

The purpose of this document is to provide proponents with a template guide for the preparation of a construction Traffic Management Plan (TMP) for works carried out within the proponent's lease area (i.e. laydown areas, hardstand areas, etc.) and for works carried out within Pilbara Ports' managed areas or common areas (i.e. roads, wharves, corridors, etc.). Note, the construction TMP is to be submitted as part of the construction application package (refer Port Development Guidelines – Application Guide). The complete construction application package (including all documents and attachments) is to be submitted via Aconex. Management Plans prepared by a contractor or sub-contractor on the proponent's behalf, are to be reviewed and approved by the proponent before submission to Pilbara Ports.

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Introduction

This document provides proponents with a guide for the preparation of a construction Traffic Management Plan (TMP). This document provides general information on the format and content of a TMP that is acceptable to Pilbara Ports. It is Pilbara Ports' preference that practitioners refer to the Main Roads Western Australia (MRWA) publication 'Guide to the Preparation of a Traffic Management Plan' and use the associated template for the preparation of the TMP for road works. Pilbara Ports also recommends that practitioners carry out a self-audit of the draft TMP in accordance with the MRWA publication 'Suitability Audit: Checklist for Traffic Management for Works on Roads' before finalising the TMP for submission to Pilbara Ports.

The person undertaking the preparation of the TPM should inspect the site at least once prior to finalising the document. The site inspection is required to identify specific site conditions such as internal site road conditions, existing signs, lighting, abutting accesses, external road networks, etc. Inspections should be carried out during times of the day/night similar to the proposed scheduling of site operations to identify matters specific to the site. If a site inspection is not practical, the person preparing the TPM should obtain the relevant information of the site through notes, sketches and/or photographs.

TMPs are prepared prior to construction works commencing and may be subject to audit before and during implementation, if Pilbara Ports considers it necessary, for instance, if complex traffic arrangements will be involved. In addition, Pilbara Ports may require that TMPs are prepared and audited by a person accredited under MRWA's Advanced Worksite Traffic Management program, if it considers it necessary.

The TPM is a key workplace document that has legal standing. As such it is critical that the structure and content of the TMP is sufficient to explain the potential hazards, the assessed risks and the proposed treatments for the proposed work activities and work site.

1. DOCUMENT CONTROL AND AUTHORISATION

The front cover of the TMP should include document control details in accordance with the organisation's internal control procedures, to ensure that approved documentation can be clearly identified. As a minimum, information relating to the person who prepared the TMP and their accreditation details, details of the initial site inspection, along with sign-off details is to be included (refer to the Port Development Guidelines).

2. TRAFFIC MANAGEMENT OBJECTIVES

The objectives should be clearly stated in the TMP including requirements to:

- Ensure the safety and health of work personnel, the public and those who will be impacted by the construction works.
- Ensure that road users are aware of the potential changed traffic conditions and that risks are identified and mitigated.
- Ensure that the port's operations will be maintained at a satisfactory level of performance during the period of the construction works.

The TMP may also have other objectives that are specific to the location or to the work activities to be undertaken, for instance, temporary parking for security clearance, temporary laydown for heavy vehicles or loads, management of pedestrian traffic, turnaround areas, and interaction of light vehicles with heavy vehicles.

3. CONSTRUCTION WORKS INFORMATION

3.1 Purpose and Scope

The purpose and scope of the TMP should include an overview of the construction works, the nature of the traffic environment and the location of the site.

3.2 Project Location

A locality plan outlining the location of the construction works and its connection to the surrounding road network should be included.

3.3 Construction Works Details

This section should:

- Provide details of the construction works including the exact location(s), nature and extent of the activities.
- Identify who the construction activities are being conducted for (i.e. landowner, leaseholder or sub-leaseholder), and include details of who will be implementing the TMP (i.e. name, job title and contact details).
- Include how the prevention of injury to workers due to traffic hazards within the site will be addressed, along with details for protecting pedestrians from site traffic, and ensuring the safe movement of traffic on port roads.
- Provide details of the proposed commencement and completion dates, the working hours (i.e. day and/or night, start and finish times), and the duration of the construction works. In high traffic volume periods the proposed hours of work should be selected to maintain, as far as practicable, site operation volumes during peak hours without compromising safety.

3.4 Construction Site Details

This section should include:

- A description of the construction area and surroundings.
- A description of the proposed or existing section of port roads, site building frontage, parking or laydown area, bypass lane, posted speed limit, land width, traffic volume and heavy vehicle component.
- The expected construction traffic volumes and the speed limit within the construction site.
- Details of proposed speed zones and delineation types, if applicable.
- Details of parking facilities.

If construction works are to be conducted in different areas due to the nature of the works, then the TMP should take this into account and be detailed accordingly. If construction works are carried out at more than one site, multiple TMPs for each separate area may be required.

If there are several TMP for different construction sites, the TMP should detail the interface and provide the links to the respect traffic control diagram for each site. The traffic control diagrams should detail all activities necessary for the effective implementation of each TMP for each site.

3.5 Site Owner Representative

The TMP should identify Pilbara Ports as the lease area owner, the leaseholder as tenant, and the organisation or contractor responsible for implementing the TMP to be represented by its site manager.

3.6 Roles and Responsibilities

The TMP should provide details of the responsibilities and authorities of all key personnel on the site including the site manager, site supervisors, contractors and workers, safety personnel and the traffic management personnel. The TMP should also include an outline of the traffic management hierarchy in the form of a 'flow chart' so that these roles are clearly identified.

Details of the persons responsible for the administration of the TMP are best presented in a table format. This will facilitate contact with the persons responsible.

4. PLANNING

4.1 Traffic Assessment

The following traffic volume and data should be considered during the preparation of the TMP:

- Current traffic volumes, peak times and flow, and expected construction traffic volume (current traffic data for existing port roads can be provided by Pilbara Ports).

- Vehicle types (consider heavy and permit vehicle routes, oversize vehicle routes, and other special needs).
- Operating speeds and construction lower speeds.
- Where queues are likely to occur as a result of the works, the TMP should quantify the likely queue lengths and indicate what contingency strategy will be undertaken if queue lengths exceed acceptable limits. The TMP should clearly state at what stage and how the strategies will be implemented.
- Existing roadway geometry and capacity.
- Methods to guide vehicles through the construction site.
- Methods of traffic control (i.e. signage, line-marking, bollards, barricades, etc.).
- Whether or not the construction works require measures requiring additional traffic control (such as traffic controllers, light vehicle escorts, police escorts, portable signage, variable message signs, etc.).
- Whether or not the works should be confined to the hours of low traffic flow such as during nights and/or weekends.
- Where it is likely that over-sized vehicles or loads may need to be accommodated as part of the traffic management regime, traffic management planners should ensure that lane width, turning movements and vertical alignments are suitable for these vehicles to traverse.
- Provide details of any unregistered vehicles proposed to be used for transport during construction and their requirements. The TMP should also identify the interface between any unregistered vehicles and other vehicles and pedestrians.
- The potential impact that construction works will have on pedestrian and cyclists both on-site and on adjoining roads. The TMP should indicate the likely sources and routes taken by pedestrians and cyclists, and identify facilities that may generate high volumes of pedestrian or cycle traffic. Where paths are interrupted, alternative safe access needs to be provided (taking into consideration pedestrian and cyclist behaviour).

Details of existing traffic flow, control and lane dimension/configuration are to be shown on drawings.

4.2 Special Traffic Situations and Other Leaseholders

The traffic management planner should identify and document in the TMP special traffic situations outside of the proponent or contractor's control that may impact on the effectiveness of the TMP, and those occasions when the TMP may adversely impact on neighbouring leaseholders.

4.3 Construction Site Assessment

4.3.1 Access to Adjoining Roads and Leaseholds

The planning process should take into consideration all neighbouring leasehold access and roads, and ensure that access is maintained at all times to leaseholds and other port and public roads.

4.3.2 Environmental Conditions

Any potential problems that may impact sight distances at entry and exit points to leaseholds should be identified and addressed. The need for any temporary re-positioning of road furniture should also be identified.

Care should be taken to ensure traffic control devices will not affect roads in an east-west direction through shadowing or glare.

Measures to remove and store signs during cyclone preparations should be included in this section. Where there is a Cyclone Response Plan proposed for the site, the TMP should refer to that document.

4.3.3 Hazardous Facilities and Conditions

Any dangerous goods sites (such as fuel stations, public pools, generating plants, etc.), gas and electricity transmission features and any other potentially dangerous facilities/situations that have the potential to impact or be affected by the construction traffic, should be recorded in the TMP. Risks associated with such hazardous facilities should form part of the respective TMP risk assessment.

4.3.4 Impact on Adjoining Road Network

Change of normal operations on site may have significant impacts on traffic flow on the port's roads by causing excessive delays or queue lengths, particularly for other leaseholders. This may require specific traffic engineering analytical skills to assess the potential impacts. The TMP should document details of any such consideration and analysis, along with any proposed measures to mitigate potential impacts on the adjoining road network.

4.4 Risk Identification and Assessment

The TMP should include an assessment of all potential risks associated with the traffic passing near and through the construction site and should determine the operational measures that minimise the risk.

The identification and assessment process should be undertaken in accordance with AS/NZS 4360, and the likelihood and consequences should be rated after risk treatments (that is residual risk) have been determined. The site manager should, so far as practicable, control or reduce identified risks in accordance with the hierarchy of control as defined by ISO45001.

The TMP should provide details of the mechanism that will be used to identify and assess future hazards as they arise throughout the construction works.

4.5 Variations to Standards and Plans

Any deviation from applicable Australian Standards and regulations should be documented in the TMP. Before seeking Pilbara Ports' approval of the TMP it is important that a risk assessment is carried out where there are variations to Australian Standards. The risk mitigation measures to address any lower safety levels and the residual risk should be clearly documented.

4.6 Emergency Planning

Contact details of the police and emergency services contacts in the area should be documented in the TMP. The TMP should also include provisions for emergency services vehicles to travel through the site to another site or leasehold, and to access the site should an emergency situation arise on-site during the construction works.

4.7 Consultation and Communication

4.7.1 Onsite Personnel

The TMP should outline how the traffic requirements and associated procedures and practices established in the TMP will be communicated to work personnel who will enter the site. This may be undertaken in conjunction with other site induction mechanisms. Visitors to the site should also receive suitable instruction.

4.7.2 Affected Leaseholders

The TMP should provide evidence of how affected leaseholders have been consulted and their requirements considered. Contact details of affected leaseholder representatives should also be included.

4.7.3 Notification to Public, Affected Leaseholders and Government Agencies

The TMP should indicate whether notification to the public is necessary to advise the proposed traffic management arrangements for public roads in advance of the construction works.

A public notice will generally take the form of on-site advance warning signs, local newspaper notices, radio and television announcements, and written notification to affected leaseholders and other Government agencies.

The TMP should include details of all proposed notices, along with the proposed wording and locations of signage.

4.7.4 Notification to Pilbara Ports

Pilbara Ports requires notification of the impending traffic disruptions at least seven days prior to the construction works commencing.

5. IMPLEMENTATION

5.1 Traffic Control Diagrams

The TMP should include traffic control diagrams which show the proposed locations of the traffic control devices (such as signs, traffic cones, bollards, line-marking, barricades, etc.), traffic direction, road furniture, temporary lighting if necessary, that will be used during the construction works.

The traffic control diagrams should include the following:

- Document control details.
- A location diagram showing adjoining roads, north point, scale and time of day applicable.
- Adjoining leaseholds and access requirements, road layout, lane width dimension details.
- Provisions for traffic flow, site features (topography, geometry, obstructions) and delineations.
- A list of the type, size and quantity of road furniture to be used in a tabular format.
- Pilbara Ports requires that all traffic control diagrams be approved by an accredited Advance Worksite Traffic Management ticket holder.

5.2 Road Furniture and Road Markings

5.2.1 Signs, Line Marking and Delineation

All signs, line markings (including retroreflective pavement markers and arrow markings) and delineation (including traffic cones, bollards, barricades and guardrails) used should conform to the designs and dimensions as shown in the Australian Standards. All signs should use Class 1 retro-reflective material.

The TMP should detail inspection and maintenance procedures to ensure signs, line markings and delineation are in sound condition, they are clean and not faded, retro-reflectivity is adequate and where applicable power supply is fully operational.

All signs should be positioned and erected such that:

- They are properly displayed and securely mounted.
- They are within the driver's line of sight.
- They cannot be obscured from view.
- They do not obscure other devices from the driver's line of sight.
- They do not become a possible hazard to workers or vehicles.
- They do not divert traffic into an undesirable path.

Where there is a potential for conflict of information between existing signage and temporary signage erected for the purpose of traffic control, the existing signs should be covered. The material covering the sign should not be adhered directly onto the sign or the painted surface of the post. The legend on the sign should be rendered invisible under all conditions, i.e. day, night and wet weather.

The TMP should provide details of how existing pavement markings including reflective raised pavement markers will be maintained.

5.2.2 Variable Message Signs

Variable message signs may be erected as part of the traffic management regime. The TMP should detail under what circumstances variable message signs will be used and the message that will be used. A signage maintenance procedure should ensure that devices are operational at all times.

5.2.3 Temporary Speed Limit Signs

The use of temporary speed limit signs and covering up of permanent speed limit signs may be required.

Speed zones should only be adjusted where special traffic situations require it. The TMP should detail how the site manager will ensure that there is adherence to the temporary speed zones, and what contingencies will be put in place if vehicles do not reduce their speed.

5.3 Demobilisation

The TMP should explain whether the construction traffic management regime will transition to a permanent arrangement or whether the prior-to construction traffic arrangement will be reinstated once the construction works are complete. This may include removal of all temporary traffic signs and devices and management of post-construction changed traffic conditions.

6. MONITORING AND MEASUREMENT

6.1 Site Inspections and Record Keeping

Road furniture needs to be maintained at all times. To achieve this, the TMP should outline suitable monitoring procedures. The monitoring program should generally incorporate inspection on a regular basis and nominate competent and reliable personnel.

6.2 Auditing

The site manager should conduct audits of the TMP prior to and during construction works.

Pilbara Ports may require audits of the TMP by an accredited road safety auditor. Where there are non-compliances identified, the audit procedure should have a mechanism for the issuing of a formal corrective action. Corrective actions should be closed-out and registered as such in accordance with the organisations normal practice.

6.3 Feedback

The TMP should detail mechanisms that ensure comments and complaints received from external and/or internal personnel are registered and addressed. The procedure should ensure there is regular monitoring of the register by management and appropriate action taken.

7. DOCUMENT OWNER – PILBARA PORTS OFFICE USE ONLY

The Developments Manager has overall responsibility for this guide.