Hazard Management

IMPLEMENTATION

Aim

To prescribe the responsibilities and overarching actions required for the management of hazards during University related activities to ensure the University meets the requirements of the Health, Safety and Wellbeing (HSW) Policy and the relevant sections of the Work Health and Safety Act 2012 (SA) and Work Health and Safety Regulations 2012 (SA).

1 Objectives

1.1 To identify and manage the risks to health and safety by eliminating the risk, so far as reasonably practicable, or if not reasonably practicable, to minimise the risk in accordance with the hierarchy of controls [WHS Regulations 2012, Sections 34 - 38].

1.2 To ensure risk assessments have been completed for activities in accordance with the 5 Step Hazard Management process (Appendix A) where required.

2 Scope and application

2.1 This process applies to workers who are undertaking University of Adelaide related activities (including those working off campus).

2.2 Application

The Hazard Management chapter provides overarching roles, responsibilities, processes and templates for the broad management of hazards and risks to health and safety.

The HSW Handbook provides additional and specific information on other Hazard Management activities to assist those with responsibilities to meet WHS legislative requirements (e.g. for Contractor activities and hazard management, refer to the requirements in the Contractor Safety Management HSW Handbook chapter).

The principles of hazard management apply to both physical and psychological risks.
Further guidance specific to psychological risks is available in the Guide: Integrated approach to work-related psychosocial health and safety and the Guide for preventing and responding to workplace bullying.

3 Process: Hazard Management

	Person Responsible	Actions
3.1	Head of Faculty/Division/ School/Branch/ Institute	❑ Take reasonable steps to: ❑ gain an understanding of the nature of the operations under your control and generally of the hazards and risks associated with those operations; ❑ ensure that the areas under your control have appropriate resources and processes to eliminate or minimise risks to health and safety from work carried out; and ❑ ensure the Faculty/Division has appropriate processes for receiving information regarding hazards and risks in a timely way.

3 Process: Hazard Management (Continued)

Person Responsible	Actions
3.2 **Supervisor/Person in control of the area/activity**	❑ Ensure that the reasonably foreseeable hazards, associated with the operations in your area(s) of control, are managed (i.e. the risk to health and safety is eliminated or minimised). The operations in your area include: ❑ the physical work environment; ❑ plant/equipment, materials and substances used; ❑ work tasks and how they are performed; ❑ work design and management; and ❑ changes to any of the above. in accordance with the 5 step Hazard Management process (Appendix A) ❑ Ensure there is a process for workers to receive the relevant level of HSW information, instruction and training on the hazards, associated control measures and where to access safety information in their area(s) of work, before they undertake the activity. ❑ Ensure all workers and students have access to the following Risk assessment templates if a formal risk assessment is required. Single Task (Appendix B1); Multiple tasks (Appendix B2) and Short Form (Appendix B3) or equivalent template electronically or in hard copy. ❑ Ensure that the control(s) selected provide the highest level that is reasonably practicable under the Hierarchy of Controls. (See Hierarchy of control measures Appendix A page 6). ❑ Ensure that specific control measures that are mandated are documented on the Risk assessment and that these have a direct correlation with the hazard that they are controlling. ❑ Consult, co-operate and co-ordinate as far as reasonably practicable with other workers who carry out the activity, or are likely to be directly affected (e.g. where co-location arrangements are in place), including Health and Safety Representatives (if applicable), when controlling and reviewing the risk. ❑ Ensure that if you are planning to occupy a new/leased/refurbished work space, that the principles of good work design have been considered. Refer to the New/Leased/Refurbished workplace – Safety checklist for guidance. ❑ Check if there are any relevant Approved Codes of Practice or Australian Standards, Safety Data Sheet (SDS) or HSW Handbook chapters that outline the controls that are to be followed, unless there is another solution which achieves the same or a better standard of health and safety. ❑ Ensure that where it has been decided that a Safe operating procedure is required as a control within a Risk assessment that, the Safe operating procedure is created in accordance with Appendix C or an equivalent template. ❑ Check the residual risk rating after control measures have been determined and ensure that the appropriate authorisations are held. Continued

3 Process: Hazard Management

Person Responsible	Actions
3.2 **Supervisor/Person in control of the area/activity** (Continued)	**AUTHORISATIONS TO COMPLETE THE ACTIVITY** **For any formal risk assessments where the highest residual risk rating is:** ❑ **Low or medium** Staff and student (Undergraduate and Post Graduate) created Risk assessments Require: ❑ authorisation by the Supervisor/Person in control of the area/activity on the Risk Assessment, or other formal authorisation record. (It is not appropriate for a student to authorise the risk assessment.) ❑ **High** Staff and student (Undergraduate and Post Graduate) created Risk assessments Require: ❑ the Head of School/Branch to review the risk assessment and where intending to permit the activity as documented, to raise a risk under the University's Risk management framework (refer to Section 4.1); then ❑ authorisation by the Head of School/Branch and Supervisor/Person in control of the area/activity on the Risk assessment, or other formal authorisation record. ❑ **Very high** Staff and student (Undergraduate and Post Graduate) created Risk assessments Require: ❑ the Head of School/Branch to review the risk assessment and where intending to permit the activity as documented, to raise a risk under the University's Risk management framework (refer to Section 4.1); then ❑ authorisation by the Executive Dean/Divisional Head in addition to the Head of School/Branch and the Supervisor/Person in control of the area/activity on the Risk assessment, or other formal authorisation record. *Note: Approval for travel to a high/very high risk destination (i.e. DFAT 3 or 4) will also need approval by the Pro Vice-Chancellor (International) in accordance with the Travel & Entertainment Policy & Procedures.*

4 Process: Risk Management for activities where the residual risk rating is high or very high

Person Responsible	Actions
4.1 **Head of School/Branch or Executive Dean/Divisional Head**	❑ Raise a risk under the University's Risk management framework through the University Risk Register. ❑ Monitor and report on progress and outcomes in accordance with the Risk management framework. *Note: The requirement to raise a risk under the University's Risk management framework does not apply to high/very high residual risk travel. The high risk travel process will provide Legal and Risk Branch with the relevant information as part of the approval process.*

5 Process: Ongoing Hazard Management

Person Responsible		Actions
5.1	Supervisor/Person in control of the area/activity	❑ Ensure that the workers you are supervising are following the 5 steps of the hazard management process for every task. (Refer to Appendix A) ❑ Ensure that workers remain informed of the relevant hazards to which they may be exposed in their work area and any relevant control measures. ❑ Ensure that any Level 2 instruction (e.g. Proficiency) or Level 3 training (e.g. a qualification/competency) required by a risk assessment is added to the Training Plan (or equivalent) and instruction/training provided to relevant workers in accordance with the HSW Handbook chapter Provision of HSW Information, Instruction and Training. ❑ Monitor that control measures are being implemented and provide additional supervision if/where required based on the level of risk and experience of the worker(s). ❑ Ensure that, where a control measure requires regular programmed testing or maintenance, the activity is added to the Schedule of Programmable Events (or equivalent), unless this requirement is centrally managed (e.g. by Infrastructure Branch). ❑ Ensure that control measures are and remain: ❑ fit for purpose; ❑ suitable for the nature and duration of the work; and ❑ installed, set up and used correctly. ❑ Review the control measures if: ❑ a new/previously unforeseen hazard has been introduced; or ❑ requested by a Health and Safety Representative; or ❑ new legislation is introduced; or ❑ new information becomes available which could eliminate or minimise the risk. to ensure they remain in place and are effective. ❑ Ensure that Risk assessments and controls are reviewed following an incident, if control measures were ineffective in controlling the risk, in consultation with the local HSWO and any other relevant workers in accordance with the HSW Handbook chapter Incident investigation.
5.2	Workers	❑ Implement controls as documented in Risk assessments. ❑ Follow reasonable instructions, safety measures (e.g. lab rules) and Safe operating procedures (where applicable) for any activity you are required to undertake. This includes any requirement to wear personal protective equipment in accordance with the information, instruction and training provided. ❑ Undertake hazard management where required and assist in any hazard management process where required/requested by your Supervisor/Person in control of the activity/area.

Continued

5 Process: Ongoing Hazard Management (Continued)

	Person Responsible	Actions
5.2	**Workers (Continued)**	❑ Report: ❑ to the Supervisor/Person in control of the activity/area; and/or ❑ to your local HSW Team; or ❑ to a Health and Safety Representative; or ❑ using the on-line Report a safety issue, where you consider that one or more control measures are not effective in controlling the risks associated with any activity, or if you have concerns that the activity may place you or any other person at risk of injury/illness.
5.3	**Head of School/Branch in consultation with the local HSW Team (if required)**	❑ Ensure that the School/Branch Annual Hazard Review Template, is completed at the beginning of each year.

6 Process: Documentation and retention of records

	Person Responsible	Actions
6.1	**Supervisor/Person in control of the area/activity**	❑ Ensure a copy of the Risk assessment is provided to the HSWO as part of any Incident Investigation process when one has been completed for the activity. ❑ Ensure there is a system for retaining formal Risk assessments in accordance with the State Records of SA, General disposal Schedule No 30 issued under the State Records Act 1997. (Contact the University's Records Management Office for further assistance/information if required). ❑ Ensure workers have access to current Risk Assessments and where required by a Risk assessment, any Safe operating procedures.

7 Definitions

Biological hazards
Biological hazards are organic substances that pose a threat to the health of humans and other living organisms. Biological hazards include pathogenic micro-organisms, viruses, toxins (from biological sources), spores, fungi and bio-active substances. Biological hazards can also be considered to include biological vectors or transmitters of disease.

Note: Areas may use a control banding approach when managing biological hazards (e.g. "Standard Precautions" to achieve a basic level of infection prevention and control which are used at all times in all situations). However additional precautions are to be used when standard precautions alone are not sufficient to prevent the spread of an infectious agent. Refer to the SA Health website for further guidance for "Preventing and responding to work related exposure to infectious disease".

Competency (for the purposes of University Training)
Achievement of a Licence, Qualification or Statement of Attainment following formal training against specific assessment criteria by an authorised or Nationally Recognised Training Organisation.

Continued

7 Definitions (Continued)

Control banding (CB)
CB is a technique which enables an area to group activities or locations together and to complete a single risk assessment, as the control measures eliminate or minimise the risk in the same way.
(e.g. this technique may be used when grouping activities for similar equipment or chemicals to reduce the number of risk assessments required such as Standard Precautions for Biological hazards).

Event
Any programmed activity which changes the environment/venue for which it was otherwise intended; or introduces a foreseeable safety hazard(s) due to the nature of the event/activity/function.

Hazard
Refers to a source of potential harm (injury/illness).

Hazardous chemical (Refer to Safework SA website for further guidance)
A substance, mixture or article that satisfies the criteria for a hazard class in the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), including a classification referred to in Schedule 6 Work Health and Safety Regulations 2012 (SA), but does not include a substance, mixture or article that satisfies the criteria solely for one of the following hazard classes:
(a) acute toxicity – oral – category 5
(b) acute toxicity – dermal – category 5
(c) acute toxicity – inhalation – category 5
(d) skin corrosion/irritation – category 3
(e) serious eye damage/irritation – category 2B
(f) aspiration hazard – category 2
(g) flammable gas – category 2
(h) acute hazard to the aquatic environment – category, 1, 2 or 3
(i) chronic hazard to the aquatic environment – category 1, 2, 3 or 4
(j) hazardous to the ozone layer.

Note - Hazardous chemicals may present an immediate or long term risk to human health through their toxicological properties, or a risk to safety of persons and property as a result of their physicochemical hazards. Risks include:
- Fire and smoke related injuries
- Explosion related injuries
- Skin exposure: symptoms include skin dryness, blistering, redness, rashes, and itching.
- Eye exposure: the most common symptoms of eye exposure are burning, itching, and watering of the eyes.
- Respiratory tract exposure: symptoms may include headache, nose and throat irritation, dizziness, and disorientation.
- Chronic disease

Hazardous manual activity
An activity that requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing that involves one or more of the following:
(a) repetitive or sustained force
(b) high or sudden force
(c) repetitive movement
(d) sustained or awkward posture
(e) exposure to vibration

Where one or more of the above factors have been identified as part of an activity, the body could become overloaded and lead to a musculoskeletal disorder (MSD)/injury:
- sprains and strains of muscles, ligaments and tendons;
- back injuries, including damage to the muscles, tendons, ligaments, spinal discs, nerves, joints and bones;
- joint and bone injuries/degeneration, including injuries to the shoulder, elbow, wrist, hip, knee, ankle, hands and feet;
- nerve injuries or compression (e.g. carpal tunnel syndrome);
- muscular and vascular disorders as a result of hand-arm vibration;
- soft tissue hernias;
- chronic pain.

7 Definitions (Continued)

Hazardous plant

Any plant/equipment used for a work/task related activity that:

- has the potential:
  - to entangle, crush, cut/stab/puncture, trap, shear, tear or strike (i.e. safe-guarding is required);
  - for a pinch point to trap any part of the body or catch loose clothing, hair etc (e.g. conveyor, gears, loaders and other moving equipment);
  - for a worker to come into contact with fluids under high pressure;
  - to cause a serious burn/injury;
  - to expose the worker to live electrical conductors;
  - to expose the worker to gases/vapours/liquids/dusts/other substances triggered by the operation;
  - to explode or implode;
  - to exceed safe noise levels;
  - for the worker to adopt poor posture (see definition for a Hazardous Manual Activity);
  - to overturn, collide with another person or thing (e.g. moving powered plant);
- lifts or suspends a load;
- is an industrial robot or other remotely or automatically energised plant at the workplace;
- involves non-ionising radiation or high level magnetic fields;
- requires registration in accordance with Schedule 5 of the Work Health and Safety Regulations 2012 (SA).

(e.g. an autoclave, forklift, cryostat, boiler, lathe, industrial robot, scaffolding, boiler, laser, microtome, elevated work platform, crane, gantry, reach stacker, pressure equipment)

Refer to the HSW Handbook chapter Plant/Equipment Safety Management for additional information.

Hierarchy of Control

The process to eliminate, or where this is not possible, manage the risks to as low a level as is reasonably practicable. They are listed below in order of most to least effective. See Appendix A page 6 for further guidance.

Level 1 control:	Elimination (e.g. remove the hazard from the site)
Level 2 controls	Substitution (e.g. replace the item or substance or activity with a less hazardous one) Isolation (e.g. remove the opportunity of contact with the hazard by distance from work activities) Engineering (e.g. guarding, barriers, electronic guarding such as light curtains)
Level 3 controls	Administration (e.g. Safe operating procedure, supervision, training, maintenance programs) Personal Protective Equipment (e.g. gloves, safety glasses, laboratory coats)

HSW information, instruction and training

(Refer to HSW Handbook chapter Training Plan for further information.

There are 3 levels. Generally the higher the risk, the higher the level of information, instruction and training is required.

1. Level 1: Information
   Provides general information to participants. This type of training is suitable where no proficiency, qualification or licence is required.
2. Level 2: Instruction
   Provides a higher level of instruction to manage the risk associated with the activity and requires a record to be kept. There are three types of instruction; these relate to instruction around Hazardous Chemicals, instruction related to the controls for high or very high risk activities and proficiency based instruction. Proficiency based instruction will generally have a documented practical component to enable the trainee to observe the process from beginning to end, and then demonstrate back to their trainer/assessor that they are proficient/skilled to undertake the task or operate the equipment without supervision.
3. Level 3: Training
   This type of training is required where the operator must attend formal training by an authorised or Nationally Recognised Training Organisation that will provide the trainee with a statement of attainment, qualification or licence following successful completion of the training. Examples may include: first aid training, forklift training, work associated with rigging, cranes, hoists, confined space entry, scaffolding, dogging, work at height, operation of load-shifting equipment, firearms, electrical, asbestos removal and licence to use or handle a radioactive substance.

7 Definitions (Continued)

Inherent risk
The associated risk before implementation of risk controls.

Proficiency (See HSW information, instruction and training – Level 2: Instruction)

Reasonably practicable [WHS Act 2012, Section 18]
"in relation to a duty to ensure health and safety, means that which is, or was at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters including –

a) the likelihood of the hazard or risk concerned occurring; and
b) the degree of harm that might result from the hazard or risk; and
c) what the person concerned knows, or ought reasonably to know, about –
    i. the hazard or the risk; and
    ii. ways of eliminating or minimising the risk; and
d) the availability and suitability of ways to eliminate or minimise the risk; and
e) after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk."

Residual risk
The risk remaining after implementation of risk controls.

Risk
The possibility that harm (death, injury or illness) might occur when exposed to a hazard.

Risk assessment (RA)
The process of evaluating the probability and consequences of injury or illness arising from exposure to an identified hazard or hazards.

Risk control
Taking action to eliminate health and safety risks so far as is reasonably practicable, and if that is not possible, minimising the risks so far as is reasonably practicable.
(A control measure minimises the risk either by reducing the likelihood and/or the consequence.)

Safe operating procedure (SOP)
A document created as a control under a risk assessment where an activity requires work to be performed in a particular sequence in order to carry out the work safely.

A SOP, if identified as a control measure, must :

- identify the steps required to perform the work safely;
- specify/address the identified hazards relating to the work at each step;
- describe the measures to be implemented to control the risks;
- take into account the circumstances at the workplace that may affect the way in which the work is carried out;
- take into account emergency management arrangements where applicable; and
- be communicated to all workers who carry out the work.

Supervisor/Person in control of the area/activity
(This includes a Head of School/Branch)
In the context of this chapter the supervisor has two meanings:

1. the line manager of a staff member or the principal supervisor of a higher degree research student. The responsibility of this type of supervisor is captured in section 3.2 and should be read in relation to all activity other than where the worker's activity is supervised by someone as described in the second meaning below.
2. any other individual who (separate to the line manager/principle supervisor) has control of a laboratory, clinic, workshop, field activity or other activity in which the worker is participating or working. For example a workshop manager who has control of what is undertaken and/or who determines which workers may/may not work within the workshop they control. These supervisors also have the responsibility captured in section 3.2 for the activities under their control. (Note: Control means that these individuals have the right to deny access to or stop any activity until they are satisfied that the activity can occur safely.)

7 Definitions (Continued)

Worker (WHS Act 2012)
A person is a worker if the person carries out work in any capacity for a person conducting a business or undertaking, including work as –

- an employee; or
- a contractor or subcontractor; or
- an employee of a contractor or subcontractor; or
- an employee of a labour hire company who has been assigned to work in the person's business or undertaking; or
- an outworker; or
- an apprentice or trainee; or
- a student gaining work experience; or
- a volunteer; or
- a person of a prescribed class.

The person conducting the business or undertaking is also a worker if the person is an individual who carries out work in that business or undertaking.
Note: Higher Degree Research and Honours (Research) students and Academic Visitors are likely to be workers under the WHS Act (2012).

8 Performance Measures

The HSW Team will use performance measures to assist in identifying areas of success and/or where corrective action is required to meet the objectives and targets of this process.
The level of compliance with the chapter and effectiveness will be determined during the internal audit process.

9 Useful information and resources

9.1 University related documents

HSW Policy Statement
HSW Handbook

- Asbestos
- Biological Safety
- Boating Operations
- Bullying at Work (Preventing & Responding to)
- Chemical Safety Management
- Children in the workplace
- Confined spaces
- Contractor safety management
- Diving
- Drugs and Alcohol
- Electrical Safety
- Emergency Management
- Events Safety Management
- Off campus activity (including Field Work)
- First Aid Management
- Firearms Safety Management
- Hot Work
- Incident Reporting and Investigation
- Induction (HSW)
- Infectious and Communicable Diseases
- Injury Management
- Laboratory Safety
- Manual Handling and Ergonomics
- Noise and Sound Safety Management
- Personal Protective Equipment
- Plant/Equipment Safety Management
- Prevention of Falls
- Provision of HSW information, instruction and training
- Radiation
- Smoke-Free University
- Student Placement
- Temperature Extremes
- Travel Safety
- Workplace Monitoring (Including New/Leased/Refurbished Workplace – Safety Checklist)

9.2 Related Legislation

Work Health and Safety Act 2012 (SA)
Work Health and Safety Regulations 2012 (SA)
Approved Codes of Practice (including How to Manage work health and safety risks)
Australian Standards

9.3 Useful Web-links

University Incident reporting system
SafeWork SA
SafeWork Australia
SafeWork Australia Principles of good work design handbook
University HSW Information (on-line) sessions

5 STEP HAZARD MANAGEMENT PROCESS

Step 1 — Planning or pre start check

Consider the sequence of steps involved in carrying out the task from start to finish.

- ☐ Does the activity expose the worker to any hazards which could result in a significant injury or illness (e.g. medical treatment, hospitalisation)? (Refer to the list of examples on this Appendix, pages 2 - 5 as a guide)
- ☐ Does the activity involve the use of an item of plant/equipment or chemical in a different way to how the manufacturer intended?
- ☐ Does the task involve the use of a Hazardous chemical or nanoparticles?
- ☐ Is the activity an event (e.g. function such as an open day) or require the co-ordination of a number of tasks which could impact on the safety of the worker(s) completing the task or others in the vicinity?
- ☐ Is the activity to be conducted in a different workplace/environment to normal and modification to the workplace or process is required?
- ☐ Are there any concerns/uncertainty that the activity (e.g. tools and equipment, chemicals, the work environment, the physical/mental/emotional demands of the tasks) may place a worker at risk of injury/illness?

If yes to any of the above, do not start the activity until you reach step 5

If no to all of the above

Is there an existing Risk assessment (RA) for the activity on file?

No Risk assessment held

Select and complete the appropriate RA template

Single task (Appendix B1); or

Multiple tasks (Appendix B2); or

Short Form (Appendix B3)

Yes – A Risk assessment held

Check whether the hazards and control measures are correct for your activity.

If no

Go to step 2 and complete a new Risk assessment (Appendix B1, B2 or B3)

If Yes

Go to step 5

No formal Risk assessment is required

It is an activity which is considered low risk.

There is no expectation that an injury/illness will occur. If there was an injury/illness, treatment would be very minor/negligible (e.g. first aid treatment requiring a band aid).

Complete the activity safely and in accordance with:

- ❑ the manufacturer's instruction; and/or
- ❑ Safety Data Sheet; and/or
- ❑ any information/ instruction/training provided.

Seek assistance from your Supervisor/Person in control of the area/activity if you are unsure of the method of work or have any concerns.

Step 2 — Identify the hazards

- ☐ Identify the hazards that could cause harm (injury/illness) through immediate or long term exposure and how/when the worker is exposed to the hazard(s) during the activity. An activity may have many different hazards. (Refer to pages 2 – 5 of this Appendix for guidance).

Step 3 — Assess the level of risk

Based on the nature of the activity and the hazard(s) identified

- ☐ Determine the likelihood and consequences of an injury/illness using the Risk assessment table on the RA template.

Step 4 — Control the risk

- ☐ Determine the controls to ensure the highest level that is reasonably practicable under the Hierarchy of controls (see page 6 of this Appendix) are selected, to either eliminate/minimise the risk.

In consultation with your Supervisor/Person in control of the area/activity:

- ☐ Ensure that specific control measures that are mandated are documented on the RA and that these have a direct correlation with the hazard they are controlling.
- ☐ Obtain the relevant authorisations to complete the activity, based on the level of residual risk (i.e. the remaining risk after controls are in place).

Step 5

Complete the activities safely and in accordance with the Risk assessment.
Ensure your own safety and the safety of others for the duration of the activity.
Review the Risk assessment if the conditions change e.g. new hazards are identified.

HAZARD IDENTIFICATION (EXAMPLES)	If the hazard is applicable to the activity, then transfer the hazard and how the worker could be exposed onto your Risk assessment template

HAZARD IDENTIFICATION: Stop and think. What could cause harm?	
Identify each hazard that is part of this work process	**Examples of how/when the worker could be exposed to the hazard (e.g. what is the route of exposure?)**
Hazardous chemical Use of: ☐ a corrosive ☐ an explosive ☐ an acid ☐ a flammable liquid/solid/gas ☐ a toxic poison Including hazardous waste Where practical name the category or name of chemical on the Risk assessment. The SDS for the chemical will provide additional information. Use of a **Nanomaterial**	☐ Could the worker be exposed to potential harm via inhalation? ☐ Could the worker be exposed to potential harm via skin absorption? ☐ Could the worker be exposed to potential harm via ingestion? ☐ Could the chemical splash into the worker's eyes? ☐ Could the worker be required to work with the chemical for long periods of time? ☐ Is the chemical a carcinogen, mutagen, reproductive toxicant or sensitisation agent? ☐ Could an accidental spill place the worker and others in the vicinity at risk? ☐ Is the chemical being used in an enclosed space? ☐ Could other workers make contact with the chemical or contaminated surfaces (e.g. during cleaning, contractors entering the space)? ☐ Does the chemical require decanting, spraying, heating? ☐ Could the chemical cause a fire and explosion if there is a source of ignition? ☐ Could exposure to the chemical require an immediate first aid response (e.g. antidote, emergency shower)? ☐ Is there the potential for vapour accumulation? ☐ Is the chemical an asphyxiant? ☐ Do the storage containers need to have impact protection in place? ☐ Are there specific transfer/transport arrangements required for the chemical? ☐ Are there specific storage arrangements required for the chemical? ☐ Could the worker be exposed to nano-sized particles that could enter the body through inhalation, ingestion or contact through the skin? Refer to the Chemical Safety Management Handbook chapter and FAQ Nanomaterials for further information on the risk assessment process.
Hazardous Plant/Equipment ("Plant") (During operation) ☐ Rotating/moving parts (e.g. shafts, pullies, sprockets, gears, belt conveyors) ☐ Hard surfaces moving together ☐ Scissor or shear action ☐ Eject objects (parts, components, waste) ☐ Sharp edge – moving/stationary ☐ Ignition sources (flame or spark) ☐ Compressed air or high pressure fluid ☐ Electricity ☐ Explosive or flammable atmosphere ☐ Ergonomic (e.g. equipment design/layout) ☐ Mobile plant/equipment (e.g. forklifts, pallet jacks, earthmoving equipment) ☐ Heat (radiated or conducted) or steam ☐ Harmful noise ☐ Poorly positioned control levers or buttons	Could the plant/equipment: ☐ entangle a person's hair, clothing, gloves, jewellery, in moving parts? ☐ crush a person (e.g. material fall off the plant, uncontrolled/unexpected movement of the plant)? ☐ stab, puncture or strike e.g. due to coming into contact with sharp or flying objects? ☐ shear a body part (e.g. between two parts of the plant/between the plant and a work structure)? ☐ expose the worker to live electrical conductors (e.g. proximity, overload of electrical circuits)? ☐ expose the worker to gases/vapours/liquids/dusts/other substances triggered by the operation? ☐ explode or implode, or reach high temperatures? ☐ exceed safe noise levels (e.g. more than 85 decibels over a normal shift or a single noise level above 140 decibels) due to very loud impact or explosive sounds? ☐ require the worker to adopt poor ergonomic posture/repeat the same movements? (see Hazardous Manual Activity)? ☐ overturn, collide with another person or thing (e.g. moving powered plant)? ☐ malfunction (e.g. is an industrial robot/remotely/automatically energised plant at the workplace)? ☐ expose the worker to hazardous levels of vibration (to whole or part of body)? ☐ cause a significant burn ☐ require energy sources to be isolated e.g. for cleaning, maintenance? ☐ require the operator to climb onto the equipment during operation? ☐ be operated in a confined space? (See FAQ Confined space for additional guidance) ☐ controls be inadvertently bumped or knocked? ☐ require extension leads which present electrical hazards if damaged or wet? ☐ require the operator to make adjustments to the mechanism of machinery while the machine is in motion/operation? ☐ require the use of Hazardous chemicals during operation, cleaning, maintenance? (see section above)

HAZARD IDENTIFICATION (EXAMPLES)	If the hazard is applicable to the activity, then transfer the hazard and how the worker could be exposed onto your Risk assessment template

HAZARD IDENTIFICATION: Stop and think. What could cause harm?	
Identify each hazard that is part of this work process	**Examples of how/when the worker could be exposed to the hazard (e.g. what is the route of exposure?)**
Hazardous manual activity The task requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing involving one or more of the following: ☐ repetitive or sustained force ☐ high or sudden force ☐ repetitive movement ☐ sustained or awkward posture ☐ exposure to vibration	Could the activity require: ☐ carrying objects over long distances or a load that is unbalanced/unstable/unpredictable? ☐ lifting/lowering/carrying an object that cannot be positioned close to the body? ☐ the use of a tool requiring continuous finger/pinch/open-handed grip or tight squeeze grip? ☐ the handling of frightened/resistant/unpredictable animals or a person? ☐ repetitive use of the same muscle groups (e.g. computer tasks, bending/twisting)? ☐ repeated reaching for an object (e.g. beyond normal reach, whilst sitting, with arms overhead)? ☐ transfer of an awkward/heavy item from one level to another (e.g. stairs, from the floor)? ☐ the worker to complete the task where the workplace environment poses a risk? ☐ a level of skill/experience or more than one worker due to the nature of the load?
Heavy lifting using mechanical lifting equipment (e.g. a hoist, a crane, a power shovel, a telescopic/telehandler, fork lift truck, elevating work platforms, passenger lifts/hoists) Note If engaging a Contractor for this work, refer to the Contractor Safety Management HSW Handbook chapter which includes the requirements for Permission to work.	Could the: ☐ activity crush another person due to the impact of moving objects or loads falling because they are not properly slinged or the wrong type of sling is used? ☐ plant/equipment strike a pedestrian? ☐ plant/equipment collapse or fall over due to improper fixation or strong wind, unsafe loads, loads exceeding the safe weight limits? ☐ plant/equipment or the load trap/crush a worker during the lift/transfer? ☐ the operator fall from a height e.g. fall from the lifting platform or when the platform moves? ☐ worker be exposed to a hazard when positioning the load? ☐ work environment interfere with communication between workers or concentration? ☐ load come into contact with overhead electrical cables, other structures or other people? ☐ plant/equipment not be fit for purpose? ☐ operator not have the necessary skills qualifications to undertake the tasks?
Radiation (Exposure to) ☐ Ionising radiation ☐ Sealed sources ☐ Un-sealed sources	☐ Could the worker be exposed to high powered lasers, x-ray machines and transilluminators? ☐ Could the worker be exposed to potential harm by breathing in radioactive dust? ☐ Could the worker absorb the radiation through their skin? ☐ Is the worker required to work with materials containing radioactive iodine? ☐ Could the worker be exposed to non-solar sources of radiation such as arc welding?
Biological hazards (Exposure to) ☐ Blood, tissues, saliva, mucous, urine and faeces, sewage ☐ Toxins, poisons, venom ☐ Spores, fungi and bio-active substances ☐ Biological vectors/transmitters of disease ☐ Communicable diseases ☐ Animal diseases and infections that have the potential to infect humans (e.g. Q-fever, Avian flu, Hendra virus) ☐ Harmful plants ☐ Animal and bird droppings	☐ Could micro-organisms enter the body through the respiratory system? ☐ Could there be transmission through contact with body fluids of the infected person/animal? ☐ Could the worker come into contact with contaminated objects? ☐ Is the worker in contact with laboratory cell cultures, soil, plant materials, organic dusts, wastewater or sewerage? ☐ Is the worker working with animals? ☐ Could the worker be exposed to a venomous bite or sting? ☐ Is the worker working in a hospital, dental practice, health care setting (including home healthcare)?
Psychosocial/stress/duress (Exposure to) ☐ Personal threat ☐ Fatigue	☐ Could the worker be exposed to trauma? ☐ Could the worker be exposed to occupational violence, aggression, abuse or assault? ☐ Could the worker be exposed to constant work demands (e.g. heavy workload, physical and/or mental exertion)? ☐ Is the worker, working alone for extended periods or in remote locations? ☐ Is the worker meeting with clients that are unfamiliar and/or in an unfamiliar environment when on their own?

HAZARD IDENTIFICATION (EXAMPLES)	If the hazard is applicable to the activity, then transfer the hazard and how the worker could be exposed onto your Risk assessment template

HAZARD IDENTIFICATION: Stop and think. What could cause harm?	
Identify each hazard that is part of this work process	**Examples of how/when the worker could be exposed to the hazard (e.g. what is the route of exposure?)**
Fall from one level to another / Falling objects	☐ Could the worker fall from a cliff?) ☐ Could the worker fall from a ladder, work platform or item of plant/equipment? ☐ Could the worker fall from a roof or through a structure, fragile surface? ☐ Could the worker fall into an unguarded hole in the floor such as hatchway, inspection hole, pit, tank or machinery? ☐ Could the worker be hit by a falling object?
High risk travel (Travel to a high risk destination)	☐ Is the worker travelling to a DFAT level 3 destination? i.e. Reconsider your need to travel (This level means that there are serious and potentially life threatening risks that make the destination unsafe for tourism and unsuitable for most travellers. This could be due to an ongoing threat of terrorism or kidnapping, frequent incidents of violent crime, ongoing civil unrest, widespread disease, or other safety risks including a natural disaster.) ☐ Is the worker travelling to a DFAT level 4 destination? i.e. Do not travel (This level means that the security situation is extremely dangerous. This may be due to a high threat of terrorist attack or kidnapping, ongoing armed conflict, violent social unrest, or critical levels of violent crime. It is often a combination of these.) The DFAT Smart traveller website provides additional information. The Travel & Entertainment Policy & Procedures sets out the approval process for travel to a high/very high risk destination.
Operation of a drone (Regardless of the size or if operated indoors or outdoors)	☐ Is the worker operating a drone for work purposes? Refer to the University website - The Unmanned Research Aircraft Facility (URAF) for all compliance requirements including risk assessments. Strict protocols apply to all University activities requiring the operation of a drone to meet the requirements for Remotely Piloted Aircraft Systems under the Civil Aviation Act and Regulations. All operations regardless of drone type or activity must be approved by the University's Chief Remote Pilot. Non-compliance by any University staff or students could lead to the cancellation of our licence which would impact on all University pilots and mean that all University drones would be grounded. No insurance cover will apply.
Electrical ❑ Electric shock (working on or near power lines or live power) ❑ Hidden wiring/cables (wall or ground penetration)	☐ Could the worker be penetrating a wall or ground and there is the potential for contact with electrical wiring/cables? ☐ Could the worker be operating electrical equipment near water (beyond what the manufacturer intended) or outdoors? ☐ Could the equipment be chewed on by animals? ☐ Is the electrical cord subject to crushing or crimping? ☐ Could the equipment be in direct contact with dust, vibration, heat, or corrosive chemicals that could cause damage to the item? ☐ Could the equipment be immersed in water or in an environment where there is condensation on the floors or walls?
Boating and diving activity	☐ Could the worker be at risk of drowning? ☐ Could the worker be exposed to weather extremes? ☐ Could the worker require emergency medical treatment during the activity? ☐ Could there be communication issues (e.g. by virtue of location or isolation) ☐ Could equipment failure harm the worker? ☐ Could the worker come into contact with dangerous marine animals?
Noise and sound (Produced during an activity)	☐ Could the worker be exposed to noise levels approaching/greater than safe exposure standards (including music) >85dB(A) or peak level approaching/greater than 135dB(C) for any period of time?

HAZARD IDENTIFICATION (EXAMPLES)	If the hazard is applicable to the activity, then transfer the hazard and how the worker could be exposed onto your Risk assessment template

HAZARD IDENTIFICATION: Stop and think. What could cause harm?	
Identify each hazard that is part of this work process	**Examples of how/when the worker could be exposed to the hazard (e.g. what is the route of exposure?)**
Confined space entry ☐ Poor air quality/insufficient oxygen ☐ Chemical exposure ☐ Extreme temperature ☐ Flooding ☐ Suffocation, crushing, engulfment	☐ Could the worker be required to enter into an enclosed or partially enclosed space that is not designed or intended primarily to be occupied by a person (e.g. a pit, tank, vat, pipe, duct, silo, container)? A specific Permit to Work is required to address the hazards. Refer to the HSW Handbook Confined Space FAQ
Operation of a **Firearm**	☐ Could the worker be required to operate a firearm or be part of a work related activity where someone is operating a firearm? Specific requirements and licences are required to meeting the requirements of the Firearms Act and Regulations. Refer to the HSW Handbook chapter Firearms Safety Management for information.
Hot work (e.g. welding) ☐ Burns, fire and heat ☐ Dust, smoke and fumes ☐ Light radiation ☐ Asphyxiation	☐ Is the worker required to do welding, grinding, thermal or oxygen cutting or heating or other related heat producing or spark-producing operations? A hot-work permit is required for this activity. Refer to the HSW Handbook Hot work FAQ for further information on hazard management.
Other ☐ Off campus activity Remote or isolated work ☐ Temperature extremes (hot or cold)	☐ Is the worker required to work in a remote location that would require specific arrangements to be in place for rescue and/or medical assistance? (Refer to the Off campus activities FAQ which includes a risk assessment decision tool and a specific Risk assessment template for "Off campus activities"/Field Work.) ☐ Is the worker required to work in a location where they could suffer hyperthermia (i.e. body is overheated), or work in a cold room?

DESCRIPTORS FOR ASSESSING THE LEVEL OF RISK

Likelihood Table

CATEGORY	DESCRIPTION
Almost certain	There is an expectation that an event/incident will occur.
Likely	There is an expectation that an event/incident **could occur** but not certain to occur.
Possible	This expectation lies somewhere in the midpoint between "could" and "improbable". May happen occasionally.
Unlikely	There is an expectation that an event/incident is doubtful or **improbable** to occur.
Rare	There is no expectation that the event/incident will occur.

Consequences Table

CATEGORY	DESCRIPTION
Severe	Injury resulting in death, permanent incapacity.
Major	Injury requiring extensive medical treatment (e.g. hospitalisation), or activities could result in a Notifiable occurrence.
Moderate	Injury requires formal medical treatment (e.g. hospital outpatient/doctors visit) Activities could result in an Improvement/Prohibition Notice.
Minor	Injury requires first aid treatment.
Negligible	Injury requires minor first aid (e.g. bandaid), or result in short term discomfort (e.g. bruise, headache, muscular aches), no medical treatment.

Risk matrix

Likelihood	Consequences				
	Negligible	Minor	Moderate	Major	Severe
Almost Certain	Medium	High	Very High	Very High	Very High
Likely	Medium	Medium	High	Very High	Very High
Possible	Low	Medium	High	High	Very High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Low	Medium	Medium

HAZARD MANAGEMENT – HIERARCHY OF RISK CONTROL

The process to eliminate, or where this is not possible, manage the risks to as low a level as is reasonably practicable. They are listed below in order of most to least effective and are required to be recorded on your Risk assessment A combination of the controls set out may be used to minimise risks if a single control is not sufficient for the purpose.

Refer to any relevant Approved Codes of Practice or Australian Standard, Safety Data Sheet or Handbook chapter(s) which outline the controls which are to be followed, unless there is another solution which achieves the same or a better standard of health and safety.

Hierarchy of control			Examples of control measures	
HIGHEST	**Level 1**	**Elimination**	• Not introducing the hazard into the workplace. • Designing out the hazards before they are introduced. • Removing the hazard completely. • Not conducting the activity.	MOST
	If this is not practicable then ↓			
	Level 2 Where it is not reasonably practicable to eliminate the hazards and associated risks.	**Substitution**	• Replacing or substituting the hazard with something safer. Record what you have substituted so it is clear to the worker.	
		Isolation	• Isolating the hazard from the people by distance or using barriers. Record what isolation controls need to be in place so it is clear to the worker.	
		Engineering	• Installing/using a control measure of a physical nature, including a mechanical device or process (e.g. trolleys, hoists, guards, residual current devices, fume-hoods, extraction/ventilation systems, RCD protection). Record what specific engineering controls are in place so it is clear to the worker.	
	↓			
LEVEL OF HEALTH AND SAFETY PROTECTION	**Level 3** These control measures do not control the hazard at the source. They rely on human behaviour and supervision, and used on their own tend to be the least effective in minimising risks.	**Administrative**	• Documenting a Safe operating procedure (SOP) and include in the induction program for all staff required to perform the activity. • Developing a proficiency based training program if required by the risk assessment (see definitions) (Workers may be trained against the SOP Appendix C or other assessment criteria). • Training workers to use control measures implemented when carrying out the activity. • Introducing a second operator. • Providing signage or warning labels. • Restricting access. • Maintenance and testing programs. • Changing the work organisation (e.g. relocating equipment or items, rotating workers between different activities). (Record on the Risk assessment the specific Admin controls that are in place so they are clear to the worker.)	RELIABILITY OF CONTROL MEASURES
LOWEST	Exposure is only limited if the worker wears and uses the PPE correctly.	**Personal Protective Equipment (PPE)**	Requiring the use of one or more of the following: • ear protection (ear muffs); • respirators, face masks; • hard hats/helmet; • gloves, aprons; • eye protection (glasses, shield, visor); and • non-slip footwear, appropriate clothing. (Record on the Risk assessment the specific PPE to be worn so it is clear to the worker.)	LEAST

HAZARD MANAGEMENT – RISK ASSESSMENT

Date: / /

SINGLE TASK

(This template or equivalent template can be used)

(If you have not completed a risk assessment before refer to the Handbook Chapter Appendix A for guidance)

RECORD THE HIGHEST RESIDUAL RISK RATING Ensure the appropriate level of authority to complete the activity can be evidenced. (e.g. a signature or formal approval attached)	☐ Low ☐ Medium ☐ High ☐ Very high

Title of the task (e.g. use of ……)	
Physical location(s) or operational unit	
Names of workers involved in completing the risk assessment	Author:
	Other workers (if applicable)

Supervisors/person in control of the area/activity

- *Ensure that the control measures address the hazards identified for each step in the process for this task.*
- *Ensure that there is a system for retaining this Risk assessment. (See section 5.1 of the Handbook chapter)*
- *Ensure that workers who undertake this task have access to this Risk assessment, are provided with the relevant, information, instruction and training required before they undertake the task. (This includes any other guidance material (e.g. Safe operating procedures) where required by this Risk assessment.)*
- *Ensure that if there is a requirement for instruction (Level 2 proficiency) and/or training (Level 3 competency/qualification) the information is added to the Training Plan.*

Hazard identification: Stop and think. What could cause harm from start to finish?		**Assess the harm**	**What needs to be in place before you start?**	**Re-assess the level of risk**
Identify and list each hazard that is part of this work process	Record how/when the worker is exposed to the hazard (e.g. what is the route of exposure when completing the task)	Calculate the risk rating without controls in place (See descriptor table overleaf)	The measures you select must address the hazard, be selected in accordance with the Hierarchy of Control and be clear to the worker. (Refer to the Hierarchy of Control Appendix A page 6 for guidance.)	i.e. the residual risk rating after controls are in place
		☐ Low ☐ Medium ☐ High ☐ Very high		☐ Low ☐ Medium ☐ High ☐ Very high
		☐ Low ☐ Medium ☐ High ☐ Very high		☐ Low ☐ Medium ☐ High ☐ Very high
		☐ Low ☐ Medium ☐ High ☐ Very high		☐ Low ☐ Medium ☐ High ☐ Very high

Authorisation for staff and student related tasks			
Residual risk rating	**Authorisation**	**Name and signature (or attach evidence of authorisation)**	
Low & medium risk	Supervisor/Person in control of the area/activity		
High risk	Head of School/Branch		
Very high risk	Executive Dean/Divisional Head		

Proof of hazard identification and risk assessment is required for this task

- ❑ File your completed Risk assessment as instructed by the Supervisor/Person in control of the area/activity
- ❑ Ensure there is a system for retaining formal Risk assessments in accordance with the State Records of SA, General disposal Schedule No 30 issued under the State Records Act 1997. (Contact the University's Records Management Office for further assistance/information if required.)

For activities with a Residual risk rating of high or very high risk

- ❑ The Head of School/Branch or Executive Dean/Divisional Head is to raise a risk under the University's Risk management framework through the University Risk Register.

DESCRIPTORS FOR ASSESSING THE LEVEL OF RISK

Likelihood Table

CATEGORY	DESCRIPTION
Almost certain	There is an expectation that an event/incident will occur.
Likely	There is an expectation that an event/incident **could occur** but not certain to occur.
Possible	This expectation lies somewhere in the midpoint between "could" and "improbable". May happen occasionally.
Unlikely	There is an expectation that an event/incident is doubtful or **improbable** to occur.
Rare	There is no expectation that the event/incident will occur.

Consequences Table

CATEGORY	DESCRIPTION
Severe	Injury resulting in death, permanent incapacity.
Major	Injury requiring extensive medical treatment (e.g. hospitalisation), or activities could result in a Notifiable occurrence.
Moderate	Injury requires formal medical treatment (e.g. hospital outpatient/doctors visit) Activities could result in an Improvement/Prohibition Notice.
Minor	Injury requires first aid treatment.
Negligible	Injury requires minor first aid (e.g. bandaid), or result in short term discomfort (e.g. bruise, headache, muscular aches), no medical treatment.

The level of risk will increase as the likelihood of harm and its severity increases										
Likelihood of exposure	**Consequences – level of seriousness of the injury following exposure to the hazard(s) -**									
	Negligible		**Minor**		**Moderate**		**Major**		**Severe**	
Almost certain	☐	**Medium**	☐	**High**	☐	**Very High**	☐	**Very High**	☐	**Very High**
Likely	☐	**Medium**	☐	**Medium**	☐	**High**	☐	**Very High**	☐	**Very High**
Possible	☐	**Low**	☐	**Medium**	☐	**High**	☐	**High**	☐	**Very High**
Unlikely	☐	**Low**	☐	**Low**	☐	**Medium**	☐	**Medium**	☐	**High**
Rare	☐	**Low**	☐	**Low**	☐	**Low**	☐	**Medium**	☐	**Medium**

HAZARD MANAGEMENT – RISK ASSESSMENT

This template or equivalent template can be used

Date: / /

MULTIPLE TASKS (If you have not completed a risk assessment before refer to the Handbook Chapter Appendix A for guidance)	**RECORD THE HIGHEST RESIDUAL RISK RATING** Ensure the appropriate level of authority to complete the activity can be evidenced. (e.g. a signature or formal approval attached)	☐ Low ☐ Medium ☐ High ☐ Very high
Physical location(s) or Operational unit:		
Names of workers involved in completing the risk assessment		

Supervisors/person in control of the area/activity

- *Ensure that the control measures address the hazards identified for each step in the process for this task.*
- *Ensure that there is a system for retaining this Risk assessment. (See section 5.1 of the Handbook chapter)*
- *Ensure that workers who undertake this task have access to this Risk assessment, are provided with the relevant, information, instruction and training required before they undertake the task. (This includes any other guidance material (e.g. Safe operating procedures) where required by this Risk assessment.)*
- *Ensure that if there is a requirement for instruction (Level 2 proficiency) and/or training (Level 3 competency/qualification) the information is added to the Training plan.*

Standard controls for this location (e.g. Lab/workshop rules) (See definitions for information on control banding) The control measures listed must be applied by all workers when entering the location regardless of whether they are completing the task. The control measures must be specific. They do not need to be repeated under each task below.	**[List lab/workshop rules here if applicable]**

Hazard identification: Stop and think. What could cause harm from start to finish?		**Assess the harm**	**What needs to be in place before you start?**	**Re-assess the level of risk**
Identify and list each hazard that is part of this work process	Record how/when the worker is exposed to the hazard (e.g. what is the route of exposure when completing the task)	Calculate the risk rating without controls in place (See descriptor table overleaf)	The measures you select must address the hazard, be selected in accordance with the Hierarchy of Control and be clear to the worker. (Refer to the Hierarchy of Control Appendix A page 6 for guidance.)	i.e. the residual risk rating after controls are in place
Task 1:	**[Describe the task here]**			
[List hazard here]		☐ Low ☐ Medium ☐ High ☐ Very high		☐ Low ☐ Medium ☐ High ☐ Very high
		☐ Low ☐ Medium ☐ High ☐ Very high		☐ Low ☐ Medium ☐ High ☐ Very high

Hazard identification: Stop and think. What could cause harm from start to finish?		Assess the harm	What needs to be in place before you start?	Re-assess the level of risk
Identify and list each hazard that is part of this work process	Record how/when the worker is exposed to the hazard (e.g. what is the route of exposure when completing the task)	Calculate the risk rating without controls in place (See descriptor table overleaf)	The measures you select must address the hazard, be selected in accordance with the Hierarchy of Control and be clear to the worker. (Refer to the Hierarchy of Control Appendix A page 6 for guidance.)	i.e. the residual risk rating after controls are in place
Task 2:	**[Describe the task here]**			
[List hazard here]		☐ Low ☐ Medium ☐ High ☐ Very high		☐ Low ☐ Medium ☐ High ☐ Very high
Task 3:	**[Describe the task here]**			
[List hazard here]		☐ Low ☐ Medium ☐ High ☐ Very high		☐ Low ☐ Medium ☐ High ☐ Very high

Authorisation for staff and student related tasks

Residual risk rating	Authorisation	Name and signature (or attach evidence of authorisation)	
Low & medium risk	Supervisor/Person in control of the area/activity		
High risk	Head of School/Branch		
Very high risk	Executive Dean/Divisional Head		

Proof of hazard identification and risk assessment is required for this task

- ❑ File your completed Risk assessment as instructed by the Supervisor/Person in control of the area/activity
- ❑ Ensure there is a system for retaining formal Risk assessments in accordance with the State Records of SA, General disposal Schedule No. 30 issued under the State Records Act 1997. (Contact the University's Records Management Office for further assistance/information if required.)

For activities with a Residual risk rating of high or very high risk

- ❑ The Head of School/Branch or Executive Dean/Divisional Head is to raise a risk under the University's Risk management framework through the University Risk Register.

DESCRIPTORS FOR ASSESSING THE LEVEL OF RISK

Assess the level of risk based on the likelihood of an incident occurring and the consequence

Likelihood Table		Consequences Table	
Almost certain	There is an expectation that an event/incident will occur.	**Severe**	Injury resulting in death, permanent incapacity.
Likely	There is an expectation that an event/incident **could occur** but not certain to occur.	**Major**	Injury requiring extensive medical treatment (e.g. hospitalisation) or activities could result in a Notifiable occurrence.
Possible	This expectation lies somewhere in the midpoint between "could" and "improbable".	**Moderate**	Injury requires formal medical treatment (e.g. hospital outpatient/doctors visit).
Unlikely	There is an expectation that an event/incident is doubtful or **improbable** to occur.	**Minor**	Injury requires first aid treatment.
Rare	There is no expectation that the event/incident will occur.	**Negligible**	Injury requires minor first aid (e.g. bandaid), short term discomfort (e.g. bruise, headache), no medical treatment.

The level of risk will increase as the likelihood of harm and its severity increases

Likelihood of exposure	Consequences – level of seriousness of the injury following exposure to the hazard(s) -									
	Negligible		Minor		Moderate		Major		Severe	
Almost certain	☐	**Medium**	☐	**High**	☐	**Very High**	☐	**Very High**	☐	**Very High**
Likely	☐	**Medium**	☐	**Medium**	☐	**High**	☐	**Very High**	☐	**Very High**
Possible	☐	**Low**	☐	**Medium**	☐	**High**	☐	**High**	☐	**Very High**
Unlikely	☐	**Low**	☐	**Low**	☐	**Medium**	☐	**Medium**	☐	**High**
Rare	☐	**Low**	☐	**Low**	☐	**Low**	☐	**Medium**	☐	**Medium**

HAZARD MANAGEMENT – RISK ASSESSMENT

Date: / /

SHORT FORM RISK ASSESSMENT

(This template is not intended for complex tasks.)

RECORD THE HIGHEST RESIDUAL RISK RATING Ensure the appropriate level of authority to complete the task can be evidenced. (e.g. a signature or formal approval attached)	☐ Low ☐ Medium ☐ High ☐ Very high

Title of the task (e.g. use of ……)	
Physical location(s) or Operational unit	
List the hazardous plant/equipment/chemical(s) used (if applicable)	
Author: (print name)	

Supervisors/person in control of the area/activity

- *Ensure that the control measures address the hazards identified for each step in the process for this task.*
- *Ensure that there is a system for retaining this Risk assessment. (See section 5.1 of the Handbook chapter)*
- *Ensure that workers who undertake this task have access to this Risk assessment, are provided with the relevant, information, instruction and training required before they undertake the task. (This includes any other guidance material (e.g. Safe operating procedures) where required by this Risk assessment.)*
- *Ensure that if there is a requirement for instruction (Level 2 proficiency) and/or training (Level 3 competency/qualification) the information is added to the Training plan.*

Step 1: Identify the hazards (tick as applicable)

1	☐ Animals (e.g. unpredictable behaviour, bites, stings, kicks)	12	☐ Hazardous terrain
2	☐ Biological (e.g. pathogens, body fluids)	13	☐ Hot work/risk of fire
3	☐ Communication (e.g. location, isolation)	14	☐ Moving powered lifting equipment
4	☐ Electrical equip. used outdoors, potential for electric shock	15	☐ Moving powered plant/equipment
5	☐ Fall from one level to another	16	☐ Moving vehicles in pedestrian access areas
6	☐ Falling, flying sharp objects	17	☐ Noise and sound >85dB(A)
7	☐ Fatigue (e.g. mental/physical exertion)	18	☐ Noise and sound peak level of > 135dB(C) for any period of time
8	☐ Ground/wall penetration	19	☐ Poor lighting
9	☐ Hazardous chemical exposure/radiation	20	☐ Security, aggression, personal threat
10	☐ Hazardous manual handling	21	☐ Temperature (hypothermia/burns)
11	☐ Hazardous plant/equipment	22	☐ Other:

Step 2: Assess the level of risk before control measures based on the likelihood of an incident occurring and the consequence).
Tick the highest risk rating assessed for the hazards you have identified

Descriptors for assessing the level of risk

Assess the level of risk based on the likelihood of an incident occurring and the consequence			
Likelihood Table		**Consequences Table**	
Almost certain	There is an expectation that an event/incident will occur.	**Severe**	Injury resulting in death, permanent incapacity.
Likely	There is an expectation that an event/incident **could occur** but not certain to occur.	**Major**	Injury requiring extensive medical treatment (e.g. hospitalisation, or activities could result in a Notifiable occurrence.
Possible	This expectation lies somewhere in the midpoint between "could" and "improbable".	**Moderate**	Injury requires formal medical treatment (e.g. hospital outpatient/doctors visit).
Unlikely	There is an expectation that an event/incident is doubtful or **improbable** to occur.	**Minor**	Injury requires first aid treatment.
Rare	There is no expectation that the event/incident will occur.	**Negligible**	Injury requires minor first aid (e.g. bandaid), short term discomfort (e.g. bruise, headache), no medical treatment.

Likelihood of exposure	**Consequences – level of seriousness of the injury following exposure to the hazard(s) -**									
	Negligible		**Minor**		**Moderate**		**Major**		**Severe**	
Almost certain	☐	**Medium**	☐	**High**	☐	**Very High**	☐	**Very High**	☐	**Very High**
Likely	☐	**Medium**	☐	**Medium**	☐	**High**	☐	**Very High**	☐	**Very High**
Possible	☐	**Low**	☐	**Medium**	☐	**High**	☐	**High**	☐	**Very High**
Unlikely	☐	**Low**	☐	**Low**	☐	**Medium**	☐	**Medium**	☐	**High**
Rare	☐	**Low**	☐	**Low**	☐	**Low**	☐	**Medium**	☐	**Medium**

Continued overleaf

APPENDIX B3 (Page 2 of 2)

HAZARD MANAGEMENT – RISK ASSESSMENT

Step 3: Manage the risk by selecting the appropriate level(s) of control.
Enter the ref number of the hazard(s) & tick/highlight control measures applicable.

Action(s) required to minimise the risk

Hierarchy of Control	Hazard ref number(s)	(e.g. Step 1 Ref numbers 1 & 10 if the activity involves Animals and Hazardous manual handling)	Hazard ref number(s)	
Level 1: ☐ Elimination **If this is not practicable, then:**		☐ Work process to cease. Advise your Supervisor of the outcome and determine next steps.		
Level 2: ☐ Substitution		☐ Substituted the hazard with a safer option (Please specify)		
Level 2: ☐ Isolation/Engineering		☐ Barrier/guard/shield/crush installed		☐ Trolley/hoist/mechanical aid used
		☐ Power/services isolated ☐ Platform/scaffold		☐ Fume hood used
		☐ RCD protection provided/installed		☐ Emergency stop button/device
		☐ Restricted/secure/swipe-card access		☐ Emergency shower/eye wash
		☐ Ventilation/extraction system		☐ Duress alarm (monitored/audible)
		☐ PC2 Lab		☐ Surveillance
		☐ Interlocked physical barrier		☐ Additional lighting
		☐ Safeguarding		☐ Communication equipment/radio/mobile
		☐ Platform/scaffold/fall protection		☐ Other:
Level 3: ☐ Administrative		☐ SOP completed & attached (see Appendix C) ☐ Safety Data Sheet reviewed and attached		Appropriate level of Information, instruction, training provided: (* record to be on file)
		☐ Monitoring device/badge dosimeter		☐ Info on control measures (Induction)
		☐ Permits complete (e.g. hotwork/confined space)		☐ * Worker induction to hazardous chemicals completed
		☐ Permission from Facilities Management to penetrate ground/wall (e.g. marquee)		☐ * Workers are proficient (if required)
		☐ Signs/warning labels displayed		☐ * Workers are competent/licensed
		☐ Standard precautions (infection control)		☐ Buddy/second operator to assist
		☐ Maintenance and testing program in place		☐ Health monitoring ☐ Audio testing
		☐ First aid kit		☐ Rest breaks
		☐ Emergency spill kit on site		☐ Other
		☐ Antidote available		
Level 3: ☐ Personal Protection Please indicate/circle/strike out or be specific if option not listed		Gloves ☐ Rubber ☐ Vinyl ☐ Leather ☐ Neoprene ☐ Cut resistant ☐ Nitrile		Protective clothing ☐ Lab coat ☐ Gown ☐ Long sleeves ☐ Long pants ☐ Helmet ☐ Hood ☐ Veil ☐ Steel capped/enclosed footwear ☐ Sun protection
		☐ Butyl ☐ Thermal -hot/cold		
		☐ Face shield/visor ☐ Dust mask		
		☐ Safety glasses ☐ Shield ☐ Goggles		
		☐ Air-purifying respirator		**☐ Other (please specify)**
		☐ Supplied air respirator		
		☐ Hearing protection - Ear plugs		
		☐ Hearing protection - Ear muffs		

Step 4: Calculate the residual risk rating after the abovementioned control measures are in place. Transfer to the top of page 1

☐	Very high	☐	High	☐	Medium	☐	Low

Step 5: Sign off by author and relevant authority (Name and signature)

Residual risk rating	Authorisation	Name and signature (or attach evidence of authorisation)	
Low & medium risk	Supervisor/Person in control of the area/activity		
High risk	Head of School/Branch		
Very high risk	Executive Dean/Divisional Head		

Proof of hazard identification and risk assessment is required for this task

- ❑ File your completed Risk assessment as instructed by the Supervisor/Person in control of the area/activity
- ❑ Ensure there is a system for retaining formal Risk assessments in accordance with the State Records of SA, General disposal Schedule No 30 issued under the State Records Act 1997. (Contact the University's Records Management Office for further assistance/information if required.)

For activities with a Residual risk rating of high or very high risk

- ❑ The Head of School/Branch or Executive Dean/Divisional Head is to raise a risk under the University's Risk management framework through the University Risk Register.

Appendix C

HAZARD MANAGEMENT – SAFE OPERATING PROCEDURE (SOP)

Only to be completed where required as a control measure under a Risk Assessment

A document setting out the requirements to carry out the work in a safe and healthy manner and in a logical sequence. It must be able to be easily read by those who need to know what has been planned. It is relevant to the following people: • the worker carrying out the work; and • the person who has management and control over the work.	A SOP, if identified as a control measure, is to: • identify the work; • specify/address the identified hazards relating to the work; • describe the measures to be implemented to control the risks; • take into account the circumstances at the workplace that may affect the way in which the work is carried out; • take into account emergency management arrangements where applicable; and • be communicated to all workers who carry out the work.

NAME OF THE TASK/ACTIVITY		**DATE:**
LOCATION		Insert photo (Optional)
RISK ASSESSMENT (RA) NAME		
Residual risk rating on the RA	☐ **Low** ☐ **Medium** ☐ **High** ☐ **Very High**	
Hazards identified on the RA		

PERSONAL PROTECTIVE EQUIPMENT (BE SPECIFIC AND SPECIFY PPE TO BE WORN DURING THE TASK) (DELETE THE ROW IF NOT APPLICABLE)

	Eye protection: ☐ Safety glasses ☐ Eye shields ☐ Safety goggles ☐ Other:	
	Face protection: ☐ Dust goggles ☐ Face shield ☐ Visor ☐ Face mask ☐ Dust mask ☐ Other:	
	Respiratory protection: ☐ Half face mask ☐ Air-purifying respirator ☐ Supplied air respirator ☐ Other:	 ☐ Full face mask
	☐ Long hair must be contained or covered ☐ Other:	
	Head protection: ☐ Hard hat ☐ Other:	
	Hand protection: ☐ Rubber ☐ Cut resistant ☐ Leather ☐ Vinyl ☐ Neoprene ☐ Nitrile ☐ Barrier creams ☐ Other:	
	☐ Enclosed footwear: ☐ Footwear that is resistant to spills of hazardous substances ☐ Boots with steel caps ☐ Other:	
	Protective clothing: ☐ Lab coat ☐ Gown ☐ Long sleeves ☐ Long pants ☐ High visibility ☐ Helmet ☐ Sun protection ☐ Other:	
	Hearing protection ☐ Ear plugs ☐ Ear muffs ☐ Other:	

DESCRIBE, IN SEQUENCE, STEPS TO COMPLETE THE ACTIVITY SAFELY

Pre-operational checks

Operational checks/steps to complete the activity from start to finish (including transport and waste disposal where relevant)

On completion of work – steps to make safe (including clean up, any waste disposal & service/maintenance requirements)

Emergency and Spill Procedures, Transport or storage requirements (where relevant), First aid/Medical

Prepared by

People involved in the drafting of this SOP			
Person authorising the SOP	Name:		Signature
	Position:		

This SOP must be reviewed after any incident/injury associated with this activity or when a Risk assessment is reviewed.
File your completed SOP as instructed by the Supervisor/Person in control of the area/activity and retain the SOP in accordance with the State Records of SA, General disposal Schedule No. 30 issued under the State Records Act 1997. (Contact the University's Records Management Office for further assistance/information if required.)