

Self-Paced Learning Participant Resources and Handbook

CPCOHS1001A: Work Safely in the Construction Industry

National Building and Construction Industry General Safety Induction

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National Construction Training Induction Course for the Building and Construction Industry.

This self-paced manual contains general information on Workplace Health and Safety laws, obligations, and responsibilities of employers and employees, and introduces a range of general health and safety hazards found in construction work sites. The National Construction Card is required for all people doing construction work, including workers, employers and self-employed people. When you are issued with a construction card, it will be recognised throughout Australia. It is important that you complete the card for the state that you reside in.

At the successful completion of this course you will receive a card and a Statement of Attainment for the nationally accredited course CPCOHS1001A Work Safely in the Construction Industry.

Course participants should download and study the manual prior to attempting the online test. Time taken to study this manual prior to testing is varied depending on previous skills, experience and knowledge levels, however you should allow about five to six hours of study time.

Steps in obtaining your national Construction Card

- Download the manual
- Study the manual (this should take about 5 to 6 hours dependent on your level of experience)
- Go online and register. If you have not already done so register at www.frontlinests.com.au/register
Ensure you provide us with contactable phone and email details. Choose your own password and log in name. This should be unique and easy to remember. We suggest a combination of your driver's license name and phone number to make then unique
- Select the test *National Construction Card* (see special conditions below)
- Complete the test. Allow about 40 minutes if you have studied the manual (three weeks if you haven't)
- Complete the security verification section
- Go to the payment section
- Select payment method
 - Credit card - Note: If a different person is paying than the one who has completed the exam, notify us via email to eliminate any delays.
 - Purchase order - Companies must be pre- approved to use purchase orders
 - Other payment methods - If you would like to pay via EFT transfer or money order the information needed for this is on the website
- Complete the ID Verification form

We will process your National Construction Card as soon as possible. If you complete the course prior to 3pm on a weekday, your card and Statement of Attainment will be processed and posted on that day. However, we conduct random verification and if selected for verification we will need to speak to you before your card is issued. This is done to ensure the integrity of the testing process and the security and authority for the credit card payment. To reduce delays when you register you should provide a phone number that you easily contactable on and your current email address.

Special Conditions

New national induction training course

CPCOHS1001A Work Safely in the Construction Industry is a nationally accredited course. People who complete this new unit of competency in WA will be issued with a *white card*. People who have previously c

Completed the SAT course will not have to repeat the training. Both current Safely Awareness Training (Blue) card and the new White Card will be accepted across *all* States and Territories.

IMPORTANT INFORMATION – Other States

Due to changes in requirements we do not provide this service to any other States unless the participant is intending on working in Western Australia. The participant must have an address in Western Australia to be eligible for this card.

Acceptance of cards from different states

All other states Blue and White cards are accepted under a reciprocal agreement.

INTRODUCTION

All workers including building and construction industry workers have a role to play to ensure that people are safe at work. The building and construction industry is constantly changing. The environment, hazards and risk levels constantly change as work progresses on the site and as workers move from one project to another.

Workers need to be fully informed of their role and of the hazards in the workplace. To achieve this, workers need to participate in three distinct induction processes.

General OHS Induction Training <i>This course</i>	This gives people who are new to the construction industry and revises others on basic knowledge of Occupational Health and Safety Legislation, Risk Management Principles, Communication and Incident Reporting Procedures.
Site Specific Induction	Provides people with knowledge of OHS issues and safe work practices which are specific to a particular building and construction site
Work Specific Induction	This aims to provide workers knowledge of the OHS issues and safe work practices relating to them for a specific task that they are involved with on the site.

Learning Outcomes

As a result of completing this self-paced online training course you will have knowledge to:

- Identify OHS legislative requirements
- Identify construction hazards and control measures
- Identify OHS communication and reporting processes
- Identify OHS incident response procedures

Other publications that should form part of your knowledge library to work safely in the building and construction industry include

Your States Occupational Safety and Health Act

Your States Occupational Safety and Health Regulations

Construction related Codes of Practice

National Standard for Construction Work (NOHSC: 1016 of

2005) Notes:

LEGISLATION

All states in Australia have occupational safety and health legislation that requires the employer to provide a workplace that as far as practicable, employees are not exposed to hazards.

This legislation is structured to keep everyone in the workplace safe. The structure consists of the Act, Regulations, Codes of Practice, Standards and Guidance notes. The most important aspect of the legislation is the Duty of Care obligations for all parties in the workplace

The Act

In WA the Act is known as the Occupational Safety and Health Act 1984. In most States OS&H Acts have similar titles. **Compliance is compulsory** with the Act.

Not only does the employer and employee have obligations under the Act but manufacturers, suppliers and contractors also have obligations, in-fact everyone in the workplace has a duty of care to themselves and every other person in the workplace.

The Act promotes consultation and cooperation between all parties in the workplace.

The Regulations

The Regulations are designed to support the Act and provide details to help the employer and employee meet their obligations to comply with the Act. **Compliance is compulsory** with the Regulations



Codes of Practice

These are documents that are usually developed by Health and Safety authorities to assist employers and employees to comply with the Act and Regulations. Codes of Practice offer sound advice and recommendations so legal obligations set out in the Act and Regulations can be met. Some industry bodies also develop their own Codes of Practice. **Compliance is not legally binding**, however Codes of Practice can be used in court to highlight that the employer could have done more to meet the requirements under the Act and Regulations.

Australian /NZ Standards

These provide advice and guidance and set a benchmark or minimum standard that should be met in relation to a particular topic. **Compliance is not compulsory unless** they are mentioned in the Regulations. There are two main types of standards, National Standards developed by the Australian Safety and Compensation Council (ASCC) and Australian Standards developed by Standards Australia.

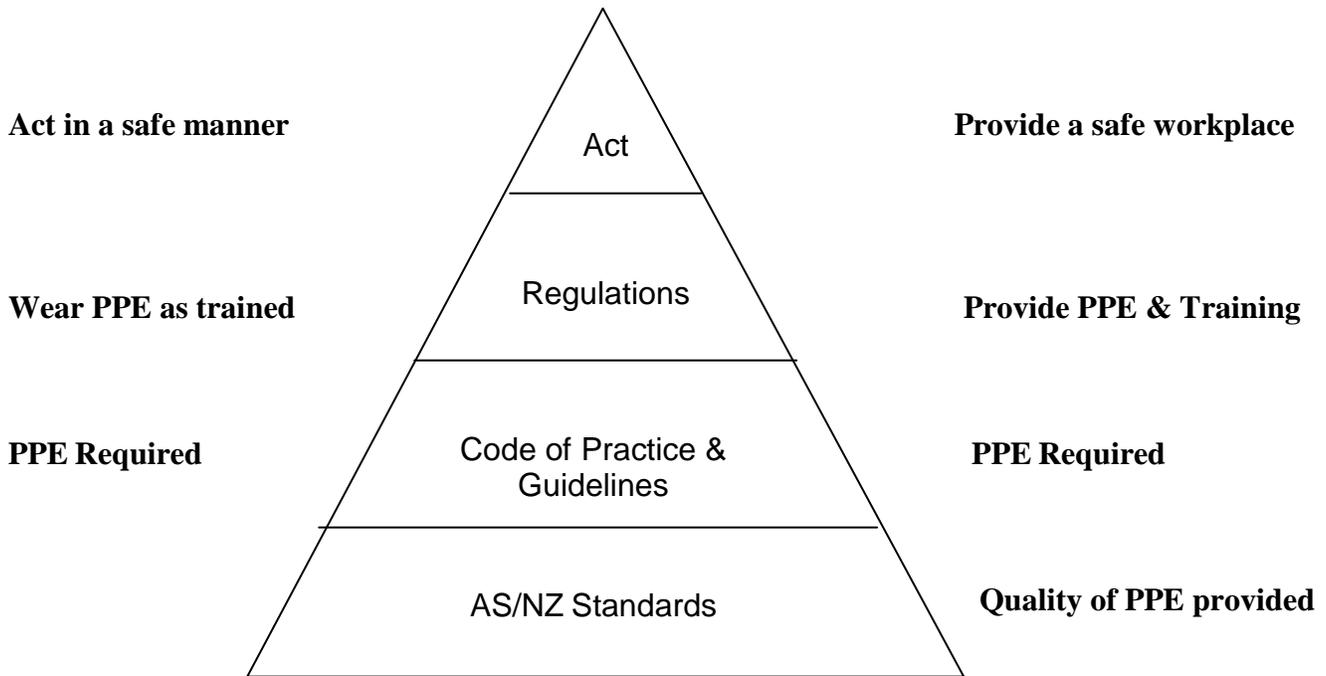


You need to know the OHS legislation that covers your job & workplace. You will also need to understand how these affect your work or job, and the workplace. You need to know your legal responsibilities and the responsibility of others around you relating to OHS in your workplace.

A very good way to visualize how the legislation works is to think of a pyramid with one side representing the employers' obligations, and the other being the obligations of the employees.

Employee Obligation

Employer Obligation



DUTY OF CARE

The most important aspect of the legislation is the Duty of Care obligations of all parties in the workplace. Duty of Care requires a person to do everything reasonably possible to protect themselves and others from harm. Whilst all parties have a Duty of Care obligation, the following is some of the obligations of the three particular groups.

Employer or PCBU Duty of Care obligations include

- Provide a safe workplace as far as reasonably practicable
- Provide information, instruction, training and supervision
- Safe systems of work
- Safe plant and substances
- Adequate Personal Protective Equipment (PPE) and clothing and a replacement process
- Consultation and cooperation
- Providing feedback to employees

PCBU – person conducting business or undertaking.

The employer must also let you know about

- Procedures for handling and disposal of materials and waste
- Safety systems including procedures to minimize dust and contaminants
- How to access toilets and amenities such as drinking water
- How to report hazards

- What to do in case of emergency
- The workplace resolution of issues process

Employees/Workers Duty of Care obligations include

- Reasonable care to ensure their own safety and health at work and of others in the workplace.
- Comply with safety instructions given by the employer
- Use Personal Protective Equipment and clothing as instructed
- Follow safe work practices
- Consult and cooperate with the employer
- Report all hazards in the workplace
- Report all injuries that the employee may become aware of to the employer
- Participate in safety training

This includes:

- Assisting the employer to meet their OHS objectives
- Not putting other employees at risk by what you do or don't do.
- Reporting any potential workplace hazards quickly to your employer in the correct format that you have been trained to do.

Contractors

All contractors to site have the same obligations as everyone else at the site. These obligations include not putting themselves at risk and not doing anything that puts any other person at risk.

Manufacture and Suppliers

As far as practical manufacturers and suppliers must

- Design, manufacture, construct and supply plant and equipment so that people who use it in the workplace are not exposed to hazards.
- Ensure that plant is installed or erected so it can be used safely.
- This essentially means that the equipment provided must be safe to use.

For example: If you hire a pavement cutter the machine must be provided with all the guards in place, be in a serviceable condition and safe to use.

Working Safely

To meet your OSH obligations you need to comply with safe working practices to protect yourself and your fellow workers. Safe work practices include:

- Do not take any unnecessary risk
- Always look out for potential hazards
- Always maintain and wear the PPE given to you
- Smoke only in designated areas
- Keep your work area clean and tidy
- Use plant, tools and equipment in a safe manner and only if your authorized
- Enter and leave site by designated route
- Assisting to prevent workplace bullying and harassment
- Never be under the influence of drugs or alcohol at work

How does construction compare to other industries?

In 2012 there were 192 work related deaths in the construction industry in Australia. They represented 11 % of all work related deaths.

Compared to other industries, the construction industry has a consistently higher average of Lost Time Injuries and Diseases (LTI/Ds)

The percentage of injuries by accident types in construction are:

Muscular Stress - lifting	30%
Muscular Stress - handling	5%
Falls from Height	15%
Falls on the same level	7 %
Being hit by moving object	31 %
Other accident types	6 %

You should google the net to find out the statistics related specifically to your industry

COMMON HAZARDS

Industry has identified a number of workplace hazards (common to all industries) that result in the highest number of injuries and diseases. These are referred to as priority areas and are:

- Chemical and harmful substances
- Electricity
- Forklifts
- Manual handling – lifting
- New and young workers
- Slips, trips and falls
- Working at heights

HAZARD IDENTIFICATION, ASSESSMENT, CONTROL AND REVIEW

Hazard Definition

A hazard is anything that can cause or has the potential to cause injury or harm to the person or the health of the person.

Some objectives of the Act are to prevent death, Injury or illness being caused by the workplace. This can be achieved by effective hazard management systems. A very useful tool is the Identification Assessment & Control (IAC) process.

The IAC process is a four stage process:

- | | | |
|----------|-------------------|--------------------------------|
| I | Step One | Identify the Hazard (s) |
| A | Step Two | Assess the Risk |
| C | Step Three | Control the Hazard(s) |
| | Step Four | Review and Evaluate |



Identify the Hazard

Some examples of hazard at a construction site are listed below

Physical	Chemical	Biological	Psychological	Ergonomic
Noise	Liquids	Bacteria	Bullying	Work bench height
Mobile equipment	Dust	Viral	Anxiety	Poorly designed tool
Electricity	Gases	Animal	Stress	
Unguarded machines				
Sun				

You will be aware of some hazards on the workplace but there may be some you may not easily recognise. The effective identification of hazards in the workplace is the single most important step of the IAC process. Without effective identification of hazards there can be no effective risk assessment or risk control. Hazard identification is the responsibility of everyone in the workplace.

How to Identify Hazards

To control hazards in the workplace it is important to recognise and develop a list of all the types of hazards existing in the workplace.

To assist in the hazard identification process the *employer* should:

- Carry out workplace inspections both formal and informal
- Review accident, incident and hazard reports
- Encourage consultation and feedback between workers
- Look at the types of activities performed in the workplace and identify which part of the task could expose workers to hazards.
- Complete checklists and surveys.

To assist in the hazard identification process the *employee* should:

- Continually inspect the workplace
- Correct hazards if safe to do so and has authorisation
- Report all hazards to the employer
- Assist the employer by consultation and cooperation



Assess the Risk

Risk is the probability of a hazard causing injury. Risks associated with identified hazards need to be assessed to determine how serious they are. Assessing the risk allows decisions to be made about which hazards need to be controlled and to set out priorities for the introduction of controls. When assessing the risk, controls that are already in place need to be considered.

To determine the level of risk the following must be considered:

Consequence

For each identified hazard, ask the question “What If”. Realistically what is the worst likely outcome from exposure to the hazard (Catastrophic to Insignificant)

Likelihood

Consider the likelihood of harm occurring if a person is exposed to the hazard. This could range from almost certain to rare.

RISK SCORE CALCULATOR							
RISK CRITERIA			CONSEQUENCES				
			Low	Minor	Moderate	Major	Critical
		People	First Aid Injury (FAI)	Medical Treatment Injury (MTI)	Lost Time Injury (LTI) / Restricted Work Case	Single Fatality	Multiple Fatalities
		Environment	Low level environmental impact	Minor effects on biological or physical environment	Moderate short term environmental impact	Relatively wide spread medium long term environmental impact	Wide spread long term environmental impact
		Operational Impact	Easily fixed up straight away	Minor damage to equipment, no loss of production	Loss of less than one week's production	Major damage to facility, loss of less than six months production	Serious problems with future operation of the facility
LIKELIHOOD	Almost Certain	Expected to occur yearly	Moderate	High	High	Extreme	Extreme
	Likely	Will probably occur Every 1 to 2 years	Moderate	Moderate	High	Extreme	Extreme
	Possible	Should occur over The next 5 years	Low	Moderate	Moderate	High	Extreme
	Unlikely	Could occur in 5 to 10 years	Low	Low	Moderate	High	High
	Rare	May occur over the Next 20 – 30 years	Low	Low	Moderate	Moderate	High

Using the table

Make a judgment as to how likely it is that someone will be injured by the hazard. Consider the exposure to the hazard. How many people and for how long? If a person was injured by the hazard what would be the likely outcome? How badly would they be hurt? Would they be killed, require hospitalization or require first aid treatment?

Once the likelihood and possible consequence has been established, read the interconnecting outcome on the table e.g. Moderate and this gives you the level of risk.

Extreme risk
High risk
Moderate risk
Low risk

Control the Risk

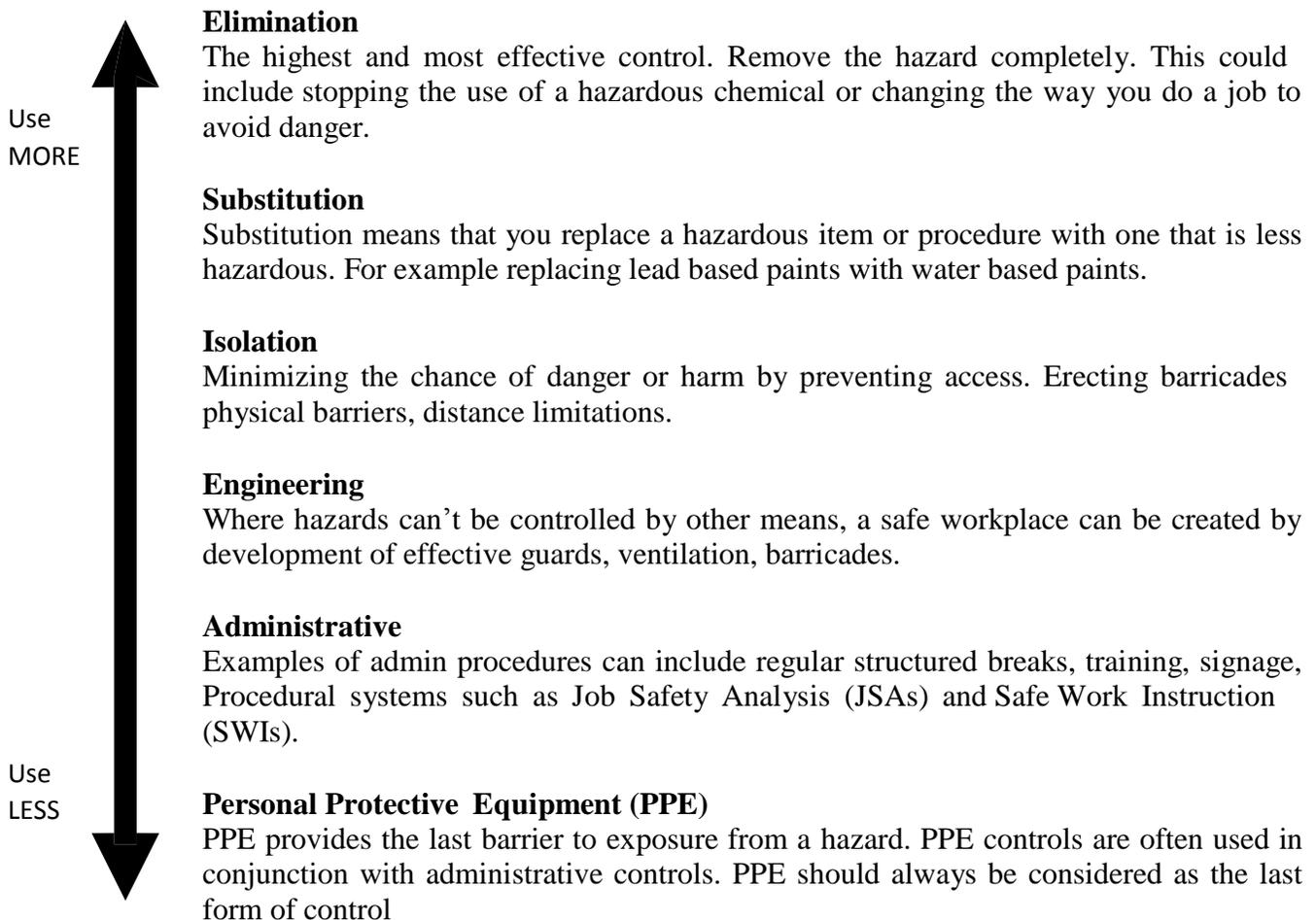
Deciding on which is the best method of control requires consideration of the following:

- Whether the activity should be continued or stopped
- Whether the activity can be changed in any way to reduce or eliminate the risk
- The consequences of continuing or discontinuing the activity

When an unacceptable risk has been identified effective controls must be introduced to reduce the risk to an acceptable level.

Hierarchy of Control

There are a number of ways to control risk. These are collectively known as the Hierarchy of Control and their order is indicated by their effectiveness:



MONITOR AND REVIEW

Once the controls have been determined, you must identify a person who is responsible to implement these controls. This person will also be responsible to monitor the controls to ensure that they are effective, that they don't introduce other hazards or become ineffective due to workplace changes.

SAFE WORK METHOD STATEMENT (SWMS)

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 risk control measures have been put into place. They are very similar to a JSA

JOB SAFETY ANALYSIS (JSA)

A very effective form of hazard identification and management is the use of a Job Safety Analysis, (JSA) which provides a systematic approach to a job or task that identifies any hazards, enables them to be assessed and develop a way of doing the job or task that eliminates or minimises the risks.

It is essential for employees to know and understand the most efficient and safest way of performing all workplace tasks. The participation and involvement of all relevant workers is vital in the risk management process and with the development of the JSA.

	JSA Process	Description of steps
1.	Identify the Job	What is the actual task and its elements
2.	Break the job down in to logical steps	Don't make the steps too short or too long
3.	Identify the hazard or hazards in each step	Note: there may not be hazards in every step or there may be several for each step
4.	Identify the best control method using the Hierarchy of Control	Remember always use PPE as the last resort
5.	Identify who is responsible	Identify the person who is responsible to implement agreed control options
6.	Monitor and review	Make sure that the procedures that you have agreed on are documented and followed. Whenever there is any modification to the agreed procedure all parties must agree before the task is conducted.

Whenever the JSA is changed or there is a change of persons doing the job, review of the JSA is required.

A JSA should be developed for jobs:

- That require risk control measures
- That have a record of high accident rate
- That involve teamwork so everyone is familiar with all parts of the job
- That can result in serious injury
- That are being carried out for the first time
- All high risk tasks

A Job Safety Analysis (JSA) Template is available on the resources page of the Website.

SAFETY REPRESENTATIVES AND COMMITTEES

Employees have the right to have a workplace Occupational Safety Committee with elected employee representatives and appointed employer representatives. Employees also have the right to elect a Safety and Health Representative. Consultation about safety and health matters is an important part of the Safety Representatives role.

Safety Representatives are elected by the workforce for and must complete an accredited course within the first 12 months of assuming the position.

Safety and Health Representative

Safety and Health Representatives role include:

- Workplace Inspections
- Reviewing circumstances surrounding workplace incidents
- Consulting with the employer and employees
- Assisting in the resolution of workplace health and safety issues
- Being present at interviews relating to safety incidents in the workplace

Appropriately trained Safety Representatives also have the right to issue Provisional Improvement Notices (PIN) if they are of the opinion that there is a contravention to a provision of the Act in the workplace.

Safety and Health Representatives are responsible only for safety and health in the workplace or that part of the workplace that was agreed between the employer and employee delegates before their election.

Safety and Health Committee

Safety and Health Committees are vital because they provide an opportunity for employers and representatives of employees to regularly discuss and make decisions about occupational safety and health issues. These may include policy development, planning, monitoring programs, emergency procedures, safety and health training, trends in accident and illness reports, accident investigations and new plant or processes to be introduced into the workplace that may affect employees' safety and health. The committee may also take part in resolving safety and health disputes.

RESOLUTION OF ISSUES IN THE WORKPLACE

Workplaces should develop and implement procedures for the resolution of workplace issues. It is vital that this resolution of issues procedure is agreed upon by everyone in the workplace. This information should be communicated to all employees when first starting work, so it is clear to everyone what to do if confronted with a safety issue at the workplace.

HOW TO RAISE OHS ISSUES IN THE WORKPLACE

- Toolbox meetings (An informal briefing or short talk on OHS issues).
- OHS Meetings (Formal OHS meeting with the aim to provide workers with specific information relating to OHS).
- Discussions with OHS Reps (this could be face to face, by phone or email.)
- Supervisors' discussion (this could be initiated by yourself or your supervisor).

REFUSAL TO WORK

Employees can refuse to work providing that they have a legitimate reason to believe that continuing to work will risk injury to them self or any person in the workplace. Employees must advise the employer of this refusal to work and the reason why they believe the job is unsafe. The employer should modify the task to make it safe, give the employee another job that is safe or discuss with the employee the reasons why he or she believes the job is unsafe. The employee should be satisfied that the job is safe before continuing with the task. The employee should also advise fellow employees of the hazard(s)

It is important to note that employees must not leave the workplace without the permission of the employer unless the workplace itself is unsafe. The employer should offer the employee reasonable, alternative work until the issue is resolved.

WORKPLACE DOCUMENTATION

There are several types of OHS documents that should be at the workplace. These documents provide information about health and safety in the workplace and provide a way that hazards, incidents and injuries can be reported. You as an employee or subcontractor have a right to inspect these documents in the workplace. Examples of these documents include:

- **Site Specific Safety Management Plan**

This document gives an overall view of the hazards that could be encountered at the site and the planned method to control these hazards. It also will include the points of contact after hours and in case of an emergency. This is used in conjunction with the JSAs and or SWMS.

- **Material Safety Data Sheet (MSDS)**

MSDS exist for materials that are hazardous. The sheets are supplied by the manufacturer or supplier and they as well as a register of all hazardous materials should be at the workplace.

- **JSA Register**

A register of all JSAs on the site should be maintained and be available on request by all employees.

- **Accident and Injury Report forms**

These forms should be readily available at the site and must be completed in the event of an accident, incident or injury at site.

- **Hazard Report documents and forms**

Hazard report forms should be readily available to all persons on site. Employees should be encouraged to complete a hazard report form and pass to their supervisors as soon as practical.

WORKPLACE POLICIES AND PROCEDURES

In addition to this documentation the employer must ensure that policies and procedures outlining the companies preferred way of dealing with issues in the workplace is provided to all employees. These may include a range of topics including:

- alcohol and drugs consultation
- resolution of issues
- tool and equipment maintenance
- personal protective equipment (PPE) emergency procedures
- chemical use and storage

Policies must be clear and simple and detail what the company expects. Procedures should reflect the policy and outline instructions to be followed for achieving the objectives set out in the policy.

Policies and procedures must be well communicated to all employees as employees have a Duty of Care to ensure they act and work in accordance with the set policies and procedures. For example, if a company has developed a policy to ensure employees wear suitable personal protective equipment such as a helmet or fall protection while working at heights, then employees must follow and practice the safe working procedures. It is also important the company advises all employees of these policies and procedures and they ensure the employees fully understand what is required of them.

For policies and procedures to work effectively, commitment is needed from both employers and employees.

Employers should:

- provide employees with access to copies of all policies and procedures
- display copies at the workplace
- provide adequate training
- supervise work to ensure requirements are being met
- regularly review and update contents of all policies and procedures.

Employees should:

- follow instructions
- report problems
- ask questions if unsure
- be actively involved in the development and review of policies and procedures

REPORTING AND DOCUMENTATION

All employees must report to their supervisor as soon as practicable any injury or harm to themselves or any other person in the workplace and any potential serious occurrence that in the course of or in connection with their work any situation that they believe is a hazard in the workplace

Accurate and prompt reporting of injuries, serious occurrences and hazards is fundamental to maintaining a safe and healthy workplace.

This report must be in the method indicated within workplace policies and procedures.

The Importance of Reporting Minor Injuries

The reporting of all minor injuries is important because many of these injuries have the potential to develop into more serious conditions. Should a minor injury become infected or a mild strain or sprain becomes more painful, medical treatment may be required.



All minor injuries, including those treated from a first aid box, must be reported and all first aid stores usage should be recorded.

Why Report Hazards

Reporting hazards, incidents, and injuries is vital so that a safe and healthy workplace can be maintained. Reporting can prevent reoccurrence or the development of new hazards incidents or injuries in the workplace.

EMERGENCY PLANNING

Emergency situations can occur at any time and cover a wide range of events including the unexpected. Emergency situations could include:

- Fire
- Gas Leak
- Fall from Height
- Serious Injury

What is an Emergency?

An Emergency can be described as “A sudden unforeseen crisis beyond your control that requires immediate action”. An emergency presents (or may present) a risk of serious injury or death.

Details of the site specific emergency procedures must be explained to you prior to commencement of work at that particular site. The procedures will include information relating to the contents and location of the first aid kit, what to do in the event of an emergency, who to contact and by what means to contact. These procedures will form part of the overall site specific management plan.

Alarm Systems and Emergency Assembly Areas

It is essential that you are familiar with the emergency procedure at your workplace. You must be able to recognise and respond to the alarm, know the escape route and the location of the emergency assembly area, and who to report to when you arrive there.

RESPONDING TO EMERGENCIES:

The procedure for emergency response will be explained to you prior to commencement of the work. The key principles of these procedures are:

- remain calm
- contact your supervisor or emergency services
- state clearly and slowly:
 - the exact location of the emergency
 - the nature of the emergency for example fall from height
 - how many people are involved /injured
 - types of injury if known
 - your contact details

If you are in contact by phone with emergency services ensure the person at the other end of the telephone is clear on the information that you are providing and that they are going to act on this information.

FIRST AID

Your employer has a legal responsibility to provide adequate First Aid equipment and facilities in the workplace. This includes access to trained first aiders. A designated person should be appointed to be in charge of the First Aid Kit, they must be ready to provide first aid when necessary.

You should know the name, contact number and workplace location of the first aid officer or person to contact, if you don't ASK. Your worksite should also have a first aid plan that details workplace first aid procedures, and the location of first aid equipment as part of the site specific safety management plan.

WORKERS COMPENSATION

Compensation provided to workers who become injured or ill through the course of their work, and may include:

- Weekly payments to cover loss of earnings
- Lump sum payments in case of impairment
- Reimbursement of medical and related expenses
- Workplace rehabilitation assistance to return to work
- Legislation: Workers Compensation and Injury Management Act 1981

Workers compensation is a no fault system this is different from common law. The only exception to this no fault system is serious and/or willful misconduct. You must also ensure that you complete all paperwork required for any injury in the workplace.

ACCIDENT AWARENESS AND PREVENTION

An accident in the workplace can be defined as unplanned and unwelcome events that cause personal injury, property damage, and/or interruption to work.

In the prevention of accidents in the workplace an important consideration is the interaction of the environment, people and resources.

Environment

Problems occur if the environment is:

- Unstable or an uneven surface
- Cluttered with material
- Has poor lighting
- Affected by adverse weather conditions

People

Problems occur when people are:

- untrained unsupervised
- not using the correct or no PPE
- unfamiliar with the task
- lacking in instruction or information not fit to work

Resources

Problems occur when resources or equipment are:

- not suitable for the task not maintained correctly
- modified without authorisation or guard removed



ACCIDENT INVESTIGATIONS

Conducting investigations after the accident is extremely important in helping to prevent future accidents.

Investigations are not undertaken to blame, but to discover the causes. Anyone involved in the accident investigation process is encouraged to carry out the investigation as quickly as possible.

Generally the make-up of the team will depend on the size of the accident. Those likely to be involved, range from the safety and health representative, employer, employees, supervisors and any relevant external parties.



Investigations may involve surveying the scene, taking photographs, speaking to witnesses and compiling reports.

Ultimately it is important to discover common trends in the causes and events that led up to the accident so measures can be employed to prevent the accident reoccurring.

Cost of Accidents

Failure to prevent accidents can lead to undesirable outcomes such as:

- death or injury
- damage to equipment and property
- lowered morale
- absenteeism and loss of competent staff members
- unemployment or loss of wages
- workers compensation claims resulting in higher premiums or
- prosecution

HEALTH AND FITNESS

Worker capacity includes fitness, health, skill, experience, and motivation. When prolonged hard work is involved, fitness is the most important factor in worker capacity. Medical conditions may limit, reduce or prevent the person from performing a job effectively.

Things to be aware of:

- A change in health
- A medical condition that can limit, reduce or prevent a person from performing a new or current job effectively
- A medical condition that can make it unsafe to do the job
- A medical condition that is likely to make it unsafe for the worker, their co-workers or the public
- A medical condition that may be made worse by the job

Employees have a duty to report to work in a manner that enables them to do their job safely. If they for any reason do not have the capacity they must discuss this with their employer.

DISEASES

Most workplaces have minimal risk of the transmission of infectious diseases such as HIV, Hepatitis or other viruses. Where there is a possibility that workers will be exposed to blood or other body fluids, there is a potential for the transmission of viruses. Some activities have an increased risk for example a site cleaner might be exposed to a contaminated syringe left in a toilet.

You should ensure that:

- You don't do anything which may expose you or any other person to an infectious disease.
- Dispose of infectious material safely (for example use a syringe collection device).
- Use good housekeeping and personal hygiene.
- Use the right cleaning materials.
- Use appropriate PPE
- Cover wounds cuts and abrasions with dressings.

FATIGUE

The most common cause of fatigue is not enough quality sleep. Most people need 7 to 8 hours of unbroken sound quality sleep to be able to function to their potential. Some people can survive satisfactorily with a little less and some people need a little more.

We need to be mindful of our level of alertness. Our body has what is called a circadian cycle which assists us to sleep at night time and remain awake in the daytime. As a consequence of this cycle we have reduced periods of alertness.

Human alertness is at its lowest between 2 am and 6 am and between 2pm and 4 pm.

It is important to note that one in five major road accidents are related to fatigue. You could only wonder what percentage of workplace injuries and incidents are related to fatigue.

EXERCISE

Regular exercise is becoming increasingly important as technology takes more and more physical exertion out of workplace activities. You should establish a regular exercise pattern and maintain it as a minimum.



FOOD

Most people should be aware of the importance of a regular balanced diet. We should avoid greasy foods especially at nights and limit or avoid too much coffee, tea or drinks containing caffeine in the evenings.

SMOKING, ALCOHOL AND DRUGS

Smoking

Smoking at work is a major issue. It is essential that if people smoke they do so in an area that has been designated a smoking area.

Smoking is prohibited in any enclosed workplace, this includes all vehicles.

If people are to smoke they **MUST** adhere to all signs and rules regarding smoking in their workplace such as No Smoking signs.



There are two significant factors regarding smoking:

- Workers who are nonsmokers can be annoyed or put at risk by the smoke and associated health concerns and
- The unsafe disposal of cigarette butts and their potential to start fires.

ALCOHOL USE



Overindulgence in alcohol is still one of the major causes of unfitness for work.

The health effects of alcohol are generally well known but its consequences for fitness for work not fully appreciated. Alcohol has a severe negative effect on sleep quality, which is essential to fitness for work. Your entitlement to workers' compensation benefits may be at risk if any disability you may suffer at work is attributed or related to fitness for work linked to excessive alcohol

consumption.

It is also important to note that prescribed medication such as anti-depressants, painkillers and certain cough medicines can also have an effect on a person such as drowsiness. Employees should ensure they notify the supervisor if taking medication that could affect their ability to do the job safely.

Employees should advise their employer if they are taking any prescription or over the counter medication or any substance that can impair their work performance.

PREVENTION OF ALCOHOL AND DRUGS IN THE WORKPLACE

Some of the strategies used to minimise the use of alcohol and drugs in the workplace include:

1. Recognition of the problem

Management should recognise that alcohol and drug use is a real issue that happens in the workplace. Awareness is vital. Policies and procedures should be well communicated to employees outlining steps that will be taken if a person is found in the possession or using alcohol/drugs in the workplace.

2. Education and awareness

The dissemination of information is extremely valuable. Employees should be informed if the organisation has access to support groups or assistance programs. Educating employees about the use of alcohol and drugs and the adverse effects it can have on a person is very important.

3. Employee Assistance Programs (EAP)

Employee assistance programs (EAP's) can be beneficial to both employers and employees. EAP's are intended to support and offer assistance to workers to overcome problems they may be experiencing as a result of alcohol and drug usage.

4. Alcohol and Drug screening

Some organisations require employees to be tested for traces of alcohol and drugs in their system. Testing could be planned for certain days or workers could be chosen at random.

HOUSEKEEPING

Good housekeeping practices significantly decrease accidents and injuries in the workplace and, in particular, those resulting from slips, trips and falls. Slipping and tripping is a major cause of workplace injury with many incidents resulting in broken bones. They often result in other injuries like falls from heights and sometimes are fatal.

Benefits of a clean and tidy workplace:

- Workplace injuries can be prevented
- A positive attitude to safety and health is created
- Work efficiency and employee morale is improved
- Productivity can be increased



Some examples of good housekeeping include:

- rolling up extension cords after use
- store and stack material in an orderly, safe and accessible manner.
pick up excess rubbish
- return tools after use
- clean up any spill immediately

Remember the three golden rules of housekeeping

If you drop it - pick it up

If you dirty it - clean it

If you use it - put it back

THE ENVIRONMENT

Atmospheric Contaminants

Dust, fumes from various sources, oil and other toxic discharges can be damaging to your health and to the environment.

The atmosphere is a crucial factor for long term survival and you should make every effort to protect your health and prevent pollution of the environment.



Pollution

The preservation of our water resources is everyone's responsibility. Take care not to allow any substance to be disposed of in drains or be allowed to contaminate any waterway. All substances must be disposed of in accordance with the Material Safety Data Sheet (MSDS)

SAFETY SIGNAGE

Safety signage is designed to draw attention to objects and situations affecting safety and health. Each sign carries the same authority as a direct instruction from you supervisor.



Prohibition Signs

These signs indicate an activity or action that is prohibited. They have a white background and a red ring with a diagonal red line running through it.



Limitation Signs

These signs place a restriction or a limit through use of a number. For example maximum speed or the maximum weight allowed in an Elevated Work Platform (EWP).



Mandatory Signs

These signs indicate instruction that must be carried out. They have a white background with a blue disk.



Danger Signs

Warn of a particular hazard or hazardous condition that could be life threatening. They have the word danger in white letters on a red oval with a black background.



Hazard Warning Sign

Warn of a hazard or hazardous condition that is not likely to be life threatening they have a yellow background with black triangle.



Emergency Information Signs

They are signs indicating the location of emergency related equipment such as first aid kits and emergency exits. They have a green background and white text.



Fire Signs

These signs advise the location of fire alarms and firefighting equipment they have a red background with white text.

HAZARDOUS SUBSTANCES

There are many substances used in the workplace of which many are very dangerous and require extreme care when working with them. All employees must be trained in all hazards associated with hazardous substances.

Types of substances range from corrosives, solvents, lime, paint, glues, cleaners, fuel including petrol and diesel. All substances have the potential to cause injury or harm. Some substances may cause skin



irritations, bring about allergic reactions, cause burns, or be highly flammable and therefore need to be segregated from other incompatible substances.

All substances that are or will be used or produced in the workplace need to be identified. The best method to identify hazardous substances is the Material Safety Data Sheet or MSDS

A MSDS is an information fact sheet detailing physical and chemical properties of hazardous substances. It provides information on:

- Safe use
- PPE Requirements
- Handling, storage, and disposal
- Health hazards
- First aid,
- Emergency procedures.

The MSDS is available from the manufacturer or supplier of the substance.

It is paramount that the requirements set out in an MSDS are strictly followed by all personnel at all times. For every hazardous substance in the workplace there must be an accompanying MSDS which must be accessible to everybody and should be located near where the substance is being used or stored. A MSDS register must be developed and constantly kept up to date.

Safety Considerations for Hazardous Substances

The following should be considered when dealing with hazardous substances.

Labels

- All substances must be appropriately labeled, regardless of whether stored in a box, drum, container or other form of packaging.
- Labels must conform to relevant standards and legal requirements with correct labeling allowing people to know what they are working with.
- Labels must be in good condition and easy to read. Replace those that have faded or been defaced.

Storage and Segregation

- The type of storage area must be suitable for the substance being stored and is often dependent on the amount to be stored.
- Incompatibles must be appropriately segregated.
- Adequate ventilation must be provided.

Hazardous substances must NOT be stored under any circumstances in any food grade container eg: soft drink bottle or cordial bottle.

A segregation table detailing the storage of hazardous substances and dangerous good is available for download at the website

Use, handling and disposal of hazardous substances

Safe work procedures must always be followed including the correct use of hazardous substances for the intended purpose, and to prevent swallowing, inhaling or skin contact. Safe procedures are also paramount when disposing of the substance or container. They should not be poured down drains or sewers.

Improper disposal could lead to:

- Death or serious injury to people
- Environmental problems in waterways effecting animals and aquatic life;
- Prosecution
- Explosions.

Personal Protective Equipment

Employers must supply suitable PPE for all employees working with hazardous substances. This may include gloves, respirators, and enclosed footwear.

Asbestos

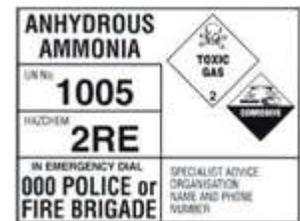
Asbestos is significant killer of workers in Australia. Never attempt to remove asbestos without the correct training and PPE. Asbestos is generally safe if not disturbed and can be found in many areas including ceiling, wet areas, floor tiles, pipes, glues, insulating materials and fencing products. If you believe that there is asbestos in the area that you are working, stop work and seek immediate guidance from your supervisor.

Dangerous Goods

Extreme care must be exercised when working with or near dangerous goods. A prime example is fuel. There are nine classes of dangerous goods. Dangerous goods are basically hazardous substances that have been listed as dangerous goods.

Placards

Are of particular importance as they aid in providing much needed information in the event of an emergency. Placards provide information such as who to call and information on the identification of the substance. Other information includes: UN number; Class of dangerous good; name; and emergency code.



PERSONAL PROTECTIVE EQUIPMENT (PPE)

It is a requirement of occupational health and safety legislation that all employees wear personal protective equipment in working environments where hazards cannot be eliminated by other means.

There are four times when you must wear PPE.

1. When told at the site induction
2. When the supervisor tells you
3. When the signs indicate the requirement
4. When you think you need it

Employees:

- Must use the protective clothing or equipment in the manner in which they have been instructed to use it
- Must not misuse or damage the clothing or equipment
- Must maintain the PPE if appropriate
- Must, as soon as practicable after becoming aware of any damage or malfunction notify the employer of such damage etc.

Employers:

- Must provide adequate PPE
- Provide training for the PPE
- Provide a replacement process

There are Australian/NZ Standards in place for most items of PPE and all PPE provided by the employer must meet this standard

Safety Helmets (Hard Hats)

Safety Helmets are a very important part of the safety equipment provided to you and must be worn in all designated areas.

You should inspect your helmet prior to each use for cracks and any damage and ensure that it is fitted and adjusted correctly.



You should never wear a helmet following an impact, never put stickers on your helmet unless the glue has been tested not to damage the helmet, never write on your helmet with permanent marker pens as these pens can adversely affect the plastic in the helmet and do not modify your helmet in any way.

Safety Glasses

Eye protection is a major consideration especially when working in dusty or windy environments or when using power tools. There are various types of eye protection available and it is important that the correct type is used. Eye protection must comply with standards particularly AS/NZS 1337 and AS/NZS 1338.



Hearing Protection

Noise induced hearing loss is a major health and safety concern in the building and construction industry and is one of the least considered risks in the workplace.

Even short term exposure to loud noise can cause damage to your hearing

There are two main types of hearing protection ear plugs and ear muffs.

When fitting ear plugs particular care must be taken to ensure that the plugs are fitted correctly and the plugs and your hands are clean when fitting. Dirty hands or plugs can result in ear infections.



Ear Muffs should be clean and precautions should be taken to ensure they fit correctly and are maintained and cleaned prior to use.

Note: In the 10 years to 2001, construction workers had the highest hearing loss among industry sectors other than mining

A good “rule of thumb” to indicate when you need to wear hearing protection is:

‘IF YOU NEED TO RAISE YOUR VOICE TO UNDERSTAND A PERSON STANDING AT ONE METRE OR AT ARMS LENGTH DUE TO THE ENVIRONMENTAL NOISE, THE NOISE LEVEL MAY BE 85DB OR ABOVE AND HEARING PROTECTION SHOULD BE WORN’

Safety Boots

Safety footwear (steel capped boots) provides protection against heavy items being dropped on feet, stubbed toes, stepping on nails or sharp objects. Safety footwear comes in the form of full ankle support boots or may look like your average dress shoe.

Footwear must have non slip tread and be well maintained worn with securely tied laces or be elastic sided and must be worn at all times in designated areas.



Safety Gloves



There are many types of hand protection available from disposable plastic gloves to heavy industrial gloves. All gloves must be appropriate for the job and fit correctly. Gloves that are loose can catch on items and reduce handling ability. Gloves that are too tight can restrict movement. Gloves should be easily removed in case of injury. Poorly fitting gloves or inappropriate type for the purpose can contribute to hand fatigue.

Protective Clothing



Protective clothing can include overalls, reflective vests, and wet weather jackets and pants. It is important that protective clothing when worn in the vicinity of moving parts of machines is body contour fitting and cannot become caught in any machinery. Loose clothing may be suitable when working outside in high temperatures to protect the skin from the sun and to allow air flow.

You should also be cautious wearing jewelry including rings and chains as they can present a significant danger in relation to machinery and moving objects.

Respiratory Protection



Respiratory protection provides protection against dust, fumes, smoke and fibres that could be detrimental to your health. There are many types of respiratory protection, the most common being the dust mask, which filters out airborne particles before they are inhaled. These are generally used against nuisance dusts that are not deemed toxic but can upset respiratory function. It is critical the equipment is well maintained and replaced when necessary appropriate for the type of hazard you are trying to guard against and the equipment complies with the correct standard and MSDS.

Sunblock

Sunlight contains ultraviolet (UV) radiation which causes premature ageing of the skin, wrinkles, eye damage (including cataracts), and skin cancer. The amount of damage from UV exposure depends on the UV radiation levels (which can range from low to extreme), the length of the exposure and whether your skin is protected. There can be high UV levels even on cool days and you can receive sunburn on a cloudy day. Sun exposure at any age can cause skin cancer. The most dangerous form

of skin cancer is melanoma. Australia has the highest rate of skin cancer in the world with over 360,000 cases annually.

All construction workers are at increased risk, simply because they work outside.

PROTECTIVE MEASURES

- Wear tightly woven clothing that covers as much skin as possible, such as long sleeved shirts and trousers.
- Use sunscreen (SPF30+) at all times on skin areas that could be exposed.
- Wear a wide brim hat or a wide brim and neck flaps fitted to your safety helmet to protect exposed areas.
- Wear sunglasses or tinted safety glasses to protect your eyes from sun, reflection and glare.
- Whenever possible, limit your exposure to the sun particularly when UV radiation is most intense.
- Sun block should be worn at all times exposed



MANUAL HANDLING



Manual handling is one of the leading causes of workplace injuries. Manual Handling means any activity requiring the use of force exerted by a person to lift, lower, push, pull, carry or to move, hold or restrain an item.

Manual handling can affect the entire body. The types of injury sustained from manual handling tasks can range from sprains, strains, hernias, cuts and fractures with the most common being back pain.

Injuries can be acute and/or chronic in nature, the latter being more common.

Acute

Injuries that result from a single movement often cause instant pain and suffering. The pain may not become severe for hours after.

Chronic

Progressive wear and tear caused by repetitive and ongoing manual handling activities.



Factors that Increase the Risk of Manual Handling Injuries include:

- size and shape of the object
- distance loads are carried over
- ability to grip the load
- terrain and obstacles in the area
- amount of working space available

- postures sustained through tasks (bending, reaching and twisting movements);
- height of object or person
- health and fitness status of the person

Preventing Manual Handling Injuries



It is important to incorporate risk management principles of identification, assessment and control to effectively prevent problems linked to manual handling. To reduce the risk of manual handling injuries it is important to follow safe working practices such as storing heavier items at waist height to reduce stretching and bending movements. Using mechanical aids to transport heavy, awkward and bulky items.

SEVEN RULES FOR LIFTING AND CARRYING SAFELY

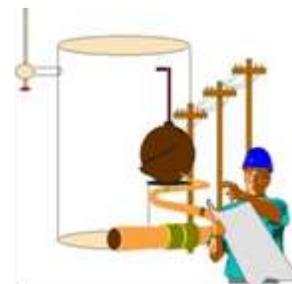
1. Size up the load and decide whether you can handle it alone.
2. Keep the load close to your body.
3. Crouch down, keeping your back as straight as possible; bend the hips and the knees. Keep your head upright.
4. Keep your feet apart. Keep one foot slightly in front of the other so that you are ready to walk off.
5. Grip the load firmly using your palms and fingers. Keep your arms and elbows close to your body.
6. Use your body weight to start the load moving. Then lift by pushing up with the legs.
7. Bend your knees to lower the load. Do not stoop. Keep your head upright.



Do not twist your body at any time when carrying loads and use your feet to change direction.

CONFINED SPACES

A confined space is an enclosed or partially enclosed space which is not intended or designed primarily as a workplace, is at atmospheric pressure during occupancy and can have restricted means for entry and exit. It also can have either an atmosphere containing potentially harmful levels of contaminants, or an unsafe oxygen level or is of a nature that could contribute to a person in the space being overwhelmed by an unsafe atmosphere or contaminant.



All work carried out in relation to a confined space must conform to AS/NZS 2865 Safe Working in a Confined Space.

A confined space may be:

- A manhole
- An excavation
- Inside a storage tank
- Within a sewer pit

All employees must receive adequate training when working with confined spaces especially when:

- supervising others working in or near a confined space
- purchasing and maintaining equipment used by or for the rescue or protection of persons working in or near a confined space
- in the immediate vicinity outside the confined space
- involved in rescue teams.

Employees should be aware of the associated hazards, control measure and any emergency procedures applicable to confined space.

Employees should undergo regular refresher training to revise their skills and knowledge.

No one should enter a confined space without being adequately trained or without a standby person present immediately outside the confined space area.

EXCAVATIONS AND TRENCHES

All trenches or excavations must be barricaded or fenced off to warn people of their location, and to prevent accidental or unauthorised entry. People should not enter areas immediately next to trenches or excavations unless the area is well supported with benching or batters and are authorized.

WORKING AT HEIGHT

If work requires people to work at heights and they must be able to do so safely. Types of work where falling from height can occur include:

- working on the roofs of buildings
- working from Elevated work platforms or scaffolding
- working near the edge of excavations
- working from ladders

Contributing factors that may initiate a fall include:

- falling objects
- openings in railing fragile roof surfaces
- weather conditions (wet/ windy)
- incorrect use of ladders
- poorly maintained ladders
- scaffolds not erected or used properly
- unprotected penetrations (holes or openings)
- no PPE or Fall Arrest systems in place
- poor training

To minimise the risk of working at heights it is important to:

- Be correctly trained.
- Do as much work as possible on the ground
- Ensure all tools and loose materials are in a position where they cannot fall or are secured from falling
- Areas near scaffolding must be kept clear of rubbish and debris

- Signage and barricades must be placed in the access area, particularly in places directly below the work area
- If working from a platform fitted to a mobile machine, ensure the platform is correctly secured to the machine and that you are wearing fall prevention equipment as specified in the relevant Standard
- Safety signage must be used if scaffolding is incomplete or not properly assembled; and
- Floor penetrations (holes and openings) must be sign posted and have fixed grid mesh or checker plate flooring panels. Hard barricades must be in place.



Fall Arrest Equipment

All persons who work where there is a danger of falling from heights must be provided with fall restraint/arrest equipment. All height safety equipment must be inspected prior to its use and regularly re-checked as required by the relevant Standard and manufacturer's instructions.

When using fall restraint/fall arrest equipment ensure it is secured to anchor points in the work area which are strong enough for the purpose (not to convenient points such as a hand rail). Anchor attachment points must have a minimum load capacity in accordance with Australian/NZ Standards.

If your fall restraint/fall arrest equipment has been used to arrest a fall it must be checked by a competent person and serviced to manufacturer's specifications or discarded. Worn or damaged equipment must not be used.

Scaffolding

Safety considerations for scaffolding include:

- Equipment is to be used in accordance with AS/NZS 1576
- Areas near scaffolds must be kept clear of debris and rubbish
- Edge protection must be provided where there is a risk a person could fall 2 or more metres from a scaffold platform
- Scaffolds must not be moved or altered in any way without authorisation



Ladder Safety

When using a ladder ensure



- The ladder is in good working order
- The ladder is stable with the locking arms in place
- The ladder is set up to approximately one horizontal slope to four vertical or at 75 degrees
- The top of the ladder extends at least 900mm above the landing point and is tied off securely
- The ladder is suitable for the task eg wooden working with electricity

Ensure that

- Your boots and the ladder rungs are free from mud, grease or dirt
- You maintain three points of contact at all times
- You carry all your tools in a workbag and not in your hands
- You do not stand on the top three rungs of the ladder
- Your body is centered between the side rails of the ladder at all times
- You do not lean out from the ladder
- The ladder is secured by tying off or is otherwise secured



Unplanned Collapse

An unplanned collapse can pose a significant danger to construction workers. An unplanned collapse can include:

- The collapse of a building or structure (or part of) which is unstable before completion or demolition
- Failure of a load bearing part of a crane, hoist, lifting gear or lift. .
- The collapse of shoring or an excavation

To reduce the likelihood of injury you should be aware of any potential hazards and comply with all workplace procedures, including complying with maximum load limits and not entering exclusion zones.

Traffic and Mobile Plant

Mobile plant can be very dangerous at site if not operated in responsible manner.

Potential hazards include other plant, the slope of the ground, penetrations and underground services, Overhead power lines and structures.



When operating plant you also must be very mindful of pedestrians.

You must ensure before you operate any mobile plant at site that:

- You are licensed to do so
- You are authorised
- You are competent to operate the plant
- You have completed a Prestart check when starting or taking over control of the vehicle

Approaching Mobile Plant

Before you move forward to mobile plant that is or is likely to be in operation you must obtain eye contact with the operator and the operator must clearly indicate that it is safe for you to approach the mobile plant.

WEATHER CONDITIONS

Weather conditions can have a big impact upon the safety and health of workers, especially in outdoor work environments. Some weather conditions will be immediately obvious such as rain or gusts of wind, others such as exposure to prolonged heat or cold are insidious and the impact may not be realised until the damage is done.



Working in extreme cold conditions can cause breathing difficulties and can cause errors due to lower circulation or pain in extremities (hands, feet, ears, etc.).

Wind gusts can make work environments unpredictable, by varying the stability of the work areas, cause things to fall from above, blow structures over or carry dust and small particles. Other risks include downed power lines.

Rain creates wet and slippery conditions that could include slips and falls, driving accidents due to slippery roadways and electrocution.

Lightning Where groups spend a great deal of time outdoors, care needs to be taken to minimise the risk of injury from exposure to lightning. Keep a constant look out for thunderstorms and seek a safe location when lightning is imminent. Ask your supervisor about the site safety procedures in place to avoid lightning related injuries.

Workplaces must have safe work practices for whatever situation workers are in and have contingency plans that accommodate changing conditions.

Heat Related Conditions

Excessive heat is both a health and a safety hazard.

Working in excessive heat conditions can result in a number of adverse health effects, ranging from discomfort to serious illness and even death.

When the body is unable to cool itself by sweating, several heat-induced illnesses such as heat stress or heat exhaustion and the more severe heat stroke can occur, and can result in death.

Working hard in high heat reduces the body's ability to cool itself because the muscles need

extra blood thus decreasing the amount of blood available to circulate to the skin and internal organs. Alertness, stamina and productivity are reduced and the body's core temperature and heart rate rise.

Factors that can contribute to heat stress

- High temperature above 36 degrees Celsius the body begins to gain heat from the environment.
- High relative humidity levels, which reduce, sweat evaporation.
- Low air movement, which affects the heat exchange on your skin.
- Excessive or inappropriate clothing.
- Physical activity.
- Radiant heat from machinery or reflective surfaces.
- Low personal tolerance

Symptoms of Heat Stress

- Headaches, dizziness, light headedness or fainting. Increased sweating
- Muscular cramps.
- Tiredness, mood changes such as irritability and inattention.
- nausea or vomiting; yellow urine

Treatment for Heat Stress

- Have the person rest in the coolest possible place.
- Give them cool (but not cold) fluids. Avoid overly sweet or drinks containing caffeine
- Don't allow them to work until fully recovered

Preventative Measures

- Drink enough water on a regular basis to keep your urine nearly colourless.
- Wear appropriate loose fitting clothes to protect yourself from strong, direct sun.
- Wear tinted sunglasses and a protective flap on your safety helmet and use sun screen. Try to schedule heavy physical tasks for the early morning or late afternoon when it is coolest.
- Avoid alcohol, which increases urine output and increases dehydration.

Personal Considerations

Some people have conditions, which can make them more susceptible to heat stress. Medical conditions such as heart problems, diabetes, hypertension, fever or infections can contribute to heat stress. Other contributing factors can include

- Advancing age.
- Being overweight or in poor physical condition.
- Inadequate salt in their diet
- Fatigue

It is important to identify heat stress and effectively manage it as the person may develop heat stroke, which is a potentially lethal condition.

LOCKOUT AND TAGGING

The purpose of tagging and lockout procedures is to ensure that people and equipment are protected from hazards that could happen when:

- work is being carried out on equipment and machines
- the equipment or machine is faulty or damaged
- repairs/ maintenance are in progress
- routine and on the spot inspections are being conducted

There are two primary types of tags, personal danger tags and out of service tags. Requirements for use may differ from each workplace so it is important to become familiar with the work site specific procedures and follow them at all times.

Out of Service Tags

In general Out of Service tags:

- signify the equipment if faulty or currently undergoing repair or maintenance
- they are colour coded yellow and black
- must be securely placed at the isolation point or points

If an employee identifies a piece of equipment that they consider faulty or unsafe to use then they must complete and place on the equipment at the isolation point(s) an out of service tag. Information on the tag must be filled out correctly providing the person's name, number, date and a description of the fault detected this then should be reported to the supervisor.



The out of service tag should only be removed by the repairer or supervisor (authorised person) when they are satisfied that the equipment is safe to use.

Personal Danger Tags

In general, personal danger tags

- are used to protect people who are working on equipment
- inform people that work is in progress and any actions to begin operating could be dangerous to them and the person already working on the equipment
- are colour coded black, red and white
- must be securely placed at the isolation point or points must be in place before any work begins
- information on the tag must be filled out correctly detailing the date, person's name; and their signature



The tag should only be removed by the person who put it there in the first instance; and must be provided for each person working on the job (if there are two or more people working together then each are required to fill out a danger tag and each is to appropriately isolate it to the equipment)

Remember: If you're not on the job nor is your tag.

LOCKS

Locks are an additional safeguard for preventing the equipment becoming operational during repair or maintenance and normally are used in conjunction with a personal danger tag.

BARRIER TAPES

These tapes are used to barricade areas to prevent access to the area

Hazard Warning Tape



This tape is used to advise that the segregated or barricaded area is hazardous and employees should not enter the area unless they have made themselves aware of all the hazards within the area. This tape is yellow and black.

Danger Tape



This tape is used to restrict employees from entering the area. No employee should enter any area segregated by danger tape unless they have been approved in writing by the site supervisor.

This tape is red and white

MAINTENANCE OF TOOLS AND EQUIPMENT

Injuries frequently occur when tools are not maintained or used correctly. Important safety practices include:

- Ensure that you are competent before operating any tools or equipment
- Keeping guards and safety devices in place and operational at all times
- Complying strictly with personal protective equipment procedures, for example, wearing eye protection at all times in designated areas or when using designated equipment
- Wearing hearing protection at all times in work areas where there is exposure to excessive noise
- Using the correct hand tools for the purpose they were designed for and keep them clean and free from contamination
- Ensuring that other employees are not at risk from your activities, for example, when cutting, or grinding at height
- Maintenance of tools, inspection, licensing

FIRE SAFETY

Fires continue to be a major concern both in the community and in industry, both from a personal safety point of view and also because of the damage to property, plant and equipment. Property losses attributed to fires cost many millions of dollars annually.

Many of these fires could be avoided by better housekeeping and an increased awareness of the likelihood of a fire when proper precautions are not taken.

The three factors needed to support combustion (FIRE) are:

- Heat
- Oxygen
- Fuel

These three factors combined in the right quantity give us a chemical chain reaction (combustion) or a fire



The key to the reduction or elimination of fires in the workplace is good housekeeping by:

- Eliminating risks from chemical spills, cleaning rags, paper, matches and cigarette butts
- Place all waste in bins
- Keep aisles and exits clear at all times
- Ensure strict compliance with safety signage in any restricted areas such as chemical storage areas
- Do not store flammable materials near timbered areas, or electrical equipment
- Do not leave flammable materials, cleaning rags, on motors
- When transporting flammable materials keep them in sealed containers and ventilated at all times.
- Clean up and report any spillage of chemicals
- Do not smoke within ten (10) metres of any flammable materials storage area or in an unauthorised area
- Correct disposal of cigarette butts

Always ensure the availability of a water supply, suitable fire extinguishers and a fire blanket when welding, cutting, grinding or other hot work is being done.

Fighting a Fire

Before you even consider fighting a fire, you must ensure that all persons in the area are alerted and have left, or are leaving the immediate area, and that the fire brigade has been called. The first question you must then ask yourself is whether or not you should fight a fire at all. In most cases, portable fire extinguishers offer only sufficient firefighting agent to fight a relatively small fire. It may be more effective and safer for you to leave the fire to the fire brigade. If you leave a fire, close off the area as you go. If you do propose to fight a fire:

1. Be certain that the fire is contained to a small area and is not spreading beyond the immediate area.
2. Be sure that your back is to a safe and unobstructed exit, and the fire cannot spread to block your path.
3. Be sure that the extinguisher you use is of the proper type and size.

A Good acronym to remember if you are going to attempt to fight a fire is **PASS**

P	Pull the Pin Break the seal and test the extinguisher
A	Aim at the base of the fire ensure you have a means of escape
S	Squeeze the operating handle to operate extinguisher and discharge agent
S	Sweep from side to side, completely extinguish the fire

DO not attempt to fight a fire if you're not trained to do so.

Above all ensure that you are safe



Types of Fire

Fires are classified according to the type of material that is burning. It is essential that you be aware of the type of extinguisher you must use if a fire starts in your workplace.

	A Wood, Paper & Plastic	B Flammable & Combustible Liquids	C Flammable Gases	E Energised Electrical Equipment	F Cooking Oils & Fats	Notes: 1. Green indicates that the extinguisher is not the agent of choice for the class of fire but that it will have to be used to prevent spreading capability. Class 1 fires involving wood products should use only special extinguishers (indicated as only agent of choice) or water with expert advice. Comments: (Refer Appendix A, 2.1.1.1)
 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)	😊	😊	😞	😊	😞	Generally not suitable for outdoor fires. Suitable only for small fires.
 Water	😊	😞	😞	😞	😞	Dangerous if used on flammable liquid, energised electrical equipment and cooking oil/fat fires.
 Foam	😊	😊	😞	😞	😊	Dangerous if used on energised electrical equipment.
 Wet Chemical	😊	😞	😞	😞	😊	Dangerous if used on energised electrical equipment.
 Fire Blanket	😞	😞	😞	😞	😊	Use blanket to wrap around a person and/or. 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.

Thanks to exelgard for the use of this table

PLACEMENT OF EXTINGUISHERS



Extinguishers should be placed near to where they may be used. However, they should not be so close that a fire will prevent you from reaching the extinguisher. In buildings it is a requirement that extinguishers be clearly visible with an approved indicator sign placed above.

Replacing used Extinguishers

If you use a fire extinguisher advise your supervisor who will arrange for its prompt replacement. An empty extinguisher **MUST NEVER** be returned to the hanger and should be given to the supervisor or stores person.

ELECTRICAL SAFETY

Contact with energised objects at mains voltages is potentially fatal. It can also cause serious burns from the discharge of electrical energy.

Health effects include muscle spasms, shock, burns, nausea and vomiting, palpitations, heart fibrillation and unconsciousness.

Fatalities caused from the use of electricity occur regularly both in the workplace and in the home. Fatalities continue to occur because the dangers associated with its use are not well understood.

There is no such thing as a minor electrical shock. They are all serious and potentially fatal.

Electrical Safety Procedures



- **Always** assume all electrical appliances are "**live**" until they are effectively isolated
 - Isolate, tag and test equipment before commencing work.
 - **Prove the isolation**
-
- Examine portable appliances ,extension leads and power plugs before you use them
 - Do not use defective equipment. Remove it from use, tag it out and report it
 - Make sure the power is off before removing a plug from a power point
 - Remove the plug by firmly grasping the plug & not the cable
 - Switch the power off before changing light bulbs
 - Do not operate portable electrical equipment while out in the rain or other wet areas
 - Replace worn extension leads. Never use PVC insulation tape to repair extension leads
 - Do not run leads over wet areas
 - Unwind long, cords before use to prevent overheating
 - Never allow tools or other objects to lie on extension leads or pull them over sharp objects
 - Do not place extension leads in hazardous areas where there is a likelihood of them being damaged, crushed or cut and
 - Always use an RCD

Excavation work

When excavation work is to be carried out and buried power cables or gas pipelines could be in the vicinity, their location must be identified and approval must be obtained prior to work commencing and a risk assessment conducted.

Overhead power lines

It is very important to consider the risks that are associated with working near overhead power lines. Any work performed near overhead power lines is dangerous and requires all personnel to take extreme care at all times. If work in the vicinity of power lines is not carried out in a safe manner the consequences could involve death of workers and/or bystanders.



There are many considerations to keep in mind whilst working near overhead power lines. It is essential to:

- Always keep a safe distance from the power lines;
- Ensure work is conducted with any danger zone requirements in place;
- Approach all power lines as if they were live and dangerous;
- Never touch a collapsed or damaged power line, always remaining at a safe distance
- Use a spotter when working within proximity to the power lines;
- Pay attention at all times.
- Always look up particularly when travelling or working underneath the power lines.
- Remember if another person comes into contact with power lines your first concern is your own safety

Maintenance and Repair of Electrical Equipment

All repairs of electrical equipment must be carried out by persons licensed to do so. This includes repairs to damaged power boards and extension cords.

Tests and Tag

All portable electrical equipment including RCD's on a building and construction and site must be tested and tagged by an electrician or a qualified person in accordance with the Australian /New Zealand Standard.



Workers Compensation

Workers Compensation (Compo) means that you can receive medical treatment and assistance if you are injured at work. All employees have a right to workers compensation. Workers Compensation will cover you for medical expenses and wages to varying degrees and dependent on your circumstances. There are defined procedures that you must follow to ensure that you do not jeopardize your entitlement to workers compensation, these include

- Reporting all workplace injuries (including minor ones)
- Complete the relevant report form and claim for compensation form as soon as possible after the incident or accident
- Attach any medical certificates and expenses that occur as a result of the incident that caused the injury
- Keep a copy of all relevant documents

Remember there is only one person who is affected if you do not report a workplace injury: YOU

There is also another important group that a workplace injury to you will affect
Your Family

Notes: