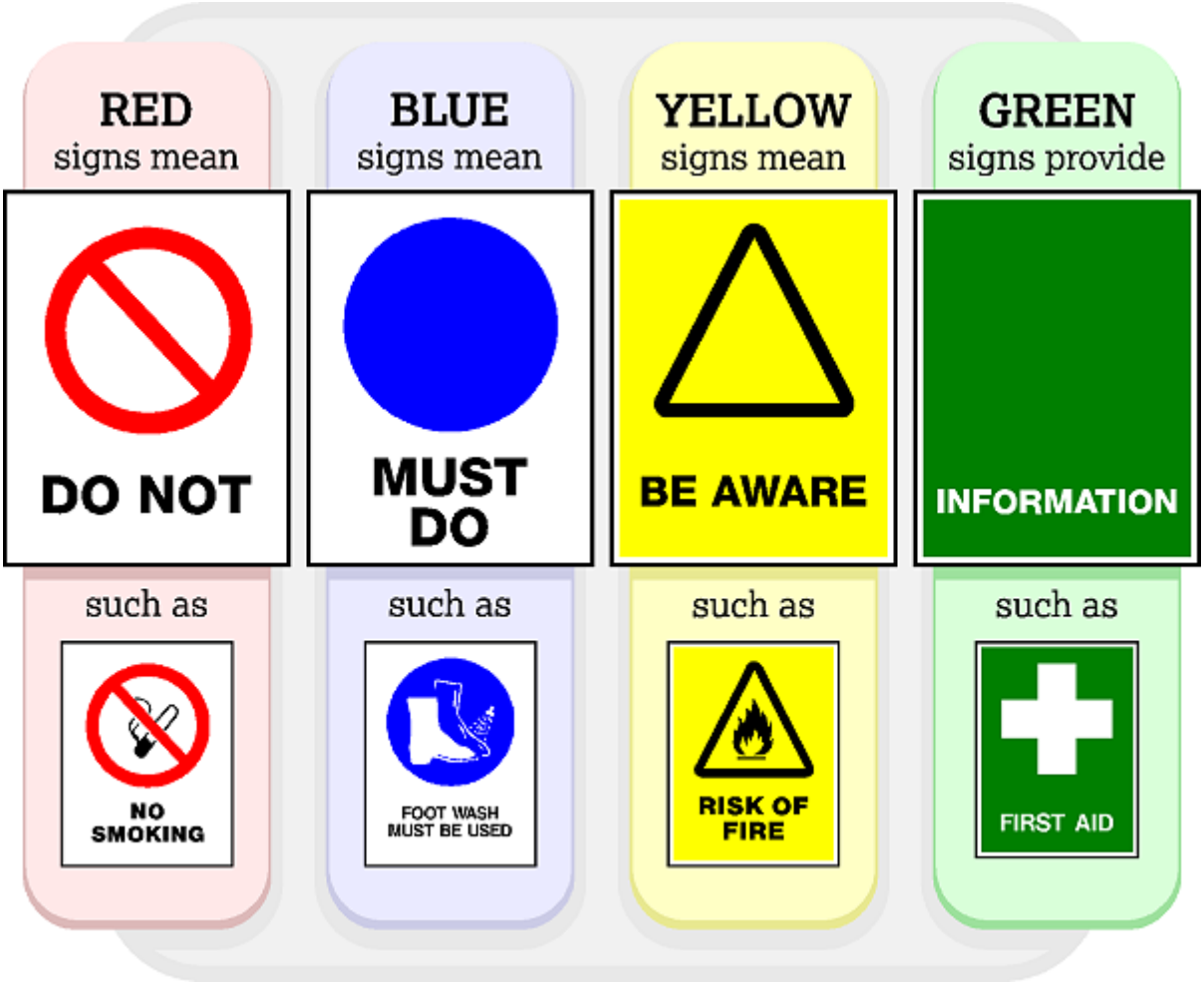
Safety Signs & Symbols

Australian Standards specify the colour, size and shape of safety signs. Safety signs are part of the administrative controls within the hierarchy of control. They are important communication tools and their message must be followed.

Safety signs are classified into the following colours:



SIGN TYPE	SYMBOLIC SHAPE	LEGEND COLOUR	MEANING	EXAMPLE
Regulatory Prohibition		Black when superimposed on symbolic shape	Not Permitted	
Regulatory Mandatory		White when superimposed on symbolic shape	Indicate a restriction that must be followed	
Regulatory Restriction		Black when superimposed on symbolic shape	Indicate a restriction that must be followed	

Hazard Warning		Black when superimposed on symbolic shape	Indicate a hazard that is not likely to be life threatening	
Hazard Danger		Black when superimposed on symbolic shape	Used when actual dangers exist	
Emergency Information		White when superimposed on symbolic shape	Emergency Information	
Fire Sign		White when superimposed on symbolic shape	Indicate fire equipment	

Notices and signs are classified into seven main groups: Regulatory prohibition, Regulatory Mandatory, Regulatory Restriction, Hazard Warning, Hazard Danger and Emergency information and Fire signs refer to section.

All signs required by relevant Acts or Regulations shall comply with Australian Standards or as dictated by operational requirements.

All signs shall be maintained free of obstruction and in a clean, visible and legible condition. Faded or damaged signs shall be reported and replaced.

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Electrical Warning Signs

All sub-stations, switch rooms, transformers, generating stations and other electrical installations shall display statutory notices and signs as required by legislation. In particular:

- No unauthorised entry
- No unauthorised handling or interfering with electrical equipment
- Procedure in case of fire
- Procedure in case of electric shock.
- Any missing, unclear, incorrect or obsolete colour codes or markings should be reported to the immediate supervisor or your health and safety representative.

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Lock Out, Isolation & Safety Tagging

Lock Out, Isolation & Safety Tagging

Isolation, tagging and lock out procedures are designed to protect people and property in a workplace from hazards related to electrical power, damaged equipment or machinery or when repairs, maintenance or inspections are carried out.

Before any repair or alteration work is started the electrical circuits or equipment to be worked on must be disconnected from the electricity supply, unless other adequate precautions are taken to prevent electric shock.

These devices include switches with a built-in lock, and lockouts for circuit breakers, fuses and all types of valves. A tag on its own is not an effective isolation device. A tag acts only as a means of providing information to others at the workplace. A lock should be used as an isolation device, and can be accompanied by a tag.

Lock Out

Lock out is the best way of preventing machinery or electrical current becoming operational during maintenance. A lock is attached to the machine switch so that it cannot be turned on. The employee working with the machine should hold the only key to the lock. A lock must only be removed from equipment or machinery by the person who attached it. Procedures must be put in place for the removal of the lock in case this person is not available, for example if there has been a change of shift workers.

Isolation & Tagging

Before you start work:

- Switch off;
- Isolate circuits;
- Fix appropriate tags;
- Test that the electricity supply is isolated; and
- Always test your test instruments.

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Section 2 ► Slide 20

Danger Tags

Personal “DANGER” tags are colour-coded red, black and white, and are used while equipment and machinery is being repaired or serviced.

A “DANGER” tag on an item of equipment is a warning to all persons that the equipment is being worked on and must not be operated as lives may be placed in danger.

If turning on a switch or valve or operating any machinery or equipment you are working on will place you or someone else in danger you must fix your own “DANGER” tags. They must be tied on every main isolation switch or valve and you must make sure the switch is in the correct safe position before you start the job. When two or more employees are working on the same job they must each fix their own danger tag.

“DANGER” tags are for everyone's safety. You must:

- Sign and date the tag;
- Only fix and remove your own “DANGER” tags;
- Place tags at common isolation points;
- Tie the tag securely; and
- Remove your tag at the end of the shift or when the work is done.

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Out of Service Tags

Yellow and black “OUT OF SERVICE” tags are used to warn people machinery, appliances or equipment is damaged, unsafe or out of service for repairs. They are used to prevent accidents and damage to the equipment or machinery.

While an “OUT OF SERVICE” tag is fixed to machinery, appliances or equipment it must not be operated.

If you are required to fix “OUT OF SERVICE” tags, you must:

- Be authorised to fix and remove them;
- Write your name and the fault on all tags;
- Place them in a prominent position;
- Place tags at common isolation points; and
- Leave tags on until the machinery or equipment is repaired and is safe to use.

Any faulty equipment should be tagged "OUT OF SERVICE" so that it cannot be used until it is replaced or repaired.

The safe work procedures for the removal of "DANGER" and "OUT OF SERVICE" tags at your workplace must be followed.

Talk to your PCBU or supervisor if you are unsure about tagging machinery and equipment correctly.

Front

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Authorisations-Licenses & Permits

Authorisations (e.g. licences, permits and registrations) are required for certain types of work, some workplaces and the use of some plant. There are many common construction activities which require authorisations before they can be undertaken. Examples of work which may require special license or permits:

- Scaffolding (over 4 metres)
- Dogging
- Rigging
- Crane operations
- Hoist operation

- Use of pressure equipment
- Removal of asbestos
- Gas-fitting
- Producing, storing and transporting prescribed waste
- Earthwork drainage
- Dredging
- Forklift operation
- Laying underground electrical and water services where the work is over or under council streets/footpaths

Working on or near roads

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Licenses & Permits: Earth Moving Equipment & Crane Operation

A person must be trained and competent but DOES NOT require a licence or ticket to operate this equipment which includes-

- Dozer, Grader, Scraper, Excavator and,
- Front-end loader, Backhoe, Skid steer loader, and
- Road Roller with an engine capacity of more than 2L, and
- Remote Controlled Bridge and Gantry Cranes only.

Although a licence or ticket issued by Workplace Health & Safety is not required to operate the equipment the person must still be trained and competent to do so

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Prescribed Activities

The WHS Regulations require the following types of work only to be carried out or supervised by a person with prescribed qualifications or experience:

Plant:

- maintenance, repair, inspection and testing of registered mobile cranes and tower cranes (section 235 WHS Regulation)
- maintenance, repair, inspection and testing of amusement devices (sections 240 and 241 WHS Regulations)
- verification of plant design (section 252 WHS Regulations)

Construction:

- all construction work requires general construction induction training (sections 316 and 317 WHS Regulations)

Management of asbestos:

- identification of asbestos at a workplace (section 422 WHS Regulations)

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Personal Protective Equipment

PPE is an essential part of the work environment on site, not only for your protection but for the safety of others. Personal protective equipment (PPE) is clothing or equipment designed to be worn by someone to protect them from the risk of injury or illness. PPE that is used by workers shall only be an approved type and must have the registered mark of the Australian Standards (AS) displayed, or be otherwise approved by the relevant authority.

Where does the use of PPE fit in the risk management process?

The provision of PPE should always be considered as a last resort, when engineering or work procedures cannot remove a hazard (unless stated in a Safety Data Sheet or work practice). Therefore, PPE should only be used:

- as a last resort, where there are no other practical control measures available
- to be a short-term measure until a more effective way of controlling the risk can be used
- together with other controls measures such as local exhaust ventilation
- by itself during maintenance activities

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Choosing Personal Protective Equipment

There are several factors to consider before choosing the right Personal Protective Equipment to use on site or for a specific work task. You should consider the following when considering the type of PPE to use:

- The suitability to yourself the worker
- The suitability to the work task
- The suitability to the work environment

Suitability to yourself, the worker

- Check the PPE is a suitable size and fit for each worker. Respiratory protective equipment, for example, requires a good facial seal.
- If PPE is comfortable to wear and workers are involved in choosing it, they will be more likely to use it.
- Individual circumstances of workers may affect choice. For example wearing of prescription glasses, allergies such as latex allergy and some medical conditions.
- Consider workers' medical conditions, which can influence whether they can use certain items of equipment.

Suitability to the work task

- Match the PPE to the hazard, remembering that a work task may expose workers to more than one hazard. For example welders may need protection from harmful welding gases and fumes, as well as ultraviolet radiation, hot metal and sparks.
- How the work is carried out and the level of risk to the worker. For example a more protective respirator may need to worn where the level of air contamination is very high.
- How long PPE will need to be worn.
- Work demands of the work activity. For example the level of physical activity or dexterity required.
- Make sure PPE that is to be worn at the same time can be used together

Suitability to the Work environment

Understand the impacts of a hot and humid work environment.

If you are protecting against exposure to a substance such as a hazardous chemical or a biological substance, consider how the substance can enter the body. For example where a chemical can be absorbed through the lungs and skin, skin protection as well as respiratory protection may be required. Choose PPE that meets current Australian Standards.

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Section 2 ► Slide 27

Care for your Personal Protective Equipment

Maintenance

- Proper care and maintenance is essential to ensure PPE continues to provide the necessary level of protection.
- Look for broken or damaged components before using PPE and repair or replace it as needed.
- Replace PPE that has expired or reached its usable lifespan.
- Clean reusable PPE after use and store in a clean area such as a cupboard, drawer or resealable container.
- Report broken, damaged or contaminated PPE

Sharing PPE

Most PPE is provided for the personal use of a worker. However, PPE may be shared in some circumstances, for example where PPE is only required for limited periods.

Shared PPE must be properly cleaned and disinfected before it is used again to ensure there are no health risks to the next person. Refer to the manufacturer's instructions for appropriate methods.

Information, training and instruction

Workers must be provided with enough information, training and instruction on when to use PPE and how to:

- use, fit and wear it including any adjustments that may be needed
- carry out repair or replace parts
- clean and store it correctly

When wearing more than one item of PPE to protect against substances, such as hazardous chemicals or biological substances, it is important to put on and remove each item correctly. If hands could become contaminated when removing PPE, it is important to wash them thoroughly to prevent accidental contamination.

Watch the following video for an example on how to put on and take off Personal Protective Equipment here.

Section 3

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Section 3 ► Slide 1

Hazards & Risks

Hazards and risks are **NOT** the same thing.

A **hazard** is anything (including an intrinsic property of a thing) or situation to cause harm or injury. Hazards can include substances, plant, work processes and/or other aspects of the work environment.

Risk is the likelihood of causing injury or harm.

The relationship between hazard and risk is illustrated by the examples below.

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Section 3 ► Slide 2

Common Hazards & Associated Risks

Hazard Categories	Examples
Physical	• noise • heat from the machine • moving machinery • repetitive jobs • poor design
Chemical	• solvents, cleaners, acids • dusts and powders like asbestos • fumes from hot metals, petrol and gases • smells from paints, plastics and pesticides
Biological	• rusty machine parts • unclean work area and facilities
Psychological	• long shifts without proper breaks
Electrical	• broken or frayed cords • exposed wires

	• faulty electrical wiring

HAZARD	RISK
Work environment: confined space	The likelihood that a work might suffer carbon monoxide poisoning because they are using a petrol operated pump in a well (ie - an inadequately ventilated space)
Energy: electricity	The likelihood that a worker might be electrocuted because they are exposed to electrical wires while using a deep fryer that has inadequate insulation on the power cable
Manual handling	The likelihood that a worker might suffer back strain from manual lifting 40 kg bags
Noise	The likelihood that workers and others in the area might suffer irreparable hearing damage because they work near someone continuously using a jack hammer which emits noise levels over 85 dB(A)
Noise	The likelihood that office workers might suffer stress in the form of fatigue, anxiety and/or aggression because they are exposed to constant low level noise of below 75dB(A)
Substance: infected blood	The likelihood that a worker might sustain a cut or laceration from a piece of plant or equipment which could result in an infection.

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Section 3 ► Slide 3

Hazardous Substances

Hazardous substances are those that, following worker exposure, can have an adverse effect on health. Examples of hazardous substances include:

- poisons
- substances that cause burns or skin and eye irritation
- substances that may cause cancer
- Asbestos
- Synthetic mineral fibres
- Cement dust
- Chemicals and solvents
- Wood dust

When dealing with hazardous substances and dangerous goods you should always:

- Comply with Material Safety Data Sheet s (SDS's)

- Wear an approved respirator, eye protection and gloves
- Wet down dusty surfaces or areas
- Keep vehicle speed down
- Use wet methods when cutting hazardous materials
- Clean up quickly

Workplace storage, handling and use of hazardous chemicals were regulated under different pieces of legislation before the implementation of the Work Health and Safety Regulation 2011.

The WHS Regulation 2011 covers workplace hazardous substances and dangerous goods under a single framework for hazardous chemicals. It also introduces a new hazard classification and hazard communication system based on the United Nations' Globally Harmonised System of classification and labelling of chemicals.

Transitional arrangements are in place for the new classification, safety data sheets (SDS) and labelling requirements.

Remember that hazardous substances and dangerous goods will need to be disposed of safely. Make sure that you know the correct procedures for disposal of specific items or goods.

Asbestos

- Found in many areas including bonded form (around eaves, ceilings, wet areas) and friable form (around hot water pipes)
- Never try to remove asbestos - law states that people who assess and remove asbestos must be licensed
- You must immediately report the presence (or suspected presence) of asbestos

Chemicals & Solvents

- Always check the Safety Data Sheet (SDS) before handling
- SDS details safe handling and disposal procedures
- If in doubt, isolate and check

Dust (Wood or Cement)

- Dust can be dangerous to your health. Cement and gypsum-based materials are hazardous and can be found in things like mortar, concrete and adhesives.
- Excavation, demolition and traffic flow can also cause dust problems.

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Section 3 ► Slide 4

Dangerous Goods

Dangerous goods are substances, mixtures or articles that, because of their physical, chemical (physicochemical) or acute toxicity properties, present an immediate hazard to people, property or the environment.

Types of substances that are classified as dangerous goods include:

- explosives
- flammable liquids and gases
- corrosives
- chemically reactive or acutely (highly) toxic substances

The criteria used to determine whether substances are classified as dangerous goods are contained in the Australian Dangerous Goods Code (ADG code). The ADG code contains a list of substances classified as dangerous goods.

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Section 3 ► Slide 5

Dust

Dust can come in many forms and can be very dangerous to your health. In particular a natural substance called Silica, found in most rocks, sand and clay, and in products such as bricks and concrete, can cause some serious harm if inhaled.

Work processes such as cutting, sanding, carving, grinding, blasting or polishing materials containing silica can generate respirable crystalline silica (RCS).

RCS dust particles are so small they cannot be seen under ordinary lighting.RCS is hazardous to health, the small particle size means it is easily inhaled deep into the lungs.

Construction workers are more likely to be exposed to RCS when performing:

- tunnelling
- labouring
- demolition
- concrete grinding
- brick, concrete or stone cutting, especially using dry methods
- excavation, earth moving and drilling plant operations
- paving and surfacing

Activities like dry cutting of bricks and concrete with diamond tipped blades can also produce very high levels of silica dust.

Control the risks

Reducing the airborne concentration of RCS is more effective than simply relying on respiratory protective equipment (RPE). Look carefully at the control measures that can be used, some are more cost effective and practical for each situation than others.

You can control RCS risks by:

- Stopping or reducing the dust
- Controlling the dust
- Maintaining and reviewing the controls

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Section 3 ► Slide 6

Noise

Noise is usually caused by vehicles and traffic, machinery and heavy equipment, hand and explosive powered tools. It can affect your health, or the health of others through hearing loss or damage, stress, headaches, and problems with communication.

You should always wear hearing protection (e.g. ear plugs, ear muffs or both) where noise levels could cause deafness or hearing damage. Personal hearing protectors should be used when noise levels cannot be reduced by other control measures. Personal hearing protectors should not be used as a substitute for engineering or administrative noise control measures. Be aware of the appropriate sound level or decibel (this is the unit used to measure the intensity of the sound wave) specified for construction activities. Your supervisor can help with this.

Staff at workplaces should be:

- supplied with personal hearing protectors of correct rating and suitable for the work conditions
- instructed in their correct use
- instructed to wear them when exposed to noise
- monitored to ensure they wear hearing protection

Also, always consider other people (both on and off site) when noise is a concern. Schedule your work in a way that minimises noise disruption. Areas where people may be exposed to excessive noise should be signposted as 'hearing protection areas' at every entry point to the areas. The boundaries of these areas should be clearly defined.

No person, including visitors, managers or supervisors, should enter a hearing protection area during normal operation unless they wear appropriate personal hearing protectors, however short the entry period.

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Section 3 ► Slide 7

Manual Handling

This is any activity that requires you to use force to lift, lower, push, pull, curry or otherwise move any load. Incorrect handling is a common form of injury, and can often result in serious and long term injury.

When determining control measures to manage hazardous manual task risks, consider:

- postures, movements, forces, vibration
- duration and frequency
- workplace environmental conditions
- design of work area
- layout of the workplace
- systems of work used
- nature, size, weight or number of persons, animals or things involved

Shoulders, hands, neck, back and knees are the most common areas of injury. You can break bones, fracture vertebrae in your neck or back, twist and sprain muscles and ligaments. You can also pinch nerves. These injuries are costly to you and your workplace.

If it is an awkward or heavy load, do not attempt to do it by yourself. Organise others to work as a team to shift the load. One person should take charge of the lifting. It is also best to use people of similar height. Relevant stakeholders must consult and work together to identify and manage the risk so far as is reasonably practicable.

Safe work procedures for manual handling

The aim of a SWP is to help supervisors, workers and any other persons at the workplace to understand how to carry out a task in a safe and healthy manner. It sets out the work activities in a logical sequence and identifies hazards and describes the control measures.

The information in a SWP is developed after the risk assessment, identification and implementation of suitable controls. This process should include consultation with workers.

As a part of risk management it is important to monitor and review the controls and ensure that any new hazards are managed. If the task remains hazardous, further risk assessment and management will be required.

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Section 3 ► Slide 8

Plant & Equipment

The operation of powered mobile plant at construction workplaces exposes workers to a range of risks to health and safety, including the risks of:

- the plant overturning
- things falling on the operator of the plant
- the operator being ejected from the plant
- the plant colliding or coming into contact with any person or thing (e.g. workers, other vehicles or plant, energised power lines)
- mechanical or other failures (e.g. hydraulic failures, release of hazardous substances)

Powered mobile plant is defined by the Work Health and Safety Regulation 2011 to mean any plant that is provided with some form of self-propulsion that is ordinarily under the direct control of an operator, and includes:

- earthmoving machinery (e.g. rollers, graders, scrapers, bobcats)
- excavators
- cranes
- hoists
- elevating work platforms
- concrete placement booms
- reach stackers and forklifts

Use only plant and equipment that are safe to use. Make sure the equipment you use has been correctly serviced and checked.

Operation of Plant Equipment

The WHS Regulation requires high risk work licenses for plant operation. If you carry a high risk license to operate plant equipment you should ONLY use plant and equipment for the purpose(s) for which they are meant to be used.

Remember that all guards should be fitted safely and be in good condition. Knife blades must be covered when they are not in use and must be secured or locked in place when in use. Live electrical equipment must never be worked on until they are de-energised and/or physically isolated. You should always ask your supervisor or other responsible person to shut down and tag out (or lock out) systems if needed.

Remember to keep an eye out for:

- Overhead power lines
- Exposed, moving mechanical components (eg gears, drive shafts, pulleys)
- Areas where there could be a release of steam, chemicals, pressurised fluids or biological hazards.

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Traffic & Mobile Plant

You must be licensed to operate and able to safely control. Make sure you only operate plant and equipment that you are licensed to use and can safely control and operate. Only use the equipment for the purpose for which it was designed to be used.

You must carry out all pre-operational checks when starting or taking over equipment. Remember to check warning and hazard signs and lights.

Also, make sure that you:

- Work only within the specified areas
- Be careful and follow road rules and transport rules when moving between sites
- Be aware of people and objects around you when working
- Identify and avoid potential hazards
- Observe and obey warning signs
- Identify and mark services, and isolate (and tiger tag) overhead power lines if needed
- Follow correct procedures when parking, storing and isolating equipment and attachments
- Follow lock up and isolation procedure s if plant and equipment are to be left overnight
- Replace or tag faulty items and report any damage or faults immediately
- Complete all minor maintenance within guidelines and to your level of responsibility
- Record and report other maintenance and repairs
- Be aware of and avoid contact with moving parts and hot engine/body parts and lubricants (oils)
- Replace or check guards before and after use

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Electrical Safety

Electricity and working with electrical equipment can be extremely dangerous. People can be seriously injured when they become part of the electrical circuit.

There are four main types of injuries: electrocution (fatal), electric shock, burns, and falls. These injuries can happen in various ways:

- Direct contact with exposed energized conductors or circuit parts. When electrical current travels through our bodies, it can interfere with the normal electrical signals between the brain and our muscles (e.g., heart may stop beating properly, breathing may stop, or muscles may spasm).
- When the electricity arcs (jumps, or "arcs") from an exposed energized conductor or circuit part (e.g., overhead power lines) through a gas (such as air) to a person who is grounded (that would provide an alternative route to the ground for the electrical current).
- Thermal burns including burns from heat generated by an electric arc, and flame burns from materials that catch on fire from heating or ignition by electrical currents or an electric arc flash. Contact burns from being shocked can burn internal tissues while leaving only very small injuries on the outside of the skin.

- Thermal burns from the heat radiated from an electric arc flash. Ultraviolet (UV) and infrared (IR) light emitted from the arc flash can also cause damage to the eyes.

You must report all electrical shocks and short circuits. Australian standards and WHS legislation demand that regular routine inspections of electrical equipment happen, this includes:

- Testing and tagging all electrical equipment quarterly.
- Checking extension leads and portable tools for defects and correct tags prior to use

In work areas, all electrical leads should be suspended off the ground. Equipment must be earthed properly and portable equipment must include a portable earth leakage circuit breaker (a residual current device RCD). This is an added protection and should not be used as a sole protection.

Where a portable generator is being used, make sure that the wiring is correct and that the outlet socket, generator and frame have a common earth wired by a licence electrician.

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UV Radiation

Along with heat stress, ultra-violet (UV) radiation is one of the hazards workers encounter when exposed to in the sun. You should know that it can also come from lasers, welding flashes and high intensity lighting.

UV radiation passes through the skin and harms the living cells in the body. These cells swell and the skin burns. Your eyes are also at risk.

Make sure you take sensible measures to protect your skin from UV radiation (sunburn). Wear appropriate PPE if you are welding or exposed to lasers or high intensity lighting.

Always remember to:

- Slip on a shirt
- Slop on the sunscreen
- Slap on a hat
- Wrap on sunglasses.

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Working at Heights & Falls

Falls from heights are one of the most common forms of serious injury or death on work sites. When working at heights, appropriate protection must be given to you, and used. This rule applies regardless of the height at which you are working.

The Work Health and Safety Regulation 2011 sets out the specific control measures that are required where there is a risk of a fall of at least:

- three metres in housing construction work
- two metres in other construction work

You must make sure that:

- As much as possible is done at ground level
- Passage ways, aisles and stairs are clear of obstruction
- People below are protected
- Ladders are used correctly
- Edge protection is used if a person is likely to fall more than 2 metres , or there is a risk (e.g. guard rails, barricades, or other solid and secure safety screens)
- A safety harness, safety net or other system is used if edge protection can't be used
- All scaffolding, temporary structures, planks, decking, tools and equipment etc are secured to stop them from falling
- You wear non-slip footwear

Scaffold or mobile work platforms are used if work is of an extended nature if above 4 metres erected by a licensed scaffolder. A scaffold is any temporary structure specifically erected to support access or working platforms, and includes:

- modular or prefabricated scaffold
- tube and coupler scaffold
- cantilevered scaffold
- spur scaffold
- hung scaffold
- suspended scaffold

The erection, alteration, use and dismantling of scaffold exposes workers to the risk of a serious fall or being struck by falling objects, such as scaffold components, tools, or in the event of a collapse, the entire scaffold.

It is important to note that control measures may still be required for work below three metres in housing construction, and below two metres for all other construction work, if a risk assessment suggests control measures should be provided.

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Falling Objects

You must take care to ensure that objects do not fall onto or hit people during construction work and people in adjoining areas. Adjoining areas could include a public footpath, road, square or the yard of a dwelling or other building beside a workplace.

Falling objects include equipment, material, tools and debris that can fall or be sent out sideways or upwards. Examples of falling objects include tools falling off a work platform, rock and soil falling into a trench, falling bricks bounced off the side of a building, and concrete pre-cast panels falling over.

It is important that:

- Perimeter containment screening, scaffold fans, hoardings or gantries are used to contain falling objects
- Scaffolding is erected and dismantled during quiet times in built-up areas
- Materials are never dropped from a scaffold - mechanical hoists should be used to move materials
- Danger tags and warning signs (such as 'keep out - falling objects' and 'danger - incomplete scaffolding' etc. are used to warn people of hazards from falling objects.

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Excavations (Including Trenches)

An excavation means a trench, tunnel or shaft, but does not include a mine, water bore, or a trench for use as a place of interment. Excavation work introduces a number of risks that must be managed, including the risk of:

- a person falling into the excavation
- a person being trapped by the collapse of an excavation
- a person working in the excavation being struck by a falling object
- a person working in the excavation being exposed to an airborne contaminant.

All trenches or excavations must be barricaded or flagged off to warn people of their location, and to prevent accidental or unauthorised entry. People are generally not allowed to enter areas immediately next to trenches or other excavations that are 1.5 metre s in depth or more, unless the sides are benched, battered or supported.

Safe Work Method Statements are required for all high risk construction work, including work:

- Carried out in or near a shaft or trench with an excavated depth greater than 1.5 metres or a tunnel

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Tunnelling

A tunnel is any excavation that is approximately horizontal and starts at the surface or from within another excavation. Tunnelling work is often highly complex and involves the use of a range of engineering and construction techniques, plant and equipment.

There are a number of risks with tunnelling work, including:

- risk of collapse
- Contaminated atmospheres (toxic, flammable, etc.)
- risks associated with heavy plant or equipment

There numerous other risks associated with tunnelling as there are often a range of activities taking place inside a tunnel. Activities that take place inside a tunnel and bring with them additional hazards include building support and other internal structures, installing services, and constructing the surface. Workers carrying out these activities are exposed to a number of additional risks that must be managed, including:

- noise, which can be amplified in an enclosed space
- heat stress
- air quality
- the movement of vehicles and mobile plant in an enclosed space

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Confined Spaces

A confined space includes any enclosed or partially enclosed space which:

- Is not intended as a regular workspace
- Has restricted means for entry and exit
- May have an atmosphere that is contaminated or lacking oxygen
- Is at atmospheric pressure
- Has a permit system for access
- Has special requirements such as a permit for work, provisions for rescue and first aid, communication and people acting as “spotters”

Confined spaces that may be found on a construction site include some types of excavations or trenches, drainage or sewerage pipes, and crawl spaces.

Australian Standards prescribe procedures, regulations and rules that must be followed with regard to confined spaces. These rules must be complied with. An example of legislation, WHS Regulation, s67, which applies to confined spaces, is the requirement for a confined space entry permit.

The PCBU must not direct a worker to enter a confined space unless that person has a confined space entry permit for work.

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Unplanned Collapse

An unplanned collapse poses a significant danger to construction workers.

It can involve:

- The collapse of a building or structure (or part of a building or structure) which is weak or unstable before it has collapsed
- The collapse, overturning or failure of a load-bearing part of a lift, crane, hoist, or lifting gear
- The collapse of shoring or an excavation with is more than 1.5 metres deep

To manage the risk of unplanned collapses, the condition of roofs, walls and floors of the building should be assessed by a competent person before commencing demolition work.

As always, you should be aware of potential hazards and risks, and comply with procedures, regulations and Australian Standards which are in place to help you be safe at work (for example those relating to maximum load limits of load bearing equipment).

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Hot & Cold Working Environments

Effects of extremes of temperature or humidity can be a serious cause for concern. It is important that you know the difference between a situation which threatens health and safety, and a feeling of discomfort.

Terms like hypothermia and heat stroke refer to serious medical conditions.

- **Hypothermia** - is where a person gets an abnormally low body temperature as a result of exposure to cold environments. It is a serious condition which can lead to death.
- **Heat stroke** - is an uncommon and more severe form of heat illness, which is a medical emergency. It occurs when the body can no longer control the body temperature and it rises to temperature s where mental function is seriously impaired.
- **Heat exhaustion** - is related to lack of fluids, or a rapid loss of body fluids.
- **Heat stress** - is more serious, and can lead to death. It is more likely to occur in conditions of high humidity.

The effects of heat and cold on the body are influenced by the environment through:

- Air temperature (how hot or cold the surrounding air is)
- Humidity (the moisture in the air)
- Air movement including air speed (or wind speed), and air circulation
- Radiant heat (heat radiating from the sun, or given out by plant, buildings, equipment, fixtures etc)

By themselves, they may not present a serious hazard.

Other things can make them worse. If they are present during strenuous physical work, or if you are required to wear heavy protective clothing, the potential for harm may be greatly increase.

Extreme environments

Accidents can also occur in extreme environment where ice and water or condensation can add to slips and falls. This can include when people are:

- Working in freezers and cold rooms
- Using ice and iced products
- Moving in areas with high humidity and condensation such as kitchens, laundries and indoor pool areas

The best strategies to reduce the risk in extreme environmental conditions include to:

- Remove ice build-ups
- Check door seals
- Prevent/reduce humidity
- Provide slip-resistant flooring
- Wear slip-resistant footwear

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Infectious Diseases

Most workplaces are not at high risks of transmitting infectious diseases such as HIV, hepatitis and other viruses found in the blood and other body fluids. Where there is a possibility that workers will be exposed to blood or other body fluids, there is potential for transmitting viruses.

Some work activities have an increased risk, for example a plumber might be exposed to a syringe left in a toilet. Other risks relate to workers who use sharp instruments or tools that might penetrate their skin, or poor housekeeping or personal hygiene.

Transmission will usually occur if hypodermic needles or other sharp instruments contaminated with infected blood or body fluids penetrate the skin infected blood or body fluids splash into your eye or other mucous membranes, or onto broken skin.

Section 4

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Hazard Identification

Hazard identification is the process of recognising that a hazard exists and defining its characteristics. All hazards must be identified and assessed to determine the level of risk. The risk must then be eliminated or controlled.

The process involves identifying all hazardous items, activities, situations, plant and equipment, products, services and processes that could result in injury or illness. This would generally involve consideration of:

- The type of injury or illness that is possible
- The situation or events, or combination of circumstances that could give rise to injury or illness
- The way work is organised and managed

A PCBU, in managing risks to health and safety, must identify reasonably foreseeable hazards that could give rise to risks to health and safety including:

- The work premises
- Work practices, systems and shift working arrangements (including hazardous processes, psychological hazards and fatigue related hazards)
- Plant (including transport, installation, erection, commissioning, use, repair, maintenance, dismantling, storage or disposal)
- Hazardous substances (including production, handling, use, storage, transport or disposal)
- Presence of asbestos
- Manual handling (including the potential for occupational overuse injuries)
- Layout and condition of the workplace (including lighting and workstation design)
- Biological organisms, products or substances
- Physical environment (including the potential for electrocution, drowning, fire or explosion, slips, trips and falls, contact with moving or stationary objects, exposure to noise, heat, cold, vibration, radiation, static electricity or contaminated atmosphere)
- Potential for violence

Hazards are commonly identified through:

- Direct observation
- Completing checklists
- Site safety audits
- Workplace inspections
- Incident/accident investigation
- Monitoring the work site
- Consultation with staff or external organisations
- Feedback from other people
- Injury and illness records

- References to information and historical data
- Investigating staff concerns
- Environmental and health monitoring

All employees should be involved in hazard identification. It should take place at all stages of product or service delivery, from design to manufacture, supply and product use.

Identifying hazards should be a systematic, planned process that enables workplace hazards to be identified in a logical, structured manner. However, hazards may also be identified through less systematic means such as internal or external complaints or observations from employees.

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Systematic Methods for Hazard Identification

Systematic inspections of the workplace evaluate the implementation and effectiveness of the organisation's safety management system.

Systematic methods include:

Safety audits

External consultants or WHS professionals may conduct the audit. Audits usually result in a written report for management and recommendations are referred to the WHS committee/WHS representative for consideration.

Workplace inspections

Regular, systematic physical inspections of the workplace by managers, supervisors and the WHS committee/WHS representative should be conducted. Inspections make use of observation, checklists and discussion to identify workplace hazards.

If you identify a hazard during a workplace inspection you should:

- Assess the risk
- Notify relevant people such as other workers and your PCBU
- Control of stop the hazard if reasonably practical to do so

In conducting inspections, consultation and cooperation between PCBUs and employees is essential. The WHS committee/WHS representative can facilitate this. The outcomes of inspections and control recommendations should be documented and made available to employees.

Incident/accident investigations

Many workplaces have a set of procedures for reporting and investigating hazards and circumstances that contribute to incidents/accidents.

Records

Workplaces should keep records of injuries and illnesses, WHS training and incident/accidents. Information about ‘near hits’ can be very helpful in identifying hazards and preventing potential harm or damage. Registers of hazardous substances, plant or first aid are also useful.

Consultation

A range of consultation mechanisms is available to identify hazards and bring them to the attention of the PCBU.

Most workplaces determine that a WHS committee or WHS representative(s) are the most effective means of raising health and safety issues however other agreed arrangements could include WHS meetings, quality circles and total quality management processes.

Environmental & health monitoring

Systematic investigation and monitoring of hazards is an effective way to bring hazards to the attention of management and employees.

As with WHS audits, monitoring may be undertaken by WHS professionals to provide technical advice about suspected hazards. Monitoring may help in deciding whether a substance or process is hazardous and, if so, the level of risk involved. In this way, monitoring is not only associated with hazard identification, but is also associated with workplace assessment and control measures.

Environmental monitoring measures the hazards present in the workplace environment (e.g. air sampling) whereas health monitoring considers exposure of the individual (e.g. blood or hearing testing).

Work health & safety management system

A work health and safety management system is a system or methodology used by a business to manage the WHS obligations within a business. It is useful for organising how workplace health and safety is managed and provides a proactive and systematic approach.

Hazard identification does not end with the initial investigation. The hazard identification steps are repeated as part of an ongoing process, especially when there are changes in the workplace.

Once a WHS program is in place, hazard identification should be regarded as an ongoing, integral part of workplace operations.

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Risk Management

The WHS Act requires a person conducting a business or undertaking to manage risks associated with the carrying out of construction work.

Risk management is a system that allows workplaces to identify WHS issues and to methodically control them by the best means available. It provides PCBUs with a strategic means of meeting their duty of care under the Act. Risk management gives organisations the flexibility to adapt to changing circumstances as they arise. It provides health and safety practitioners with the basis for developing a health and safety program that will systematically identify and resolve the key WHS issues in their workplace.

When risk management is carried out, it must examine tasks and activities, plant and equipment, substances, and the premises where work is performed.

When conducting this process it is important to consider the level of information regarding hazards which is available within the business as well as information available external to the business, so that all factors can be considered.

Consultation with workers needs to take place when risks to health and safety are assessed and when decisions are being made about the measures for eliminating or minimising risks. This is an important step in ensuring work health and safety.

Decisions about how to control risks must reflect a consideration of what is reasonably practicable; taking into account the various factors that must be weighed up. These factors include the likelihood and potential severity of adverse consequences from risks, which implies that a process of risk assessment must be undertaken before deciding on risk control options, even where there is no explicit requirement for risk assessment.

To conduct a Risk Assessment means gathering information so that you can make a clear and educated decision about what needs to be done to lower the risk as far as possible.

Conducting a risk assessment is nothing more than a careful examination of what could cause harm to people in your workplace and assessing

- The likelihood that it will do harm (probability)
- The severity of harm it could do (consequence)
- The number of times people could be affected by it (frequency).

The aim is to make sure that no one gets hurt or becomes ill - that a person returns home safely after work.
When undertaking risk management:

- involve workers in the process
- don't use it to justify a decision that has already been made
- consider good practice in your industry
- make records of any risk management activities undertaken

Risk management can be applied at many levels in an organisation. It can be applied at the strategic level and at the operational level. It may be applied to specific projects, to assist with specific decisions or to manage recognised risk areas

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Risk Management Responsibilities

Who has responsibilities for Risk Management?

- PCBUs, business owners, managers, directors, HR staff with WHS responsibilities, WHS practitioners employed on-site. PCBUs must take a risk management approach to fulfil their WHS obligations. Risk management techniques must be applied to the particular workplace and not as a generic set of principles in order to comply with responsibilities and duties prescribed by law.
- Occupiers and contractors: In the same vein as applies to PCBUs, occupiers and principal contractors must apply risk management to fulfil their WHS responsibilities.
- Workers: As workers are the usual subjects of risk management, they too must think risks and risk management in order to assist an overall regime of good WHS.
- Health and safety representatives/committees: Locating and understanding the risks that exist in workplaces is critical to the role of committees and representatives who are then expected to work with management to assist in resolving these issues.
- Contractors working on-site: As workers coming on-site who are not employees need to understand the WHS issues that affect the particular workplaces, contractors must be alert to sound risk management practices.
- Manufacturers and suppliers of goods/equipment to workplaces: Equipment brought into a workplace must be designed with WHS in mind and this means that possible or potential risks associated with the equipment must be assessed and addressed.

A PCBU must consult with workers when:

- Identifying hazards and assessing risks arising from work
- Proposing changes that may affect the health and safety of workers
- Carrying out activities prescribed by the WHS Regulation.

A PCBU must also consult with workers and take their views into account when making decisions about:

- Ways to eliminate or minimise risks
- The adequacy of facilities for workers' welfare
- Procedures for consulting workers

- Resolving health and safety issues
- Monitoring the health and safety of workers or workplace conditions
- How to provide health and safety information and training to workers.

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Five Step Process

Risk management is a five step process in controlling exposure to health and safety risks associated with hazards in the workplace.

Before approaching the five steps it is important to consider the context in which the risk management process takes place.

The five steps of the risk management process are:

1. Identify hazards **(find or see)**
2. Assess the risks involved **(think about and check)**
3. Consult and report ensuring the involvement of relevant people **(talk and tell)**
4. Control the hazard **(stop or prevent it)**
5. Review to identify change or improvement **(check and reflect)**

The way you implement this process at your workplace will depend on the type of work you do and the nature of hazards and risks at your workplace.

Risk management is a process than can contribute to organisational improvement. With each cycle, risk criteria can be strengthened to achieve progressively better levels of risk management.

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Assess Risk

To assess risk, you need to consider both likelihood and consequences.

The desired outcome of this step is a prioritised list of risks for further action. Various methods can be used to undertake a risk assessment. One method is presented below.

Risk Likelihood

For each of the risks:

- Estimate the likelihood of an incident occurring at your workplace, bearing in mind existing control measures;
- Estimate the consequences of an incident occurring at your workplace, bearing in mind existing control measures
- Estimate the number of times people could be effected by it (frequency)

Using the ratings of each risk, develop a prioritized list of workplace risks requiring action.

Likelihood	
Very Likely	Could happen frequently
Likely	Could happen occasionally
Unlikely	Could happen, but rarely
Very Unlikely	Could happen, but probably never will

The following factors can affect the likelihood of an incident occurring:

- How often the situation occurs.
- How many people are exposed?
- The skills and experience of persons exposed.
- Any special characteristics of the people involved.
- The duration of exposure.
- The position of the hazard to workers.
- Distractions.
- Quantities or multiple exposure points.
- Environmental conditions.
- Condition of equipment.
- The effectiveness of existing control measures:
- Do the existing control measures represent good practice?
- Are the existing control measures minimising exposure to the risk?
- Do workers know about the existing control measures?
- Are the existing control measures being used / followed?
- Are there adequate systems in place for the control measures?
- Is training and supervision adequate for the control measures?
- Is maintenance adequate for the control measures?
- How easy is it to use, or work with, the control measures?

Risk Consequences

Use the following descriptive scale to nominate the consequences of an incident occurring.

Consequences	
Extreme	Death or permanent disability
Major	Serious bodily injury or serious work caused illness
Moderate	Moderate injury or illness requiring casualty treatment
Minor	Minor injury or illness requiring first aid only, no lost work time.

To determine consequences, you must make a judgement on the severity of the potential outcome.

You should review any information gathered during the identification stage, including incident statistics and manufacturer's data.

Also consider the following factors which can affect the consequences:

- Potential for a "chain reaction"
- Concentrations of any substances
- Volumes of materials
- Speeds of projectiles and moving parts
- Heights
- Position of the worker relative to the hazard
- Weights
- Forces and energy levels

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Risk Priority Chart

The level of risk, or 'risk score', is determined by the relationship between the likelihood of an incident occurring and the potential consequence of the incident occurring. This relationship can be represented using a matrix, as follows.

Determine the risk score for each risk by plotting consequence and likelihood estimates on the table. Prioritise risks based on their risk score.

How severely could it hurt someone, or how ill could it make someone?	Very likely Could happen anytime	Likely Could happen sometime	Unlikely Could happen but very rarely	Very unlikely Could happen but probably never will
Kill or cause permanent disability or ill health	1	1	2	3
Long term illness or serious injury	1	2	3	4
Medical attention and several days off work	2	3	4	5
First aid needed	3	4	5	6

This stage of the risk assessment gives a basis for ranking risks in terms of their priorities. It is important to note that the risk scores obtained have no absolute value.

This chart provides a means of ranking the risks ONLY.

The scores (1-7) in the risk priority chart indicate how important it is to do something about each risk, as follows:

Score	Action
1,2 or 3	Do something about these risks IMMEDIATELY
4 OR 5	Do something about these risks as soon as possible
6 or 7	These risks may not need immediate attention

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Risk Control

Control strategies should be developed and implemented after the hazards have been identified and risk assessment completed. The main purpose of risk control is to eliminate hazards if reasonably practicable or if this is not possible, to reduce the risk in the workplace to the lowest possible level. It is essential that a thorough examination of the workplace be carried out to reveal the types of hazards and their extent. This should be linked closely to available information and requirements of appropriate legislation, codes and standards.

Once implemented, control strategies should always be documented and training provided to all employees where necessary. Regular monitoring and review should be conducted to ensure continuing applicability and suitability. This also encourages continual improvement.

Control measures are designed to reduce the:

- Risk arising from hazardous work
- Risk of exposure to hazardous substance or hazardous environment
- Likelihood of disease where that exposure is an integral part of the work process

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Hierarchy of Controls

The hierarchy of controls is used when it is not reasonably practicable to eliminate risks to health and safety caused by a hazard. Controls are not mutually exclusive. Several in the hierarchy may be needed to obtain the level of control necessary. This is particularly true when using administrative or PPE controls.

A series of questions is asked starting from the most effective treatment of a risk, which is elimination, and working down to the least effective, which is personal protective equipment. These questions are:

- **Elimination:** Is it possible to remove the hazard completely?
- **Substitution:** Is it possible to substitute materials, equipment or process with less hazardous ones?
- **Isolation:** Is it possible to minimise the chance of danger or harm by preventing access?
- **Engineering:** Can a safer environment be created by making equipment and process improvements such as guarding for equipment?

- **Administration/Training:** Are there policies, standards and standard working procedures in place to minimise the risk?
- **Personal Protective Equipment (PPE):** Should PPE be used as additional protection?

If elimination cannot occur the following control measure must be used starting with control measure one.

Control measure one (1):

- Substituting the hazard e.g. system of work, plant, substance or tools with something safer
- Isolating the hazard e.g. introduce a strict work area; enclose a noisy process from the person
- Minimising the risk by introducing engineering controls e.g. Guard rails, scaffolding, and ventilation

Control measure two (2):

- Minimising the risk by adopting administrative controls e.g. Hazard warning signs, safe work practices, appropriate hearing, housekeeping, maintenance

Control measure three (3):

- Using PPE e.g. Eye and hearing protection

If no single control is appropriate, a combination of the above controls needs to be taken to minimise the risk to the lowest level that is reasonably practical.

The measures at second and third level are less effective and require more frequent reviews of hazards and systems of work.

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Controlling Risks

Identify Hazards	Assess Risk	Implement Control
Gas, Dust, Fumes	Are there any air pollutants now? Will there be any air pollutants generated? Are there any fire alarms nearby that may be set off?	• isolate, wash down or wear PPE • provide ventilation away from workers and restrict access • disconnect and arrange additional warning devices
Noise	Will you need to shout to be heard?	move work away or provide PPE
Spills	Can something be spilt or overflow? If so, can harm happen to people, area or plant?	• control flows or re-route flows • erect bunds or barricade the area

Environmental	If something is spilt or was released, would the area be affected?	consult with the Environmental Adviser to provide a plan
Electrical	Is there live equipment in the area?	isolate or barricade hazard
Mechanical	Is there any crush points or moving parts?	isolate or barricade hazard , or move work away from hazard
Chemical	Are there any hazardous chemicals in the area? Will you be handling any chemicals?	• isolate or minimise exposure times • attach SDS and wear PPE
Temperature	Is the work area hot or cold? Can you contact very hot or cold surfaces?	• reduce working times and wear PPE • provide barriers or distances from sources
Pressure	Are there any high pressures present?	isolate, protect or barricade pressure sources from work area
Manual handling	Will the work involve lifting, carrying, pushing, pulling? Will the work be in an awkward position?	• reduce heavy loads, use lifting teams or mechanical means • reduce working times and share duties
Ignition sources	Will the work involve cutting, welding or sparks?	• restrict access and place protective guards • determine if a “permit to work” is needed
Light	Is the work area dark?	move job or install lighting to the area
Rock Falls	Can someone be struck by a rock while carrying out the work?	ensure the area has been washed down and ground control mechanisms applied (scaling, roof bolting, meshing)
Explosives	Will the work involve the use of explosives? Could there be any explosives in the area?	• ensure the person is competent in the handling of explosives • check the area prior to carrying out the work

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Controlling Risks with Personal Protective Equipment

	HAZARDS	PPE OPTIONS
Eyes	• Chemical or Metal Splash • Dust • Projectiles • Gas and Vapour • Radiation.	• Safety Spectacles • Goggles • Face Shields • Visors. • Double eye protection
Head	• Impact from Falling or Flying Objects • Risk of Head Bumping • Hair Entanglement. • Loss of hearing	• Various Helmets including chinstrap if required • Bump Caps. • Earmuffs, earplugs
Hearing	• Operation of equipment. i.e. jack hammer or chain saw • Work around large equipment, i.e. front end loader	• Earmuffs, ear plugs, or other hearing protector that complies with safety standards
Breathing	• Dust • Vapour • Gas • Oxygen-deficient Atmospheres	• Disposable Filtering Face Piece Respirator, • Half or Full-Face respirators • Air-fed helmets • Breathing Apparatus.
Protecting the Body	• Temperature extremes • Adverse weather • Chemical or metal splash spray from pressure leaks or spray guns • Impact or penetration • Contaminated dust • Excessive wear or entanglement of own clothing • Sun damage if working outdoors	• Conventional or disposable overalls • Apron • Boiler suits • Specialist protective clothing - chainmail aprons & high-visibility clothing etc. • Protective well fitting clothing • UV protective clothing • Sunscreen • Hard hats
Hands & Arms	• Abrasion • Temperature extremes • Cuts and punctures • Impact • Chemicals	• Gloves • Gauntlets • Mitts • Wrist cuffs • Armlets

	• Electric shock • Skin infection • Disease or contamination	• Barrier cream
Feet & Legs	• Wet • Electrostatic build-up • Slipping • Cuts and punctures • Falling objects • Metal and chemical splash abrasion.	• Safety boots and shoes with protective toe caps and penetration resistant mid-sole • Gaiters • Leggings • Spats • Rubber gumboots with protective toe cap

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Implement Risk Control Measures

The next step involves putting selected control measures in place at your workplace.

Developing work procedures

- Develop work procedures in relation to the new control measures to make sure they are effective.
- Management, supervision and worker responsibilities may need to be clearly defined in the work procedures.

Communication

- You should inform workers and others about the control measures to be implemented.
- It is important to clearly communicate the reasons for the changes.

Providing training and instruction

- Training and instruction for the workers, supervisors and others in relation to the new control measures.

Supervision

- Supervision to verify that the new control measures are being used correctly.

Maintenance

- Maintenance relating to control measures is an important part of the implementation process.
- Work procedures should spell out maintenance requirements to ensure the ongoing effectiveness of the new control measures.

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Monitoring & Reviewing Risks

Once the risks associated with all the identified hazards have been assessed and control measures have been introduced, the risk management process can be repeated to determine if the risk has been reduced to a satisfactory level. This continual assessment forms part of the monitoring and review phase of the risk

For this step, it can be useful to ask questions to determine whether:

- Chosen Control Measures Have Been Implemented, As Planned
  - Are chosen control measures in place?
  - Are these measures being used?
  - Are these measures being used correctly?
- Chosen Control Measures Are Working
  - Have the changes made to control exposure to the assessed risks resulted in what was intended?
  - Has exposure to the assessed risks been eliminated or adequately reduced?
  - Are There Any New Problems?
  - Have implemented control measures resulted in the introduction of any new problems?

Have implemented control measures resulted in the worsening of any existing problems?

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First Aid

A developed First Aid plan is critical to responding to incidents on a work site. The following key elements should be implemented as part of a First Aid Plan on site:

- First aid equipment is available and each worker has access to it or knows of the location of the equipment
  - The PCBU has an obligation to provide first aid equipment and a trained first aid officer at your worksite. Only currently certified or qualified persons may administer first aid
- Facilities are made available and are accessible for the administration of first aid
- An adequate number of workers are trained to administer first aid

In the event you come across an incident where first aid is required you must immediately notify the first aid officer and provide assisted where necessary. All first aid incidents need to be reported and documented; this includes any equipment used from a first aid kit.

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First Aid Responsibilities

Site/Project/Service Manager, Supervisor

- Ensure that first aid staff and equipment are appropriate for the tasks being undertaken and the employee's numbers at each workplace.
- Maintain a register of first aid officers and certificate details and establish a process to ensure that certification is maintained current.
- Establish a process to ensure that first aid kits are stack and current.

First Aid Officer

- Administer First Aid to injured or ill employees and complete Incident Report Form for every treatment. A qualified first aider must be appointed to be in charge of the first aid kit and first aid room.
- They must be accessible to all workers and ready to give first aid when needed.
- Maintain first aid facilities.
- Maintain current first aid and cardio-pulmonary resuscitation certification
- The PCBU shall provide a trained first aid officer at workplaces with a head count of 25 or greater.

Accredited First Aid Officer

An accredited first aid officer is an employee who has completed as a minimum a Workplace First Aid Certification and/or Basic First Aid and Emergency Life Support Certification through an approved service provider.

Worker

Become familiar with the location of first aid equipment. Document all first aid treatments received in the first aid register and Incident Report

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First Aid Procedures

First aid procedures should be developed for every work site and all workers should have a clear understanding of first aid in their workplace.

The procedure should cover:

- the type of first aid kits and where they are located
- the location of first aid facilities such as first aid rooms
- who is responsible for the first aid kits and facilities and how frequently they should be checked and maintained
- how to establish and maintain appropriate communication systems (including equipment and procedures) to ensure rapid emergency communication with first aiders
- the work areas and shifts that have been allocated to each first aider. These procedures should contain the names and contact details of each first aider
- arrangements to ensure first aiders receive appropriate training

- arrangements for ensuring that workers receive appropriate information, instruction and
- training in relation to first aid
- how to report injuries and illnesses that may occur in the workplace
- what to do when a worker or other person is too injured or ill to stay at work
- access to debriefing or counselling services to support first aiders and workers after a serious workplace incident

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First Aid Treatment

- First aid treatment following an incident shall be provided exclusively by an accredited first aid officer with such treatment being commensurate with provider's certification. There should be a first aid plan that details first aid procedures and equipment
- The names and contact numbers of accredited First Aid staff shall be made available at the following locations:
  - With First Aid Kits
  - With WHS Coordinator
  - At prominent places in Office workplaces
  - The Company WHS database

First Aid Rooms

Where a first aid room shall be maintained in accordance with the Legislation. Guidelines for the provision of First Aid rooms at construction sites are as follows: A First aid room shall be provided where there are 200 or more employees in a workplace, or at a construction site where there 100 employees or more.

First Aid Kits

First Aid Kits contain essential supplies and a list of First Aid accredited personnel. First Aid Kits will be replenished upon request. Designated first aid officers must ensure that the first aid kits are stocked at all times and that the contents and contents list is current. No person other than first aid officers is to remove or tamper with the contents of First Aid kits.

General requirements relating to the management of first aid kits include:

- Kits must be located in readily accessible areas of the workplace. Kits must be clearly identifiable to all employees. Signage shall be provided to clearly identify the location of cabinets and treatment rooms.
- First aid supplies must be kept in dustproof boxes or cabinets that are used exclusively for first aid supplies.
- A first aid kit contents list shall be retained in the kit and contents checked on a monthly basis by the First Aid Officer or employee nominated to control the kit.
- Daily management of the kit is the responsibility of the First Aid Officer.

First aid kits for specific workplaces, i.e. workshops must be supplemented with appropriate supplies, including eye or burns modules. The contents of First Aid Kits A, B and C are listed in the following table;

CONTENTS	A	B	C
Adhesive plastic dressing strips, sterile, packets of 50	2	1	1

Adhesive dressing tape, 2.5cm x 5cm	1	1	-
Bags, plastic, for amputated parts:			
Small	2	1	1
Medium	2	1	1
Large	2	1	-
Dressings, non-adherent, sterile, 7.5cm x 7.5cm	5	2	-
Eye pads, sterile	5	2	-
Gauze bandages:			
5 cm	3	1	1
10 cm	3	1	-
Gloves, disposable, single	10	4	2
Rescue blanket, silver space	1	1	-
Safety pins, packets	1	1	1
Scissors, blunt/short nosed, minimum length 12.5cm	1	1	-
Splinter forceps	1	1	-
Sterile eyewash solution, 10ml single use ampoules or sachets	12	6	-
Swabs, pre-packed, antiseptic, packs of 10	1	1	-
Triangular bandages, minimum 90 cm	8	4	1
Wound dressings, sterile, non-medicated, large	10	3	1
First-aid pamphlet	1	1	1

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Notifiable Incidents

The Work Health and Safety Act 2011 and the Safety in Recreational Water Activities Act 2011 set out what sort of incidents are notifiable to WHSQ.

A notifiable incident means an incident involving the death, injury or serious illness of a person, or a dangerous incident. In these cases, a report must be made to the correct authority.

A PCBU must notify Workplace Health and Safety Queensland as soon as they become aware of a death, or a serious injury or illness that results in:

- Immediate hospital treatment as an in-patient
- Immediate medical treatment for injuries (e.g. amputation, scalping,
- A spinal injury, loss of a bodily function or a serious laceration, burn, head or eye injury)
- Medical treatment within 48 hours of exposure to a substance.

Serious injuries and incidents must be reported immediately (verbally) and followed-up with a written report (within 48 hours)

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Serious Illness or Injury

The Work Health and Safety Act 2011 and the Safety in Recreational Water Activities Act 2011 set out that a serious injury or illness of a person is an injury or illness requiring the person to have:

- immediate treatment as an in-patient in a hospital
- immediate treatment for
- the amputation of any part of his or her body
- a serious head injury
- a serious eye injury
- a serious burn
- the separation of his or her skin from an underlying tissue (such as de-gloving or scalping)
- a spinal injury
- the loss of a bodily function
- serious lacerations
- medical treatment (treatment by a doctor) within 48 hours of exposure to a substance
- any infection to which the carrying out of work is a significant contributing factor, including any infection that is reliably attributable to carrying out work
- with micro-organisms
- that involves providing treatment or care to a person
- that involves contact with human blood or body substances

That involves handling or contact with animals, animal hides, skins, wool or hair, animal carcasses or animal waste products

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Right to Cease Unsafe Work

If a worker has a reasonable concern about a serious risk to their health or safety from immediate or imminent exposure to a hazard, they may cease or refuse to carry out work. A worker who ceases work must notify the PCBU as soon as possible. Workers can be redirected to suitable alternative work at their workplace or at another site until they can resume normal duties.

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Workers Compensation

Workers compensation means that you can receive medical treatment and assistance if you are injured at work. All employees have a right to receive workers compensation. Compensation can cover you for loss of wages and medical expenses to varying degrees depending on the circumstances.

There are processes that you need to follow to be eligible for workers compensation, for example you must:

- Complete the relevant claim for compensation from as soon as possible after the incident
- Attach any medical certificates and expenses (bills, receipts etc.) that occurred as a result of the incident that caused the injury
- Keep a copy of the form and all relevant documents.

There may be other processes that need to be followed - you should check these with your PCBU or WHS representative.

When preparing to return to work from a work related injury or illness, you must obtain a medical clearance or certificate from your doctor.

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Dangerous Incident

Near misses or dangerous occurrences which do not cause injury but may pose an immediate and significant risk to persons or property need to be reported so that action can be taken to prevent recurrence.

A dangerous incident is an incident in relation to a workplace that exposes a worker or any other person to a serious risk to a person's health or safety emanating from an immediate or imminent exposure to:

- an uncontrolled escape, spillage or leakage of a substance
- an uncontrolled implosion, explosion or fire
- an uncontrolled escape of gas or steam
- an uncontrolled escape of a pressurised substance

- electric shock
- the fall or release from a height of any plant, substance or thing
- the collapse, overturning, failure or malfunction of, or damage to, any plant that is required to be authorised for use in accordance with the regulations
- the collapse or partial collapse of a structure
- the collapse or failure of an excavation or of any shoring supporting an excavation
- the inrush of water, mud or gas in workings, in an underground excavation or tunnel
- the interruption of the main system of ventilation in an underground excavation or tunnel
- any other event prescribed under a regulation; but does not include an incident of a prescribed kind

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Reporting Hazards, Incidents & Injuries

How are Hazards, Incidents and Injuries Reported?

Any hazard, incident or injury must be reported promptly to the WHS representative or safety personnel for your work site or organisation. You may also need to use a reporting form or “proforma” to do this. This is especially the case if the report relates to something that needs to be reported to people outside of your work site or organisation. Your WHS representative can assist you with the necessary proforma - these will usually vary depending on the organisation and work site.

A person conducting a business or undertaking (PCBU) is required to make the notification immediately after becoming aware that a notifiable incident arising from the business or undertaking has occurred. The PCBU must forward all hazard, incident and injury reports relating to legal WHS requirements, as well as keep records within the organisation for a period of 5 years.

Why Report Hazards, Incidents and Injuries?

Reporting incidents, injuries and hazards is vital so that healthy and safe workplace can be maintained. Reporting can prevent repeated or new hazards, incidents and injuries. It can lead to improvements in health and safety for all workers.

Who needs to be told?

Dangerous occurrences, near misses and serious incidents and injuries must be reported to the relevant Commonwealth, state or territory workplace safety regulatory. For QLD it must be reported to the Division of Workplace Health and Safety, and an Incident Notification Form must be completed. Which authority to report to depends on the nature of the report, and the state or territory your work site is located in.

Depending on the type of incident, emergency services such as the Fire Brigade, Police, Ambulance, State Emergency Services, or Environment Protection Authority may need to be notified. Again, you should check the procedures which relate to your work site.

To report a serious workplace incident contact your state or territory work health and safety authority. Use the table below to locate the work health and safety authority in your state or territory.

State or Territory	Work Health and Safety Authority
NSW	http://www.safework.nsw.gov.au/
Queensland	https://www.worksafe.qld.gov.au/
Western Australia	https://www.safeworkaustralia.gov.au/contacts-your-stateterritory/contacts-western-australia

South Australia	https://www.safework.sa.gov.au/
Tasmania	http://www.worksafe.tas.gov.au/
Victoria	https://www.worksafe.vic.gov.au/
Northern Territory	http://www.worksafe.nt.gov.au/Pages/default.aspx
ACT	http://www.worksafe.act.gov.au/health_safety

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Other Notifications

In addition to the notification of incidents, PCBUs are required to notify Workplace Health and Safety Queensland of the following matters:

- licensed asbestos removal work (licensed asbestos removalist)
- asbestos fibre levels greater than 0.02 f/ml (licensed asbestos removalist – for Class A removal work)
- asbestos emergency work - domestic premises (PCBU with management or control of the workplace – for demolition work)
- asbestos emergency work - non-domestic premises (PCBU who is to carry out the demolition work – for demolition work)
- lead risk work commencing
- changes to information regarding lead risk work
- worker who is removed from carrying out lead risk work
- health monitoring reports
- abandoned tanks
- pipelines
- demolition work
- Schedule 11 hazardous chemicals exceeding manifest quantities at a workplace
- Schedule 15 hazardous chemicals exceeding 10 per cent of their threshold quantity

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Emergencies

An emergency is a sudden unforeseen crisis (usually involving danger) that requires immediate action. It presents (or may present) a risk of serious injury or death to people on the work site.

There are three levels of an emergency situation:

1. Local - for any situation which threatens life or property in the immediate area.
2. Site - where effects may spread to other areas of the site; and
3. Off-site alert - where effects may spread and impact on people, property or the environment outside the site, where the situation cannot be contained by site Resources.

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Types of Emergencies

The following types of emergencies may occur:

- Fire
- Explosions
- Spills (chemical liquids, solids, radioactive or biological materials)
- Gas leaks (flammable or toxic)
- Natural events such as floods, grass fires, Bushell forest fires, earthquakes, cyclones, when storms and land slip/subsidence
- High winds that cause structural damage to building sites or containers
- impact events such as those involving road vehicles, heavy vehicles and mobile equipment
- Off-site events such as a fire or explosion near the main worksite
- chemical spill
- fire
- injury to personnel
- structural collapse
- toxic and/or flammable vapours emission
- vehicle/mobile plant accident

Risks may be higher at specific times and under specific circumstances, eg. when loading or unloading, during maintenance work, hot work, digging entrenching and working at heights.

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Basic Emergency Response

You should know the emergency response procedures for your worksite before an emergency happens. This information is available in documents such as emergency plans, evacuation plans and procedures, and incident notification procedures. Check with your WHS representative or supervisor if you are unsure.

Remember in an emergency situation, it is important to:

- Keep calm
- Check your safety
- Raise the alarm

- Obtain help

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Emergency Services

Notification of emergency authorities will depend on the type of incident or emergency as well as other factors such as legal responsibilities, the emergency plan and access to communications. In an emergency it may fall to you to ring or contact emergency services. You will need to quickly decide who needs to know: Fire brigade, police or ambulance or workplace personnel such as your supervisor or first aider. Current phone numbers should be readily available. If not find out where you can get these from.

In the event you are required to contact off-site emergency services such as the Fire Brigade, Police, Ambulance Service, Health Department or the State emergency services it is important to provide accurate and concise information about the emergency situation. The types of information they would require are as follows:

- Location
- Type of emergency
- When and how
- Casualties, and how many;
- What hazards present
- Name of the organisation emergency manager
- Telephone contact numbers; and
- Where a security guard, traffic control coordinator or other person will meet the emergency response vehicles on arrival at the site

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Emergency Plan

A person conducting a business or undertaking must prepare an effective emergency plan for the workplace. An emergency plan helps to prevent panic, poor judgement under pressure and breakdown of normal paths of communication and authority.

When developing an emergency plan, consideration must be had to the following factors:

- the nature of the work being carried out at the workplace
- the nature of the hazards at the workplace
- the size and location of the workplace
- the number of workers and other persons at the workplace

For workplaces that use, store or handle large quantities of hazardous chemicals, providing a copy of emergency plans and details of actions to be taken in the event of an alarm or emergency situation to neighbouring sites may assist coordinating responses in the event of an emergency.

An Emergency plan MUST provide an effective procedure when responding to an emergency:

- evacuation procedures
- notification procedures to advise emergency services organisations at the earliest convenience
- medical treatment and assistance
- communication procedures between the person coordinating the emergency response and all persons at the workplace
- the testing procedures and how often this will be done
- how relevant workers will be provided with information, training and instruction about implementing the emergency procedures

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Hazardous Chemical Incidents

The extent of emergency procedures required will depend on the size and complexity of the workplace, types and quantities of hazardous chemicals and the processes involved when the goods are in use.

To reduce the effects of an explosion or a reaction of corrosive or toxic gases an emergency plan should be developed for your worksite, A comprehensive emergency plan for responding to hazardous chemical emergencies should include:

- a site map that indicates where hazardous chemicals are stored
- responsibilities of key persons in managing emergencies
- circumstances to activate the plan
- systems for raising the alarm
- alerting emergency services organisation to the emergency or if it has the potential to become a dangerous occurrence
- procedures that account for all people at the workplace
- isolation of the emergency area to prevent entry by non-essential personnel
- roles of on-site emergency response teams (including First Aid Officers, Emergency
- Wardens)
- containment of any spillage
- the requirement for fire-water retention to ensure that contaminated fire-water cannot enter waterways, drains or ground water
- disconnection of power supplies and other energy sources except when required
- prevention of hazardous chemicals or contaminated material of any kind from entering drains or waterways
- Ensure automatic sprinkler systems do not interact with chemicals in case of hazardous chemical reaction
- provision of relevant information and assistance to the emergency services authority,

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Electrical Incidents

You must be aware of two types of electrical incidents or events. There is a serious electrical incident (SEI) and dangerous electrical incident (DEE). In the case of a SEI or DEE it is an offence to interfere with the scene of an incident without the permission of an inspector or police officer. There are some exceptions, such as when it is necessary to save a life, relieve suffering, prevent injury to a person or to prevent property damage.

Quick action after an electrical incident that causes injury can save a life or significantly reduce the severity of the injury.

Even if an electrical incident does not appear to have caused injury at the time, there may be some delayed effects. Any person who is involved in an electrical incident involving an electric shock should receive medical attention. Incidents that expose a worker or any other person to a serious risk from an electric shock must be notified to the regulator and may also be notifiable separately to an electrical safety regulator.

Other effects of electrical incidents could include an adverse effect on plant equipment or an electronic circuit malfunction. It is extremely important that if plant equipment has an emergency stop control, the person with management or control of the plant ensures it cannot be affected by an electrical incident or emergency.

A well-prepared emergency response assists in managing the severity of the injury where an incident has occurred and takes into account the health and safety of those required to respond to the incident. For example, in an exposed energised high voltage situation, the electricity supply should be isolated and proved de-energised before carrying out a rescue.

In the event of an electrical emergency remain calm and call emergency services on 000.

In the event that a vehicle has made contact with power lines it is important to try and instruct the driver to remain in the vehicle and cut off the fuel supply to the vehicle to prevent fire or explosion. The driver should remain in the vehicle until the power has been isolated and earthed.

Keep a safe distance from downed power lines or any exposed electrical wires. Do not approach the area of the accident until the proper authorities have declared the area safe.

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Fire Safety Equipment

Fire Safety Equipment must be provided in the workplace. This includes:

Fire Extinguishers

A fire extinguisher is an active fire protection device used to extinguish or control small fires, often in emergency situations. It is not intended for use on an out-of-control fire, such as one which has reached the ceiling, endangers the user (i.e., no escape route, smoke, explosion hazard, etc.), or otherwise requires the expertise of a fire department.

Fire extinguishers are designed to cope with a range of fire types, there are:

1. Water Extinguishers
2. Carbon Dioxide Fire Extinguisher
3. Powder Type Extinguishers
4. Foam Extinguishers

Blankets

These are ideal for stove top fires. They are easy to use. The most common cause of fires in kitchens is cooking oil fires. Fire blankets are very suitable and effective in putting these fires out.

Hose Reels and Mains

If a building requires the installation of fire mains and/or hose reels to meet building codes and regulations then it is best that the fire hose reels also be available for firefighting purposes as the building progresses.

Breathing Apparatus

These are needed by fire fighters when carrying out firefighting or where they may be exposed to high temperatures, oxygen deficiency, toxic substances, smoke concentration, dust, heat radiation or burning embers. Breathing apparatus is worn for the respiratory safety of fire-fighters. They supply the wearer with air (oxygen) from a cylinder.

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Fire Extinguishers

Fire extinguishers are designed to cope with a range of fire types. These include:

- Water Extinguishers

These are for use when the main hazards are wood, paper, textiles or rubbish.

- Carbon Dioxide Fire Extinguisher

These are for use on fires involving live electrical appliances such as switchboards, electric motors and electronic equipment. They can also be used on small flammable liquid fires, eg. petrol, paint and solvents. The extinguisher works by reducing the concentration of oxygen in the air to the level where combustion can no longer occur.

- Powder Type Extinguishers

These extinguishers are available in a variety of powders to cover a wide range of risks. Dry chemical powder is used to extinguish flammable liquids and energized electrical equipment. They are extremely effective at doing this.

- Foam Extinguishers

These are used on A & B flammable liquids such as petrol, paint and solvents.

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Fire Extinguisher Chart

YES / NO — TYPE OF EXTINGUISHER Colour scheme - AS 1841.1 (Pre 1997 / Post 1997)	A Wood, Paper & Plastic	B Flammable & Combustible Liquids	C Flammable Gases	E Energised Electrical Equipment	F Cooking Oils & Fats	
Powder ABE	✓	✓	✓	✓	✗	Special Powders are available specifically for various types of metal fires. Seek expert advice.
Powder BE	✗	✓	✓	✓	✓	Special Powders are available specifically for various types of metal fires. Seek expert advice.
Carbon Dioxide (CO_2)	* LIMITED	* LIMITED	✗	✓	✗	Generally not suitable for outdoor fires. Suitable only for small fires.
Water	✓	✗	✗	✗	✗	Dangerous if used on flammable liquid, energized electrical equipment and cooking oil/fat fires.
Foam ***	✓	✓	✗	✗	* LIMITED	Dangerous if used on energized electrical equipment.
Wet Chemical	✓	✗	✗	✗	✓	Dangerous if used on energized electrical equipment.
Vaporising Liquid	✓	* LIMITED	* LIMITED	✓	✗	Check the characteristics of the specific extinguishant.
Fire Blanket	✗	✗	✗	✗	✓	Use blanket to wrap around a human torch. Ensure you replace the blanket with a new one after use.
Fire Hose Reel	✓	✗	✗	✗	✗	Ensure you maintain a path of egress between you and the nearest exit.

* Limited indicates that the extinguishant is not the agent of choice for the class of fire, but that it will have limited extinguishing capability.
*** Solvents which may mix with water, e.g. alcohol and acetone, are known as polar solvents and require special foam. These solvents break down conventional AFFF.

NOTE: Class D fires (involving combustible metal(s) use only special purpose extinguishers and seek expert advice.

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How to Use a Fire Extinguisher

A simple fire extinguisher training technique to use with employees is the PASS method which is illustrated in the diagram below.

- Pull the pin on the extinguisher.
- Aim the hose nozzle low toward the base of the fire.
- Squeeze the handle to release the extinguishing agent.
- Sweep the nozzle from side to side at the base of the flames until extinguished.

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What should be done if there is a Fire?

As with any other emergency, in the event of a fire you need to follow emergency procedures and plans for the worksite. Try to limit the danger to yourself and others by quick action. If quick containment is an option, take swift and appropriate action to do so.

First attack firefighting equipment should be used if:

- It appears capable of extinguishing the fire
- The size of the fire is not a hazard to your safety or others
- You are capable of using the fire equipment
- The level of the smoke is not an obvious health hazard, and
- A secure escape route is available

Fire must have 3 elements present to support combustion:

- Oxygen
- Heat
- Fuel

Methods of Extinguishing a Fire:

- Starvation

- Smothering
- Cooling
- Inhibiting Chemical Reaction

Always remember that any actions to extinguish a fire will result in a considerable increase in smoke and loss of visibility.

The need for evacuation should be decided by considering a number of things including:

- Perceived levels of risk from information gained from the threat
- Risks associated with not evacuating - smoke levels, opportunity to exit in the immediate future, fire, oxygen and visibility levels
- Any current circumstances which may add to the risk factor
- Emergency plans

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Resources

For information about Model Laws, Regulations and Codes of Practice visit the Safe Work Australia site.

National WHS Laws	Contact
Safe Work Australia	(02) 6121 6000 info@safeworkaustralia.gov.au www.safeworkaustralia.gov.au
Queensland	**WorkCover (Queensland)** 1300 362 128 info@workcoverqld.com.au www.workcoverqld.com.au **Workplace Health and Safety Queensland** 1300 369 915 www.deir.qld.gov.au/workplace
New South Wales (NSW)	**WorkCover Authority of NSW** p: 131050 www.workcover.nsw.gov.au
Australian Capital Territory (ACT)	**Worksafe ACT** (02) 6207 3000 worksafe@act.gov.au www.worksafe.act.gov.au

Northern Territory	**NT Worksafe** 1800 019 115 ntworksafe@nt.gov.au www.worksafe.nt.gov.au
Other Jurisdictions	Contact
Western Australia	**Worksafe WA** 1300 307 877 safety@commerce.wa.gov.au www.safetyline.wa.gov.au **WorkCover WA** 1300 794 744 www.workcover.wa.gov.au
South Australia	**Safe Work SA** 1300 365 255 help@safework.sa.gov.au www.safework.sa.gov.au **WorkCover SA** 13 18 55 www.workcover.com
Victoria	**Worksafe Victoria** 1800 136 089 info@worksafe.vic.gov.au www.worksafe.vic.gov.au
Tasmania	**WorkCover Tasmania** 1300 776 572 workcover@justice.tas.gov.au www.workcover.tas.gov.au
National	**Standards Australia** http://www.standards.org.au/Pages/default.aspx **Comcare** 1300 366 979 www.comcare.gov.au **ACTU (Australian Council of Trades Unions)** 1300 362 223 help@actu.org.au www.actu.org.au **ACCI (Australian Chamber of Commerce & Industry)** (02) 6273 2311 info@acci.asn.au

	www.acci.asn.au **CFMEU (Construction, Forestry, Mining & Energy Union)** (02) 8524 5800 www.cfmeu.asn.au