

SAFE USE OF MOBILE ELEVATING WORK PLATFORMS (MEWPS) TO MANAGE TREES AND VEGETATION

Mobile elevating work platforms (MEWPs) are a safe way of providing temporary access at height for tree care work and vegetation control. Overgrown or overhanging trees and vegetation require management and MEWPs provide an ideal solution for this. This task is necessary in both urban and rural locations – often in public areas close to pedestrians and passing traffic. Pruning or removing branches can be a hazardous task, especially if trees are in the proximity of power lines or communications cables or the platform is poorly positioned in relation to the work area.

The most common type of MEWPs used for this task are static (1b) machines such as vehicle-mounted platforms, tracked and trailer-mounted MEWPs. These machines are favoured for ability to drive across rough terrain and to be set up on uneven ground.

“ Reports IPAF received to its accident database over the period 2012-21 indicate there has been a steady increase in the number of incidents involving tree care and vegetation control resulting in major injury and death. ”

The three most common types of injury for those using MEWPs for tasks of this nature are:

- **Electrocution** – contact with or arcing from power lines;
- **Falls from the platform** – platform occupants not using or incorrect use of personal fall protection equipment (PFPE);
- **Hit by falling objects** – such as tree branches or sections of trunk.



Accidents can be prevented by having safety procedures in place and making sure they are followed

What are the hazards?

- inadequate planning, including site and risk assessment;
- poor ground conditions;
- over-reaching or standing on guardrails;
- failing to wear appropriate PFPE or failing to attach lanyard to manufacturer-approved anchorage points;
- contact with or arcing of power lines to platform occupants, conductive object, or any part of the MEWP;
- being struck by falling objects or materials;
- attaching branches or lumber to the MEWP to swing or lower away from the work area, or any similar use of the MEWP as a crane;
- being struck by passing traffic;
- pedestrians entering work zones;
- excessive wind or changeable weather conditions;
- injuries from cutting and pruning equipment;
- wildlife, such as nesting birds, wasps or bees;
- exceeding the safe working load (SWL) of the MEWP.

Risk-control measures

Recommended risk-control measures can be separated into three stages:

- 1 Planning stage
- 2 Workplace inspections and pre-use checks on site
- 3 Operation and shut down

1. Planning stage

- ✓ Proper risk and site assessments must be conducted and communicated.
- ✓ A safe work procedure must be developed and adopted.
- ✓ Select the correct MEWP for the task to be undertaken.
- ✓ A traffic management plan is needed if working on or near to roads.
- ✓ Identification of power and communication lines must be carried out, note this might involve contacting utility suppliers. Power lines can sometimes be hidden among vegetation.
- ✓ Make sure you know the safe set-up distance from power lines. If there is a requirement to work closer than this, ensure lines are deactivated and isolated and consider using an insulated aerial device (IAD).
- ✓ Consider using manufacturer-approved accessories such as equipment holders and segregation screens.
- ✓ Create a segregated area with a drop zone clear of the MEWP base and structure, taking into account wind velocity.
- ✓ If chainsaws are to be used, ensure operators hold the necessary licence and can demonstrate competency.
- ✓ Make sure a ground-rescue person is in place, familiarised with the MEWP's emergency lowering controls and the agreed rescue plan.
- ✓ Never use or adapt MEWPs in a way that is not manufacturer-approved. Always use MEWPs safely, never use or adapt equipment in any way that is not manufacturer approved.



2. Workplace inspection and pre-use check

- ✓ Carry out pre-use checks before using any MEWP. Always check for damage or faults, and isolate, tag and report any defects.
- ✓ Plan and walk the route – getting to and from the work site may involve manoeuvring the MEWP over challenging terrain. For vehicle-mounted platforms consider using a four-wheel-drive unit.
- ✓ Track-mounted MEWPs should be manoeuvred with outriggers partially deployed so if the MEWP becomes unstable while being driven it reduces the risk of overturn (see illustration below).
- ✓ Make sure the ground can support the weight of the MEWP and the load in the platform – on 1b-type machines use spreader pads to distribute weight evenly. Consideration must be given to the point-load pressures when MEWPs have more weight over one side of the machine – this can be up to 80% of the machine's total weight.
- ✓ Overturns can occur if MEWPs are not set up on firm surfaces or struck by other vehicles. Ensure MEWPs are set up and levelled correctly, on firm surfaces, and are not at risk of being struck by other vehicles or machines.
- ✓ Set up well away from edges, verges or steeply sloped banks.





3. Operation and shut down

- ✓ Occupants should always wear the correct full body harness and lanyard in boom-type MEWPs and ensure these are attached to designated anchorage points inside the platform.
- ✓ Occupants should be aware of surroundings and use continual visual observations and communicate with each other when operating – look up, look down and look around.
- ✓ Pay attention to possible changes in ground conditions while operating – ground can become softer after frost has melted, if it is raining, or the ground is wet.
- ✓ Always use suitable spreader pads under outriggers. Ensure pads are level, even on sloping ground.
- ✓ Take precautions to protect all occupants from chainsaws and flying debris. Use of manufacturer-approved platform dividers is mandatory in some countries if chainsaws are used.
- ✓ Always cut trees so that branches fall away from the platform, and will not strike the MEWP structure.
- ✓ When work is finished, and the MEWP is lowered and returned to the stowed position clear the MEWP of sawdust and other such debris, paying particular attention to moving parts and joints, hydraulics, and machine controls.
- ✓ Any MEWP that has been operated in adverse or extreme weather or temperature conditions should be inspected and maintained accordingly to ensure all systems remain in safe working order.
- ✓ Always check for damage on the MEWP after use. Any damage must be reported to the MEWP owner immediately. Isolate, tag and report damaged machines.
- ✓ Leave the MEWP in a safe and secure place with all controls isolated and keys removed and stored in a safe location.
- ✓ Handle and store fuel and other flammable liquids safely, away from the platform.
- ✓ Never carry fuel/petrol in the platform.
- ✓ Occupants should remain within the platform and never unclip PFPE at height.





Credit: William Currie

Training and familiarisation

- It is the employer's (User) responsibility to ensure that all operators are trained and familiarised on any equipment they are required to use.
- Training and familiarisation should always include demonstration on stabilisation systems fitted to the MEWP.
- Nominated ground rescue persons or ground personnel should also be familiarised in the MEWP controls and emergency/auxiliary controls and know and understand the agreed rescue plan.

For more details please visit www.ipaf.org/trees

