

# HIRAC Report

<b>Title: Hand Tools</b>	<b>Authorized By:</b>
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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:	<b>Ballarat Tech School (Fed College)</b>
Name of Person(s):	Liam Mudge
Date Conducted:	30/01/2024
Last Reviewed:	24/01/2021
Next Review Due:	March 2025

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<p><b>Description of Use:</b></p> <p>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.</p> <p>This document assesses the risk involved with using personal hand tools and cutting devices such as:</p> <ul style="list-style-type: none"> <li>• Scissors, blades &amp; other cutting tools.</li> <li>• Hot glue guns.</li> <li>• Heat gun</li> <li>• Spanners, hammers, and screwdrivers.</li> <li>• Pliers, clamps, and vices.</li> <li>• Sewing needles, staple guns.</li> <li>• Hand Drills, Dremel's etc</li> </ul>	<p><b>Summary of Key Risks:</b> <b>(Refer to appropriate subsections)</b></p> <ul style="list-style-type: none"> <li>• Entanglement</li> <li>• Electricity</li> <li>• Slips/trips/falls</li> <li>• Temperature</li> <li>• Shearing</li> <li>• Chemical</li> </ul>
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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

## 2. Documentation

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Relevant Legislation/Standards	Y / N	Comments
Key reference material:		<ul style="list-style-type: none"> <li>AS/NZS 3760:2022 In service safety inspection and testing of electrical equipment.</li> <li>Safe Use of Hand and Power Tools. Arrium Mining Safety.</li> <li>Safe Use of Hand and Power Tools. Arrium Mining Safety.</li> </ul>

3. Hazards				
Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk

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<p><b>IMPACT AND CUTTING INJURIES</b>        Can anyone be cut/struck etc. due to:</p> <ul style="list-style-type: none"> <li>• Material falling off the workspace?</li> <li>• Uncontrolled/unexpected movement of tools /workspace?</li> <li>• Lack of capacity to slow, stop or immobilize tools?</li> <li>• The tools tipping or rolling over?</li> <li>• Parts of the tool disintegrating or collapsing</li> <li>• Contact with moving parts during testing, inspection, operation, maintenance, cleaning or repair?</li> <li>• Contact with sharp or flying objects? (e.g. work pieces being ejected)</li> <li>• Inappropriate parts and accessories being used?</li> </ul>	<p>Medium</p>	<ul style="list-style-type: none"> <li>• Work piece may slip or move while in use.</li> <li>• Tool may slip or move causing impact/cutting of user or other nearby persons.</li> <li>• Tools may fall off workspace onto user or other persons.</li> <li>• Work piece/scrap may be ejected/displaced while working.</li> <li>• Misuse of tools may result in damage to tool, work piece or user.</li> </ul>	<ul style="list-style-type: none"> <li>• Training, induction, and supervision.</li> <li>• Ensure work piece is secured and stable.</li> <li>• Direct cutting tools away from body and not towards another person.</li> <li>• Ensure tools are stable and steady when placing on work bench.</li> <li>• Inspect tools before use to ensure they are in good condition.</li> <li>• Use appropriate PPE while using tools, safety glasses, gloves etc.</li> <li>• Use tools appropriate to the task at hand.</li> <li>• Do not use tools other than for their intended purpose.</li> <li>• Allow adequate work area for user to avoid collision with other person/object.</li> </ul>	<p>Low</p>
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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
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<b>ENTANGLEMENT</b> Can anyone's hair, clothing, gloves, cleaning brushes, tools, rags or other materials become entangled with moving parts of the tools or materials?	Medium	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure hair, loose clothing, rags and jewellery is kept clear of moving parts when in use.</li> <li>Aprons/Lab coats can be used to restrict loose clothing.</li> <li>Hair ties/hair nets can be used to secure long hair.</li> <li>Ensure inappropriate jewellery and accessories (e.g. bracelets) are not worn when operating equipment.</li> </ul>	Low

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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
<b>SHEARING</b> 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?	Medium	<ul style="list-style-type: none"> <li>Scissors, scalpels, blades, and other cutting tools.</li> <li>Blunt cutting tools may result in slipping and harm to user</li> </ul>	<ul style="list-style-type: none"> <li>Training, induction and supervision.</li> <li>Ensure all cutting tools are appropriately sharpened and in good working order before use.</li> <li>Ensure work piece is secured and stable.</li> <li>Use cutting tools away from body and not towards another person.</li> <li>Ensure tools are stable and steady when placing on work bench.</li> <li>Inspect tools before use to ensure they are in good condition.</li> <li>Use appropriate PPE while using tools.</li> <li>Use tools appropriate to the task at hand.</li> <li>Do not use tools other than for their intended purpose.</li> <li>Allow adequate work area for user to avoid collision with another person/object.</li> </ul>	Low
Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk

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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
<b>ELECTRICITY</b> Can anyone be injured or burnt due to: <ul style="list-style-type: none"> <li>• Live electrical conductors? (e.g. exposed wires)</li> <li>• Access to electricity?</li> <li>• Damaged or poorly maintained electrical leads, cables, or switches?</li> <li>• Water near electrical equipment?</li> </ul>	Medium	<ul style="list-style-type: none"> <li>• Damaged or frayed electrical cables pose an electrical hazard.</li> <li>• Liquids may cause electrical short circuitry.</li> <li>• Packing up tools such as hot glue guns before they have sufficiently cooled may cause damage to their cables exposing wire.</li> </ul>	<ul style="list-style-type: none"> <li>• Operator to check for damaged electrical cables prior to use.</li> <li>• Ensure equipment is regularly serviced, tested and tagged (if not hardwired) and appropriate isolation procedures (e.g. lock out tags) are in place.</li> <li>• No food or drink in work area.</li> <li>• Ensure all tools are powered down and allowed to cool (if hot equipment) before packing away.</li> </ul>	Low

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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
ERGONOMICS Can anyone be injured due to: <ul style="list-style-type: none"> <li>Poorly designed workstation?</li> <li>Repetitive body movement?</li> <li>Constrained body posture or the need for excessive effort?</li> <li>Design deficiency causing psychological stress?</li> <li>Inadequate or poorly placed lighting?</li> <li>Is the location of the workplace inappropriate? (Consider potential effects due to environmental conditions and terrain)</li> </ul>	Medium	<ul style="list-style-type: none"> <li>Design of workstation does not allow for adequate space to perform tasks.</li> <li>Inadequate lighting may result in incorrect wiring/assembly.</li> <li>Force required to shape/manipulate/fix work piece.</li> </ul>	<ul style="list-style-type: none"> <li>Training, induction, and supervision.</li> <li>Ensure adequate lighting to perform task. Additional lighting may be required if ambient/room lighting is insufficient.</li> <li>Users should avoid prolonged application of force, reassess appropriateness of tool, and use vice/grip.</li> <li>Allow adequate work area for user to avoid collision with another person/object.</li> </ul>	Low
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Hazards Inspected	Initial Risk	Description of Risk	Control Measures	Residual Risk
<b>SLIPS/TRIPS/FALLS</b> Can anyone using the tool, or in the vicinity of the plant, slip, trip or fall due to: <ul style="list-style-type: none"> <li>• Uneven, slippery, or steep work surfaces?</li> <li>• Poor housekeeping, e.g. spillage in the vicinity?</li> <li>• Obstacles being placed in the vicinity of the tool?</li> </ul>	Medium	<ul style="list-style-type: none"> <li>• Poor housekeeping practices allowing the build-up of waste materials or failure to immediately clean up spills could result in a slip hazard.</li> <li>• Inappropriate placement of objects (e.g. spare materials, bags etc) in the immediate vicinity of the plant equipment may result in trip hazard.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure appropriate cleaning and housekeeping practices are maintained to minimise the risk of a slip, trip or fall.</li> </ul>	Low
<b>TEMPERATURE/MOISTURE</b> Can anyone come into contact with objects at high or low temperatures? <ul style="list-style-type: none"> <li>• Can anyone suffer ill-health due to exposure to high or low temperatures?</li> <li>• Can anyone be injured or suffer ill-health due to exposure to moisture?</li> </ul>	Medium	<ul style="list-style-type: none"> <li>• Heating element of the hot glue gun, heat gun can reach temperatures which may burn the skin on contact.</li> <li>• Glue is heated and remains hot to touch for a period of time after extrusion.</li> </ul>	<ul style="list-style-type: none"> <li>• Safety slide included for all programs using glue guns.</li> <li>• Avoid touching hot components.</li> <li>• Rest unit on heatproof surface.</li> <li>• Allow to cool before packing away.</li> <li>• Use of custom jig to keep hot glue guns in upright position.</li> </ul>	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: <ul style="list-style-type: none"> <li>Chemicals?</li> </ul>	Medium	<ul style="list-style-type: none"> <li>Hot glue</li> <li>Fumes from hot glue may cause nausea.</li> <li>Glue and Glue gun become hot during and shortly after use.</li> <li>Fumes associated with burning/cutting different materials e.g. wood, acrylic.</li> </ul>	<ul style="list-style-type: none"> <li>Instruct users of this intrinsic feature, ensure glue gun is placed to rest on appropriate mount while in use and cooling.</li> <li>Avoid unnecessary use and excessive contact with hot glue.</li> <li>Ensure appropriate ventilation.</li> <li>Refer to hot glue MSDS.</li> <li>Use portable fan as necessary</li> </ul>	Low

## 4. Risk Assessment Signoff

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Authorised By: Albert Ferguson	Signature: Aferguson	Date: 21/02/2024

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