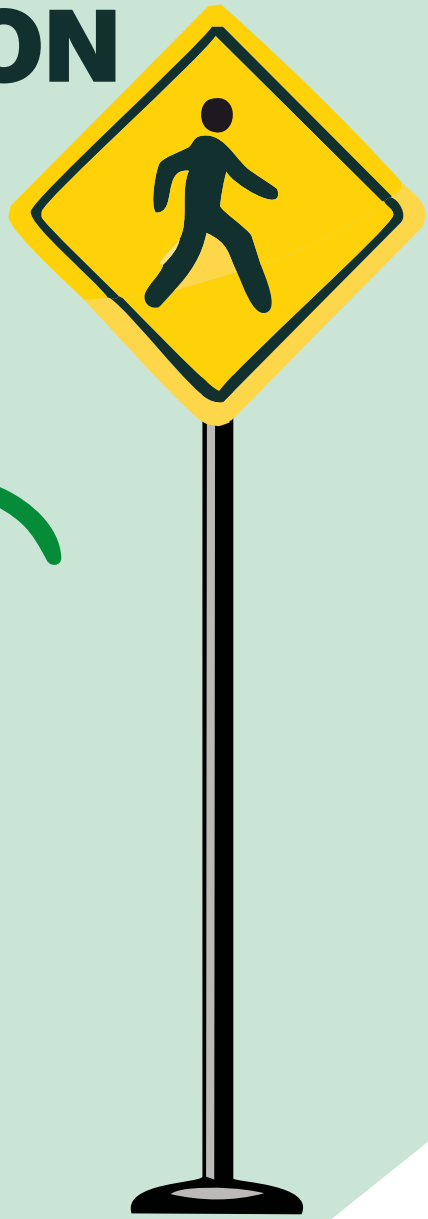
Australian Forest Products Association

MOBILE PLANT & PEDESTRIAN INTERACTION




STOP
STOP
PENTARCH
FORESTRY

ACKNOWLEDGEMENTS

This project was initiated and managed by the Australian Forest Products Association (AFPA) Softwood Manufacturing Chamber, Workplace Health and Safety Committee. AFPA thanks the numerous industry participants who volunteered their assistance in the development of this guide.

DISCLAIMER

This Guide is not intended to be a procedural document or a work standard. The information contained within is provided to raise awareness of the of mobile plant interaction with pedestrians and provide practical information to assist in managing the associated risk. The information should not be construed in any way as providing legal advice or deemed to represent a policy position.

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FIRE
EXTINGUISHER

1.0 INTRODUCTION

The movement of mobile plant and vehicles in and around a workplace, including reversing, loading and unloading, pose a significant risk to pedestrians in multiple industries.

There is a well-documented risk of serious injury or fatality.

The Australian Forest Products Association (AFPA) has developed this guidance document regarding the risk of mobile plant and pedestrian interaction inherent in timber manufacturing, movement and storage, to assist businesses with safe operation.

2.0 SCOPE

This Guide is designed to enable anyone in the timber industry to readily identify and manage mobile plant and pedestrian interaction risk.

Potential for mobile plant to interact with pedestrians, other plant and structures is a broad subject. Therefore, this Guide is limited to managing the risk associated with mobile plant and pedestrian interaction.

This Guide is intended to provide guidance for meeting obligations under relevant health and safety state laws regarding the specific risk of interaction between mobile plant and pedestrians on operating sites.

It is not intended to be a procedural document but provides practical examples of the general principles for managing mobile plant and pedestrian interaction risk on timber industry sites.

3.0 OBLIGATIONS

Persons conducting a business or undertaking (PCBUs) / Employers, must meet their duties and obligations under relevant health and safety laws.

Duty holders are responsible for the safe movement of traffic and pedestrians around the workplace.

A PCBU/Employer must consult with workers when:

- identifying hazards and assessing risks to health and safety arising from the work conducted or to be carried out
- making decisions about ways to eliminate or minimise those risks


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4.0 RISK MANAGEMENT APPROACH

4.1. Safety by Design

A well planned and designed site layout and traffic flow reduces the risk of interaction between pedestrians and plant. In addition, when purchasing or hiring mobile plant it is good practice to ensure it is fit for purpose and compatible with existing plant.

4.2. Identifying the Hazards

Types of typical powered mobile plant include, but are not limited to:

- forklifts
- loaders
- bobcats
- mobile cranes
- tip trucks
- elevated work platforms
- log grabs
- site vehicles
- trucks

Creating a visual site map is useful in identifying areas of risk and planned traffic flow. Consider:

- vehicle / directional flows, including areas of high traffic volume
- speed limits and other warning systems
- entry and exit points (including specialist vehicles)
- pedestrian movements (including cross over points)
- loading and unloading areas and driver safe exclusion zones
- building locations
- potential blind spots and any areas of poor visibility
- specific activities which require pedestrians to be outside of normal operating areas (e.g. performing stocktake)
- restricted areas

Sample site map indicating traffic flow and exclusion zones

HIERACHY OF CONTROLS

HIGHEST

MOST

LEVEL 1

Eliminate the hazards

LEVEL 2

Substitute the hazard with something safer.

Isolate the hazzard from people.

Reduce the risks through engineering controls.

LEVEL 3

Reduce exposure to the hazard using administrative actions.

Use personal protective equipment.

Level of health and saftey protection

Reliability of control measures

LOWEST

LEAST

4.3. ASSESSING THE RISKS

A risk assessment can help determine what action to take to control the risk and how urgently the action needs to be taken. Consider:

- work tasks, design and management. Understanding pedestrian activities within each operational area may provide opportunity to change work practice and remove/ segregate plant and pedestrian interaction
- types and heights of vehicles, where loading and unloading occurs and the general needs of traffic, including parking, road surface and entering and exiting the workplace
- asking your workers, pedestrians and visiting drivers about traffic management problems they encounter at the workplace
- incident and injury records, including near misses
- any specific environmental risks e.g. work at night
- whether plant and equipment provided is fit for purpose and maintained accordingly
- In many cases the risks and related control measures will be well known. In other cases, you may need to carry out a risk assessment to identify the likelihood of somebody being harmed and how serious the consequences could be. Refer to the sample traffic hazard checklist provided by SafeWork Australia.

Note that a pedestrian should be defined as any person who is on foot (including those using mobility devices) in the workplace. For example, a forklift operator who leaves the vehicle, even temporarily, to attend to other tasks must be classified as a pedestrian at that point.

4.4. CONTROLLING THE RISKS

The ways of controlling risks can be ranked from the highest level of protection and reliability to the lowest as shown in the Hierarchy of Control measures illustratedon left side of plant The hierarchy of control measures can be applied in relation to any risk. Health and Safety regulations make it mandatory for duty holders to work through this hierarchy when managing certain risks.

PCBU's / Employers must always aim to eliminate the risk, which is the most effective control. If this is not reasonably practicable, you must minimise the risk by working through the other alternatives in the hierarchy.

Administrative controls and personal protective equipment (PPE) are the least effective at minimising risk because they do not control the hazard at the source and rely on human behaviour and supervision. These control measures should only be used:

- to supplement higher level control measures (as a back-up), or
- as a short-term interim measure until a more effective way of controlling the risk can be used, or
- when there are no other practical control measures available (as a last resort)

In most cases, a combination of the control measures will provide the best solution to minimise the risk to the lowest level reasonably practicable.


PEDESTRIANS
KEEP TO MARKED

4.5. MAINTAIN AND REVIEW THE CONTROLS

Managing risks is an ongoing process that needs attention over time. It is critical that controls are regularly reviewed to ensure they are working as planned and remain effective. Refer to the sample traffic control checklist at Safework Australia.

Risks should be reviewed whenever there is a change to design, workplace layout, activities or control measures.

5.0 COMMONLY USED CONTROL MEASURES

In this section examples of control measures are provided for guidance. The examples provided are not prescriptive, nor exhaustive.

The first thing to consider is whether a risk can be eliminated, for example:

- through the removal of powered mobile plant and other vehicles from the workplace
- in loading and unloading zones, consider eliminating the risk posed by reversing vehicles by using drive-through loading and unloading systems, multi-directional mobile plant or rotating cabins
- through the removal of pedestrians from the workplace by eliminating tasks in the proximity of mobile plant
- if elimination is not reasonably practicable, work through the hierarchy of control measures. The hierarchy of control measures requires the highest level of control measures to be implemented first, so far as is reasonably practicable

5.2 SUBSTITUTION

Where possible, substitute the hazard for something safer. For example:

- substitute trucks or forklifts with other load shifting equipment such as a walker stacker
- replace an item of mobile plant that has a restricted field of vision, with one that has a clear field of vision

5.3 ISOLATION

If possible, isolate pedestrians from mobile plant by:

- creating exclusion zones such as:
- mobile plant only areas in log yards
- driver safety zones in loading and unloading areas
- using overhead walkways or subways
- providing barriers or guardrails at building entrances and exits to stop pedestrians walking in front of vehicles
- providing high impact traffic control barriers
- providing temporary physical barriers
- directing traffic around the workplace, rather than through, e.g. setting up a detour route or contraflow
- providing separate entries and exits for pedestrians and vehicles
- providing separate entry and exit points for large vehicles


WARNING
HIGH MOBILE PLANT ACTIVITY
PRESS WARNING LIGHT BUTTON
PRIOR TO CROSSING ROAD WAY

5.4 ENGINEERING

Potential engineering controls include but are not limited to:

- fitting vehicles with devices such as reversing sensors, reversing cameras, mirrors and speed limiting devices
- using boom gates and proximity devices that trigger boom gates, or power down operating plant
- using gates with warning devices to guide the movement of traffic and pedestrians
- using devices like speed humps to slow vehicles
- fitting refractive lenses on rear windows to help drivers see 'blind spots'

5.5 ADMINISTRATIVE

Administrative control measures include:

- risk assessment tools such as SWMS', JSA's
- standard operating procedures
- implementing speed limits
- using separation distances / zones
- installing signage and traffic light systems
- installing reflective strips on mobile plant
- providing appropriate communication devices to allow effective communication (e.g. UHF radios)
- ensuring drivers of plant are fit for work, appropriately licensed and competent in the tasks they are performing

5.6 PERSONAL PROTECTIVE EQUIPMENT

Pedestrians can wear high-visibility clothing, so they are easily visible in the workplace. This may include reflective striping to enhance visibility in low light environments.

6.0 TRAFFIC MANAGEMENT PLANS

A traffic management plan is more comprehensive than just a diagram or site map as described above. It can help to plan and communicate how the business manages traffic risks and should be communicated and made available to workers on site. Plans should be reviewed on a regular basis.

A typical traffic management plan includes details of:

- the duties and responsibilities of the people involved
- the types of vehicles that may be found on site
- risks and relevant controls that are to be implemented
- the desired flow of pedestrian and vehicle movements, including the space needed for plant operators to safely enter and exit their vehicles
- the expected frequency of interaction of vehicles and pedestrians
- illustrations of the layout of barriers, walkways, signs and general arrangements to warn and guide traffic around, past, or through a work site or temporary hazard
- drawings or dimensions of Driver Safe Exclusion zones
- relevant colour designations – line marking
- speed limits
- how short term, mobile work and complex traffic situations will be managed


PLANER
PENTARCH FORESTRY
STOP

7. TRAINING AND AWARENESS

PCBU's / Employers are responsible for ensuring workers are properly instructed and trained on how to do their work safely.

Workers must be provided with information, training, instruction and supervision regarding all relevant risks to their health and safety. This includes training in the content of the Traffic Management Plan and any other relevant documentation.

Operators of mobile plant must be appropriately trained and verified as competent to operate the equipment and must understand relevant operating instructions regarding that activity.

Contractors and visitors to site must also be provided with information regarding site hazards and protocols, so should be inducted to a standard that reflects their role on site.

Training and instruction must be easy to understand, even for those whose first language is not English and those who have additional needs such as literacy and hearing difficulties.

8. REFERENCE DOCUMENTS AND OTHER GUIDANCE MATERIAL

- Safework – General Guide to Workplace Traffic Management
- SafeWork – Traffic Hazards Checklist
- Safework Australia Traffic Control Measures Checklist
- AFPA – Guide to Load Restraint for Loaders and Unloaders
- Federal Safety Commissioner - Mobile plant educational material and resources timber stacking incident