Health and Safety - Plant Management Procedure

Section 1 - Purpose / Objectives

(1) The purpose/objective of this procedure is to:

a. ensure that Victoria University has a system to identify, eliminate or minimise risk of injury to all employees, students and contractors who use plant, and
b. explain the system that is to be used to identify, assess and control the hazards arising from use of plant.

Section 2 - Scope / Application

(2) This procedure:

a. applies across the University;
b. only covers plant that is defined in current OHS legislation and regulations. (Refer to Definitions);
c. does not apply to plant that relies exclusively on manual power for its operation and/or is designed to be primarily supported by hand, for example a screw driver or chisel.

Section 3 - Definitions

(3) Commissioning - Means performing the necessary adjustments, tests and inspections to ensure plant is in full working order, in accordance with the requirements specified in the design of the plant, before the plant commences normal operation for the first time.

(4) Competent Person - A person who has acquired through training, qualification, experience or a combination of these, the knowledge and skill enabling that person to correctly perform the required task.

(5) Plant -

a. Plant is defined in current OHS legislation as:
    i. any machinery, equipment, appliance, implement and tool;
    ii. any component of those things; and
    iii. anything fitted, connected or related to any of those things.
b. Current OHS Regulations cover the following types of plant:
    i. plant which processes material by way of a mechanical action that:
        - cuts, drills, punches or grinds the material; or
        - presses, forms, hammers, joins or moulds the material; or
        - combines, mixes, sorts, packages, assembles, knits or weaves the material.
    ii. plant designed to lift or move people or material — e.g. : cranes, fork-lifts, hoists, and mobile elevating

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work platforms;

iii. pressure equipment — e.g. boilers, pressure equipment such as sterilizers and autoclaves;
iv. earth-moving machinery — e.g. excavators;
v. lasers;
vi. scaffolds;
vii. temporary access equipment e.g. individual fall arrest systems;
viii. explosive power tools;
ix. turbines; and
x. amusement structures.

(6) Lock Out Tag Out (LOTO) - A system to ensure the energy of plant is de-energised whilst it is being commissioned, cleaned, serviced, repaired or modified.

The Lock Out/Tag Out system is also used for faulty or hazardous plant.

(7) Plant Register - A documented inventory of each piece of plant present within a specific location. (Refer to Plant Register template).

(8) Safe Design - Is defined as the integration of control measures early in the design process to eliminate, control or minimise risks to health and safety throughout the lifecycle of the plant being designed i.e. from design to disposal.

Section 4 - Policy Statement

(9) This procedure supports the VU Health and Safety Policy .

Section 5 - Procedures

Part A - Roles and Responsibilities

Roles	Responsibilities
Executives and Leaders (VC, COO & Provost)	- Demonstrate due diligence by reviewing and following up on information e.g. Enterprise Risk Registers and Audit Reports.
Directors, Deans, Department Heads and Senior Management	- Ensure sufficient funds are budgeted and are available to maintain and update plant to ensure safe operating condition. - Review and follow up on information from Direct Reports and OHS department regarding high risk activity and incidents involving the use of plant e.g. Incident Investigations, Risk Registers and Audit Reports. - Ensure systems and controls are in place to prevent recurrence of identified high risk activity, incidents or near misses.

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Roles	Responsibilities
Technical Managers/or Supervisors, Managers, Teachers, Contract Manager, Academic Staff and Researchers	- Conduct research within industry and other tertiary education providers to ensure that the most appropriate plant for the intended purpose is selected. - Complete the 'Plant Pre Purchase Checklist' prior to purchasing or hiring plant. - Ensure commissioning and installation of plant is completed by qualified, competent individuals and as per manufacturer's instructions. - Complete risk assessments, and safe operating procedures prior to operation of plant. - Ensure instruction, training and appropriate supervision is provided to all individuals who operate VU plant. - Inspect licenses or evidence of competency prior to allowing operators to use plant. - Complete and maintain 'Plant Registers'. - Maintain plant in accordance with manufacturer's recommendations, risk assessments and Australian Standards. - Implement lock out/tag out for defective plant to prevent usage until it can be rectified. - Ensure that decommissioning, disposal or sale of plant is conducted in accordance with this procedure. - Ensure all hazards and/or incidents that have been reported and entered into VU's Incident Management System are investigated and rectified as appropriate.
Employees, Students, Contractors & Volunteers (if applicable) who operate plant on VU premises (or on behalf of VU)	- Work within the level of training competency and licensing attained when operating plant. - Follow manufacturer's instructions and safe operating procedures. - Attend training to attain and maintain competency and skill inclusive of obtaining licences for high risk plant. - Conduct pre-start checks prior to operation of plant to ensure proper working order. - Report any hazards or faults identified either prior to or during operation. - Report all incidents with plant inclusive of near misses.
OHS Team	- Provide advice on minimising hazards with the purchase, installation, maintenance and use of all plant. - Refer staff to suitably qualified external individuals where expertise is required beyond what is available within the team. - Disseminate any relevant information inclusive of legislative updates for the operation and maintenance of plant. - Monitor compliance with this procedure as part of planned auditing.

Part B - Procedure

Pre - Purchase or Hire Risk Management

(10) Prior to introducing plant (whether it is new or second hand, purchased or hired, received from a donation or any other procurement process), all hazards must be identified using the 'Plant Pre Purchase Checklist'. All items identified as relevant on the checklist must be actioned prior to the purchase or hiring process.

Safe Design

(11) There may be instances where design of plant occurs internally within the University, for example by a qualified engineer.

(12) When this occurs the designer must ensure (as far as is reasonably practicable) that the plant is designed without risks to health and safety throughout the plant's whole lifecycle. This can be achieved by the application of a risk management process in the design phase.

(13) When designing plant the 'Safe Design of Plant Checklist' is to be completed.

(14) A record must be kept of any published technical standard that was used to design the plant. If published

technical standards are not used then the designer must record any engineering principles that were used within the design.

(15) If a manufacturer advises the designer of any risk with the design of plant, then the designer must review the design and where reasonably practicable make the necessary changes to control the risk. If the designer is of the opinion that no changes are required then this must be provided to the manufacturer in writing.

Modification

(16) Modification of existing plant design must not occur unless it is approved by the designer or manufacturer.

(17) When the designer or manufacturer is unknown then any modifications must be approved by a competent person (e.g. a qualified engineer or designers of plant systems) and an engineer's report provided.

Plant Risk Assessment

(18) No research, teaching or operational activities shall be undertaken with plant unless a risk assessment is completed using the ‘Plant Risk Assessment Template’ and that the relevant Dean, Director, Department Head or Senior Manager is satisfied that the hazards present are controlled as far as is reasonably practicable.

(19) Identified hazards and the risks are to be eliminated where possible. If not possible to eliminate, then hazards and risks are to be controlled in order of the 'hierarchy of controls' as per below:

a. substituting the plant with other plant that has a lower level of risk;
b. the use of engineering controls e.g. guarding; or isolating the plant from people;
c. personal protective equipment; and
d. administrative controls e.g. procedures.

(20) Specifically a plant risk assessment must be completed in the following instances:

a. when new plant is purchased or hired and commissioned for the university prior to operation;
b. when existing plant is altered or modified in any way;
c. when the process or operation of existing plant changes; and
d. any activity, work task and research that involves the use of plant.

Commissioning and Installation

(21) Commissioning of plant is required to ensure the plant is in safe working order. Plant is to be locked and/or tagged out until a risk assessment is completed and deemed safe to operate.

(22) Commissioning includes testing:

a. that the plant operates as specified in the manual, or if no manual exists that it operates in a safe manner (Note: for new plant this is often done by the manufacturer's representative on site);
b. the functioning of any safety devices, guards or other engineering controls; and
c. the functioning of other safety controls (which are not on the plant itself) that assist to control hazardous events from arising e.g. gas monitors, smoke alarms, electrical safety switches, ventilation systems, sprinkler systems and access barriers.

(23) Results of commissioning must be recorded and retained with the relevant Plant Register.

(24) Deficiencies discovered during the pre-purchase or hire management process must be rectified prior to

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installation and the plant must be operationally safe. All installation must conform to safety specifications, manufacturer's instructions and be suitable for local environmental factors.

(25) Installation of plant must be completed by an appropriately qualified and competent individual e.g.

a. a qualified contractor;
b. the manufacturer; and/or
c. Technical Officers who have the necessary knowledge and experience to install the plant.

(26) Any installation or erection of plant must be completed in such a way that ensures:

a. that there is sufficient clear working area around the plant for it to be used and maintained in a safe manner, and the layout of the plant does not restrict access and egress to the work area.

(27) All electrical installations associated with the plant must comply with relevant Australian Standards (or equivalent).

Registration

(28) Certain items of plant design are to be registered with the relevant State Authority as per current OHS Regulations. (Refer to Plant Registration Matrix).

Plant Register

(29) All plant must be listed on an inventory for the College or Department of the University it is used in by using the approved VU 'Plant Register' template.

Training and Licencing Requirements

(30) Appropriate Instruction, training and supervision levels for each piece of plant must be determined and implemented prior to operation of plant.

(31) Consideration for instruction, training and supervision must be given to:

a. who will operate the plant;
b. whether different levels of supervision and training is required for inexperienced users and others;
c. whether a competency assessment be completed prior to allowing unsupervised or limited supervised access to the plant;
d. how will competency be measured, recorded and by whom;
e. what training is required and how will it be delivered; and
f. adding users of plant to a register of trained and competent users.

(32) High risk work involving plant listed in the current OHS Regulations has specific requirements and may not be undertaken without the operator being appropriately licensed. (Note: the exception to this is if the operator is under instruction by a licenced operator specifically for the purpose of learning to obtain their licence).

(33) Refer to ‘High Risk Work Licence' Matrix.

Safe Operating Procedures (SOP's)

(34) Safe Operating Procedures must include pre-start, operational and post-operation requirements. 'Safe Operating Procedures (SOP's) must be created referring to the Manufacturer's user manuals for instruction of how to operate the

plant and safety precautions to be followed.

(35) Refer to SOP template (located under ‘Risk management and assessment’).

Inspection and maintenance and repairs

(36) Plant requiring periodic inspection, testing, monitoring or maintenance, must be identified and records must be kept. Safety devices and engineering controls are items that require inspection, testing and monitoring. A maintenance schedule must identify what maintenance is required, when it is required (according to the manufacturer or a competent person) and necessary legal requirements.

(37) Some inspections, testing and maintenance are specified in Australian Standards for specific plant, these timeframes and actions must be detailed in the plant register and complied with. All repairs shall be carried out by competed persons under competent direction or supervision. Repairs shall only be permitted where structural integrity of equipment/plant can be maintained.

(38) Inspection and maintenance completed on plant must be summarised and recorded in the 'Plant Register'.

Isolation of damaged or unsafe plant

(39) When a mechanical, physical or electrical hazard may exist then the Lock Out and Tag Out system is to be used to de-energise the plant prior to maintenance occurring. All plant found to be faulty or damaged must be taken out of service using an established lock out and tag out system.

(40) Refer to Health and Safety - Lock-Out and Tag-Out Procedure.

(41) Prior to returning damaged or unsafe plant back to operation any repairs or alterations must be completed by a competent person and recommissioning checks made. All repairs and alterations performed must be recorded in the 'Plant Register'.

High risk plant activities — Contractors

(42) There may be instances where contractors are engaged to conduct high risk activities which involve the use of plant.

(43) Examples may include:

a. Working from heights e.g. use of elevated work platforms; and
b. Operation of powered mobile plant e.g. forklifts and cranes.

(44) In these instances a 'Permit to Work' must be issued by an Authorised Person to the contractor prior to commencement of work.

(45) Refer to the Health and Safety - Permit to Work Procedure for further information.

Decommissioning and dismantling

(46) Plant that is not in use must be stored in a manner such that it does not create a risk to workers or other people in the workplace and so that the plant is at minimal risk of damage or degradation. Plant that has been stored and/or unused for extended periods must be recommissioned using documented checks similar to commissioning.

(47) Decommissioned plant that is to remain in the University must be isolated, tagged and 'locked out' to ensure it cannot be used until a full commissioning inspection and testing process has been followed.

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(48) Decommissioning and dismantling of plant that is no longer required must be completed by competent persons and recorded within the 'Plant Register'. Plant should be disposed of with consideration for the risk assumed by the organisation if sold to another party or with consideration to environmental risks. (Note: Some aged plant may contain hazardous materials such as asbestos, ozone depleting substances or polychlorinated biphenyls and disposal must be as required by the relevant agency).

Incidents

(49) Any incident that occurs with the storage, use and maintenance of plant must be reported to the relevant Supervisor / Manager and entered into the VU on-line incident management system.

(50) Refer to the Health and Safety - OHS Incident Reporting and Investigation Procedure for further information.

Records

(51) Each College or department must develop a system to ensure the retention of all records pertaining to each plant item is retained and accessible to the users. The recommended means is via electronic files i.e. individual College/Department OHS Folders on Shared Y: Drive.

(52) Records must be accessible to OHS personnel and/or external auditors and regulatory authorities upon request.

Section 6 - Guidelines

(53) Nil

Section 7 - Templates

(54) Plant Pre Purchase Checklist

(55) Plant Register

(56) Plant Risk Assessment template

(57) Safe Operating Procedure template (located under 'Risk management and assessment')

(58) Plant Registration Matrix

(59) High Risk Work Licence Matrix

(60) Safe Design of Plant Checklist

Section 8 - References

(61) This procedure is required to support the following:

a. Occupational Health and Safety Act 2004
b. Occupational Health and Safety Regulations 2017, Part 3.5 Plant
c. Occupational Health and Safety Amendment Regulations 2014
d. Equipment Public Safety Regulations 2007
e. Health and Safety Policy

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Section 9 - Support Documents

(62) The following documents have been referenced in this procedure:

a. High Risk Work Guide — Licence Requirements (extract Schedule 3 from Regulations 2007)
b. Managing Risks of Plant in the Workplace Code of Practice - Safework Australia (2013)
c. Hazard Guide/Plant - WorkSafe Victoria (2007)
d. Guide for Safe Design of Plant — Safe Work Australia (2014)
e. Health and Safety - Lock-Out and Tag-Out Procedure
f. Health and Safety - Permit to Work Procedure
g. Health and Safety - OHS Incident Reporting and Investigation Procedure

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