CONSTRUCTION WORK

Code of Practice

JULY 2012

safe work australia

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Safe Work Australia is an Australian Government statutory agency established in 2009. Safe Work Australia consists of representatives of the Commonwealth, state and territory governments, the Australian Council of Trade Unions, the Australian Chamber of Commerce and Industry and the Australian Industry Group.

Safe Work Australia works with the Commonwealth, state and territory governments to improve work health and safety and workers' compensation arrangements. Safe Work Australia is a national policy body, not a regulator of work health and safety. The Commonwealth, states and territories have responsibility for regulating and enforcing work health and safety laws in their jurisdiction.

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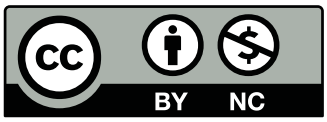

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FOREWORD

This Code of Practice for construction work is an approved code of practice under section 274 of the *Work Health and Safety Act* (the WHS Act).

An approved code of practice is a practical guide to achieving the standards of health, safety and welfare required under the WHS Act and the Work Health and Safety Regulations (the WHS Regulations).

A code of practice applies to anyone who has a duty of care in the circumstances described in the code. In most cases, following an approved code of practice would achieve compliance with the health and safety duties in the WHS Act, in relation to the subject matter of the code. Like regulations, codes of practice deal with particular issues and do not cover all hazards or risks that may arise. The health and safety duties require duty holders to consider all risks associated with work, not only those for which regulations and codes of practice exist.

Codes of practice are admissible in court proceedings under the WHS Act and Regulations. Courts may regard a code of practice as evidence of what is known about a hazard, risk or control and may rely on the code in determining what is reasonably practicable in the circumstances to which the code relates.

Compliance with the WHS Act and Regulations may be achieved by following another method, such as a technical or an industry standard, if it provides an equivalent or higher standard of work health and safety than the code.

An inspector may refer to an approved code of practice when issuing an improvement or prohibition notice.

This Code of Practice has been developed by Safe Work Australia as a model code of practice under the Council of Australian Governments' *Inter-Governmental Agreement for Regulatory and Operational Reform in Occupational Health and Safety* for adoption by the Commonwealth, state and territory governments.

SCOPE AND APPLICATION

This Code provides guidance to principal contractors and other persons conducting a business or undertaking who carry out construction work on how to meet the health and safety requirements under the WHS Act and Regulations relating to construction work.

This Code should be read in conjunction with other codes of practice on specific hazards and control measures relevant to the construction industry including:

- 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.

HOW TO USE THIS CODE OF PRACTICE

In providing guidance, the word 'should' is used in this Code to indicate a recommended course of action, while 'may' is used to indicate an optional course of action.

This Code also includes various references to sections of the WHS Act and Regulations which set out the legal requirements. These references are not exhaustive. The words 'must', 'requires' or 'mandatory' indicate that a legal requirement exists and must be complied with.

1. INTRODUCTION

1.1 Key terms used in this Code

To understand what construction work is and what the related duties are, there are a number of key terms specified in the WHS Act and Regulations and within this Code. Some of the key terms include:

- construction work
- structure
- high risk construction work
- construction project.

WHAT IS CONSTRUCTION WORK?

Regulation **289**

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.

Construction work includes the following:

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

However, construction work does not include any of the following:

- the manufacture of plant
- the prefabrication of elements, other than at a place specifically established for the construction work for use in the construction work, for example making precast concrete panels or roof trusses at a workshop of a person conducting a business or undertaking who is not involved in the construction work
- the construction or assembly of a structure that, once constructed or assembled, is intended to be transported to another place, for example mobile or prefabricated homes
- testing, maintenance or repair work of a minor nature carried out in connection with a structure, for example:
  - undertaking regular inspections of a building's fire equipment or lifts
  - replacing or repairing a sprinkler or smoke detector
  - replacing carpet in an office
  - servicing or minor repair of an air-conditioning system or solar panel unit

  - regular testing and repair of pressure piping
- mining or the exploration for or extraction of minerals, for example:
  - extracting sand or rock from a quarry or an open-cut mine
  - removing overburden at an open-cut mine.

Examples of construction work may include:

- removing an internal office wall
- building, fitting out or refitting an office building
- building a driveway crossover
- repointing a tile roof.

Construction work also includes the following activities as listed in the table below:

Activity	Examples
Any installation or testing carried out in connection with an activity referred to in the above definition of construction work	■ Installing an alarm system in a building during the fit-out phase of its construction ■ Testing an electrical installation in a high-rise building under construction (but testing, maintenance and repair work is not covered if the floor has been completed and handed over to the building owner with a certificate of occupancy, unless it is fixing defects arising from the construction work)
The removal from the workplace of any product or waste resulting from demolition	■ Loading trucks, waste bins and rubbish skips with demolition waste.
The prefabrication or testing of elements, at a place specifically established for the construction work, for use in construction work	■ Making concrete panels or roof trusses at the construction site ■ Preparing bitumen at a bitumen plant specifically established for road construction work ■ Undertaking on-site concrete batch testing.
The assembly or disassembly of prefabricated elements to form a structure or part of a structure	■ Constructing a factory using precast concrete panels ■ Dismantling a prefabricated building ■ Installing prefabricated power poles ■ Installing bridge beams.
Any work connected with an excavation Any work connected with any preparatory work or site preparation (including landscaping as part of site preparation) carried out in connection with an activity referred to in the above definition of construction work	■ Preparatory site clearing, benching or levelling done before construction ■ Soil-testing the ground for design purposes before construction of a structure ■ Installing an in-ground swimming pool or spa ■ Doing excavations while constructing a golf course ■ Assembling temporary fencing for a building site ■ Carrying out remediation excavation work on a contaminated site.

The installation, testing or maintenance of an essential service in relation to a structure	■ Roughing-in telephone, television and internet cables ■ Major drainage repair works ■ Installing a grey water recycling system ■ Installing solar heating units.
An activity referred to in the above definition of construction work that is carried out on, under or near water, including work on buoys and obstructions to navigation	■ Dredging to prepare for the erection of a structure ■ Re-piling jetties and piers ■ Driving navigation markers into the seabed.

'In connection with' means related to or associated with construction. Contracts covering a project are a good guide to what activities are done in connection with construction. Examples may include:

- work by architects or engineers in on-site offices or conducting on-site inspections, but not architects or engineers working in offices away from the construction site
- work by a mechanic on an excavator on-site and not in an isolated service area
- delivering building materials to different points on the site, but not making deliveries to a single designated delivery area
- excavating for a basement garage
- testing fire equipment on the construction site
- supervisors and manager moving around the site to monitor work
- surveying a site after construction has started, but not surveying a Greenfield site before construction has started
- traffic control on a construction site.

WHAT IS A STRUCTURE?

The WHS Act defines a structure as anything that is constructed, whether fixed or moveable, temporary or permanent. A structure includes:

- buildings, masts, towers, framework, pipelines, transport infrastructure and underground works (shafts or tunnels), for example noise reduction barriers on a freeway, communications masts or towers, electricity transmission towers and associated cables, flying cables and supports, guyed towers such as a ski-lift tower
- any component of a structure
- part of a structure.

Examples of a structure include the following:

- a roadway or pathway
- a ship or submarine
- foundations, earth retention works and other earthworks, including river works and sea defence works
- formwork, falsework or any other structure designed or used to provide support, access or containment during construction work, for example a prop or formwork system

- an airfield
- a dock, harbour, channel, bridge, viaduct, lagoon or dam
- a sewer or sewerage or drainage works, for example storm water drains, sheet piling to divert the course of a river or to build a cofferdam, underground storage tanks for an irrigation system, road tunnels, ventilation or access shaft for underground services.

Chapter 6 of the WHS Regulations (i.e. the Construction Work chapter) does not apply to plant unless:

- the plant is:
  - a ship or submarine
  - a pipe or pipeline
  - an underground tank
  - designed or used to provide support, access or containment during work in connection with construction work
- work on the plant relates to work that is carried out in connection with construction work
- the plant is fixed plant on which outage work or overhaul work that involves or may involve work being carried out by five or more persons conducting businesses or undertakings at any point in time.

Regulation **291**

WHAT IS HIGH RISK CONSTRUCTION WORK?

High risk construction work is defined as construction work that:

- involves a risk of a person falling more than 2 metres, for example installing an evaporative cooler on the roof of a double-storey building.
- is carried out on a telecommunication tower, for example installing equipment on a telecommunications tower
- involves demolition of an element of a structure that is load-bearing or otherwise related to the physical integrity of the structure, for example knocking down load-bearing walls as part of a warehouse conversion.
- involves, or is likely to involve, the disturbance of asbestos, for example removing floor tiles containing asbestos as part of a building refurbishment or cutting or drilling into an asbestos cement sheet wall
- involves structural alterations or repairs that require temporary support to prevent collapse, for example using props to support a ceiling where a load-bearing wall will be removed
- 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 1.5 metres or is carried out in or near a tunnel, for example laying or repairing pipes and conduits in a 2-metre trench, testing drainage pipes in a 2-metre trench, building a tunnel in the course of constructing an underground railway or road
- involves the use of explosives, for example blasting in preparation for the construction of a building or road, breaking up rock during construction of foundations
- is carried out on or near:
  - pressurised gas distribution mains or piping
  - chemical, fuel or refrigerant lines
  - energised electrical installations or services

'Near' in the above circumstances means close enough that there is a risk of hitting or puncturing the mains, piping, electrical installation or service. High-risk construction work is not limited to electrical safety 'no-go zones'. Electrical installations do not include power leads and electrically powered tools. Some examples of high-risk construction work include working near overhead or underground power lines and construction work that involves drilling into a wall where live electrical wiring may be present.

- is carried out in an area that may have a contaminated or flammable atmosphere, for example demolishing a petrol station and removing old tanks, decommissioning plant and removing pipework that may contain residue of hazardous chemicals
- involves tilt-up or precast concrete, for example building a factory using tilt-up panels or installing a precast drainage pit
- 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, for example building an additional lane on a road or installing drainage that involves digging up part of the road
- is carried out in an area at a workplace in which there is any movement of powered mobile plant, for example working in an area of a construction site that is not isolated from the movement of skid steer loaders, telehandlers, backhoes, mobile cranes or trucks
- is carried out in an area in which there are artificial extremes of temperature, for example construction work in an operating cool room or freezer or construction work alongside an operating boiler
- is carried out in or near water or other liquid that involves a risk of drowning, for example constructing a bridge over a river or restoring a wharf, or
- involves diving work, for example divers undertaking structural repairs to jetties, piers or marinas.

Regulation **292**

WHAT IS A CONSTRUCTION PROJECT?

A construction project is a project that involves construction work where the cost of the construction work is $250,000 or more.

Valuing construction work

A construction project covers all the activities involved in the construction work. The cost of construction work can be determined by the contract price for carrying out the work. The kinds of costs that would be included are:

- project management costs associated with the work
- the costs of fittings and furnishings, including any refitting or refurbishing associated with the work (except where the work involves an enlargement, expansion or intensification of a current use of land)
- any taxes, levies or charges (other than GST) paid or payable in connection with the work by or under any law.

The cost of the construction work would not include:

- the cost of the land on which the development is to be carried out
- the costs associated with marketing or financing the development (including interest on any loans)
- the costs associated with legal work carried out or to be carried out in connection with the development.

1.2 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.

2. DUTIES RELATING TO CONSTRUCTION WORK

2.1 Specific duties

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.

PERSON CONDUCTING A BUSINESS OR UNDERTAKING WHO COMMISSIONS 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 owner-builder), 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
  - traffic in the vicinity of the workplace that may be affected by construction work
  - essential services at the workplace.

PERSONS WHO HAVE MANAGEMENT OR 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.

2.2 What is required to manage risks in construction work?

Regulation **297**

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

Regulation **32-38**

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.

Chapter 3 of this Code provides guidance on managing the risks associated with construction work by following a systematic process that involves:

- identifying hazards
- if necessary, assessing the risks associated with these hazards
- implementing control measures
- maintaining and reviewing the effectiveness of control measures.

Guidance on the risk management process is available in the *Code of Practice: How to Manage Work Health and Safety Risks*

CONSULTING, COOPERATING AND COORDINATING ACTIVITIES WITH OTHER DUTY HOLDERS

Consultation is a legal requirement and an essential part of managing health and safety when carrying out construction work.

A safe workplace is more easily achieved when everyone involved in the work communicates with each other to identify hazards and risks, talks about any health and safety concerns, and works together to find solutions. This includes cooperation between the people who manage or control the work and those who carry out the work or who are affected by the work.

Section **46**

The WHS Act requires that you consult, cooperate and coordinate activities with all other persons who have a work health or safety duty in relation to the same matter, so far as is reasonably practicable.

At a construction site, work activities are often likely to overlap and interact, which means that the duty holders will each have a duty, for example, to protect the health and safety of a worker.

In these situations all duty holders who share responsibility for health and safety are required to consult, cooperate and coordinate activities with each other. This will help address any gaps in managing health and safety risks that often occur when:

- there is a lack of understanding of how the activities of each person may add to the hazards and risks to which others may be exposed
- duty holders assume that someone else is taking care of the health and safety matter
- the person who takes action is not the best person to do so.

The outcome of consulting, cooperating and coordinating activities with other duty holders is that you each understand how your activities may impact on health and safety and that the actions you each take to control risks are complementary.

Principal contractors for a construction project have specific duties under the WHS Regulations to include arrangements in their WHS management plan that outline how persons conducting a business or undertaking at the workplace will consult, cooperate and coordinate activities between each other.

CONSULTING WITH WORKERS

Section **47**

Section **48**

The WHS Act requires that you consult, so far as is reasonably practicable, with workers who carry out work for you who are (or are likely to be) directly affected by a work health and safety matter.

If the workers are represented by a health and safety representative, the consultation must involve that representative.

The broad definition of a 'worker' under the WHS Act means that a person conducting a business or undertaking must consult with their employees plus anyone else who carries out work for their business or undertaking. The person must consult, so far as is reasonably practicable, with their workers (including contractors and subcontractors) who are directly affected by a health and safety matter.

In many cases, decisions about construction work and construction projects are made prior to engaging workers, therefore it may not be possible to consult with workers in these early stages. However, it is important to consult with them as the construction work progresses.

Consultation can occur through:

- general or workplace induction processes, for example when specialist skills arrive on site
- toolbox talks
- participative risk assessment processes
- phone, email or fax
- one-off sessions or events called for a specific purpose

Example of toolbox talks

Toolbox talks can be used to provide information to and receive feedback from your workers as well as assist in raising the awareness of how construction work can be carried out in a safe and healthy manner.

At a toolbox talk, the person conducting a business or undertaking can provide updates on any upcoming programming issues that may have an effect on health and safety, for example:

- new high risk construction activities
- new tower crane being erected
- dual or specialised crane lifting
- changes in access to and around the site
- changes that may affect members of the public.

When using toolbox talks it is good practice to:

- keep a written record of the topic covered, attendees and any feedback received
- organise a program of toolbox talks to ensure workers are given sufficient opportunity to provide input into how risks should be controlled
- monitor the effectiveness of toolbox talks through safety outcomes (e.g. control measures implemented and near misses).

Further guidance on consultation is available in the *Code of Practice: Work Health and Safety Consultation, Co-operation and Co-ordination.*

3. MANAGING RISKS WITH CONSTRUCTION WORK

3.1 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.

3.2 Assessing the risks

Assessing the risk includes considering:

- the severity of any injury or illness that could occur, for example is it a small isolated hazard that could result in a very minor injury or is it a significant hazard that could have wide ranging and severe affects, and
- the likelihood or chance that someone will suffer an illness or injury, for example consider the number of people exposed to the hazard.

Under the WHS Regulations, a risk assessment is not mandatory for construction work however it is required for specific situations, for example when working with asbestos. In many circumstances a risk assessment will assist in determining the control measures that should be implemented. It will help to:

- identify which workers are at risk of exposure
- determine what sources and processes are causing that risk
- identify if and what kind of control measures should be implemented
- check the effectiveness of existing control measures.

A risk assessment is not necessary if the risk and how to control it is already known.

3.3 Controlling the risks

THE HIERARCHY OF CONTROL MEASURES

Some control measures are more effective than others. Control measures can be ranked from the highest level of protection and reliability to the lowest. This ranking is known as the *hierarchy of control.*

ELIMINATING THE RISK

This means removing the hazard or hazardous work practice from the workplace. This is the most effective control measure and must always be considered before anything else. For example, eliminate the risk of a fall from a height by doing the work at ground level.

If elimination of the risk is not reasonably practicable, you must consider using substitution, isolation or engineering controls, or a combination of these control measures, to minimise the risk.

MINIMISING THE RISK BY USING ONE OF THE FOLLOWING CONTROL MEASURES

Substitution

Minimise the risk by substituting or replacing a hazard or hazardous work practice with a less hazardous one. For example:

- Substituting a manual task of carrying tools from one level to another with a material hoist or craning material will minimise the risk of workers developing a musculoskeletal disorder.
- Substituting a two-part epoxy substance with a water-based acrylic waterproofing system will minimise exposure to a hazardous substance.
- Substituting an ordinary brick-cutting saw blade with a noise-reduced saw blade will minimise exposure to hazardous noise.

Isolation

Minimise the risk by isolating or separating the hazard or hazardous work practice from people. For example, isolating a mobile plant work zone from workers and/or the public with physical barriers will minimise the risk of contact occurring between a person and the mobile plant.

Engineering Controls

Engineering controls are physical control measures to minimise risk. For example:

- Benching, battering or shoring the sides of the excavation will minimise the risk of a person being trapped and prevent the excavation from collapsing.
- By enclosing an open cab excavator, for example using a falling object protective structure (FOPS) or a roll-over protective structure (ROPS), will minimise the risk of an operator being struck by a falling object or being crushed if the excavator rolls over.

MINIMISING THE RISK BY USING ADMINISTRATIVE CONTROLS

Administrative controls should only be considered when other higher order control measures are not practicable, or to increase protection from the hazard. These are work methods or procedures that are designed to minimise the exposure to a hazard, such as ensuring there is no unauthorised entry of a person to a work area. For example:

- Using a ‘keep out’ sign and a person to secure an exclusion zone when dismantling scaffolding to minimise the risk of people entering the work area and being struck by a falling object.

- Implementing a training program to show workers how to use new equipment
- Implementing a job rotation system
- Using permit systems to prevent unauthorised persons from entering a confined space

MINIMISING THE RISK BY USING PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE is the lowest order control measure in the hierarchy of controls. PPE should also only be considered when other higher order control measures are not reasonably practicable or to increase protection from the hazard.

PPE relies on the proper fit and use of the PPE and does nothing to change the hazard itself. It therefore requires thorough training and effective supervision to ensure compliance and effectiveness. Examples of PPE include:

- Wide brimmed hats (where hard hats are required then it should be a hard hat brim or neck flap), sunglasses and sunscreen to minimise the exposure to ultraviolet (UV) radiation.
- High visibility reflective clothing or vests.
- Ear plugs or ear muffs to minimise the risk of exposure to excessive noise when operating noisy machinery and power tools.

COMBINATION OF CONTROL MEASURES

In many cases a combination of control measures may be implemented to control a risk.

Example 1

To manage the risk of a fall when a worker is removing old roofing on a building under demolition, control measures may include the following:

- Determine whether the roof can be demolished from the ground (elimination)
- If this is not reasonably practicable, minimise the risk of a fall by:
  - building a scaffolding platform underneath the roof (substitution)
  - installing a perimeter fence to keep unauthorised persons from the construction workplace (isolation)
  - working off scissor lifts and/or elevating work platforms (engineering control)
- Implement a procedure that prohibits work near open edges (administrative control)
- Use personal safety harness (PPE).

Example 2

To manage the risk of persons working in the same area from being struck by mobile plant, control measures may include:

- using traffic lights instead of a traffic controller to control traffic at road works (substitution)
- replacing an item of mobile plant which has a restricted field of vision to one that has a clear field of vision (substitution)
- using zero tail swing excavators rather than conventional tail swing excavators (substitution)
- segregating the work processes through distance and time (isolation)

- installing collision avoidance technology (in accordance with manufacturer's instructions) when the vehicle is reversing (engineering)
- developing and implementing a traffic management plan for any traffic control being carried out (administrative)
- requiring all workers to wear high visibility reflective clothing or vests (PPE).

When selecting and implementing a combination of control measures it is important to consider whether any new risks might be introduced as a result and, if so, whether the combination of the control measures should be reviewed.

Regulation **37**

Implemented control measures must be maintained to ensure they are fit for purpose, suitable for the nature and duration of the work, and are installed, set up and used correctly.

3.4 Reviewing control measures

The control measures that are put in place to protect health and safety should be regularly reviewed regularly to make sure they are effective. A review should occur on a regular basis and can be done by using the same methods as the initial hazard identification process. Common methods include workplace inspection, consultation, testing and analysing records and data. Reviewing the control measures also involves considering whether a higher order control measure is now reasonably practicable.

Regulation **38**

You must review your control measures and, if necessary, revise them:

- when the control measure is not effective in controlling the risk
- before a change at the workplace that is likely to give rise to a new or different health and safety risk that the control measure may not effectively control
- if a new hazard or risk is identified
- if the results of consultation indicate that a review is necessary, or
- if a health and safety representative requests a review.

When reviewing control measures, the SWMS must also be reviewed and revised where necessary.

If problems are found, go back through the risk management steps, review your information and make further decisions about control measures.

A change at the workplace includes:

- a change to the workplace itself or any aspect of the work environment
- a change to a system of work, a process or a procedure.

Where a SWMS has been developed for high risk construction work or a WHS management plan has been developed for a construction project, these documents must also be reviewed and revised (where necessary) when control measures have been reviewed.

4. SAFE WORK METHOD STATEMENTS (SWMS)

Regulation **299**

A Safe Work Method Statement (SWMS) must be prepared before high risk construction work (as defined in *Chapter 1* of this Code) commences.

Regulation **300**

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.

4.1 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.

Appendices A and B provide a template and an example of a basic SWMS.

WHO IS RESPONSIBLE FOR PREPARING 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.

Example
A contractor is engaged to install roof sheeting on a structure that is above 2 metres. A second contractor is engaged to use a crane to lift the roof sheeting so the first contractor can install it. Both contractors are required to prepare a SWMS for the high risk construction work being carried out, -for the work above 2 metres and for the work on the powered mobile plant.

In this case, the contractors may decide to prepare one SWMS to cover both types of high risk construction work or they may decide to prepare separate SWMS. If separate SWMS' are being prepared, the contractors must consult, cooperate and coordinate to the extent necessary to avoid inconsistencies and ensure that they are carrying the work out safely.

4.2 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 in Appendix A illustrates how this may be done.

Workers and their health and safety representatives should be consulted in the preparation of the SWMS. If there are no workers engaged at the planning stage, consultation should occur with workers when the SWMS is first made available to workers, for example during workplace-specific training or a toolbox talk, and when it is reviewed.

A generic SWMS may be prepared and used for those work activities that are carried out on a regular basis. The content of this type of SWMS may be refined over a number of years and include consultation with workers and other persons conducting a business or undertaking. Prior to each new activity, the SWMS must be reviewed and revised to ensure it applies to the high risk construction work and the actual workplace.

4.3 Implementing a SWMS

COMPLYING WITH A SWMS

All persons conducting a business or undertaking who are involved in high risk construction work must develop and implement arrangements to ensure the work is carried out in accordance with the SWMS. Arrangements may include a system of routine or random workplace inspections, for example, observing workers and supervisors to see if the control measures outlined in the SWMS are being implemented.

If the work is not being carried out in accordance with the SWMS, then the work must stop immediately or as soon as it is safe to do so. Work must not resume until the work can be carried out in accordance with the SWMS. If work is stopped, the work and the SWMS should be reviewed to identify non-compliance and ensure that the method in the SWMS is the most practical and safest way of doing the task. If another method is identified now as being a reasonably practicable option, the SWMS should be revised to take this change into account before re-commencing work.

If the high risk construction work is being carried out in connection with a construction project, a person conducting a business or undertaking must provide the principal contractor with a copy of the SWMS. The principal contractor must take reasonable steps to obtain the SWMS prior to the high risk construction work commencing.

PROVIDING INFORMATION AND INSTRUCTION

All workers who will be involved in high risk construction work must be provided with information and instruction so they:

- understand the hazards and risks arising from the work
- understand and implement the risk controls in a SWMS
- know what to do if the work is not being conducted in accordance with the SWMS.

For example, this information and instruction may be provided during general construction induction training, workplace-specific training or during a toolbox talk by the principal contractor, contractor or subcontractor.

KEEPING THE SWMS

The SWMS must be kept and made available to any person engaged to carry out the high risk construction work and for inspection under the WHS Act until the high risk construction work to which it relates is completed or for at least 2 years following the occurrence of a notifiable incident.

Where a SWMS is revised, all versions should be kept.

The SWMS may be kept at the workplace where the high risk construction work will be carried out. If this is not possible, then the SWMS should be kept at a location where it can be delivered to the workplace promptly.

4.4 Reviewing a SWMS

A SWMS must be reviewed (and revised if necessary) if relevant control measures are revised. Chapter 2 of this Code provides further information on when control measures must be reviewed.

The review process should be carried out in consultation with workers (including contractors and subcontractors) who may be affected by the operation of the SWMS and their health and safety representatives who represented that work group at the workplace.

When a SWMS has been revised, the person conducting a business or undertaking must ensure:

- all persons involved with the high risk construction work are advised that a revision has been made and how they can access the revised SWMS. For a construction project, the principal contractor should be given a copy of the revised SWMS
- all persons who will need to change a work procedure or system as a result of the review are advised of the changes in a way that will enable them to implement their duties consistently with the revised SWMS
- all workers that will be involved in the high risk construction work are provided with the relevant information and instruction that will assist them to understand and implement the revised SWMS.

5. WHS MANAGEMENT PLANS FOR CONSTRUCTION PROJECTS

Regulation **309**

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.

5.1 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.

5.2 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.

PEOPLE WITH HEALTH AND SAFETY RESPONSIBILITIES

Persons at the workplace whose positions or roles involve specific health and safety responsibilities must be identified in the WHS management plan. For example, people who should be listed include WHS managers, first aid officers and project managers. Their responsibilities should be briefly described. Health and safety representatives do not need to be listed, unless they have a coordinating role separate to their role as a health and safety representative.

ARRANGEMENTS FOR CONSULTATION, COOPERATION AND COORDINATION

An important part of the WHS management plan involves the arrangements for consultation, cooperation and coordination of all persons conducting a business or undertaking at the workplace.

The principal contractor must include details in the WHS management plan about how the persons conducting a business or undertaking at the workplace will consult and cooperate with each other. There should be ongoing consultation and cooperation between all duty holders so that when work overlaps, each person is aware of other construction activities and can control any associated hazards and risks. Examples include:

- holding pre-commencement WHS meetings with all contractors and subcontractors
- scheduling regular contractor/subcontractor WHS meetings
- holding toolbox WHS meetings
- establishing a construction project WHS committee
- distributing a regular WHS newsletter.

In many cases, people who have responsibilities are not always at the workplace all the time. It is recommended that consultation arrangements for communicating with people off-site also be included in the WHS management plan.

The WHS management plan must detail the arrangements that the principal contractor will use to coordinate the construction work to ensure compliance. It must also include the process for developing, reviewing and distributing SWMS. This would also include providing training to workers.

ARRANGEMENTS FOR MANAGING INCIDENTS

The principal contractor should consider the types of health and safety incidents that might occur. The WHS management plan should document the actions that will be taken and who will represent the principal contractor. The following should be included (covering both the process involved and the person responsible for it):

Process	Action to be taken
Incident management	■ Arrangements to stabilise and evacuate any injured person after ensuring safety of rescuers ■ Arrangements for isolating the incident scene ■ Arrangements for making the workplace safe after the incident ■ Arrangements for preserving the incident site ■ Arrangements for notifying the principal contractor ■ Notification of the relevant regulator and emergency services as necessary ■ Arrangements for the investigation of an incident.
Emergency situations	■ The emergency plan for the construction project ■ Arrangements for testing of the emergency plan ■ Arrangements for training and instruction requirements.
First aid arrangements	■ The facilities and first aid equipment that will be provided by the principal contractor ■ Arrangements for training in first aid ■ First aid equipment that will be provided by contractors and subcontractors.

The WHS management plan should also include arrangements for reporting and acting upon any 'near misses'.

SITE-SPECIFIC HEALTH AND SAFETY RULES

The WHS management plan must detail any site-specific WHS rules that the principal contractor requires persons to comply with and the arrangements for ensuring that all persons at the workplace are informed of these rules. The rules should be simple and clear and, where appropriate, they should show who each rule applies to.

The nature of the work, hazards, size and location of the workplace, and the number and composition of the workers and other persons at the workplace can assist in determining the site-specific rules.

Upon finalisation of the rules, the principal contractor should inform everyone in the workplace about the rules. Ways of informing people about the safety rules are:

- holding toolbox meetings or face-to-face discussions
- posting them in a prominent position at the workplace
- distributing copies to everyone at the workplace.

If there are people at the workplace who do not understand English well, the WHS management plan should set out how these people will be informed of the rules.

ARRANGEMENTS TO PREPARE, COLLECT AND ASSESS, MONITOR AND REVIEW SWMS

The WHS management plan must include details of the arrangements for the preparation, collection and any assessment/approval, monitoring and review of SWMS at the workplace. The principal contractor may establish a process to ensure that the work being undertaken does not conflict with control measures being used by other contractors or subcontractors working in the same location or create additional risks for others.

The WHS management plan must also include arrangements to ensure that SWMS are followed by all affected workers (including contractors and subcontractors), and that work is ceased if the SWMS is not being followed.

5.3 Implementing the WHS management plan

INFORMING PEOPLE ABOUT THE WHS MANAGEMENT PLAN

The principal contractor must:

- ensure, so far as is reasonably practicable, that all persons who are to carry out construction work on the construction project are made aware of the content of the WHS management plan in respect to their work and their right to inspect the plan
- make workers aware of the parts of the WHS management plan that are relevant to the work they are carrying out.

OBTAINING SWMS

The principal contractor must take all reasonable steps to obtain copies of SWMS relating to high risk construction work before work on the construction project commences. Contractors and subcontractors should be made aware of the responsibility to provide the SWMS to the principal contractor prior to commencing any high risk construction work.

KEEPING THE WHS MANAGEMENT PLAN

The WHS management plan (including any revisions to it) must be kept and made available to any person engaged to carry out the high risk construction work and for inspection under the WHS Act until the construction project to which it relates is completed or for at least 2 years following the occurrence of a the notifiable incident.

5.4 Reviewing and revising a WHS management plan

The principal contractor must review and, as necessary, revise the WHS management plan to ensure it remains up-to-date and relevant for the construction project.

Situations where a WHS management plan may be reviewed include:

- changes of critical personnel, for example project manager, site supervisor, site safety manager
- if safety rules on site change
- changes in legislation, regulations or codes of practice
- where there are significant changes to site conditions that result in changes to persons with responsibility for health and safety or additional persons with responsibility for health and safety.

Where reasonably practicable, the review process should be undertaken in consultation with workers (including contractors and subcontractors) at the workplace.

Following the revision of a WHS management plan, if a process has changed, the principal contractor must ensure, so far as is reasonably practicable, that each person carrying out construction work in connection with the construction project is made aware of any revisions to the WHS management plan. This can be achieved by providing the revisions in writing to contractors and holding face-to-face discussions.

6. INFORMATION, TRAINING, INSTRUCTION AND SUPERVISION

Section **19**

Regulation **39**

The WHS Act requires a person conducting a business or undertaking to provide relevant information, training, instruction and supervision to protect all persons from risks to their health and safety arising from work carried out.

The WHS Regulations require that a person conducting a business or undertaking must ensure that information, training and instruction provided to a worker is suitable and adequate, having regard to:

- the nature of the work carried out by the worker
- the nature of the risks associated with the work at the time of the information, training and instruction, and
- the control measures implemented.

The training provided must be readily understandable by any person to whom it is provided.

A range of activities can assist in ensuring people have the necessary knowledge and skills to complete the work safely, including general construction induction training and other training that may be specific to the workplace or the task the person is performing.

Information that might be provided includes workplace health and safety arrangements and procedures, such as for emergency evacuations. Information can be provided in various forms, including written formats or verbally, for example during workplace-specific training, pre-start meetings or toolbox talks.

Information and instruction are often provided at the same time. In addition, supervisors will provide specific workplace instructions during the work, including for health and safety. Supervisors should be aware of and provide the level of supervision necessary to ensure the health and safety of workers, including assessing workers' competency to undertake the work.

6.1 General construction induction training

Regulation **316-317**

If a worker has either not successfully completed general construction induction training, or has successfully completed general construction induction training more than 2 years previously but has not carried out construction work in the preceding 2 years, a person conducting a business or undertaking must:

- not direct or allow the worker to carry out construction work, and
- ensure that general construction induction training is provided to a worker engaged by the person who is carrying out construction work.

General construction induction training provides basic knowledge of construction work, the work health and safety laws that apply, common hazards likely to be encountered in construction work, and how the associated risks can be controlled.

General construction induction training must be delivered in Australia by a Registered Training Organisation (RTO) and cover the content set out in the specified VET course for general construction induction training. The training should include:

- the roles, responsibilities and rights of duty holders
- health and safety consultation and reporting processes

- the principles of risk management
- common construction hazards and control measures
- safety information and documentation (e.g. WHS management plans and SWMS).

A person conducting a business or undertaking must ensure that any person who is to carry out construction work must have successfully completed general construction induction training, for example project managers and engineers, foreman, supervisors, surveyors, labourers and trades persons. The person must not direct or allow the person to carry out the work unless this training has been completed.

GENERAL CONSTRUCTION INDUCTION TRAINING CARDS

Regulation **317**

A person conducting a business or undertaking must ensure workers have successfully completed general construction induction training before starting construction work. Each construction worker must hold:

- a general construction induction training card, or
- a general construction induction training certification that has been issued within the preceding 60 days if the worker has applied for but not yet been issued with a general construction induction training card.

Once a person has successfully completed general construction induction training they may apply to the regulator for a general construction induction training card.

If a worker has applied for a general construction induction training card and has not been notified of the decision on the application within 60 days of submitting the application, the worker is taken to hold a general construction training card until a decision is made by the regulator. If the worker receives a cancellation notice, they must return the card as requested in the notice.

The WHS Regulations recognise that a general construction induction card can be issued in different jurisdictions under their work health and safety legislation. Where a worker holds a card that is issued in a different jurisdiction to where the work is being carried out, then the card is recognised as being valid as long as it is used in accordance with the terms and conditions under which it was granted. However, this does not apply if the card has been suspended, cancelled or has expired.

Workers must keep their card available for inspection by an inspector. They will also need to provide their card to the person conducting a business or undertaking that engages them so they can be sure the worker has successfully completed the training.

6.2 Workplace specific training

Workplace specific training aims to provide information about work health and safety issues and safe work practices that are specific to the construction workplace. It should be conducted by a person conducting a business or undertaking that has management or control at the workplace or by the principal contractor for the construction project.

All workers should attend workplace specific training so they can become aware of procedures, management and reporting arrangements, as well as other issues that are relevant to a particular construction workplace. Other persons who may visit the workplace may also require some workplace specific training.

Construction workplace specific training may cover the following:

- safety documents, policies and plans, including the WHS management plan and SWMS
- supervisory, consultation and reporting arrangements
- workplace safety rules, including first aid provisions and emergency procedures
- workplace facilities, including their location, use and maintenance
- emergency procedures, including after-hours emergency contacts
- health monitoring requirements and procedures
- access, egress and security
- workplace specific hazards and control measures
- how safety issues are resolved, including health and safety representative arrangements
- how to report hazards and unsafe work practices
- how to report accidents, incidents and dangerous occurrences
- what to do if a person is injured, including first aid provisions.

Workplace specific training may be delivered in a variety of ways, including:

- toolbox talks
- pre-start meetings
- on-the-job instructions
- one-off sessions or events called for a specific purpose.

6.3 Other training

Other training may also be necessary to ensure that the worker has the relevant information and instruction when undertaking a particular construction activity. For example, task specific training may be provided to communicate hazards and risk controls and to provide the skills necessary for workers to carry out a specific task safely.

Task specific training should be developed for the actual task carried out and be regularly reviewed and updated whenever there are changes to the task, processes, systems of work, plant and substances that may affect health and safety.

6.4 Supervision

Adequate supervision must be provided, taking into account where workers are unfamiliar with the site or the nature of the work.

Workers in a supervisory role (e.g. leading hand or foreman) should be trained and authorised to ensure the work is carried out in accordance with relevant policies, procedures and the SWMS.

7. GENERAL WORKPLACE MANAGEMENT ARRANGEMENTS

Regulation **40-55**

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.

7.1 The work environment

Regulation **40**

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 re-handling 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.*

ENTRY AND EXIT

The means of entry and exit to and from all areas of the workplace must be safe. For example, providing separate entries and exits for mobile plant (including cranes or trucks) and pedestrians will reduce the risk of persons being hit by moving vehicles. If persons and vehicles have to share a traffic route, use kerbs, barriers or clear markings to designate a safe walkway and have traffic management controls implemented.

Entry and exit areas and passageways should be clearly lit, signed and kept free from materials and debris to minimise the risk of trips and slips.

Emergency exit routes must be easily identifiable, kept free from obstruction and have emergency lighting, directional signs and exit points marked. Emergency lighting back-up systems should have sufficient capacity to provide safe emergency egress for a reasonable period of time in the event of power failure. Emergency lighting systems should be tested regularly to ensure an evacuation could be safely carried out in both daylight and night time conditions.

WORK AREAS

Work areas should be clearly identified and separated as necessary so that work can be undertaken safely. A workplace management plan may be prepared to outline different areas, including loading zones, access and egress, materials storage, offices, first aid stations, waste and recycling areas. Signs may be used to provide clear instructions to persons at the construction workplace, for example, ‘No Entry’, ‘No Smoking’, ‘PPE required’, and signs identifying hazard areas.

Vehicle, plant and pedestrian traffic in the workplace may be controlled through clear vehicle paths, allocated parking areas, signage, physical barriers and/or traffic controllers.

Where there is risk of falling objects, exclusion zones may need to be created to prevent unauthorised people entering the work area and being put at risk.

FLOORS AND SURFACES

The type of work surfaces that are required at a workplace will depend on the different phases of construction and the type of work being carried out. Construction work surfaces will vary (e.g. earth, steel, timber and concrete) and the risk of slips and trips must be appropriately controlled.

Consideration should be given to the surface slope, profile and how workers carry out work on the surface. Dust, moisture and the materials from which the surface is constructed will also present hazards to workers and the placement of materials and equipment. Surfaces should be inspected regularly and maintained to eliminate or minimise slip and trip hazards.

LIGHTING

Adequate lighting must be provided to supplement low levels of natural light to ensure tasks can be conducted safely.

The level of illumination should match the demands of the job and the location. The following are examples for minimum lighting levels at the workplace:

- general access ways and base lighting to rooms, stairways: 40 LUX
- typical building work (e.g. bricklaying, plastering, gyprock and electrical): 160 LUX.

If adequate lighting cannot be provided, the room or area should be suitably locked out and not used.

Lighting installations should avoid the risk of electric shock, burns and glare. For example, high intensity lighting such as halogen and metal halide fittings should be installed at a sufficient height and angle so as to prevent glare and contact burns and have sufficient clearance from combustible materials so as not to create a fire hazard.

Lighting should be checked regularly to ensure it remains adequate for the construction work or project as it progresses. Any defective globes, lamp guards and fittings should also be replaced or repaired promptly by a competent person.

HEAT AND COLD

Heat stress can arise from working in high air temperatures, exposure to high thermal radiation or high levels of humidity, including working on a formwork deck, landscaping works and fit-out work in an enclosed non air-conditioned structure. The symptoms of heat stress include dizziness, fatigue, headache, nausea, breathlessness, clammy skin or difficulty remaining alert.

If it is not reasonably practicable to eliminate exposure to heat and cold, risks can be minimised with a range of control measures. Examples of control measures in a hot work environment may include installing shade structures, task rotation, rest breaks, or isolating workers from heat. Workers must have access to adequate, cool, clean water.

Outdoor workers should be provided with protection in adverse weather conditions, for example sunshades, sheds, caravans, tents and windbreaks. Protection against solar ultraviolet (UV) exposure is also important, for example by:

- organising outdoor work so that workers carry out alternative tasks or work in shade during hot periods of the day
- providing personal protective clothing and equipment, such as a wide brim hat, long sleeved and collared shirt, long pants, sunglasses and sunscreen, and hard hat attachments

ESSENTIAL SERVICES

Essential services include the supply of gas, water, sewerage, telecommunications, electricity, chemicals, fuel and refrigerant in pipes or lines. The principal contractor for a construction project must manage the risks to health and safety associated with essential services at the workplace.

The WHS Regulations define construction work that is carried out on or near:

- pressurised gas distribution mains or piping
- chemical, fuel or refrigerant lines
- energised electrical installations

as high risk construction work and a SWMS must be prepared before this work commences.

Before work commences, the principal contractor must find out what services are at or near the location where the work is to be done that could create a risk if contacted or damaged. Services may be underground or hidden in floor slabs and behind walls.

Underground essential services

Underground essential services use pipes, cables or other associated plant located underground.

Regulation **304**

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*.

7.2 Facilities at a construction workplace

Regulation **41**

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:

Workers	Closet Pan(s)	Urinals
Males	1 per 15 males (or fraction of)	1 per 20 males (or fraction of) 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.
Females	1 per 10 females (or fraction of)	N/A

For example, a construction workplace with 20 male workers would require two closet pans and one urinal. Additionally, should the construction workplace have 17 male workers and three female workers (total of 20), the workplace would require two male closet pans, one urinal and a female closet pan.

The above ratios are seen as the minimum acceptable standard for toilet facilities at a construction workplace.

Appendix C provides examples of some common construction workplaces and the facilities that might be suitable for these workplaces. Appendix D provides guidance for housing construction.

Further general guidance on workplace facilities is available in the *Code of Practice: Managing the Work Environment and Facilities.*

7.3 First aid

Regulation **42**

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.*

7.4 Emergency planning

Regulation **43**

A person conducting a business or undertaking at a workplace must ensure that an emergency plan is prepared for the workplace.

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
- 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.

7.5 Personal protective equipment

Regulation **44**

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.

Regulation **46**

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, or
- 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.

7.6 Falling objects

Regulation **54**

Regulation **55**

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.

APPENDIX A – SAFE WORK METHOD STATEMENT TEMPLATE

RECOMMENDED STEPS FOR FILLING OUT THE SWMS TEMPLATE

1. Consult with relevant workers, contractors and health and safety representatives involved with the high risk construction work, the activities involved, and associated hazards, risks and controls.

2. In the 'What is the high risk construction work?' column, identify the high risk construction work for the construction work activity that will be undertaken.

3. In the 'What are the hazards and risks?' column, list the hazards and risks for each high risk construction work activity.

4. Identify the workplace circumstances that may affect the way in which the high risk construction work will be done.

Examples of workplace circumstances that may impact on the hazards and risks include:

- information relating to the design of the structure, the workplace (e.g. location, access, transport), and information contained in the WHS Management Plan
- information on any 'essential services' located on or near the workplace
- confirmation that the regulator has been advised of any 'notifiable work' (e.g. demolition work involving explosives)
- safe work methods and plant to be used.

5. In the 'How will the hazards and risks be controlled?' column, select an appropriate control or combination of controls by working through the hierarchy of controls. It is important that you are able to justify why the selected control measure is reasonably practicable for the specific workplace.

SELECTING CONTROL MEASURES

1. Eliminate the risks so far as is reasonable practicable

2. If this is not reasonably practicable, minimise them so far as reasonably practicable by applying the following hierarchy of control measures:

- minimise the risk by doing one or more of the following:
  - substituting the hazard
  - isolating the hazard
  - implementing engineering controls
- if the risk still remains, minimise the remaining risk by implementing administrative controls
- if the risk still remains, minimise the remaining risk by ensuring the provision and use of suitable personal protective equipment (PPE).

SWMS COMPLIANCE (INFORMATION, MONITORING AND REVIEW)

1. Brief each team member on the SWMS before commencing work. Ensure each team member knows work is to stop if the SWMS is not followed.

2. Observe the work being carried out and monitor compliance with the SWMS. Review risk controls regularly, including:

- before a change occurs to the work itself, the system of work or the work location
- if a new hazard associated with the work is identified
- when new or additional information about the hazard becomes available
- when a notifiable incident occurs in relation to the work
- when risk controls are inadequate or the SWMS is not being followed.

In all of the above situations stop the work, review the SWMS, adjust as required and re-brief the team.

KEEP THE SWMS IN A READILY AVAILABLE LOCATION FOR THE DURATION OF THE HIGH RISK CONSTRUCTION WORK AND FOR AT LEAST 2 YEARS AFTER A NOTIFIABLE INCIDENT OCCURS.

APPENDIX A - SAFE WORK METHOD STATEMENT TEMPLATE

[PCBU name, ABN, Office Address and Phone]		**Principal Contractor (PC)**	[Name, ABN, Office Address]
Work Activity:	[Job description]	**Work Location:**	
High Risk Construction Work:	• [list work from WHS Regulations]		
	•		
	•	**Works Manager:**	
	•	**Contact Phone:**	
Have workers been consulted about the SWMS?			
Person Responsible for ensuring compliance with SWMS		**Date SWMS Provided to PC:**	
Person(s) Responsible for reviewing the SWMS		**Last SWMS Review Date:**	
Date received:		**Signature:**	
Workers name		**Date received:**	
Workers signature			
What are the tasks involved?	**What are the hazards and risks?** (What is the problem?)	**What are the control measures?** (Describe the control measures and how they will be used)	
Think about the workplace and each stage of the work, including preparation and clean-up.			
	Identify the hazards and risks that may cause harm to workers or the public.	Describe what will be done to control the risk. What will you do to make the activity as safe as possible?	

APPENDIX B - SAFE WORK METHOD STATEMENT EXAMPLE

ABC Bricklaying [ABN] 123 Mortar Street Standard Course ACT 2600 Ph: (02) 1234 5678		**Principal Contractor (PC)**	**XYZ Contracting Services** 8910 Management Road Projectville ACT 2666 Ph. (02) 9876 5432
Work Activity:	Bricklaying	**Work Location:**	Potters Hut
High Risk Construction Work:	• Powered mobile plant		Brick Street
	• In or adjacent to a road, that is in use by traffic		Pottery ACT 2600
	• Falls of more than 2 metres		
	• Energised electrical installations	**Works Manager:**	Fred Bloggs
	• Structural collapse	**Contact Phone:**	0400 111 111
Have workers been consulted about the SWMS?	Yes		
Person Responsible for ensuring compliance with SWMS	Joe Bloggs Leading Hand	**Date SWMS Provided to PC:**	5 January 2012
Person(s) Responsible for reviewing the SWMS	Fred Bloggs Works Manager	**Last SWMS Review Date:**	
Signature:		**Date received:**	
Workers name	Tom Smith	**Date received:**	14 January 2012
Workers signature			

APPENDIX B - SAFE WORK METHOD STATEMENT EXAMPLE

What are the tasks involved?	What are the hazards and risks? (What is the problem?)	What are the control measures? (Describe the control measures and how they will be used)
Delivery of bricks ■ Movement of powered mobile plant. ■ Work in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians.	Workers being struck by powered mobile plant. including delivery vehicle and forklift used for unloading. Workers being struck by vehicles in adjacent road or traffic corridor. Vehicles in adjacent road or traffic corridor being struck by falling objects.	Prepare and implement workplace traffic management plan and make available to workers: ■ Exclusion zone for mobile plant to be clearly identified (signage and barricades as per site plan) and controlled during vehicle loading/unloading operations. ■ Dedicated, trained road traffic controller(s) to direct traffic entering and leaving site and control traffic (pedestrian and vehicle) on adjacent pedestrian footpaths and roadways. ■ Use portable traffic signals and/or temporary safety barriers to direct/control traffic flow as required. ■ Brick delivery vehicle to be unloaded on-site (not from public roadway). Place brick pallets adjacent to bricklaying work areas (inside workplace boundaries and clear of workplace traffic routes).
Working at ground level ■ Movement of powered mobile plant. ■ Work that is carried out near a trench with an excavated depth greater than 1.5 metres.	Being struck by powered mobile plant. Falls into excavations.	Powered mobile plant to travel on planned and controlled workplace traffic routes. Where powered mobile plant are required to travel outside of planned and controlled routes, a dedicated, trained road traffic controller is to control plant movement. Powered mobile plant and materials are not to be operated or stored within 2 metres of an open trench.
Working above ground ■ A risk of a person falling more than 2 metres. ■ Construction work that is carried out on or near energised electrical installations or services.	Worker falling from height. Worker coming in contact with and/or receiving electric shock from overhead electric lines. Plant/equipment contacting overhead electric lines.	For bricklaying activity where there is a risk of a person or object falling less than 2 metres, use fully decked heavy duty frame trestle scaffolds, with bay lengths of 1.8 metres or less. For bricklaying activity where there is a risk of a person or object falling greater than 2 metres, use heavy duty modular scaffolds with brick-guards. Scaffolds from which a person or object can fall more than 4 metres must be constructed and certified by a licensed scaffolder.

What are the tasks involved?	What are the hazards and risks? (What is the problem?)	What are the control measures? (Describe the control measures and how they will be used)
		For all scaffolds: ■ Platforms are not to be loaded with more than 100 bricks per bay (or 400 kg of blocks). ■ No scaffold alterations are to be undertaken except by licensed scaffolder. ■ Access to scaffold platforms is to be via stairs or ladder towers. ■ The exclusion zones and approach distances to overhead electric lines at the locations and distances specified on the site plan are to be clearly identifiable and enforced by a dedicated controller.
Constructing brick walls ■ Structural alterations or repairs that require temporary support to prevent collapse.	Worker injured by structural collapse before completion & curing.	Brace all constructed brisk walls in accordance with Company Instruction Sheet #3.
Work completion ■ A risk of a person falling more than 2 metres. ■ Structural alterations or repairs that require temporary support to prevent collapse.	Injuries to public from unauthorised access to workplace (e.g. falls greater than 2 metres, structural collapse).	All scaffolding and site fencing is secure and serviceable. All entry and exists must be locked at the end of each day.

APPENDIX C - GENERAL CONSTRUCTION WORKPLACE FACILITIES

Workplace	Toilets	Hand washing facilities	Drinking water	Eating facilities	Showers	Change rooms	Personal storage
What facilities are required?	√ **Must provide** Number and type based on number and sex of workers	√ **Must provide** Number based on number of workers	√ **Must provide** Adequate supply of cool, clean drinking water (free of charge).	√ **Must provide** Hygienic dining facilities for eating meals and preparing and storing food.	**? If required** For example, if the work involves dirty, hot or arduous work.	**? If required** For example, if a need to change in and out of clothing (e.g. PPE).	**? If required** For example, if a need to store personal belongings such as tools.
Example 1: **Large residential project** ■ New multiple single dwellings ■ Max 30 workers, including 3 female workers ■ $1.5 Million	**Minimum requirements:** ■ 1 female pan (inc adequate) means for disposal of sanitary items, ■ 2 male pan, and ■ 2 (space) urinal. **Options include:** ■ temporary facilities such as portable toilets ■ relocatable buildings with toilet facilities, or ■ use new building facilities when available.	**Minimum requirements:** ■ 1 female hand basin, and ■ 2 male hand basin **Options include:** ■ temporary facilities such as portable toilets with a hand basin ■ relocatable buildings with hand washing facilities, or ■ use new building facilities when available.	**Drinking water facilities such as:** ■ direct connection to the mains water supply, ■ bottled water or containers.	**A separate dining facility such as:** ■ relocatable building, or ■ use of part of new building when available.	**If required, provide 2 separate shower facilities such as:** ■ portable shower units, or ■ use new building facilities when available.	**If required:** ■ provide temporary change room facilities, or ■ use area of new building.	**If required, provide**: ■ lockable space in an existing or relocatable building, or ■ lockable vehicle or trailer, or ■ lockable tool/storage boxes.

APPENDIX C - GENERAL CONSTRUCTION WORKPLACE FACILITIES

Workplace	Toilets	Hand washing facilities	Drinking water	Eating facilities	Showers	Change rooms	Personal storage
What facilities are required?	√ **Must provide** Number and type based on number and sex of workers	√ **Must provide** Number based on number of workers	√ **Must provide** Adequate supply of cool, clean drinking water (free of charge).	√ **Must provide** Hygienic dining facilities for eating meals and preparing and storing food.	**? If required** For example, if the work involves dirty, hot or arduous work.	**? If required** For example, if a need to change in and out of clothing (e.g. PPE).	**? If required** For example, if a need to store personal belongings such as tools.
Example 2: Commercial construction project ■ New 12 storey office tower ■ Max 70 workers, including 5 female workers ■ $200 Million ■ Hazardous chemicals in use at the workplace	**Minimum requirements:** ■ 5 female pan (inc adequate means for disposal of sanitary items, ■ 5 male pans, and ■ 5 (space) urinal. **Additional requirements due to multi-storey building:** ■ 1 toilet (at least) provided on every second floor. **Options include:** ■ relocatable buildings with toilet facilities ■ temporary facilities such as portable toilets, or ■ use new building facilities when available.	**Minimum requirements:** ■ 5 female hand basin, and ■ 5 male hand basins. **Options include:** ■ relocatable buildings with hand washing facilities ■ temporary facilities such as portable toilets with a hand basin, or ■ use new building facilities when available.	**Drinking water facilities such as:** ■ direct connection to the water supply, or ■ bottled water or containers.	**A separate dining facility such as:** ■ relocatable building, or ■ use of part of new building when available. Additional requirements for large static workplaces: ■ adequate supply of suitable tables, chairs or benches, ■ crockery and cutlery, ■ clean storage and ■ rubbish bins.	If required provide 3 male and 1 separate female shower facilities, such as portable shower units. Specialised shower facilities may also be required dependent on the types of activities being undertaken, and any use of hazardous chemicals at the workplace.	As some workers are required to use hazardous chemicals at the workplace, which requires the use of specific PPE, change room facilities should be provided. **When required:** ■ provide temporary change room facilities, or ■ use area of new building.	**When required, provide:** ■ lockable space in change room facility ■ lockable container, vehicle or trailer, or ■ lockable tool/storage boxes.

APPENDIX C - GENERAL CONSTRUCTION WORKPLACE FACILITIES

Workplace	Toilets	Hand washing facilities	Drinking water	Eating facilities	Showers	Change rooms	Personal storage
What facilities are required?	√ **Must provide** Number and type based on number and sex of workers	√ **Must provide** Number based on number of workers	√ **Must provide** Adequate supply of cool, clean drinking water (free of charge).	√ **Must provide** Hygienic dining facilities for eating meals and preparing and storing food.	**? If required** For example, if the work involves dirty, hot or arduous work.	**? If required** For example, if a need to change in and out of clothing (e.g. PPE).	**? If required** For example, if a need to store personal belongings such as tools.
Example 3: Civil construction project ■ New major road ■ Outdoor and rural location ■ Max 70 workers (no female workers on site) ■ $350 Million	**Minimum requirements:** ■ 5 male pans, and ■ 4 (space) urinal. Due to rural location and portability of the workplace, temporary facilities such as portable toilets or relocatable facilities should be provided.	**Minimum requirements:** ■ 5 male hand basins. **Options include:** ■ temporary facilities such as portable toilets with a hand basin, or ■ relocatable buildings with hand washing facilities.	**Drinking water facilities such as:** ■ direct connection to the local water supply, or ■ bottled water or containers.	Access provided to a separate dining facility such as a relocatable building e.g. transportable lunchroom.	If required, provide 3 separate shower facilities such as portable shower units (dependent on the types of activities undertaken).	If required, access provided to temporary change room facilities such as a relocatable building.	**If required, provide:** ■ lockable space in a relocatable building, ■ lockable vehicle or trailer, or ■ lockable tool/storage boxes.

APPENDIX D - HOUSING CONSTRUCTION WORKPLACE FACILITIES

This Appendix provides further detail on the construction, renovation or extension of:

- detached houses
- attached dwellings, separated from each other by a fire resisting wall, such as terrace, row or town houses
- boarding and guest houses, hostels or similar with a floor area <300m^2
- ancillary buildings to the above, such as private garages, gazeboes and carports.

Note: The above are based on classes 1, 2 & 10 of the Building Code of Australia. Multi-storey buildings i.e. above three habitable storeys, are not included in the scope of this Appendix.

GENERAL

The provision of facilities that are reasonably practicable should take into account the following:

- the location of the site
- the nature of the work to be done
- the number of workers
- the availability of power and services.

The builder should plan for the following:

- the safe and convenient location of facilities
- positioning and construction to prevent external flooding
- clear access to facilities at all times
- hygienic and safe discharge of waste water
- clean and sanitary facilities
- adequate natural and/or artificial lighting for safe access and use of facilities.

Enclosed facilities should be of sound construction and weatherproof, with adequate ventilation and lighting

MEAL AND SHELTER FACILITIES

The builder should provide hygienic and weatherproof meal and shelter facilities in an area accessible to the building under construction at the earliest opportunity, for example in the garage or similar covered area.

These facilities should include:

- adequate seating (which could include a board across two trestles and other alternatives to chairs) and a clean surface upon which to place food, which could include an esky provided by the worker or subcontractor or other material owned or controlled by the relevant subcontractor
- a rubbish bin with a lid or appropriate alternative(s) for the hygienic disposal of food scraps.

At the initial stages of construction, but only until an adequate area can be made available, shelter may be provided in the form of contractors' vehicles.

TOILETS

Workers must have access to conveniently located toilet facilities. Where the toilet is not connected to the sewerage system, self-contained fresh water flushing portable toilets should be provided that are regularly serviced in accordance with the supplier's information and instructions, but not less than monthly.

To provide an acceptable standard of hygiene and privacy, the toilet must be:

- kept clean
- weatherproof
- well lit and well ventilated, either naturally or artificially
- provided with a hinged seat and lid
- provided with a door that can be locked from inside
- provided with a well-drained floor above ground level that is covered with a durable waterproof material
- provided with a plentiful supply of toilet paper
- set up to remain level and stable under all working conditions.

Toilets may be shared between sites if:

- the sites are under the control of the same builder or there is clear agreement between the builders
- the toilets are convenient and readily accessible to the workers on each site
- there is at least one toilet per 15 male workers or one toilet per 10 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.

Where female workers are present on site, appropriate measures for sanitary item disposal should be made, such as a disposal unit provided in the portable toilet or sewer connected toilet closet.

WASHING FACILITIES

Hand washing facilities within or adjacent to each toilet or urinal should be provided. Clean water and soap should be provided for the purposes of washing.

DRINKING WATER

A readily accessible and plentiful supply of drinking water must be available to all workers on the site.

The site water tapping, complete with hose bib-tap, should be installed at the earliest opportunity.

Where a mains water supply connection is not possible, drinking water may be provided using flasks, labelled water containers, water bags or similar. However, mains water supply should be provided at the earliest possible time.

Drinking water facilities must be separated from toilet facilities to ensure adequate hygiene.

THIS CODE PROVIDES PRACTICAL GUIDANCE ON HOW TO MEET WORK HEALTH AND SAFETY REQUIREMENTS RELATING TO CONSTRUCTION WORK.