

TTMKN Explain the requirements for the temporary traffic management (TTM) system

Kaupae Level	4
Whiwhinga Credit	10
Whāinga Purpose	This skill standard recognises the underpinning knowledge required by Temporary Traffic Management (TTM) personnel to understand the requirements of the TTM system and its application to relevant engineering principles and operational practices for an activity requiring TTM.

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Explain the requirements for the TTM system.	a. The TTM framework in terms of people, processes, equipment and contracts is explained.
	b. The legislation requirements in terms of operational practice for an activity requiring TTM are explained.
	c. The operational roles and responsibilities for personnel for an activity requiring TTM are explained.
2. Explain how relevant engineering principles and operational practices are applied to an activity requiring TTM.	a. Engineering principles and their application to an activity requiring TTM are explained.
	b. The function, impact, installation, operation, maintenance, and uplift of TTM controls for an activity requiring TTM are explained.
	c. Operational practices and their alignment with the Traffic Management Plan (TMP), regulatory, and organisational requirements for an activity requiring TTM are explained.
	d. Regulatory and organisational requirements for documentation and reporting procedures for an activity requiring TTM are explained.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

Evidence provided for this skill standard should align with the TTM resources identified in the Programme Guidance document, and the New Zealand Guide to Temporary Traffic Management (NZGTTM), referenced below.

Engineering principles refer to:

- road geometric design (cornering and space required, sight lines, stopping distances, intersection sight lines), basic traffic variables and relationships, and traffic behaviour.
- delay calculations, verge rates, shifting or merging tapers and why they are used, and chicane elements to produce a passive or control measure.
- the impact of controls on human behaviour.
- Common geometric dimensions.

Operational practices refer to:

- how certain closures (systems of control) function and how they introduce, or limit impacts on stakeholders and the implementation, operation, maintenance, and uplift of TTM.
- equipment standards and how to apply knowledge of specific good practice for their design or delivery.
- how alternating flow is defined in good practice with consideration of organisational practice.

Organisational requirements refer to policy, procedures, and methodologies of the organisation. They include legislative and regulatory requirements that may apply across the organisation or to a specific TTM zone. Requirements are documented in the organisation health and safety plans, traffic management plans (TMPs), practice notes, contract work programmes, quality plans, policies, and procedural documents.

TTM controls refer to a way of eliminating or minimising risks to health and safety.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

Requirements when altering the normal operating conditions of the road.

- TTM Framework and the core elements for a successful TTM system:
 - people (leadership, training, roles and responsibilities)
 - processes (operational practice, good practice, engineering principles associated to TTM (e.g. basis of dimensions, sign configuration, etc.)
 - equipment design, construction, specifications, and standards. Examples could be size shape and weight of cone, how cones are put together, and installed to create a system of controls
 - contracts (contract specifications, roles & responsibilities).
- Legislation requirements.
- Operational roles and responsibilities and the Health and Safety at Work Act 2015. TTM responsibilities model.

TTM operational practice and engineering principles

- Engineering principles relevant to TTM used in traffic theory concepts.
- The function, impact, installation, operation, maintenance, and uplift of TTM controls.
- Operational practices relevant to TTM.
- Regulatory, contractual, organisational, processes, TTM documentation and reporting throughout the process (work scoping through delivery and completion).

Rauemi | Resources

Land Transport Rule: Traffic Control Devices 2004, available from www.nzta.govt.nz.

Waka Kotahi NZ Transport Agency: *New Zealand Guide to Temporary Traffic Management*, available from www.nzta.govt.nz.

WorkSafe good practice guidelines: *Keeping healthy and safe while working on the road or roadside*. Guidance for PCBUs, available from www.worksafe.govt.nz.

Refer to the Temporary Traffic Management Programme Guidance document which includes resources, definitions, and further information of relevance to this standard, available from qualifications@waihangaararau.nz.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Waihanga Ara Rau Construction and Infrastructure Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Engineering and Technology > Infrastructure Works > Temporary Traffic Management
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0101

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	dd mm 2024	N/A
Kōrero whakakapinga Replacement information	N/A		
Rā arotake Planned review date	dd mm 2029		

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@waihangaararau.nz to suggest changes to the content of this skill standard.

MS01 Supervise a mobile operation on the road reserve

Kaupae Level	4
Whiwhinga Credit	5
Whāinga Purpose	This skill standard recognises the skills required to supervise a safe mobile operation on the road reserve.
Whakaakoranga me mātua oti Pre-requisites	It is recommended people achieve skill standard 40232, <i>Perform mobile operations within the road reserve</i> , or demonstrate equivalent skills and knowledge before being assessed against this skill standard.

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Prepare for a mobile operation on the road reserve.	a. Traffic management plan (TMP) and the risk assessment are analysed to address inaccuracies and ensure they are fit for purpose for the mobile operation.
	b. Selected TTM controls are checked for alignment with the requirements of the risk assessment, the TMP, and organisational requirements.
	c. Roles and responsibilities for the mobile operation are clearly and accurately communicated to personnel during the pre-site briefing.
2. Supervise a mobile operation on the road reserve.	a. Adjustments, and actions to take based on the road reserve environment, and the risk assessment, are communicated to personnel during the onsite briefing.
	b. Supervision of the mobile operation aligns with the TMP requirements, the outcomes from the risk management process, and organisational requirements.
	c. Mobile operation is dis-established safely in line with the risk management process, TMP, and organisational requirements.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

To achieve this standard, the assessment will be where the person conducting a business or undertaking (PCBU) has the overall responsibility to ensure the safety of TTM personnel as they supervise a mobile operation in line with HSWA Act 2015.

This skill standard is not intended for setting up of static sites which require additional training.

Organisational requirements refer to policy, procedures, and methodologies of the organisation. They include legislative and regulatory requirements that may apply across the organisation or to a specific TTM zone. Requirements are documented in the organisation health and safety plans, traffic management plans (TMPs), practice notes, contract work programmes, quality plans, policies, and procedural documents.

Mobile operation refers to an activity or work carried out within the road reserve that is not contained within a fixed site. The vehicle(s) associated with the activity travel along the road in the direction of the traffic flow, usually at slower speed or in a different manner, to normal traffic flow on the road.

TTM controls refer to a way of eliminating or minimising risks to health and safety.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

Pre-site planning

- Analysis and adjustment of TMPs and risk assessments for mobile operations.
- Hierarchy of controls, common hazards, TTM controls, management onsite and ensuring a safe mobile operation.
- Pre-site briefings and roles and responsibilities for the supervisor and mobile operations personnel.

Mobile operations

- On-site safety briefings, consulting and communicating with the mobile operations personnel, responding to common issues for mobile operations.
- Carriageway, and footpaths drivable before leaving, and safe for public and road users, exiting carriageway safely and in a safe order, rejoining traffic, electronic and manual signage vs beacons, remove and decommission signs, return to normal speed limit.
- Follow up procedures, post-operational recording and reporting documentation.

Rauemi | Resources

WorkSafe good practice guidelines: *Keeping healthy and safe while working on the road or roadside*. Guidance for PCBUs, available from www.worksafe.govt.nz.

Refer to the Temporary Traffic Management Programme Guidance document which includes resources, definitions, and further information of relevance to this standard, available from qualifications@waihangaararau.nz.

Pārongo Whakaū Kounga | Quality assurance information

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M01 Monitor, manage, and maintain temporary traffic management controls for an activity

Kaupae Level	4
Whiwhinga Credit	10
Whāinga Purpose	This skill standard recognises the skills required to monitor, manage and maintain pre-established static temporary traffic management controls for an activity.

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Monitor, manage, and maintain pre-established static TTM controls for an activity.	a. Site briefings and inductions are completed in line with the traffic management plan (TMP), the risk assessment, and any changing site conditions are identified and actioned.
	b. Site conditions are monitored to check alignment with the TMP and risk assessment.
	c. New site conditions that affect the safety of site or the crew are communicated to site personnel.
	d. TTM controls for the activity are managed in compliance with the TMP and issues are escalated in line with organisational requirements.
	e. Onsite records are maintained in line with organisational requirements.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

To achieve this standard, the assessment will be where the person conducting a business or undertaking (PCBU) has the overall responsibility to ensure the safety of TTM personnel as they monitor, manage, and maintain the TTM activity in line with HSWA Act 2015.

This skill standard is limited to those people who monitor a pre-established static site. They receive a site handover briefing led by a supervisor.

Organisational requirements refer to policy, procedures, and methodologies of the organisation. They include legislative and regulatory requirements that may apply across the organisation or to a specific TTM zone. Requirements are documented in the organisation health and safety plans, traffic management plans (TMPs), practice notes, contract work programmes, quality plans, policies, and procedural documents.

TTM controls refer to a way of eliminating or minimising risks to health and safety.

Ngā momo whiwhinga | Grades available

Achieved

Ihirangi waitohu | Indicative content

Site briefings and inductions

- Verification of the risk assessment and new risk.
- Site and situational awareness, risk identification, actioning responses to risk onsite.
- Checking TMP is still fit for purpose for the activity and the environment.

Monitor the TTM controls

- Monitoring the process for identifying changing site conditions.
- Phasing the work, regular checks of the site by the TTM monitor.
- Organisational requirements for the escalation of issues or changing site conditions.
- Emergency response procedures for a TTM worksite.

Manage TTM controls

- Contingency planning.

Maintain on-site records

- Completing paperwork.
- Reading a TMP.

Rauemi | Resources

WorkSafe good practice guidelines: *Keeping healthy and safe while working on the road or roadside*. Guidance for PCBUs, available from www.worksafe.govt.nz.

Refer to the Temporary Traffic Management Programme Guidance document which includes resources, definitions, and further information of relevance to this standard, available from qualifications@waihangaararau.nz.

Pārongo Whakaū Kounga | Quality assurance information

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Kōrero whakakapinga Replacement information	N/A
Rā arotake Planned review date	Dd mm 2029

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