Safe Use Of Plant and Equipment Procedure

Section 1 - Purpose and Scope

(1) This Procedure outlines The University of Queensland's (UQ) requirements for working safely with plant. For the purposes of this Procedure, plant includes any machinery, equipment, appliance, container, implement and tool, and includes any component or anything fitted or connected to any of those things. The definition of plant is provided in the appendix.

(2) The purpose of this Procedure is to ensure UQ, as far as reasonably practicable, eliminates or minimises risk associated with the use of plant across its lifecycle. The plant lifecycle includes acquisition, installation, commissioning, use, inspection, maintenance, alteration, repair, decommissioning, dismantling and disposal.

(3) The requirements of this Procedure apply to new and used plant utilised for UQ purposes that is:

a. procured or acquired by UQ; or
b. designed and/or manufactured by UQ workers.

(4) This Procedure applies to UQ workers on all UQ campuses and sites. For the purposes of this Procedure, the definition of UQ workers is broad and is intended to ensure UQ meets its responsibilities under the Work Health and Safety Act 2011. The definition of UQ workers is provided in the Appendix.

(5) The roles and responsibilities of UQ's Property and Facilities Division (P&F) and individual Organisational Units regarding the installation, maintenance and safe operation of plant are outlined in section 4.

Exclusions

(6) The requirements of this Procedure do not apply to:

a. plant that relies exclusively on manual power for its operation and is designed to be primarily supported by hand (e.g. manual powered hand tools, utensils and trollies);
b. general office equipment (e.g. PCs, laptops, tablets and printers used primarily for administrative tasks); or
c. kitchen appliances and equipment (e.g. kettles and toasters).

Additional Information

(7) This Procedure should be read in conjunction with the following plant procedures and guidelines:

a. Safe Procurement and Acquisition of Plant and Equipment Procedure;
b. Safe Procurement and Acquisition of Plant and Equipment Guideline;
c. Decommissioning and Dismantling of High Risk Plant Guideline;
d. Lock Out Tag Out (LOTO) Isolation Safety Guideline.

(8) The Managing the Risks of Plant in the Workplace Code of Practice 2021 (the Code) provides practical guidance to achieving the standards of health, safety and welfare required under the Work Health and Safety Regulation 2011 (WHS Regulation). Additional information about safe work practices when using plant is in the Code.

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Section 2 - Process and Key Controls

(9) The following requirements apply to UQ workers proposing to use plant at UQ:

a. Hazards associated with plant must be identified and related risks assessed in UQSafe and include all aspects of the plant lifecycle (e.g. acquisition, installation, commissioning, use, maintenance, alteration, decommissioning, dismantling and disposal).
b. A risk assessment and management process must be undertaken for tasks requiring the use of plant (e.g. a UQSafe risk assessment, a Job Hazard Analysis, Safe Work Method Statement, or standard operating procedure).
c. The following tasks must be undertaken by a competent person, as defined in the Appendix, during the plant lifecycle:
    i. design verification,
    ii. installation,
    iii. commissioning,
    iv. inspection and maintenance (including alterations and repairs),
    v. decommissioning, dismantling or disposal.
d. UQ workers must not use plant unless instruction, training, and supervision is provided, and current licences or competency to operate plant or equipment is held by the user where required.

Section 3 - Key Requirements

Risk Management and Assessment

(10) Risk management must be considered for all items of plant to achieve safety and compliance, and for the efficient and effective use of UQ resources. For further information on the risk management process, refer to Health and Safety Risk Management Procedure.

(11) A risk assessment, completed in UQSafe, is required to identify hazards associated with the use of plant, and the controls proportionate and relevant to the activities being undertaken. Standard Operating Procedures (SOPs) may be identified as an outcome of a risk assessment. Risk assessments and all SOPs must be made available to UQ workers.

UQ Designed and Manufactured Plant

(12) Organisational Units that design or manufacture plant for use at UQ, including for use in research and teaching, must ensure that:

a. UQ workers undertaking this work are competent, appropriately licenced and qualified;
b. a risk assessment is undertaken prior to design and manufacture that considers any risks that may arise throughout the life of the plant (i.e. from design/manufacture to disposal); and
c. the plant design is verified as safe (refer to clauses 13-15).

Plant Design Verification

(13) Design verification is the process of confirming that plant has been manufactured in accordance with plans, diagrams, specifications, and where relevant, published technical standards or engineering principles specified by the designer. Organisational Units are responsible for verifying that plant is manufactured as per approved designs. This requires a competent person checking the design integrity and consulting with manufacturers, erectors, installers and end users.

(14) To support verification requirements, design specifications must be developed (including plans, diagrams and drawings) and international, Australian and other technical standards that exist must be consulted. Any plant that is designed to a rated level (e.g. voltage, safe working load, pressure) must be certified by an independent third party with documented evidence.

(15) For alterations and repairs to UQ designed and manufactured plant, refer to clauses 25-26.

Installation

(16) When installing, relocating or erecting plant, Organisational Units must ensure:

a. affected stakeholders have been consulted and an installation plan is completed, which includes an assessment of:
    i. ancillary services (e.g. power, gas, dust extraction);
    ii. environmental controls (e.g. for noise pollution, emissions, waste);
    iii. location suitability for the operation being undertaken and the type of plant in use;
    iv. space sufficiency around the plant to allow it to be maintained and repaired;
    v. layout of the workplace to provide safe access and egress;
b. the plant is installed by a competent person according to the manufacturer's instructions;
c. all reasonably practicable steps have been taken to ensure that hazards and risks identified with the plant are effectively controlled;
d. interim safeguards are used if final safeguarding is not in place during any testing or commissioning; and
e. installation diagrams and drawings are maintained for future reference following installation.

Commissioning

(17) Commissioning involves adjustments, tests and inspections to ensure the plant is in working order to specified requirements before use. Commissioning includes recommissioning.

(18) Before commissioning plant, Organisational Units must check, test, and inspect it in accordance with the manufacturer’s recommendations. Plant must not be placed into operation until commissioning is complete.

(19) A competent person must verify that the plant is working according to design and manufacturer specifications and has safe operating procedures in place.

Inspection and Maintenance

(20) Inspection and maintenance of plant must be undertaken to ensure the safe working condition according to manufacturer specifications. Maintenance of plant includes: statutory maintenance (required by external authorities); preventative maintenance (recommended by manufacturers); and corrective maintenance (repair).

(21) Inspection and maintenance schedules are to be developed that detail:

a. the inspection, testing and or maintenance requirements for each item of plant (including any registration or certification requirements); and
b. the testing and maintenance requirements for all safety features and/or warning devices.

(22) Inspection and maintenance of plant must be:

a. undertaken by a competent person in accordance with procedures recommended by the designer or manufacturer, that does not alter the original design of the plant;

b. only undertaken once the plant has been safely isolated from all sources of energy (refer to the Lock Out Tag Out (LOTO) Isolation Safety Guideline); and
c. verified by a competent person that it is safe before being returned to service.

(23) All mobile plant must have logbooks to record pre-operation inspection checklists. If a hazard has been identified during use, the Manager or Supervisor, in consultation with the local Health, Safety and Wellness Manager (HSW Manager) or Work Health and Safety Coordinator (WHSC), Health and Safety Representatives (HSR) and UQ workers using the plant, must review the existing controls.

(24) If the function or condition of the plant is impaired or damaged to an extent that gives rise to an immediate risk to health or safety, it must be immediately withdrawn from use until the risk is controlled.

Alterations and Repairs

(25) If plant or equipment is to be altered or repaired, it must then be inspected and tested by competent persons, having regard to any relevant design specification (taking into account any alteration to the design) prior to it being returned to service. Records of repair, inspection, testing and maintenance activities must be retained by the Organisational Unit. This requirement also applies to UQ designed and manufactured plant and equipment (refer to clauses 12-15).

(26) Where an alteration is made to plant requiring the plant to be decommissioned, a recommissioning process will need to be undertaken before it is commissioned for use (see clauses 17-19).

Safe Operating Procedures

(27) A risk assessment may require the development of a safe operating procedure to manage the risks arising from the use and maintenance of plant. The development of safe operating procedures must take into account:

a. workers' competency;
b. regulatory requirements;
c. standard industry operation;
d. manufacturer or supplier requirements.

(28) Organisational Units that use plant in high-risk construction work must ensure the development and implementation of Safe Work Method Statements (SWMS) for the activities.

Decommissioning, Dismantling and Disposal

(29) The Organisational Unit must ensure that plant:

a. inspected by a competent person prior to dismantling, decommissioning and/or disposal, including a review of any necessary documentation;
b. is decommissioned, dismantled and disposed of by competent persons in accordance with the designer and manufacturer instructions;
c. decommissioned and dismantled in accordance with the Decommissioning and Dismantling of High Risk Plant Guideline, where applicable;
d. stored in a state that does not create a hazard in the workplace;
e. is disposed of only once all the relevant UQ and regulatory approvals have been obtained. For example, disposal of radiation apparatus requires notification to UQ's Radiation Protection Advisor then notification to Queensland Radiation Health within seven days of disposal;
f. assessed for the risk of exposure to persons to hazardous chemicals and materials (e.g. asbestos and oils) prior

to dismantling, decommissioning or disposal. If the presence of hazardous chemicals or materials is suspected or confirmed, the person responsible will contact their local HSW Manager or WHSC for further guidance; and

g. supplied to a new owner with relevant documentation provided by the designer and manufacturer.

Records

(30) Organisational Units are responsible for maintaining the following records with plant and where required by this Procedure:

a. Risk assessments and/or Job Hazard Analysis (JHAs).
b. Safe operating procedures (SOPs).
c. Training and licensing records.
d. Procurement, installation, commissioning and maintenance documentation.
e. Statutory notifications and compliance records.
f. Manufacturer's instruction and operating manuals (including plant developed at UQ, where UQ is the manufacturer).

Competency and Training

(31) The installation, maintenance, use and inspection of some plant is not permitted unless specific competency and/or supervision requirements are met. Where it is required, Organisational Units must ensure that UQ workers complete appropriate training, be adequately supervised and/or have current licences (where required) and/or competency to undertake these tasks.

(32) Records of all training provided to UQ workers for working with plant must be kept by the Organisational Unit or in UQ's Human Capital Management System.

Personal Protective Equipment (PPE)

(33) PPE must be used where determined to be an appropriate control measure, either in combination with other controls or as a stand-alone measure, through the risk assessment process or where stated in regulations. Refer to the Personal Protective Equipment Procedure for more information.

Section 4 - Roles, Responsibilities and Accountabilities

Property and Facilities Division (P&F)

(34) UQ's Property and Facilities Division (P&F) is responsible for:

a. The installation, maintenance and safe operation of plant associated with the provision of building services on UQ campuses and sites, including:
    i. water supply;
    ii. waste reticulation and sewage;
    iii. electrical supply;
    iv. heating, ventilation and air-conditioning (HVAC) and exhaust systems (see exclusion below);
    v. supply of manifold and internal reticulation gas (up to cylinders);
    vi. high-risk fixed plant (e.g. lifts, elevators, cranes, hoists);
    vii. any other services or reticulation systems up to the connection point or isolation point for an item of

plant (e.g. electrical isolator, plumbing valve, gas tap or duct connection);

viii. safety or sensor devices connected to building infrastructure;

ix. any mobile plant owned by P&F; and

x. any items of fixed plant covered by a specific preventative maintenance contract or scope.

b. Identifying, undertaking and recording appropriate inspection requirements for plant (pre-operational checks, preventative maintenance schedules, safety inspections, regulatory inspections).

c. Updating local as built drawings as required.

Heads of Organisational Unit

(35) Heads of Organisational Units are responsible for:

a. Ensuring the installation, maintenance and safe operation of:

i. plant in their area of responsibility;

ii. safety or sensor devices that are not connected to the building infrastructure (e.g. portable alarms); and

iii. reticulation systems (e.g. pipes, cables, ducts) connecting the item of plant to the building services connection or isolation point (e.g. isolator tap) in their area.

b. Ensuring any required statutory, preventative and corrective maintenance to plant, including the reticulation system (up to the connection or isolation point to building services) and safety devices, in their area is scheduled and conducted as required.

c. Ensuring P&F is notified of any maintenance requirements specific to plant in their area when:

i. the plant is installed; or

ii. the Organisational Unit becomes aware of the maintenance requirements.

d. Any plant (including equipment attachments) covered by a specific service level agreement (SLA).

e. All costs associated with plant maintenance in their area.

f. Managing the risks associated with plant in their area in accordance with this Procedure.

g. Seeking advice from their local Work Health and Safety Coordinators (WHSC) or HSW Manager on implementing the requirements of this Procedure; and

h. ensuring that Managers and Supervisors in their area, who manage UQ workers required to work with plant, are aware of this Procedure and associated risk assessments and provide resources to meet the competency and training requirements of this Procedure.

Managers and Supervisors

(36) Managers and Supervisors are responsible for:

a. Conducting and reviewing risk assessments in UQSafe in consultation with UQ workers.

b. Consulting affected stakeholders during the design and procurement stages of plant.

c. Ensuring plant is recorded in the local plant register.

d. Ensuring UQ workers under their supervision are suitably qualified and trained to use the plant.

e. Informing UQ workers under their supervision of any safe operating procedures for tasks involving the use of plant.

f. The inspection and maintenance of plant in accordance with the manufacturer’s specifications and relevant Australian legislative requirements and standards.

g. Maintaining records of inspection and maintenance for plant; and

h. ensuring new owners of transferred plant are provided with the designer or manufacturer supporting documentation.

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Health, Safety and Wellness Division (HSW Division)

(37) Health, Safety and Wellness Division is responsible for:

a. Supporting P&F in the ongoing development and implementation of this Procedure and providing health and safety advice to Organisational Units when required or requested.
b. Communicating this Procedure to Organisational Units and UQ's Safety Network for implementation; and
c. providing guidance and advice to Organisational Units, in collaboration with P&F, on the implementation of this Procedure.

Health, Safety and Wellness Managers (HSW Managers) and Work Health and Safety Coordinators (WHSCs) (WHSC)

(38) HSW Managers and WHSCs are responsible for:

a. Providing advice and guidance to UQ workers in their Organisational Unit on how to implement and operationalise this Procedure.
b. Assisting Managers, Supervisors and UQ workers to conduct and review risk assessments for tasks and activities involving the use of plant.
c. Consulting with HSW Division on any constraints to implementing the requirements of this Procedure.

UQ Workers

(39) UQ workers using plant are responsible for:

a. Using plant only for the purpose for which it is designed.
b. Complying with training, competency and licensing requirements outlined in this Procedure and following instruction received from their Head of Organisational Unit, Manager or Supervisor.
c. Following safe operating procedures and manufacturer's instructions.
d. Conducting pre-operational checks on plant before starting a task, and completing associated log books where required.
e. Assisting Managers and Supervisors to conduct and review risk assessments in UQSafe.
f. Conducting a Job Hazard Analysis (JHA) before commencing a task, where required.
g. Using any required personal protective equipment and safety equipment as determined by the risk assessment or the manufacturer instructions.
h. Reporting all incidents, injuries, near misses or hazards associated with an item of plant in UQSafe and to the Manager or Supervisor as soon as reasonably practicable.
i. Reporting any defective plant to the Manager or Supervisor, and tagging and/or locking out until repaired.

Section 5 - Monitoring, Review and Assurance

(40) Property and Facilities Division and HSW Division will collaboratively review this Procedure as required to ensure its accuracy, relevance and effectiveness. Review of the Procedure will also be informed by feedback from Heads of Organisational Units, Supervisors and Managers.

(41) HSW Division will conduct periodic audits of P&F and Organisational Unit compliance with this Procedure, which may include:

a. the existence, adequacy and review of plant risk assessments;

b. UQ worker compliance with this Procedure and safe operating procedures; and
c. UQ worker training and competency documentation.

(42) Local HSW Managers and WHSCs will conduct regular inspections (at least annually) to review appropriate risk controls, including the review of the risk assessments and safe operating procedures in their areas.

Section 6 - Recording and Reporting

(43) HSW Managers and Organisational Unit Managers and Supervisors will ensure:

a. all incidents and near misses involving plant and equipment are reported in UQSafe; and
b. non-compliance with this Procedure and SOPs is reported to the Heads of Organisational Unit.

Section 7 - Appendix

Definitions

Term	Definition
Competent Person	A person who has acquired through training, qualification or experience, or a combination of these, the training and knowledge and skills to carry out that task.
High Risk Work Licence	Licence issued by WorkSafe Queensland that is required to undertake the following tasks: forklift operation, pressure equipment operation, crane and hoist operation, dogging and rigging work, Elevated Work Platforms and scaffolding work.
High Risk Construction Work	in context of plant and equipment, means construction work carried out in an area at a workplace in which there is any movement of powered mobile plant.
Job Hazard Analysis (JHA)	Also known as a job safety analysis (JSA), is a technique to identify the hazards and risks of specific tasks in order to reduce the risk of injury to workers.
Plant	Includes machinery, equipment, appliances, containers, implements and tools and any components or anything fitted or connected to those things. Plant includes items as diverse as lifts, cranes, computers, machinery, conveyors, forklifts, vehicles, power tools, quad bikes, mobile plant and amusement devices.
Plant and Equipment Design	Design, redesign or modification of plant/equipment or a part of an item of plant/equipment.
UQ Worker	For the purposes of this Procedure includes: - Staff - continuing, fixed-term, research (contingent funded) and casual staff; - Contractors, subcontractors and consultants working under UQ systems and control (e.g. contingent workers); - Visiting academics and researchers; - Affiliates - academic title holders, visiting academics, Emeritus Professors, adjunct and honorary title-holders, Industry Fellows and conjoint appointments; - Higher Degree by Research students; and - Volunteers and students undertaking work experience.

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