

TIP sheet

Working on foot in proximity to moving plant

T002 – MARCH 2006



This TIP sheet has been developed to ensure personnel are safe while working on foot in the vicinity of mobile plant or vehicles. It is based on new guidelines for Working on Foot in the Vicinity of Moving Plant set out in section 9.26 of the RTA Traffic Control at Worksites Manual.

Vehicle Movement Plans

Vehicle movements within worksites must be planned, taking into account:

- all mobile plant;
- delivery vehicle;
- other site traffic; and
- site workers on foot and other pedestrians.

A site specific Vehicle Movement Plan (VMP) is mandatory where any of the following conditions exist:

- There are more than 20 repetitive vehicle movements per day
- Plant is travelling on site faster than 40 km/hr
- Plant is reversing over 100 metres
- Other specific hazards to pedestrians on site from plant carrying out work.

The VMP must be updated as site conditions and work processes change and must be communicated through site inductions to all plant operators, delivery drivers and all workers

driving vehicles or working on foot. Changes to VMPs must be communicated through re-induction or toolbox meetings.

Visitors to site must be made aware of the VMP and how it impacts on their activities while on site.

Key hazards identified:

- Reversing plant
- Revolving plant
- Delivery vehicles
- Haulage vehicles (dump trucks, scrapers etc)

Risk factors to be considered:

- Unauthorised persons entering the work site
- proximity of people to mobile plant and revolving plant such as excavators
- Vehicles being loaded or unloaded
- plant being operated in reverse
- Working below plant operating close to the edge of or on embankments or cuttings
- Trenching operations
- High speed plant such as dump trucks
- Noisy work locations masking the sound of approaching plant
- Inappropriate location of compounds or site amenities

- lack of adequately defined and safe crossing points
- Working at night
- Limited sight distances
- crews unfamiliar with the site or that part of the site visiting intermittently
- Working beneath power lines
- Working beneath overhead activities ie bridge sites, steel erection etc
- Servicing and/or floating of plant items
- Parking plant or vehicles in inappropriate locations ie too close to moving plant or in blind spots
- workers jumping onto, out of or riding on plant
- Volume, speed and clearance to any adjacent traffic

Safety controls

Exclusion zones

- As a general rule, workers are not to work within 3 metres of moving plant, or within the area of influence of revolving plant
- Where the activity requires workers within 3 metres or within the area influence, you must ensure that:
 - Workers are properly trained



- A spotter is assigned to the plant or vehicle
- Plant Operators and vehicle drivers are advised of the proximity of workers on foot (or pedestrians etc).
- Workers not to use mobile phones
- Barriers and exclusion zones should be considered to delineate plant movement areas and prevent access.

Spotters/observers

- Use of spotters is required for plant and vehicles in the vicinity of workers on foot
- Ensure communication systems are established between observers, workers on foot and plant/truck operators
- Spotters must have the authority to stop work where a danger exists for workers on foot from the plant or vehicles

Alarms

Ensure that plant items and delivery vehicles are fitted with operational and automatically activated, clearly audible reversing alarms and warning lights before they are allowed into the site.

Personal protective equipment

Approved high visibility clothing and other PPE must be worn by all site personnel and pedestrians/visitors to the site.

Central reporting point for delivery vehicles

Have a designated central point where all delivery drivers must report on arrival at the site

Site induction

Site induction is a critical means of communicating site specific safety rules including vehicle movement plans to all workers and visitors to construction sites

Site inductions should be immediately repeated as site conditions and safety measures change. Toolbox meetings provide an alternate and/or supplementary means of ensuring that all workers and visitors on site are kept up to date with changes.

New technology

Technological solutions that should be considered include:

- Rear-mounted vehicle cameras for reversing plant although factors such as night work, light levels outside and inside the vehicle must also be taken into account
- Sensor alarms that warn drivers and plant operators of their proximity to physical objects and people.

- Interlock devices that prevent vehicle or plant movement outside a pre-determined range.

References

[Traffic Control At Worksites Manual](#) – Sec. 9.26

[WorkCover COP](#) - Moving plant on construction sites



Summary of hazards and precautions

Hazard	Work activity involved	Precautions to be taken
Reversing plant	Heavy patching Excavation under traffic Clearing & grubbing Earthworks Testing, surveying etc AC paving Bitumen sealing Concrete paving Kerb & gutter extrusion Stabilising	<ul style="list-style-type: none"> ■ ensure that plant items are fitted with an automatically activated, clearly audible and working reversing alarm and lights ■ preferably do not have workers working within 3 metres of moving plant such as rollers ■ if the proximity of people to plant is unavoidable use a spotter when the plant is reversing (the spotter might be supplied with a whistle to attract attention of workers) ■ non use of mobile phones
Revolving plant	Heavy patching Excavation under traffic Clearing & grubbing Earthworks Stockpiles	<ul style="list-style-type: none"> ■ ensure that workers are not working within the area of influence of plant like excavators such that they can be hit when the plant item revolves.
Delivery vehicles	Heavy patching Excavation under traffic Earthworks AC paving Bitumen sealing Concrete paving Kerb & gutter extrusion Stabilising	<ul style="list-style-type: none"> ■ ensure that all delivery vehicles report to a designated location or person ■ if delivery vehicles are required to reverse near people ensure that they are fitted with working reversing alarms and lights and a spotter is used. ■ no conflicting instructions?
Haulage vehicles	Haulage works Earthworks	<ul style="list-style-type: none"> ■ consider imposing a speed limit where workers are working near haulage routes ■ if required, designated crossing points are to be installed and all workers and operators advised of their locations. Workers and operators should not cross until the haulage route is clear of haulage vehicles. ■ the haulage route is to be varied to move it away from the workers ■ the work location is to be clearly delineated using barrier boards, plastic mesh fencing or similar and the location of workers advised to each driver of a haulage vehicle.