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| **Insert your logo here** | Vehicle movement plan (VMP) – short term/ low impact works | TCAWSVMP-02 |
| Checklist and template for preparing a VMP |

**Disclaimer**

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*Disclaimer updated on 20 October 2023, 9:00am*

This checklist/template provides guidance on the key considerations and process for developing and implementing a VMP for short term low impact work. All VMPs must be designed and approved by a Prepare Work Zone Traffic Management Plan (PWZTMP) qualified person.

When developing and implementing a VMP:

* assess road environment, traffic volumes, road environment and required work vehicle/ plant movements
* consider these factors in the project risk assessment or a specific temporary traffic management risk assessment
* ensure that the VMP and its controls provide safe access to, from and around the work site
* get the VMP reviewed and approved by the project manager or other nominated person
* ensure that all personnel visiting the site are inducted into the VMP, understand it, and have a copy of it.

Where the VMP identifies that temporary traffic management is required, a traffic management plan (TMP) that includes a traffic guidance scheme (TGS) will also be required. This TMP and the supporting TGS and VMP must be designed and approved by a Prepare Work Zone Traffic Management Plan (PWZTMP) qualified person – see Step 2 below for more information.

**Step 1 – Data collection**

The prompts (blue text) provide guidance on what information is required for the development of a VMP and can be deleted after entering details.

|  |  |
| --- | --- |
| **Proposed work activity** | *Surveying, Geotechnical investigation using a drilling rig/backhoe* |
| **Proximity of workers to passing traffic**  | *Workers on foot, or operating plant within:** *more than 6 m of a traffic lane*
* *between 3 m and 6 m of a traffic lane*
* *between 1.5 m and 3 m of traffic*
* *are closer than 1.5 m to traffic*
 |
| **Site location** | *address, distance from nearest cross street /town or other identifying feature, or GPS coordinates**e.g. 174–178 Narromine Rd Dubbo NSW**Mitchell Highway, 18 km west of Dubbo**Oxley Highway, 25 km east of Redgum Creek**(-32.20708401444611, 148.41963917386428)* |
| **Road configuration at the site** | Number of traffic lanes*:** *2 lanes, one in each direction*
* *Multi-lane roadway in both directions*
* *Motorway / expressway / freeway*

Median *(separates vehicles travelling in opposite directions)* * *raised, painted, covered in grass and/or trees, concrete/wire barrier*
* *dual carriageway*

Shoulder width*–* * *nil (no area to pull off the travel lanes)*
* *variable width (from x metres to y metres)*
* *3m + (sealed / unsealed)*
 |
| **Posted speed limit** | *6O, 80, 90, 100 or 110 km/h both ways* |
| **Proposed work hours** | *7:30 am to 3:30 pm* |
| **Peak traffic flow times** | *6:30 am to 8 am and 3:30 pm to 5 pm* |
| **Traffic volumes during work hours** | *Preferably hourly traffic volume during work hours**If not, use daily traffic volume and multiply by 10-15% to get an estimate of peak flows* [Traffic Volume Viewer | Transport for NSW](https://www.transport.nsw.gov.au/operations/roads-and-waterways/corporate-publications/statistics/traffic-statistics/traffic-volume) website*The Traffic Volume Viewer provides average road traffic volumes for a selection of permanent and sample roadside collection device stations.**If no data is available, make a reasonable estimate or do a short count while on site (i.e. for 5 min and multiply by 20)* |
| **Work site vehicle movements (entering / leaving site)** | *Number of vehicles entering / leaving site**Type of vehicle (i.e. light vehicles, heavy vehicles)**Are there any large vehicles that require special access arrangements?* |
| **Vehicle movements within the site** | *Designated parking location shown on the VMP and marked out on site**Vehicles reverse parking into parking bays**Heavy vehicle movements around the site shown on VMP and managed with a spotter* |

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**Step 2 – Site access risk assessment**

Step 2 provides guidance on the vehicle movement related risks that should be considered as part of the broader project risk assessment or if applicable, a specific temporary traffic management risk assessment. It does not negate the need to follow Transport for NSW (TfNSW) WHS risk management procedures for the works. [*Refer to WHS risk management procedure PN0066P02.*](https://home.transport.nsw.gov.au/documents/sppreview/c3ca6885-58bb-4e54-a8f7-1c67bd172a3b)

Where the site access risk assessment identifies the need to implement controls that manage vehicles or other road users, a traffic management plan (TMP) must be developed in accordance with the Traffic control at work sites (TCAWS) Manual by a Prepare Work Zone Traffic Management Plan (PWZTMP) qualified person. Some controls include:

* shoulder closure or lane closure
* reduced speed limit; or
* other temporary traffic management signs or devices that control or direct the traffic.

If a TMP is required, a VMP and traffic guidance scheme (TGS) must also be developed by a PWZTMP qualified person and be included in the TMP. The data collected in Step 1 and the risk assessment in Step 2 of this checklist, will support the development of the TMP.

The prompts (blue text) provide guidance on hazards/controls for the development of a VMP and can be deleted after entering details.

| **Key considerations** | **Potential controls** |
| --- | --- |
| Proximity of traffic  | * *Workers on foot, or operating plant, are more than 6m from a traffic lane – No roadwork speed limit is required i.e. no reduction in traffic speed*

***If the normal speed limit is greater than the speed limit below, then a roadwork speed zone is required in accordance with the TCAWS Manual – see Section 4.3.5***

|  |  |
| --- | --- |
| ***Proximity of workers to traffic***  | ***Road work speed limit*** |
| *More than 6 m*  | *Not required* |
| *Between 3 m and 6 m of a traffic lane* | *80 km/h* |
| *Between 1.5 m and 3 m of a traffic lane* | *60 km/h* |
| *Closer than 1.5 m to traffic*  | *40km/h* |

* *Workers symbolic (T1-5) sign must be used where worker on foot will be visibly working adjacent to traffic.*
* *Surveyors On Road (t2-239n) sign to be used where a surveyor will be visibly working adjacent to traffic.*
* *Placement of signs must be arranged so that they are prominently displayed to traffic and will command attention.*
 |
| Working in a traffic lane or median | * *If Yes, than a TMP (&TGS) will be required.*
 |
| Vehicles will be entering or leaving from a road with a posted speed limit of greater than 75km/h | * *Vehicles to use a deceleration lane or safely slow down using the road shoulder before entering work site. If not possible a roadwork speed zone is required.*
* *Where there might be little or no other indication of vehicle turning movements at the work site access, the Trucks (Crossing or entering) symbolic (W5–22 or T2-25) sign should be used, which may be supplemented by the ON LEFT/RIGHT (W8-207) (L) or (R) signs*
* *Placement of signs should be arranged so that they are prominently displayed to traffic and will command attention.*
* *Vehicle movements into / out of the site access will be in the direction of traffic flowing past the worksite (i.e. left in/ left out)*
* *All vehicles accessing the site are to have rotating/flashing light(s)*
 |
| Sight distance to the worksite access or vehicle turn around locations | * *Where possible site access/ vehicle turn around locations should be provided from a local road, subject to it having a suitable intersection with the main road/ highway.*
* *Where sight distance does not meet the following criteria, the access/ egress from the site must be managed with one of the following strategies:*
	+ *turning movements into/ out of the site access are restricted to left in/ left out*
	+ *an alternate access provided*
	+ *traffic control provided to stop traffic on through route to allow safe ingress/ egress from the site access.*

***Strategy 1 - Left in/left out (i.e. no right turn in/out)**** *Where sight distance does not meet the following distances, access must be restricted to left in/left out (i.e. no right turn in/out).*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Speed*** | *60km/h* | *70km/h* | *80km/h* | *90km/h* | *100km/h* |
| ***Sight Distance***  | *120m* | *150m* | *180m* | *215m* | *250m* |

 |
|  | ***Strategy 2 - Alternate access via a local road or temporary access point**** *Where sight distance does not meet the following distances, alternate access must be provided so there is safe access to/ from the site.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Speed*** | *60km/h* | *70km/h* | *80km/h* | *90km/h* | *100km/h* |
| ***Sight Distance***  | *75m* | *90m* | *115m* | *140m* | *165m* |

* *Where there might be little or no other indication of vehicle turning movements, the Trucks (Crossing or entering) symbolic (W5–22 or T2-25) sign should be used, which may be supplemented by the ON LEFT/RIGHT (W8-207) (L) or (R) signs*
* *Placement of signs must be arranged so that they are prominently displayed to traffic and will command attention.*
* *All vehicles accessing the site are to have rotating/flashing light(s)*

***Strategy 3 - traffic control to stop through traffic and allow safe access to/from the site**** *Where sight distance does not meet the following distances and Strategy 2 – Alternate access is not feasible, traffic control must be implemented to stop the through traffic and allow safe access to/from the site.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***Speed*** | *60km/h* | *70km/h* | *80km/h* | *90km/h* | *100km/h* |
| ***Sight Distance***  | *75m* | *90m* | *115m* | *140m* | *165m* |

* *Where there might be little or no other indication of vehicle turning movements, the Trucks (Crossing or entering) symbolic (W5–22 or T2-25) sign should be used, which may be supplemented by the ON LEFT/RIGHT (W8-207) (L) or (R) signs*
* *Placement of signs must be arranged so that they are prominently displayed to traffic and will command attention.*
* *All vehicles accessing the site are to have rotating/flashing light(s)*
 |
| Vehicles accessing the site are heavy vehicles (i.e. vehicles with a GVM of 4.5 tonnes or over) | * *For heavy vehicles entering the site, consider the traffic volumes (site vehicles and through road), speed limit, shoulder width (and its construction) and gaps (distance) between vehicles on the through road. Is there a trafficable shoulder of adequate width for the heavy vehicle to move off the edge of road as it decelerates or sufficient gaps between vehicles to allow heavy vehicles to safely enter the site without adversely impacting on the safety of approaching vehicles?*
* *Consider the sweep (turning) path of heavy vehicles/ long vehicles (i.e. does the site access have sufficient width/ geometry to accommodate the sweep paths?)*
* *Inadequate provision for turning movements:*
	+ *movements into / out of site access to be in the direction of traffic flowing past the worksite (i.e. left in/ left out)*
	+ *designated turning bays/areas*
	+ *spotters should only be engaged to warn of other vehicles, pedestrians, or plant in the area not to undertake informal traffic control.*
* *Use of two-way radio communication via UHF radio between heavy vehicle and site – designate UHF channel*
* *Accessing site requires turning from far lane or opposing lane:*
	+ *only from opposing lane if the Road Rules permit it (vehicles not permitted to cross double barrier lines i.e. two parallel continuous dividing lines) – see Road Rule 134 (3).*
	+ *only if sufficient gaps in traffic flow and adequate sight distance*
	+ *consider use of spotter and communicate (via two- way radio) traffic flows and direction*
	+ *vehicle movement will be in the direction of traffic flowing past the worksite only (i.e. left in/ left out)*
	+ *use designated turning bays/areas*
* *For heavy vehicles leaving the site, consider the traffic flow on the road being accessed and availability of gaps in the flow. Will there be sufficient gaps to allow heavy vehicles to safely egress the site and accelerate to a reasonable travel speed?*
* *The Trucks (Crossing or entering) symbolic (W5–22 or T2-25) sign must be used where roadworks generate greater than 20 truck turning movements per day. These signs should also be used where there might be little or no other indication of likely vehicle turning movements. They may also be supplemented by the ON LEFT/RIGHT (W8-207) (L) or (R) signs.*
* *All vehicles accessing the site are to have rotating/flashing lights.*
 |
| Vehicles accessing the site during peak hour traffic  | * *Heavy vehicles to access the site outside peak flow e.g. 6:30 am to 8:30 am and 3:30 pm to 5 pm*
* *All vehicles accessing the site are to have rotating/flashing light(s).*
* *Restrict site access to left in / left out (i.e. no right turn in/out)*
 |
| Where site access constraints require off-site location movements to turn around | * *Designated turn around bays/area: do they have adequate sight distance for the turning manoeuvres? See above*
* *A UHF radio channel (and mobile phone number) assigned for communication between vehicle and worksite*
* *Restrict site access to left in / left out (i.e. no right turn in/out)*
* *Include turn around location in VMP*
 |
| Where vehicles are required -- to decelerate by greater than 20 km/h within a traffic lane or - enter the traffic lane at a speed more than 20 km/h below the permanent speed limit. | * *Vehicles to use a formal deceleration lane or the road shoulder (if adequate width and construction) to slow down before entering work site – If not possible a roadwork speed zone will be required.*
* *Where there might be little or no other indication of likely vehicle turning movements, the Trucks (Crossing or entering) symbolic (W5–22 or T2-25) sign should be used, which may be supplemented by the ON LEFT/RIGHT (W8-207) (L) or (R) signs*
* *All vehicles accessing the site have flashing lights or escorted from the rear by a vehicle with flashing warning light*
* *For sites with regular turning movements on roads with higher traffic volumes, consider the use of a portable variable message sign (VMS) with appropriate warning message during work hours.*
 |
| Vehicle movements impact on pedestrians or cyclists | * *Spotters or traffic controllers engaged to assist with pedestrians and cyclists.*
* *Provide cyclists or pedestrians with an alternative safer route if appropriate*
 |
| Other considerations | * *Refer to TCAWS Manual for further key considerations and detailed guidance on this topic.*
 |

**Step 3 – Prepare the VMP**

Use relevant information from Step 2 to develop the VMP. All VMPs must be designed and approved by a Prepare Work Zone Traffic Management Plan (PWZTMP) qualified person. Refer to the example VMP.

**Step 4 – Communicate the VMP**

Ensure that TfNSW staff, contractors and subcontractors have a copy of the VMP, are inducted into it and understand how to apply it.

**Step 5 – Monitor the effectiveness of the VMP and if applicable, the traffic management plan (TMP)**

Monitor the VMP (and if applicable, the TMP) for effectiveness and adjust where necessary. Any adjustments should be based on consultation with relevant stakeholders and documented as part of an updated VMP. A revised VMP must be approved by a Prepare Work Zone Traffic Management Plan (PWZTMP) qualified person.

Refer to the TCAWS Manual for guidance on how to monitor the effectiveness of the VMP and other plans through work site inspections, reviews, and audits.