Procedure: Plant (equipment) hazard management

Purpose

The objective of this procedure is to support the University’s Plant (Equipment) Management Policy to achieve a safe and healthy workplace where plant is involved in the undertaking of University business. A risk management approach and strategies are emphasised in the policy, this procedure, guidelines and forms.

In line with University expectations, no research, teaching or operational work shall be undertaken unless a risk assessment of Plant and its use is completed. Under delegation 3.57 (a), the Dean, Director, budget manager and supervisor in a budget area should be satisfied that the hazards associated with the plant and its use are controlled as far as reasonably practicable, with any residual risk acknowledged.

All staff, students, visitors and contractors of the University involved with plant are required to follow this procedure as well as any local associated management guidelines or associated ANU guidelines.

Definitions

Plant is defined as any machinery, equipment or tool, and any component therefore (Work Health and Safety Regulations 2011).

Plant used at the University ranges from complex installations to portable equipment and tools. The Plant may be purchased, created for, and employed in, any aspect of University business. Plant at the University may include:

- plant under pressure e.g. autoclaves, boilers, gas cylinders
- Plant with moving parts e.g. presses, lathes, milling machine
- Powered mobile Plant e.g. electric vehicles; vehicle hoists
- Plant with hot or cold parts
- Electrical plant and plant that is exposed to electrical hazards e.g. electrical generators, powered hand tools
- Plant designed to lift or move e.g. cranes, forklifts, hoists and elevating
work platforms; earthmoving machinery

- Industrial robots and other remotely or automatically energised equipment
- Lasers and laser products
- Scaffolds
- Non-powered hand tools e.g. screwdriver, chisel, hammer etc. small office equipment
- Amusement structures.

ANU guidelines on specific types of high hazard plant are available to enable responsible areas to determine compliance.

**Exemptions**

Under the regulations, the following items are not included in the definition of Plant:

- Buildings – refer to Facilities and Services for specific requirements;
- Integral parts of a building (such as air conditioning plant, lifts, electrical, lighting and fire safety systems) – refer to Facilities and Services for specific requirements;
- Ships – (not currently applicable to the ANU).

**Procedure**

**Life Cycle Risk Management**

2. The University and its budget areas have specific duties according to its role in the life cycle stages of plant. All aspects of the plant’s life cycle should be considered including:

- **Part A Design, construction and manufacture**;
- **Part B Acquisition and purchase**;
- **Part C Installation and commissioning**;
- **Part D Operation, use and work practices**;
- **Part E Maintenance and cleaning**;
- **Part F Decommissioning and dismantling; and Disposal**.

**Risk Management Process – Overview**

3. A risk assessment process has been developed around the life cycle stages
of plant. Risk assessment is best incorporated into the purchasing operating procedures and/or plant associated guidance material.

4. A risk management process should be undertaken on new and existing items of plant to achieve safety, compliance and best use of University resources, as far as is reasonably practicable.

5. The risk management process generally involves four (4) steps:
   a. **Identify the hazard** – identify aspects of the plant that may cause harm in all aspects of the physical plant; the operation or work practice involving the plant; and the environment in which the plant is used.
   b. **Assess the risk** (at least in terms of probability and consequence) of the hazard’s identified;
   c. **Take action to eliminate or reduce the risks** to a reasonably practicable level (including licensing and certification requirements); and
   d. **Review and regularly monitor** the effectiveness of the risk reduction measures.

6. Where a variance in risk assessment occurs between assessors, a competent person familiar with the plant should undertake a technically objective assessment to determine risks and appropriate controls. Advice is available from the [Work Environment Group](mailto:) (Human Resources Division).

**Responsibility**

7. A Budget Area must take all reasonably practicable steps to ensure that:
   - risk control measures are maintained and effectively monitored;
   - effective and safe systems of work are implemented and appropriately supervised;
   - training programs support risk management principles.

8. This process is explained further in the [ANU’s Plant Risk Assessment Guidelines](mailto:).

9. Use of the following is encouraged to document the risk assessment and management decisions:
   - plant pre-purchase assessment checklist
   - Plant Risk Assessment and Management Summary (PRAMS) Form

**Regulatory Obligations**

10. Under the [Work Health and Safety Act 2011 (Cth)](mailto:), the University is required
to establish systems to effectively manage plant under its control to minimise the risk to health and safety of staff, students, contractors, and other people at or near University workplaces, as far as is reasonably practicable.

11. At various stages in the life cycle for certain plant, the University may be required to meet specific duties, including those allocated to:
   - Employers;
   - Staff members;
   - Designers and manufacturers of plant;
   - Importers and suppliers of plant; and
   - Erectors and Installers of plant.

Record Keeping

12. The budget area is responsible for maintaining records (including relevant tests, commissioning, inspection, and maintenance) for all plant. To assist in this process, the Maximo system may be used (or equivalent system).

13. Plant may exist within the University for many years. It is therefore important that records are kept and maintained. It is suggested records are kept with the plant or in the workshop and a copy on a registered University file.

14. It is recommended that the plant dossier; plant risk assessment and management summary (PRAMS) documentation; relevant tests; commissioning, inspection, and maintenance records are kept for at least 7 years after the disposal of the plant. Training requirements and any instruction manual may be destroyed (or transferred) with the equipment.

Plant Register

15. To assist with regulatory compliance, Work Environment Group will maintain a Plant Register for:
   - Crane designed to handle molten metal or dangerous goods.
   - Concrete placing booms
   - Industrial lift trucks
   - Mobile cranes
   - Hoists, with a platform movement in excess of 2.4 metres, designed to lift people;
   - Boom-type elevated work platforms
   - Presence sensing safeguarding systems
• Vehicle hoists
• Gantry cranes >5 tonnes, bridge cranes >10 tonnes, or any gantry or bridge crane.

16. Budget Units are requested to inform Work Environment Group when a purchase of the above equipment is being considered.

Reporting Hazards with Plant

17. An ANU Hazard Report must be submitted when a hazard with plant is identified. The plant should be taken out of service until the hazard has been rectified and the plant re-commissioned in accordance with this Procedure.