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1. Hazard Management Details – General	
This form relates to OHS Procedure – *Hazard Identification, Risk Assessment and Control (HIRAC)*	
School / Work Location:	**Ballarat Tech School (Fed College)**
Name of Person(s):	Liam Mudge
Date Conducted:	24/03/2025
Last Reviewed:	31/01/2024
Next Review Due:	March 2026

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Description of Use:	Summary of Key Risks: (Refer to appropriate subsections)
The Ballarat Tech School (BTS) delivers a range of STEM curriculum projects, some of these activities may be hazardous to user's health if safety procedures and lab etiquette are not followed. This document assesses the risk involved with using personal hand tools and cutting devices such as: • Circular, Drop & Jig Saws • Handheld grinders. • Belt Sanders • Impact drills • Press drills • Bradding Gun Items of Plant/Power tool require induction and sign off by BTS Technical Officers/persons deemed competent.	• Entanglement • Electricity • Slips/trips/falls • Temperature • Shearing • Chemical

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Risk Assessment Matrix

Assessing OHS Risks

Risk assessments in matters of Occupational Health and Safety* are based on 2 key factors:

- The severity of any injury/illness resulting from the hazard(s), and
- The likelihood that the injury/illness will actually occur.

**Assessment of risk level based on likely severity and probability of harm*

		LIKELIHOOD			
		Very Unlikely Could happen, but probably never will	**Unlikely** Could happen, but very rarely	**Likely** Could happen sometime	**Very likely** Could happen any time
SEVERITY	Death or permanent disability	MEDIUM	HIGH	EXTREME	EXTREME
	Long-term illness or serious injury	LOW	MEDIUM	HIGH	EXTREME
	Medical attention and short-term incapacity	VERY LOW	LOW	MEDIUM	HIGH
	First aid needed	VERY LOW	VERY LOW	LOW	MEDIUM

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2. Documentation		
Relevant Legislation/Standards	**Y / N**	**Comments**
Key reference material:		• AS/NZS 3760:2022 In service safety inspection and testing of electrical equipment • Safe Use of Hand and Power Tools. Arrium Mining Safety. • Machinery and Equipment Safety- an Introduction. A Handbook for workplaces. WorkSafe Victoria.

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3. Hazards				
Hazards Inspected	**Initial Risk**	**Description of Risk**	**Control Measures**	**Residual Risk**
ENTANGLEMENT Can anyone's hair, clothing, gloves, cleaning brushes, tools, rags or other materials become entangled with moving parts of the tools or materials?	High	• Long hair, loose clothing, rags, cleaning brushes and jewellery could become entangled in the moving parts of the equipment or, could knock over equipment/vessels.	• Ensure hair, loose clothing, rags and jewellery is kept clear of moving parts when in use. • Aprons/Lab coats can be used to restrict loose clothing. • Hair ties/hair nets can be used to secure long hair. • Ensure inappropriate jewellery and accessories (e.g. bracelets) are not worn when operating equipment.	Low

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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
IMPACT & CUTTING INJURIES Can anyone be crushed/cut/struck etc. due to: • Material falling off the workspace? • Uncontrolled/unexpected movement of tools /workspace? • Lack of capacity to slow, stop or immobilize tools? • The tools tipping or rolling over?	High	• Tool or work piece may slip or move causing impact/cutting of user or other nearby persons. • Work piece/scrap may be ejected/displaced while working. • Misuse of tools may result in damage to tool, work piece or user.	• Training, induction, and supervision. • Use appropriate PPE while using tools. • Ensure workpiece and tools are securely fastened/installed before operation. • Direct tool operation away from operator. • Ensure workspace free from bystanders. • Ensure tools are stable and steady when placing on work bench. • Do not use tools other than for their intended purpose. • Ensure tools are stable and steady when placing on work bench.	Low

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• Parts of the tool disintegrating or collapsing? • Contact with moving parts during testing, inspection, operation, maintenance, cleaning, or repair? • Contact with sharp or flying objects? (e.g. work pieces being ejected) • Inappropriate parts and accessories being used? • Nails from bradding gun are ejected at high speed.	High	• Damaged tools/work surfaces etc may become dislodged/ejected. • Sharp moving parts may cause laceration to user. • Tool may slip or move causing impact/cutting of user or other nearby persons. • Inappropriate parts may become dislodged or act in unexpected manner • If the bradding gun safety trigger is engaged when not on a work piece it can fire nail in unsafe manner	• Inspect tools before use to ensure they are in good condition. • Maintain equipment in routine manner as specified by the manufacturer. • Ensure tools are properly and securely loaded before operation. • Allow adequate work area for user to avoid collision with other person/object. • Ensure tool is disconnected and discharged before undertaking any maintenance or fixing new tool piece. • Training, induction, and supervision. • Use appropriate PPE while using tools • Use tools appropriate to the task at hand. • Do not use tools other than for their intended purpose. • Bradding safety mechanism requires safety trigger to be engaged on work piece	Low

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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
SHEARING Can anyone's body parts be sheared between two parts of tool, or between a part of the tool and a work piece or structure?	High	• Reciprocating/rotating cutting tools may cause serious injury if operated incorrectly. • Blunt cutting tools may result in slipping and harm to user. • Inattention may result in interference with tool path	• Training, induction, and supervision. Ensure all cutting tools are appropriately sharpened and in good working order before use. • Ensure work piece is secured and stable. • Use cutting tools away from body and not towards another person. • Inspect tools before use to ensure they are in good condition. • Use appropriate PPE while using tools. • Use tools appropriate to the task at hand. • Allow adequate work area for user to avoid collision with other person/object. • use of exclusion zones as necessary.	Low

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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
ELECTRICITY Can anyone be injured or burnt due to: • Live electrical conductors? (e.g. exposed wires) • Access to electricity? • Damaged or poorly maintained electrical leads, cables or switches? • Water near electrical equipment?	High	• Exposure to hazardous voltage/currents • Damaged or frayed electrical cables pose an electrical hazard. • Access from 240V mains power supply. • Damaged or frayed electrical cables pose an electrical hazard. • Packing up tools before they have sufficiently cooled may cause damage to their cables. • Liquids may cause electrical short circuity.	• Induction & Supervision • Operator to check for damaged electrical cables prior to use. • Supply points kept clear of clutter. • Items requiring power are correctly inserted to supply. • Ensure all tools are powered down and allowed to cool (if hot equipment) before packing away. • Ensure equipment is regularly serviced, tested and tagged (if not hardwired) and appropriate isolation procedures (e.g. lock out tags) are in place. • No food or drink in work area.	Low

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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
ERGONOMICS Can anyone be injured due to: • Poorly designed workstation? • Repetitive body movement? • Inadequate or poorly placed lighting? • Does the activity impact on the surrounding workplace and create potential hazards? (Consider safe access and egress from plant, workflow and design of the workplace)	Medium	• Design of workstation does not allow for adequate space to perform tasks. • Bending, lifting, operating equipment in non-ergonomically adequate fashion may result in misuse of equipment or user injury. • Force required to shape/manipulate/fix work piece. • Inadequate lighting may result in incorrect wiring/assembly.	• Training, induction, and supervision. • Allow adequate work area for user to avoid collision with another person/object. • Users should avoid prolonged application of force, reassess appropriateness of tool, and use vice/grip. • Ensure adequate lighting to perform task. • Additional lighting may be required if ambient/room lighting is insufficient. • Ensure regular clean-up of site if dust/waste could cause slip/trip hazard.	Low

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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
FRICTION Can anyone be burnt due to contact with moving parts, materials or surfaces of the tool?	Medium	• Tools/workpiece may be hot after operation. • Sanding Belt may cause friction injury	• Allow tool/workpiece adequate time to cool before touching. • Use of appropriate PPE. • Do not touch sanding belt until machine is de-energised and come to a full stopped. • Induction and supervision.	Low
NOISE • Can anyone using the tool, or in the vicinity of the plant, suffer injury due to exposure to noise?	Medium	• Power tools may produce noise levels which can be harmful to human health. Especially over prolonged periods of time.	• Use of appropriate PPE • Ensure work area clear of bystanders.	Low

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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
SLIPS / TRIPS / FALLS Can anyone using the tool, or in the vicinity of the plant, slip, trip or fall due to: • Poor housekeeping, e.g. spillage in the vicinity? Obstacles being placed in the vicinity of the tool?	High	• Poor housekeeping practices allowing the build-up of waste materials or failure to immediately clean up spills could result in a slip hazard.	• Ensure appropriate cleaning and housekeeping practices are maintained to minimise the risk of a slip, trip or fall. • Regular cleaning of work area during use if dust/waste created	Low
TEMPERATURE / MOISTURE Can anyone come into contact with objects at high or low temperatures? • Can anyone suffer ill-health due to exposure to high or low temperatures?	Medium	• Friction from cutting/grinding tools may reach temperatures which burn the skin on contact.	• Avoid touching hot components. • Rest unit on heatproof surface. • Allow tool and workpiece to cool before picking up.	Low

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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
OTHER **Can anyone be injured or suffer ill-health from exposure to:** • Chemicals • Fumes/Dusts		• Fumes/Dust from cutting etc may cause health hazard/	• Ensure tool is placed to rest on appropriate mount while in use and cooling. • Ensure appropriate ventilation. • Use power fan as required. • Use of appropriate PPE	

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4. Risk Assessment Signoff		
Authorised By: Albert Ferguson	Signature: AFerguson	Date: 24/03/2025