A Welcome from Abacus Training Management and Staff

Welcome to Abacus Training.

This specific unit covered in this Learner Guide is:

**CPCCOHS1001A – Work safely in the construction industry**

CPCCOHS1001A, will help you develop the required skills and knowledge required to demonstrate compliance in your ability to interact in your specific workplace environment.

**Unit Descriptor:**

This unit of competency specifies the outcomes required to undertake Occupational Health and Safety (OHS) induction training within the construction industry.

It requires the ability to demonstrate personal awareness of OHS legislative requirements, and the basic principles of risk management and prevention of injury and illness in the construction industry. Licensing requirements will apply to this unit of competency depending on the regulatory requirements of each jurisdiction.

**Course Aim:**

The aim of the course is to promote health and safety awareness as it is applicable to the building and construction industries.

Further, the course aims to develop responsible thinking and an attitude of risk management, safeguarding against injuries and illness as a result of workplace activities.

The unit directly covers those areas as specified by the National Code of Practice for Construction Work. (ASCC 2006)
**Expected Outcomes:**

Through successful completion of the course, you will be able to demonstrate the following knowledge and skills:

- Identify OHS legislative requirements as applicable to your state or territory and nationally as appropriate
- Identify construction hazards and control measures
- Identify OHS communications and reporting processes
- Identify OHS incident response procedures

This Learner Guide includes:

- Using the Learner Guide and helpful study hints
- Information and relevant course notes
- Text references and guidance materials
- Information on Abacus Training Corporate Policies

**Before you commence your activities, you should review this Learner Guide fully and arrange all the reference materials you will need for this unit.**

The guide will assist you in identifying, gaining, revising and confirming the knowledge and skills that you need to perform the associated work tasks effectively.

You can study the knowledge and practice the skills included in this part at your own pace.

Complete all the activities and retain them in a portfolio.

Review all topics covered and their related activities with your workplace mentor, nominated workplace supervisor or with your Abacus Training facilitator.

Record all evidence of relevant workplace practice and have this record verified by your workplace mentor or supervisor where appropriate.
If at any time you are unsure of anything in the Learner Guide, or you become uncertain of how to best complete a task, either:

- Discuss your concerns or questions with your workplace mentor or supervisor, or

- Contact your course facilitator at Abacus Training:
  - Facsimile: 07 55467090
  - Email: rick.heaton@bigpond.com (course director)

Unit Training Materials

To successfully undertake this unit you will need to have access to:

- Your relevant workplace documentation: (samples provided in the course text)
  - Workplace Health and Safety Plans
  - Incident Reporting Procedures
  - Work Method Statements

- Suggested additional reference text
  - The requirements of this unit are fully covered in the Learner Guide provided, but should be supplemented with the following:
    - Workplace Health and Safety Act
    - Workplace Health and Safety Regulations
    - Code of Practice 2011, How to manage work health and safety risks (Department of Justice and Attorney-General)
    - Code of Practice July 2012, Construction Work (WorkSafe Australia)
  - Some useful links are:
    - www.safeworkaustralia.gov.au
    - www.worksafe.qld.gov.au
    - www.worksafe.vic.gov.au
    - www.worksafe.wa.gov.au
    - www.safework.sa.gov.au
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Fire Safety
Using the Learner Guide

Who could use this Learner Guide?

**Learner**

As a learner you could use this guide to;

- Study and practice skills at your own pace
- Review topics covered during the course, your trainer or coach
- Prepare for assessment

**Trainer, Mentor or Coach**

As a trainer mentor or coach, you can use the Learner Guide to;

- Plan and deliver your on the job training
- Provide additional support information
- Set and record practical activities
- Record all training completed

**Assessor**

Assessor may also use the guide to;

- Assist in the planning of assessments
- Retain records of evidence collect during assessments

Plan your learning

Remember what you are trying to achieve is to demonstrate to your assessor that you possess a high level of competence (knowledge, awareness and skills) in all aspects of the training you are undertaking.
Prioritise your learning

You may already have certain skills, competencies and knowledge relevant to the topic being studied.

For example a person undertaking a unit which includes customer service may have had considerable experience in retail, restaurant operations or front line reception in a large hotel.

These skills are transportable and the basic principles of communication, dispute resolution and handling difficult situations are common across a range of industries.

If you can demonstrate a high level of competence, underpinning knowledge and sound skills, do not spend more time that is necessary on this topic.

Use your time more wisely on those areas in which you have little or no experience and knowledge.

Organise your learning schedule and a good study location

As you work through the course notes allow yourself sufficient quality time to complete each topic.

You may wish to refer back to certain section along the way as the completion of each unit should allow greater understanding of all previous topics and the course as a whole.

Establish realistic target dates or times for the completion of each topic and set aside regular scheduled times for you learning.

You should identify a quiet, conducive location at home or work to complete study, activities and assignments.

Look for opportunities at work, home and your day to day activities to reinforce the knowledge and skills you are learning.

Your mentor, coach and Abacus staff should always be available to offer assistance, guidance and advice.
Obtain the training materials you need

Whilst we have provided a great deal of the information and materials you will need to successfully complete this course, there are some activities which will require you to obtain information from other sources.

Examples of resources you may elect to use would include:

- Company magazines and newsletters
- Newspaper editorials
- Advertising materials
- The internet
- Interviews with appropriate industry personnel
- Questionnaires

Identify a coach or mentor (an experienced advisor)

You may need to identify an experienced, competent adviser to assist you with your learning.

For most of you already in an associated industry, this could be your supervisor, manager or a colleague.

If you are not already working in an associated or similar industry, you will most likely use your trainer at Abacus as your coach or mentor.

Work through this guide step by step

- Read through and learn this Learning Guide carefully. The skills and knowledge covered in each topic will help to prepare you to become competent in this unit.

  Make sure you fully understand each part before going on.

- If necessary, talk to your coach/mentor and agree on how to organise your training. Work through all the information and complete the activities in each topic.

  Ask for help when you need it. Your coach/mentor will support you and show you the correct way to do things. If appropriate, talk to more experienced workmates and ask for their guidance, too.
• Listen, take notes, ask questions and practise your new skills on the job or in a simulated workplace environment.

Make sure you practise your new skills regularly.

That way you will improve both confidence and consistency in performance.

At the end of each section, check your own knowledge of the information and your skills in applying it.

You must have good knowledge of all the information in all parts of the topic and must have achieved proficiency in the practice of all skills where applicable.

You must also have completed all activities in the Learners Guide.

**Assemble evidence of your competency**

When you have completed all course activities and exercises and feel confident that you have had sufficient practice, submit your completed works to Abacus Training for assessment.

Before you do, ensure you have assembled all the required evidence of your competency, and are confident about your competence.

**Evidence of Competency**

Systematically collate all your responses to the Learning Guide "Activities" (where applicable, they are located at the end of each Part) in a portfolio of evidence for you assessor.

This will then form an important part of the evidence of your competence at the tasks involved.

It is likely that you may need assistance from your coach or trainer with some of the activities.

This is fine, but make sure that you master the issue from this assistance and, at the end of the day, that it is you that is competent.
Ensure that the following are accurately completed and returned to Abacus Training for assessment;

1. Practise Activities (as required)
2. Assignment tasks
3. Final Assessment
4. Statutory Declaration
5. Identification Documents
6. Online assessment or training activities and review (as required)

You may be required to do a brief oral and/or written assessment on the required underpinning knowledge.

As applicable, your assessor will advise you where knowledge or skill is not yet up to the required industry standard and where it meets the standard for recognition of competency.

You must be competent in all tasks.

Once you have successfully completed all components of your assessment, you will have achieved competence each topic.

Good luck with your learning!

Keep in mind throughout that Abacus Training is on hand to assist you to achieve your required outcomes.
Construction Workplace Health and Safety

The following is adapted from Code of Practice July 2012, Construction Work;

Who has health and safety duties relating to construction work?

Everyone involved in construction work has health and safety duties when carrying out the work.

The primary duty under the WHS Act requires a person conducting a business or undertaking to ensure, so far as is reasonably practicable, that workers and other persons are not exposed to health and safety risks arising from the business or undertaking.

The complexity of construction work, however, means that there are a number of businesses or undertakings with duties relating to construction work, ranging from a person conducting a business or undertaking who:

- designs the building or structure
- commissions the construction work
- is a principal contractor
- has management or control of a workplace at which construction work is carried out
- carries out high risk construction work.

There are also other duty holders that have responsibilities under the WHS Act and Regulations including:

- officers (e.g. company directors)
- workers
- other persons (e.g. visitors to construction sites).

It is common in the construction industry for a person to have dual roles. For example, contractors and subcontractors can be persons conducting a business or undertaking but they may also be workers.

This is recognised in the WHS Act, which provides that a person can have more than one duty by virtue of being in more than one class of duty holder.

The WHS Act provides that more than one person can have the same duty and requires that such persons comply with those duties to the standard required, even if another duty holder has the same duty. This is, however, qualified by the extent to which the person has the capacity to influence and control the matter or would have had that capacity but for an agreement or arrangement purporting to limit or remove that capacity.
The WHS Act requires such duty holders to consult, cooperate and coordinate activities with all other persons who have a duty in relation to the same matter, so far as is reasonably practicable. While this is a specific obligation under the WHS Act, it can also be seen as a practical way in which dual duty holders can ensure that they each fulfil their obligations under the WHS Act and Regulations.

At any one time there is generally a number of business operators working at a construction site. Some of these people will have the same duties under the WHS Act and Regulations.

For example, each contractor or subcontractor at the site who is a person conducting a business or undertaking will have the same duties under the WHS Act and Regulations.

**The Queensland experience is similar across all Australian States and Territories:**

Each year, approximately 80,000 incidents, accidents and illnesses occur in Queensland workplaces.

Of these, some 500 injury claims were made by workers aged 16 years or less. The burden this places on workers, businesses and the community at large is enormous.

Direct financial costs arising from workers compensation, hospitalization, rehabilitation, lost production and staff retraining is estimated to cost the Queensland community around $1.6 billion each year.

For workers, the human cost of injury can be equally devastating.

Pain, discomfort and rehabilitation are often accompanied by other psychological stressors.

These typically include emotional stress, strained relationships, uncertainty and disruption to study.

Workplace injuries also affect or intrude into a person's social and recreation pursuits.

Family members are affected in similar ways.
Medical rehabilitation and social welfare payments are other costs absorbed by the community.

Overall workplace injury and illness undermines Australia’s economic performance and reduces our living standards.

Adapted from:

Department of Employment and Training Workplace Health and Safety Training Resource Kit

Nationally Uniform Laws

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.

The laws replace existing work health and safety legislation in all states, territories and the Commonwealth from 1 January 2012.

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.
History of Workplace Safety

Workplace Health and Safety Legislation has existed in varying forms for many years.

Originally our legislation was based on the English Factories Acts 1844 – 1894.

Australia inherited this style of occupational health and safety as a result of our influence and position as a member of the Commonwealth.

Today, Australia has adopted the Robens Model as the basis of it’s workplace health and safety legislation.

The emphasis is on proactive prevention, rather than reactive compensation.

WorkSafe Australia has a “watch dog” role in seeing that all states and territories administer effective high quality Occupational Health and Safety practices, standards and legislation.

The commission is made up of Employer Associations, Union Representatives and State Government Representatives.

The group makes recommendations to the State Workplace Health and Safety Council, who will support the relevant Minister in the legislation of the Act.
Harmonisation

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.

The laws replace existing work health and safety legislation in all states, territories and the Commonwealth from 1 January 2012.

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.

What is Construction Work?

Construction work is defined 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.
OHS Legislative Requirements

Workplace Occupational Health and Safety Laws

All states and territories have their own independent but conforming legislation in place.

Broadly, these Acts are administered in the following manner, with only minimal variation being evident from authority to authority.

Since January 1st, 2012 a common or harmonised approach has been effected at a National level resulting in a far more consistent approach to legislation, administration and enforcement of Workplace Health and Safety laws.

These are legislative instruments are further supported by Codes of Practice which are generally developed and produced to provide guidance in specific industries and related work tasks.

The *Workplace Health and Safety Acts*, impose obligations to “ensure workplace health and safety” on various persons, including:

- employers;
- self-employed persons;
- persons in control of workplaces;
- principal contractors;
- designers, manufacturers, importers and suppliers of plant;
- erectors and installers of certain plant; and
- manufacturers, importers and suppliers of substances.

Workers and other persons at the workplace also have workplace health and safety obligations:

- to comply with instructions given for workplace health and safety at the workplace by the employer at the workplace and, if the workplace is a construction workplace, the principal contractor for workplace health and safety at the workplace;
- for a worker – to use personal protective equipment if the equipment is provided by the worker’s employer and the worker is properly instructed in its use;
- not to wilfully or recklessly interfere with or misuse anything provided for workplace health and safety at the workplace;
- not to wilfully place at risk the workplace health and safety of any persons at the workplace;
- not to wilfully injure himself or herself.

All obligation holders should use the workplace health and safety risk management process to achieve the outcomes prescribed for their role under the Act.
People in different roles, therefore, will use the process in different ways to fulfil their different workplace health and safety obligations.

For example, an employer is a person who engages a worker to do work for him or her. (A “worker” is a person who does work, but is not a contractor.)

An employer should use the workplace health and safety risk management process to consider all hazards that the employer’s workers may encounter while performing work for the employer.

Whereas in relation to persons who are not the employer’s workers, the employer should use the process to consider those hazards that may affect such persons as a result of the employer’s business.

Other obligation holders have much more specific obligations. Therefore, they need to apply the workplace health and safety risk management process to hazards arising from activities relevant to such obligations.

Definitions

The following terms are used throughout this Learner Guide and the course materials:

**Health and safety committee (HSC)** – a group including workers, HSRs and PCBUs (see definition below) that facilitates cooperation between a PCBU and workers to provide a safe place of work.

**Health and safety representative (HSR)** – a worker who has been elected by a work group to represent them on health and safety issues.

**Officer** – an officer within the meaning of section 9 of the Corporations Act 2001 (Cth) other than a partner in a partnership. Broadly, an officer is a person who makes, or participates in making, decisions that affect the whole, or a substantial part, of the organisation’s activities. An elected member of a municipal council acting in that capacity is not an officer of the municipal council. Similarly, a minister of a state, territory or the Commonwealth is not an officer of a responsible agency of the state, territory or Commonwealth.

An officer can also be an officer of the Crown or a public authority if they are a person who makes, or participates in making, decisions that affect the whole, or a substantial part, of the business or undertaking of the Crown or public authority.

**Person conducting a business or undertaking (PCBU)** – 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 selfemployed 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.

**Person with management or control** – a PCBU with management or control over the workplace.

**Plant** – any machinery, equipment, appliance, container, implement or tool.

**Structure** – anything that is constructed, whether fixed or moveable, temporary or permanent and includes buildings, masts, towers, framework, pipelines, transport infrastructure and underground works (shafts or tunnels).

**Substance** – any natural or artificial substance in the form of a solid, liquid, gas or vapour.

**Supply** – supply and re-supply of a thing provided by way of sale, exchange, lease, hire or hire purchase arrangement.

**Volunteer** – a person who acts on a voluntary basis regardless of whether they receive out of pocket expenses.

**Worker** – employees, contractors, subcontractors, outworkers, apprentices and trainees, work experience students, volunteers and PCBU who are individuals if they perform work for the business.

**Work group** – a group of workers who share similar work conditions (e.g. all the electricians in a factory; all people on night shift; all people who work in the loading bay of a retail storage facility).

**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.
Obligations

Designers

The WHS Act defines a designer as a person conducting a business or undertaking that designs a structure that is to be used as, or could reasonably be expected to be used as or at, a workplace. There may be multiple designers who are involved in the design of a structure and have the same duties, for example architects, civil engineers, electrical engineers, mechanical engineers, structural engineers and hydraulic engineers. A builder could also be considered to be a designer if they are involved in altering the design for a building, even after construction work has commenced.

The WHS Act requires a designer to, so far as is reasonably practicable, ensure that the structure is designed to be without risks to the health and safety of persons who:

- at a workplace, use the structure for a purpose for which it was designed
- construct the structure at a workplace
- carry out any reasonably foreseeable activity at the workplace in relation to the manufacture, assembly or use of the structure for a purpose for which it was designed or the proper demolition or disposal of the structure
- are at or in the vicinity of a workplace and who are exposed to the structure at the workplace or whose health may be affected by a use or activity referred to in the preceding dot points
- carry out, or arrange for the carrying out of, any calculations, analysis, testing or examination that may be necessary for the performance of their duties
- give adequate information to each person who is provided with the design for the purpose of giving effect to it concerning:
  - each purpose for which the structure was designed
  - the results of any calculations, analysis, testing or examination
  - any conditions necessary to ensure that the structure is without risks to health and safety when used for a purpose for which it was designed or when carrying out any activity referred to above on request, so far as is reasonably practicable, give current relevant information on the matters referred to above to a person who carries out or is to carry out any of the activities referred to above.
The WHS Regulations require a designer of a structure, or any part of a structure that is to be constructed, to give the person conducting a business or undertaking who commissioned the design a written report that specifies the hazards relating to the design of the structure that, so far as the designer is reasonably aware:

- create a risk to the health or safety of persons who are to carry out any construction work on the structure or plant
- are associated only with the particular design and not with other designs of the same type of structure.

**Persons conducting a business or undertaking who commission construction work**

Under the WHS Regulations, the person conducting a business or undertaking who commissions construction work will usually be the principal contractor. An owner-builder who is a person conducting a business or undertaking may also be the person who commissions construction work.

While there may be persons who represent the person who commissions the construction work or a construction project and coordinate the commissioning (e.g. project managers, construction managers, architects or engineers), the person who actually commissions the work will remain the duty holder.

The WHS Regulations require a person conducting a business or undertaking who commissions construction work in relation to a structure to:

- consult, so far as is reasonably practicable, with the designer of the whole or any part of the structure about how to ensure that risks to health and safety arising from the design during the construction work are eliminated, so far as is reasonably practicable, or if it is not reasonably practicable to eliminate the risks, minimised so far as is reasonably practicable.

  Such consultation must include giving the designer any information that the person has in relation to the hazards and risks at the workplace where the construction work is to be carried out.

- take all reasonable steps to obtain a copy of the designer’s safety report if they did not themselves commission the design of the construction project

- if they engage another person as principal contractor, give the principal contractor any information they have in relation to hazards and risks at or in the vicinity of the workplace where the construction work is to be carried out.
**Principal Contractor**

Under the WHS Regulations, each construction project (i.e. construction work valued at $250,000 or more) must have a principal contractor appointed. There can only be one principal contractor for a construction project at any one time.

The person conducting a business or undertaking that commissions a construction project is the principal contractor, unless the person appoints another person conducting a business or undertaking to be the principal contractor and authorises such person to have management or control of the workplace and discharges the duties of the principal contractor.

A principal contractor can be a sole proprietor of a business or undertaking (e.g. an ownerbuilder), a company or a partnership. In the case of a company, the company has the duties of the principal contractor rather than the individual managers who are employed by the company. In the case of a partnership, each partner is responsible for the duties of the principal contractor.

An individual person, for example the owner of residential premises who wishes to have construction work carried out in relation to the premises, will not be a principal contractor unless they are conducting a business or undertaking. They can engage a person conducting a business or undertaking to carry out a construction project in relation to the residential premises and that person will be the principal contractor.

The WHS Regulations require a principal contractor to carry out a number of specific duties in relation to:

- appropriate signage for the construction project that:
  - show the principal contractor’s name and telephone contact numbers (including an out of hours telephone number)
  - show the location of the site office for the project, if there is one
  - is clearly visible from outside the workplace, or the work area of the workplace, where the construction project is being undertaken

- the WHS management plan for the workplace

- arrangements for ensuring compliance at the workplace with the requirements for general workplace management in Part 3.2 of the WHS Regulations

- managing risks associated with the following:
  - the storage, movement and disposal of construction materials and waste
  - the storage of plant that is not in use
o traffic in the vicinity of the workplace that may be affected by construction work essential services at the workplace.

Persons who have management control of a workplace at which construction work is carried out

A person with management or control of a workplace at which construction work is carried out has obligations under the WHS Regulations in relation to:

- ensuring, so far as is reasonably practicable, that the workplace is secured from unauthorised access, having regard to all relevant matters, including risks to health and safety arising from unauthorised access to the workplace, the likelihood of unauthorised access occurring and, to the extent to which it cannot be prevented, how to isolate hazards within the workplace

- obtaining essential services information when excavation work is to be carried out and providing it to any person engaged to carry out the excavation work.

Persons conducting a business or undertaking that includes the carrying out of high risk construction work

The WHS Regulations place obligations on persons conducting a business or undertaking that includes the carrying out of high risk construction work to:

- ensure that a Safe Work Method Statement (SWMS) is prepared before the proposed work commences

- make arrangements to ensure that the high risk construction work is carried out in accordance with the SWMS

- ensure that a copy of the SWMS is given to the principal contractor before the work commences

- ensure that the SWMS is reviewed and revised if necessary

- keep a copy of the SWMS until the high risk construction work is completed.
Persons conducting a business or undertaking

Apart from the specific duties outlined above, a person conducting a business or undertaking must:

- manage risks to health and safety when excavation work is being carried out
- comply with the requirements of the WHS Regulations regarding the excavation of trenches
- comply with the requirements of the WHS Regulations in relation to general construction induction training.

Officers

Officers, for example company directors, have a duty under the WHS Act to exercise due diligence to ensure that the business or undertaking complies with its duties and obligations under the WHS Act and Regulations. This includes taking reasonable steps to ensure that the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks that arise from the construction work.

Workers

Workers have a general duty under the WHS Act to take reasonable care for their own health and safety, and they must not adversely affect the health and safety of other persons.

Workers must comply with any reasonable instruction and cooperate with any reasonable policy or procedure relating to health and safety at the workplace.

Workers have specific obligations under the WHS Regulations to keep their general construction induction training card available for inspection. If the worker is awaiting a decision on their application for a general construction induction training card, the worker must keep their general induction training certification available for inspection.
Other Persons

The WHS Act requires other persons who are present at the workplace, for example visitors to construction sites, to take reasonable care for their own health and safety. They must also take reasonable care that their acts or omissions do not adversely affect the health and safety of other persons and comply, so far as is reasonably practicable, with any reasonable instruction given to them by the person conducting the business or undertaking.

Obligations of Designers of Plant

One of the specific obligations of a designer of plant, for example, is to ensure that the plant is designed to be safe when used properly. Therefore, the designer should apply the workplace health and safety risk management process to achieve the outcome of managing exposure to risks in relation to hazards that may arise when the plant is used properly and for any foreseeable misuse.

A designer of plant for use at a relevant place for the plant has an obligation to ensure that:

the plant is designed to be safe and without risk to health when used properly; and if the designer gives the design to another entity that is to give effect to the design, the design is accompanied by information about the way the plant must be used to ensure health and safety.

Also, a designer of plant for use at a relevant place for the plant has an obligation to take the action to prevent the use of unsafe plant anywhere.

Obligations of Manufacturers of Plant

A manufacturer of plant for use at a relevant place for the plant has an obligation to ensure that:

the plant is manufactured to be safe and without risk to health when used properly; and the plant, when manufactured, is tested and examined to ensure it has been manufactured to be safe and without risk to health when used properly.

When the plant, when supplied to another person, is accompanied by information about the way the plant must be used to ensure health and safety.
A manufacturer of plant for use at a relevant place for the plant has an obligation to prevent the use of unsafe plant anywhere.

**Obligations of Suppliers of Plant**

A supplier of new plant for use at a relevant place for the plant has an obligation to:

- examine and test the plant to ensure the plant is safe and without risk to health when used properly, or:

- to ensure the manufacturer of the plant has given an assurance that the plant has been examined and tested to ensure it is safe and without risk to health when used properly; and

- to ensure the plant is accompanied by information about the way the plant must be used to ensure health and safety.

A supplier of used plant for use at a relevant place for the plant has an obligation:

- to take all reasonable steps to ensure the plant is safe and without risk to health when used properly; and

Example of reasonable steps a supplier of used plant might take:

A reasonable step for a supplier to take might be to examine and test the plant to establish that it will be safe and without risk to health when used properly and to ensure the plant is accompanied by information about the way the plant must be used to ensure health and safety, if the information is available.

Also, a supplier of plant for use at a relevant place for the plant has an obligation to take the action to prevent the use of unsafe plant anywhere.

If the supplier is supplying plant by hiring it to another person, the supplier is obliged only to have the information available at the point of hire.

**Issues about which there is a regulation, advisory standard, industry code of practice or guidance material**

If there is a regulation, advisory standard, industry code of practice and/or guidance material made about the risk, refer to the advice provided in that document(s).

If a regulation exists, you **MUST** do what the regulation says to discharge your workplace health and safety obligation.
Written Materials and Instructions

Advisory standard or industry code of practice

If there is an advisory standard or industry code of practice about a hazard that you have identified at your workplace, you may find it more convenient to use that document which specifically tailors the risk management process to the hazard at your workplace than to use this general risk management standard.

Guidance material

Although guides are not part of the legislative framework, they can assist you to meet your workplace health and safety obligation. Section 27 of the Act states that if there is no regulation, advisory standard or industry code, a person may choose “any appropriate way” to discharge the person’s obligation, provided the person “takes reasonable precautions and exercises proper diligence to ensure the obligation is discharged”.

Following the advice provided in guidance material will be proof of taking reasonable precautions and exercising proper diligence in relation to the risk(s) discussed in the guidance material.

However, guidance material may not cover all the risks or all forms of the risk associated with an identified hazard. In such circumstances, you will still need to take reasonable precautions and exercise proper diligence in relation to aspects of the risk not covered by the guide in order to meet your workplace health and safety obligation.

To find out whether there are any regulations, advisory standards, industry codes of practice or guidance material for any of the hazards identified at your workplace, you can:

- refer to the Workplace Health and Safety Regulations (for regulatory information only);
- access the Department of Employment, Training and Industrial Relation’s home page (www.detir.qld.gov.au) and then click on health and safety;
- contact the Division of Workplace Health and Safety, 1300 369 915;
- contact your local district office of the Division of Workplace Health and Safety;
- refer to the Divisional publication, *Publications Catalogue*; and/or
consult your union, employer body, professional association and/or health and safety consultancy.

Australian Standards

These standards are critical to Occupational Health and Safety as they guarantee safe manufacturing of products and machinery.

They also specify the minimum safe work procedures and practices when undertaking defined work tasks.

Like the regulations, they further identify methods of complying with the legislation.

Codes of Practice

More general information on what are considered and accepted safe work practices within an industry, profession or in high risk cases, specific tasks.

They are not law, however will be considered as evidence in a Court, inquiry or investigation as evidence as what constitutes an acceptable industry practice.

Administration of the Act

The legislation is administered by the Minister of the appropriate department responsible for OHS in each state or territory.

Workplace Health and Safety Council

The Minister takes advice from this council, consisting of Employer Organisations, Government Representatives, Unions and subject matter experts.

They meet to establish new laws, codes and practices for the various industries they represent.

A large function of the Workplace Health and Safety Council is to promote education in all areas of Health and Safety.
Duty of Care

Obligations of Employers, Employees and Others

Duty of care is often used as a legal term and most people would be aware of their duty of care in regards to occupational health and safety. However, duty of care applies to a range of situations and can be briefly described as an obligation that a sensible person would have in the circumstances when acting toward others and the public. If the actions of a person are not made with care, attention, caution, and prudence, their actions are considered negligent.

Each of us has a responsibility in the workplace to keep safe.

Keep safe ourselves, keep safe workmates and keep safe the general public or anyone who comes into or is affected by the workplace.

Employers have identified responsibilities in the areas of:

- The work environment must ensure the health and safety of the employees and visitors
- Plant and machinery are adequately maintained and the employed systems of work are as far as is reasonably practicable, safe and without risk to the health and safety of any person.
- Work duties will not affect the health and safety of others

Employees have identified and defined responsibilities and the law imposes obligations on employees to:

- Comply to the instructions given for workplace health and safety
- use appropriately all personal protective equipment
- not interfere with or misuse anything provided for workplace health and safety
- not place at risk any person at the workplace
- not wilfully injure themselves

The responsibilities of others include:

- Must not wilfully or recklessly interfere with anything provided in the interest of health and safety
- Adhere to safety directions given by the workplace principal or their representatives for the workplace concerned
Safe Work Practices

Safe work practices not only include guarding against injury and the misuse or incorrect use of equipment, they also relate to the general employment and workplace conditions that exist on a site.

These conditions include:

**Housekeeping**

Principal contractors or persons responsible for a construction workplace, play an important role in ensuring the orderly conduct of construction work.

The principal contractor needs to implement and maintain safe housekeeping practices, including:

- appropriate, safe and clear access to and from the workplace
- safe systems for collecting, storing and disposing of excess or waste materials
- adequate space for the storage of materials and plant
- an adequate number of safety signs that are kept in good condition.

Appropriate signs may include signs about

- the direction to the site office or site amenities
- where first aid and fire extinguishing equipment are kept
- the means of access must be kept clear
- where hazardous substances are kept
- who the principal contractor is
- head and foot protection must be worn
- authorisations required for the site.

Relevant people must:

- implement and maintain the safe housekeeping practices that apply to their work
- manage risks from protruding objects such as exposed nails or vertical reinforcing steel.

Employers must ensure all workers on site are instructed to follow the safe housekeeping practices.
Following is an extract from the WHS website that identifies housekeeping responsibilities:

**Preventing bullying or harassment**

Following is an extract from the Workplace Health and Safety website which assists in identifying workplace harassment.

**What is workplace harassment?**

Workplace harassment is where a person is subjected to behaviour, other than sexual harassment that:

- is repeated, unwelcome and unsolicited
- the person considers to be offensive, intimidating, humiliating or threatening
- a reasonable person would consider to be offensive, humiliating, intimidating or threatening.

Workplace harassment can be committed by:

- an employer
- worker
- co-worker
- group of co-workers
- client or customer or
- a member of the public.

Workplace harassment covers a wide range of behaviours ranging from subtle intimidation to more obvious aggressive tactics, including:

- abusing a person loudly, usually when others are present
- repeated threats of dismissal or other severe punishment for no reason
- constant ridicule and being put down
- leaving offensive messages on email or the telephone
- sabotaging a person's work, for example, by deliberately withholding or supplying incorrect information, hiding documents or equipment, not passing on messages and getting a person into trouble in other ways
- maliciously excluding and isolating a person from workplace activities
- persistent and unjustified criticisms, often about petty, irrelevant or insignificant matters
- humiliating a person through gestures, sarcasm, criticism and insults, often in front of customers, management or other workers
- spreading gossip or false, malicious rumours about a person with an intent to cause the person harm.
- Management action may be considered as workplace harassment where it is used:
  - primarily to offend, intimidate, humiliate or threaten workers
  - to create an environment where workplace harassment is more likely to occur
Smoking

Site rules will be established in respect to smoking on site, there exist laws which specifically relate to smoking in public areas and in confined spaces.

Smokers need to be mindful and respectful of others in the workplace considering the effect of their actions on others.

Basically, this can be considered under the general duty of care obligations of an individual.

Use of drugs and alcohol

It remains each individual's responsibility to present themselves in a fit state for the work duties they are required to perform. A person must not enter a workplace if they are under the influence of drugs and or alcohol to a point where it will affect their performance.

Safety in this respect is the individual's responsibility however each of us has an obligation to not allow drug or alcohol affected persons to be present in the workplace.

Workplace Facilities

The WHS Regulations require that a person conducting a business or undertaking be responsible for:

- providing a safe working environment
- providing and maintaining adequate and accessible facilities
- providing first aid
- emergency planning
- providing workers with PPE
- remote or isolated work
- managing risks associated with airborne contaminants
- managing risks associated with hazardous atmospheres, including ignition sources
- storage of flammable and combustible substances
- managing risks associated with falling objects.

Where required, the risk management process outlined in Chapter 3 of this Code must be followed to manage the associated risks.
A person conducting a business or undertaking must ensure, so far as is reasonably practicable, that:

- the layout of the workplace allows, and is maintained to allow, persons to enter and exit the workplace and move within it safely, both under normal working conditions and in an emergency
- work areas have space for work to be carried out safely
- floors and other surfaces are designed, installed and maintained to allow work to be carried out safely
- lighting enables each worker to carry out work safely, persons to move around safely and safe evacuation in an emergency
- ventilation enables workers to carry out their work without risk to their health and safety
- workers exposed to extremes of heat or cold are able to carry out work without risk to their health and safety, and
- work in relation to or near essential services (such as gas, electricity, water, sewerage and telecommunications) do not affect the health and safety of persons at the workplace.

An untidy workplace can cause injuries. Good housekeeping practices are essential to ensure a safe workplace, for example:

- the entry, exits and access ways in the workplace are kept clean and clear of materials and waste
- a safe system implemented for collecting, storing and disposing of excess or waste materials by providing adequate rubbish bins and recycling bins
- enough area is allocated to safely store materials or plant for the construction work
- temporary electrical supply cables are positioned so as not to present tripping hazards (off the floor or away from access routes as far as is reasonably practicable)
- materials are safely stacked away from fences and hoardings and located to minimise rehandling and reduce transport distances
- combustible and flammables substances and other hazardous chemicals are safely stored and clearly identified
- protruding objects such as exposed nails etc. are removed or covered.
For a construction project, principal contractors must also ensure, so far as is reasonably practicable, that the storage, movement and disposal of construction materials and waste at the workplace are without risks to health and safety.

Further guidance on specific control measures is located in the Code of Practice: Managing the Work Environment and Facilities.

A person conducting a business or undertaking must ensure, so far as is reasonably practicable:

- the provision of adequate facilities for workers, including toilets, drinking water, washing facilities and eating facilities, and
- that the facilities are maintained in good working order and are clean, safe and accessible.

Given the often temporary and dynamic nature of construction workplaces, how these facilities are provided and who provides them will vary at workplaces that carry out construction work.

When providing facilities, all relevant matters must be considered, including:

- the nature of the work being carried out at the workplace
- the nature of the hazards at the workplace
- the size, location and nature of the workplace
- the number and composition of the workers at the workplace.

Affected workers must also be consulted when making decisions about the adequacy of facilities for the welfare of workers.

**DECIDING WHAT FACILITIES ARE REQUIRED**

To decide what facilities are required at any particular construction workplace, a person conducting a business or undertaking must consider:

- the nature of the work being carried out. For example, if workers are required to change into protective clothing to use hazardous chemicals, it may be reasonably practicable to provide change rooms
- the size, location and nature of the workplace.
  - For example: where there are existing suitable facilities available (e.g. a factory shut-down), arrange with the owner to use these facilities
- where the construction work will be carried out in a remote or isolated area that is not connected to essential services, portable toilets, drinking water and washing facilities should be provided
- the number and composition of the workers at the workplace.
For example: facilities need to be accessible during the hours that shift workers are working where there are both male and female workers, separate toilet, washing and shower facilities may be required.

Other factors that should be considered:

- Toilets, washing and shower facilities must not be used for any other purposes, for example storing of dangerous goods. Closets and urinals should be washed and kept in a clean, hygienic condition.

- Adequate washing facilities that are suitably drained, and wash basins/troughs should be supplied with hot and cold running water.

- Personal cleaning products such as soap and towels or air dryers should be supplied.

NUMBER OF TOILETS

For workplaces within buildings, the National Construction Code of Australia sets out the ratio of toilets to the number of workers, and the specifications for toilets.

Generally, separate toilets should be provided in workplaces where there are both male and female workers. However, one unisex toilet may be provided in workplaces with both male and female workers where:

- the total number of people who normally work at the workplace is 10 or less
  there are two or less workers of one gender.

For example, a construction workplace with two male and eight female workers or with one female and three male workers could have a unisex toilet because there are 10 or fewer workers in total and two or fewer workers of one gender.

Any female toilet, including unisex facilities, should have adequate means for disposing of sanitary items.

For all other construction workplaces, separate toilets should be provided using the following ratios:

<table>
<thead>
<tr>
<th>Workers</th>
<th>Closet Pan(s)</th>
<th>Urinals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>1 per 15 males (or fraction of)</td>
<td>1 per 20 males (or fraction of)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: A urinal is not required for less than 10 workers. If a slab urinal is provided, each 600 mm shall be regarded as one urinal.</td>
</tr>
<tr>
<td>Females</td>
<td>1 per 10 females (or fraction of)</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Meaning of High Risk Construction Work

High Risk Construction Work is construction work that:

- involves a risk of a person falling more than 2m;
- is carried out on a telecommunication tower;
- involves demolition of an element of a structure that is load-bearing or otherwise related to the physical integrity of the structure;
- involves, or is likely to involve, the disturbance of asbestos;
- involves structural alterations or repairs that require temporary support to prevent collapse;
- is carried out in or near a confined space;
- is carried out in or near a shaft or trench with an excavated depth greater than 1.5m; or a tunnel; or
- involves the use of explosives;
- is carried out on or near pressurised gas distribution mains or piping;
- is carried out on or near chemical, fuel or refrigerant lines;
- is carried out on or near energised electrical installations or services;
- is carried out in an area that may have a contaminated or flammable atmosphere;
- involves tilt-up or precast concrete;
- is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians;
• is carried out in an area at a workplace in which there is any movement of powered mobile plant;

• is carried out in an area in which there are artificial extremes of temperature;

• is carried out in or near water or other liquid that involves a risk of drowning;

• involves diving work

**Managing Risk in the Construction Workplace**

A person conducting a business or undertaking must manage risks associated with the carrying out of construction work.

In order to manage risk under the WHS Regulations, a duty holder must:

• identify reasonably foreseeable hazards that could give rise to the risk

• eliminate the risk, so far as is reasonably practicable

• if it is not reasonably practicable to eliminate the risk, minimise the risk so far as is reasonably practicable by implementing control measures

• maintain the control measure so that it remains effective, and

• review, and if necessary revise, control measures so as to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.

In the next module we will consider in depth, the **Risk Management** process.
Safe Work Method Statements

A work method statement must be prepared for each high risk activity undertaken on a construction workplace.

A Safe Work Method Statement (SWMS) must be prepared before high risk construction work commences.

A person conducting a business or undertaking must ensure the high risk construction work is carried out in accordance with the SWMS for the work.

A work method statement describes how certain work activities are to be undertaken so that workplace health and safety will be ensured.

Specifically, the statement documents the risk management process in relation to certain hazards associated with undertaking these work activities.

A work method statement must be prepared for each high risk construction activity that will be undertaken on the site.

Generally, it will be the responsibility of the person undertaking the high risk activity to prepare and present the work method statement.

The Principal Contractor must not allow the relevant person to start work on a high risk activity until the work method statement is presented and is accepted, additionally, work must not commence or continue unless it is undertaken in a way which complies with the work method statement.

What is a SWMS?

The primary purpose of a SWMS is to enable supervisors, workers and any other persons at the workplace to understand the requirements that have been established to carry out the high risk construction work in a safe and healthy manner. It sets out the work activities in a logical sequence and identifies hazards and describes control measures.

Any activity, no matter how simple or complex, can be broken down into a series of basic steps that will permit a systematic analysis of each part of the activity for hazards and potential accidents. The description of the process should not be so broad that it leaves out activities with the potential to cause accidents and prevents
proper identification of the hazards, nor is it necessary to go into fine detail of the tasks.

The SWMS must be able to be easily read by those who need to know what has been planned to manage the risks, implement the control measures and ensure the work is being carried out in accordance with the SWMS.

Relevant persons include:

- the supervisor of the high risk construction work
- the worker carrying out the high risk construction work
- the principal contractor (if it is a construction project) or the person who has management and control over the high risk construction work.

**Who is responsible for preparing an SWMS?**

A person conducting a business or undertaking that includes the carrying out of high risk construction work must ensure a SWMS is prepared or has already been prepared by another person before the proposed work commences.

The person responsible for carrying out the high risk construction work is best placed to prepare the SWMS in consultation with workers who will be directly engaged in the high risk construction work. This person understands the work being carried out, is responsible for providing training, instruction and supervision to the workers undertaking the work and can ensure the SWMS is implemented, monitored and reviewed correctly.

There may be situations where there are different types of high risk construction work occurring at the same time at the same workplace, for example work is being carried out:

- where there is a risk of a person falling more than 2 metres
- on a trench with an excavated depth greater than 1.5 metres.

If this is the case, it is possible for one SWMS to be prepared to cover all the high risk construction work being carried out at the workplace. Alternatively, a separate SWMS can be prepared for each type of high risk construction work. If separate SWMS are prepared, thought must be given to how the different work activities may impact on each other and whether this may lead to inconsistencies between the various control measures.
Preparing a SWMS

When preparing a SWMS, the following must be taken into account:

- the circumstance at the workplace that may affect the way in which the high risk construction work is carried out
- on a construction project, the WHS management plan prepared by the principal contractor.

The SWMS must:

- identify the work that is high risk construction work
- specify hazards relating to the high risk construction work and risks to health and safety associated with those hazards
- describe the measures to be implemented to control the risks
- describe how the control measures are to be implemented, monitored and reviewed.

A SWMS should also include the following information:

- the name of the person conducting a business or undertaking, their address and ABN (if they have one)
- details of the person(s) responsible for ensuring implementation, monitoring and compliance with the SWMS

if the work is being carried out at a construction project:

- the name of the principal contractor
- the address where the high risk construction work will be carried out
- the date the SWMS was prepared and the date it was provided to the principal contractor
- the review date (if any).

A SWMS may also include the names of workers that have been consulted on the content of the SWMS, the date the consultation occurred and the signature of each worker acknowledging their participation in this consultation and the opportunity to discuss the proposed measures.

The content of a SWMS should provide clear direction on the control measures to be implemented. There should be no statements that require a decision to be made by
supervisors or workers. For example, the statement ‘use appropriate PPE’ does not
detail the control measures. The control measures should be clearly specified and
the example of a completed SWMS template as provided in the Code of Practice,
Construction Work, illustrates how this may be done.

**SWMS Sample**

<table>
<thead>
<tr>
<th>Principal Contractor (PC)</th>
<th>Work Location</th>
<th>Work Manager</th>
<th>Contact Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Name, ABN Office Address]</td>
<td>[Address]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Activity</th>
<th>High Risk Construction Work</th>
<th>Have worker been consulted about the SWMS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Job description]</td>
<td>[High risk work]</td>
<td>[Yes/No]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Person Responsible for ensuring compliance with SWMS</th>
<th>Person Responsible for reviewing SWMS</th>
<th>Date received</th>
<th>Workers name</th>
<th>Workers sign off</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Name]</td>
<td>[Name]</td>
<td>[Date]</td>
<td>[Name]</td>
<td>[Signature]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What are the hazards and risks?</th>
<th>What are the control measures?</th>
<th>What will you do to control the risk?</th>
</tr>
</thead>
<tbody>
<tr>
<td>[What are the hazards and risks?]</td>
<td>[Control measures and how they will be used]</td>
<td>[Action plan]</td>
</tr>
</tbody>
</table>

The complete sample template is available in the Appendix and resources section of
the course.
WHS Management Plans

All construction projects (i.e. construction work costing $250,000 or more) must have a written WHS management plan prepared by the principal contractor before work on the construction project commences.

What is a WHS Management Plan?

A WHS management plan sets out the arrangements to manage work health and safety on a construction project. The intention of a WHS management plan is to ensure the risks associated with a complex construction project are managed, as there are usually many contractors and subcontractors involved and circumstances can change quickly from day to day.

The WHS management plan must be in writing. It should be easily understood by workers (including contractors and subcontractors). It may not be necessary to communicate the entire WHS management plan to all workers, however, they must be made aware of the parts that are applicable to the work they are carrying out.

Preparing a WHS management plan

The level of detail required for a WHS management plan will depend on how complex the workplace is (in particular, the number of contractors at the workplace at any one time) and the risks involved in the work.

The WHS management plan prepared by the principal contractor must include:

- the names, positions and health and safety responsibilities of all persons at the workplace whose positions or roles involve specific health and safety responsibilities in connection with the construction project
- the arrangements in place between any persons conducting a business or undertaking at the workplace for consultation, cooperation and coordination of activities in relation to compliance with their duties under the WHS Act and Regulations
- the arrangements in place for managing any work health and safety incidents that occur
- any site-specific health and safety rules and the arrangements for ensuring that all persons at the workplace are informed of these rules, and
the arrangements to collect and assess, monitor and review the SWMS.

The WHS management plan may include the following information:

- details of the person commissioning the construction work, for example their name, ABN (if available) and address

- details of the principal contractor

- details of the construction project, for example address of the workplace, anticipated start and end date and a brief description of the type of construction work that the WHS management plan will cover

- details on how contractors and subcontractors will be managed and monitored, including how the principal contractor intends to implement and ensure compliance with the WHS management plan such as checking on the performance of contractors and subcontractors and how non-compliance will be handled

- details on how the risks associated with falls, falling objects and any high risk construction work that will take place on a construction project will be managed.

It may also include information on:

- the provision and maintenance of a hazardous chemicals register, safety data sheets and hazardous chemicals storage

- the safe use and storage of plant

- the development of a construction project traffic management plan

- obtaining and providing essential services information

- workplace security and public safety

- ensuring workers have appropriate licences and training to undertake the construction work.
Construction Workplace Safety Plans

The Workplace Health and Safety Management Plans as discussed in the last section are mandatory for Construction Projects (value of $250,000.00 or more) are mandatory.

For smaller projects however, it is strongly suggested that the person in control of the construction site prepare and maintain a Workplace Safety Plan.

This plan can be less formal than a Workplace Health and Safety Management Plan, but should be constructed so as to provide a means of documenting procedures, policies and site rules at smaller construction worksite.

It will include maintaining a register of general safety induction, specific site hazards and emergency response contacts and procedures.
Construction Safety Plans

A construction safety plan can assist persons responsible for a construction workplace, to manage their workplace health and safety obligations.

A responsible person should prepare a construction safety plan before construction work starts.

The plan should state:

- workplace address
- name and address of the person in control of the site
- expected start date
- estimated duration of the work
- type of construction
- site rules
- emergency procedures
- public safety strategies.

The plan should be written so it is easy to understand. It should be available for the length of the project.

The responsible person should sign and date work method statements that have been received and keep them with the plan, as well as monitor their implementation.

The responsible person should not allow work to start unless:

- the plan has been discussed with or a copy given to all relevant people
- the plan is available or readily available for inspection.

The plan must be amended if there are changes in how risks will be managed.

The responsible person should inform any affected person of the change.
Examples of site rules may include:

All visitors to the site must report immediately to the site office before entering the site.

Safety boots and goggles must be worn in designated areas of this site.

A person must not consume alcohol on this site.

Do not use explosive power tools without first advising the site supervisor or the principal contractor.

Examples of emergency procedures may include:

- If there is an emergency evacuation, a siren will sound and all personnel must assemble on the corner of McPhail Street and Beatie Roads to await further instructions and must in no circumstance, return to the site until so directed by the Site Supervisor.

- The periodic testing of emergency lighting installations and early warning systems as appropriate.

- The periodic testing of fire equipment

An example of controls included for the purpose of protecting occupants of adjacent properties and areas may include:

- A gantry with a hoarding will be provided over the footpath to protect people from falling objects
The construction safety plan should state:

✓ The common plant to be provided

✓ The construction safety plan must be written in a way likely to be understood by all persons likely to be performing the construction work

✓ The construction safety plan must be signed and dated by the Principal Contractor.

An example of common plant could include:

✓ Perimeter guard railing
✓ 1800mm high hoarding
General Construction Work Requiring Licenses, Certificates or Tickets

Some tasks undertaken in construction workplaces require the operator to hold a certificate, license or ticket which documents the operators completion and or demonstration of competence in performing specified tasks or operation of specified machinery.

These licenses, tickets and certificates include but are not limited to:

- Scaffolding
- Dogging
- Rigging
- Crane and Hoist Operations
- Load Shifting Equipment
- Forklift Operations

The Workplace Health and Safety Regulations, details the specific requirements that cover licensing and tickets required that are relevant to construction work.

Scaffolding certificates

Scaffolding is the erection, alteration or dismantling of a temporary structure, specifically erected to support platforms.

Workplace Health and Safety Regulation defines scaffolding as a prescribed occupation which means that a certificate is required, to undertake any work related to this area. Certificate requirements also apply where a person or object could fall more than four metres from the scaffolding.

Dogging Work

Workplace Health and Safety Regulations defines a person undertaking dogger work to include:

- the application of slinging techniques including the selection and/or inspection of lifting gear
- the directing of a crane/hoist operator in the movement of a load when the load is out of the operator's view.

Slinging techniques are the exercising of judgement in relation to the suitability and condition of lifting gear, and the method of slinging, by consideration of the nature of the load, its mass and its centre of gravity.
Workplace Health and Safety Regulations classifies dogging (DG) as high risk work and provides the units of competency required for dogging work.

To be competent the person should be able to:

- Plan and prepare work
- Complete dogging work

**Rigging Work**

Rigging work involves the use of mechanical load shifting equipment and associated gear to move, place or secure a load including plant, equipment or members of a building or structure and to ensure the stability of those members and for the setting up and dismantling of cranes and hoists.

Rigging does not include any work performed by operators or drivers of mechanical loadshifting equipment, unless the work is part of the process of setting up or dismantling cranes and hoists.

Workplace Health and Safety Regulations defines rigging as a prescribed occupation which means that a licence (certificate) is required, to undertake any work related to this area.

**Crane Licences**

Workplace Health and Safety Regulations lists crane operation as a prescribed occupation which means that a licence is required, to undertake any work related to this area.

Any person wishing to obtain a crane operators licence should be aware that there are eleven types that can be issued:

- Self-erecting tower cranes (CS)
- Tower crane (CT)
- Derrick crane (CD)
- Portal boom crane (CP)
- Bridge or gantry (CB)
- Vehicle loading crane (CV)
- Non-slewing mobile crane (CN)
• Slewing mobile cranes (up to 20t, up to 60t, up to 100 t, over 100t)

**High risk work - crane and hoist operation**

Bridge or gantry crane, self-erecting tower crane, tower crane, derrick crane, portal boom crane, vehicle loading crane, non slewing mobile crane, slewing mobile crane, elevating work platform, concrete placing boom, materials hoist and materials

**Load Shifting Equipment**

Examples of load shifting equipment includes:

• combination front-end loader and backhoe
• skid steer loader,
• excavator
• crane or personnel hoists

**Pressure Equipment**

**Licence to perform high risk work**

On 1 January 2012, with the commencement of the Work Health and Safety Acts, there have been a few changes to existing occupation licensing arrangements for high risk work (HRW).

The states and territories agreed in most cases to laws and regulations which are consistent across the nation.

Below is a summary of those changes, they are not definitive and you should check your local regulator for their latest requirements.

**Reach stacker (RS) greater than 3 tonnes capacity**

From 1 January 2012, a reach stacker will be included as a class of high risk work (HRW) and will require a HRW licence
Can bridge and gantry crane operators sling their own load?

Under the new WHS legislation the operator of a bridge and gantry remote control crane (LBG) can continue to sling a load under the limited circumstances listed below:

Does a slewing mobile crane licence cover the operation of vehicle loading cranes and non-slewing mobile cranes?

Following consultation with work health and safety regulators in other jurisdictions, it has been determined that certain encompassment arrangements that existed under the former workplace health and safety legislation will be maintained.

What happens to operator tickets issued prior to July 2008?

WHSQ will continue to convert only those classes that are issued as a HRW licence.

Operators who hold tickets for earthmoving or particular crane (EPC) classes should retain this as evidence of having undertaken training and assessment in the operation of the particular plant.

Further information

All existing categories of HRW will continue to be licensed under the current arrangements of photographic and renewable licensing, with the first renewal cycle for Queensland occurring from 1 July 2013.

Further information can be obtained from your local regulator and example of the information and fact sheets they will provide can be accessed at:

**Basic Risk Management**

**What is involved in managing risks?**

Effective risk management starts with a commitment to health and safety from those who operate and manage the business or undertaking. You also need the involvement and cooperation of your workers, and if you show your workers that you are serious about health and safety they are more likely to follow your lead.

To demonstrate your commitment, persons in control of a construction workplace must:

- get involved in health and safety issues
- invest time and money in health and safety
- ensure health and safety responsibilities are clearly understood.

**Reasonably Practicable**

The guiding principle of the WHS Act is that all people are given the highest level of health and safety protection from hazards arising from work, so far as is reasonably practicable.

The term ‘reasonably practicable’ means what could reasonably be done at a particular time to ensure health and safety measures were in place.

In determining what is reasonably practicable, there is a requirement to weigh up all relevant matters including:

the likelihood of a hazard or risk occurring (i.e. the probability of a person being exposed to harm)

the degree of harm that would result if the hazard or risk occurred (i.e. the potential seriousness of injury or harm)

what the person concerned knows, or ought to reasonably know, about the hazard or risk and ways of eliminating or minimising it

the availability of suitable ways to eliminate or minimise the hazard or risk

the cost of eliminating or minimising the hazard or risk.

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.
A step-by-step process

A safe and healthy workplace does not happen by chance or guesswork. You have to think about what could go wrong at your workplace and what the consequences could be.

Then you must do whatever you can (in other words, whatever is ‘reasonably practicable’) to eliminate or minimise health and safety risks arising from your business or undertaking.

This process is known as risk management and involves the four steps set out in the Code of Practice 2011, How to manage work health and safety risks.

- identify hazards – find out what could cause harm
- assess risks if necessary – understand the nature of the harm that could be caused by the hazard, how serious the harm could be and the likelihood of it happening
- control risks – implement the most effective control measure that is reasonably practicable in the circumstances
- review control measures to ensure they are working as planned.

Risk management is the systematic approach to managing hazards found on a typical construction work site.

It is a four step process which is employed after preparing for the process by defining the context.

The preparation you will need to do in defining the context includes means identifying the tasks, activities, processes and practices which will be employed on your site during the construction process and general site activities.

Defining the context involves identifying:

- work processes, practices, activities and tasks that will be analysed in the risk management process and the steps involved;
- the people involved in carrying out those work processes and in what capacity;
- whether the people involved are sufficiently competent, skilled experienced; and
- what items of plant or material are to be used
- any site specific hazards such as watercourses, steep site areas, confined spaces etc
The process must be circular, that is it must be continually applied, modified and improved throughout the course of the project.

The most common reasons for modifying a control are:

1. Deficiency observed in the original control (it isn’t working)
2. There is a change in the way a task is being completed (could include different plant and equipment)

Workplace health and safety risk management is an ongoing process. It should be undertaken at various times, including:

- now, if you have not done it before;
- when a change occurs;
- after an incident (and/or “near miss”); and
- at regularly scheduled times appropriate to your workplace.

**Now**
If you have not worked through a process to make sure health and safety is managed at your workplace, you should do so now.

**When change occurs**
Whenever you make a change at the workplace, check for new hazards and risks, and then continue through the process. Any modifications made as a result of this process should be discussed with those workers affected. Some examples of workplace changes are:

- starting a new project;
- changing work procedures;
- adding or changing tools, equipment or machinery, their locations or the way they are used;
- obtaining information about a previously unknown design or manufacturing fault, or about a previously unidentified hazard;
- introducing new people with different skill levels; and
- changing a control measure after reviewing its effectiveness.

**After an incident**

If an incident (or near miss) occurs, review the workplace health and safety risk management process in relation to the relevant task to determine whether changes are needed and what those changes should be. Such changes should be discussed with all workers performing the task.

**Regularly**

You should repeat the whole workplace health and safety risk management process at regularly scheduled intervals appropriate to your workplace.

The period between repeating the process will depend on the nature of the hazards and associated risks and the degree of change likely in the work activity. Generally, you should undertake the process more often if there is a high level of risk involved with your work activities compared with a low level of risk.

**Consultation**

You should consult with your workers at each stage of the workplace health and safety risk management process.

This will help you achieve better health and safety outcomes from the risk management process.

As an owner-builder, this means talking to your contractors and working with them to identify health and safety issues which will affect:

- You
- Your Contractors
- Visitors to the site
- General Public
Special note for Owner Builders

As person responsible for a construction workplace, it is possible that construction work sites may not be your usual environment.

Each year owner-builders are injured or even killed on their site due to both inexperience and unfamiliarity with the dangers associated with working on building sites.

This is consistent with general workplace health and safety statistics which have identified young people and new entrants to the construction industry as those most at risk or likely to be involved in an incident or accident on site.

If you are unfamiliar with construction worksites, use this document as a guide to identifying construction workplace hazards and potentially dangerous situations.

Talk to your contractors, read relevant fact sheets, codes of practice and safety information to make yourself familiar with the hazards on your site.

Visit your relevant authority’s website to discover what’s new or developing trends.

If it is a complex site, it may be necessary to engage a safety professional.

Most of all be vigilant in looking for and acting upon hazards or dangerous situations on your site.

If you see a dangerous act or an unsafe work practice, do something about it.

Identifying hazards

The first step in the risk management process is to identify the hazards associated with construction work. Examples of hazards include:

the construction workplace itself, including its location, layout, condition and accessibility

the use of ladders, incorrectly erected equipment, unguarded holes, penetrations and voids, unguarded excavations, trenches, shafts and lift wells, unstable structures such as incomplete scaffolding or mobile platforms, fragile and brittle surfaces such as cement sheet roofs, fibreglass roofs, skylights and unprotected formwork decks
• falling objects, for example tools, debris and equipment
• collapse of trenches
• structural collapse
• the handling, use, storage, and transport or disposal of hazardous chemicals
• the presence of asbestos and asbestos-containing materials
• welding fumes, gases and arcs
• hazardous manual tasks
• the interface with other works or trade activities
• the physical working environment, for example the potential for electric shock, immersion or engulfment, fire or explosion, slips, trips and falls, people being struck by moving plant, exposure to noise, heat, cold, vibration, radiation, static electricity or a contaminated atmosphere, and the presence of a confined space.

Control Measures (Hierarchy of Controls)

The hierarchy of controls is simply a list, in order of effectiveness of the types of controls which should be put in place to eliminate risk. Perhaps before we go too much further we should look at a couple of definitions related to health and safety / risk management.

✓ SAFE

A general term describing an acceptable level of risk, freedom from and the low probability of harm.

Freedom from conditions that can cause danger, death or harm, damage to operational equipment.

✓ HAZARD

A condition or situation which if left untreated, could lead to a negative consequence such as death, injury, disease or financial impact.

✓ INJURY
As defined by the Workers Compensation and Rehabilitation Act 2003.

“Is a personal injury arising out of, or in the course of, employment if the employment is a significant contributing factor to the injury” examples of injury would be a cut or fracture, a disease, industrial deafness, death from an injury.

✓ **RISK ANALYSIS**

The systematic application of management policies, procedures and practices to the task of analysing, evaluating and

✓ **CONSEQUENCE**

The outcome of an event expressed as a loss, injury, disadvantage or gain. Often, several possible outcomes may be associated with an event or a task. Safe work practices will generally promote a safe and profitable outcome

**Hierarchy of Control**

Following is the hierarchy of control, you need to remember our goal is to first eliminate all hazards and associated risks in the workplace.

This will not always be possible so working through the hierarchy, we are able to establish and implement the most appropriate control measures. That is where we cannot eliminate the risk, we need to prevent or minimise the exposure to the risk.

Often it is necessary to use a combination of controls to ensure they are effective and provide the safest workplace possible.

The strategies or controls we employ are:

- **Elimination**

  With this control we eliminate the need to undertake the task which is not normally an option but does need to be considered.

- **Substitution (Alternative)**

  Is there an alternative way of completing the task, a good example of this may be where it is necessary to make a joint in copper water piping in a confined space.
Do you need to hot weld the joint or is there a ‘safer’ option such as a mechanical (compression) joint.

- **Engineered control**

  A good example of an engineered control is the use of shoring or benching in where it is necessary to enter and work within deep excavations.

- **Administrative control**

  Administrative controls are orders, procedures or documented workplace practice which must be followed in order to make a task ‘safer’. Safe work method statements are an example of administrative controls which are often coupled with an engineered control and the use of personal protective equipment.

- **Personal Protective Equipment**

  The use of these controls will either resolve the issue and remove the threat or resist the hazard which may lessen the effect or likelihood of an incident.
The hierarchy of risk control

You can see that only the higher order controls such as elimination and substitution will remove the threat where lower order controls such as administrative and engineered controls are more likely to only resist the threat or hazard.

It is important to understand that any combination of these strategies or control measures can be used together to achieve the required outcome. That is a safe workplace or procedure.

You must always aim to eliminate a hazard, which is the most effective control. If this is not reasonably practicable, you must minimise the risk by working through the other alternatives in the hierarchy.
Level 1 control measures

The most effective control measure involves eliminating the hazard and associated risk. The best way to do this is by, firstly, not introducing the hazard into the workplace. For example, you can eliminate the risk of a fall from height by doing the work at ground level.

Eliminating hazards is often cheaper and more practical to achieve at the design or planning stage of a product, process or place used for work. In these early phases, there is greater scope to design out hazards or incorporate risk control measures that are compatible with the original design and functional requirements. For example, a noisy machine could be designed and built to produce as little noise as possible, which is more effective than providing workers with personal hearing protectors.

You can also eliminate risks by removing the hazard completely, for example, by removing trip hazards on the floor or disposing of unwanted chemicals.

It may not be possible to eliminate a hazard if doing so means that you cannot make the end product or deliver the service. If you cannot eliminate the hazard, then eliminate as many of the risks associated with the hazard as possible.

Level 2 control measures

If it is not reasonably practicable to eliminate the hazards and associated risks, you should minimise the risks using one or more of the following approaches:

- Substitute the hazard with something safer

  For instance, replace solvent-based paints with water-based ones.

- Isolate the hazard from people

  This involves physically separating the source of harm from people by distance or using barriers.

  For instance, install guard rails around exposed edges and holes in floors; use remote control systems to operate machinery; store chemicals in a fume cabinet.

- Use engineering controls

  An engineering control is a control measure that is physical in nature, including a mechanical device or process.
For instance, use mechanical devices such as trolleys or hoists to move heavy loads; place guards around moving parts of machinery; install residual current devices (electrical safety switches); set work rates on a production line to reduce fatigue.

Level 3 control measures

These control measures do not control the hazard at the source. They rely on human behaviour and supervision, and used on their own, tend to be least effective in minimising risks. Two approaches to reduce risk in this way are:

- Use administrative controls
  
  Administrative controls are work methods or procedures that are designed to minimise exposure to a hazard.
  
  For instance, develop procedures on how to operate machinery safely, limit exposure time to a hazardous task, use signs to warn people of a hazard.

- Use personal protective equipment (PPE)

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**HOW TO MANAGE WORK HEALTH AND SAFETY RISKS**

*Code of Practice 2011*

*Provides details on how to apply a systematic approach to managing risk*
**RISK ASSESSMENT METHOD**

When assessing risk, you need to consider both the likelihood and the consequence. Using this information, you can develop a prioritised list of risks that require action or controls.

Once the list is developed you need to consider those that are minor and those that are issue about which there is a regulation, advisory standard or industry code of practise.

First fix the minor issues then deal with those covered by regulations or procedures.

<table>
<thead>
<tr>
<th>LIKELIHOOD</th>
<th>How likely is it to happen?</th>
<th>CONSEQUENCES: How severely it hurts someone (if it happens)?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Insignificant (no injuries)</td>
<td>Minor (first aid treatment only; spillage contained at site)</td>
</tr>
<tr>
<td></td>
<td>Moderate (medical treatment; spillage contained but with outside help)</td>
<td>Major (extensive injuries, loss of production)</td>
</tr>
<tr>
<td>Almost certain - expected in most circumstances</td>
<td>3 H</td>
<td>3 H</td>
</tr>
<tr>
<td>Likely - will probably occur in most circumstances</td>
<td>2 M</td>
<td>3 H</td>
</tr>
<tr>
<td>Possible - might occur at some time</td>
<td>1 L</td>
<td>2 M</td>
</tr>
<tr>
<td>Unlikely - could occur at some time</td>
<td>1 L</td>
<td>1 L</td>
</tr>
<tr>
<td>Rare - may occur, only in exceptional circumstances</td>
<td>1 L</td>
<td>1 L</td>
</tr>
<tr>
<td>Score and statement</td>
<td>Action</td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>4 A: Acute</td>
<td>ACT NOW – Urgent - do something about the risks immediately. Requires immediate attention.</td>
<td></td>
</tr>
<tr>
<td>3 H: High</td>
<td>Highest management decision is required urgently.</td>
<td></td>
</tr>
<tr>
<td>2 M: Moderate</td>
<td>Follow management instructions.</td>
<td></td>
</tr>
<tr>
<td>1 L: Low</td>
<td>OK for now. Record and review if any equipment/people/materials/work processes or procedures change.</td>
<td></td>
</tr>
</tbody>
</table>

Use the table provided above and then the guide to prioritise and act upon hazards identified in your workplace.

Those risks which fall in the **EXTREME (RED)** range need to be addressed and treated immediately, they represent a significant intolerable risk to your workplace and those employed in it. You must eliminate the hazard and make the workplace or process safe before any further exposure occurs.

Those risks which fall in the **HIGH (ORANGE)** range need urgent attention and are also intolerable, look for alternatives or substitution work methods or materials to reduce the risk and protect personnel. Act as soon as practical to introduce adequate controls.

Those risks that are rated as **MODERATE (CYAN)** are also significant hazards that require addressing they are less critical than those risks which are high or extreme, but do need either an engineering or administrative control to minimise the risk.

Those risks which are quantified as **LOW (GREEN)** are tolerable risks and possibly do not need any attention other than awareness to exposed personnel and the use of appropriate personal protective equipment.
Common Construction Hazards

Common construction hazards are often the subject of specific Codes of Practice which identify risks and control measures associated with the hazards.

Remember that where a Code of Practice illustrates a means of mitigating a risk to an acceptable level, this control must be employed or an equivalent level of safety must be demonstrated.

High risk work for which specific Codes of Practice exist include:

* Demolition Work
* Excavation Work
* Managing the Risk of Falls at Workplaces
* Managing Noise and Preventing Hearing Loss at Work
* Preventing Falls in Housing Construction
* Confined Spaces
* Hazardous Manual Tasks
* How to Manage and Control Asbestos in the Workplace
* How to Safely Remove Asbestos.

If your workplace conducts activities which are the subject of these Codes, you must ensure you familiarise yourself with the contents of the Code.

Common Hazards

Following is a list of common workplace hazards with a focus on construction workplaces or building sites.

The list is in no way meant to be definitive, rather it is provided to highlight some of the areas you, as an owner-builder will need to consider during the construction or renovation works under your control.

Asbestos Containing Materials

Generally the presence of asbestos in building materials does not pose a risk to health unless the material is broken, deteriorating, or disturbed in such a way that dust containing asbestos fibres is produced.

Special precautions should be taken by anyone needing to disturb asbestos. Asbestos is the name given to a group of fibrous silicate minerals that can potentially cause lung disease if inhaled.
Asbestos can be found in a number of products used in the Australian building industry between the 1940s and late 1980s, and in the brakes, clutches and gaskets of many cars.

The most commonly found household building materials that contain asbestos are asbestos-cement products (also called ‘fibro’ and ‘AC sheeting’).

Generally the presence of asbestos in home building materials does not pose a risk to health unless the material is broken, deteriorating, or disturbed in such a way that dust containing asbestos fibres is produced.

Special precautions should be taken by anyone needing to disturb any asbestos.

Some people have developed asbestos-related lung disease, such as asbestosis, lung cancer or mesothelioma, after inhaling asbestos fibres.

Asbestos-related disease is generally associated with long-term exposure to asbestos in an occupational setting.

However, as the level of exposure that may cause health effects is not known, exposure to asbestos fibres or dust containing asbestos fibres should always be kept to a minimum.

Confined Spaces

What is a confined space?

A ‘confined space’ means an enclosed or partially enclosed space that:

(a) is at atmospheric pressure when anyone is in the space; and
(b) is not intended or designed primarily as a workplace; and
(c) could have restricted entry to, or exit from, the place; and
(d) is, or is likely to be entered by a person to work; and
(e) at any time, contains, or is likely to contain, any of the following -
   (i) an atmosphere that has potentially harmful levels of a contaminant;
   (ii) an atmosphere that does not have a safe oxygen level;
   (iii) anything that could cause engulfment.
Examples of confined spaces include:

- storage tanks, tank cars, process vessels, pressure vessels, boilers, silos and other tank-like compartments;
- pits and degreasers;
- pipes, sewers, sewer pump stations including wet and dry wells, shafts and ducts; and
- shipboard spaces entered through small hatchways or access points, cargo tanks, cellular double bottom tanks, duct keels, ballast or oil tanks and void spaces.

However, many other types of structures may also meet the definition of a confined space.

**Confined spaces can be fatal**

Each year in Australia, people are killed in a wide range of confined spaces, from storage vessels, to complex industrial equipment. Many of these fatalities occur when attempting to rescue another person in a confined space. Additionally, people can be seriously injured from other hazards found within confined spaces.

**Electrical Equipment and Installations**

Electricity is a major hazard which can, if not correctly controlled, present significant risk to workers on a building site.

Electricity has been called a ‘silent’ killer and must be treated with respect.

The hazards and risks associated with electricity include:

- Loose uncontained leads laying about floor level of a building site can potentially be a trip hazard which results in injury
- Leads and or power tools used in a water laden area can result in electrocution of the operator
• Work on energised electrical equipment must only be done by qualified and competent tradespersons
• Poorly maintained power tools and extension cords can result in electrocution
• Overloading electrical circuits can cause a fire risk

Excavations and Trenches

Excavation and trenches present a serious hazard on building and construction sites.

The risks associated with excavations and trenches include:
- Collapse of the excavated material, leading to entrapment
- Injury or death of a person
- Injuries caused by falling into the open excavation
- Damage to adjacent properties or structures
- Contact with and damage to underground services
- Confined space considerations

Safe entry and egress

Falling Objects

A person conducting a business or undertaking must manage risks to health and safety associated with an object falling on a person if the falling object is reasonably likely to injure the person.

The person conducting a business or undertaking must:

• eliminate the risk, so far as is reasonably practicable, or
• if that is not reasonably practicable to minimise the risk so far as is reasonably practicable.

This requires the person conducting a business or undertaking to provide and maintain a safe system of work including:

• fall prevention, so far as is reasonably practicable, or
• if fall prevention is not reasonably practicable, a system to arrest the fall of a falling object, so far as is reasonably practicable.
Falling objects can pose a significant risk and cause serious injuries to workers at construction workplaces or members of the public if control measures are not implemented to eliminate or minimise the associated risks.

For example, a person could receive fatal head injuries if building materials or equipment is not secured or prevented from falling.

It is essential to ensure that objects do not fall onto workers or other persons who may be under or adjacent to the area where the work is being performed.

Objects that could fall include:

- parts of a structure being built or dismantled
- walls being demolished
- materials stored or stacked at the workplace
- construction or waste material
- debris
- plant
- tools
- scaffolding components
- pre-cast concrete panels.

When work must be undertaken at height or there are open excavations there will be a risk of people or objects that fall, topple over or roll over. If work cannot be performed safely from the ground or from solid construction, fall prevention, such as perimeter guard rails and temporary work platforms (e.g. scaffolding, elevating work platforms and work boxes) should be provided.

Control measures that can be implemented to manage the risk of falling objects when undertaking construction work include:

- securing and properly bracing structures
- securing loose material such as plywood, iron sheets and off-cuts against the wind
- using chutes when placing debris into a skip below the work area
- erecting perimeter containment screens
- not stacking materials close to un-meshed guardrails and perimeter edges
- enclosing areas over which loads are being lifted
- using toe boards on edge protection
- using tool lanyards
- erecting catch platforms and/or nets
- using a gantry where work involving multiple levels is being performed beside a footpath
- closure of the adjoining area to form an exclusion zone
- establishing traffic management devices including road diversions or traffic detours
- using a spotter on the ground level when loads are being lifted to higher levels
- using traffic controllers to direct pedestrians or other traffic
- working outside normal hours
using PPE such as hard hats.

Fall prevention must be considered and, so far as is reasonably practicable, implemented before considering options for arresting the fall of objects.

**Control measures include:**

- using the appropriate equipment to raise and lower objects, including ensuring that working load limits are not exceeded
- providing a secure physical barrier at the edge of the elevated area, such as toe boards or infill panels that form part of a guardrail system
- erecting perimeter containment screening made of mesh, timber, plywood or metal sheeting. The framework supporting the screen should be able to bear the load of the screen
- inspecting pallets each time before use to make sure they are in a safe condition
- load pallets correctly to ensure load stability, banding, shrink or stretch wrap can help with this.

When considering control measures to contain or catch falling objects, identify the types of objects that could fall, as well as the fall gradient and distance, to ensure that any protective equipment or structures are strong enough to withstand the impact forces of the falling object. Examples of these control measures include:

- erecting a covered pedestrian walkway
- erecting a catch platform with vertical sheeting or perimeter screening
- providing overhead protective structures on mobile plant.

Falling objects present a real risk on may work sites.

Overhead workers no matter how careful can and do make mistakes.

Dropping a small timber section or a hand tool can present a real risk and the possibility of serious injury to those below.

Controlling these risks could include the use of appropriate barriers, hoardings and restraint systems for those working above and adequate personal protective equipment such as hard hats for those working below.
Working at Heights

Many people have been seriously injured or in fact killed as a result of a fall from heights at their workplace.

Fall arrest systems and harness, adequate scaffolding and safe working procedures all contribute to preventing or minimising the risks of working at heights.

Management of risk of fall

A person conducting a business or undertaking at a workplace must, manage risks to health and safety associated with a fall by a person from one level to another that is reasonably likely to cause injury to the person or any other person.

The person conducting the business or undertaking at a workplace must minimise the risk of a fall by providing adequate protection against the risk.

The person provides adequate protection against the risk if the person provides and maintains a safe system of work, including by:

providing a fall prevention device if it is reasonably practicable to do so, or if it is not reasonably practicable to provide a fall prevention device, providing a work positioning system.

- in the vicinity of an opening through which a person could fall
- in the vicinity of an edge over which a person could fall
- on a surface through which a person could fall
- in any other place from which a person could fall.

Examples of a safe system of work could include;

- providing temporary work platforms
- providing training in relation to the risks involved in working at the workplace
- providing safe work procedures, safe sequencing of work, safe use of ladders, permit systems and appropriate signs

Note;

A combination of the controls set out in this subsection may be used to minimise a risk, so far as is practicable, if a single control is not sufficient for the purpose.
Hazardous Substances

Hazardous substances are commonplace on many building sites and their use, storage and disposal must be controlled.

All workers who use or come into contact with any of these substances must be fully aware of the associated risks.

In controlling the risks and educating workers on safe practices, the following measures must be taken:

- Store all hazardous materials appropriately and in a well signed area which is well isolated from other potential hazards (for example, flammable liquids would not be stored in an area close to welding operations or where ‘hot work’ was to be conducted)
- Ensure appropriate personal protective equipment is available and used by all person coming into contact with the substance
- Have MSDS sheets and poison information available and make certain all persons on site are aware of the location of this material
- All relevant persons must be aware of the correct emergency response procedures to be undertaken with respect to a dangerous goods/hazardous substance incident or accident.

A material safety data sheet (MSDS) is intended to provide workers and emergency personnel with procedures for handling or working with that substance in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill-handling procedures.

MSDS formats can vary from source to source within a country depending on national requirements.

Inground Services

Existing underground services can potential cause injury or death to those working on site.

Controlling risk requires a well established plan for carrying out site works where damage or disruption to existing services may occur.

Some of the potential risks include:

- Explosion or fire (gas services and piping)
• Site and excavation flooding (water and sewerage)
• Electrocution of personnel (electrical conduits, services and cabling)
• Damage to services costing thousands of dollars in repair bills which will be recoverable from the responsible person.

Have a plan, do your homework, identify potential risks and existing underground services before you start.

Work slowly and carefully around existing services.

Even when you do all the right things, accidents can and do still happen.

If something does go wrong, think and act carefully, do not do anything that will make the situation worse or put yourself or anyone else at risk.

Before commencing excavation work, a person conducting a business or undertaking with management or control of the workplace must take all reasonable steps to obtain current underground services information that relates to the workplace and areas adjacent to the workplace. The person must provide this information to all persons carrying out the excavation work and ensure it is readily available for inspection under the WHS Act until the excavation is completed or, if there is a notifiable incident relating to the excavation, 2 years after the incident occurs.

General location of underground services can be determined by a number of different methods, including:

• contacting organisations that can assist in locating underground services (e.g. DIAL BEFORE YOU DIG)
• examining the records held by the person commissioning the construction work.

Relevant information includes:

• the essential services that may be affected
• the location, including depth, of any pipes, cables or other plant associated with the affected essential services
• any conditions on the proposed excavation work.

All persons carrying out the excavation work must have regard to that information during the work.

Further information on how to manage the risks associated with excavation work is available in the Code of Practice: Excavation Work.
Manual Tasks

Many workplace injuries occur as a result of incorrect lifting techniques or from people attempting to move objects which are too heavy or awkward to move unassisted or manually.

Think about the load or materials you are going to move, plan the route and look for any obstacles in the way which will make the move hazardous, difficult or impossible.

Consider alternative ways of shifting the load. Can you get help?

Is there a device which could assist you, (wheelbarrow, pallet mover, hoist etc)?

Workplace injuries as a result of incorrect lifting or manual handling cost the industry millions of dollars each year and contributes to much pain and suffering.

Injuries can be as simple as mild strains and sprains, or as serious as permanent muscular skeletal damage including, ruptured spinal disks, breaks and fractures.

Noise

Noise, vibration, heat and cold are all stressors which affect a person over time and can lead to irreparable damage.

It has been proven that exposure to unacceptable levels of noise over even a relatively short period of time can result in permanent hearing loss or damage.

Continued exposure to these stressors is also extremely fatiguing and often results in poor concentration, acceptance of lower standards and lack of concentration.

Plant or heavy machinery operators are often exposed to these hazards. This can have serious implications on safety, as a worker becomes increasingly affected by noise, vibration, heat or cold.

Personal protective equipment, appropriate work schedules, sound workplace policies and education are the best defences against the risks associated with the common workplace hazards.
Plant and Vehicles

Heat, noise vibration etc can affect operators of plant and equipment and those working close by.

As well as this risk, all persons on site must be aware of the movement and location of all plant and keep a careful lookout.

Vigilance and an understanding of the work being undertaken by the machinery is an important part of staying aware and safe.

Other hazards include:

- Existing underground services
- Overhead power lines
- Overhead structures

Remember that unless you are directly in full view of the operator, seeing you will be difficult, hearing you will be almost impossible.

When working near or around this plant, make certain your intentions are clear to the operator and that you each understand what the other one is going to do, or in what direction they intend to travel.

Specified Dangerous Goods

As for hazardous substances, specified dangerous goods such as corrosives, organic peroxides and flammable liquids are all commonplace on construction sites.

Develop and maintain sound handling storage and emergency response techniques

As for hazardous materials, it is necessary to develop and maintain sound procedures for handling, using and disposing of all dangerous goods which are on site.

As appropriate, correct signage and labeling must be used and all workers coming into contact with the materials must understand the risk and be aware of all control measures in place.
Long Work Hours

Fatigue can lead to a lack of awareness and alertness which results in an increased likelihood of injury due to slowing of reaction times and acceptance of lower standards of safety in the workplace.

Look for fatigue in yourself and fellow workers and act quickly.

Long work hours leads to fatigue and the associated loss of concentration, acceptance of lower standards, diminished awareness of risk and poor physical coordination.

Each of these are dangerous in themselves, but couple with a workplace full of hazards and risks, you have a recipe for disaster.

You are responsible for presenting yourself to work in an acceptable state and free from fatigue.

At times external influences will impact on your levels of fatigue and your performance in the workplace.

Look for signs of fatigue in yourself and fellow workers, act early and minimise the risk.

Diving

Diving is a specialist construction activity which has its own unique set of risks.

An example would be flying after diving (risk of bends) and the effects of prolonged submersion or rapid ascents.

Similar controls to working in confined spaces may be applied.
Underwater diving and the associated risks are a specialised and complex area of operations that must be understood and all required control measures must be complied with and monitored in accordance with the Workplace Health and Safety Regulations 2008.

Competent persons involved with diving operations must demonstrate a sound knowledge of:

- The skills required to perform diving operations safely
- The application of diving physics
- The use of all diving equipment, including emergency equipment relevant to their work tasks
- The use of dive compression tables
- Forms of underwater communication
- Use, inspection and maintenance of diving equipment used
- Diving physiology and first aid

**Projections**

End projections, starter bars, nails in ‘stripped’ formwork all have the potential to cause harm or injury.

It is everyone’s responsibility to ensure all end projections are adequately protected and made safe, this could include:

- Denailing timbers
- Capping starter bars or rod ends
- Signage, guards, covers etc being installed
- Correctly terminating services so as not to present a threat which could cause injury.
Ultra Violet Radiation

Thousands of Australian are affected by sun damage and UV radiation each year. A lot of the problem is exposure whilst working on or around building and construction sites.

Each of us have a responsibility to keep ourselves protected from harmful UV by:

- Wearing appropriate and adequate clothing (long sleeves, hat, sunglasses etc)
- Using adequate skin protection through the regular application of a sunscreen
- Working in shaded areas where possible
- Providing temporary shade over work areas if possible

Minimising our personal exposure to the sun and harmful UV rays through smart work scheduling

Wearing Jewellery

Rings, necklaces and piercings, all present a hazardous situation in the construction workplace.

Rings and necklaces can get caught in machinery or on construction materials and piercings can become infected through contact and collection of foreign bodies and chemicals.

Body piercings and the wearing of jewellery present a real risk to workers on building and construction sites.

Piercings if loose can become caught in machinery and plant or catch on protrusions like rod ends, exposed nails etc.

The same can be said for rings, necklaces and other jewellery items that hang loose about a person and present a ‘catch’ hazard.
Another issue with tight fitting jewellery is the potential for infection and disease through the trapping of chemicals or substances which react with the skin causing dermatitis and other long term skin complaints.

**Waste Materials**

A clean site is a safe site, and suitable storage facilities and locations should be set up on site.

The storage and collection area can be as simple as the one shown in the photo or may include the use of hired bins or skips to keep work areas clean.

Always consider the environment and prevent run off or water course contamination that may occur as a result of incorrectly managed waste collection areas.

Good housekeeping practices like this minimise risks including:

- Tripping
- Fire
- Disease
- Damage to plant
- Cuts, abrasions and lacerations

**Trips and Falls**

Controlling the use of leads and ropes or cables on the site can prevent injury to workers.

Leads, cables and ropes present a trip hazard and should be run at height and kept above floor level.
We discussed earlier, the problem with leaving electrical leads laying around the site.

Ropes, cables, cords and strapping can potentially present the same risks.

Again, good housekeeping and a tidy site will go a long way in eliminating these risks and potential injuries.

**Unguarded Machinery**

Power tools and plant must be fitted with the correct guards and safety devices to minimise the risk of injury to the user.

The guard must be present, fitted correctly and used properly to ensure the safety of the user or operator.

All persons should be properly educated on the fitment and use of all guards on equipment they will be using.

Loose hair, clothing and jewellery are also important considerations when using any plant or equipment which has fast moving or rotating parts.
Unfamiliar Workplace

As we work on a site we become more aware of the specific hazards associated with the site.

New sites require each worker to undertake a comprehensive site specific briefing and induction to highlight the hazards and risks associated with the unfamiliar workplace.

Take time to familiarise yourself with all the hazards that exist on the site or in the workplace.

Make sure others are also familiar with the risks.

Statistically, it has been proven that new entrants to the work force and new employees are those most at risk when entering a workplace or construction site.

Drugs and Alcohol

You have a responsibility to present yourself to the workplace in a fit state and ready to work.

If you are under the influence of drugs and or alcohol, you must not enter the site.

All responsible people, principal contractors and relevant persons must maintain a strict no drug / alcohol policy on their work site and remain vigilant in identifying anyone who is affected by drugs or alcohol.
Heat

Heat has been discussed with the other stressors, noise, vibration and cold.

Where possible, leave hot work till cooler periods of the day.

Employ fans or coolers as appropriate.

Drink plenty of fluids (preferably water) and be aware of the effects and onset of dehydration

Defective Tools and Plant

Be alert and on the lookout for faulty or defective equipment that could present a risk to yourself or other workers on the site.

Report and condemn any equipment or plant found to be faulty or any tool that is not suitable for the task being performed.
Personal Protective Equipment

Personal protective equipment (PPE)

Personal protective equipment (PPE) is clothing, equipment or substances designed to be worn by someone to protect them from risks of injury or illness.

PPE should only be considered as a control measure when exposure to a risk cannot be minimised in another way, or when used in conjunction with other control measures as a final barrier between the worker and the hazard. PPE does not control the hazard at the source.

What is personal protective equipment?

Personal protective equipment (PPE) is any clothing, equipment or substance designed to protect a person from risks of injury or illness.

PPE can include:

- hearing protective devices, such as ear muffs and ear plugs
- respirators
- eye and face protection, such as goggles
- safety helmets and sun hat, gloves and safety boots, clothing, such as high visibility vests or life jackets

When should you use it?

It is a requirement of the Workplace Health and Safety Act 1995 that risks must be assessed and control measures then implemented and reviewed to prevent or minimise exposure to the risks.

Personal protective equipment (PPE) and administrative controls are lowest on the hierarchy of control measures. PPE does not control the hazard at the source and
should not be relied on as the main control measure unless it is a temporary or interim measure or when options higher on the list of controls have been exhausted. PPE can be used effectively in conjunction with other control measures to manage exposure to a risk.

The effectiveness of PPE as a control measure is limited as it can:

- be uncomfortable to wear
- make working difficult
- create other risks to a person’s health and safety
- be expensive in the long term

**Who pays?**

Employers must ensure workers have appropriate personal protective equipment (PPE). However, who pays for it can be negotiated in the workplace.

Payment arrangements could include:

- the employer buys and pays for it
- the worker buys it and is fully or partially reimbursed
- the worker buys it and pays for it

In deciding who should provide PPE consider:

- the availability of equipment
- whether the equipment can generally be used outside work, such as sunglasses or boots
- the need for a personal fit
- the requirements in the relevant industrial award or enterprise agreement regarding provision of PPE.

**Selecting PPE**

To ensure that the item of personal protective equipment (PPE) will provide the level of protection that is it designed to, PPE should:

- be appropriate for the type of work and give appropriate protection for the risk
- give adequate protection to the user
- not create additional health or safety risks
- be compatible with other PPE being used (e.g ear muffs with a hard hat)
- fit properly
- not interfere with any medical conditions of the user
- be easy to use
• be comfortable
• comply with relevant Australian Standards

Consult with workers when selecting PPE and consider a person's individual characteristic and style preference.

Using PPE

Make sure that:

• personal protective equipment (PPE) is used in accordance with the manufacturers' instructions
• the PPE fits correctly
• workers are instructed and trained in how to use it
• appropriate signs should be displayed to remind workers where PPE must be worn

Training should cover arrangements for the provision, correct use, storage and maintenance of PPE and should be done:

• when new workers start work
• when you get new PPE
• to refresh workers' memories from time to time

Remember to keep a record of any training.

Storing and maintaining PPE

Personal protective equipment (PPE) should be stored in a clean and fully operational way. PPE needs to be checked regularly both during storage and use and should be easily accessible when needed.

PPE should be maintained to ensure its continued effectiveness. As part of a maintenance program, identify and record:

• maintenance duties and responsibilities
• storage procedures
• cleaning procedures
• checking procedures
• replacement criteria.

Repair or discard damaged or defective PPE.
Where PPE is to be used to minimise a risk to health and safety, the person conducting a business or undertaking who directs the carrying out of work must provide the PPE to workers at the workplace, unless the PPE has been provided by another person conducting a business or undertaking.

The worker must, so far as the worker is reasonably able, use or wear the equipment in accordance with any information, training or reasonable instruction by the person conducting the business or undertaking.

**PPE is one of the least effective ways of controlling risks to health and safety and should only be used:**

- when there are no other practical control measures available (as a last resort)
- as an interim measure until a more effective way of controlling the risk can be used,
- to supplement higher level control measures (as a back-up).

A worker who is provided with PPE by a person conducting a business or undertaking must:

- use or wear the equipment in accordance with any information, training or reasonable instruction provided by the person conducting a business or undertaking, so far as they are reasonably able
- not intentionally misuse or damage the equipment
- advise the person conducting a business or undertaking of any damage to, defect in or need to clean or decontaminate any of the equipment that they are aware of.

If the PPE is uncomfortable or does not fit properly, the worker should consult with their manager.

PPE used at a workplace must be:

- selected to minimise risk to health and safety
- suitable for the nature of the work and any hazard associated with the work
- a suitable size and fit and reasonably comfortable for the person wearing it
- maintained, repaired or replaced so it continues to minimise the risk, including ensuring the equipment is clean, hygienic and in good working order.

Selection processes must include consultation with workers and their health and safety representatives and should also include:

- detailed evaluation of the risk and performance requirements for the PPE
- ensuring compatibility of PPE items where more than one type of PPE is required (e.g. ear muffs with a hard hat)
• consultation with the supplier to ensure PPE is suitable for the work and workplace conditions

• preference for PPE that complies with the relevant Australian Standard or equivalent standard.

The following PPE should be provided to all workers when at the construction workplace:

• head protection (e.g. hard hats must be worn to protect against falling objects or collision with fixed objects, tools or plant)

• foot protection (e.g. safety boots with toe and mid-sole protection such as steel cap boots)

• eye protection (e.g. goggles or glasses when working with power or machine tools and pressure equipment; face shields should be worn when handling hazards chemicals;

• suitable welding goggles must be worn for gas welding and cutting; welding helmets should be worn for electric arc welding; welding screens will protect the eyes of other persons from welding flashes)

• gloves

• high visibility clothing.

The following equipment may also be provided where it has been identified by a risk assessment:

• hearing protection if the noise levels are not within the appropriate levels (e.g. ear plugs or ear muffs should be worn when working with or near jackhammers, grinders, explosive-powered tools or pile driving)

• respiratory protection (e.g. respirators, face masks or cartridge filters should be worn where there is a risk of exposure to hazardous chemical vapours, fumes, dust or fibres)

• body protection (e.g. aprons, safety harnesses, lanyards, shock absorbers and inertia reels).

Other persons including visitors to the workplace should also be provided with PPE (e.g. hard hats, gloves, ear protection, high visibility clothing and respiratory protection) to wear when they are at the construction workplace to protect them from health and safety risks. They must wear the PPE in accordance with any information, training and instruction provided to them by the person conducting a business or undertaking at the workplace.
OHS Personnel and Representatives

Workplace Health and Safety Inspectors

Inspectors have unfettered power to enter any workplace or suspected workplace or any place where specified high risk plant is situated (i.e. amusement rides, cooling towers, escalators). Inspectors also have the power to enter land around domestic premises to gain access to a workplace or suspected workplace.

Inspectors can also enter any place with a warrant or the property owner's consent.

To gain consent, the inspector must tell the occupier:

- the purpose of entry
- that consent does not have to be given.

If consent is given, the inspector may ask the occupier to sign an acknowledgement of the consent and will give the occupier a copy of this acknowledgement.

An inspector can also apply to a magistrate for a warrant to enter a place to exercise inspectors' powers.

Every appointed inspector holds an identity card which shows a recent photo of the inspector and is signed by the inspector. Before exercising a power (including entry into the workplace) inspectors must show their identity card.

Following entry to a place, inspectors have the power to:

- search any part of the place
- inspect, measure, test, photograph or film any part of the workplace or anything at the workplace
- take samples
- copy a document at the workplace
- make enquiries or conduct surveys to assess the degree of risk at the workplace or the standards of health and safety existing at a workplace
- inquire into the circumstances and probable causes of workplace incidents
- take any person, equipment or materials into the workplace to assist the inspector to exercise a power
- require a person to give reasonable help
- require a person to produce certain documents or ask other people to provide these documents, for example maintenance records kept by a mechanic contracted by an employer to do the work).
Inspectors also have specific powers to seize things - such as plant, equipment or substances - in the following circumstances:

- where the inspector believes the thing is evidence of an offence against the Act
- if seizing the thing is consistent with the purpose of entry
- where a warrant was issued for the seizure
- if the inspector believes the thing is defective, hazardous or likely to cause an injury.

Inspectors can also seize workplaces or part of the workplace if it is believed to be defective or hazardous.

**Occupational Health and Safety Representatives**

These are workplace representatives, generally nominated by their peers, with a reporting responsibility to ensure their workplace is both safe and meets the required standards in respect to health and cleanliness.

They have an advising role to both management and fellow staff and often facilitate change.

They will normally be the nominated employee who accompanies any health and safety inspector that may visit the workplace.

**Workplace Health and Safety Officers (WHSO)**

Workplace health and safety officers (WHSO) are appointed by employers and principal contractors where there are 30 or more people at the workplace to provide advice about workplace health and safety. They carry out inspections and audits, set up educational programs about workplace health and safety, help investigate all workplace incidents and conduct annual workplace assessments. WHSOs require special training.

**Workplace Health and Safety Representatives**

Workplace health and safety representatives (WHSR) are elected by fellow workers.

Representatives are entitled to carry out inspections and review the circumstances of workplace incidents. They are also entitled to participate in the workplace health and safety committee. A workplace health and safety representative does not need any experience or special qualifications, but is entitled to be paid training on request.
Workplace health safety representatives can also issue Provisional Improvement Notices (PIN) in their own workplaces. A PIN is a written direction from a WHSR to an employer (or employer representative) requiring them to fix a workplace health and safety problem. A PIN is a legal document and is designed to improve health and safety in a workplace, encouraging employers and workers to openly discuss health and safety hazards and risks in their workplace.

**Health and Safety Committees**

These Committees are required to be formed in any workplace with more than 30 employees, or wherever the Department requests the formation of a committee due to the high risk nature of a specific workplace.

An employer or principal contractor may establish a workplace health and safety committee for a workplace.

An employer or principal contractor must establish a workplace health and safety committee for a workplace if:

- a workplace health and safety representative for the workplace asks the representative’s employer or the principal contractor to establish a committee; or
- for a workplace where work of a particularly hazardous nature is carried out, the chief executive directs by written notice given to the employer or principal contractor.

An employer or principal contractor must establish the workplace health and safety committee within 28 days of the request or direction.

However, if a workplace health and safety officer is appointed for a workplace, the principal contractor must establish the workplace health and safety committee within 7 days of the appointment.

More than 1 committee may be established for a workplace.

Workplace health and safety committees help in the cooperation between employers and workers. A committee member must be an employer, principal contractor or worker at the workplace.

A committee considers health and safety issues and reports on these to the employer. An employer may form a workplace health and safety committee on his or her own initiative, but must do so if the WHSR requests it.
Role of the Unions

Unions are involved at Commonwealth, State and at Local Government levels in formulating and assisting in the implementation of laws.

Often they are involved in the introduction and education of new practices and reforms at individual workplaces or in an industry at large.

WHS Communications in the Workplace

Incident notification

A PCBU must notify the regulator 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), or
- medical treatment within 48 hours of exposure to a substance.

A serious illness is:

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:

(i) with micro-organisms
(ii) that involves providing treatment to a person
(iii) that involves contact with human blood or body substances, or
(iv) involves handling or contact with animals, animal hides, skins, wool or hair, animal carcasses or animal waste products.

the following occupational zoonoses contracted in the course of work involving handling or contact with animals, animal hides, skins, wool or hair, animal carcasses or animal waste products:

(i) Q fever
(ii) Anthrax
(iii) Leptospirosis
(iv) Brucellosis
(v) Hendra Virus
(vi) Avian Influenza
(vii) Psittacosis.
Workplace Health and Safety regulators must also be immediately notified of any dangerous incident that exposes a person to a serious health or safety risk from immediate or imminent exposure to:

- the uncontrolled escape, spillage or leakage of a substance
- an uncontrolled implosion, explosion or fire
- an uncontrolled escape of gas, steam or a pressurised substance
- an electric shock
- the fall or release from height of any plant, substance or thing
- the collapse, overturning, failure or malfunction of, or damage to, plant that is required to be licensed or registered
- the collapse or partial collapse of a structure, including an excavation or of any shoring supporting an excavation
- the inrush of water, mud or gas into an underground excavation or tunnel
- the interruption of the main system of ventilation to an underground excavation or tunnel
- other incidents as stated in the WHS Regulation.

Notice of an incident must be given by the fastest possible means. If notice is given by telephone, Workplace Health and Safety regulators may request a written notice of the incident.

This must be provided within 48 hours of the request and the PCBU must keep a copy of this record for at least five years.

The person with management or control of a workplace at which a notifiable incident has occurred must ensure the site of the incident is not disturbed until an inspector arrives at the site or directs otherwise.

This does not prevent any action required to protect a person’s health or safety, help someone who is injured or make the site safe.

**Other notifications**

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

- 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)
- hazardous chemicals exceeding manifest quantities at a workplace
- 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
• health and safety representatives.

Workplace Health and Safety Inspectors investigate workplace incidents to:

- determine their cause
- prevent similar incidents recurring in the workplace
- notify employers of incidents occurring within their industry
- prosecute offences against the Workplace Health and Safety Act 1995

Comprehensive investigations are generally completed within 6 months. Less serious incidents or complicated complaints are dealt with more quickly.

Workers Compensation and Injury Management

The Workplace Health and Safety Act includes as one of its objectives:

To reduce the burden on the workers’ compensation scheme caused by these deaths, injuries and illnesses, which in turn reduces costs imposed on industry.

The Workplace Health and Safety Acts are supported by the Workers’ Compensation and Rehabilitation or similar Acts.

What is WorkCover’s role?

WorkCover assesses and manages serious injury statutory claims in accordance with the Workers’ Compensation and Rehabilitation Acts.

The role of the serious injury customer advisor

The serious injury customer advisor will coordinate all medical, rehabilitation, and support needs that relate to your WorkCover claims.

They will:

- manage the claim during acute medical treatment, the transition phase from hospital to home, and during your community based rehabilitation
- be the main point of contact at WorkCover during your claim
- offer support to you and your family and negotiate individual needs
• liaise with medical and rehabilitation providers

• approve medical, rehabilitation, and support costs.

The serious injury customer advisor will work with you, your family, treating doctors, and allied health providers to set goals and develop a rehabilitation plan.

Your employer may already have a point of contact with WorkCover, so your serious injury customer advisor will also work with their contact to keep them up-to-date with your claim.

In cases where return to work may not be an option, the goal of rehabilitation is to enhance quality of life and independent functioning.

**What happens while you are in hospital?**

In most cases you will be an in-patient for an extended period of time and will undergo intensive specialised rehabilitation prior to hospital discharge. The serious injury customer advisor will visit you in hospital, and regularly consult with hospital staff about your rehabilitation needs.

**Discharge planning**

The discharge process involves assessing your needs in order to leave hospital and live in the community. This process includes the provision of/referral to:

• assistive devices, equipment, and/or prosthetics

• home modifications

• selection and training of carers (voluntary or paid)

• transportation and community access assistance

• appropriate community based services

• ongoing adjustment to disability needs

• ongoing rehabilitation and review.

The serious injury customer advisor will attend family meetings to assist in coordinating these discharge needs.

**What is rehabilitation?**

Rehabilitation focuses on improving function. After discharge from hospital, private providers in the community carry out rehabilitation under the direction of medical and allied health providers. How long rehabilitation takes is different for each injury and each person.
WorkCover can only use registered providers to deliver rehabilitation services.

For seriously injured workers, rehabilitation may include:

- physiotherapy
- occupational therapy
- psychology
- neuropsychological assessment
- gym programme
- hydrotherapy
- attendant care
- support worker programme
- podiatry.

**Who is responsible for rehabilitation?**

Rehabilitation is a joint effort involving you, your family, health providers, and WorkCover. Under the Workers’ Compensation and Rehabilitation Acts, we are responsible for providing necessary and reasonable rehabilitation.

You also have an obligation to participate in rehabilitation while receiving benefits from WorkCover.

Participation in rehabilitation includes being involved in planning and participating in activities approved by your doctor.

**What rehabilitation costs are covered?**

WorkCover will pay any necessary and reasonable medical and rehabilitation costs related to your work-related injury. These may include:

- medical treatment referred by a doctor and provided by a registered provider
- medication or prescriptions that are relevant to the work-related injury
- equipment (such as wheelchairs, shower commodes, and hoists)
- modifications to the home, or a vehicle, to aid independent functioning.
WorkCover will not pay for treatment from unregistered providers, such as personal trainers, massage therapists, or naturopaths. You must contact the serious injury customer advisor to determine whether treatment will be covered.
Site Safety Signs

Safety Signs and Symbols

Safety signs play an important role in keeping people safe in the workplace through raising awareness and highlighting potentially dangerous situations or activities.

Signs are colour coded and intended to identify or locate areas and activities which may require, attention, the use of specialised equipment or work procedures.
The colours used in the signs identify the actions or procedures to be used:

- red signs mean “DO NOT” (eg a stop sign)
- blue signs mean “MUST DO” (eg wear PPE)
- yellow signs mean “BE AWARE” (eg pedestrian signs)
- green signs provide “INFORMATION” (eg exit signs)

*The exception to this rule are fire extinguisher signs which are traditionally red in colour*

Here are some examples of site safety signs you may see on a typical construction site:

Both of these signs are blue in colour meaning “MUST DO”

So in this case, you would be required to wear a hard hat, hearing protection such as ear muffs and safety goggles
Both of the following signs are green in colour meaning they provide “INFORMATION”

In the case of these signs, they indicate the location of first aid facilities and the storage point for Material Safety Data Sheets.

A yellow sign means you should “BE AWARE”

The sign shown on this slide indicates that a surface may be slippery and care should be taken to avoid a fall and possible injury to people entering the affected area.
A red sign means “DO NOT”

These signs show prohibited actions or limit access to approved and appropriately qualified persons only.

Do not enter and do not smoke or cause a naked flame are just two examples of “DO NOT” signs

Some signs may be grouped together as shown here in this example.

In this case, it is a general sun protection reminder and the responsibility is on the individual to select and use appropriate PPE.

(Personal Protective Equipment)

How do you select what PPE you should use, how you should use it and when you would use it?
Emergency Response

Establish on site, a method of evacuation and assembly at a nominated safe point away from site.

Ensure all persons working on or visiting the site understand the warning or evacuation signals and where to meet in the event of an evacuation.

Nominate a responsible person to coordinate the assembly and check that all persons are accounted for.

Construction sites can pose particular problems because the routes in and out may be incomplete and obstructions may be present.

Open sites usually offer plentiful means of escape and special arrangements are unlikely to be necessary. In enclosed buildings people can easily become trapped, especially where they are working above or below ground level. In such cases means of escape need careful consideration.

Make sure that:

Wherever possible, there are at least two escape routes in different directions;

- Travel distances to safety are reduced to a minimum;

- Enclosed escape routes, for example corridors or stairwells, can resist fire and smoke ingress from the surrounding site.

- Where fire doors are needed for this make sure they are provided and kept closed (self-closing devices should be fitted to doors on enclosed escape routes);
• Escape routes and emergency exits are clearly signed;

• Escape routes and exits are kept clear.

• Emergency exits should never be locked when people are on the site;

• Emergency lighting is installed if necessary to enable escape. This is especially important in enclosed stairways in multi-storey structures which will be in total darkness if the normal lighting fails during a fire;

• An assembly point is identified where everyone can gather and be accounted for.

MEDICAL and other EMERGENCY ASSISTANCE

All sites should have prominently displayed:

Contact details for fire, ambulance and police

Location and fastest route to medical centres and hospitals or emergency departments close to the site

Quick reference charts for poison information centres and any other relevant information that may be helpful in the event of an incident.

When you call for an ambulance, you will be asked the following questions:

• What is the exact address of the emergency?

• What is the phone number you are calling from?

• What is the problem? Tell me exactly what happened.

• How many casualties are there? If only one casualty what is the approximate age?
• Is the casualty conscious?
• Is the casualty breathing?

All of the site information should be readily available and prominently displayed near any location where an emergency call is likely to be made from.

These days with mobiles, it is likely the call will be made directly from the area of the incident, if you are making the call, do you have all the answers to the questions above?

All workplaces must have an emergency plan that has been specifically developed for the particular workplace and its specific hazards and covers a range of potential incidents. All persons at the construction workplace must receive information, training and instruction about implementing the emergency plan.

A reliable and effective means of communication should be established between all work areas and persons involved to permit and ensure effective evacuation of danger areas.

Rescue equipment and a communication system to contact any necessary emergency services, should be available and readily accessible at the workplace.

The emergency procedures in the emergency plan must clearly explain how to respond in various types of emergency, including how to evacuate people from the workplace in a controlled manner. Contact numbers for emergency services should be prominently displayed.

A register of all persons who are at the construction workplace on a particular day should be kept so that in the case of any emergency everyone can be accounted for.

**Emergency procedures must include:**

- an effective response to an emergency
- evacuation procedures
- notifying emergency service organisations at the earliest opportunity for medical treatment and assistance
- effective communication between the person authorised by the person conducting the business or undertaking to coordinate the emergency response and all persons at the workplace.

For example, emergency procedures may include:

the personnel in charge of emergencies, including personnel to respond to and oversee the evacuation of injured persons
• the warning system (e.g. the alarm signal for evacuation)
• the safe assembly point
• shutting down of work, including plant and electrical equipment
• information regarding hazardous chemicals located on site
• provision of fire fighting and rescue equipment at appropriate locations
• procedures for assisting injured people and people whose means of escape are limited
• procedures for managing the risk of combustible materials (such as paper, card, wood, dust, timber, plastic and polystyrene) and highly flammable liquids and gases (such as solvents, liquefied petroleum gas (LPG) and oxygen)
• procedures following an evacuation, for example undertaking a headcount to determine if all persons that were at the construction workplace have been accounted for
• procedures regarding incident investigation, counselling and debrief.

The evacuation procedures should be displayed in appropriate location(s) at the construction workplace. The emergency plan and evacuation procedures must be tested on a regular basis.

First Aid

First Aid is exactly that, the act of providing immediate assistance to an injured person in an attempt to save life, relieve pain or provide comfort.

The most important first step in first aid is ensuring your own safety and that of other persons affected by or in the area of the incident.

Basic rules for first aid can be summarised as follows:

**DRABC**

- **Danger** to yourself or others?
- **Response**, is there any from the patient/victim?
- **Airways**, are the patients airways clear?
- **Breathing**, is the patient breathing?
- **Circulation**, is there a pulse?
The DRABC Action Plan has long been recognised as an important first action procedure when you find yourself in a position where you need to administer first aid. When approaching the scene of an accident or incident, follow the DRABC action plan.

D  Check for danger, to you, to others, to the casualty. Make certain that noone else gets hurt. You will not be of any help if you get injured too. Only proceed when it is safe to do so. For example, if you are attending a victim of electrocution, ask yourself, has the power supply been isolated?

R  Check for a response, is the casualty conscious? Gently shake the casualty and ask a simple question such as “What is your name?” If the casualty is conscious, check for bleeding and other injuries. If the casualty is unconscious, turn on their side and place in the recovery position.

A  Is the airway clear? With the casualty in the recovery position, tilt the head back and slightly down. Check for and clear any obstructions in the mouth.

B  Is the casualty breathing? Look for the chest rising up and down. Listen for the sound of breathing and feel with your cheek. If the casualty is breathing, ensure that he or she is in a stable side position. Check and manage bleeding or other injuries. If the casualty is not breathing, turn onto back and commence EAR (expired air resuscitation)

C  Check for circulation. Feel the pulse at the neck, (carotid pulse) if a pulse is present continue EAR. If pulse is not present, commence CPR (cardiopulmonary resuscitation)

Know the location of first aid kits and familiarise yourself with the contents
Identify any trained first aiders on site and ensure others on site are also aware
Keep a copy of an up to date first aid manual on site
Maintain the contents of your first aid kit
A relevant person performing construction work must ensure that first aid equipment is reasonably accessible to the person, and if the relevant person is an employer, to the person’s workers.

The first aid equipment must be appropriate and adequate for the construction work and the relevant person or the person’s workers.

The relevant person must ensure that all first aid equipment made available by the person is maintained in a hygienic, safe and serviceable condition.

FIRST AID KITS

Each site should carry a first aid kit which is adequately equipped with the contents being suitable for applying basic first aid.

In considering the required contents of a first aid kit for your site, you need to think about likely minor injuries that could occur as a result of working on the site.

Notes:
Following is the suggested contents of a first aid kit suitable for a small workplace. Preference is for all items to be disposable where possible.
CONTENTS USE FUNCTION/COMMENTS

adhesive strips (assorted sizes) minor wound dressing
non-allergenic adhesive tape (eg 5m x 2.5cm) secure dressings, strapping
eye pads (eg 5 single packs) emergency eye cover
triangular bandage (eg minimum of 5) slings, support, padding
hospital crepe or conforming bandage (various sizes eg 2.5cm - 10cm) retain dressings
(heavier crepe bandages for sprains may also be required)
wound/combine dressings (assorted sizes) bleeding control, cover wound
non-adhesive dressings (assorted sizes) wound dressing
safety pins (eg packet of 10) secure bandage, slings
scissors (eg stainless steel sharp/blunt type -12.5cm) cutting dressings, clothing
kidney dish hold dressings, instruments (where reusable, clean and disinfect after use)
small dressings bowl holds liquids eg, antiseptic solutions (where reusable, clean and disinfect after use)
gauze squares (eg 2 packets) wound cleaning
forceps/tweezers (preferably disposable splinter type - 12.5cm) remove foreign bodies eg, splinters (where reusable, clean and sterilise after use)
disposable latex or vinyl gloves (eg box of 10) infection control
sharps disposal container infection control - disposal purposes
sterile saline/water (eg 1 bottle - 250ml or single use ampoules - 30ml) emergency eye wash - irrigating eye wounds (contents MUST be discarded after opening)
resuscitation mask to be used by qualified personnel for resuscitation purposes
antiseptic solution (eg 30 ml) pre-measured containers with expiry dates, low use - single packs
plastic bags (eg 12 medium size) waste disposal
note pad and pencil recording the injured or ill person’s condition and treatment given
re-usable ice-pack for treatment of strains, sprains and bruises
The above contents are suggested for a small workplace (less than 30 workers), where the risk of injury or illness is low.

The bracketed numbers are for guidance only and do NOT represent minimum requirements.

The actual quantity of particular items and contents of the kit MUST be determined by the Risk Assessment undertaken for that workplace.
A person conducting a business or undertaking at a workplace must ensure:

- the provision of first aid equipment for the workplace
- that each worker at the workplace has access to the equipment, and
- access to facilities for the administration of first aid.

All workplaces must have first aid provisions in case of injury or illness. All construction workplaces must have access to a trained first aider. First aid staff should be familiar with the specific conditions and hazards at the construction workplace and the types of injuries likely to occur.

The names of first aid officers, first aid procedures and emergency contact phone numbers should be part of the workplace-specific training and displayed in prominent locations visible to all workers.

The principal contractor must put in place arrangements for ensuring compliance with the requirement to provide first aid at the construction project workplace. How the principal contractor intends to ensure compliance should be detailed in the WHS management plan.

When considering first aid provisions for a workplace, including the number of and training requirements for first aiders, the person conducting a business or undertaking and/or the principal contractor, should take into account the:

- nature of the work and the workplace hazards
- size and location of the workplace
- number and occupations of the workers and other people.

A construction workplace where high risk construction work is undertaken should be considered a high risk workplace. In these circumstances, it may be appropriate to employ specific work health professionals or services.

Further guidance on how to provide first aid is available in the Code of Practice: First Aid in the Workplace.

**Personal Protective Equipment**

Personal protective equipment is the last measure of control in the hierarchy.

All other forms of control should be considered first.

The order or hierarchy of control is:

- Eliminate (get rid of)
- Substitute (change)
- Engineer Controls (make something new)
- Administrative Controls (instructions and signs)
- Personal Protective Equipment (gloves, earplugs etc)
For example if a process requires the use of a hazardous substance, first you should have exhausted all possible alternatives to using and handling the substance.

If, following an appropriate risk assessment that has considered the alternatives you must still handle the substance, then do so only after equipping yourself with the appropriate PPE.

**Employer responsibilities in respect to PPE**

- Provide appropriate PPE
- Provide training on the use of PPE
- Replace or repair broken PPE
- Make certain there is appropriate sizes of all required PPE for all relevant personnel

**Employee responsibilities in respect to PPE**

- Wear PPE as instructed or required
- Look after it and clean/service it when finished
- Use and fit it correctly
- Ask for training on the use of any PPE you are uncertain about

**PPE should be used when:**

- It is obvious that PPE should be worn
- You believe wearing a certain piece of PPE would make a task safer (remember, common sense is a great tool in all health and safety)
- You are instructed to do so by a supervisor or manager
- A MSDS (material safety data sheet) tells you to wear PPE
- A warning sign instructs you to wear appropriate PPE
Fire Safety

A fire on any building site can be disastrous.

It is everyone’s responsibility to ensure that the risk of fire is minimised and that they understand the steps to take in the event that a fire occurs.

A clean, well organised site with materials correctly stacked and stored is the best defense against the threat of fire breaking out.

As well as a good clean site, observing simple safety rules and good practices when carrying out general tasks on site will go a long way to eliminating the risk of fire.

FIRE

Fire is a chemical reaction requiring:

- Heat (an ignition source)
- Fuel (gas, flammable liquid, timber)
- Oxygen (air)

The way to extinguish a fire, is to remove any or all of the components of the fire triangle.

- STARVATION remove the fuel from the fire
- SMOTHERING remove the oxygen from the fire
- COOLING remove the heat or ignition source from the fire
- INHIBITING CHEMICAL REACTION remove any chemical reaction (ionisation) that may be sustaining the fire
Each of the types of fire extinguisher will act on the fire to remove or inhibit one of the components of the fire triangle, for example, a water extinguisher removes heat from a class A fire, where a dry chemical extinguisher removes oxygen from a flammable liquid fire.

Gaseous agents such as halon (restricted in use) and CO2 extinguishers remove oxygen from the fire triangle and have a secondary effect of cooling.

The simple act of throwing sand or soil on a fire may be effective as it can remove the oxygen from the triangle.

**FIRE FIGHTING**

General hazards on a building site that have the potential to cause fire include:

- poorly stored flammable liquids such as petrol, kerosene and paint supplies
- careless work when carrying out welding operations
- electrical hazards including poorly maintained leads and power tools

Fire can break out on most construction sites. As you read this publication there is probably a fire on a construction site. Not only can people be killed or injured, but fires can also be financially devastating to those involved.

Most construction fires have simple causes and can be dealt with by simple precautions.

The following are particularly important:

Make sure that LPG cylinders and other flammable materials are properly stored. LPG should be stored outside buildings in well-ventilated and secure areas. Flammable materials such as solvents and adhesives should be stored in lockable steel containers;

LPG supplies should be turned off at the cylinder when not in use. This is particularly important out of hours. Serious explosions have occurred after site sheds or even tradesman’s vans have gradually filled with gas because an LPG cylinder has not
been turned off properly or is leaking. Make sure that LPG equipment and fittings are properly maintained.

Damaged hoses and fittings or makeshift connections are extremely dangerous because they can easily lead to leaks in tough construction conditions;
If there is any suspicion that LPG is leaking stop using it and check. Leaks can be identified by hissing, smell or using soapy water, but never with a naked flame. Only light up when you are certain that there are no leaks and that any vapour which has leaked has dispersed;

Follow clear rules for hot work such as welding. Adhere strictly to any special precautions or actions shown in the applicable work method statement. Make sure extinguishers are at hand and that sparks or heat cannot set fire to surrounding materials. After the work has finished (usually an hour later) check the worksite to make sure that there is no smouldering;

Keep a tidy site and make sure rubbish is cleared away promptly and regularly; Avoid unnecessary stockpiling of combustible materials, e.g. polystyrene, and store what is necessary away from ignition sources. Limit what is taken onto site from the store to what is needed for a day's work;

Consider the need for special precautions in areas where flammable atmospheres may develop, such as the use of volatile solvents or adhesives in enclosed areas; Avoid burning waste materials on site wherever possible. Never use petrol or similar accelerant's to start or encourage fires;

Make sure everyone abides by site rules on smoking. Site rules for preventing fire are useless unless they are followed.

The Principal Contractor and or the relevant person must monitor their worksites and take appropriate action when breaches are found.

**Preparing for fire if it happens**

Fires can grow extremely rapidly. If a construction fire occurs the primary aim is to ensure that all those on site reach safety as soon as possible. Delay can be fatal. Site staff may need to fight a fire to enable their escape, but tackling larger fires is the fire brigade's task.

**Raising the alarm**

If fire breaks out the alarm should be raised as soon as the first person discovers it.
The type of alarm needed can range from a simple shout of 'fire', to sophisticated automatic systems. Whatever system is chosen make sure that it:

- Can be heard by everyone working on site over normal background noise;
- Will work when needed (check that existing building alarm systems have not been disconnected if you rely on them during refurbishment work);
- Can be activated immediately (delay can be fatal).

Fire-fighting equipment

The equipment needed depends on the risk of fire occurring and the likely consequences if it does. It can range from a single extinguisher on small low-risk sites to complex fixed installations on large and high-risk sites. Whatever equipment is needed make sure that:

- Fire equipment is located where it is really needed and is easily accessible;
- The location of fire-fighting equipment and how to use it is clearly indicated;
- The right sort of extinguishers are provided for the type of fire that could occur. A combination of water or foam extinguishers for paper and wood fires and CO2 extinguishers for fires involving electrical equipment is usually appropriate;
- The equipment provided is maintained and works. Fire-fighting equipment should be checked regularly by a competent person - often from the manufacturer;
- Those carrying out hot work have appropriate fire extinguishers with them and know how to use them.
FIRE FIGHTING – CLASSES OF FIRE

CLASS B FIRE
Flammable Liquids

CLASS A FIRE
Combustible solids

CLASS E FIRE
Energised Electrical Equipment

*Do not use a water extinguisher on an electrical fire*

Class D Fire
Metal Fires

Metal fires require the use of specialist fire extinguishers
Class F Fire
Cooking Oil and Fat Fires

Class C Fire
Flammable Gas Fires

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### Portable Fire Extinguisher Guide

<table>
<thead>
<tr>
<th>Type of Fire, Class and Suitability</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>F</th>
<th>Comments</th>
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<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>Foam*</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td></td>
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<td>Powder (BC)</td>
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<tr>
<td></td>
<td></td>
<td>Carbon Dioxide</td>
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<tr>
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</tr>
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<td></td>
<td></td>
<td>Fire Blanket</td>
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<td>LIMITED</td>
<td>x</td>
<td>✓</td>
</tr>
</tbody>
</table>

* The class on which each agent is most effective is shown in red. It is recommended for that class of fire. For more information go to: www.fpa.com.au

This guide shows the different methods of identifying the types of portable fire extinguisher that may be located on a building site.

It also shows the class of fire for which the extinguisher is suitable.

New fire extinguishers have a coloured band which is displayed around the full cylinder to help the user quickly identify the type of agent held in the extinguisher.

Using the table above you can see that a foam extinguisher will have a blue band around it and that it can be used most effectively on class A and class B fires. It should not be used on class C or E fires and has limited use on class F fires.

The guide shown is available for download from the FPAA website on www.fpaa.com.au

Using a Fire Extinguisher

The **PASS** method is the most accepted and correct way to use a portable fire extinguisher:

- **PULL** out the safety pin
- **AIM** at the base of the fire
- **SQUEEZE** the trigger
- **SWEEP** the base of the fire

**Notes:**

**Pull** the pin or release any other locking device  
**Aim** low, pointing the extinguisher nozzle at the base of the fire  
**Squeeze** the handle to release the extinguishing agent  
**Sweep** from side to side at the base of the fire until the fire is extinguished

Remember, fire extinguishers are for small fires only – don’t endanger yourself when using them.
If you have used an extinguisher you should arrange to have it recharged immediately.

Other precautions when using a portable fire extinguisher include:

- Do not let the casing of the extinguisher come into contact with energised electrical equipment
- Consider using breathing apparatus if available when fighting a fire in a confined space
- When fighting fires which contain loose particles or involve light materials, or when fighting liquid fires, be careful not to spread the fire with the blast of the agent from the nozzle
- Never use a water extinguisher on an electrical fire