**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** |
| *AAT – 30* | **16/03/2021** | *11 April 2021* | **1.6** |
| **Name of the Task/Activity/Area/Hazards assessed** | Guided Public Tours of the Anglo Australian Telescope and surrounding areas | **Top Residual Risk (L, M, H, E)** |
| **Medium** |
| **Description of the activity/task & location** | Tour of the AAT. Access to the AAT through main doors, traverse the ground floor, use of the freight elevator to access to 4th floor and the external catwalk. Return via the freight elevator and exit through main doors.These tours may also include walking around the grounds of SSO.The AAT cannot accommodate people with certain disabilities, there are stairs from 4th – 6th floor and catwalk area is not accommodating. Also a PEEP would be needed for this group of people. Hence it recommend that they don’t enter the AAT due to ANU emergency procedures that can’t be met.  |
| **School/Service Division** | RSAA – AAT - SSO |
| **Location and Supervisor** | **Location** | **SSO** | **Supervisor** | **Chris Lidman** | **Ph** |  |
| **Risk Assessment Team**Have you completed ANU WHS Risk Management Training? [x]  Y [ ]  N**IF NO, DO NOT PROCEED** | **Name** | **Zoe Holcombe** | **Email** | **Zoe.holcombe@anu.edu.au** | **Ph** | **0268426291** |
| **Name** | **Robert Brookfield** | **Email** |  | **Ph** | **0268426287** |
| **Name** |  | **Email** |  | **Ph** |  |
| **Name** |  | **Email** |  | **Ph** |  |
| **Who are affected by this RA?** | [x]  All people in the location [ ]  A group/s of people (list below)[ ]  A single person (list below) |
| **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*Chris LidmanRafat AlamRobert BrookfieldZoe HolcombeDaniel Bonello – RSAA SSO HSRBrad Condon – F&S Site ManagerMarnie Ogg – Dark Sky Traveller |
| **WHS Legal and Other Requirements** | Work Health and Safety Act 2011 (Cth)Work Health and Safety Regulations 2011 (Cth)*We refer to https://www.safeworkaustralia.gov.au/covid-19-information-workplaces/industry-information/trades-and-home-maintenance/physical on current recommendations on lift capacity restrictions. Even if workers and others only spend a short amount of time in a lift each day, there is still a risk of exposure to COVID-19 that you must eliminate or minimise so far as reasonably practicable.**There is no requirement to provide 4 square metres of space per person in lifts; however, you must still ensure, as far as you reasonably can,* *that people maintain physical distancing in lifts and lift waiting areas.* |
| **Type of RA** | [x]  **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 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

| **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 |
|
| [x]  | 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  |
| [x]  | 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 |
| [x]  | 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 |
| [x]  | Uncontrolled spread of GMO, communicable or infectious disease to public |
| [x]  | 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** |
| --- |
| [x]  | 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) |
| [x]  | Hazardous terrain or environment including wet/slippery surfaces |
| [ ]  | Lighting/visibility is compromised and hazardous |
| [ ]  | Exceedingly strong lighting both natural and artificial |
| [ ]  | Glare and reflections |
| [x]  | 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)  |
| [x]  | 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 orobstructing 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 |
| [x]  | 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)* |

| **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** |
| **Public and staff exposed to COVID-19 due to movement through the Anglo Australian Telescope** | **Unlikely** | **Catastrophic** | **High (19)** | **Elimination****•** exclude visitors with any symptoms of COVID-19, have travelled within 14 days internationally and have been in contact with anyone diagnosed with COVID -19.**Isolation****•** MAX of 6ppl in the AAT freight lift at all times* **MAX of 20 people per tour group**

**Administration*** Ensure all guests have signed a waiver prior to tour
* Use of hand sanitiser at start of tour
* Use of disinfectant on lift buttons and door handles after use. Note that the cleaning was done on the check list in the lift.
* Signage (COVID 19 – Posters from NSW Health)
* COVID Risk Assessment completed (Appendix B.4)
* Hard hats to be sanitised after each use

**PPE*** Ensure all guests and guides wear a face mask
 | **Rare** | **Catastrophic** | **Medium (12)** |
| **Falling material from height** | **Unlikely** | **Major** | **High (18)** | **Elimination****•**No entry of guests and guides to 4th floor while maintenance activities involving the movement of the telescope, dome, or crane are occurring**Isolation****•** Barricades are in place to prevent tour group from entering the area **Administration****•** Explain hard hats should be held on to/taken off; when on AAT catwalk due to high winds (hard hat could fly off and fall to ground)* Signage (hard hats to be worn)

**PPE*** Hard hats MUST be worn in the AAT Dome area
 | **Rare** | **Moderate** | **Low (5)** |
| **Fall on same level (e.g. slip, trip, wet or unstable surface)****(Because there is always someone that falls over)** | **Unlikely** | **Moderate** | **Medium (8)** | **Administration****•** Signage (watch your step)* First Aid kit
* Training in First Aid
* SSO Emergency contacts numbers
* AAT tour radio – (inside use only)

**PPE*** Enclosed shoes must be worn
 | **Unlikely** | **Minor** | **Medium (6)** |
| **Weather**Can include:* Lightning
* Rain
* Snow
* Fire
* Hot and cold temps
 | **Possible** | **Major** | **High (18)** | **Elimination****•** No walking tours should go ahead if there is lightening outside* No access to AAT Catwalk if lightening around
* No access to Site when Fire danger is Severe or above

**Substitution*** Tour Groups to Drive up to lodge carpark following Tour guide if raining; Or in a bus if available

**Isolation****•** Stay inside until storm passes over* Ice falling off dome – barriers out in front of AAT and access from Wshop Door ONLY

**Administration****•** Check for storms / weather before starting tour* SSO Emergency Plan / Procedures

**PPE*** Enclosed footwear MUST be worn
* Appropriate clothing
* Wear Sun Screen if on a walking tour
* Hat (sun protection)
 | **Rare** | **Major** | **Medium(11)** |
| **Wild Animals outside*** Snake bite
 | **Rare** | **Major** | **Medium(11)** | **Isolation****•** Stay away from snakes if you see one**Administration****•** Tour First Aid kit to have a snake bit module* Training in First Aid
* SSO Emergency contacts numbers
* AAT tour radio – (inside use only)
* SSO Emergency Plan / Procedures

**PPE*** Enclosed footwear
 | **Rare** | **Moderate** | **Low (5)** |
| **Guests / Students etc getting lost** | **Possible** | **Minor** | **Medium (9)** | **Administration*** Count how many on tour at start and finish
* Make them aware to stay with the tour group – DO NOT WONDER OFF
* Tour guide to keep eye on group
* Signage
* School Supervisors to monitor students all the time
 | **Rare** | **Minor** | **Low (3)** |
| **Hit by a vehicle (e.g. moving cars in proximity to pedestrians)**Walking tours on Site | **Unlikely** | **Moderate** | **Medium (8)** | **Administration*** SSO site staff know what times tours are happening and try to keep off the road
* Follow roads rules (eg speed limits)
* Slow down when approaching tour groups
* SSO Emergency Plan / Procedures
* First Aid Kit
* SSO Emergency Contact numbers
* Signage on roads
 | **Rare** | **Moderate** | **Low (5)** |
| **Equipment Damage**From people doing and touching things they shouldn’t! | **Possible** | **Moderate** | **High (15)** | **Isolation*** Tour groups only to be allowed in the designated areas as listed in this RA – no going into the Control Room, instruments, near 2df etc
* Entry and exit is via ground floor main entry door only
* MAX of 20 people per tour group

**Administration*** Guide / Teachers etc to monitor group at all times
* DO NOT touch equipment
* DO NOT climb on or touch equipment – including ladders etc
* signage
 | **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** |
| Covid Vaccine passport – when its available | N/A | Not known | N/A |
|  |  |  |  |
|  |  |  |  |

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.

|  |  |
| --- | --- |
| **Approval required** |  |
| **Worker conducted RA** |
| **Residual Risk Level** | **Authority required** | **Signature and date** |
| **Low** | **Author of RA** |  |
| **Medium** | **Supervisor** |  |
| **High** | **School/Service Division Director****College Dean** |  |
| **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 IncidentLTI >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 IncidentLTI < 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
 | **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
 |
| 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
 |
| 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
 |
| 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
 |
| Personal Protective Equipment (PPE) | * Lab coat
* Safety glasses/face shield
* Gloves/cryogenic gloves
* Respirators/Masks
* 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/orAfter an incident where deficiencies in identifying or controlling hazards have been observedWhen changes to the activity need to occurWhen significant changes (e.g. renovation) to the workplace need to occurWhen 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. |