

MIA STANDARD: TRAFFIC MANAGEMENT

Health and safety is of paramount importance to the New Zealand meat processing industry. The risk of being seriously harmed by traffic at a plant is a significant hazard. It is in the interest of every company and the industry as a whole to meet minimum standards for traffic management at a plant. For this reason, the meat industry is committed to achieving these standards. This standard draws on international experience and merges this with the relevant New Zealand regulations coming into force under the Health and Safety at Work Act 2015. This is a working document. This document and the subsequent family of documents will evolve over time for example to reflect changes in industry practice and regulation.

1 BASIC PRINCIPLES

The three key elements of good traffic management are:

- Safe site – layouts and traffic flows are designed to ensure effective control over vehicle movements and pedestrian interactions
- Safe vehicle - all workplace transport is fit for purpose and well maintained
- Safe driver - drivers are competent, fit for work and appropriately supervised

2 DUTIES OF THE PCBU

The PCBU is generally the company. Someone within the company is responsible for health and safety of the workers at a site and usually this will be senior manager at that site. The PCBU has a general duty of care set under the Health and Safety at Work Act 2015, that a PCBU who manages or controls a workplace must ensure, so far as is reasonably practicable, that the workplace, the means of entering and exiting the workplace, and anything arising from the workplace are without risks to the health and safety of any person. There are also specific requirements relating to traffic management at the site.

The PCBU must assign responsibility to a nominated person to manage traffic risks at each site. They must ensure, so far as is reasonably practicable, that:

- The layout of the site allows, and the site is maintained so as to allow, persons to enter and exit the site and to move within it without risks to health and safety, both under normal working conditions, out of normal hours and in an emergency.
- Work areas have sufficient space for work to be carried out without risks to health and safety.
- Surfaces are designed, installed and maintained to allow work to be carried out without risks to health and safety.
- There is sufficient lighting to enable –
 - i. Each worker to carry out work without risks to health and safety;
 - ii. Persons to move within the site without risks to health and safety, and
 - iii. Safe evacuation in an emergency.

These are required in regulation, and a PCBU or any worker who fails to comply with these duties is committing an offence and is liable to conviction.¹

3 IDENTIFY HAZARDS

The PCBU (or the nominated person) must identify reasonably foreseeable hazards that could give rise to risks to health and safety.²

In identifying potential hazards at a site, you should consider

Different users:

- Staff and visitors parking cars

¹ See Health & Safety at Work – General Risk and Workplace Management Draft Regs 2015, s.10.

² S.5.

MIA STANDARD: TRAFFIC MANAGEMENT

- Visitors and contractors unfamiliar with the site
- Maintenance or changes to the existing traffic flows workers may be unfamiliar with
- Use of forklifts or other internal vehicles
- Trucks delivering livestock
- Trucks delivering and collecting packaging, general freight and collecting product
- Tankers or trucks carrying hazardous substances
- The moving of rail rolling stock and locomotives on a railway
- Pedestrians

Site layout:

- Roadways and footpaths
- Turning areas
- Exit and entry points to buildings (vehicles and pedestrians)
- Signage and road markings
- Barriers
- Crossing points
- Speed limits
- One way systems
- Lighting
- Blind spots (within the site and from vehicles)
- Height or width restrictions (pipe bridges, power lines, tipping vehicles, cranes and lifting equipment)
- Surface construction –coefficient of friction, resistance to oils and fats, ice and wet, etc

Vehicle related hazards:

- Falling objects
- Roll over
- Collision
- Reversing
- Overloading and load instability
- Run away
- Work at height (sheeting loads, maintenance, man riding cages)
- Noise
- Ergonomics
- Access and agres
- Exposure to carbon monoxide

Workers (including visitors and contractors):

- Induction and training
- Hearing and eyesight (including the effect of wearing PPE or fogging when moving from cold to hot environments)
- Impairment by alcohol, drugs or fatigue
- Lack of attention (use of mobile phones or music devices)
- Distraction
- Human factors (tendency to take the quickest route from A-B)
- High risk tasks –shunters, dogmen, loaders, banksman

A Traffic Management Plan of the site showing the arrangement and spacing between key areas and plant equipment, doorways, etc and traffic flows is a useful tool for identifying the risks and planning controls.

In undertaking a risk assessment, you should consider:

- Reviewing incident records
- Frequency/volume of use by pedestrians and vehicles

MIA STANDARD: TRAFFIC MANAGEMENT

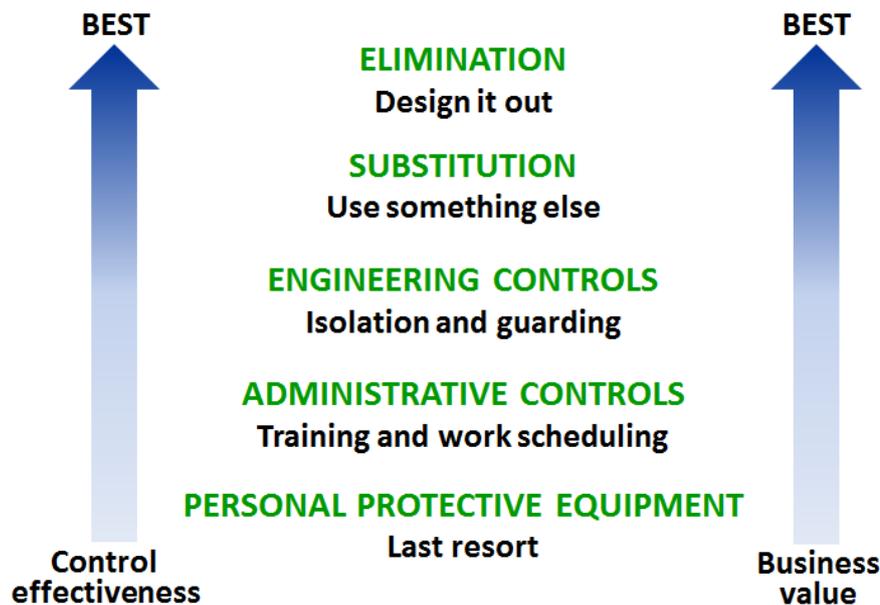
- Proximity type and interaction of pedestrians and vehicles (inc. turning circles, reversing areas, loading and unloading bays)
- Potential consequences (i.e. seriousness of harm that could occur).

In creating a Traffic Management Plan, you should:

- Consult area Health and Safety Representatives and/or the Health and Safety Committee.
- Have an area layout, noting the different zones and planning traffic and pedestrian routes.

4 IMPLEMENT CONTROLS

If it is not reasonably practicable for the PCBU to eliminate identified risks, risk-control measures should be introduced to mitigate the risk following the hierarchy of control.³



The first thing to consider is whether risks can be eliminated from certain parts of the workplace (for example by using overhead walkways). It is unlikely to be possible to remove all traffic management risks in this way so consideration should be given to a package of the following options to minimise risks, so far as is reasonably practicable:

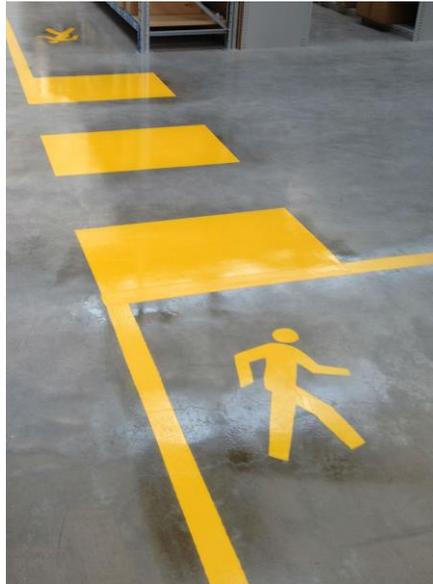
- substitute the equipment for something safer e.g. replace forklifts with other load shifting equipment like a walker stacker or pallet jacks
- isolate the hazard from people e.g. by creating a delivery area away from other pedestrians or work activities, use of bollards, cones, etc
- use engineering controls e.g. speed limiters on forklifts, presence sensing devices or interlocked gates, high kerbs, speed bumps, crash barriers,

If after implementing the above control measures a risk still remains, consider the following controls in the order below to minimise the remaining risk, so far as is reasonably practicable:

- use administrative controls e.g. warning signs or schedule delivery times to avoid or reduce the need for pedestrians and vehicles to interact, training,
- use personal protective equipment (PPE) e.g. high visibility clothing.

³ S.6.

MIA STANDARD: TRAFFIC MANAGEMENT



You need to consider all possible control measures and make a decision about which are reasonably practicable for your workplace. Deciding what is reasonably practicable includes the availability and suitability of control measures, with a preference for using substitution, isolation or engineering controls to minimise risks before using administrative controls or PPE. Cost may also be relevant, but you can only consider this after all other factors have been taken into account.

Irrespective of the type of controls, they should be supported with measures to make sure:

- Everyone on site understands the controls and why they are there
- Everyone uses the controls and that there is adequate supervision with follow up for anyone not obeying them
- The controls are working
- The controls remain effective

A PCBU must ensure through effective supervision and monitoring that the control measures are effective and are maintained. There must be regular reviews of the risks and controls.

4.1 CONTROL ZONES

The purpose of control zones is to separate pedestrians and traffic as much as possible.

Pedestrian zones should be demarked and ideally separated from vehicles by distance or barriers. Vehicle traffic ways and operating areas should be demarked. Where it is impracticable to do so, pedestrians and vehicles should mix only in area that is clearly demarked and subject to additional controls.

The paint schemes laid out below may differ from plant to plant. However, it is important that workers at the plant understand what the different paint schemes mean, and that it is consistent throughout the plant.

Zone	Purpose	
------	---------	--

MIA STANDARD: TRAFFIC MANAGEMENT

<p>Designated Pedestrian Walkways</p>	<p>These are designated pathways (painted with a yellow outline, yellow diagonal lines, barriers or deterrent paving, etc). There must be a significant distance (at least 3 meters) or a kerb, guardrails (often painted high visibility yellow) or bollards between pedestrians and vehicles.</p> <p>The surfaces should be well drained and not potholed, slippery, obstructed or cluttered.</p>	
<p>Traffic ways and traffic way crossings</p>	<p>These are normal traffic ways consistent with public roads. Consider a one-way system (ideally clockwise around the site), as this helps pedestrians know which direction vehicles will travel, limit the need for reversing, and are easier to enforce. Pedestrians should not be allowed on traffic ways, except to cross at designated "zebra" crossings.</p> <p>Traffic ways should be wide enough to allow vehicles to use without having to leave the route. Be aware that the trailer on articulated trucks (such as livestock trucks) will swing out behind the tractor unit.</p>	
<p>Pedestrian exclusion zones, loading zones and active forklift areas</p>	<p>These zones apply to plant equipment being used to load and unload trucks, rail wagons, containers, livestock trucks, and warehouse and operational areas where forklift activity is the predominant task being conducted.</p> <p>Pedestrians must keep clear of hazardous zones when vehicles or plant equipment (such as forklifts) are being operated.</p> <p>The pedestrian exclusion zone should be clearly marked, such as by red diagonal painted lines. Barriers such as expandable gates, temporary bollards, ropes or cones may also be used where practical to do so.</p>	

MIA STANDARD: TRAFFIC MANAGEMENT

Shared operating zones	<p>Shared operating zones are hazardous areas where it is impractical for vehicles and pedestrians not to operate within 3-5 meters of each other.</p> <p>Within these zones interaction between pedestrians and vehicles should be minimised as far as is reasonably practicable, and vehicle speed limits reduced from normal operation.</p> <p>The shared operating zone must be clearly marked, such as by red and/or yellow lines. Barriers such as expandable gates, temporary bollards, ropes or cones should also be used where practical to do so to separate pedestrians from forklifts and other vehicles.</p>	
Parking Bays	<p>Areas for parking must be specifically designated, ideally with white painted lines. Parking for work-related vehicles should be separated from worker and visitor car parks.</p> <p>Parking areas must be clear of walkways, crossings and fire hydrants. For larger vehicles and trucks consider drive-through parking so as to avoid the need for reversing.</p> <p>Where possible, drivers of parked vehicles should not have to cross potentially hazardous traffic routes.</p>	

4.2 VEHICLE SPEED AND PEDESTRIAN SEPARATION LIMITS



The maximum vehicle speed inside the gates of a site is recommended to be <15kph. Where pedestrians and vehicles are in close proximity and there is no separation, the speed limit should be lower. A single, site-wide speed limit reduces opportunities for confusion.

4.3 BARRIERS AND TRAFFIC CONTROL

Consideration should be given to one-way traffic systems.

Barriers should be installed wherever practicable to create a physical control between people and vehicles. Where there are crossings, consideration should be given to gates.

MIA STANDARD: TRAFFIC MANAGEMENT

Barriers include bollards, handrails, and removable barriers. More substantial Armco style steel barriers should be used where there is little separation distance between walkways and heavy vehicle roadways.

Gates, such as boom gates, should be used at site entry points to control/restrict site access.



4.4 SAFETY SIGNS

Signs must be visible to those entering or operating in the area. The size of the signage should be proportional to the level of risk of the hazard.

Entrances to all areas where mobile equipment or vehicles operate should display:

- Authorised person and mobile equipment operating signs
- Mandatory PPE requirements
- Signs should be large enough to be easily read by approaching vehicles, positioned at the approximate eyeline of the driver, kept clean and follow normal road signage conventions.

MIA STANDARD: TRAFFIC MANAGEMENT



4.5 LIGHTING

Sufficient lighting is required in all areas during hours where any vehicle/people interactions occur, so that drivers, operators and pedestrians have clear and unobstructed visibility, regardless of weather or time of day.

Avoid sudden changes in lighting, such as leaving a dark warehouse into a bright day.

4.6 HIGH VISIBILITY CLOTHING

All drivers, operators and pedestrians in traffic areas where vehicles or mobile equipment can operate should wear high visibility clothing. All high visibility apparel should comply with:

- AS/NZS 4602: *High visibility safety garments*
- AS/NZS 1906: *Retro reflective materials and devices for road traffic control purposes – High visibility materials for safety garments*
- Or equivalent standards.

4.7 DRIVER COMPETENCY

All drivers and operators of mobile plant must hold a current driver's licence with relevant endorsements. Drivers should be appropriately trained and certified in the use of the vehicle they operate. Refreshed training and certification should be provided –and is mandated in some circumstances for example for a fork truck licence.

Training records of drivers should be kept.

Vehicles must not be operated by staff who are not trained and authorised. Consideration should be given to removing keys from unattended vehicles and/or swipe card or keypad controls to prevent unauthorised use.

Regular health checks should be considered for drivers to include eyesight and hearing as well as general fitness to drive.

Company policies on drug and alcohol use and fatigue management should apply to drivers as these are safety sensitive roles. Visiting drivers should be subject to the same rules as others on site.

4.8 WORKER TRAINING

The PCBU should make sure that all supervisors and workers are competent to do their work properly.

MIA STANDARD: TRAFFIC MANAGEMENT

Make sure new workers are competent – have effective recruitment or placement policies to ensure workers have the relevant knowledge and experience to do their jobs safely or gain this through training

Make sure existing workers are competent – provide ongoing information about the traffic management plan and training, especially where changes in staff, equipment or procedures are planned.

Training of workers should include traffic safety and reference to the site traffic management plan. This may include

- Familiarisation with walkways and main access ways around the site
- Familiarisation with signs and painting of different control zones
- Familiarisation with reversing horns
- Familiarisation with the main escape routes
- Requirements and responsibilities of workers.

4.9 MANAGING CONTRACTORS

Contractors are an additional risk because they may be unfamiliar with the site, work at different times, bring their own specialist vehicles and mobile plant onto site and their health and safety responsibilities and duties in relation to other workers may be unclear.

When contractors are engaged, the site manager should establish their competence before they do any work. The same health and safety standards that apply to workers also apply to contractors on site. They are likely to need specific job and familiarisation training and/or supervision.

The site manager should give the contractor appropriate information about, for example:

- The workplace
- The routes to be used
- The vehicles and equipment on site
- Risks from activities on the site and controls in place

The site manager and contractors should agree the safety arrangements before they start work. Contractors should be aware of any penalties if they fail to follow safe working practices.

5 WORKER RESPONSIBILITIES:

Workers at processing sites must:

- Follow all traffic-related hazard controls correctly and consistently
- Must report any uncontrolled hazards they see to their immediate supervisor
- Must not drive a vehicle that they do not have specific training to operate
- Must report any traffic-related incidents using their site's incident reporting system
- Must not drive a vehicle while fatigued, and must inform their immediate supervisor. If a worker is too fatigued to drive safely they must not drive themselves home. They may have to wait until friends or family can drive them home.

6 REFERENCE STANDARDS

Australian Standards and Australian/New Zealand Standards

SafeWork Australia Workplace traffic management guidance material

<http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/guidance-traffic-management>

AS 1742 *Manual of uniform traffic control devices*

New Zealand Transport Agency - *Traffic control devices manual (TCD manual)*,

<https://www.nzta.govt.nz/resources/traffic-control-devices-manual/>

MIA STANDARD: TRAFFIC MANAGEMENT

AS/NZS 1906 *Retroreflective materials and devices for road traffic control purposes*
 WorkSafe NZ Traffic Management <http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/workplace-traffic-management/workplace-traffic-management.pdf>
 SafeWork Australia traffic management guidance
<http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/guidance-traffic-management>
<http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/864/Traffic-Management-General-Guide.pdf>
 HSE (UK) traffic management guidance <http://www.hse.gov.uk/workplacetransport/index.htm>
<http://www.hse.gov.uk/pubns/indg199.pdf>
<http://www.hse.gov.uk/pubns/priced/hsg136.pdf>

7 TRAFFIC MANAGEMENT CHECK LIST

Traffic Management	Yes	No	N/A
<i>Process</i>			
Has the site manager undertaken an identification of the hazards?			
Has the site manager undertaken a risk assessment of the hazards?			
Has the site manager identified and documented controls?			
Has the site manager undertaken a regular review of the hazards and controls?			
Has the hazard identification, risk assessment and identification of controls been documented?			
Does the site have a current Traffic Management Plan?			
Is there an up-to-date register of accidents and near misses?			
Was the Health and Safety Representative/Health and Safety Committee consulted on the Traffic Management Plan?			
<i>Controls</i>			
Are control zones clearly marked?			
Are walkways, guard rails and, stairs in good condition?			
Are all road and pedestrian markings and signs well maintained?			
Have safe traffic routes been put in place - preferably with one-way systems and, if needed, pedestrian crossing points?			
Are vehicles and pedestrians kept safely apart by, for example, provision of safe pedestrian routes both outside and, where possible, inside buildings?			
Do vehicles and pedestrians have separate doors into buildings with suitable barriers where required?			
Are appropriate speed limits enforced and, where required, speed bumps installed?			
Are adequate signs in place, e.g. indicating direction, speed limit, no entry, etc., and mirrors fitted on blind corners?			
Are vehicles, including private cars, parked in designated areas?			
Is access to loading yards restricted to essential personnel and are they wearing high visibility clothing where necessary?			
Are all roads, manoeuvring areas and yards adequately lit, with particular attention being given to areas near junctions, buildings, plant, pedestrian areas and places where there is regular movement of vehicles or mobile equipment?			
Are all emergency exits well marked, free of obstruction, unlocked and able to be opened from the inside?			
Are all employees provided with appropriate personal protective equipment and trained in correct use and limitations?			

MIA STANDARD: TRAFFIC MANAGEMENT

Are regular checks made to ensure employees wear their PPE when and as required?			
Do drivers have a relevant valid driver's licence?			
Have workers been made familiar with walkways and main access ways around the site?			
Are all employees and contractors made aware of the location of escape routes from all work areas?			