

PLANT & EQUIPMENT RISK ASSESSMENT CHECKLIST

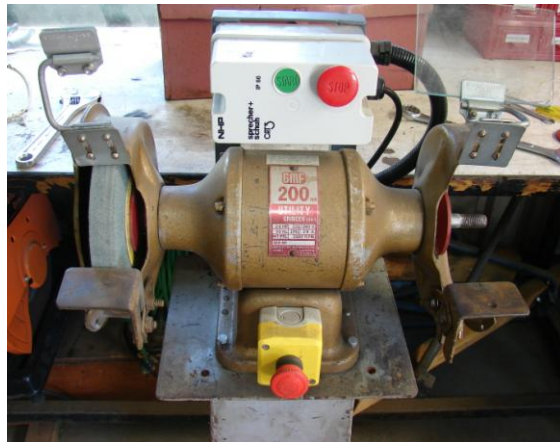
This form is to be completed in conjunction with the Plant Hazard Identification Form and in accordance with the Hazard Management Policy/Procedure and Plant and Equipment Safety Management Policy/Procedure.

Overall risk rating
(existing controls)
highest score
eg L, M, VH, H

LOW

STEP 1 : ENTER INFORMATION ABOUT THE ITEM OF PLANT/EQUIPMENT, IT'S LOCATION AND THE PEOPLE COMPLETING THE RISK ASSESSMENT

Campus Waite	School/Branch Agriculture, Food & Wine	Building Alverstoke Orchard - 9e	Room 1	Date assessed: 22/03/2010
Plant (Include name and model) ⁱ	GMF 200mm Bench Grinder/Buf			Review date: 30/06/2015
Purpose of Plant	Sharpening of high-speed steel cutting tools, deburring and removal of surface imperfections, polishing metal and plastic			



REGISTRATION/LICENCES/COMPETENCIES (Refer Appendix B)

Registration required?

- Yes
 No

Licence/ Trade certificate required?

- Yes
 No

Supervisor assessment required?
(Induction required for this plant)

- Yes
 No

Other competency required?

- Yes
 No

Include in Safe Operating Procedure

LEGISLATION

OHS Legislation and/or Australian Standard to be used for further reference.

OHS Regulations (1995) Divisions:

- 1.2 OHS Responsibilities
- 1.3 Information, Instruction, Training, Induction, Supervision
- 2.10 Noise
- Part 3 Plant (including)
 - 3.2.25 Plant with moving parts
 - 3.2.15 Hazard Management
 - 3.2.17 Control of risk

AS 4024 - 2006 Safety of machinery

AS 1788 Abrasive wheels

AS 60204.1 electrical equipment for industrial machines

RISK ASSESSMENT TEAM

HSO: Terry MacKenzie

HSR: Nicola Featherstone

Operator: Benjamin Pike

Residual risk rating of HIGH to VERY HIGH must be endorsed by the Head of School.

Date: / /

(Signature)

(Name)

PLANT & EQUIPMENT RISK ASSESSMENT CHECKLIST

LEGEND		
<input type="checkbox"/> El = Elimination	<input type="checkbox"/> Is = Isolation	<input type="checkbox"/> CAR = Corrective Action Register
<input type="checkbox"/> Su = Substitution	<input type="checkbox"/> Ad = Administration	
<input type="checkbox"/> En = Engineering	<input type="checkbox"/> PPE = Personal Protective Equipment	

Hazard Identified	Likelihood	Consequence	Score	Comments (ie when and where hazard is present, task/activity)	Hierarchy of Control	Current Controls	Action Required? Y / N	Tfr to CAR Y / N
Can the following items become entangled (eg in moving parts)?								
<input checked="" type="checkbox"/> Yes (e.g. Hair, Jewellery, Clothing, Cleaning aids (cloth), Gloves or Other _____) <input type="checkbox"/> No <input type="checkbox"/> NA	Rare	Minor	Low	Draw in points (wheel spindle, and between grinding wheel rest) may entangle loose clothing, hair, jewellery etc if latter not secured and they make contact with the wheel. Entanglement of extraneous cleaning cloths or rags, if not previously removed from the immediate lathe work area.	<input type="checkbox"/> El <input type="checkbox"/> Su <input checked="" type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input checked="" type="checkbox"/> PPE	Fixed wheel guards in place. Tool rest set at correct angle and distance, relative to grinding wheel. Adjustable guards set to minimise access to grinding wheel. Clear and ready access to Emergency Stop button. SOP includes essential 'safe dress code' (no loose clothing, jewellery etc). SOP requires long hair to be constrained close to the head. Only qualified and trained staff allowed to operate this plant.	No	No
Are Emergency Stop buttons adequate?								
<input checked="" type="checkbox"/> Yes (within easy reach and clearly marked) <input type="checkbox"/> No <input type="checkbox"/> Other issues _____ <input type="checkbox"/> NA	N/A	N/A	N/A	Emergency Stop Button and Emergency Brake Pedal readily accessible, within easy reach, to an operator standing in the area reasonably deemed to be the normal operating position. NOTE: "Normal Operating Position" is that position where an operator stands that is within easy reach of all essential machine controls.	<input type="checkbox"/> El <input type="checkbox"/> Su <input checked="" type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input type="checkbox"/> PPE	Emergency Stop Button in place and accessible to operator. SOP requires Emergency Stop Button to be tested periodically and prior to each operation.	No	No

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Hazard Identified	Likelihood	Consequence	Score	Comments (ie when and where hazard is present, task/activity)	Hierarchy of Control	Current Controls	Action Required? Y / N	Tfr to CAR Y / N
Can anyone be crushed by:								
<input type="checkbox"/> Plant falling or unexpected movement of the plant eg <input type="checkbox"/> Tipping <input type="checkbox"/> Falling <input type="checkbox"/> Rolling over <input type="checkbox"/> Rolling forward <input type="checkbox"/> The plant's load <input type="checkbox"/> Under/between plant and a structure eg wall <input type="checkbox"/> Inability to apply brake <input type="checkbox"/> Falling off the plant <input type="checkbox"/> Part of the plant collapsing/changing shape <input type="checkbox"/> Other issues _____ <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	N/A	N/A	N/A	Plant DOES NOT move.	<input checked="" type="checkbox"/> EI <input type="checkbox"/> Su <input type="checkbox"/> En <input type="checkbox"/> Is <input type="checkbox"/> Ad <input type="checkbox"/> PPE	Plant is firmly fixed in position on a flat horizontal surface, with at least a safe minimum (600mm + length of work piece) all-round clearance (see SOP for details).	N/A	N/A
Can anyone be cut, stabbed or punctured, amputated by coming into contact with :								
<input checked="" type="checkbox"/> Moving plant or parts <input checked="" type="checkbox"/> Sharp or flying objects <input checked="" type="checkbox"/> Work pieces ejected <input type="checkbox"/> Work pieces disintegrating <input type="checkbox"/> Other issues _____ <input type="checkbox"/> No <input type="checkbox"/> NA	Rare	Minor	Low	Flying (grinding dust) particles produced through the nature of the grinding process. Standing in the incorrect position when grinding. Inadvertent contact with grinding wheel. Work piece poorly and/or incorrectly held in the hand, or locking pliers (self-grip wrench).	<input type="checkbox"/> EI <input type="checkbox"/> Su <input checked="" type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input checked="" type="checkbox"/> PPE	Fixed wheel guards in place. Tool rest set at correct angle and distance, relative to grinding wheel. Adjustable guards set to minimise access to wheel. SOP includes essential 'safe dress code' (<u>no</u> loose clothing or jewellery, <u>use of</u> safety glasses, face shield etc). SOP requires long hair kept tied up and close to the head. USAGE – Always ensure hands are kept clear of and out of line of grinding wheel. Only qualified and trained staff are allowed to operate plant	No	No

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Hazard Identified	Likelihood	Consequence	Score	Comments (ie when and where hazard is present, task/activity)	Hierarchy of Control	Current Controls	Action Required? Y / N	Tfr to CAR Y / N
Can anyone be injured from an electrical shock?								
<input type="checkbox"/> Water near equipment <input type="checkbox"/> Plant located near or in contact with exposed live electrical conductors <input type="checkbox"/> Leads/switch in poor condition <input type="checkbox"/> Overhead and underground wires <input type="checkbox"/> Other issues _____ <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	N/A	N/A	N/A	Risk of electrical shock eliminated through the installation of an ELCB/RCD safety device in the electrical power distribution board NOTE: Faulty electrical devices to be tagged out and repaired or replaced immediately by a qualified electrician.	<input type="checkbox"/> EI <input type="checkbox"/> Su <input checked="" type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input type="checkbox"/> PPE	SOP requires operator to be aware of state of plant (i.e. exposed wiring, switches and surrounding area) for potential electrical risks. Visual inspection of plant and allied electrical devices required prior to machines operation. Inline RCD device installed to isolate current leakage. ELCB/RCD Circuit Breaker device installed in Electrical Power Distribution Board. Maintained and tested by Property Services.	N/A	N/A
Can anyone be injured by an explosion?								
<input type="checkbox"/> Gas <input type="checkbox"/> Vapour <input type="checkbox"/> Dust <input type="checkbox"/> Liquid <input type="checkbox"/> Other issues _____ <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	N/A	N/A	N/A	No explosive elements or compounds present, as part of the plant or material being machined.	<input type="checkbox"/> EI <input type="checkbox"/> Su <input type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input type="checkbox"/> PPE	N/A –SOP requires operator being aware of state of plant and surrounding area. Visual inspection of plant and its surrounding area mandatory prior to operation.	N/A	N/A
Can anyone be burnt due to Friction?								
<input checked="" type="checkbox"/> Contact with moving parts or surface of the plant <input type="checkbox"/> Material handled by the plant <input type="checkbox"/> Other issues _____ <input type="checkbox"/> No <input type="checkbox"/> NA	Unlikely	Minor	Low	Contact with rotating grinding wheel. Overheating of work piece being ground. NOTE: Ensure that there is an adequate supply of cooling fluid readily at hand.	<input type="checkbox"/> EI <input type="checkbox"/> Su <input checked="" type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input type="checkbox"/> PPE	Fixed wheel guards in place. Tool rest set at correct angle and distance, relative to grinding wheel. Adjustable guards set to minimise access to grinding wheel. At all times, keep hands clear of rotating wheel, use locking pliers to grip small objects.	No	No

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Hazard Identified	Likelihood	Consequence	Score	Comments (ie when and where hazard is present, task/activity)	Hierarchy of Control	Current Controls	Action Required? Y / N	Tfr to CAR Y / N
Can anyone be struck by moving objects due to:								
<input checked="" type="checkbox"/> Plant/materials being ejected <input type="checkbox"/> Plant/material movement <input type="checkbox"/> Other issues _____ <input type="checkbox"/> No <input type="checkbox"/> NA	Unlikely	Minor	Low	Flying particles ejected by the plant during the grinding process. Standing in the incorrect position when grinding.	<input type="checkbox"/> EI <input type="checkbox"/> Su <input checked="" type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input checked="" type="checkbox"/> PPE	Tool rest set correctly. Adjustable guards set to minimise access to grinding wheel SOP (including requirement to use self locking pliers for holding small work pieces.) Dress code (close fitting dustcoat or overalls. Loose clothing or jewellery to be secured) PPE (Face shield/safety glasses, steel-toed safety shoes/boots, dust coat or overalls) Qualified and trained staff are only allowed to operate plant	No	No
Can anyone suffocate due to:								
<input type="checkbox"/> Lack of oxygen <input type="checkbox"/> Atmospheric contamination <input type="checkbox"/> Engulfment <input type="checkbox"/> Other issues _____ <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	N/A	N/A	N/A	No oxygen depleting risk present. No chemicals or other contaminants present or required for the proper operation of this plant.	<input type="checkbox"/> EI <input type="checkbox"/> Su <input type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input type="checkbox"/> PPE	N/A – SOP requires operator to be aware of state of plant and its surrounding area. Visual inspection of plant and its surrounding are mandatory prior to its operation.	N/A	N/A
Can anyone be burnt due to:								
<input type="checkbox"/> High/low temperature <input type="checkbox"/> Naked flame <input type="checkbox"/> Steam <input type="checkbox"/> Laser beams <input type="checkbox"/> Other issues _____ <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	N/A	N/A	N/A	The use of Fire, Steam and/or Lasers is NOT part of the cutting or machining process for this machine.	<input type="checkbox"/> EI <input type="checkbox"/> Su <input type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input type="checkbox"/> PPE	N/A – SOP requires operator to be aware of state of plant and its surrounding area. Visual inspection of plant and its surrounding are mandatory prior to its operation.	N/A	N/A

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Hazard Identified	Likelihood	Consequence	Score	Comments (ie when and where hazard is present, task/activity)	Hierarchy of Control	Current Controls	Action Required? Y / N	Tfr to CAR Y / N
Can anyone be affected by temperature extremes?								
<input type="checkbox"/> Exposure to high temperature <input type="checkbox"/> Exposure to low temperature <input type="checkbox"/> Other issues _____ <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	N/A	N/A	N/A	The use of extreme temperature devices is NOT part of the grinding process for this machine.	<input type="checkbox"/> El <input type="checkbox"/> Su <input type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input type="checkbox"/> PPE	N/A – SOP requires operator to be aware of state of plant and its surrounding area. Visual inspection of plant and its surrounding are mandatory prior to its operation.	N/A	N/A
Can anyone slip, trip or fall due to:								
<input type="checkbox"/> The location of the plant <input type="checkbox"/> Uneven work surfaces <input type="checkbox"/> Lack of safe guards (eg rails) <input checked="" type="checkbox"/> Slippery work surfaces <input type="checkbox"/> Other issues _____ <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	Rare	Minor	Low	No Issues present under normal working circumstances.	<input type="checkbox"/> El <input type="checkbox"/> Su <input type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input checked="" type="checkbox"/> PPE	SOP mandates a clean and tidy work environment. SOP requires an operator to maintain a clean and clear work environment. SOP mandates a safe minimum (600mm) all-round clearance (see SOP for details). SOP mandates the use of "diatomaceous earth" to soak up oil spills.	N/A	N/A
Can anyone come into contact with Fluids or Gases under high pressure due to:								
<input type="checkbox"/> Failure of the plant <input type="checkbox"/> Nature of the plant <input type="checkbox"/> Other issues _____ <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	N/A	N/A	N/A	The use of High Pressure fluids of gases is NOT part of the grinding operation for this machine.	<input type="checkbox"/> El <input type="checkbox"/> Su <input type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input type="checkbox"/> PPE	N/A – SOP requires operator to be aware of state of plant and its surrounding area. Visual inspection of plant and its surrounding are mandatory prior to its operation.	N/A	N/A

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Can anyone injured due to Ergonomic issues due to:								
<input checked="" type="checkbox"/> Repetitive body movement or posture <input type="checkbox"/> Insufficient space <input type="checkbox"/> Excessive effort (push/pull) <input type="checkbox"/> Working at a height <input type="checkbox"/> Seating design <input type="checkbox"/> Poor lighting <input type="checkbox"/> Other issues _____ <input type="checkbox"/> No <input type="checkbox"/> NA	Unlikely	Minor	Low	Prolonged period of grinding Adopting poor posture and/or standing in the incorrect position when grinding.	<input type="checkbox"/> EI <input type="checkbox"/> Su <input type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input type="checkbox"/> PPE	SOP requires operator to be trained in Manual Handling technique. Supervisor to monitor duration and frequency of the task. Equipment mounted at correct operating height. Operator is free to use muscle stretching-relaxing exercises to relieve stiffness caused by long periods of standing.	No	No
Can anyone be injured or suffer ill health from exposure to other hazards?								
<input type="checkbox"/> Chemicals <input type="checkbox"/> Radiation <input type="checkbox"/> Fumes <input checked="" type="checkbox"/> Dusts <input type="checkbox"/> Vibration <input checked="" type="checkbox"/> Noise <input type="checkbox"/> Toxic gases or vapours <input type="checkbox"/> Other issues _____ <input type="checkbox"/> No <input type="checkbox"/> NA	Rare	Negligible	Low	During grinding operation performed on some types of material.	<input type="checkbox"/> EI <input type="checkbox"/> Su <input type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input checked="" type="checkbox"/> PPE	SOP and training/induction requires operators to assess the type material being ground and assess any possible risk. SOP mandates appropriate PPE safety wear (i.e. dust mask, face shield, hearing protection, where required)	No	No
Rare	Negligible	Low	During grinding operation performed on certain resonant types of material.					

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Does the plant generate significant environmental hazards								
<input type="checkbox"/> Energy consumption <input type="checkbox"/> Water consumption <input type="checkbox"/> Hazardous waste <input type="checkbox"/> Hazardous emissions <input type="checkbox"/> Nuisance noise <input type="checkbox"/> Produce ignition to the surrounding area <input type="checkbox"/> Other issues _____ <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	N/A	N/A	N/A	N/A	<input type="checkbox"/> EI <input type="checkbox"/> Su <input type="checkbox"/> En <input type="checkbox"/> Is <input checked="" type="checkbox"/> Ad <input type="checkbox"/> PPE	N/A – SOP requires operator to be aware of state of plant and its surrounding area. Visual inspection of plant and its surrounding are mandatory prior to its operation. SOP and training and induction require operators to assess the type of material being ground and assess any possible risks.	N/A	N/A

STEP 3 : ACTION REQUIRED BY MANAGER/SUPERVISOR/AUTHORISED PERSON (Note : Sign off required by Head of School/Branch on Page 1)

- All action items have been transferred to the Corrective Actions Register (CAR)
- If no actions required and residual risk is medium to very high, the activity and the hazard(s) have been transferred to the Hazard Register and communicated to the relevant personnel.

RISK ASSESSMENT TABLES

Likelihood Table

CATEGORY	DESCRIPTION
Almost Certain	Incident will occur at some time (0 – 1 month)
Likely	Incident could occur at some time (1 month – 1 year)
Slight	Incident is possible to occur (1 year – 2 years)
Unlikely	Incident is possible, but unlikely to occur (2 years – 5 years)
Rare	Cannot imagine that this could occur (over 5 years)

Consequences Table

CATEGORY	DESCRIPTION
Negligible	Effects unlikely to last until the next day.
Minor	Likely to affect employee the next day.
Moderate	Medical Treatment injury needs formal medical treatment
Major	Injury requiring extensive medical treatment and/or hospitalization
Severe	Injury resulting in death or permanent incapacity

Risk Score Calculator

Likelihood	Consequences				
	Negligible	Minor	Moderate	Major	Severe
Almost certain	Medium	High	Very High	Very High	Very High
Likely	Medium	Medium	High	Very High	Very High
Slight	Low	Medium	High	High	Very High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Low	Medium	Medium

Risk Priority Table

Descriptor	Priority	Action
Very High	1	Immediate action required. The activity should cease immediately and short term safety controls implemented. Notify Manager and assess activity.
High	2	Implement short term safety controls immediately. Notify Manager and assess activity
Medium	3	Short term safety controls implemented to minimise risk of injury. Notify Manager and assess activity. Corrective Actions within one month.
Low	4	Notify Manager and assess activity. Corrective Actions within three months (if possible).