

Overview

Schools have a responsibility to safely manage plant and machinery. Plant is a general name for machinery, tools, appliances and equipment. It can include equipment as diverse as electric drills, angle grinders, routers, mowers, welders and power tools, workshop equipment, office equipment as well as blenders and coffee grinders. This guideline has been developed to ensure that risks associated with plant and machinery within the school are identified and managed.

Plant and machinery commonly found in schools

- **General grounds and maintenance:** electric drills, angle grinders, electric saws and power tools, ride on mowers, whipper snippers, quad bikes, chain saws, mowers, lifts, LP Gas BBQ.
- **Technology areas (including wood work and metal work):** saws, drills, angle grinders, sanders, welders.
- **Art:** potter's wheel, kilns, laminators, guillotines.
- **Food technology:** fryers, microwaves, dishwashers, cooking equipment, industrial bread makers, dough mixers, food processors.

What are the risks?

The risk of injuries that can occur from using plant and machinery are:

- Crush injuries
- Sprains and strains
- Burns
- Fractures
- Cuts/lacerations/open wounds
- Electric shock

Reducing the risks of injuries from plant and machinery

Identifying plant and machinery hazards

- Conduct formal workplace inspections (including the use of the Plant and Machinery Hazard Identification Checklist).
- Read the manuals and safety information provided with the plant and current safety advice found on relevant websites.
- Review reports of injuries/incidents, near misses, first aid records and workers' compensation claims.
- Regularly observe the condition of plant and machinery or the behaviour of staff and student using the plant and machinery.



Assessing the risks associated with plant and machinery

Hazards should firstly be assessed according to the severity of the injury likely to be caused and then according to the likelihood that the hazard will cause an injury.

Things to consider when assessing the risks should include:

- Could the plant cause serious injury?
- Could the plant create hazardous conditions, such as noise and fumes?

The likelihood of injury in specific situations will be influenced by:

- The layout and physical conditions of the environment.
- The training, experience and ability of the staff involved.
- The way the plant or machinery is being used.

Control measures to reduce the risk of injury from plant and machinery

Examples of plant and equipment controls (from most to least effective) could include:

- **Elimination** of risks by purchasing/hiring safe equipment in the first place or by removing dangerous equipment from the school.
- **Substitution** or replacing a hazard with a lower risk item. For example, if the power cord on an electric drill is in danger of being cut and creating an electrocution hazard, use a cordless drill instead.
- **Isolation** can be used in cases such as moving a photocopier to a dedicated room with its own ventilation system or shifting noisy woodworking equipment into a separate area.
- **Engineering** controls such as electronic cut-out switches, stop controls, warning devices, exhaust ventilation, screens, guards, etc.
- **Administrative Controls** including safe work practices can be used to minimise exposure to a particular piece of plant, including signage, inducting and training staff and students, safe operating procedures, maintenance inspections.
- **Personal Protective Equipment (PPE)** does not remove hazards but reduces their impact. Examples include ear muffs, safety glasses, overalls, hats, safety footwear, lab coats, etc.

Suggested strategies for managing plant and machinery on the school site

Once the appropriate control measures have been determined, they should be documented and communicated to staff.

Schools should:

- Inspect all plant and machinery on a regular basis.
- Ensure regular maintenance of plant and machinery is conducted.
- Maintain all plant and machinery in a safe working condition, ensuring all electrical safety requirements are adhered to.



- Read the manuals and safety information provided with the plant and machinery.
- Maintain a list of all the plant and machinery used at the school and record any hazards identified.
- Review formal and informal reports (verbal, paper or electronic) from staff, students, maintenance staff or school leaders.
- Review reports of injuries / incidents, near misses, first aid records and workers compensation claims.
- Maintain documentation relating to safe work practices and their effectiveness.
- Ensure that teachers have appropriate training and experience with the use of the machinery that students will use in their classes.
- Ensure that teachers have appropriately inducted students into the safe use of the plant and machinery before commencing use, with training records maintained.
- Remove old or damaged machinery from the school.
- Place machinery in a well ventilated area, if required.
- Ensure Safe Operating Procedures (SOPs)/Safe Work Procedures (SWPs) are developed and displayed adjacent to all items of static plant and accessible to operators of portable plant. The SOPs/SWPs provide students, teachers and other staff members with a consistent and structured approach for the use of plant and machinery.
- Ensure appropriate Personal Protective Equipment (PPE) is worn at all times when operating plant and machinery.

Monitoring and Review

All control measures implemented should be assessed in order to determine whether they:

- Have the intended effect; or
- Have created any additional hazards.

Resources

- Plant and Machinery Hazard Identification Checklist
- Plant Hazard Checklist (WorkSafe publication)

Related Topics

- Electrical Safety
- First Aid
- Slips, Trips and Falls
- Noise

Legislation

- Occupational Health and Safety Act 2004
- Occupational Health and Safety Regulations 2007 (Part 3.5)