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Hazards/Risks	Hierarchy of Recommended Control Measures
Exposure to Rotating or Moving Parts: **Entanglement and Entrapment** Could hair, clothing, ties, jewellery or other materials become entangled with moving parts of the equipment? **Impact and Striking** Could anyone be struck by the unexpected or uncontrolled movement of the equipment? **Note:** CNC robotics may move in a direction not anticipated or planned, at high speed in linear or rotary directions. The CNC may also eject work pieces, off-cuts or molten metal. Workers are at risk from being hit by the robotics or parts of the work piece.	1. Where possible, potentially hazardous plant, machinery and processes, including the CNC Mill, would be substituted or replaced with less hazardous alternatives. 2. All necessary CNC Mill guards and safety devices are in place protecting workers from all moving parts. 3. Micro switches are fitted that cut off power when covers or guards are opened. 4. “Lock Out” or warning “Danger” tags are affixed to the CNC Mill when under repair or maintenance preventing workers from using the equipment. 5. Staff and student training is provided to minimise exposure to these hazards. 6. Safe operating procedures (SOPs) for the CNC Mill are available and clearly displayed. 7. “Safe Working Zones” around the CNC Mill is clearly defined by yellow safety lines (or similar). 8. Emphasis is placed on the requirement for plant operators to remove all jewellery, tuck in loose clothing and tie back long hair. 9. All appropriate and approved personal protective equipment (PPE) is used where required.
Slips, Trips, Falls and Abrasions: Can anyone using the plant or in the vicinity of the plant, slip, trip or fall due to the working environment or other factors? e.g. Poor housekeeping, slippery or uneven work surfaces, power cables across work areas causing injuries and abrasions?	1. Slip resistant flooring is encouraged. Regular checks are made for unsafe wear and damage. Inspections are made for any power leads, etc. 2. Procedures are in place for the disposal of all waste materials around the CNC Mill. 3. Staff training is provided to minimise exposure to these hazards.

Hazards/Risks	Hierarchy of Recommended Control Measures
Environmental: **Noise** Is it likely that the normal operation of this plant will produce excessive noise levels? **Dust, Fumes and Vapours** Is it likely there will be airborne dust particles, toxic fumes or volatile vapours produced and therefore be present in the workspace? **Lighting** Is there insufficient lighting to operate this plant in a safe manner? Is there a possible strobe lighting effect caused by faulty fluorescent tubes in the workspace?	1. The CNC Mill is regularly maintained to help reduce exposure to these hazards. 2. All CNC Mill maintenance is documented in a register (EMRs). 3. Exposure to noisy ITD workshop environments is monitored and evaluated regularly for all workers. 4. Engineering controls (or physical changes) such as mandatory machinery guarding or any protective safety screens and enclosures are in place in all workspaces and all in good working condition. 5. Staff and student training is provided to minimise exposure to these hazards. 6. All ducted dust, waste and fume extraction systems are fully maintained, cleaned and emptied, connected and operational. 7. Good lighting is provided to all workspaces and this is maintained on a regular basis. Fluorescent tubes are checked and replaced as required. 8. All appropriate and approved personal protective equipment (PPE) is used where required.
Electrical: Can the operator be injured by electrical shock due to working near or contacting with damaged or poorly maintained live electrical conductors such as power outlets, extension leads, safety switches, starters and isolators or casual water on the floor near plant and machinery?	1. Visual checks are made of the 240v power lead and plug, and the restricted electrical assess cabinet on the CNC Mill. Interfaces with electrical wiring and/or switches should be isolated and guarded. 2. Electrical safety inspections, testing and tagging, etc. are completed regularly as per guidelines for all corded power equipment. 3. Warning “Danger” tags (or similar) are affixed when the CNC Mill equipment under repair or maintenance preventing workers from using it. 4. Electrical maintenance on all plant and equipment, including the CNC Mill, is documented in EMRs.
Exposure: **Hazardous Substances** Is it likely that the plant operator or others nearby in the workspace could be exposed to hazardous or toxic chemicals such volatile vapours, fumes or airborne particulates?	1. The CNC Mill is regularly maintained to help minimise the risk of exposures to these hazards. 2. Any hazardous waste material or toxic dust and gases resulting from this machining process are monitored and managed. 3. Staff and student training is provided to minimise exposure to these hazards.

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Ergonomics and Manual Handling: Can the plant be safely operated, in a suitable location, providing clear and unobstructed access? Poorly designed work stations often necessitate teachers and students performing manual tasks involving heavy lifting and lowering, pushing, pulling or carrying, etc. Such tasks then contribute to a range of musculoskeletal sprains and strains for workers.	1. The CNC Mill is designed and operated at a comfortable work height (where possible) thus minimising any unsafe or excessively strenuous manual tasks. 2. Sufficient workspace is provided in all practical classrooms to help ensure unobstructed, safe operation. 3. “Safe Working Zones” are clearly defined around all fixed plant including the CNC Mill. Floors are free of excessive wood dust, waste materials and other extraneous objects. 4. Staff training is provided with regard to manual handling techniques and procedures to minimise exposure to these hazards.
Explosion and Fire: As a consequence of using this particular item of plant and equipment, could anyone be injured by the release of stored energy triggered by volatile, explosive substances such as stored gasses, vapours or liquids?	1. Fire extinguishers of the correct type are readily available in all workspaces and positioned near exit doorways. 2. Staff training is provided regarding procedures for the correct and appropriate use of fire safety equipment. 3. Exits from buildings and other work areas are defined and access to them kept clear of obstructions. 4. Safety signage is posted clearly denoting the location of all fire safety items and emergency exits.