

**GENERAL RISK ASSESSMENT TEMPLATE**

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| **Work area / operation** | CB11.10.403 | | **Assessor’s name** | Paul Morian | | | |
| **Other persons consulted** | Ahmad Syahmi Mohd Nasir & David Manu | | | | **Date of safety assessment** | | 05/09/22 |
| Subject Coordinator’s Name | Gavin Paul | Lab Supervisor’s Name | | | | Michael Lee | |

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| **ACTIVITY**  - Describe hazardous activities related to the work area or operation. | **ASSOCIATED HAZARDS** | **INHERENT RISK**  - Harm that could occur from these hazards if controls fail or are not in place. | **EXISTING CONTROL MEASURES** | **PROPOSED CONTROL MEASURES**  - Proposed action to minimise risk to an acceptable level. | **TARGET DATE**  - To implement proposed controls | **RESIDUAL RISK LEVEL** (H,M,L) |
| Electrical cables mishandled | Tripping, electricution,  Premature ware | Falling, death/permanent injury, equipment replacement prematurely | Cables are zip tied together and covered where appropriate, minimising risk | Wrap cables in high visibility tape where necessary to ensure even more visibility | 5/10/22 | L |
| Leaving the robot arm unattended | Failure of robot, | Damage to workspace,  Fire, Injury of others | Robots are not to be left unattended when in use. Part of robotics training | Have a monitoring camera where robots can be viewed and shit down outside of the lab | 5/10/22 | L |
| Using inappropriate load on the robot | Premature ware,  Failure of robot, | Premature equipment replacement, damage to workplace, possible injury to others | Robot parameters are often displayed on the robot if unsure of load capacity | Print a big parameters sheet and have it near the robot as a reminder | 5/10/22 | L |
| Robot arm moves incorrectly | Potential collisions with environment and people | Damage to workbench, high risk to injure colleagues | High level of training using simulators before using the actual robot. Ensuring correct robotic movement. | Practical robotics training using the real robot to ensure correct usage | 5/10/22 | L |
| Incorrect manual handling | Damage to goods | Replacement of goods, risk to others | If unsure ask Lab supervisor for assistance | Diagrams near robot showing correct manual handling strategies | 5/10/22 | L |
| Operating robot when tired or distracted | Prone to mistakes,  Unsafe for others | High risk of injury to yourself or others | If tired or distracted, do not operate heavy machinery | Report to supervisor before starting and usage of robot | 5/10/22 | L |

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| **Approval of assessment** | I am satisfied that the residual risk with existing controls is acceptable XYes ☐No  OR  I am satisfied that that the proposed controls will reduce risk to an acceptable level. XYes ☐No | Signature | Paul Morian | Date | 05/09/22 |

**Guidance notes for documenting General Risk Assessments**

**ACTIVITY**

**Briefly describe this hazardous work activity -** E.g. Operating, Handling, Using … (Include names) of hazardous equipment, substances or materials used, and any quantities and concentrations of substance(s) or reaction products.

**ASSOCIATED HAZARDS**

**Plant & Equipment** – noise, vibration, moving parts (crushing, friction, stab, cut, shear), pressure vessels, lifts/hoists/cranes, sharps

**Manual Handling** – repetitive movements, lifting awkwardly, lifting heavy objects

**Work Environment** – moving objects, extremes in temperature, isolation, work at height, allergies to animal bedding, dander and fluids, risk of fire/explosion, slippery surfaces/trip hazards

**People** – potentially violent or volatile clients/interviewees

**Communicable Diseases** – exposure to bodily fluids/infectious materials, animal bites and scratches,

**Environmental** – emissions to atmosphere, discharge to soil and water bodies (including stormwater run-off), nuisance noise & odour, poor ventilation/air quality

**Radiation (non-ionizing)** – including lasers, microwaves or UV light

**Electrical** – plug-in equipment used in ‘hostile’ work environment, exposed conductors, high voltage equipment

**Pathogens** – dealings with pathogenic microorganisms such as bacteria, parasites, fungi or viruses

**GMOs** – dealings with genetically modified organisms

**Cytotoxins** – carcinogens, mutagens or teratogens

**Radiation (ionizing)** – Ionizing radiation source such as radioactive substance or radionuclide, or irradiating apparatus

**Chemical** – hazardous substances, dangerous goods, fumes, dust, compressed gas, hazardous waste

**INHERENT RISK**

Provide details of the harm that could be caused to people or the environment if something goes wrong.

For example: inhalation of fumes, laceration, injury to back, infection, burns to skin or eyes.

Think about what could happen if controls fail or are not in place.

**CONTROL MEASURES**

Note the existing and proposed actions to reduce risk to an acceptable level. Apply the “Hierarchy of Controls”, listed below, when deciding the best control measure to apply. Control types closer the top of the list are preferable.

1. ELIMINATE THE HAZARD. For example: use a different less dangerous piece of equipment, fix faulty machinery, use safer materials or chemicals

2. ISOLATE THE HAZARD FROM THE PEOPLE. Separate people from the danger. For example: use shielding, use lifting equipment or trolleys, remove dust or fumes with exhaust system, lock-out machinery.

3. CHANGE THE WAY THE JOB IS DONE. For example: change work practices, provide training, information and signs, develop work procedures.

4. USE PERSONAL PROTECTIVE EQUIPMENT (PPE), noting specific PPE is required for each job. For example: respirator, hearing protection, gloves. Training and information is required for the use of PPE.

**RESIDUAL RISK LEVEL (H, M, L)**

Estimate risk taking into account the way the activity is run and control measures put in place. The level of risk can be determined by combining consequence and likelihood using the risk matrix from below. Residual risk should be reduced to a level acceptable by management.

**CONSEQUENCE OF HARM -** This is how bad it will be if something does go wrong e.g. the number of people that could be harmed, the severity of injury.

**LIKELIHOOD OF HARM** - Chance of harm occurring is affected by the duration of the activity and its frequency; the number of people doing the activity and the level of exposure to the hazard.

