**HOW TO FILL IN A RISK ASSESSMENT (RA) FOR AN ENGN4200 PROJECT**

**Important concepts:**

The RA document required for an honours project is *a separate document* from other RAs that you may have written up for your lab/area.

The purpose of this document is:

* to outline all the risks that *a specific coursework student* will be exposed to as part of *their individual project*,
* for the supervisor to formally verify that appropriate control/elimination measures are in place and any necessary information is clearly listed in one place for the benefit of the student
* for the student to formally acknowledge that they accept the residual risk arising from the activity

Also please note that Tier 3 induction processes to gain access laboratory facilities do not replace the RA process if a RA (if one is required).

**Key steps to fill in a RA:**

1. On page i, provide details of student and supervisor. If any other staff members have assisted in making assessments and safe work decisions related to this RA (e.g., WHS team, etc.), please indicate their names
2. Mark this as a dynamic RA. A copy does not need to be deposited with the WHS Manager (though it will need to be shared on the ENGN4200 Wattle page)
3. On the Hazard selection table (pages iii and iv), mark all hazards associated with *all* activities that the student is foreseen to undertake as part of their project
4. In the Risk assessment table (page v), complete information about inherent and residual risks for all hazards listed previously. Tables on pages vii-x contain information to assist with this process.
   1. If control measures are already in place (i.e., an activity specific RA or SWP applies), then just reference it here.
   2. If new control measurements need to be developed for the project, then consider them and identify them here
5. The table on page vi calls for detail of any new control measures requiring development. Until these have been developed, work should not take place. Fulfilment of these additional control requirements will need to be followed up by the project supervisor.
6. Ensure that supervisor signature is provided on page vii. The student will then submit the finalised RA through the Wattle course page.
7. Return to page i and report the highest level of risk in the Top Residual Risk cell.

**Please note that, normally, undergraduate project work should have a residual risk rating of Low.   
Consider not engaging UG students in risky lab activities or provide continued arms-length supervision to reduce the level of risk exposure.**

Please refer to the annotated template in the next few pages for details/examples.

**Appendix B WHS Hazard and Risk Assessment Template**

* This form is used when a documented risk assessment is required in accordance with Appendix A of WHSMS Handbook Chapter 3.1.
* Original risk assessments must be located in a convenient location in the local area accessible by all people affected by the risk assessment.
* Risk assessment for static hazards/tasks/activities must be forwarded to local WHS Officer/Manager for inclusion in the School/Service Division Static Risk Assessment Template.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Static Risk Assessment No.** | | | | **Assessment Date** | | | **Reviewed by Date** | | | **Version** |
| *To be assigned by WHS Officer/Manager or equivalent* | | | |  | | | *Refer to Table 5 to determine* | | |  |
| **Name of the Task/Activity/Area/Hazards assessed** | ENGN4200 Individual Project for student  ***Name Surname uID*** | | | | | | **Top Residual Risk (L, M, H, E)** | | | | |
|  | | | | |
| **Description of the activity/task & location** | Project title or task(s) description.  Example: Collection and evaluation of acorns from ANU trees.  Complete at the end (e.g. M) | | | | | | | | | | |
| **School/Service Division** | School of Engineering | | | | | | | | | | |
| **Location and Supervisor** | **Location** | |  | **Supervisor** | | *Supervisor Name* | | | **Ph** |  | |
| **Risk Assessment Team**  Have you completed ANU WHS Risk Management Training?  Y  N  **IF NO, DO NOT PROCEED** | **Name** |  | | **Email** | |  | | | **Ph** |  | |
| **Name** |  | | **Email** | |  | | | **Ph** |  | |
| **Name** | Anyone who  participates in the RA  (if applicable) | | **Email** | |  | | | **Ph** |  | |
| **Name** |  | | **Email** | |  | | | **Ph** |  | |
| **Who are affected by this RA?** | All people in the location  A group/s of people (list below)  A single person (list below)  ***Student Name Surname uID*** | | | | | | | | | | |
| **Who are consulted on this RA?** (All persons affected or their representatives needs to be consulted) | *List the names of people who are consulted – Mandatory unless there is only 1 person affected* | | | | | | | | | | |
| **WHS Legal and Other Requirements** | Work Health and Safety Act 2011 (Cth)  Work Health and Safety Regulations 2011 (Cth)  ACT Health - Covid Advice  *For other legal requirements, choose from* [*University WHS Legal and Other Requirements Matrix*](http://imagedepot.anu.edu.au/whs/ANU%20WHS%20Legal%20and%20Other%20Requirements%20Matrix.xlsx) *for specific Risk Profile and corresponding requirements and* ***list them here****. Alternatively, you can refer to a WHSMS Handbook Chapter in this section.* | | | | | | | | | | |
| **Type of RA** | **Static RA (long term and > 6 months)** - Send a copy (electronic) to WHS Officer/Manager and keep original locally near the activity/location, accessible to all people affected.  Dynamic  **Dynamic RA (short term and < 6 months or once off)** – Keep the original locally (electronically or physically) near the activity/location, accessible to all people affected. | | | | | | | | | | |

**Risk Assessment Instruction**

1. Select hazards from **Table 1** below and transfer them into the ‘Hazards’ column of the RA Form.
2. Enter where and when this hazard exists. This may include specification of during which step, this hazard exists.
3. Estimate inherent risk of the hazard (without any controls in place) by using Likelihood against Consequences (defined in **Table 2**) and the ANU WHS Risk Matrix (**Table 3**). List them in ‘Inherent Risk’ column of the RA Form.
4. Develop control measures in accordance with the Hierarchy of Control Principle (**Table 4**) and list them in ‘Control’ column of the RA Form.
5. Estimate the residual risk of the hazard after implementing all controls. Remember that administrative control can only reduce the likelihood of an event occurring, not the consequences.
6. Identify any controls that are not in place as corrective actions and implement them before undertaking the activity.
7. Obtain approval from relevant people as identified.
8. Identify if this is a static risk assessment (> 6 months) or dynamic risk assessment (< 6 months).
9. Send a copy of the static risk assessments to WHS Officers/Managers/Equivalent – Keep on file for 7 years.
10. Keep originals of risk assessments in close vicinity of the activities. Dynamic risk assessments can be destroyed 1 year after the activity ceases.
11. Review the static risk assessments and associated safe work procedures in accordance with **3.1.2.6 Step 4: Review Control Measures** requirements

Table 1. Hazard Selection Table for Hazard Profiles

Tick all that apply,  
in the example, the student will do outdoor work on trees

| **Electrical** | |
| --- | --- |
|  | Electrical Shock (both minor and major) |
|  | Electrical Burns (both minor and major) |
|  | Overheating and fire |
|  | Electrocution |
|  | Other *(not listed above)* |

| **Chemical** | |
| --- | --- |
|  | Airborne contaminants that poses a health hazard |
|  | Flammable  Liquid  Solid  Gas  Airborne contaminants |
|  | Explosive substances |
|  | Self-reactive or self-heating chemicals |
|  | Organic peroxide or peroxide-forming chemicals |
|  | Oxidising substances |
|  | Hydrofluoric acid (HF) |
|  | Corrosive  Substances  Gas  Airborne contaminants |
|  | Asphyxiate gas (e.g. CO2 including dry ice, liquid N2) |
|  | Toxic and health hazard substances |
|  | Toxic gas (e.g. Hydrogen cyanide, cyanogen) |
|  | Respiratory irritants (e.g. engineered nanomaterials, dust, asbestos) |
|  | Chemical spraying (e.g. agricultural, pesticides) |
|  | Chemicals requiring health monitoring (e.g. Schedule 14 Chemicals). |
|  | Prohibited and restricted carcinogens |
|  | Mutagens or reproductive system hazards |
|  | Hazards during storage (e.g. mixed hazards storage, dangerous when wet, temperature sensitive, heat & friction sensitive etc) |
|  | Mix two chemicals to form a new chemical |
|  | Chemical spill – Controlled or uncontrolled |
|  | Exposure to Hazardous Materials (e.g. Asbestos, Lead or Mercury). |
|  | Other *(not listed above, e.g. hazard interactions)* |

| **Biological** | |
| --- | --- |
|  | Live animal handling (e.g. bites, allergies) |
|  | Potential of uncontrolled outbreak of an infectious disease |
|
|  | Pathogen or body fluid contamination |
|  | Exposure to viruses including blood borne viruses |
|
|  | Infective microorganism exposure |
|  | Exposure to communicable or infectious disease as a research object |
|  | GMO exposure and security |
|  | Sharps and contaminated sharps |
|  | Biological material spillage |
|  | Other *(not listed above)* |

| **Plant and Equipment** | |
| --- | --- |
|  | Entanglement and trapping parts |
|  | Crushing, rotating and cutting parts |
|  | Serious burn/cold |
|  | Ejection of piece/s; shattering or fragmentation; Explosion; Implosion |
|  | Stabbing, puncturing, shearing, friction, abrasion |
|  | Lifts or suspends a load (e.g. falling objects) |
|  | Rollover or striking against the plant |
|  | Pressurised vessels (e.g. autoclave, boilers, steam generator) |
|  | Mobile lifting equipment and Elevated Work Platform (e.g. heavy load fall from height) |
|  | Hazardous levels of heat or vibration (generated by plant to whole or part body) |
|  | Potential exposure to fluids under high pressure |
|  | Other *(not listed above)* |

| **Noise** | |
| --- | --- |
|  | Exposure to 85dB(A) LAeq, 8h |
|  | Exposure to peak noise level of 130 dB(C) any time during the work activity |
|  | Exposure to ototoxic chemicals:  At any noise level  > 50% of the OEL of the chemical at any noise level  At over 100 dB noise level but any level of exposure to ototoxic chemicals |
|  | Exposure to vibration & ototoxic chemicals |
|  | Nuisance level of noise causing discomfort |
|  | Other (*(not listed above)* |

| **Radiation** | |
| --- | --- |
|  | Sealed or Unsealed sources (alpha, beta or gamma) |
|  | Exposure to EM Radiations (e.g. X-ray, UV, infrared) |
|  | Exposure to artificial radiation (e.g. laser) |
|  | Security of sealed and unsealed sources |
|  | Other *(not listed above)* |

| **Ergonomics and Manual Tasks** | |
| --- | --- |
|  | Repetitive or sustained forces |
|  | Sustained awkward static postures |
|  | Repetitive movements |
|  | Long duration |
|  | High Forces |
|  | Long duration of the same posture (e.g. standing, sitting) |
|  | Animal handling or handling unbalanced/unpredictable load |
|  | Transfer of item(s) up or down stairs, using both hands or requiring the use of lifting equipment from one level to another |
|  | Repetitive, monotonous work, at a high pace |

| **Duress and Security Stress** | |
| --- | --- |
|  | Personal life threat e.g. violence behaviour, attacking with knives, guns, clubs, or any type of weapon |
|  | Personal threat e.g. aggressive behaviour, physical abuse, assault (includes home visits, public interview) |
|  | Verbal abuse, threat |
|  | Sexual assault/Raping |
|  | Bomb threat or unidentified package |
|  | Throwing objects, pushing, shoving, tripping, grabbing, kicking, hitting |
|  | Contact with body fluid (e.g. biting, spitting, scratching) |
|  | Kidnaping in a public location while conducting interviews |
|  | Unauthorised persons gained access to a building |
|  | Other *(not listed above)* |

| **Public Safety** | |
| --- | --- |
|  | Uncontrolled spread of hazardous materials to public |
|  | Uncontrolled spread of GMO, communicable or infectious disease to public |
|  | Natural disaster e.g. earthquake, flood, bushfire |
|  | Explosion of liquid nitrogen tanks or other tanks that would injure public |
|  | Loss of radioactive sources that are potentially hazards to students and public |
|  | Hazardous wastes going into drinking water/public river/public sewage |
|  | Use of industrial robots or University designed robots |
|  | Use of VR, AI or emerging technology on experiment participants |
|  | Provide experiment participants with confronting materials that would cause traumatic events |
|  | Supply/inject/apply substances (e.g. alcohol, chemical, S4-S9 drugs) to experiment participants |
|  | Other *(not listed above)* |

| **Physical/Environmental** | |
| --- | --- |
|  | Animals (e.g. hazardous wild animals, bees, snakes) |
|  | Confined space entry (e.g. pit, tank, silo, entry through a hatch) |
|  | Fall from a height (e.g. ladder, elevated platform, cliff, scaffolding) |
|  | Fire (potential for uncontrolled fire due to ignition sources) |
|  | Flying or moving items/plant/vehicles, falling object(s) |
|  | Hazardous terrain or environment including wet/slippery surfaces |
|  | Lighting/visibility is compromised and hazardous |
|  | Exceedingly strong lighting both natural and artificial |
|  | Glare and reflections |
|  | Temperature or weather extremes (e.g. hypothermia, major burns) |
|  | Difficult to access work site,  or a rescue effort would be difficult in the event of an emergency |
|  | Poor air quality or ventilation at work |
|  | Insufficient/poor amenities (e.g. toilets, lunch area, breakout area, air-conditioner) |
|  | Fall on same level (e.g. slip, trip, wet or unstable surface) |
|  | Other *(not listed above)* |

| **Traffic Safety** | |
| --- | --- |
|  | Lack of separation of vehicles, delivery drivers and pedestrians |
|  | Lack of physical barriers to prevent interaction between vehicles, delivery drivers and pedestrians |
|  | Vehicles queue in a way that could create risks to pedestrians, for example crossing walkways or  obstructing people’s view of vehicles |
|  | Routes are not wide enough to separate vehicles and pedestrians |
|  | Vehicles and pedestrians frequently interact |
|  | Activities done close to public areas (e.g. students coming out from a School building) |
|  | Unsuitable road conditions, uneven terrains, unregulated road routes |
|  | Certain times of higher traffic volumes or interactions between vehicles, delivery drivers and pedestrians |
|  | Poor lighting, visibility, shade or glare |
|  | Potential contact with stationary objects e.g. overhead structures, stationary plant or stored or discarded items. |
|  | Blind spots at the workplace caused by stationary equipment and vehicles and other areas of poor visibility or low lighting levels |
|  | Other hazards e.g. noise, emissions or falling objects surrounding the building |
|  | Pedestrian routes are not designed so pedestrians will not take short cuts |
|  | Intersections and bottleneck areas around driveways and entrances |
|  | ‘Blind’ or convex corners |
|  | Lack of disabled access to and within a workplace |
|  | Workers are not aware of insurance policy or emergency procedure on road |
|  | Lack of maintenance of bikes and cars provided to workers |
|  | Use of personal vehicle or bikes for work activities |
|  | Other *(not listed above)* |

| **Event Specific** | |
| --- | --- |
|  | Access to the event is restricted/controlled |
|  | Amenities, including disabled amenities inadequate/insufficient |
|  | Amusement structures/rides/inflatable structures |
|  | Animals and wildlife |
|  | BBQ using gas bottles |
|  | Children under the age of 18 are part of the event or attending |
|  | Hit by a vehicle (e.g. moving cars in proximity to pedestrians) |
|  | Held in a remote area, difficult to access site) |
|  | Crowding |
|  | Communication problems/co-ordination of information/alerts |
|  | Fatigue e.g. duration of the event, extreme heat |
|  | Liquor license |
|  | Medical emergency, difficult to administer or obtain first aid gain assistance e.g. access to medical facilities |
|  | Scaffolding more than 4m in height |
|  | Food services and preparation |
|  | High risk work licence required in accordance with WHS Regs |

| **High Risk Travel** | |
| --- | --- |
|  | Risk of kidnapping in this city/region |
|  | Current civil unrest/political tension |
|  | Violent crime |
|  | Threat of attack from bordering nations |
|  | Region affected by natural disaster |
|  | Threat of regional disputes spreading |
|  | Heightened risk terrorist attacks can occur |
|  | Health risks from insect borne disease |
|  | Health risks from water borne disease |
|  | Health risks from other infectious disease in the destination countries |
|  | Threat of assault and sexual assault in foreign countries |
|  | Travel by some roads restricted due to risks |
|  | Risk of violence or discrimination based on gender or LGBTI identity |
|  | Unpredictable and potentially volatile security situation |
|  | Other *(not listed above)* |

| **Working Away from Campus** | |
| --- | --- |
|  | Lack of appropriate communication tools/aid |
|  | Lack of tracking to know where the person is |
|  | Remote or isolated work locations |
|  | Use of poorly maintained vehicles or use of personal vehicles |
|  | Wildlife or animals |
|  | Traffic accidents while going to or from Campus |
|  | Duress situations including being threatened by the public |
|  | Poorly set-up/resourced offsite workspace |
|  | Social isolation and lack of day to day support |
|  | Loss of usual health/self-care routines such as exercise and sleep |
|  | Other *(not listed above)* |

| **Psychosocial** | |
| --- | --- |
|  | **Environmental** – Workplace not compliant with WHS requirements |
|  | **Environmental** – Poor air quality, high levels of noise, extreme temperatures |
|  | **Environmental** – Lack of WHS consideration for unsafe plant |
|  | **Environmental** – Other: please list |
|  | **Organisational** – High job demand, long working hours |
|  | **Organisational** – High workloads, time pressure, fast work pace |
|  | **Organisational** – High emotional effort responding to distressing situations and to aggressive colleagues or students |
|  | **Organisational** – Direct exposure to traumatic events at work |
|  | **Organisational** – Indirect exposure to traumatic events at work |
|  | **Organisational** –Shift work, casual employment, afterhours work, fatigue management |
|  | **Organisational** – Frequently working in unpleasant conditions |
|  | **Organisational** – Low job demands, too little to do, monotonous tasks |
|  | **Organisational** – Low job control |
|  | **Organisational** – Poor support, including emotional support, from employer, colleagues and managers |
|  | **Organisational** – Workplace bullying, aggression, harassment and sexual harassment, discrimination etc |
|  | **Organisational** – Poor relationship between supervisors/line managers and staff or HDR students or other workers |
|  | **Organisational** – Poor relationship between supervisors/line managers and staff or HDR students or other workers |
|  | **Organisational** – workplace conflicts |
|  | **Organisational** – Perceived or actual lack of fairness, equity and diversity; discrimination against community groups or members (e.g. LGBTQI) |
|  | **Organisational** – Low role clarity; uncertainty about changes or frequent changes to tasks and work standards; conflicting job roles |
|  | **Organisational** – Poor organisational change management; poor consultation in change management |
|  | **Organisational** – Low recognition and reward; low recognition in high WHS performance |
|  | **Organisational** – Poor organisational justice; inconsistent application of policy and procedures; bias on resource allocation |
|  | **Organisational** – No standardised WHS management practices across the University |
|  | **Organisational** – Frequent remote and/or isolated work |
|  | **Organisational** – Violent events such as robbery, assault, being threatened by managers, colleagues or managers |
|  | **Individual** – innate susceptibility to stress; disabled worker; pre-existing mental and/or physical conditions; age and experience of worker, external stressors eg carer responsibilities, financial situation, relationship status. |
|  | **Teaching** – SELT Aggression or abuse towards teaching staff from students |
|  | Other *(not listed above)* |

| **COVID-19** | |
| --- | --- |
|  | Common Controls associated with COVID-19 ([Appendix B.1](http://imagedepot.anu.edu.au/whs/3.1%20Hazard%20Management/3.1%20Appendix%20B.1%20Common%20controls%20for%20COVID-19%20exposure%20at%20work.pdf)) |
|  | Other *(not listed above)* |

Tick all that apply

| **Other Hazard Profiles not listed above** | |
| --- | --- |
|  | *Please identify in the Hazard Profile here and hazards in the form below* |

|  |  |
| --- | --- |
|  | **No hazards are identified. No Risk Assessment is required.** |

| **Risk Assessment** | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Hazards**  Also list where and when can the hazards present? | **Inherent Risk** | | | **Control Measures**  When control a hazard, always follow Hierarchy of Control Principle to go to the highest possible control before moving to less effective controls (see Table 4).  List the control category and the controls below. Do the same for all other hazards. For any controls that are not in place, fill in the Actions table on the next page. | **Residual Risk** | | |
| **Likelihood** | **Consequence** | **Risk rating** | **Likelihood** | **Consequence** | **Risk rating** |
| **EXAMPLE**  **COVID-19 Exposure**  **Moderate/Medium** | **Almost certain** | **Major** | **Extreme (22)** | **Refer to Chapter 3.1** [**Appendix B.1**](http://imagedepot.anu.edu.au/whs/3.1%20Hazard%20Management/3.1%20Appendix%20B.1%20Common%20controls%20for%20COVID-19%20exposure%20at%20work.pdf)  **Elimination**   * No people with COVID symptoms are allowed to be at work or attend classes and must get tested (remain isolated until test result is negative).   **Substitution**   * Remote/virtual teaching, learning, meetings.   **Isolation**   * Maintain physical distancing in line with current state/territory requirements.   **Engineering**   * Up to date COVID vaccination (including booster). * Access to handwashing facilities with soap and paper towel or hand sanitiser. * Ventilation and HEPA filter installed.   **Administration**   * QR Check-In App. * ACT Health and University Guidelines. * Rostering scheduled for workers.   **PPE**   * Properly fitted P2/N95 face masks. | **Rare** | **Moderate** | **Low (5)** |
| **UV exposure from solar radiation** | **Almost certain** | **Minor** | **High (14)** | **Engineering** Apply sunscreen | **Unlikely** | **Insignifcant** | **Low (2)** |
| **Contact with dangerous arboreal wildlife (spiders, snakes)** | **Possible** | **Major** | **High (17)** | **Elimination** Survey tree carefully before commencing task; **PPE** full-length clothes, gripper gloves, helmet, goggles | **Unlikely** | **Minor** | **Medium (6)** |
| **Physical injury from working with plants, including working at heights  as identified in RA-XYZ for garden activities**  *Example of citing existing RA* | **Possible** | **Moderate** | **High (15)**  *Example of citing existing controls* | **Elimination**  Do not climb to heights exceeding 3m**. Engineering**  Use only School-supplied ladder.  **Other existing controls**  Follow existing RA for garden activities and SWP XX-123 for the use of ladders | **Rare** | **Moderate** | **Low (5)** |

| **Actions** | | | |
| --- | --- | --- | --- |
| **The activity must not be commenced until all controls are in place.**  List below which controls are currently not in place, who will implement them and by when. Add additional rows as needed. | | | |
| **List of Controls not in place** | **Who is to implement them?** | **Timeframe** | **Date Completed** |
| **School Ladder with safety labels needs to be purchased** | **SoEN Admin / WHS teams** | **by 30/04/2022** |  |
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If the level of residual risk is assessed as high or extreme,

* 1. Stop the activity immediately; AND
  2. Tag out the plant/equipment; and/or
  3. Secure any chemical; and
  4. Implement, or seek advice from WHS Officer or Subject Matter Experts to implement, additional controls to reduce the residual risk further to medium [Supervisor signature required];
  5. If the above is absolutely not possible, seek approval from relevant authority (High – School/Division Director/College Dean; Extreme – COO). **NOTE: Approval will only be granted in exceptional circumstances after consultation with Associate Director, WEG and/or a Subject Matter Expert.** See Chapter 3.1 for details.

Signatures in this section

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Approval required** | | |  |  | | |
| **Worker conducted RA** | | | | **Student conducted RA** | | |
| **Residual Risk Level** | **Authority required** | **Signature and date** | | **Residual Risk Level** | **Authority required** | **Signature and date** |
| **Low** | **Author of RA** |  | | **Low** | **Supervisor** |  |
| **Medium** | **Supervisor** |  | | **Medium** | **Supervisor** |  |
| **High** | **School/Service Division Director**  **College Dean** |  | | **High** | **School/Service Division Director**  **College Dean** |  |
| **Extreme** | **COO** |  | | **Extreme** | **COO** |  |

Table 2.1 Likelihood Table

|  |  |  |
| --- | --- | --- |
| **Ranking** | **Description** | **Probability or frequency of event happening** |
| Almost certain | The hazard is expected to lead to an event in most circumstances at the University | A daily to monthly occurrence |
| Likely | The hazard could lead to an event in most circumstances at the University | Between monthly to yearly occurrence |
| Possible | The hazard has led to an event at some time at the University | Occurs once between 1 to 5 years |
| Unlikely | The hazard could lead to an event at some time | Occurs once between 5 to 20 years |
| Rare | The hazard may lead to an event in exceptional circumstances | Occurs once between 20+ years |

Table 2.2 Consequences Table

|  |  |  |  |
| --- | --- | --- | --- |
| **Ranking** | **Injury, Illness or Disease** | **Plant, Equipment and materials** | **Environment** |
| Catastrophic | Fatality / fatalities or permanent disability. Permanently unable to work | Destroyed or cannot be reused | Long term permanent effect to ecosystems. Significant intervention required to remediate |
| Major | Requiring extensive medical treatment such as hospitalisation as in patient and possibly a Notifiable Incident  LTI >1 week | Damage requiring repairs/rebuild and possible recertification prior to reuse, lost use for one or more days | Notification to environmental agency, ecosystem will need time to recover, intervention required to remediate |
| Moderate | Minor medical treatment injury, such as treated by a health professional, hospital outpatient, no potential to be a Notifiable Incident  LTI < 1 week and can return to normal duties | Damage requiring a repair/service by a trade/technician within the day | Contamination event that does not impact on ecosystem. Short impact does not need intervention |
| Minor | Injury needing significant first aid treatment and can return to work within shift | Equipment able to be reset or gotten back into operation by the operator | Minor contained contamination ceasing when the short event is over, can remediate (e.g. spill kit) |
| Insignificant | Report only, no injury OR minor first aid (e.g. bandaid); short-term discomfort | Report only, no damage | Report only, no contamination |

Table 3 ANU WHS Risk Matrix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Insignificant | Minor | Moderate | Major | Catastrophic |
| Almost certain | Medium (10) | High (14) | Extreme (21) | Extreme (22) | Extreme (25) |
| Likely | Medium (7) | High (13) | High (16) | Extreme (20) | Extreme (24) |
| Possible | Low (4) | Medium (9) | High (15) | High (18) | Extreme (23) |
| Unlikely | Low (2) | Medium (6) | Medium (8) | High (17) | High (19) |
| Rare | Low (1) | Low (3) | Low (5) | Medium(11) | Medium (12) |

Table 4. Hierarchy of Control

|  |  |  |
| --- | --- | --- |
| **Level** | **Examples** | **Effectiveness** |
| Elimination | * Remove the hazards completely * Cease the activity * Dispose of unwanted hazardous chemicals or plant etc * Individuals with COVID symptoms are not allowed at work, attend classes or be present on campus, and must get tested (remain isolated until test result is negative) | **Most EffectiveLeast Effective** |
| Substitution | * Use less hazardous chemicals * Use safer plant equipment * Use handset instead of telephone * Move smaller weight loads instead of large weight * Remote teaching, learning and meetings (COVID) * Outdoor gathering and functions (COVID) |
| Isolation | * Physical separation from the hazard by distance or complete shielding * Install guard rails around edges and holes to floors * Move workers to a new room away from hazardous noise * Maintain physical distancing in line with current state/territory requirements (COVID) * Hire sufficient vehicles to ensure physical distancing during field trip (COVID) |
| Engineering Control | * Use ventilation system * Use fume cupboard when working with hazardous chemicals * Install guarding around rotating and crushing parts * Use trolley or hoist to lift heavy loads * Use duress alarm system while doing home interview or offsite field work * Up to date COVID vaccination (COVID) * Access to hand sanitiser/wash (COVID) |
| Administrative Control | * Use Safe Work Procedures **[See section 3.1.3.1]** or instructions * Induction and WHS information * Training **[See Handbook Chapter 3.2]** * Contingency Planning and Testing **[See section 3.1.3.2]** * Permit to Work system **[See section 3.1.3.3]** * Signage * QR Check-in system (COVID) |
| Personal Protective Equipment (PPE) | * Lab coat * Safety glasses/face shield * Gloves/cryogenic gloves * Respirators/Masks (e.g. P2/N95 for COVID protection) * Personal hearing protectors |

**Table 5 Risk Assessment and SWP review timeframe**

Use this Table to determine risk assessment and safe work procedure review timeframe and frequency and put in the front of the risk assessment.

|  |  |  |  |
| --- | --- | --- | --- |
| **Residual Risk** | **Review Frequency** | | **What to do during the review.** |
| Extreme | 6 monthly | And/or  After an incident where deficiencies in identifying or controlling hazards have been observed  When changes to the activity need to occur  When significant changes (e.g. renovation) to the workplace need to occur  When HSRs request a review | Stop work. Review the control measures and introduce additional control measures to reduce the residual risk to Medium as a maximum. |
| High | Annually | Stop work. Review the control measures and introduce additional control measures to reduce the residual risk to Medium as a maximum. |
| Medium | Two yearly | Review the control measures. |
| Low | Three yearly | Review the control measures. |