



Canberra Institute
of Technology

Work, Health and Safety (WHS) Handbook

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Introduction

CIT is committed to providing students and staff with a healthy and safe environment in which to study and work.

CIT also pride ourselves on delivering high quality education services, including leading practice work, health and safety (WHS) training.

This WHS handbook has been developed as a valuable resource and learning tool for both CIT students and staff. It incorporates all the WHS information that students and staff need to know in order to play their part in applying the most contemporary WHS policies and procedures in their work environment.

This handbook has been developed in consultation with WHS specialists, CIT teachers and industry representatives. I highly recommend it to all CIT students and staff.

Leanne Cover
Chief Executive Officer
Canberra Institute of Technology

WHS Commitment

CIT is committed to taking all reasonably practicable steps to provide a safe and healthy work environment for staff members, contractors, visitors, students, volunteers and third parties.

Effective management of WHS relies on the commitment and cooperation of all levels of management, staff and students throughout CIT.

CIT is committed to the following key principles:-

- undertaking effective risk management activities within the work environment;
- complying with relevant WHS legislation, regulations, codes of practice and Australian Standards;
- ensuring plant, equipment and substances are safe and minimise risk to health when used properly;
- providing all staff members with access to wellbeing initiatives;
- maintaining safe systems, premises, plant and environment;
- providing adequate facilities for the welfare of all staff members, students, volunteers, contractors, visitors and third parties;
- providing appropriate information, training instructions and supervision that is necessary to protect all persons from risks to their health and safety, enabling them to work in a safe and healthy manner;
- consulting with all staff members and relevant stakeholders in a meaningful and effective manner regarding WHS issues; and
- ongoing measurement, monitoring and continuous improvement of WHS performance.

A full copy of the CIT WHS Arrangements Policy and supporting arrangements can be found at:
https://cit.edu.au/policies/workplace_health_and_safety_arrangements_policy



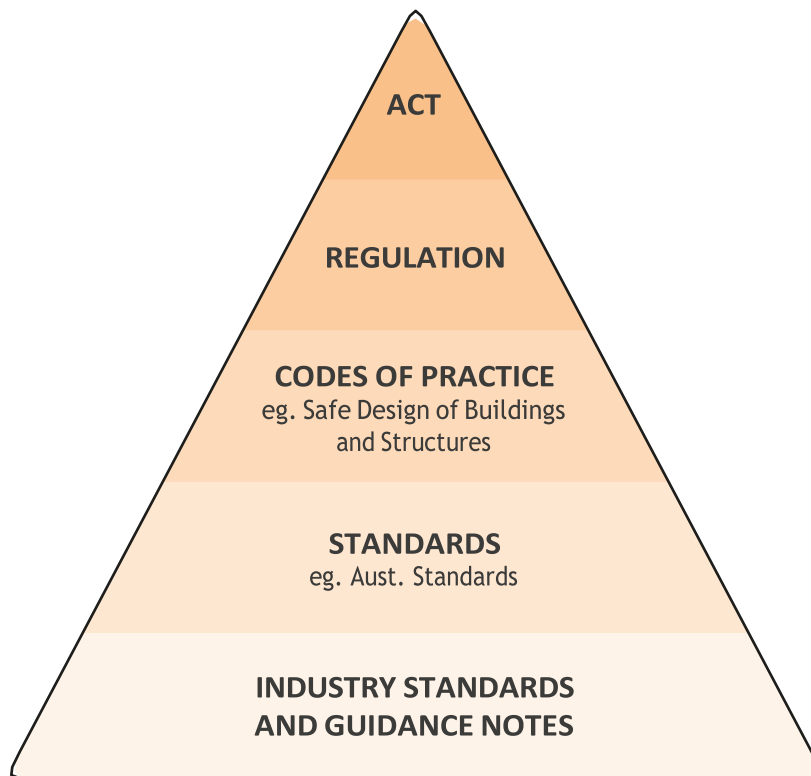
Chapter One

Legislative and Regulatory Framework

In the ACT the legal framework consists of

- The Work Health and Safety Act 2011
- The Work Health and Safety Regulation 2011
- Approved Codes of Practice.

The below framework shows the hierarchy of WHS legislation and related material.



- The Act outlines the broad responsibilities for ensuring health and safety in the workplace
- The regulations set out requirements for specific hazards and risks e.g noise and machinery
- The codes of practice provide practical information on how to meet the requirements of the Act and Regulations. These requirements should be equalled or exceeded in order to ensure compliance with the Act.
- Standards provide guidelines and technical specifications relating to matters such as design, operation and maintenance of equipment and systems. Some are referred to in legislation (law).
- Industry standards provide guidelines specific to the industry and guidance notes contain information provided by the regulator (Worksafe ACT) to assist in the implementation of the WHS Act and regulations.

Work Health and Safety Act 2011

The Work Health and Safety Act provides the framework to protect the health, safety and welfare of all workers at work as well as other people who might be affected by the work. The WHS Act aims to:

- Eliminate or minimise risks arising from work or workplaces
- Ensure health and safety issues are resolved through consultation
- Assists businesses and workers to achieve healthier and safer working environments
- Provides compliance and enforcement measures
- Support continuous improvement of higher standards of work health and safety

The Act mentions specific duties that apply to all business entities (referred to in the Act as 'Person Conducting a Business or Undertaking - PCBU, which is CIT) that specify what must be done and what penalties apply if these things are not done.

The main duty of a PCBU that engages people to do work is that they must:

- 'Identify hazards and risks in the workplace' and
- 'Eliminate or if that is not possible, minimise hazards and risks as far as is reasonably practicable from the workplace'.

Under the legislation, workers include:

- employees;
- contractors and sub-contractors;
- employees of contractors and sub-contractors;
- labour hire company employees;
- outworkers (e.g. employed by someone else but working at/for CIT);
- apprentices and trainees;
- work experience persons;
- volunteers.

In addition to workers there is another classification of people who must be protected, they are referred to as 'others', which includes:

- members of the public (whether visitors or just passing by)
- students.

This last classification of students is particularly important as they are the largest group which CIT has a duty of care towards.

Work Health and Safety Regulation 2011

At the level below the Act, sits the WHS Regulations, which provide requirements for specific issues and hazards including how they must be managed.

Issues covered by the regulations include:

- Representation and participation
- General risk and workplace management
- Hazardous Work
 - Noise
 - Hazardous Manual Tasks
 - Confined Spaces
 - Falls
 - High Risk Work
 - Demolition work
 - Electrical Safety
 - Diving Work
 - Plant and Structures
 - Registration of plant design and items of plant
 - Construction Work
 - Asbestos

Each of these sections of the Regulations contains specific guidance on the management of the relevant aspect of WHS and prescribes what must be done to comply.

Approved Codes of Practice

There are currently 26 Approved Codes of Practice that are relevant to CIT and what CIT does, either as part of its internal activities or as part of its teaching activities. Each of the Codes of Practice can be reached by clicking on the link below. They provide significant detail in terms of how to work safely and minimise risk in the workplace.

- [How to Manage Work Health and Safety Risks](#)
- [Work Health and Safety Consultation, Cooperation and Coordination](#)
- [Managing the Work Environment and Facilities](#)
- [Abrasive Blasting](#)
- [Confined Spaces](#)
- [Construction Work](#)
- [Demolition Work](#)
- [Excavation Work](#)
- [First Aid in the Workplace](#)
- [Formwork](#)
- [Hazardous Chemicals](#)
- [Hazardous Manual Tasks](#)
- [How to Manage and Control Asbestos in the Workplace](#)
- [How to Safely Remove Asbestos](#)
- [Labelling Hazardous Chemicals](#)
- [Managing Electrical Risks](#)
- [Managing Noise and Preventing Hearing Loss at Work](#)
- [Managing the Risk of Falls at Workplaces](#)
- [Managing Risks of Plant](#)
- [Preparation of Safety Data Sheets for Hazardous Chemicals](#)
- [Preventing Falls in Housing Industry](#)
- [Preventing and Responding to Bullying](#)
- [Safe Design of Structures](#)
- [Spray Painting and Powder Coating](#)
- [Transport and Delivery of Cash](#)
- [Welding Process](#)

Compliance

Compliance with the WHS Act, WHS Regulation and Codes of Practice is a key focus for CIT to ensure that the health, safety and wellbeing of all of its staff, students and visitors are protected.

Compliance is required of everyone who comes to and uses any CIT facility. So the stated rules must be followed at all times.

Failure to do so can have major consequences, both financial in the event of a WHS prosecution and personally in terms of the illness or injury that might be sustained.



Chapter Two

General Safety Information

Campus Emergency Management

In the case of any Campus emergency, the first contact within the organisation is to CIT Estate, which can be contacted as below: -

Campus	Phone	Mobile
CIT Bruce	(02) 6207 4000	0408 487 545
CIT Gungahlin	(02) 6207 3333	0403 228 388
CIT Fyshwick	(02) 6205 3148	0418 494 732
CIT Reid	(02) 6207 3540	0418 487 546
CIT Tuggeranong	(02) 6207 3333	0403 228 388

If you are unable to reach any of the above contacts, ring Wilson Security on 13 60 00.

If ACT Emergency Services are required they can be contacted on 000.

Dial before you dig, 1100 during business hours www.1100.com.au.

Evacuation procedures

Should an evacuation occur at CIT, alert tones or evacuation tones will sound: -

Alert Tones (*Beep...Beep*)

- Prepare to evacuate
- Save computer work
- Switch off all appliances
- Secure material as necessary
- Wait for further instructions.

Evacuation Tones (*Whoop...Whoop*)

- Proceed to nearest emergency exit (do not use lifts)
- Proceed to emergency assembly point
- Follow emergency wardens' instructions.

BEIMS (Building and Engineering Information Management System)

The [BEIMS](#) online system allows staff to report faults and submit requests for maintenance or engineering work.

If students identify a building fault or an area that requires maintenance, they can raise this with their teacher, who can report it on their behalf.

First Aid

Lists of First aid officers are available on the CIT Intranet and are also displayed on emergency notice boards that are located throughout each CIT campus. First aid officers are trained to treat minor injury or illness and in the case of serious injury or illness, provide initial care until medical aid arrives.

If there is no first aid trained person available and the emergency is serious or life-threatening then immediately call for an ambulance (either 000 or 112).

In non-serious/nonlife-threatening situations, the Facilities Manager at CIT Bruce, Fyshwick and Reid can also be contacted until 10 pm. First aid officer lists also show the location of first aid kits.

Staff, students and others have a responsibility to:

- become familiar with CIT's first aid arrangements including the location of first aid officer lists;
- contact a First Aid Officer as soon as an incident occurs that requires first aid attention; and
- report any accidents and incidents that require first aid assistance.

CIT Staff can access information regarding First Aid via the following link:

<https://citeduau.sharepoint.com/sites/corporate/SitePages/First-Aid-Officers-and-Rooms.aspx>

CIT Students are encouraged to contact a staff member regarding all First Aid matters.

Accident/Incident Reporting

The proper reporting of accidents and injuries, including near misses is the responsibility of every member of CIT Staff.

‘Accidents’ and ‘Incidents’ include any event that did or could result in:

- the death, injury or illness of a person (including third parties),
- a notifiable incident including a dangerous occurrence.

All accidents/incidents should be entered into the Riskman incident reporting system within 48 hours. Staff incidents should be entered by the employee involved or if this is not possible by a colleague or the attending first aid officer. Student accident/incidents should be reported to their teacher who is then responsible for entering the accident/incident.

Accidents/incidents should be assigned to the affected employee’s manager or in the case of a student the department head of the affected student’s teacher.

CIT staff can access Riskman via the following link:

<https://form.act.gov.au/smartforms/servlet/SmartForm.html?formCode=1426> .

In addition to the above more serious incidents known as ‘notifiable incidents’ must be reported to Worksafe ACT. Notifiable incidents include:

- the death of a person,
- the serious injury or illness of a person, and
- a dangerous incident,

A serious injury or illness of a person includes:

- An injury that requires immediate treatment as an in-patient in a hospital,
- Exposure to a substance that requires medical treatment within 48 hours
- immediate treatment for a serious injury or illness including; a serious head injury, a serious eye or burn, an amputation, a degloving or scalping, a spinal injury, loss of bodily function and a serious laceration.

A dangerous incident is one where a worker or someone else is exposed to the serious health and safety risk from an imminent or immediate exposure to:

- an uncontrolled escape, spillage, or leakage of a substance
- an uncontrolled implosion, explosion or fire
- an uncontrolled escape of gas or steam
- an uncontrolled escape of a pressurised substance
- electric shock
- the fall or release from height of any plant, substance, or thing
- the collapse, overturning, failure, malfunction of, or damage to, any plant that is required to be authorised for use by the WHS regulations
- the partial or full collapse of a structure

- the collapse or failure of an excavation or of any shoring supporting excavation
- the inrush of water, mud, or gas in workings, in an underground excavation or tunnel
- the interruption of the main system of ventilation in an underground excavation or tunnel
- other events prescribed in the WHS regulation

CIT staff, please contact CITs Workplace Health and Safety team, on (02) 6205 9245 if you think an incident is notifiable.

Further information for staff is also available via:

<https://citeduau.sharepoint.com/sites/corporate/SitePages/Accident-and-Incident-Reporting.aspx> .

Slips, Trips and Falls

Slips, trips and falls are one of the two most common causes of injury in the workplace. The majority of these occur when people are walking around during the normal course of their work/study.

When walking around campus keep a look out for hidden slip, trip, fall trip hazards and in winter keep a lookout for not so obvious slip hazards such as ice or a build-up of leaf litter on a wet path. Many serious slips and fall injuries can occur in these circumstances.

When using stairs, either going up or going down, concentrate on what you are doing, rather than the distraction of a conversation or mobile device and keep a loose grip on the handrail so that you can steady yourself if you do lose your balance

Many of the paths on CIT Campuses, particularly at Bruce, exceed the recommended slope for disabled access. These paths are all sign posted and point to alternate routes and paths that should be used by mobility impaired people to access campus.

Where a slip, trip or falls hazard is identified, staff must raise a BEIMS request. Students are encouraged to advise their teacher if they notice anything that poses a slip, trip or fall hazard.

Risk Management

Risk management is recognised as an integral part of good management practice. It is an interactive process consisting of steps, which, when undertaken in sequence, enable continual improvement in decision making. In WHS, risk management assists to identify hazards and risks and manage them before they cause an injury.

What are hazards and risks?

Hazard - A hazard is anything that has the potential to cause harm. Hazards exist in all workplaces. For example, an electrical cable lying across a walkway.

Risk - A risk is what might occur when exposed to the hazard. The level of risk is determined by comparing the consequence of harm (e.g. serious injury) with the likelihood of harm occurring.

The risk management process

Before commencing tasks, all foreseeable hazards and risks should be identified, and appropriate safety measures put in place.

The risk management process, is made up of the following steps:

- Hazard identification - find out what could cause harm;
- Assess risks - understand the nature of the harm that could be caused by the hazard, how serious the harm could be and the likelihood of it happening;
- Control risks - Try to eliminate the hazard if possible and if not possible find a solution to reduce the risk using the hierarchy of control (see below);
- Review control measures - regularly review control measures to ensure they are working as planned and remain effective.

CIT Staff can access further information via the following link:

[WHS Risk Management \(sharepoint.com\)](https://sharepoint.com)

CIT Students are encouraged to contact a CIT staff member should further information be required.

Risk Assessments

A **WHS risk assessment** must be carried out:

- before organising CIT events such graduations, ceremonies and plant sales;
- before new plant(machinery) and equipment or regulated plant is acquired;
- before new chemicals and substances are acquired;
- before building are acquired or leased for new workspace like refurbishment;
- before relocation of renovation/change to existing workplaces;
- when required by legislation for specific hazards.

CIT has a number of Risk Assessment forms available to be undertaken for specific hazards including:-

- **CIT Physical Risk Assessment form** - used to record hazards, risk and controls (measures to be used to eliminate, reduce or minimise the risk)
- **Risk Management Procedure** - sets out the procedure for conducting risk assessments at CIT
- **Risk Assessment Matrix** - Used to determine risk the overall level of risk i.e. risk rating. The priority for addressing risk is based on the risk rating
- **Safe Operating Procedure (SOP)** - a set of step-by-step instruction on the safe operation/use of plant and equipment. SOPs detail PPE requirements, precautionary statements and hazards involved in the use of the plant and equipment. Safe operating procedures should be placed in a visible position near plant/equipment.
- **Job Safety Analysis (JSA)** documents a job so that it can be completed as safely as possible. It sets out the steps (tasks) needed to complete the job, the hazards involved in each step and the control measures required to complete each step safely. JSAs should be reviewed by all workers involved in the job prior to commencement of work.
- **Safe Work Method Statement (SWMS)** - a document that is required under the Work Health and Safety Regulation 2011 for all high-risk construction activities as specified in Section 19 of the regulation. The purpose of the SWMS is to ensure that everyone that is involved in the activity understands how it is to be carried out in a safe and healthy manner. It includes the intended method of work including:
 - The hazards/risks identified in the work
 - Control measures to be used and who is responsible for implementing and maintaining each risk control measure
 - The standards or codes of practice to be complied with
 - The qualifications and training required of the personnel doing the work
 - How the work is to be carried out and the equipment used in the work

More detail about SOPs, JSAs and SWMS are shown in Chapter 4 of this Handbook.

Workplace hazard identification and assessment

Supervisors and managers should proactively identify hazards in their workplace. They must also encourage staff, students, contractors and visitors, to report hazards.

When a hazard is identified, the supervisor/manager must assess the risk and implement a control plan using the WHS risk assessment methodology. Where reasonably practicable, this should be completed in consultation with Health and Safety Representatives (HSR's) and affected CIT employees. Building issues such as trip hazards, housekeeping or broken equipment can be fixed with a BIEMS request.

Supervisors/managers should ensure that risk control measures are documented and implemented. The effectiveness of these measures should be monitored continuously and reviewed regularly.

Hierarchy of Control

When managing hazards and risks in the workplace, there are fundamental principles embedded into the WHS Regulations that focus on how and in what order controls should be considered. This is referred to as the Hierarchy of Control.

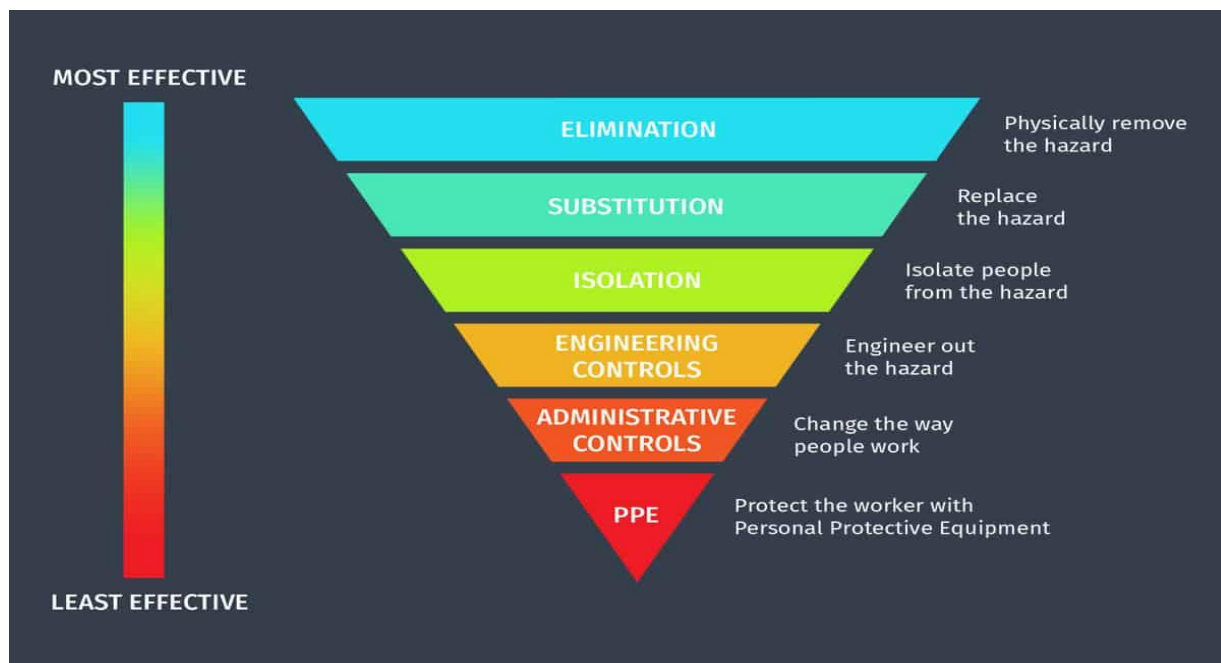
The WHS Regulations outlines this as:

Managing risks to health and safety

A duty holder, in managing risks to health and safety, must:-

- Eliminate risks to health and safety so far as is reasonably practicable; and
- If it is not reasonably practicable to eliminate risks to health and safety—minimise those risks so far as is reasonably practicable.

The Hierarchy of Control can be seen in the diagram below.



Hierarchy of Control	Description
Elimination	Eliminate the risk by removing the hazard completely (e.g. Work at Height - Do work at ground level)
Substitution	Reduce the risk by substituting a less hazardous alternative (e.g. Change from caustic to non-caustic cleaner, replace heavy items with those that are lighter and easier to handle)
Isolation	Reduce the risk of exposure by separating the worker from the hazard (erecting safety barriers, placing locks on doors, fitting safety screens e.g. welding screens)
Engineering	Reduce the risk of exposure to the hazard through designs or modifications to equipment, processes or systems (placing a barrier between worker and the hazard - machine guards and cut-off switches or removing a hazardous workplace condition - ventilation to remove hazardous gasses and fumes)
Administration	Reduce the risk exposure by implementing safety rules or work procedures to reduce the risk of harm or injury (redesigning the work or work-flow, scheduling tasks to reduce exposure, providing training, instructions and warnings for workers)
Personal Protective Equipment (PPE)	Protect the worker from hazard by providing PPE (gloves, eye protection, hearing protection etc.)

The supervisor or manager must ensure that documented controls are implemented, reviewed and their effectiveness monitored and maintained.

If you require further information or assistance on implementing this framework, please contact CITs Workplace Health and Safety Team.

Risk register

A Risk Register is a list of all the identified hazards in a particular area, including the risk level and the controls implemented to eliminate or minimise the risk associated with a hazard(s). Each work area has their own risk register, which should be reviewed regularly to update/add any identified risks.

Hazardous Chemicals, Dangerous Goods/ Substances

CIT is committed to ensuring that a management systems are in place aimed at identifying and controlling risk factors associated with hazardous substances and dangerous goods. This is required to meet legislative requirements and assist with the provision of a safe working environment for staff, students and visitors.

Hazardous chemicals are substances, mixtures, or articles that pose a significant risk to health and safety if not managed correctly. They are any substance, mixture or article that satisfies the criteria of one or more Globally Harmonised System of Classification and Labelling of Chemicals (GHS) hazard classes, including a classification in Schedule 6 of the WHS Regulation

Dangerous goods are substances transported or stored in quantities that present an immediate safety hazard to people, property and the environment. Dangerous goods are classified in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) and most dangerous goods are also hazardous chemicals except those that have only radioactive hazards, infectious substances and dangerous goods in class 9 (miscellaneous dangerous goods) of the ADG Code.

Dangerous substances are defined in the Dangerous Substances Act 2004. They include substances classified as explosives under the Australian Dangerous Goods Code, asbestos and security sensitive substances.

The Act requires suppliers of a dangerous chemicals to ensure that the substance is correctly packaged and labelled and that a Safety Data Sheet (SDS) is prepared and provided upon request by the receiving entity. CIT departments and business units must obtain a copy of the current safety data sheet (SDS) and conduct a risk assessment of the chemical prior to supply unless a current risk assessment exists for the chemical. Suppliers are required to update the information on an SDS at least every 5 years to ensure the information contained on it is current.

Working safely with hazardous chemicals

Before working with any hazardous chemical for the first-time, workers (including CIT staff and students), must read over the information on the label, the Safety Data Sheet (SDS) and any safe work documentation (i.e. SWMS, JSA, SOP or risk assessment) relating to the chemical. Workers should follow all reasonable directions contained on these documents to ensure the safe use of the chemical.

Of particular importance take note of:

- The properties and hazards of the hazardous chemical
- The intended purpose for use of the chemical - do not use it for something else
- The storage requirements of the chemical including incompatibilities, ventilation requirements, cool dry area etc
- The PPE requirements for use of the chemical - remember to check PPE for defects, cracks, missing parts etc prior to use
- Emergency procedure, emergency equipment and its location (e.g. emergency eye wash, spill kit)

Safety data sheets can be found in CHEMWATCH for online access. Some areas hold the documents in hard copy, kept in folders that are readily available in the workplace.

SDS are prepared by the manufacturer of the product and are only valid for five years from the date of issue. A check of the currency of the SDS can be made by referring to the issue date and ensuring that it is less than five years old.

Failure to comply with safety instructions

This section applies to formally drafted WHS instructions in relation to workplaces, work practices and use of equipment as well as the wearing of specified uniforms and protective clothing (PPE).

Any breach of these instructions will be treated within the framework outlined below.

Staff

By accepting employment at CIT, you undertake to comply with the CIT Code of Practice as part of your terms and conditions of employment. This includes adhering to all policies, procedures and guidelines.

CIT is a statutory authority of the ACT Government and as such all employees are required to comply with the Public Sector Management Act 1994 (PSM Act). As a CIT employee, you hold a position of trust and are accountable for your actions. Failure to comply with section 9 of the PSM Act may result in either misconduct or under-performance disciplinary actions being taken.

Section H - Workplace Values and Behaviour of both CIT Enterprise Agreements outlines the process for identifying and dealing with misconduct and underperformance to comply with the PSM Act. You should understand and adhere to all laws, regulations, policies, industrial agreements, and frameworks relevant to your work. CIT policies and procedures can be found on the website. If you need clarification on any policy ask your supervisor or director.

Students

As per the CIT Student Code of Conduct and CIT's Student Conduct Policy you are expected to comply with all Work, Health and Safety requirements.

Failure to adhere to these requirements may result in the following disciplinary action being taken:

- exclusion or timeout from CIT
- exclusion from a program or subject
- exclusion from one or more CIT activities
- a requirement to enter a contract that includes conditions for continued enrolment
- the issuing of a reprimand
- a combination of one or more of these or other actions that is appropriate under the circumstances.

If you are an apprentice these actions will include contact with your employer and place your apprenticeship and/or completion/continuation of your qualification with CIT on hold.

Off Campus Activities

Off-campus activities form an integral part of learning at CIT. The nature of these activities, (combined with the less familiar environments they are conducted in), may present increased risk.

CIT Teaching Staff

The [Off-Campus Activities Policy/Procedures](#) is the resource to be used by CIT staff when planning and organising any activity that is not held on CIT campus.

A [Risk Management Plan](#) must be completed prior to undertaking off campus activities. This plan ensures that all WHS hazards and risks are identified and assessed and that appropriate controls are implemented to prevent harm. The extent of the plan should be proportionate to level of risk involved in the off-campus work/activity.

More information relating to risk assessment and the control of specific risks is included in the [CIT WHS Procedure Manual](#). This manual also contains advice about remote or isolated work/activities. This advice should be considered when staff and students are undertaking work/activities which are isolated from the assistance of other people (i.e. rescue, medical assistance and emergency services) because of location, time or nature of the work being undertaken.

CIT Students (including Apprentices)

When undertaking off campus activities, students must follow all reasonable directions as determined in the CIT risk management plan as well as any site-specific rules and requirements of the host organisation. This includes compliance with all induction rules and PPE requirements.

Smoke Free CIT

CIT is a smoke free environment. CIT recognises that the health, safety and welfare of its staff, students, contractors, and visitors are of primary importance, and will ensure that all practicable means are applied to ensure a smoke-free environment. Staff and students are required to remove themselves beyond the boundary of a CIT campus to smoke, any tobacco products. These provisions also include the use of e-cigarettes.

CIT Staff and Students can access further information (including campus boundary maps) here: [Smoke Free Policy](#).

Alcohol and Other Drugs Policy

- ACT Government

As part of the ACT Government, CIT is committed to providing safe and healthy working environments for its employees and other people through practices that eliminate or reduce risk in its workplaces arising from the use of alcohol or other drugs.

The following is prohibited:

- drinking alcohol while on duty or on government premises without prior approval of the appropriate delegate (as referenced in a Directorate delegation schedule) on any occasion, including Christmas parties, the Melbourne Cup and farewells;
- carrying alcohol in government vehicles except where prior approval has been given by an appropriate delegate; or
- consuming alcohol in or on a Government vehicle.

CIT staff and students are expected to refrain from:

- bringing prohibited substances onto campus at any time - these matters will be referred to the police; and
- smoking on ACT government premises. The Smoke-Free Public Places Act 2003 prohibits smoking of any substance in an enclosed public space or on Government premises.

Where a worker is concerned that a person's conduct or behaviour may present a risk to the health and safety of another person in the workplace, they must promptly bring this to the attention of a manager or supervisor with authority over the person or workplace in question.

If a worker is found to be intoxicated in the workplace then disciplinary action can be taken against the employee. In some cases, such conduct may be considered 'serious' misconduct and result in the termination of the employee's employment.

Managers can seek the advice and assistance of the Human Resources area when dealing with issues relating to employees who are suspected of being intoxicated at work and/or are suspected of suffering from drug or alcohol dependence.

The ACT Public Service Alcohol and other Drugs Policy can be found here:

<https://www.cmtedd.act.gov.au/industrial-relations-and-public-sector-management/public/wpsafety/WHSPolicies>

CIT Code of Practice

CIT Staff

[CIT's Code of Practice](#) sets out the standard of behaviour and expectations for CIT staff and is consistent with the [ACT Public Service Code of Conduct](#).

Employee values of respect, integrity, collaboration and innovation are enshrined in the ACT Public Service Code of Conduct which is drawn from the Public Sector Management Standards.

By accepting employment at CIT, you agree to comply with the Code of Practice as part of your terms and conditions of employment.

CIT is a statutory authority of the ACT Government and as such all employees are required to comply with the [Public Sector Management Act 1994 \(PSM Act\)](#). As a CIT employee, you hold a position of trust and are accountable for your actions.

Failure to comply with section 9 of the [PSM Act](#) may result in either misconduct or underperformance disciplinary actions being taken. [CIT Enterprise Agreements](#) outline the process for identifying and dealing with misconduct and underperformance to comply with the PSM Act.

CIT Students

CIT is committed to upholding the values of respect, integrity, collaboration and innovation. The [CIT Student Code of Conduct](#) has been developed to provide a clear statement of CIT's expectations for student behaviour.

The Student Code of Conduct has been developed in collaboration with the [CIT Student Association \(CITSA\)](#), who are able to assist you in furthering your understanding of the Student Code of Conduct if required.

In relation to Work Health and Safety (WHS):

- you must comply with all WHS policies, procedures and guidelines, and conduct yourself in a safe manner and not place yourself or others at risk.
- you should dress appropriately as in industry, for example appropriate footwear must be worn and personal protective equipment (PPE) used where required and/or directed.
- any medical management plans or medication you are taking which can affect your performance or safety should be disclosed to your teacher.
- students with infectious diseases must advise their teaching college of their condition and remove themselves from CIT until a medical clearance certificate is provided.

Unsatisfactory Behaviour (which is managed by the [Student Conduct Policy](#)) will not be tolerated and may impact your enrolment at CIT.

This includes any behaviour which:

- limits CIT's capacity to provide a study environment which is free from bullying, discrimination and harassment;
- interferes with the potential of other CIT students to learn; and
- interferes with the rights of CIT staff and students to be safe, treated fairly and with respect.

Illegal behaviour, including physical violence, will not be tolerated at CIT and may be referred to the police.

Unsatisfactory student behaviour will be managed in accordance with the principles of procedural fairness and natural justice. Unsatisfactory behaviour may result in exclusion from CIT, classes or other activities and all CIT campuses. If a student is a trainee or apprentice and engages in unsatisfactory student behaviour, their employer will be informed of the outcome of the disciplinary process.

Academic misconduct is any action undertaken by a student that unfairly advances his, her or another student's progress in a subject and/or program. This includes plagiarism, cheating and copyright violations. Academic misconduct is managed through the [Academic Misconduct Policy](#).

Further information can be found within the [CIT Student Code of Conduct Guide](#).

Australian Apprentices

In addition to the above, to ensure all Australian Apprentices maximise the benefits of training at CIT and successfully complete their qualification; there are several requirements that CIT Australian Apprentices are expected to follow. These include:

- Paying fees;
- Attending classes;
- Compiling all required work;
- Ensuring safety of themselves and others;
- Behaving yourself;
- Updating CIT of your study status and personal details; and
- Seeking Support (where necessary).

If these requirements are not met, CIT may:

- Arrange one-on-one discussions with you, the Head of Department and/or Director for your program to address the issue/s and:
 - Seek and provide additional support, where required;
 - Determine if disciplinary action is required (e.g. removal from class);
- Report details of the issue/s to your employer, where appropriate;
- Notify your State Training Authority (Skills Canberra or Training Services NSW), where appropriate; and/or
- De-register your enrolment from CIT.

Dress Standards

In line with the ACTPS Code of Conduct, it is expected that staff and students wear appropriate clothing in the workplace. Many of the areas within CIT have the requirement for you to wear Personal protective equipment, which may include boots, hearing protection etc.

Students not meeting these requirements will not be able to attend class, and ongoing non-compliance may result in de-enrolment with CIT.

As leaders in safety best practice, all staff are required to wear personal protective equipment (when required) and can face disciplinary action for failure to comply with this requirement.

Harassment and Bullying - Staff and Students

CIT is committed to providing learning and working environments that are free from harassment, bullying and violence of any kind.

All staff, students and visitors are entitled to be treated with dignity and respect and therefore bullying, all types of discrimination and harassment are unacceptable and will not be tolerated at CIT.

Harassment is any form of behaviour that is unwelcome, unsolicited, unreciprocated and usually (but not always) repeated and may be biased. It is behaviour that is likely to offend, humiliate or intimidate.

Bullying is defined as: repeated unreasonable behaviour directed towards a person or group of people that creates a risk to health and safety. Bullying can be either direct or indirect.

Examples of direct forms of bullying include:

- Verbal abuse
- Putting someone down
- Spreading rumours and innuendo about someone
- Interfering with someone personal property or work equipment

Examples of indirect bullying include:

- Unjustified criticism or complaints
- Deliberately excluding someone from workplace or class activities

Bullying is not:

- expressing differences of opinion in an appropriate manner;
- giving lawful instructions;
- giving feedback in an appropriate manner; or
- taking reasonable action to equitably manage the learning environment such as:
 - allocation of work to a student, and setting reasonable goals, standards and deadlines;
 - warning students about unsatisfactory behaviour;
 - appropriate management of a student's unsatisfactory behaviour;
 - appropriate management of the learning environment.

What is "reasonable" will depend on the circumstances of each case but must be assessed objectively.

All staff, students and visitors to CIT must take personal responsibility to create a positive, working and learning environment and to ensure that their conduct does not include behaviours which could constitute discrimination, harassment, bullying or increase the risk to another person's physical or psychological health or safety.

Staff, students and/or visitors who experience or witness harassment or bullying behaviour should report the incident as soon as possible.

All incidents of bullying and harassment will be dealt with in accordance with the [Complaints Students and Community Members Policy](#) for students and the [Resolving Staff Workplace Issues Policy](#) and [enterprise agreements](#) for staff.

A single incident of unreasonable behaviour may have the potential to escalate into bullying and therefore should not be ignored.

All reports of alleged bullying, harassment or violence will be treated in a fair, timely, sensitive manner and procedural fairness/natural justice will apply to the complainant and respondent for all matters raised.

Threatening Behaviour between persons on CIT property will not be tolerated and will result in either formal disciplinary action or the matter being dealt with by the Police.

Threatening behaviour is any altercation between individuals irrespective of whether this results in injury to one party or another and may include:

- Verbal aggression
- Threats of self-harm or suicide
- Threats to kill or harm others
- Physical violence.

Threatening behaviour should always be taken seriously.

All reports of alleged bullying, harassment or threatening behaviour will be treated in a fair, timely, sensitive manner and procedural fairness/natural justice will apply to the complainant and respondent.

Mobile phones

Mobile phones must be on silent or turned off while you are in class (or in the Learning Centre); except under exceptional circumstances and in consultation with teaching staff.

In the learning context mobile phones can be used in theory classes but must not be used while you are operating machinery or undertaking practical tasks. Use of mobile phones by other persons whilst in the vicinity of students or teachers that are using machinery/equipment is also prohibited.

Car parking

There is parking for staff and students at each campus. Please refer to the following link for campus maps: <https://cit.edu.au/about/locations>

It is imperative that cars are parked in the designated parking bays only, as to reduce access/egress issues. Parking inspectors are frequent to CIT campuses and can issue parking infringements to cars not parked in designated parking bays.

Please adhere to speed limits to ensure safety on CIT's campuses.

Animals/Wildlife

CIT recognises that animals can and do present a risk to the health and safety of individuals who attend CIT campuses, and to animals that are kept for teaching purposes. Some animals have the potential to inflict harm (i.e. attack) and the vast majority pose a potential threat in terms of their capacity to contribute to accidents, spread disease and or cause allergic reactions. Considering these concerns, no animal is to be brought or kept on CIT premises at any time, (unless that animal is covered by a current exemption).

CIT has granted a standing exemption to:

- Accredited assistance animals when accompanying a person with a visual, hearing or other disability (i.e. assistance dogs);
- Police dogs, when being used by and under the control of ACT Policing;
- Search and rescue dogs, when being used by and under the control of official rescue services officers in the performance of their official duties;
- Security dogs, used by and under the control of security services; and
- Other animals kept by CIT for teaching purposes, subject to approval.

CIT campuses located at Fyshwick and Bruce are adjacent to bushland or relatively undeveloped areas and are locations where wildlife may be present. It is common in summer for snakes to be seen on and around campus (particularly at Bruce and Fyshwick) as well as kangaroos, wombats and possums.

If wildlife is encountered, it should be left alone. The Estate office should be informed of the encounter so that they can respond and arrange for removal of the animal if required. Where snakes or other dangerous animals are encountered individuals should maintain a safe distance and (if safe to do so) monitor the movements of the animal until help arrives.

CIT Estate has the authority to engage local rangers or other approved persons to respond to and/or remove non-approved animals from a CIT premises.

Personal Safety

Moving in and around CIT campuses and car parks can present a range of risks, particularly after hours and when dark.

If you need to work after hours or need to work so that your finish time is after dark (which can be a common issue during Canberra winter months) take appropriate precautions as far as you can to:

- Park as close to where you work as is possible and
- Park where there is adequate lighting along the pathway to your car as well as in the actual carpark.

If lighting is not working or seems to be inadequate, bring it to the attention of Campus management so that it can be checked and fixed.

If you do not feel safe, talk to your supervisor or teacher so CIT can look at what it can do to make access and egress from campus safer.

Ergonomics

Given the amount of time staff generally spend sitting at a desk using computers or other devices, it is important that the workplace is set up to provide the greatest possible amount of ergonomic support for individuals.

Each workstation will require to be set up differently to suit the individual concerned.

A detailed [workstation self-assessment checklist](#) is located on the CIT Intranet along with other guidelines in relation to [workstation adjustment](#).

Manual Handling

Manual handling is one of the most common causes of workplace injury. Common injuries include back injuries and sprains and strains of muscles and ligaments elsewhere however a range of other injuries can occur less frequently for example broken bone in the foot from a dropped heavy load.

Manual handling refers to any action associated with pushing, pulling, lifting, lowering, carrying, holding or restraining any object or person. The item being handled does not necessarily have to be heavy, but could be an unusual shape, difficult to grip or may be handled whilst you are in an awkward posture.

Basic manual handling rules that should be followed are:

Before Moving a load

- Assess and prepare loads before moving them:
 - Consider the weight, size and shape of the load, whether it is hot or cold or has sharp edges.
 - Is a comfortable hand grip present?
 - Are gloves required?
 - Is the load potentially unstable and if so what can be done to stabilise it
- Do not try to handle heavy or difficult to move loads without assistance. If you expect (or suspect) that movement of a load will be physically demanding or that you won't be able manually handle it effectively then get assistance from another person or use a mechanical assistance, such as a trolley, lifter or some other lifting device.
- Check the path of travel to your destination to ensure there are no slip, trip or fall hazards and you will not be impeded (e.g. by other people, machinery)
- Check that any mechanical device you are planning to use is functioning properly (e.g. trolley wheels are not sticking) and that you are not exceeding the mechanical device's capacity specifications (e.g. weight restrictions)

When moving a load

- Be conscious of your posture, try not to lift, lower, push or pull anything from a bent over position but maintain a straight back, try to keep the load close to your body. Change directions with your feet do not twist your spine.
- Try to avoid jerky movements, lift lower push and pull with smooth movements. Ensure that measures are in place to prevent the load from moving.
- Where the load is dynamic, such as lifting or restraining a person or animal additional caution must be exercised. Where the person/animal may move suddenly, or act in an unpredictable manner, some form of lifting device or additional restraint may be required for the lift to be carried out with the minimal amount of risk.
- When lifting with the assistance of another person, one person must assume control of the lift to ensure proper coordination so that both persons lift at the same time and just as importantly put the item down at the same time.
- Whenever possible choose pushing over pulling as this allows you to use your body weight by leaning slightly into the object and it also gives you line of site to your direction of travel. When pushing try to keep the object close to your body. Whether pushing or pulling maintain a straight back and don't twist your spine.

Additional information can be found at:

<http://sharedservices/ACTGovt/WHS/SafetyMgt/RiskManagement/Manual.htm>

Lighting

Good lighting is essential to enable people to see clearly and perform their work safely. Walkways, paths and other areas where people walk must be sufficiently lit to prevent slips, trips and falls and the areas where people work need to be sufficiently lit to perform the required activities safely.

Some areas around campus have no available natural light and, when artificial lighting is not working properly, are at increased risk of slips, trips and falls e.g. toilets and stairwells.

In general, good lighting should enable people to view their work and environment without the need to strain their eyes. Different activities require different levels and qualities of light depending on the visual demands of the task. For example walking in a corridor does not require the levels of light that is required when undertaking detailed work such as drawing or checking a document or picture for errors.

The following table provides recommended luminance levels for various types of activities.

Class of task	Approximate maintenance illuminance (Lux)	Characteristics of activity	Examples of activities & interiors
Intermittent use	80	Rooms requiring intermittent use with visual tasks limited to walking and locating destination	Staff change rooms
Simple	160	Occasional reading of clearly printed documents for short periods	Waiting rooms, rough bench and machine work
Ordinary or moderately easy	240	Continuously occupied rooms where moderately easy visual tasks with high contrasts or large detail are required	Writing boards and charts, medium woodwork, counters for transactions
Moderately difficult	320 - 400	Areas where visual tasks are moderately difficult with low contrasts	Routine office work 320 Fine woodwork, car assembly 400
Difficult	600	Areas where visual tasks are difficult with low contrasts	Drawing offices (boards), colour matching/fine painting

In addition to having the appropriate level of light for the task or area other qualities of the light are important when considering if it is appropriate. Is the colour of the fluorescent light appropriate - warm white, natural, daylight or colours? Is the light spread evenly over an area? Are lights positioned appropriately in relation to the workstation or workspace?

Other issues related to lighting include glare in the work area, reflections on the work surface and shadows across the work surface.

The CIT Health and Safety team is available to take lighting measurements and provide advice in relation to lighting issues.

If lights are not working or they are flickering and not giving even light you should raise this with your supervisor and create a BEIMS request.



Chapter Three

Operational Staff

Facilities Management Personnel, Contractors and Visitors

Facilities Management Personnel (CIT Estate)

Facilities Management (CIT Estate) personnel are often at the front line of dealing with emerging WHS issues relating to issues with the building infrastructure and broken, damaged or deteriorating plant and equipment. Many issues to do with walkways and other surfaces that people walk upon will be referred to Facilities Management for rectification works to prevent slips, trips, falls.

Minor repairs will often be carried out by CIT Estate personnel however major work is usually done by external contractors.

CIT Estate personnel are often required to address issues of an unpredictable nature so they need to be vigilant in ensuring that they do not place themselves at risk when fixing an issue.

CIT Estate personnel are constantly on the move around campus so they are well placed to keep their eyes and ears open for emerging WHS issues, ensuring that they are brought to the attention of management so that they can be logged, assessed and fixed.

CIT Estate can be contacted by phoning:

Campus	Phone	Mobile
CIT Bruce	(02) 6207 4000	0408 487 545
CIT Gungahlin	(02) 6205 3333	0403 228 388
CIT Fyshwick	(02) 6205 3148	0418 494 732
CIT Reid	(02) 6207 3540	0418 487 546
CIT Tuggeranong	(02) 6207 3333	0403 228 388

Contractors

The WHS requirements for contractors are outlined in detail in the Contractors Manual which should be consulted before a contractor undertakes any work. This includes the requirement to inform and consult with the manager/department head of the area where the work is being undertaken, especially if work is being undertaken during normal classroom or workshop activity periods.

Contractors must report to the relevant campus Estate Office to sign in and receive authorisation to carry out the work before commencing. All contractors must have been given a site induction prior to the commencement of any work.

Maps of each campus which show the location of each estate office can be found by clicking on the appropriate campus [here](#).

At the conclusion of work, all contractors must report back to the Estate Management Office and be signed out. Signing out may involve inspection of the work carried out prior to approval being given.

Visitors

All visitors to operational or trade skills areas at CIT must first report to the campus Estate Office. This will allow the visitor to be signed in and given appropriate site induction and instruction in relation to emergency arrangements and mandatory safety equipment.

All visitors to office and administrative only areas may proceed directly to the relevant office/area without the requirement to report to the campus Estate office first. The relevant office/area will provide them with any required induction and information they need during their visit. **Visitors must always be escorted.**

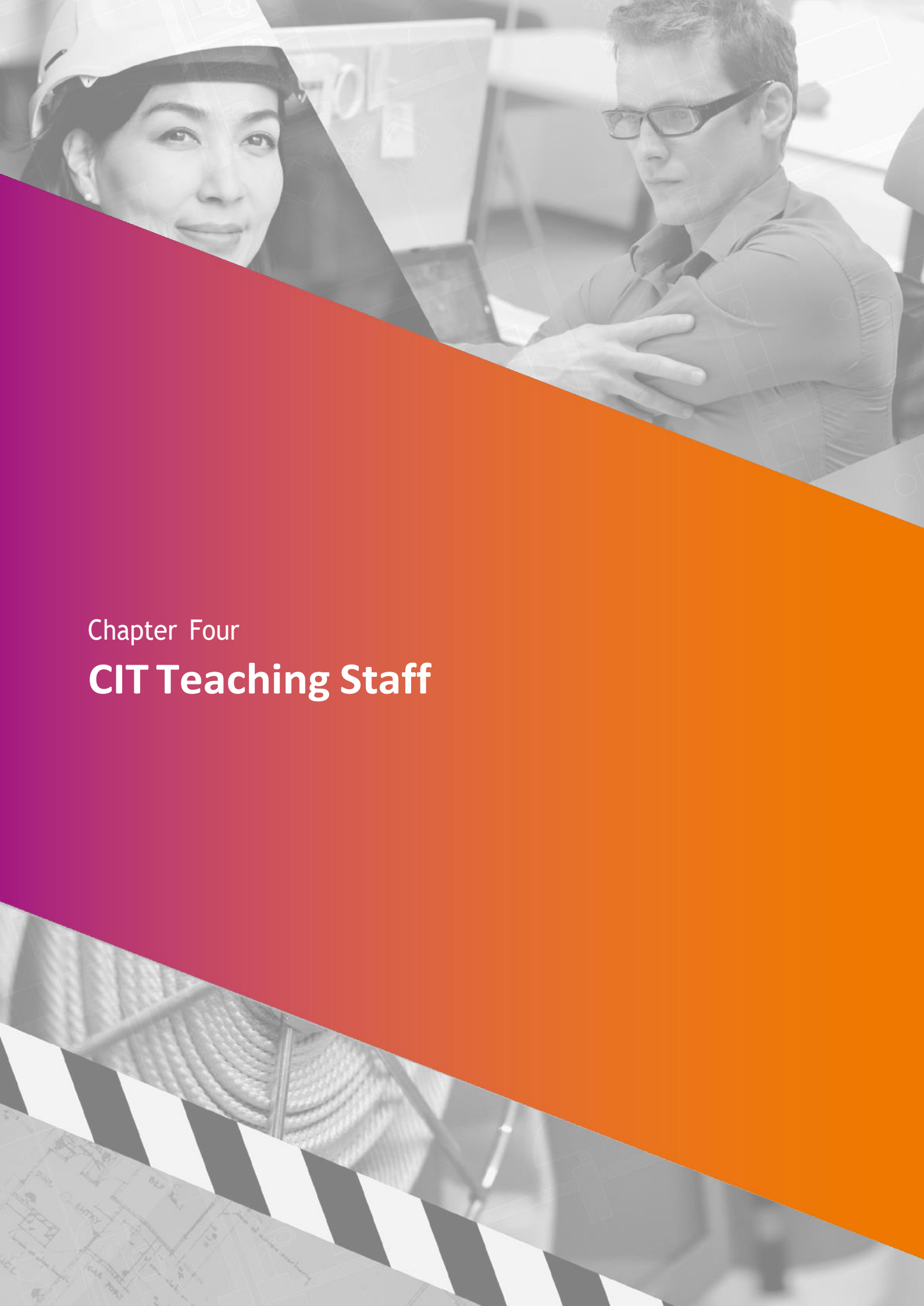
Office and Administrative Staff

General Office Safety

Office environments are generally safer than operational and trade skills areas and workshops however staff and students still need to be conscious of their own and others safety when working in these environments.

Hazards and risks present in the office environment include:

- Housekeeping - maintaining a neat and tidy environment.
- Slips trips and falls -
 - ensure walkways are free of obstructions
 - cords are secured/covered to prevent trip hazards. Submit a request through BEIMS if cords need to be run up walls.
 - Slippery substances (e.g. spilled coffee) are cleaned up immediately.
- Access and egress - maintaining clear access into and out of the area
- Emergency exits kept clear from clutter. Exits require at least 1m clearance in all directions.
- Storage - Keeping it neat and tidy and regularly disposing of unused items and
 - Storing frequently used items between knee and shoulder height for ergonomic access
 - Only storing light non-hazardous items (e.g. non-sharp) above shoulder height
- [Manual Handling](#) (see the section within this document)
- [Ergonomic](#) (see section within this document)
- [Lighting/glare](#) (see section within this document)
- Thermal Comfort - A BEIMS request can be submitted to adjust temperature and air-flow
- Electrical - Ensure power cords are secured/covered to prevent dislodgement. Don't overload power boards. Don't use double adaptors.
- Hygiene - Practice good hygiene:
 - Hand hygiene - wash hands before and after eating and going to the toilet
 - Regularly clean and disinfect work surfaces
 - Clean and disinfect shared equipment before using it
 - Cover coughs and sneezes with elbow or a clean tissue



Chapter Four

CIT Teaching Staff

General Information

Teaching staff at all levels have a duty of care towards students to facilitate their safety and make them aware of, and reinforce, Work Health and Safety requirements applicable to their study and class activities.

For classes which are classroom based this means ensuring that the teaching facility is safe, that access to and egress from the learning space is in good condition and that tables and chairs are not damaged. Teachers should make students aware of applicable procedures for emergencies.

For students undertaking practical classes ensuring that students are made aware of and understand how to perform these activities safely and with minimal risk. For example correct manual handling procedures.

For students undertaking work involving [hazardous chemicals](#) they are to be made aware of Safety Data Sheet(s) including any hazards and risks involved in the use of the chemical(s) and any other information applicable to the safe use of the chemical(s) e.g. first aid measures if exposed to the chemical.

In areas where plant and equipment are used in addition to the items mentioned above:

- Each item of plant/equipment must be regularly inspected, ideally before each use, to ensure that it is safe for use.
- Teachers should ensure that students are aware of and understand any requirements for the use of plant/equipment detailed on the Safe Operating Procedure (SOP) which is located in a visible position on or near the plant/equipment
- Relative to the risk involved in operating the machinery: training, instruction and competency assessment is undertaken and documented to ensure that the student can operate the plant/equipment safely.

Trade Specific

In each of the trade skill areas at CIT there are many learning activities where serious injury or harm could result if the risks are not properly controlled. To instruct staff and students how to perform these tasks safely CIT has adopted the use of Safe Operating Procedures (SOP), Job Safety Analysis (JSA) and Safe Work Method Statements (SWMS).

Each of these documents is described below. Completed documents are located within the teaching resources embedded in eLearn and/or physically on display alongside the relevant plant and equipment.

Safe Operating Procedures (SOP)

A Safe Operating Procedure (SOP) is a step by step set of instructions on how to operate a specific piece of equipment safely. Operation of any equipment is conditional on the operator being trained, assessed as competent and authorised to use the equipment.

The SOP document outlines:

- The name and sometimes a photograph of the equipment (within the blue banner at the top)
- The PPE required and any precautions to adhere to when operating the machine,
- Pre-operational safety checks that must be carried out before using the machine,
- Operational safety checks/procedure required to operate the machine safely
- Elements of housekeeping that must be followed,
- Potential hazards that use of the machine presents and
- Prohibitions in relation to the use of the machine.

Teaching staff and students must follow the SOP when using the specific piece of equipment.

SOP documents may exist in both the trade and non-trade training areas and must conform to the standard format.

CIT staff can access SOP templates on the CIT Intranet here: [Safety Operating Procedure SOP.docx \(sharepoint.com\)](#)

Job Safety Analysis

A JSA documents a job so that it can be completed as safely as possible. It sets out the steps (tasks) needed to complete the job, the hazards involved in each step and the control measures required to complete each step safely. JSAs should be reviewed and signed off by all staff and students involved in the job prior to the commencement of work.

CIT staff can access JSA templates on the CIT Intranet here: [Job Safety Analysis JSA.docx \(sharepoint.com\)](#)

Safe Work Method Statement

Under the Work Health and Safety Regulation 2011 a documented safe work method statement must be completed for all high-risk construction work. The purpose of the SWMS is to ensure that everyone involved in the work understands how it is to be carried out in a safe and health manner.

Construction work is 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, or preparation of a building site. Demolition includes deconstruction.

High Risk Construction Work:

- a) involves a risk of a person falling more than 2m;
- b) is carried out on a telecommunication tower;
- c) involves demolition of an element of a structure that is load-bearing or otherwise related to the physical integrity of the structure;
- d) involves, or is likely to involve, the disturbance of asbestos;
- e) involves structural alterations or repairs that require temporary support to prevent collapse;
- f) is carried out in or near a confined space;
- g) is carried out in or near-
 - i) a shaft or trench with an excavated depth greater than 1.5m; or
 - ii) a tunnel;
- h) involves the use of explosives;
- i) is carried out on or near pressurised gas distribution mains or piping;
- j) is carried out on or near chemical, fuel or refrigerant lines;
- k) is carried out on or near energised electrical installations or services;
- l) is carried out in an area that may have a contaminated or flammable atmosphere;
- m) involves tilt-up or precast concrete;
- n) 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;
- o) is carried out in an area at a workplace in which there is any movement of powered mobile plant;
- p) is carried out in an area in which there are artificial extremes of temperature;
- q) is carried out in or near water or other liquid that involves a risk of drowning; or
- r) involves diving work.

Where high risk construction activities are to be undertaken a formal and approved SWMS must be developed and implemented.

CIT staff can access SWMS templates on the CIT Intranet here [Safety Work Method Statement SWMS.docx \(sharepoint.com\)](#)

Personal Protective Equipment (PPE)

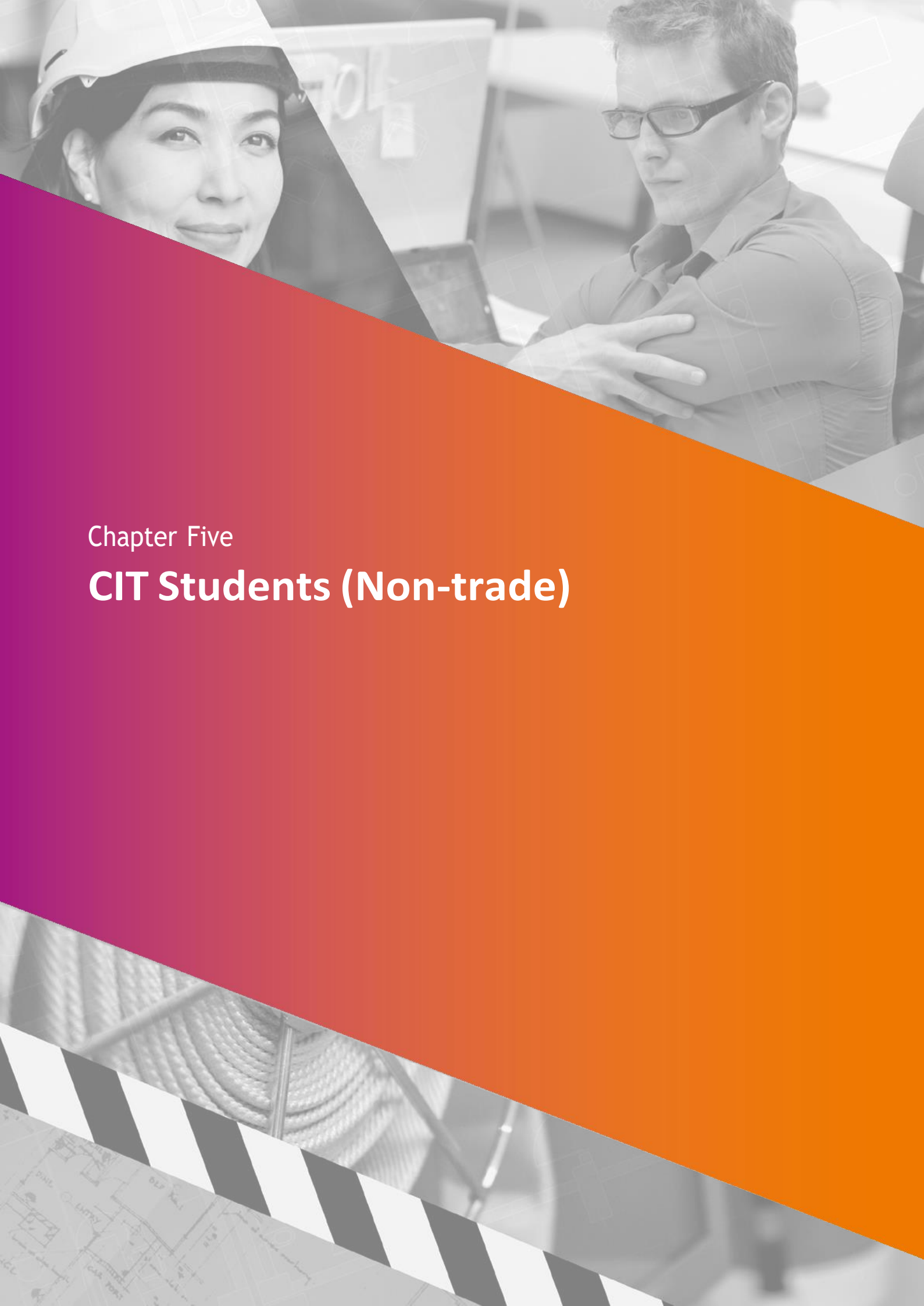
Many areas of CIT have specific PPE requirements. These requirements are included in risk management documentation (SOP, JSA, SWMS and/or risk assessment) and wherever possible on workplace signage. All staff and students must comply with these documents and notices. Failure to comply can result in disciplinary action as outlined in [failure to comply with safety instructions](#).

Where identified by risk assessment PPE shall be provided free of charge to CIT Staff.

PPE tends to be the least effective tool for preventing people from getting injured because it does not control the hazard at the source and relies on human behaviour. This means that for it to be effective that staff and students need to be vigilant to:

- ensure that it fits and is worn properly,
- that it is checked regularly to make sure that it is in good condition, and
- that it is clean and serviceable as all times.

Supervisors of staff and students also need to be vigilant that PPE is being used appropriately, is in good condition and is worn properly.



Chapter Five

CIT Students (Non-trade)

Non-trade students include all students undertaking general class-based education and learning as well as many courses that may lead to National Recognised competency-based qualifications.

These qualifications may include areas such as:

- Fitness,
- Forensics,
- Nursing,
- Children's Services,
- Aged Care and many other areas.

The following indicates some of the WHS risks associated with the risks in these areas.

Aged Care

Aged care can be a physically challenging working environment. The most common WHS issues are sprains and strain from patient handling and slips, trips and falls. These account for nearly 70% of all workplace injuries in the industry.

One of the key ways in which the risk of sprains and strains can be minimised is by ensuring that there are good patient lifting and moving processes in place. Well in advance of moving a patient you should be prepared for how you will lift and move them in the most efficient and effective manner. You need to protect your back, neck and shoulders from injury as well as provide a level of comfort and confidence for the patient.

Most slips, trips and falls are caused by contact with equipment (e.g. that has protruding legs) or by substances that have been spilled onto the floor.

Personal Protective Equipment (PPE)

As in any personal interaction area of patient care, basic PPE will be required at varying times as age care workers are often involved in the provision of wound care and dealing with bodily fluids. Preventing the transmission of disease under these circumstances is vital. Basic requirements include hand sanitation and the use of latex gloves.

Patient Interaction and aggression

Other risk elements in aged care can come from patient aggression, particularly in dementia settings or even in general aged care areas where patients may be suffering varying levels of confusion and stress.

Increasingly, patient relatives can become aggressive towards care staff, particularly if they feel their loved one is not receiving appropriate attention.

Making sure you get to know the individual idiosyncrasies of the patients can be your greatest defence, in terms of being prepared for the unexpected.

Beauty Therapy

Increasingly, the volume of clients seeking beauty treatment on a regular basis is growing. As a result there are increased risks associated with providing beauty therapy treatment for both people working in the field as well as clients.

Postural Stress

Beauty therapy always almost involves serving a client that is either sitting in a chair or lying on a treatment bed. Both activities can result in postural stress, with the beauty therapist either sitting on a chair or stool when the client is sitting or either standing or sitting on a stool if the client is on a treatment bed.

It is important in setting up for this work that the height of the chair and/or the height of the bed is adjusted to the correct working height.

Adjust the stool so that you are sitting with your arms in a comfortable working position that puts you at the correct working height so that you are neither having to reach up or reach down to treat the client. The same general rules apply when the client is on a treatment bed. If you are treating from a stool adjust the stool so that it places you at a comfortable working height. If you are standing adjust the bed so that you are not having to bend forward unnecessarily to reach the client to provide treatment. If possible, adjust the height of the treatment bed to make it easier to enable the client to get on and off or if the bed is not height adjustable ensure that there is a footstool available.

Postural stress can also result in muscle fatigue, particularly where clients are being given massage treatments for prolonged periods or when there is a successive number of massages to be performed. The pressure that is exerted through the hands and fingers can result in overuse injuries or muscle sprain or strain.

When massaging make sure that you pace yourself throughout the treatment so that you don't place yourself at undue risk of muscle fatigue or injury.

Sharps and Body Fluids

From time to time it will be necessary for the therapist to use a sharp (usually a lancet) to relieve an ingrown hair or to treat an infected pimple as part of a beauty treatment. It is essential that when this occurs strict safety protocols are followed ensuring that only sterile equipment (e.g. gloves, swabs and sharp) is used for the treatment. After treatment all equipment including gloves, swabs (used to mop up blood/bodily fluids) and sharps (e.g. lancet) must also be disposed of in a contaminated waste container.

Chemical Safety

Beauty therapy involves the use of a range of chemical products on a day-to-day basis.

Fumes and chemical sensitivity can become an issue with the use of chemicals such as acetone for nail polish removal, nail polish and acrylics and acrylic glues used when working with false nails. Nail polishes and acrylic glues contain both colours and drying agents.

Chemical fumes can also be a problem in spray tanning areas where the chemical is turned into a fine atmospheric mist that is easily breathed in. If the area is not adequately ventilated this can be toxic; creating breathing issues (up to and including chronic respiratory or acute asthmatic responses).

Chemicals must be correctly stored in suitable storage units and detailed chemical safety information needs to be held in the form of Safety Data Sheets for all chemicals.

Waxing and Burns

Depilation using hot wax is a common beauty treatment that can result in the risk of burns as well as the risk of cross contamination if good hygiene practices are not established and maintained.

Application of the wax should always be performed wearing sterile gloves to prevent the risk of infection transfer in both directions and spatulas for application should not be reused without sterilisation or disinfection. If metal spatulas are used they should be disinfected between uses and if wooden spatulas are used they should be discarded after each use.

Wax needs to be at the correct temperature for it to be able to be applied easily and then depending on the type of wax being used removed using fabric strips or by gripping the edge of the set wax and pulling to remove the hair. This process can result in burns to either the therapist or the client if the wax is too hot, or injury to the skin if it is not pulled taught before removal. Skin injuries can include blistering and tearing resulting in bleeding.

Managing potential personal hygiene issues for clients is also an issue that needs to be dealt with from a WHS perspective to ensure that the risk of bacterial transfer between therapist and client is minimised, particularly if the client is having a Brazilian or Bikini Wax.

Electrical Safety

There is a wide range of electrically powered equipment used in the beauty industry, any one of which can cause injury or death.

Every electrical appliance (including battery changing units) must be electrically tested and tagged on an annual basis. If an item has not been tagged within the last year it must not be used.

Electrical appliances such as facial steamers need to be regularly inspected to ensure that they are fully functional. Low water levels in a facial steamer must trigger the cut-out switch rather than allowing super-heated steam or water to splash onto the clients face.

If you are working in the beauty industry you should not take your own equipment into a salon unless it has been tested and tagged.

Clinic area/treatment room

In running their clinical and treatment areas, massage therapists should:

- ensure cleanliness of the clinic area
- ensure appropriate access for the elderly and people with disabilities or refer them to another clinic
- ensure visual and auditory privacy for treatments in accordance with the individual privacy needs of clients
- provide suitable lighting and ventilation and ensure the clinic area is maintained at a comfortable temperature
- maintain and service heating and ventilation systems/devices, and turn them off when not in use
- wash hands before and after each client
- use clean, freshly washed linen for each client

- maintain hand washing facilities with temperature control on hot tap
- carry out standard infection control procedures on reusable items (massage table, linen, oil dispenser etc.)
- carry out regular safety checks on all equipment including electrical equipment (hydraulic tables, towel caddies, microwave ovens)
- use ergonomic table, stools and supports that comply with relevant Australian Standards
- keep lubricants in contamination proof clearly labelled containers
- obtain safety data sheets (SDS) on all products used
- check to make sure that clients are not sensitive or allergic to products used
- provide closed containers for used linen
- be aware that drying linen in a dryer may pose a potential fire hazard due to the presence of any residual oil.
- ensure correct storage and transport of potentially hazardous waste (contaminated linen, used hand towels, tissues)
- provide non-slip or slip-proof flooring
- keep area free of obstacles for client access and assessment

Storeroom

In managing the storage of materials and supplies, massage therapists should:

- store oils and creams in accordance with the label/Safety Data Sheet
- provide clean, dry storage for clean linen, ensuring appropriate linen rotation system
- make sure floors are slip proof

Work processes

In managing the actual process of providing massage therapy, massage therapists should:

- use correct manual handling processes when lifting equipment or assisting clients on and off the massage table
- use appropriate body mechanics and techniques when performing massage to prevent muscle strain and overuse syndromes
- maintain healthy hands with exercises for strengthening and stretching
- know contraindications for massage and work within their limitations
- take adequate breaks and have realistic workloads
- have appropriate strategies in place for dealing with aggressive clients
- have strategies in place for stress management
- implement anti-bullying, intimidation, and harassment policies
- maintain a current Health Training Package “Apply First Aid” certificate

- maintain membership of a professional association and keep current with industry developments and engage in continuing education activities
- have current professional indemnity and public liability insurance
- document and maintain work health and safety and infection control policies and procedures including an ongoing risk management plan
- have a spill kit available for the management of blood or body fluids spills including the use of personal protective equipment
- be aware of management procedures for accidental exposure to blood or body fluids

Note: the above information is sourced from the Association of Massage Therapists 'Massage Therapy Code of Practice' 2012.

Hot Stone Massage

Hot stone massage is one of the modern therapies that is widely used and taught within the Beauty area of CIT.

The following key points should be noted when performing Hot Stone Massage:

- Check stones are not chipped or cracked before use
- Select stones that are the correct size for the therapist's hands and the client's body area
- Stones must always be heated in a professional heater following manufacturer's instructions
- Be careful when transferring stones from the heater unit, don't pass them directly over the client's body, especially the face as the stone may be slippery and you don't want to drop one on the client
- Do not put warm or hot stones on the eye area.

Building, Engineering, Surveying and Spatial Information

This area of CIT provides training and qualification for the building, engineering, surveying and spatial information fields of the construction industry.

Many of the activities involve working closely with both commercial and residential construction businesses and also undertaking both ground based and aerial based surveying of the land.

In many cases people working in these fields will be working in someone else's workplace with limited levels of control or they may be working in isolated or very risky public environment, such as along active roadside verges.

Having a good grasp of safety management is essential to ensure that workers come home safe at the end of each day.

Building and Engineering

When building managers and engineers are working in construction environments, whether these are commercial or residential, or other engineering or manufacturing sites, they must be aware of and very vigilant about making sure that they do not place themselves in harm's way.

All students studying these courses at CIT are taught either a Cert IV or Diploma level unit of competency in WHS. This ensures that they have a sound understanding and awareness of potential hazards and appropriate controls that should be in place to mitigate the risk of injury.

It is mandatory that any worker attending a construction site have their Construction Induction Card (known as a white card in the ACT) and asbestos awareness training. These Cert I units are used in many industries now and are very useful in gaining initial employment within the industry.

On a commercial site you will always be inducted by the Principal Contractor before you can undertake independent work and you may have to submit risk management plans of your own to satisfy their duty of care for all workers on that specific site.

On a residential site unfortunately, this best practice is often not the case and it will be your responsibility to ensure that you adhere to your own safe risk management plan as often you will be working unsupervised if the PCBU is not on site. However, with your training you should know how to work safely with the work you are undertaking.

No matter the site you will need to ensure that you meet site safety requirements, including those related to the provision and wearing of PPE, adhering to safety signage and holding a Construction Induction Card if undertaking work.

Site safety requirements must also be adhered to when visiting plant rooms, manufacturing factories, and civil works amongst others.

All workers visiting any workplace site need to be aware of their own responsibilities regarding their safety as well as what site management rules are in place for that worksite. Understanding the process for hazard identification and risk management will go a long way ensuring a safe and healthy worksite environment.

Surveying and Spatial Information

The main risks associated with training and working in the surveying profession are those associated with type of worksite. Worksites can vary from an open field to an active construction site to (very commonly) working alongside active roadways.

Sometimes surveyors will be working on a site that is controlled by others, such as an active construction site. On an active construction site the PCBU is in control of the site and responsible for determining, implementing and enforcing the site safety rules so the surveyor must follow these rules at all times. On these worksites the surveyor will need to be site inducted prior to commencement of work. Depending on the level of activity onsite, the proximity to other workers and the risk or hazards on site the surveyor will either be directed to their worksite or directly supervised whilst onsite.

On large green-field sites, where there is no established infrastructure in place the survey team will have to undertake their own risk assessment to identify risks and hazards and determine what safety arrangements need to be implemented. On these sites the risk assessment process will include:

- Consideration of access and egress to the worksite as well as
- identification of any specific hazards, such as existing or old structures, washaways, holes, penetrations or old excavations.

Once these are identified, a detailed plan needs to be developed and communicated to all the members of the survey team to ensure that they know where they can go and what they can do and more importantly, what to do in the event of an emergency.

On roadside areas being surveyed, depending on the nature of the work to be undertaken it may be necessary to establish a Temporary Traffic Management Plan (TTMP) that may or may not have to be formally approved (this depends on the requirements of the relevant road management authority such as Roads ACT or in NSW from the local council or the RTA. A TTMP usually involves the erection of warning signs that there are 'Surveyors Ahead' but may also involve temporary speed restrictions as well. Where speed restrictions are required, approval is required from the relevant road management authority.

When working near roads workers must wear high visibility clothing and keep an eye on traffic movement. They must also stay in contact with each other (most likely by two-way radio).

Increasingly, traditional survey work is being supplemented by aerial survey work using drones. When undertaking this type of work surveyors need to be aware of any other activities in their proximity which could impact or be impacted by their work and implement appropriate actions to prevent harm.

The use of drones in open fields is relatively safe and potentially incident free, however the use of drones in other areas is surrounded by strict regulatory controls determined by Air Services Australia. Breaches of regulatory controls carry significant fines. Where workers operating in the aerial surveillance space are operating drones they need to check and ensure that they have the appropriate licenses and approvals and know and follow the rules associated with drone operation.

Children's Services

Children's Services can be a challenging environment from a WHS perspective, particularly when managing young, mobile and active children.

The most common injuries in Children's Services are those involving trip and falls and those involving muscle sprains and strains.

An inherent part of childcare work is bending down and picking up children. This means muscle sprains and strains are common injuries given that the average three-year-old can weigh upwards of 15kg.

Even babies as young as 1 year old can weigh up to 10kg and it is not uncommon for near newborns to weigh 4-5kg, so the effort required to pick them up is significant. When this is repeated on several occasions over the day this accumulates and can significantly impact on the health and safety of the worker.

Important elements of any childcare environment are those associated with:

- housekeeping - keeping the area as clean and tidy as is possible to help prevent trips and falls;
- lifting children - use good lifting techniques, where possible go down to the level of the child rather than bringing the child up to your level; and
- management of health issues including allergies, asthma and other chronic illnesses through effective identification and implementation of medical action plans.

General PPE requirements for childcare are basic but do include the wearing and use of gloves for any nappy changes and/or dealing with any bodily fluids such as when a child vomits or when wiping a child's nose.

High standards of hand sanitation should be maintained, particularly as an additional defence against the transmission of disease to children who have much less well-developed immune systems.

Dealing with angry and aggressive children can be challenging and several incidents have occurred where an angry child has punched, bitten, kicked, or thrown items at other children or at a childcare worker. Sometimes dealing with these issues can require both skill and patience as well as having clearly established protocols in place for their management.

Additional information regarding manual handling can be found in the:

[CIT Procedure Manual](#)

Fitness

With the fitness industry becoming increasingly popular managing safety in the industry is crucial for fitness instructors and for clients attending fitness sessions. It is essential that fitness leaders stay in shape not only to lead by example and inspire their clients but also to ward off potential injuries. Workers in the field should be careful to always work within their limits in terms of both strength and endurance and to take regular breaks throughout the day.

Perhaps the most common injury in the fitness industry is that of muscular strains and sprains. These types of injuries are less likely to occur if workers in the field maintain a good level of fitness themselves and that they and participants in their activities warm up prior to undertaking any exercise activity. In addition, it is essential that activities are appropriate for the fitness level of all involved.

Correct and correctly adjusted footwear is important in protection from foot, ankle and knee injuries. Most fitness activities involve running or other movement so any injury to an ankle or knee can be career limiting for the worker (depending on its seriousness) and effect client enjoyment and retention.

Practicing good habits to keep cool and stay hydrated will ensure that you do not end up suffering from heat stress or dehydration during sessions. Take regular breaks and sip water regularly. This is particularly important during outdoor sessions in the summer months.

Make sure that all equipment is in good working order and maintained in accordance with manufacturer's requirements. Regularly test and tag all electrical equipment.

Remember that hygiene is important. Ensure that appropriate cleaning regimes are in place and that everyone (clients and staff) wipe down equipment with a towel as they go.

In laying out your gym, make sure that there is adequate room to move around and between the pieces of equipment and that there is enough space, so clients are not on top of each other whilst doing their workout.

Forensics

The main risk involved in forensic exercises is exposure to a wide variety of potentially harmful substances. Hazardous substances may be inhaled, swallowed or absorbed through the skin and eyes so it is important to ensure that adequate protections are in place and used.

When using chemicals always ensure that you are familiar with them and the precautions that should be followed. This can be easily ascertained by consulting the label and Safety Data Sheet (SDS). SDS should be held for every chemical product used in the workplace. SDS are regularly updated as our knowledge of the chemical increases so check that the SDS you are using is one which has been issued in the last 5 years otherwise obtain one that has been. The SDS indicates what PPE is required so wear it.

Barrier controls provided by the PPE (e.g. gloves) are of utmost importance in Forensics. Any breach of these controls can be very dangerous to you and can also compromise the integrity of the forensic investigation being conducted.

When working in the laboratory analysing evidence standard laboratory safety protocols apply and must be followed, particularly if you are using or analysing chemicals or chemically contaminated material. Where

necessary this work may need to be done in a fume cupboard or inside some form of sealed chamber, such as for the recovery of fingerprints.

All electrical equipment must be tested and tagged and if it is portable the frequency at which this happens will be more often than fixed items. Remember with any portable equipment you must inspect it every time it is used. If it is damaged do not use it, report it and take it out of use for repairs.

Handling Bodily Substances

At times students will be required to handle blood products and other fluids such as semen and saliva (their own). These samples will have been screened for communicable disease but you must still adhere to universal precautions to avoid infection risks.

Universal precautions include; handwashing before gloving up, handwashing after removal of gloves and particularly before leaving the laboratory. Before eating, drinking or smoking, and after every occasion of coughing or sneezing unless already wearing a mask.

Barrier Filters and Goggles

When using special lights for the detection of evidence it is essential that appropriate protective eye wear is worn.

The filters and goggles used with the Polilight are shown in the following tables taken from the workshop manual.

Two filter holders are provided, one with an inbuilt tuning device so that the interference barrier filter can be down-tuned by up to 30 nm, and the other without the tuning capability.

Approximate positions and band-widths on the inbuilt PL10 filters and associated barrier filters are illustrated in the workshop manual.

Table 3. Barrier filters available in Polilight kit (Source Forensics Workshop Manual)

Barrier Band Pass Filter	CW (nm) Central Wavelength	HB (nm) Half Bandwidth
Violet: IF415	415	40
Green: IF565	565	40
Orange: IF590	590	40
Red: IF 600 (610)	600	40

Table 4. Goggles available in the Polilight kit. (Source Forensics Workshop Manual)

Goggles	EW (nm) Edge Wavelength
Clear Goggles	410
Yellow Goggles	495
Orange Goggles	570
Red Goggles	620

Remember that safety procedures must be always followed.

Massage

The broader awareness of massage as a form of preventive health care and rehabilitation has created greater scope for massage therapists to provide services in diverse settings. Regardless of the environment that massage therapists work in or the nature of workplace interactions, WHS is an issue for everyone.

It is the responsibility of the massage therapist to take reasonable care for the health and safety of everyone in the workplace and to work in a responsible manner. Therapists must be aware of and comply with WHS legislation and any workplace requirements to ensure safe practice, remembering that therapists can often be working alone as sole practitioners

The Association of Massage Therapists 'AMT Code of Ethics' contains specific guidelines for the management of WHS in the workplace.

Waiting room/administration area

In establishing and managing this area of their workplace or place of business, massage therapists should ensure that they:

- maintain a safe, clean and well-ventilated facility
- provide adequate lighting for safe entry and exit
- ensure appropriate access for the elderly and people with disabilities or refer clients to another clinic
- provide and maintain toilets and hand washing facilities with single use towels and temperature-controlled taps
- cover electrical outlets with childproof safety devices
- provide strong comfortable chairs
- provide non-slip flooring (do not use floor mats or have frayed carpet) maintain functioning smoke detectors and fire extinguishers
- be familiar with the location and use of fire extinguishers and clearly indicate fire exits
- be aware of evacuation plan for emergencies with evacuation plan clearly displayed
- keep emergency information posted in plain view near all telephones
- establish a policy regarding the use of open flames and candles
- keep all areas free of obstacles

Nursing

Whilst in the teaching environment the physical issues associated with nursing can be relatively well controlled however in the real world of nursing nothing is necessarily quite so certain.

The biggest risks to nursing personnel are

- a) infection issues (e.g. syringe needle injuries), during any type of procedure to give medication or take blood,
- b) muscular and lower back strains trying to move and/or restrain patients
- c) Dealing with the problematic behaviours of patients and their visitors particularly those who are suffering life threatening illnesses who can become angry, confused, aggressive or depressed.

Universal Precautions

Universal precautions must be undertaken to prevent the spread of infectious diseases. Precautions include hand washing, sterilisation/sanitation of equipment, safe disposal of contaminated items and the wearing of barriers to prevent contact with bodily fluids.

Personal Protective Equipment (PPE)

Depending on the nursing task to be undertaken basic requirements for PPE includes masks, gloves, uniforms and/or gowns.

Any procedure involving skin to skin contact or the potential for contact with bodily fluids will involve the use of barrier protection in the form of latex gloves and in some cases eye protection. Some examples of these procedures include washing, bathing, wound management, administration of intravenous or intramuscular drugs.

Nursing work that takes place in any operating theatre will require an even higher level of barrier protection in accordance with standard theatre protocols.

Patient Handling and Interaction

Dealing with people in a hospital nursing environment can be problematic as they are under a variety of stresses related to their illness, their personal circumstances, and their general wellbeing status.

Whilst the majority of patients will willingly cooperate and assist you where they are able (e.g. weight bear and stay calm during general treatment), there will be a few who are uncooperative and in some cases can become quite aggressive.

A particularly challenging issue for nursing personnel is dealing with patients who are suffering a life-threatening illness or injury. They may be terrified of what is happening and they may feel as though they have lost control over themselves. They can become angry, confused, aggressive or depressed and take it out on anyone who meets them.

Increasingly in nursing environments patient's family members can become aggressive because of personal stress associated with the medical condition of their loved one.

Veterinary Science

Veterinary Science is a broad and diverse area of practice and can involve interactions with a broad range of animals in a wide range of situations and circumstances.

Personal Protective Equipment (PPE)

PPE in the veterinary science area can be varied depending on the nature of the procedure being performed and the animal being treated. The following sections outline some of the risks associated with veterinary work.

Handling Animals in Clinic Environments

The safety risks associated with working with animals range from bites, stings, being physically struck or trampled by large animals through to risks associated with diseases that spread from animals to humans (zoonotic diseases) and syringe needle injuries.

It is essential that appropriate precautions are taken, particularly in relation to making sure that appropriate personal protective equipment is used and that sharps are properly handled and disposed of before, during and after any inoculations or vaccinations.

Cuts, scratches, bites and stings are common when dealing with domestic animals. Cats can lash out with razor sharp claws inflicting scratches that can sometimes require stitches. Dogs similarly can become aggressive and bite, inflicting puncture and tear wounds to the hands and arms, and to other parts of the body during lifting and handling. These injuries carry the risk of infection. So, it is important that appropriate animal handling procedures are followed at all times.

Handling Animals in Farm Environments

Handling and interaction with farm animals present additional safety risks. Some common risks include having your foot trodden on, being kicked by horses/cattle or being crushed in yards or holding pens. Smaller horned animals such as goats and sheep can inflict serious puncture wounds if the animal is not properly restrained during treatment.

Zoonotic Diseases

There are many serious and debilitating diseases that can pass from animals to humans (zoonotic diseases). A good guide to infection control, PPE and how to deal with high risk situations is available at [Australian Veterinary Association | Personal Biosecurity \(ava.com.au\)](http://AustralianVeterinaryAssociation.org.au). Following these precautions are essential for anyone working with animals as there have been several cases in the past of veterinary staff becoming infected with the Hendra virus from infected horses.

Exotic Animals

Working with exotic animals presents yet another range of risks. Handling venomous snakes or fish can have obvious risks, as can working with large wild animals in captivity. There are numerous instances of veterinary staff being seriously injured and even killed by animal attacks.

Ensure you understand how to handle the species you will be working with and ensure that you are prepared for emergencies ahead of time (e.g. understand first aid procedures and that all required first aid equipment is easily obtainable).

Driving and Travelling on Unfamiliar Roads

Road accidents can be a safety issue for the veterinary community, particularly for those travelling in rural and remote areas. Many country veterinarians are required to drive long distances (and become fatigued) over often poorly constructed and maintained roads in poor weather conditions and at all times of the day or night. This means they are at increased risk to be involved in vehicle accidents, such as collisions with other vehicles or with wild animals such as kangaroos, wombats, wild pigs or emus.

Some tips for staying safe whilst driving include ensuring:

- that you are properly rested,
- that your car is properly maintained and is serviced regularly
- there are no distractions whilst you're driving e.g. animals are restrained, you mobile phone is switched off or you have a good hands free set up
- you drive within the speed limit and appropriate for the conditions (e.g. slow down on wet slippery roads)
- Don't drive under the influence of alcohol or drugs (including some prescription drugs which affect your alertness or otherwise affect your ability to drive carefully).

Sharps and Blood Products

In laboratories where blood and tissue testing takes place sound safety practices must be undertaken in order to protect staff from disease transmission and infection.

Standard precautions must be followed, including the use of appropriate PPE such as masks and gloves as well as ensuring that there are good infection control practices such as hand washing, instrument sterilisation and disposal of hazardous materials including biohazard waste.



Chapter Six

Apprentices (Trades)

The following information is applicable to both teaching staff and apprentices and should be read in conjunction with any specific requirements for the workplace that you are in. It supplements the information contained in the relevant teaching resources for specific competencies.

Workshop Safety

Workshop environments present a range of safety risks which are magnified when lots of people are working on separate projects at the same time.

Inside CIT workshops a lot of effort goes in to making the workplace safe for your learning experience to take place, but this can be easily undone if you don't follow the rules that have been established.

Always work in accordance with the directions you have been given by your teacher, which are on display in the workshop or are contained inside your learning materials. There cannot be any exceptions or shortcuts. These same rules apply for teaching staff giving instruction in the workshop.

Safe work procedures have been developed for a specific purpose and in a specific manner and that is to ensure that the risk of you being injured or becoming ill in the workplace is minimised to the greatest degree possible.

If the procedures say you do something in a specific way, do it that way. If the procedures say not to do something, no matter how confident you might be that you know what you are doing, don't do it. If you are not sure of how to do something, then don't do it and ask your teacher.

If you have not been given approval to do something or authorised to use a particular piece of equipment, don't use it until you are authorised and approved. This will usually involve some form of competency evaluation.

Personal Protective Equipment (PPE)

Some tasks or areas of the workshop will have Personnel Protective Equipment (PPE) requirements. It is imperative that you always follow the mandated requirements as failure to do so will place you and/or others in the workplace at risk of injury or illness.

PPE requirements are reinforced with signage (see next page). This signage indicates what is required. Failure to comply with any mandatory requirements regarding PPE carry the potential of disciplinary consequences.

Signage

Safety signage comes in several different configurations. These are:

- Signs with a blue background indicate that the wearing of the PPE is mandatory.
- Yellow signs, that are either square or triangular with black writing or images indicate that caution should be exercised in relation to the activity indicated.
- Signs with a red circle indicate that the activity or wearing of certain items is prohibited.

Common safety signs are as below:

Sign	Meaning
	Eye Protection must be worn
	Foot protection must be worn at all times
	Loose and Long hair must be restrained
	Protective clothing must be worn
	Hearing Protection must be worn
	Hard Hats must be worn
	High Visibility clothing must be worn

Sign	Meaning
	Welding mask must be worn
	Hand protection must be worn
	Warning that forklifts operate in this area
	Breathing apparatus must be worn
	Authorised entry only
	Mobile phone use banned in workshop
	Hand jewellery must NOT be worn

Workshop Rules

General workshop rules are:

- Only use equipment you have been trained to use, have been assessed as competent to use and you have been authorised to use;
- Keep the work area around machines clean and tidy, remove any waste material to designated waste collection points and place in bins;
- Where machines are fitted with guards, they must be in place and used at all times when the machine is in operation;
- Long hair must be restrained;
- Do not wear hand jewellery when operating equipment;
- Remove any loose jewellery that could get caught in machinery
- No smoking (including e-cigarettes) in the workshop - remember that the whole of CIT is a smoke free environment;
- No skylarking or messing about. Concentrate on what you are doing and work to ensure that your own and other people's safety is protected, do not distract others in the workshop;
- Wear indicated PPE and suitable clothing (e.g. not loose clothing that could get caught in machinery) at all times when in the workshop and obey all safety signs;
- Never use compressed air for cleaning clothing;
- Anyone affected by drugs (illicit or prescription) or alcohol are not permitted in the workshop;
- No food or drink in the workshop;
- Wash your hands after working with equipment and before eating or drinking at breaks;
- Put all tools away in their designated location when you are finished using them;
- Know where the first aid kit and emergency egress points are in relation to the workshop;
- Do not wear gloves when operating any rotating equipment or where there are trap points in any machine;
- When welding, ensure that all flammable substances are removed from the work area, including any items such as cigarette lighters from your pockets;
- Only use chemicals from correctly labelled containers, and wear the appropriate PPE; and
- Do not use or answer mobile phones in the workshop.



Chapter Seven

Trade Specific WHS Provisions

Electrical and Refrigeration

Electrical

The most obvious risk in the electrical industry is electricity and despite being trade qualified many electricians each year give themselves an electric shock or in some cases electrocute themselves.

Most commonly, electrical shocks occur when the electrician has decided to 'work live' (working on energised systems/appliances) so that it minimises the disruption to the household or business. This includes doing switchboard work.

The reality is that often electrical circuits, particularly in older buildings, may be poorly planned and inappropriately labelled so that although you may think you have shut off the correct circuit the power may not be isolated. Repeatedly, electricians get caught out in these circumstances by not checking that the circuit that they are about to work on is in fact de-energised and getting a shock as a result.

All work with energised electrical circuits is classified as High Risk Construction work and must be undertaken in accordance with a Safe Work Method Statement. (See [Safe Work Method Statement](#)).

Working in tight spaces - roof/floor spaces

Working in roof spaces, under floors and in tight/cramped spaces all present specific risks that need to be addressed on an individual basis and are best handled by having some basic risk assessment processes in place.

Working in roof spaces in the summer heat can result in heat stress and collapse, with the result that the electrician may require emergency rescue and recovery. During summer, it is a good idea to make sure that you remain well hydrated and if possible arrange additional air circulation into the roof space, by removing roof tiles or removal of roofing sheets.

Similarly, working under a floor can result in physical collapse, again requiring emergency evacuation. Precautions to take involve ensuring that the work is done when it is coolest during the day and having a fellow worker on site as well.

One of the key elements that impacts on some of the above elements and makes them fundamentally worse is that often an electrician may be working alone with no offside or no other tradespeople working in close proximity. This requires different strategies to be adopted from a WHS perspective which can involve a 'call in' system whereby you check in with a colleague or fellow worker who is on another site and/or making sure that the homeowner is aware of where you are and what you are doing.

Working at height

Another risky activity and one that results in more injury than electric shocks is falls from height. Electricians often work in roof cavities, either walking or crawling on roof beams and can fall if they lose their footing or if a roof beam is damaged or defective and collapses under their weight. Depending on the ceiling height they can fall 3 meters or more often striking themselves on furniture in the room below.

The other common fall potential is from ladders, either step or extension, with falls of up to 4m or more possible when working on the outside of a two-storey house.

There are strict WHS regulatory requirements that apply where there is a risk of falling 2m or more (Work

Health and Safety Regulation 291a). This means a more formal approach is required to manage this safety risk including the development of a documented Safe Work Method Statement (SWMS).

Some basic rules to always apply when using ladders is:

- not to climb above the second top rung of the ladder,
- make sure the extension ladder extends at least 1m past the top of the roof against which it is leant,
- set the ladder at a 1:4 ratio, making sure that it is attached at the top to the roof gutter or building façade, and
- always maintaining 3 points of contact when climbing up or down the ladder.

This latter point means that tools being used should either be attached to a belt or strap or hauled up to working height in a bucket or tool tray.

Confined spaces

Sometimes you will be required to work in areas that are designated as confined spaces. Spaces are designated as confined spaces not necessarily because the space is small but rather because they have poor ventilation which allows hazardous atmospheres (e.g. lacking oxygen, containing hazardous airborne gases) to quickly develop. Confined spaces have strict WHS regulatory requirements (High Risk Construction Work, Regulation 62 of the WHS Regulation) that require anyone entering the space to have a confined space ticket and a formally established and implemented confined space entry system, including emergency recovery.

Remember with any confined space activity, if the person in the confined space collapses, only use the rescue method designated for the area to recover them (e.g. only use the rescue rope). Under no circumstances enter the confined space yourself (unless this method of recovery has been agreed upon prior to commencement of entry, you are sufficiently trained, have appropriate breathing apparatus and the method has been included in the confined space entry documentation); otherwise, it is highly likely that there will be two recoveries required.

Motor Vehicle Accident

Importantly, and this applies to most trades, is the issue of motor vehicle accidents. For an electrician with a van full of equipment, taking evasive action in the event of a road traffic issue is fraught with danger as in many cases the vehicle is operating close to its maximum load capacity and the way the vehicle is loaded may affect the balance and handling of the vehicle.

Remember to keep the vehicle within the manufacturer's rated carrying capacity, make sure that it is regularly serviced, check tyre wear/pressures regularly and drive defensively keeping a good look out for other inattentive road users.

If you are going to spend a lot of time on the road between jobs, invest in a good hand-free device for your vehicle so you are not tempted to use your mobile non-hands-free whilst you are driving.

Refrigeration and Air-Conditioning

As a result of a survey conducted by the Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) the following key safety concerns were identified and are highlighted for consideration by people working in the field.

The four key areas of safety concern that were identified by the survey conducted by AIRAH are:

- Quality and Training
- Access
- Working Fluids
- Electricity

Quality and Training

The main area of concern here is when workers perform follow up (e.g. maintenance) work on something that hasn't been fixed properly last time. Survey results highlighted that in many cases workers are being placed at risk when they perform follow on work on something that has not been installed/maintained correctly.

Workers in the industry need to be vigilant to check that previous work was done in a competent manner and if it wasn't not to place themselves at risk by assuming that it is okay to work on.

Examples of sub-standard work that were highlighted in the survey included low quality brazing leading to refrigerant leaks and isolation or disconnection of condensate pipework leading to uncontrolled water flow that subsequently could place the next tradesperson at risk.

Access

This is a perennial problem, not only for the HVAC industry but also for any trades involved in providing service and maintenance callout services.

The risks involved are safely accessing roof areas and roof spaces, working at heights, and having insufficient space around plant to be able to work safely, without becoming entangled in the plant.

Of particular concern in relation to access and working at heights is the use of vertical ladders that have a vertical safety line leading to a roof area. When using these ladders, the worker needs to have both the correct type of fall arrest system as well as appropriate training and competency to work at height. Workers should not place themselves at risk by working at height where a fall arrest system is fitted or required, without the appropriate competencies as well as having the right type of fall arrest system.

In terms of tight spaces, make sure you are not putting yourself into a confined or constrained space without appropriate back-up arrangements in place.

Working in roof spaces in the summer heat can result in heat stress and collapse, with the result that you may require emergency rescue and recovery. During summer, it is a good idea to make sure that you remain well hydrated and if possible, arrange additional air circulation into the roof space, by removing roof tiles or removing roofing sheets.

Similarly, working under a floor can result in physical collapse, again requiring emergency evacuation. Precautions to take involve ensuring that the work is done when it is coolest during the day and having a

fellow worker on site as well.

One of the key elements that impacts on some of the above risks and makes them fundamentally worse is that often you may be working alone with no offside or no other tradespeople working in close proximity. This requires different strategies to be adopted from a WHS perspective which could involve a 'call in' system with a colleague or fellow worker who may be on another site. It could also involve making sure that the homeowner is aware of what is going on.

Working Fluids

The Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) guidance identifies issues related to refrigerants and oils, including flammability, toxicity and inappropriate retrofits.

As with any chemical substances you should ensure that the substance has been correctly identified and that you have reviewed all appropriate safety information i.e. the label, Safety Data Sheet (SDS) and any other relevant information prior to working with them. The SDS outlines the safety precautions, particularly in relation to handling and transport that need to be put in place when using the substance.

In addition, careful consideration should be given to working with fluids that are under pressure. You should not place yourself at risk if it is not safe or if the integrity of the pressurised system has been compromised. A risk assessment should be undertaken prior to working with fluids that are under pressure.

Electricity

An obvious issue for the HVAC industry is that associated with electricity. Every HVAC system is connected to the electricity supply and when it is being worked on needs to be made safe.

In many cases major issues arise when the existing electrical system is sub-standard and/or has been wired so that the HVAC cannot be easily isolated and made safe. In these cases, service personnel may have to resort to isolating the whole of the electricity supply to make it safe, rather than just isolating the HVAC.

Hazardous Substances

Asbestos should be left alone if it is encountered and if it needs to be removed it must be assessed and removed by a suitably competent and registered asbestos assessor and removalist.

All chemical products need to be handled and stored in accordance with the details and information contained in the relevant Safety Data Sheet, which means using the right type of PPE for handling, mixing, storage and application.

Motor Vehicle Accident

Importantly, and this applies to most trades, is the issue of motor vehicle accidents. For a technician with a van full of equipment, taking evasive action in the event of a road traffic issue is fraught with danger as in many cases the vehicle is operating close to its maximum load capacity and the way the vehicle is loaded may affect the balance and handling of the vehicle.

Remember to keep the vehicle within the manufacturer's rated carrying capacity, make sure that it is regularly serviced, check tyre wear/pressures regularly and drive defensively keeping a good look out for other inattentive road users.

If you are going to spend a lot of time on the road between jobs, invest in a good hand-free device for your

vehicle so you are not tempted to use your mobile non-hands-free whilst you are driving.

Manual handling

Manual Handling is an issue in all workplaces where lifting, carrying, pushing or pulling of plant and/or equipment is required. For general advice on how to undertake manual handling safely you should refer to the information in this manual located here [safe manual handling](#).

Other Issues

Other issues identified in the AIRAH survey include:

- Working outdoors and exposed to weather (dress appropriately for the weather conditions and follow appropriate [Cancer Council guidelines](#) to prevent the harmful effects of sun exposure);
- Working on active construction sites (you must follow the safety rules of the principal contractor);
- Inaction of owners on previously identified hazards;
- Irrate and unhappy customers.

Workers in the industry need to be aware of the risks and take appropriate precautions by ensuring that they undertake good safety planning and don't take shortcuts.

Electronics

Soldering is one trades that primarily takes place within the relatively controlled environment of an established workshop.

Given this, the safety risks are a bit more easily identified and controlled. Safety risks primarily surround the interaction between the electronics technician and their tools and the materials that they use those tools to work on.

The main WHS risks associated with electrocnics include:

- Use of tools and equipment
- Workplace Environment
- Manual and Material Handling
- Vapour management

Electronics technicians use a wide range of tools and equipment, including:

- soldering iron
- solder de-sucker
- hot melt pots
- hot air solder melts

Each of these has its own safety characteristics, but as they are all designed metal solid alloy wire or eutectic, and they can just as easily do harm to any hands or fingers that come into contact with the heating heads.

Generally, each piece of equipment should have a Safe Operating Procedure (SOP) next to it and you should be trained, competent and authorised to use the equipment before operating it. You should only operate it in

accordance with the SOP. If there is no SOP, or you have not been trained or are not authorised to use the equipment then you should leave it alone.

Particular attention needs to be given to ensuring that appropriate Personal Protective Equipment (PPE) is always worn.

For electronics technician this will usually involve, safety glasses, dust mask, ESD (electro-static) straps for footwear or wrist straps and at least long pants and long sleeve shirts. A soldering workshop can become very cramped and crowded if careful planning and organisation is not applied when working out the layout of the equipment. Machines need to be placed so that there is enough room around them for the movement of material.

Serious consideration must be given to the management of fumes. Some dust such as flux, lead/tin vapour PCB's (printed circuit boards) contain conformity coatings can cause respiratory issues, and some are also carcinogenic (cause cancer). This needs to be addressed by fitting (and using) fume extraction systems to the equipment and using appropriate PPE (e.g., fume mask). All lead/tin materials are carcinogenic (cancer causing), so you need to be careful when working with them. It is important to remember that cleaning of the workshop should be done with a vacuum cleaner rather than a broom to avoid stirring up dust on the floor. Other surfaces should be wiped down with a damp cloth to prevent stirring up dust into the atmosphere. Manual and material handling within a workshop can be problematic and as outlined above sufficient space within the workshop is essential to limit the risks of this.

Eye Injuries

Eye injuries can occur because of:

- fumes from melted solder
- metal wires that fly up into the eye when cutting materials., such as component legs
- fumes from melted flux and conformity coatings

These can result in issues ranging from minor irritation to major eye damage if the eyeball is scratched, particularly if you rub your eye with a dirty hand in the process of trying to remove the debris. When-ever undertaking any of these tasks you should wear eye protection that is appropriate for the task and meets the requirements of the Safety Data Sheet. Eye protection should be of a standard that complies with the applicable Australia Standard.

Dermatitis:

Dermatitis is the inflammation of the skin by chemical irritants. It usually occurs on the hands. It is caused by intermittent or ongoing exposure to chemical irritants and repeated/frequent hand washing with soap and water. Typical irritants include flux, PCB cleaner such as Isopropyl Alcohol (IPA)

The best way to prevent or limit the risk of dermatitis is to use either barrier creams or gloves and when cleaning the hands sometimes use an alcohol-based hand sanitiser containing moisturisers rather than soap and water all the time. With other tools likely to inflict cuts and abrasions, care needs to be exercised to ensure that they are kept in good condition and that handles are sound so that they are less likely to slip. Precautions needs to be taken when cutting wires to prevent hand injuries so consider wearing gloves to protect the hands from the risk of injury

Flammable or combustible components

Many building products contain flammable or combustible components that when exposed to an ignition source will catch fire or explode. Just like any business that has workers who work with chemicals, they must

be handled in accordance with the requirements of the legislation and the relevant Safety Data Sheets (SDS). Flux or IPA are all flammables so should be stored well away from any possible source of ignition. Many Fluxes or IPA are highly astringent and can cause eye irritation or breathing problems if exposed. When using any Flux or IPA make sure they are used under the 'fume extraction hood'.

Using materials electronics technician endure greater exposure to chemicals and skin damage than some other trades. They have a higher risk of work-related allergies including dermatitis and work-related asthma due to their exposure to some paints. Electronics technician should check the label and the SDS of each chemical to determine the level of health hazard (e.g., skin and lung irritation) and try to use less harmful products or if this is not possible try to reduce exposure in accordance with the PPE and ventilation requirements described in the SDS.

Electrical Safety

There are a wide range of electrically powered pieces of equipment used in the electronics industry, any one of which can cause injury or death. Commonly electrical hazards arise from faulty equipment or wiring and improper use of or exposure of a machine or its connectors to liquids, moisture, or heat.

You should.

- only use equipment in the way it is intended to prevent overload,
- do not use and report faulty equipment or equipment that has a frayed or damaged power cord,
- do not plug in equipment with wet hands,
- do not touch the victim of an electric shock or electrocution until the power source has been turned off.

Every portable electrical appliance must be electrically tested and tagged on an annual basis and if it is not tagged it must not be used. This also includes chargers for battery powered units

Waste Management

All waste materials from activities should be placed in the plastic-lined bin to be collected and disposed by the cleaners in the appropriate toxic waste bins

Plumbing and Gas Fitting

The following information is based on discussion within the Plumbing area of CIT as well as examination of material available from the Master Plumbers Association.

Plumbing, Gas Fitting, Draining and Roof Plumbing

There are a wide range of risks and hazards associated with these four closely linked tradebased skills, with some specific to individual areas and others general across the whole spectrum.

General Issues

Manual handling

Manual Handling is an issue in all workplaces where lifting, carrying, pushing, or pulling of plant and/or equipment is required. The management of plant and equipment involves workers carrying equipment/material/tools ranging from a bag full of tools to 6m lengths of PVC pipe. Where possible break the heavy loads down into smaller consignments or get some assistance from a co-worker.

For general advice on how to undertake manual handling safely you should refer to the information in this manual located here [safe manual handling](#).

Excavation

Excavation includes either hand digging or mechanical excavation. Digging to a depth of greater than 1.5 meters is a High-Risk Construction activity and as such a documented Safe Work Method Statement is required by the Workplace Health and Safety Regulation. This means that additional safety precautions must be taken including where necessary the battering or shoring of the trench.

Hot works

A number of tasks in plumbing and gas fitting involve the use of heat to join objects (pipes) together, this is known as 'hot works'. This can involve the use of a simple butane burner when soldering or Oxy/Acetylene or Arc welding to join heavier metals together.

One of the key risks associated with the use of soldering and welding gases is the transport and storage of the bottled gas. In many cases LPG is stored in a bottle that may be unsecured or improperly ventilated in the tradie's van and there have been many incidents where gas bottles have leaked and subsequently exploded, sometimes with fatal consequences. Oxy/Acetylene bottles must be kept upright and chained to a fixed or mobile structure such as the tray back of the Ute or on a portable trolley.

Remember that;

- LPG is heavier than air so if the bottle leaks the gas will settle at the bottom of the van or truck;
- Oxygen is also marginally heavier than air and will also settle at the bottom of the vehicle,
- whilst Acetylene is lighter than air so if it leaks it will collect at the top of the vehicle.

Given this it is important that vehicles carrying LPG and Oxy/Acetylene should have adequate ventilation at both the top and bottom to allow any leaking gas to escape to the outside atmosphere.

Contaminated Substances

It is common for plumbers, drainers and roof drainers to come in contact with contaminated substances. Contaminated substances can be in either water or soil, and the most obvious example is dealing with sewerage or septic systems. Workers in the industry need apply some basic actions consistently to protect themselves from the risks associated with these substances. Waterproof gum boots are essential when working in wet or contaminated conditions, as are gloves when working with sewerage lines. Face mask and safety eye wear should be worn to prevent liquids splashing into your mouth and eyes.

Basic hygiene is also important in ensuring that after you have finished working with sewer or septic systems you carefully and thoroughly wash your hands and face before eating, drinking or smoking. In areas where water is not readily available a suitable substitute is to use an anti-bacterial hand gel.

Similar issues can arise when working with stormwater as contaminated material can be picked up or absorbed from the surfaces on which it has been collected on or that it has run over. Consider the risks associated with stormwater that runs across a section of decorative copper roof, in this case the water will pick up the copper from the roof and the water will be contaminated with copper, which is a heavy metal. Similar conditions will also occur where roof sheeting contains lead joins.

Confined and/or constrained spaces

Confined and/or constrained spaces are another specific hazard faced by workers in the industry. This is the case when working under floors or in roof cavities, having to work in stormwater and sewerage pits and having to work inside septic tanks.

Sometimes you will be required to work in areas that are designated as confined spaces. Spaces are designated as confined spaces not necessarily because the space is small but rather because they have poor ventilation which allows hazardous atmospheres (e.g. lacking oxygen, containing hazardous airborne gases) to quickly develop. Confined spaces have strict WHS regulatory requirements (WHS Regulation 62) that require the creation of a Safe Work Method Statement (SWMS), a formally established and implemented confined space entry system (including emergency recovery) and, anyone entering the space must have a confined space ticket.

Remember with any confined space activity, if the person in the confined space collapses, only use the rescue method designated for the area to recover them (e.g. only use the rescue rope). Under no circumstances enter the confined space yourself (unless this method of recovery has been agreed upon prior to commencement of entry, you are sufficiently trained, have appropriate breathing apparatus and the method has been included in the confined space entry documentation); otherwise, it is highly likely that there will be two recoveries required.

When working in constrained spaces such as roof cavities or under floor spaces, whilst not strictly meeting the confined space criteria similar precautions should be taken, particularly if you are working alone or in an isolated location. Consider setting up a call back system with your boss or a colleague or with another tradesperson in the vicinity. Let them know when you go in and how long you will be and let them know when you come out at the end.

Chemicals

The use of chemicals in plumbing, drainage and roof plumbing is common, particularly using glues and solvents for the assembly of pipework, and using soldering flux for the joining of copper pipes. Like any activities involving the use of chemicals it needs to be treated with a high degree of caution.

Many of the glue products are highly astringent and can cause breathing difficulties for anyone with underlying medical conditions such as asthma. These same products can cause major skin irritation in some people, who may be allergic to the astringent qualities in them.

When using cement powder care also needs to be taken to prevent breathing in the fine dust as it can lead to breathing difficulties. Skin exposure to either the dry powder or to wet cement can cause skin burns and long-term dermatitis conditions.

If you know you are sensitive to chemicals contained in the products you are using then use gloves or barrier creams to protect your hands. If you are allergic or sensitive to dusts from cement products then using them in well ventilated areas and wearing a dust mask are ideal ways of limiting exposure.

Working at heights

Working at heights is another activity that is common within the industry, more particularly for roof plumbing than other aspects but none the less one that needs to be given close attention.

Falls from ladders and roofs is not only more common than you would expect but when it does occur it can result in serious debilitating injuries and fatalities.

Working at heights, where there is a risk of falling more than 2.0m is another specific High Risk Construction activity covered by Regulation 291a, and like other high risk activities triggers the need for the development and implementation of a Safe Work Method Statement (SWMS). In terms of safety procedures, it also may require, if no fixed or mobile scaffold is available, the use of scissor lift and/or boom lift as this is a safer option than working off a long ladder or trestle. You must have a high-risk work licence to use scissor lifts and boom lifts. These lifts must be used with an attached harness for fall prevention.

Falls of less than 2 meters can also be hazardous. Even a fall from a small step ladder can result in broken bones, or dislocated joints. These will result in significant time off work to recover.

Any work above ground level that involves standing on a ladder or other raised platform must be approached with due care and planning to ensure that the platform is stable and secure before being used and that you don't overreach when you are on the ladder or platform.

Working on pressurised systems

Working on pressurised systems, particularly gas (LPG, CNG or NG) is also classified as a High Risk Construction activity and is covered under Regulation 291i. Therefore, a Safe Work Method Statement is required for this activity. Workers working on such systems need to ensure that they or the supplier has isolated the gas supplies to the section of the piping that is being worked on and that the pipework has been purged of gas. The purging needs to be tested and proven before the work commences.

Slips, Trips and Falls

The risk of slips, trips and falls is always problematic in the construction sector given the ever-changing nature of the environment in which work takes place.

The best way of dealing with many slip, trip and fall risks encountered in the construction industry is to practice good housekeeping to ensure that the workplace is kept clean and tidy. Particular attention should be paid to ensure clear access to and egress from a work area. Ensure that rubbish on the site is placed into rubbish skips on a progressive basis.

Power Tools

The use of power tools such as drills, along with hand tools such as hammers, shovels and picks also raise issues associated with their maintenance and storage. Electrical tools need to be inspected regularly and tested by a qualified person.

Automotive, Mechanical and Electrical

Working on vehicles, whether they are small sedans, large trucks or even earthmoving equipment can present a range of safety related issues. Issues arise within established and organised workshops and when working on the roadside or on another business's worksite (e.g. construction site).

The following information is based on two publications; 'Automotive Workshop Safety' produced by WorkSafe Victoria and Automotive Workshops Work Health and Safety guidelines produced by SafeWork SA.

The key risks that need to be managed in the Automotive industry include:

- Traffic movement, driving and preventing movement of vehicles
- Hazardous Manual Tasks
- Slips, trips and falls
- Machinery and equipment
- Hazardous substances
- Electrical

Traffic Movement, driving and preventing movement – Workshops

The average mechanical workshop, particularly the larger ones with multiple work bays is one in which there is a constant movement of pedestrians and vehicles in and around the space.

Traffic movement needs to be controlled to ensure that vehicles are moved in a predictable manner and that there are appropriate directional controls. This is particularly important where traffic movement takes place in proximity to other non-mechanical workshop activities or is adjacent to or near pedestrian footpaths.

The separation of work areas is an important element of ensuring that work performed by a worker doesn't create safety risks for nearby workers.

The risks associated with the movement of pedestrians, whether they are other workers from elsewhere in the business, or customers coming to pick up vehicles, needs to be managed by having clearly defined pedestrian paths, including go and no-go areas within the workshop.

Driving of vehicles in a tight and dynamically changing workspace can be challenging at the best of times so strict rules need to be developed and followed to ensure that there is adequate control of vehicles being driven into and out of the workspace.

Workers must only drive within their license conditions. This is particularly important if the vehicle is a truck or bus that requires a special licence.

Once the vehicle is placed in the workshop, arrangements need to be made to ensure that it does not move unexpectedly whilst being worked on, or that parts of the vehicle do not move or collapse. Chocking wheels or raising the vehicle on a hoist will prevent vehicle movement accidentally. A basic and fundamental step in managing this aspect is to ensure that the keys are removed from the vehicle before work commences on it.

Traffic Movement, driving and preventing movement – other workplaces

A significant amount of automotive work takes place outside the confines of the workshop. This includes locations where roadside assistance is provided or where vehicle repairs or maintenance take place in someone else's workplace, such as on a construction site or in a forest.

The first safety element that must be managed in these situations is getting the worker to the site where the work is to be carried out. This means that a service vehicle needs to be driven to the location for the repairs to take place. Remember to keep the vehicle within the manufacturer's rated carrying capacity, make sure that it is regularly serviced, check tyre wear/pressures regularly and drive defensively keeping a good look out for other inattentive road users.

Control of the place where the work is to be done will vary from the closely controlled environment of a civil construction site to the uncontrolled environment of a roadside service call.

In controlled locations operated by someone else the work conditions may be quite strict and the worker must comply with those rules. Notwithstanding this there may still be issues associated with the specific part of the site on which the work takes place, particularly in relation to whether this is isolated and secured from other site activities or whether it is in the middle of the site with a lot of other site activities occurring around where the work is being done.

Many cases of onsite service will involve hydraulic work. This work involves working on high pressure systems or tyres. This work, when it involves trucks and large earthmoving vehicles, will require the movement and handling of large truck or earthmoving tyres weighing up to many hundreds of kilos. In this case there will need to be access to use heavy lifting equipment.

Where work takes place on the roadside, the first thing that will need to be put in place will be temporary traffic management in the form of temporary signage, flashing lights and safety barriers. If possible, consideration should also be given to moving the vehicle to as secure a location as possible off the road or further away from the road to provide a higher level of separation from traffic.

One of the other key areas of working outside the workshop is maintaining a level of communication with workers engaged in this work, particularly if they are working in isolation, alone or at night. Communication may need to be by way of mobile phone, 2-way radio or in exceptional cases may involve the use of satellite phones. A check in system should be followed in these cases.

Hazardous Manual Tasks

Many of the tasks undertaken in the industry can put excessive stress on the body if not undertaken correctly. Excessive stress can be caused by trying to lift and move heavy objects, adopting awkward postures, repetitive movements and through gradual wear and tear.

These injuries can be avoided by using appropriate well maintained lifting equipment. Use trolley jacks, jack stands, vehicle hoists and lifting arms to lift heavy objects and alter the position of the work area to improve posture and give access to difficult to reach places. If possible remove parts to improve access (e.g. seats). Use powered tools to reduce the time spent in awkward postures or performing repetitive tasks.

For general advice on how to undertake manual handling safely you should refer to the information in this manual located here [safe manual handling](#).

Slips, Trips and falls

Moving in and around the workshop can present the risk of slips trips and falls, particularly when the issue of spillage and leakage of vehicle fluids is considered. Appropriate protocols need to be established and implemented to ensure that spills are contained and cleaned up immediately and that there is a regular cleaning regime to underpin general workshop safety.

All equipment and parts should be stored and racked appropriately. This is especially important in problematic areas such as heavy vehicles areas and tyre fitting services.

Machinery and equipment

There is a range of equipment that requires caution to ensure safe usage. All machinery and equipment should be serviced and maintained according to the manufacturers instructions and only used for its intended purpose with all guards in place. Electrical power cords and leads should be appropriately tested and tagged.

Hazardous Substances

There are a range of chemicals and substances that can cause harm. Some examples include adhesives, degreasers, diesel emissions, welding fumes, battery acid and asbestos. Safety Data Sheets (SDS) should be consulted prior to working with hazardous chemicals. Extra care should also be taken when handling batteries as, in addition to the very corrosive acid, they may also deliver an electric charge at a very high rate.

Many older vehicles and some imported new vehicles may be fitted with asbestos brake linings. You should follow the workshop's asbestos removal management plan if this is the case.

Electrical

The main issue for workers in dealing with auto electrical issues relates to the potential for electric shock when grounding an active wire to an earth point on the body or frame of the vehicle.

Whilst most cars are 12-volt, heavy vehicles usually run 24 volt high amperage systems which creates a significant risk. Severe electric shock and/or burns to the hands and fingers can occur when the worker touches the vehicle earthing point allowing the current to pass through the person to the body of the vehicle to complete the circuit.

A major emerging issue in relation to auto electrical work is the work on electric vehicles that have large battery storage banks. As this is still emerging technology more information is being developed.

Panel Beating and Spray Painting

The following information is based on material produced and displayed on the Worksafe Queensland website under the general heading of Spray Painting.

The key safety issues identified as being of major concern within the industry are:

- Hazardous Chemicals
- Dust
- Machinery and equipment
- Fire and explosion
- Electrical hazards
- Confined Spaces
- Heat
- Slips, trips and falls
- Hazardous manual tasks

Hazardous Chemicals

In the panel beating and spray-painting trade, hazardous chemicals include paints, solvents, powders, acrylic lacquers, enamels, paint removers, resins, adhesives, surface preparation products, rust converters, and rust removers. Any of these products can create significant health and safety risks for workers in the industry.

Hazardous chemicals may be inhaled, swallowed or absorbed through the skin and eyes so it is important to ensure that adequate protections are in place and used.

Health and safety risks from short term exposure include minor issues such as contact dermatitis, headaches and nausea through to major and chronic conditions such as lung cancer, reproductive system damage, kidney or liver damage and 'painters syndrome' (chronic toxic encephalopathy - a disease that affects the brain).

Controls to prevent exposure to the effects of hazardous chemicals include:

- Use a spray booth where possible
- Use mechanical ventilation where it is not possible to use a spray booth
- Use fans and fresh circulating air if either of the above is not possible
- Use water-based paints rather than solvent based paints
- Automate the process to isolate the worker from the application
- Use HVLP spraying rather than conventional spraying processes
- Avoid dry sanding without extraction systems in place and operating
- Ensure that appropriate PPE is supplied and always worn

Safety Data Sheets need to be held for all chemicals used in the workshop and these must be kept up to

date; ensuring that they were issued within the last five years.

There are some chemicals that should not be used for spray painting, which are highly toxic. These include:

- Arsenic and its compounds
- Benzene
- Carbon disulphide
- Free silica (used for sand blasting)
- Lead carbonate or any lead products
- Methanol
- Tetrachloroethane
- Tetrachloromethane (Carbon Tetrachloride)

Dust

Dust is an ever-present issue in the panel beating and spray-painting industry, given that every surface that needs painting needs to be prepared first and this involves sanding. Sanding, always creates dust and what this dust is and how it is handled presents a range of issues to workers in the trade.

Recommendations for reducing dust escape include:

- Using wet sanding processes where possible
- Using tools that have built-in dust extraction systems

Other methods of reducing dust levels in workshops include:

- Using local extraction systems;
- Ensuring adequate fresh air to the work area;
- Create a separate work area to segregate the dust from other work areas;
- Use vacuums rather than brooms to clean up whilst using HEPA filtered ventilation systems to reduce the amount of dust in the atmosphere;
- Wet down spray-painting areas prior to clean up to reduce the level of potentially explosive chemicals in the atmosphere;
- Don't use compressed air to blow dust or contaminants from clothes.

To reduce inhalation of dust a respirator that meets the requirements of Australian Standard AS/NZS 1716:2012 should be used.

Machinery and Equipment

A wide range of equipment is used in spray painting and panel beating including spray booths, spray guns, sanders, grinders, vehicle hoists, jacks and frame straighteners. Machinery and equipment should be regularly checked and maintained in accordance with relevant standards and manufacturer's instructions and should only be used in the way it is intended. It is important that all PPE is worn correctly and maintained in accordance with manufacturer's instructions.

Spray Booths

Spray Booths must be designed and built to comply with Australian Standard AS/NZS 4114.1:2003 and must be regularly checked and maintained to ensure that they continue to meet this standard.

Each spray booth should have a certificate of compliance on it to demonstrate that it has been checked and tested and is certified for use. If it does not have such a certificate, it should not be used until it is certified.

When spray painting vehicles in spray booths and bake ovens, LP gas tanks and fuel tanks should be removed where possible to reduce the risk of fire or explosion. Where this is not possible, bake ovens should be operated at a temperature where it is not possible for fuel vapour or gas to be released to the bake oven atmosphere.

Vehicle hoists, trolley jacks and frame straighteners

All vehicle hoists, trolley jacks and frame straighteners should be regularly inspected. Vehicle hoists must have a registered design lodged with the local WHS regulator and trolley jacks must have a safe working load marked on them. Inspection prior to use is a good way of ensuring that they remain fit for purpose.

Fire and explosions

Fire and explosion is one of the most dangerous situations that can occur in any spray painting facility. Many paints contain flammable substances and spray painting is hazardous if painting mist contacts an ignition source.

Control the risks of fire and explosion by:

- Removing and eliminating open flames such as matches, lighters, cigarettes, welding and cutting torches;
- Allowing hot surfaces including engines to cool down and allowing heat lamps to cool;
- Managing chemical reactions that can cause heat, such as mixing two-part epoxy paints;
- Reducing the risk from electrical equipment located in the vicinity of where flammable substances are stored.

Electrical hazards

Electrical hazards and the potential for electric shock and burns are significant in the spray-painting industry.

Metal containers can build up static charges which can spark when they touch another metal object. This can be managed by using earthing straps.

Some common ways to manage electrical risks in spray painting include:

- Keep electrical equipment a safe distance from spray painting zones;
- Ensure that any electrostatic spray systems are only operated by trained spray painters;
- Have a separate electrostatic spraying area specifically designed and set up for this process;

- Remove paint and solvent drums from the spray zone;
- Earth equipment and metal surfaces that are within 3 m of the charged head of the spray gun;
- Remove metal items (watches) and silk or synthetic fibres before entering the spray zone (these items can hold a static charge);
- Wear antistatic footwear;
- Check electricity supply is switched off before cleaning spray gun.

Confined spaces

Confined spaces are sometimes encountered when working in spray painting. These spaces have poor ventilation and/or restricted entry or exit. If possible remove items to be painted from confined spaces before painting, use mechanical ventilation to improve air flow or use breathing apparatus and only allow people with correct PPE into the confined space to spray paint.

Heat Stress

Heat stress can occur when people performing spray painting are wearing incorrect or inappropriate clothing. This condition can lead to dehydration and collapse.

Ensure that workers are appropriately dressed and well hydrated at all times when working in spray booths and ensure that they do not spend too long in the booth without taking a break out into cooler fresh air.

Slips, trips and falls

Moving in and around the workshop can present a risk of slips trips and falls, particularly when the potential for spills and trip hazards like hoses and equipment is taken into account. Appropriate protocols need to be established and implemented to ensure that spills are contained and cleaned up, hoses and equipment are put away. A regular cleaning regime is essential in preventing slips, trips and falls.

Hazardous manual tasks

Many of the tasks undertaken in the industry can put excessive stress on the body if not undertaken correctly. Excessive stress can be caused by trying to lift and move heavy objects, adopting awkward postures, repetitive movements and through gradual wear and tear.

These injuries can be avoided. Using appropriate well maintained lifting equipment including trolley jacks, jack stands, vehicle hoists and lifting arms to lift heavy objects and to alter the position of the work area to improve posture. Work on single panels (where appropriate) so that they can be placed on a stand at a comfortable height (i.e. between knee and shoulder height).

For general advice on how to undertake manual handling safely you should refer to the information in this manual located here [safe manual handling](#).

Metal Fabrication

The following information is based on 'A Guide to Safety in the Metal Fabrication Industry', produced by WorkSafe Victoria.

The above publication identifies hazards associated with the metal fabrication industry as those including:

- Manual Handling
- Hand Tool Usage
- Guarding of Equipment

Manual and Material Handling

There is a significant level of manual handling involved in Metal Fabrication. This commences from the time that the raw material arrives and progresses through the cutting/manufacturing/finishing process right up to and including the loading and outward despatch to the client.

Unloading material

When unloading material ensure that the appropriate equipment is used, such as forklifts and/or cranes, ensure that operators are competent and licensed and that forked loads are secure. Ensure that if cranes are used that loads are competently and properly slung, and that clear space is allocated for the movement of materials from the unload point to the storage location.

Moving material

When moving material within the workplace, depending on the weight of the item, it may need to be moved by mechanical means rather than manually handled.

For heavy items use a forklift, bridge, or gantry crane if one is available rather than using manual processes. Manual process should only be used for light material and even then, if it can be mechanically handled this is preferable to manual handling.

Workstations

Workstations should be designed so that the material being worked on is placed at the optimal height to avoid constrained or sustained postures that can cause muscle fatigue or in the longer-term permanent back, neck or shoulder pain.

Ideally workstations should be set at a height where the operator is able to stand and work between chest height, (or just below) and waist height. Where the workstation is set so that the operator is seated the working height should be just above waist height.

Handling and loading material

Loading and handling of finished products should broadly follow the process of receiving raw materials but must consider the fact that the finished goods may be awkward in shape and size. Loading should be undertaken using mechanical lifting assistance such as a forklift or crane, or a Hy-ab if the truck is fitted with one. Again, any slinging of loads must be undertaken by a competent person with the load secured by chains or straps once loaded.

Hand tools

The most common hand tools used in metal fabrication work are angle grinders and welders (oxy, arc, MiG and TiG).

Angle grinding involves the use of a handheld grinder, which depending on the task being performed, may be fitted with a cutting/grinding wheel between 4" and 9" (100mm to 270mm). Some are fitted with a fixed speed trigger and others have a variable speed trigger to vary the RPM.

Depending on the task and what is being cut or ground significant amounts of spark showers can be created, thus increasing the risk of fire and explosion. In addition depending on the nature of the work, the cutting or grinding wheel can catch or jam, thus either throwing the item being worked on or throwing or twisting the grinder in the operators hands.

Make sure that the tool fits the person doing the task as much as possible so that there is no additional or unreasonable hand fatigue involved in holding and using the tool. Also make sure that the material being cut or ground is well secured. This does not mean holding it with the other hand or putting your foot on it; stabilise it and use a vice or clamp to hold it steady whilst working on it.

Other essential elements of using hand tools such as grinders is eye protection to prevent small metal fragments flying up into the eyes and hearing protection as the average noise level when grinding is significantly above the noise standard.

Welding

Welding is the other common element of work in the metal fabrication industry and involves the use of Oxy-Acetylene, Electric Arc, MIG or TIG welding processes.

Some of the key issues in welding are:

- Welding without any fume extraction and exposure to gases
- Welding in awkward postures
- Exposure to welding flash
- Noise

Welding gases can be quite toxic and the best possible solution is to work in an area where there is good artificial or natural ventilation. When welding on a bench the best solution is to have the area exhausted to remove the welding fumes.

If extraction is not possible the next best solution is some form of breathing apparatus. This can be either of a negative pressure respirator with a fume cartridge or a positive pressure hood that is combined with a welding mask.

Exposure to the welding arc can be deadly and can in some cases lead to either temporary loss of vision or in worst cases can lead to more long term and chronic eye problems, up to and including blindness. It is essential that eye protection is worn when welding.

When oxy welding or cutting a set of oxy goggles will be sufficient to provide adequate eye protection from the flame created at the hot cutting or welding tip. These must be coloured to reduce the risk of eye damage and must comply with the relevant Australian Standard.

When arc, MIG or TIG welding a full-face mask must be worn that complies with the relevant Australian Standard and which provides protection for both the eyes and face.

Helmets with a flip visor must meet Australian Standard AS/NZS 1338:1:1992 and those fitted with auto darkening must also meet Australian Standard AS/NZS 1338:1:1992.

In addition to protecting the welder from the risk of exposure to the welding flash, nearby workers must also be protected. In most open workshops special welding curtains or screens are used to prevent direct exposure to the welding flash.

Plant and Equipment

Many of the pieces of plant and equipment used in metal fabrication are designed to bend or cut metal pieces and involve parts that can trap and shear hands and fingers that are placed inappropriately.

Plant and equipment that has the capacity to trap and amputate is generally fitted with guards that prevent access to the trap points. These guards can be in the form of:

- Fixed guards that cannot be removed
- Interlocked guards that interrupt the machine cycle if opened
- Physical barriers to prevent access
- Presence sensing systems

Fixed guards are usually fitted to equipment that does not have any requirement for access during the operation, maintenance or cleaning of the plant. This prevents a person from accessing the dangerous part unless the machine is dismantled and non-operational.

Interlocked guards are fitted where access to various areas of the plant is required from time to time. The guard is fitted with an interlock that is linked to the operating system of the machine. If the guard is opened for any reason the operating cycle of the machine is immediately ceased to render the plant safe whilst the guard is open. In most cases the opening of the guard also triggers a reset mechanism so that the guard must be closed and the machine reset by the operator before it can recommence operation.

Physical barriers are installed when the above types of guarding are not possible or appropriate. The guard prevents access and is usually fixed in such a manner that it provides some capacity for its removal for inspection and maintenance but can only be removed using special tools, thus meaning that the removal cannot be accidental or incidental to the operation of the machine.

Presence sensing systems usually involve the fitting of a light curtain or laser beam to a machine which if broken prevents the machine from operating from the start of the cycle or interrupts the cycle of the machine at the point of intervention. They are often used around CNC machines where cutting heads can operate independently or in sequence according to a predetermined pattern and the breaking of the beam isolates the cutting heads.

You should never operate a machine if the machine guards have been removed or are missing or if interlocks have been overridden.

Culinary

Baking and Patisserie

Bakeries, especially large manufacturing facilities, are filled with many potential dangers such as hot ovens, mixing machines, heavy trays and dough cutters. As a result, bakers have a higher rate of injuries and illnesses than the national average.

All mixing and cutting equipment must only be used with guards in place where they are fitted and guards must not, under any circumstances, be altered, disabled or interfered with. If a machine requires maintenance or is not working, short-circuiting the guard can have potentially catastrophic consequences. Always wear appropriate uniform (including pants, short sleeves jacket, apron and hat (with hair tied up) to prevent becoming entangled in the moving parts of machinery

Additional caution should be exercised when moving in and around ovens and appropriate oven gloves should be used when placing items into and taking them out of hot ovens. If you do suffer a burn, run the affected part of the body under cold water and seek first aid treatment.

Bakers may endure back strains caused by lifting or moving heavy bags of flour or other products and moving trays of dough into the oven and taking baked goods out of the oven. When lifting heavy bagged products use some form of lifting device or ask someone else to assist with the lift. When moving heavy bags around use a trolley rather than carry them.

Bakers can also sometimes suffer breathing issues from flour dust and occupational asthma from long term exposure to flour dust. If you are an asthmatic or have experienced breathing issues whilst working with flour, then you should take appropriate precautions such as ensuring you have your asthma medication handy and wear a dust mask. Adequate ventilation should be provided where flour is used to ensure that airborne flour dust levels are kept under control.

Bakery floors can be slippery from either flour spilled on the floor or from seed oil such as sesame seeds. This can be particularly problematic where there are steps or other changes of level within the workplace. Always wear shoes that have a good tread, keep constantly vigilant for slippery floors and clean as you go as much as you can.

Butchery

The most common risks in butchery are those associated with knife injuries, use of bandsaws, mixers and grinders used in the making of minced meat and sausage products.

Knife injuries commonly occur because of:

- loss of concentration;
- using a blunt knife due to extra force that is required;
- using the wrong knife for the task; or
- incorrectly storing and maintaining a knife.

Remember to keep all knives sharp and to sharpen the knife on a regular basis, which may be many

times per day. Always concentrate on what you are doing and make sure you do not allow yourself to become distracted. Choose the correct knife for the tasks (e.g. chefs knife for slicing and dicing). Store your knives in a safe place where the blade is protected and the handle is easily accessible.

Band saws are designed to cut through flesh and bone and can easily do this to you if you are not paying attention. Make sure you know where your hands and fingers are in relation to the moving blade, keep your fingers tucked in and concentrate on what you are doing. Avoid talking to fellow workers or customers when operating the band saw.

When using mincers and mixers, keep fingers away from the in-feed chutes and trap points particularly around the feed screw. If the machine blocks up do not try and clear it without switching it off and unplugging it. When cleaning the machine, it must be switched off and unplugged.

If a mincer or mixer is fitted with a safety guard, it must only be used with guard in place and the guard must not, under any circumstances; be altered, disabled, bypassed, or interfered with.

When working in butchery you should always wear appropriate PPE including non-porous footwear, an apron with your hair contained in a hairnet and/or tied up.

Commercial Cookery

Commercial kitchens can be very busy and very noisy work environments. These environments present several safety risks, the most common are:

- Burn Injuries,
- Slip, Trip and Fall Injuries,
- Cuts and grazes,
- Manual Handling Injuries.

Always wear appropriate clothing/PPE including long sleeved jacket, long trousers, full length apron, nonporous, non-slip footwear and ensure that your hair is contained in a hairnet or tied up.

Common Issues Relating to the Culinary Workplace

Storage and management of knives

Among the most common injuries for people working in the culinary occupation are knife cuts. In many cases knife cuts come about because the knife is blunt and the user has to exert too much pressure which results in the knife slipping and cutting the them.

Basic knife skills include:

- making sure that the knife is kept sharp and if necessary, using a steel to hone the edge before each use;
- Store your knives in a safe place where the blade is protected and the handle is easily accessible, use a knife block or protective sheath rather than keeping them loose in the drawer;
- wash each knife separately and place in a drying rack or immediately hand dry and put away rather than leaving them in the bottom of the sink and washing multiple items

Many users see professional chefs use knives at great speed to chop and dice food and think that

this looks easy. Remember most of the people you see have had many years of experience and have developed good skills before they developed the speed. Work on the same principle.

Knife injuries can be quite severe; it is common to see culinary workers cut arteries or tendons, resulting in long term and sometimes career ending injuries.

Burn Injuries

A kitchen environment is filled with hot pieces of equipment and products that can result in serious burns, including hot oil, chemical cleaners, steam and open flames.

Hot oil

Hot oil is common in many kitchens as large open top deep fryers are a major kitchen cooking appliance. The temperature of oil used to deep fry food ranges from 160C to 190C and this, together with oil's tendency to stick to the skin makes it is far more dangerous than boiling water. It can cause severe third degree burns if not handled properly. There is also the possibility of fire if the temperature of the oil is too high or if there is a build-up of waste materials around the edges of the fryer.

When using a deep fryer;

- ensure it is filled to correct level to prevent overflow
- ensure that the oil is at the right temperature to prevent fire and smoke
- avoid allowing water to come in contact with the hot oil as it can cause spattering/splashback (e.g. dry excess water on utensils and food before placing them in the deep fryer)
- stand back a little when placing or removing food from the deep fryer and don't hover over the food
- prevent oil from dripping on the floor and clean up spills immediately to prevent slips and falls

Deep fryers should be cleaned regularly to remove waste build up. The oil should be allowed to fully cool before cleaning or changing the oil. Many kitchens now have arrangements in place where the cooking oil is changed on a regular basis by an external contractor thus reducing this risk.

Chemicals

Chemicals used for cleaning kitchens are often caustic in nature. This presents a very high risk of chemical burns, skin irritations and infections if they contact unprotected skin. Breathing difficulties can also occur from breathing in chemical vapours.

When using chemicals for cleaning always ensure that you are familiar with them and the precautions that should be followed. This can be easily ascertained by consulting the label and Safety Data Sheet (SDS). SDS should be held for every chemical product used in the workplace. Check the SDS for what PPE is required and wear it e.g. gloves.

Always make sure that the work area being cleaned is well ventilated, which might mean turning on the exhaust unit before commencing work to purge chemical vapours.

Steam

Steam can result in severe and very painful burns. Steam can escape from pots and pans during the cooking process or when food is being drained out in preparation for serving. Steam can also escape from dishwashers.

Whilst not usually as severe as hot oil burns, steam burns can be serious and in all cases are usually very painful.

Open flames

Open flames are used on charcoal grills to create a smoky flavour to the food being cooked. The open flame is an ignition source which can result in burns by direct contact. These flames can result in kitchen fires either by setting fire to unattended fatty food or by directly igniting other material that may be in close proximity.

Ovens

Additional caution should be exercised when moving in and around ovens and appropriate oven gloves should be used when placing items into and taking them out of hot ovens. If you do suffer a burn, run the affected part of the body under cold water and seek first aid treatment.

Slip, Trip and Fall Injuries

Oil, food and water spills in a commercial kitchen are inevitable and require prompt cleaning to reduce the risk they present. Even the act of cleaning to remove one hazard can create another hazard which is a wet floor.

When working in kitchens workers need to maintain awareness and act appropriately to reduce the risk of slips trips and falls. Do this by

- Cleaning up spills;
- moving at a reasonable pace, but do not rush;
- making sure that your footwear is in good condition and has adequate grip on the sole;
- walk in short, measured steps,
- keep an eye out for any trip and fall hazards such as equipment left on the floor or trailing cords to portable appliances.

Other trip and fall hazards can be created by uneven floors or floors where there is a change of level such as steps leading into cool rooms or pantries and anti-slip mats that have been moved out of position or where the corner has been rolled up creating a trip hazard. Keep an eye out for these and fix or report them as necessary.

Cuts and Grazes

As already outlined, amongst the most common injury in any kitchen environment are cuts from knives and other sharp items used in food preparation and serving.

Knives need to be treated with extreme care and due respect as a small slip can result in major injury and time away from work.

Other sources of cuts and grazes can come from using food graters and slicers, both hand and electrically powered. One of the most dangerous is a meat slicer that is often found in commercial kitchens. Only use these items if they are functioning correctly with all guards in place and only use them for what they are designed to do.

Manual Handling Injuries

Many items in kitchens are very heavy, with pots and pans the most handled. Soup and stock pots of up to 20lt capacity can weigh up to 20kg and can be very difficult to carry and move around.

Depending on the type of pan being used, heavy based cast iron pans can weigh up to 2-3kg and this is without the weight of the contents of whatever is being cooked in the pan. Handling these on an ongoing basis can result in hand and arm strains leading to long term problems.

When working with and using pots and pans of any configuration, whether they are cast iron, stainless steel or aluminium make sure that you use both hands where possible and carry or lift them for the shortest time possible.

To better understand how to undertake manual handling safely you should refer to the information in this manual located here [safe manual handling](#).

Electrical Safety

There are a wide range of electrically powered pieces of equipment used in the culinary industry, any one of which can cause injury or death. Commonly electrical hazards arise from faulty equipment or wiring and improper use of or exposure of a machine or its connectors to liquids, moisture or heat.

You should;

- only use equipment in the way it is intended to prevent overload,
- do not use and report faulty equipment or equipment that has a frayed or damaged power cord,
- do not plug in equipment with wet hands,
- do not touch the victim of an electric shock or electrocution until the power source has been turned off.

Every portable electrical appliance must be electrically tested and tagged on an annual basis and if it is not tagged it must not be used. This also includes chargers for battery powered units.

Hairdressing and Barbering

Hairdressers and barbers are exposed to many risks daily. Static postures and repetitive movements are amongst the most common risks although there are many more to consider.

Postural Stress and repetitive movements

Postural stress and repetitive movements can be significant issues for hairdressers/barbers. These stressors can cause muscle fatigue and pain and over time sometimes lead to significant injury. These type of stress are more likely to be felt when clients are being given treatments for prolonged periods.

Hairdressing and barbering almost always involves serving a client that is either sitting in a chair or reclined at a hair wash station. Both these positions can cause the hairdresser/barber postural stress since they will either be sitting on a stool when the client is sitting or standing when the client is at the hair-wash station.

It is important in setting up for these tasks that the height of their chair/your stool is adjusted to the correct working height. Adjust their chair/your stool so that you are working with your arms in a comfortable working position that puts you at the correct working height so that you don't have to reach up or reach down to service the client. If you are standing adjust the clients chair so that you are not having to bend forward unnecessarily to reach them.

Keep the blades on your scissors sharp as this will minimise the force needed to cut hair which, can save your hands, thumb, forearms from the tendonitis which can be caused by repetitive movement.

Consider the millions of cuts you make every day! You may like to get a regular massage to help reduce the tension that builds up in the muscles and joints of your hands.

Common causes of injury in the hairdressing/barbering workplace

Hairdresser's who work with their arms and elbows in elevated postures are at risk of musculoskeletal disorders especially in the neck and shoulders. Constant standing and bending over can contribute to pain in your lower back and knees as well.

Don't fall victim; "A lack of knowledge about the hazards of hairdressing/barbering work has been identified as a contributor to work related musculoskeletal injuries" (Gisele & Nelson, 2008).



Static Postures Cause Muscle & Joint Pain

1. Working with the upper arms elevated is considered a risk factor for neck and shoulder pain symptoms, as well as for rotator cuff tendonitis (van der Windt et al., 2000; Miranda et al., 2001;).

You may also find yourself suffering from headaches and migraines due to muscle tightness and imbalances in the neck and upper back.



Posture not recommended

Recommendation 1: Raise or lower your client so that you can maintain your arms in and close to your body.



Recommended posture position

2. When shampooing your client's hair, bending over is a typical cause of low back pain.



Posture not recommended

Recommendation 2: When shampooing a client try to keep your back straight by either using a stool or bending at the knees rather than bending forward. Maintain a good posture by keeping your shoulders back and never slouch when sitting. Stretch your hamstrings if they are tight and strengthen your glutes.



Recommended posture position

3. Standing on a hard floor for long periods puts considerable stress through your feet, knees and lower back muscles. Your knee, ankle and hip joints may feel achy and stiff as your joints need adequate movement to get fluid into the joint capsule. When you stand for prolonged periods of time in one place this is not happening.

Recommendation 3: Footwear is a factor which, if properly chosen will reduce the harmful effects of prolonged standing. Shoes should ensure adequate arch and heel support and cushioning while providing comfort to the wearer. It's recommended that you wear comfortable full foot covering shoes. Take frequent breaks to walk around and stretch.

Sharps and Body Fluids

The most common sharp to be used in the hairdressing and barbering industry is a pair of scissors, and just as they are designed to cut hair they can quite easily cut and nick the skin of the client or hairdresser/barber. To prevent infection, scissors must be treated with a sterilising agent between customers. The same goes for combs and any other items that are re-used on other people.

From time to time it will be necessary for the hairdresser/barber to use a sharp such as a razor blade for shaving hair off the skin. These items are designed to be a single use items so must be disposed of immediately after use into a sharp's container.

When cleaning up blood and other bodily substances it is essential that gloves are worn and that both the gloves and anything used to soak up blood/other bodily substances is disposed of into a contaminated waste container.

Chemical Safety

In hairdressing there are several chemical products that you will come into contact with throughout the normal course of your work.

These include:

- Shampoos
- Conditioners
- Colour remover (e.g. Peroxide)
- Chemical straighteners and smoothers
- Hair Colours

Many of these may appear to be harmless but all have the potential to create skin irritation issues including minor rashes and more severe contact dermatitis.

All chemicals must be treated with caution and handled with care. They must be used, handled and stored in accordance with the specific guidance contained in the product's Safety Data Sheet.

The use of some chemicals can result in the release of chemical fumes that can be pungent and cause eye irritation or breathing difficulties in some people. Always use chemicals in a well-ventilated area and ensure that if there are exhaust fans available that they are used when chemicals are being used.

Some chemical products need to be specially stored; this should be arranged so that they are accessible whilst also being stored safely. Check the Safety Data Sheet for details.

Personal Protective Equipment (PPE)

All chemicals should be handled using appropriate PPE such as gloves and, when mixing colour preparations, both gloves and safety glasses should be used.

Salon Safety

In running their salon, hairdressers and barbers should:

- Ensure the salon is kept clean
- ensure appropriate access for the elderly and people with disabilities
- provide suitable lighting and ventilation and ensure the salon area is maintained at a comfortable temperature
- ensure heating and ventilation systems/devices are properly maintained and regularly serviced turning them off when not in use
- wash hands before and after each client
- use disposable or freshly washed covers for each client
- maintain hand washing facilities with temperature control on hot tap
- carry out standard infection control procedures on reusable items (scissors and combs etc.)
- carry out regular safety checks on all equipment including electrical equipment
- use ergonomic stools and supports that comply with relevant Australian standards
- keep all chemicals in contamination proof containers which are clearly labelled
- obtain safety data sheets (SDS) for all chemical products
- check to make sure that clients are not sensitive or allergic prior to using products on them
- provide closed containers for used linen
- be aware that drying linen in a dryer may pose a potential fire hazard due to the presence of any residual oil
- ensure correct storage and transport of potentially hazardous waste (contaminated linen, used hand towels, tissues)
- provide non-slip or slip-proof flooring
- keep area free of obstacles for safe client/staff access

Electrical Safety

Hairdressers and barbers frequently use a wide range of electrical appliances (e.g. blow dryers) in areas where water is present. There is the potential for electrical shocks, burns or even fire from wet or faulty electrical equipment.

All electrical cords of portable equipment should be inspected for damage (e.g. cuts in insulation exposing wires) by the operator prior to use. Cords and plugs of all electrical appliances should also be tested and tagged on an annual basis. Items that are not tagged must not be used. This also includes charging units for battery powered units.

You should not take your own equipment into a salon unless it has been tested and tagged.

Client Behaviour

It is reasonable to expect clients to behave in a reasonable and polite manner, this includes the way they treat other people and the language that they use. If a client behaves in an impolite manner, is abusive or uses abusive, derogatory, or foul language and will not stop when asked, it is acceptable to ask them to leave. This is for the protection of yourself and others in the salon.

Staying Healthy For Your Customers

The environment in which hairdressers/barbers work is very “customer focused”. You will be on your feet constantly and will be dealing with customers in all types of moods. So, it’s important to implement correct WHS practices and maintain a healthy work/life balance.

Hairdressers/barbers often find themselves in the role of counsellor and confidant to their clients. This can lead to hairdressers/barbers not only experiencing their own emotional stresses but to take on the emotional stresses of their clients as well. This stress has the potential to lead to depression, tiredness, anxiety, and difficulty sleeping. Be sure to take a day off occasionally and do whatever you need to do to relax. Ground yourself with other activities and learn ways to de-stress such as, mediation, yoga and breathing techniques.

Horticulture

Horticultural work involves the use of a wide variety of potentially hazardous tools, equipment, and chemicals that if not handled properly can cause serious injury or illness.

Machinery

Using equipment, such as skid steer loaders and excavators present many risks such as crush and shear injuries if a person is caught in moving parts or between them and the machine structure.

Users of this equipment need to be able to demonstrate that they are competent to operate these pieces of plant in a way that is consistent with the manufacturer's recommendations/guidelines and in accordance with site specific WHS arrangements such as those outlined in an SOP or SWMS.

Remember that using any mobile plant where other people are working is a high-risk construction activity so a Safe Work Method Statement (SWMS) must be developed for the work and the work must be undertaken in accordance with the SWMS.

Other plant that is often used are horticultural mixers (either electric or powered). Depending on the power source these present issues in relation to electrical safety or petrol/diesel safety. When using electrical mixers on a construction site special care needs to be taken to ensure that the power cord is used in accordance with site instructions and protected from environmental and mechanical damage. For petrol and diesel mixers care should be taken to ensure that storage and handling of combustible/flammable fuels is done safely in accordance with the Safety Data Sheet (SDS). Site safety requirements must also be followed.

A common and highly risky piece of equipment that is often used in horticulture and landscaping is the brick saw. This equipment is usually electrically powered, it has a water supply to the blade which spins at very high speed. The brick is often held by hand on the carriage and can be easily ejected in the direction of the operator if the blade jams or grabs during the cut.

Equipment

A wide range of smaller equipment is used in the horticulture industry. These include chain saws, jack hammers, picks, shovels and smaller tools such as those used in normal carpentry. They all present risks of injury or illness. This equipment should be checked regularly and maintained to ensure it is in good condition and works efficiently.

Chemicals

Chemicals used in horticulture include pesticides, herbicides, plant foods, mulch and bagged products such as potting mixes.

All chemical products need to be handled and stored in accordance with the details and information contained in the relevant Safety Data Sheet, which means using the right type of PPE for handling, mixing, storage and application. Standard precautions for using them include wearing of eye protection, hand protection and overalls. These chemicals should be stored in specific containers and/or areas that are suitable for them.

Floristry

It is everyone's responsibility to ensure a workplace is safe. This means that you have an obligation to report/address safety issues/hazards and not to ignore them. This applies whether it will affect you, other workers, or customers.

If you work in the industry:

- look out for the health and safety of workers, customers, and others
- co-operate with your employer to comply with work, health and safety requirements
- ensure that health and safety issues are rectified and/or the employer is notified of them

If you own and/or operate a florist:

- create a work-place environment that complies with work, health and safety requirements
- supply information, training and procedures that guide workers for safe and healthy working
- address health and safety issues identified by the workers
- supply appropriate tools and equipment required to work safely and healthily
- provide safe storage areas and ensure that all chemicals/substances are clearly labelled
- create a customer area that is safe and healthy.

Common issues relating to the florist workplace

The following work, health and safety issues have been identified in relation to floristry.

Scissors, Secateurs and Knives

These are the tools of the trade for a florist and present various health and safety issues. They are sharp and can inflict serious cuts or stabbing injuries, they can also create strained or damaged hands from incorrect or repetitive use.

These tools are to be:

- treated with care and respect and stored in an appropriate way (e.g. in a sheath) in an uncluttered environment to minimize the risk of accident or injury;
- not carried in clothing or pockets unless held by a specifically designed carrier like a tool belt;
- only used after training in the capability and use of each tool;
- only used for the tasks that they are designed to do; and
- sharpened, cleaned and/or replaced regularly to reduce the chance of an accident, reduce the strain on the hands and lower the chance of infection should a cut or injury occur. Tools are to be cleaned daily with methylated spirits and a cloth.

Cool Rooms

Cool rooms are a major concern for the wellbeing of workers; being trapped in a cool room at 4C can be a very troubling and dangerous experience. To avoid this, we must make sure the cool room:

- is fitted with a bell that can be rung from inside and can be heard clearly from the outside;
- is fitted with an inside handle that can open the door;
- is fitted with a door operation that is reliable and easy to use;
- checked to ensure that there are no latches on the door that can lock or hold closed the cool room door; and
- has no materials, stock or equipment stored close to the door that may obstruct the door operation.

Floor Mats and Footwear

Florists spend much of the day standing in one spot. This can cause tiredness and can result in health problems if it is done for many years without appropriate preventative measures. To prevent these health issues florists should always stand on an anti-fatigue floor mat (rubber and/or carpet) as this will insulate the worker from cold floors, provide additional cushioning to their feet and helps to promote blood circulation in their lower limbs. Ensure the mats lay flat on the floor and do not create a trip hazard (e.g. outer edge folded up).

Footwear is another factor which can reduce the harmful effects of prolonged standing. Shoes should ensure adequate arch support, heel support and cushioning while providing comfort to the wearer.

Handling flowers and plant material

Flowers coming from the supplier often arrive in large heavy boxes that must be lifted and carried into the work room. If possible ask the courier to deliver them directly to the workroom. If this is not possible you should:

- ask a colleague (if available) to assist with a two-person lift,
- break the contents of the box into smaller loads (if possible) to carry, and/or
- use a trolley to move boxes into the work room and unpack the contents onto a work bench.

Another potential risk is in the handling of flowers and plant material due to possible contamination from any residual pesticides that could have been sprayed on the flowers prior to shipping. You may not know if the flowers have been sprayed or not, so you need to be extra cautious. Wear gloves to avoid skin contact and absorption through the hands. If you suffer any form of respiratory problems consider wearing a P2 mask to reduce the risk of breathing in pesticide fumes.

When handling products be aware that many plants have sharp thorns that can cause scratch or puncture wounds and that some plants have fine stinging like nettles that can cause major skin irritation.

Cleaning of Workplace, Storage Areas and Equipment

Cleaning is an important part of work health and safety as it reduces the risk of accidents involving workers and customers tripping or slipping and it reduces the chance of allergies and sickness of people exposed to the area.

The following details cleaning tasks and the issues involved with each:-

Using bleach and water solution - this solution should always be mixed in a well-ventilated area or outside, never take the bleach concentrate into confined spaces like a cool room, wear safety glasses and gloves always when using bleach. When using 4% Chlorine Bleach, mix 5ml bleach to 4 litre of water)

Floors - floristry creates a lot of waste debris which if allowed to build creates a trip/slip hazard. Work area waste such as, greenery, stems and general rubbish should be removed frequently, water spills broken pots and broken glass should be cleaned immediately and customer areas should always be kept clean. Vacuuming and moping will decrease the dust and lower the effect of allergies

Display - storage shelves and benches - must be wiped down regularly to remove dust and lower the effect of allergies. Work benches should be cleaned with a solution of bleach and water. (see section above using a bleach solution)

Cool room - must be swept and cleaned regularly removing any waste plant materials to avoid workers slipping. Clean rooms need to be washed (floor and walls) regularly with a mix of bleach and water to remove bacteria and fungi. (see section above Using a Bleach Solution).

Buckets and containers - flower buckets and containers must be washed regularly with a mix of bleach and water to remove bacteria and fungi. (see section above using a bleach solution).

Product and Equipment Handling

In Floristry there are many large, awkward products and equipment that require lifting and moving. Examples include large arrangements, water buckets and containers. Lifting and moving these objects incorrectly can result in serious manual handling injuries that can be long term and impact long term work capability.

To prevent manual handling injuries the following guidelines should be followed:-

- only fill buckets and containers to a level that adds an acceptable weight (no more than 12kg) to be lifted or carried;
- if an object is reasonably heavy, store and place it at waist height to allow easy access (recommended between knee and chest height); and
- follow guidelines and training on lifting heavy objects including using your legs to lift with a straight back, carry the object close to you (not at arm's length) and always lift the object completely before turning.

Additional information regarding manual handling can be found in this manual under manual handling here:

[Manual Handling](#)

Construction - Trade

Cabinet Making

Cabinetmaking is one trades that primarily takes place within the relatively controlled environment of an established workshop.

Given this, the safety risks are a bit more easily identified and controlled. Safety risks primarily surround the interaction between the cabinetmaker and their tools and the materials that they use those tools to work on.

The main WHS risks associated with cabinetmaking include:

- Use of tools and equipment
- Workplace Environment
- Manual and Material Handling
- Noise and Dust management

Cabinetmakers use a wide range of tools and equipment, including:

- Band Saw
- Circular Saw
- Docking Saw
- Jig Saw
- Rip Saw
- Table Saw
- Spindle Moulder
- Staple Gun
- Table Planer
- Thicknesser
- Wide Belt Sander

Each of these has its own safety characteristics, but as they are all designed to cut or change the shape and surface of the timber they can just as easily do that to any hands or fingers that come into contact with the cutting heads.

Generally, each piece of equipment should have a Safe Operating Procedure (SOP) next to it and you should be trained, competent and authorised to use the equipment before operating it. You should only operate it in accordance with the SOP.

If there is no SOP, or you have not been trained or are not authorised to use the equipment then you should leave it alone.

Particular attention needs to be given to ensuring that appropriate Personal Protective Equipment (PPE) is always worn. For cabinetmakers this will usually involve, safety glasses, hearing protection, dust mask, safety footwear and sturdy and well-designed clothing, in the form of overalls or at least long pants and long sleeve shirts.

It can also involve wearing gloves in certain circumstances when moving rough sawn timber or timber

with sharp edges. **DO NOT wear gloves when using any type of saw, drill or milling equipment as they can become entangled and drag your hand or fingers into the cutting head.**

A cabinetmaking workshop can become very cramped and crowded if careful planning and organisation is not applied when working out the layout of the equipment. Machines need to be placed so that there is enough room around them for the movement of material. There must be a clear path for material that is fed into and feeds out of the machine and this path must not interfere with any other machine or any other worker on another machine. Sufficient room needs to be allowed for both the length and width of materials being worked on, which in some cases may be up to a full-size sheet 2.4m by 1.2m.

Serious consideration must be given to the management of dust. Some dust such as MDF and some hardwoods can cause respiratory issues, and some are also carcinogenic (cause cancer). This needs to be addressed by fitting (and using) dust extraction systems to the equipment and using appropriate PPE (e.g. dust mask). Many hardwoods are carcinogenic (cancer causing) such as oak, mahogany, beech, walnut, birch, elm and ash so you need to be careful when working with them.

It is important to remember that cleaning of the workshop should be done with a vacuum cleaner rather than a broom to avoid stirring up dust on the floor. Other surfaces should be wiped down with a damp or oiled cloth to prevent stirring up dust into the atmosphere.

Manual and material handling within a workshop can be problematic and as outlined above sufficient space within the workshop is essential to limit the risks of this.

Manual handling injuries account for about 40% of all workers compensation claims and getting it right is essential. Getting it wrong can mean a lifetime of pain and limitations.

Individual sheets of product such as MDF or laminated particle board in full sheet configurations weigh up to 25-30kg. At these weights, particularly given the size of the sheets their handling within the workshop needs to be a two person or mechanically assisted lift. So get your offsider to assist or use some form of mechanical assistance such as a forklift or a vacuum lifter.

As items are constructed, the risks associated with manual and material handling are magnified by the increasing size and bulk of the item which make it difficult to grasp and lift. Use assistance with lifting using a two person lift or some form of lifting aid.

Hazardous Noise is an issue in any cabinetmaking enterprise. Almost every powered tool that a cabinetmaker uses will create potentially damaging noise levels that can result in noise induced hearing loss over the long term. Noise can be reduced by making sure that equipment is regularly serviced so that it is operating efficiently and effectively. Ensure that all guards are in place after maintenance is complete.

Where the noise level is assessed as being above the noise exposure standard (85 decibels or more over an 8 hour period) the provision and wearing of hearing protection is mandatory and a legislative requirement. Hearing protection should meet the relevant **Australian Standard AS/NZS 269.3:2005 Occupational Noise Management**, and muffs and plugs provided should be marked as meeting this standard.

The information above has been based on material drawn from several sources, including the NSW WorkCover (now SafeWork NSW) publication 'Safety in the Wood Products Industry' and the US Occupational Safety and Health Administration (OSHA) Woodworking eTool as well as general observations within the Cabinetmaking workshop of Canberra Institute of Technology.

Carpentry, Plastering, Tiling, Painting

The following advice is based on these documents produced by the Northern Ireland Construction Industry Training Board:

'Health and Safety Advice for Carpenters and Joiners'

'Health and Safety Advice for Wall and Floor Tilers'

'Health and Safety Advice for Plasterers'

'Health and Safety Advice for Painters and Decorators'

They have identified the major risks for these trades as follows:

- Falls from height including working on fragile roofs
- Risk of eye injury and
- Dust exposure
- Moulds and dermatitis
- Slips trips and falls
- Cuts and abrasions
- Manual handling and repetitive tasks
- Using various types of machinery and tools
- Flammable or combustible materials
- Exposure to paints and other chemicals
- Exposure to noise
- Struck by falling objects
- Asbestos

Working at heights

Working at heights occurs every time a worker must climb a ladder, step onto a trestle, or use a scaffold.

Where there is a risk of falling more than 2.0 meters this, like similar activities throughout construction will trigger the high-risk construction activity provisions under Regulation 291a which requires the development and implementation of a Safe Work Method Statement (SWMS).

When working off ladders workers need to ensure that they have set the ladder up so that it is stable, that the legs are fully extended and they have positioned it to ensure that they do not have to over reach. Ideally three points of contact should be maintained but this can be problematic when using any form of tool in one hand with the other hand stabilising the work piece. In this case it is better, depending on the height of the wall being worked on to use a small platform or a mobile scaffold rather than using a ladder as this provides a higher level of safety.

When working on roofs, even single storey roofs, it is essential that some form of fall protection is used to prevent falls off the edge. Types of fall protect include; perimeter scaffolding, edge fall protection, or harness and lanyard attached to a certified anchor point or approved temporary anchor point.

The other aspect of roof safety that must be considered is the soundness of the roof surface and

underlying roof structure. If the roof is on an older house, the tiles may be brittle, or the sheeting may be rusted. Skylights are an obvious fall hazard so must be avoided at all costs.

Weather conditions must also be considered when contemplating the conduct of roof work. In winter, early morning should be avoided as there can be frost or heavy dew on the surface making it extra slippery. If the weather is windy, roof work should also be avoided as the wind can easily blow a roof worker off balance. In summer, care needs to be taken if roof work is contemplated to avoid heat stress. Try to avoid working during the hottest part of the day 10am to 3pm, particularly if the roof surface is metal as this will add reflected heat to the level of ambient heat encountered. Stay well hydrated and ensure you take regular breaks to cool down.

Eye Injuries

Eye injuries can occur because of

- falling debris from roof or upper wall levels (when working on older buildings old materials tend to be more easily dislodged so extra care is required),
- materials and shavings that fly up into the eye when cutting materials, as well as
- splashing tiling cement and other substances into the eyes.

These can result in issues ranging from minor irritation to major eye damage if the eyeball is scratched, particularly if you rub your eye with a dirty hand in the process of trying to remove the debris.

When-ever undertaking any of these tasks you should wear eye protection that is appropriate for the task and meets the requirements of the Safety Data Sheet. Eye protection should be of a standard that complies with the applicable Australia Standard.

Dust, Moulds and Asbestos

Dust, Moulds and Asbestos is another area of concern in these trades. Dust is created when cutting, finishing, and sanding material using a saw, planer, or sander. An advantage of the powered sander is that they are fitted with a dust extraction system, which whilst it captures most of the dust does not always capture all the dust. When cutting hardwood and when sanding it is recommended that a dust mask is worn to prevent breathing in dust particles.

Mould can cause chronic respiratory difficulties so extra care needs to be exercised if any work is done in areas that do or are likely to contain mould. When removing old material consideration must be given to the potential for there to be mould behind the material, particularly if there has been moisture build-up behind the sheeting. If this is likely, gloves, eye protection and breathing protection (rated dust mask) should be worn to prevent any contamination.

Asbestos

Where work involves or is likely to involve the disturbance of asbestos this is considered a High Risk Construction activity under Regulation 291d of the WHS Regulations. This work requires the preparation of a Safe Work Method Statement. Asbestos must be assessed and removed by a suitably competent and registered asbestos assessor and removalist.

Asbestos should be left alone if it is encountered, and a comprehensive Asbestos Management Plan arrangement needs to be introduced.

Dermatitis

Dermatitis is the inflammation of the skin by chemical irritants. It usually occurs on the hands. It is caused by intermittent or ongoing exposure to chemical irritants and repeated/frequent hand washing with soap and water. Typical irritants include dust, glues, tiling cement, paints, and adhesives.

The best way to prevent or limit the risk of dermatitis is to use either barrier creams or gloves and when cleaning the hands sometimes use an alcohol-based hand sanitiser containing moisturisers rather than soap and water all the time.

Cuts, abrasions, etc.

Carpenters, plasterers, tilers, and painters routinely use a wide range of sharp tools including saws, chisels and hammers. These tools can cause cuts and abrasions mainly to the hands and fingers. These cuts and abrasions can be annoying (if it is a scratch or scrape) or more serious and sometimes life threatening if say a chisel cuts an artery or vein in the hand or arm.

Extreme care needs to be exercised when using these types of equipment. As with any tool, a dull chisel is more dangerous than a sharp one so when using a chisel make sure that the blade is sharp. With other tools likely to inflict cuts and abrasions, care needs to be exercised to ensure that they are kept in good condition and that handles are sound so that they are less likely to slip.

Whilst the tiler will use a standard notched tiler's trowel for applying the cement, they also use other tools, particularly when they are cutting the tiles in preparation for laying. The use of either a straight edge tile cutter or a mechanical tile cutter (wet or dry) or the use of an angle grinder with a diamond blade, all carry the risk of serious cuts and abrasions.

Tiling trowels have sharp edges and corners so contact with the hand can result in injury. The use of a hand tile cutter can result in cracking or splintering of the tile; these broken shards can be sharp like razor blades. The use of a wet or dry tile cutter can also result in small slivers of tile breaking off causing cuts, as can doing the same process using an angle grinder.

Precautions needs to be taken when cutting tiles to prevent hand injuries so consider wearing gloves to protect the hands from the risk of injury.

Slips, Trips and Falls

Slips, trips and falls are the most common type of accident in the construction sector. They are often the result of poor housekeeping so make sure the workplace is kept tidy to limit the number of slip and trip hazards. Remember that it is not just inside the workplace but also getting into and out of the workplace that needs to be kept tidy.

Make sure that you clean as you go and put offcuts into a bin or other rubbish receptacle. On most commercial sites and on many residential sites the builder in charge will arrange rubbish or waste management, but on smaller sites or if you are working as a solo tradesperson, you may have to arrange this yourself.

One of the easiest ways of dealing with smaller offcuts is to place them in a plastic garbage can. Stack longer offcuts safely against a wall and preferably out of a walkway.

Remember the person who is most likely to trip over your rubbish is you.

Manual Handling and postural stress

The movement of items into and within any work zone involves the risk of manual handling injuries.

When moving ladders, make sure that you do not exceed your comfortable lifting limit. If moving long ladders, use a two-person lift. When moving lengths of timber or sheets of material ensure that you lift within your capacity or get someone to give you a hand.

Moving in and setting up a portable drop saw unit can involve lifting and carrying upwards of 25kg so make sure that you use the carry handle and have a firm grip.

Be careful when moving heavy and awkward items like doors, cupboards, benchtops etc. The shape and amount of space that you have can limit your capacity to lift and carry these items so plan your lift/carry beforehand.

Manual handling and postural stress issues are quite common for tilers. Unless you are laying small tiles that are presented in sheets, every tile must be individually handled. Some modern floor tiles can be very large (up to 600mm X 600mm) and weigh upwards of 8kg each, so laying a large area is going to involve a lot of lifting, bending, and working from your hands and knees. Remember to get up and stretch on a regular basis to ensure that your legs, back and arms don't start to cramp up, which can be very painful.

For painter's, postural stress and repetitive movements can also cause issues. Take breaks and stretch regularly.

When performing repetitive tasks, like screwing a cupboard together, as far as possible try to use a tool such as a drill driver, rather than doing it by hand, but if hand assembly is required, make sure you take regular breaks.

Flammable or combustible components

Many building products contain flammable or combustible components that when exposed to an ignition source will catch fire or explode.

Just like any business that has workers who work with chemicals, they must be handled in accordance with the requirements of the legislation and the relevant Safety Data Sheets (SDS).

Gloss, undercoat, universal/wood primer and white spirit are all flammables so should be stored well away from any possible source of ignition.

Many glues are highly astringent and can cause eye irritation or breathing problems if exposed. When using any glues make sure they are used in a well-ventilated area.

When transporting goods in your van make sure they are separated and stored in a leak-proof container so that the contents do not spill if they tip over.

When mixing glues, such as two-part epoxy, it is best to do so outside, or at least in a well-ventilated space inside, to prevent the build-up of fumes.

Noise induced hearing loss

Using any form of mechanical cutting process for cutting timber or tiles, or using Explosive Power Tools (EPT) will invariably expose the worker to the risk of noise induced hearing loss. This occurs when the worker is exposed to noise levels of or more than 85 DbA for prolonged periods. The more the noise level exceeds 85 Db the shorter the period required to cause hearing loss.

Whenever using any type of mechanical cutting process, hearing protection is a must.

Struck by falling objects

There is always a risk of being struck by falling objects when other people are working above you. When working in these situations it is essential to wear a hard hat to prevent injury. On commercial construction sites this will usually be mandatory but on smaller sites it will be less vigilantly pursued and may well be up to the worker to make a judgement call on. In these situations, wear a hard hat at all times.

If you are working above other workers, be conscious of where you leave materials and tools to prevent them from falling.

Using paints

Painters endure greater exposure to chemicals and skin damage than some other trades. They have a higher risk of work-related allergies including dermatitis and work-related asthma due to their exposure to some paints.

Painters should check the label and the SDS of each paint to determine the level of health hazard (e.g. skin and lung irritation) and try to use less harmful products or if this is not possible try to reduce exposure in accordance with the PPE and ventilation requirements described in the SDS.

Gloss, undercoat, universal/wood primer and white spirit are all flammable so should be stored well away from any possible source of ignition.

Ensure that the area you intend to paint is well ventilated to reduce your exposure and to help the paint to dry.

Glass and Glazing

Each year there are a number of injuries involving people working in the glass and glazing industry. SafeWork NSW advice highlights the following as areas of concern:

- loading and unloading glass from shipping containers;
- loading and unloading vehicles or timber packaging, where glass may have moved during transport;
- being hit by falling glass due to unsafe lifting techniques, (both manual and mechanical);
- not using appropriate PPE; and
- moving, handling and storing glass sheets

SafeWork NSW recommend the following actions be undertaken to minimise the risk of injury to stay safe when storing and handling glass sheets:

- never restrain large sheets of glass by hand, keep them securely fastened;
- use the correct mechanical lifting aids, such as mechanically or manually activated suction lifters;
- keep the work area tidy to minimise the risk of trip and fall accidents;
- have a detailed lifting plan for both mechanical and manual multi-person lifts;
- stand clear of glass sheets when moving them;
- use a suitable trolley or A frame to move sheets around;
- never take sheets from the middle of the rack or stack; and
- always wear appropriate PPE, such as cut resistant arm guards and consider throat and groin protection to reduce the risk of cutting major arteries

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