



**WAIHANGA ARA RAU**

**Construction and  
Infrastructure**

Workforce Development Council

# **TEMPORARY TRAFFIC MANAGEMENT**

## **PROGRAMME GUIDANCE FOR SKILL STANDARDS**

VERSION 3 | NOVEMBER 2025

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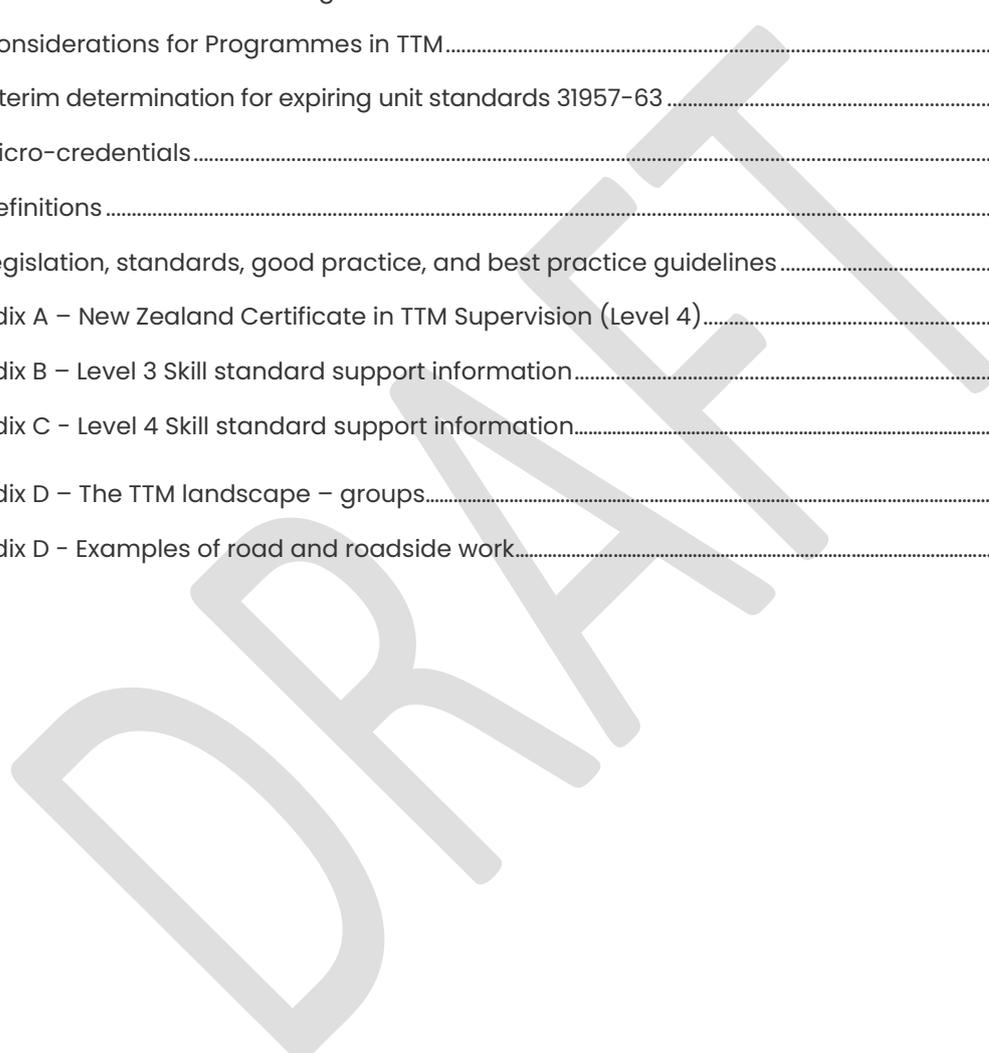
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# 1. INTRODUCTION

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This *Programme Guidance* contains information and best practice for temporary traffic management (TTM) skill standards. Its purpose is to share useful information and content of the skill standards collected during the skill standard development work completed in 2024.

It is expected people involved in training for the TTM industry will use this *Programme Guidance*. It includes industry expectations, equity considerations, and te Tiriti o Waitangi requirements that may not be included in other NZQA products.

This *Programme Guidance* document explains the role of TTM skill standards as building blocks that lead to the qualifications and credentials specified in the TTM credentials framework, available from [Resource Library » Temporary Traffic Management Industry Steering Group \(ttm-isg.org\)](#). It outlines the training approach developed by industry to support better management of safety and risk for TTM activities.

Feedback from the TTM industry and providers will ensure the content of this *Programme Guidance* document remains relevant and fit for purpose. Recommendations for improvement can be sent to [qualifications@waihangaararau.nz](mailto:qualifications@waihangaararau.nz).

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## 2. TEMPORARY TRAFFIC MANAGEMENT

The TTM industry has recently transitioned from a compliance model based on the Code of Practice for Temporary Traffic Management (CoPTTM), to a risk-based approach.

The TTM Credentials Framework Working Group (TTMCFWG) developed a TTM credentials framework to support the risk-based approach and career pathways within the industry. Industry consultation on the TTM credentials framework was conducted in April 2024.

From April 2024, qualifications, micro-credentials, and/or skill standards developed by Waihanga Ara Rau will align with the TTM credentials framework. The TTMCFWG supports the use of the approved micro-credentials that align with the TTM credentials framework.

The information in this document aligns with the risk-based approach and the guidelines provided by the TTMCFWG, WorkSafe, and Waka Kotahi NZ Transport Agency:

- WorkSafe good practice guidelines: Keeping healthy and safe while working on the road or roadside. Guidance for PCBUs, available from [www.worksafe.govt.nz](http://www.worksafe.govt.nz).
- Waka Kotahi NZ Transport Agency Guide to Temporary Traffic Management (NZGTTM), available from [www.nzta.govt.nz](http://www.nzta.govt.nz).

### INDUSTRY INITIATIVES

Organisations that support road safety initiatives are:

- Ministry of Business Innovation and Environment (MBIE).
- Waka Kotahi NZ Transport Agency.
- WorkSafe New Zealand.
- Local Government.
- Road Controlling Authorities (RCAs).
- Transport Authority Organisations (TAOs), (refer to page 24 NZGTTM).
- Civil Contractors New Zealand (CCNZ).

One Network Framework (ONF) is a tool to help establish transport network function and inform decision making and potential interventions for each road and street type, and classifications for different modes of transport (refer to page 11 NZGTTM), available from [One Network Framework | Waka Kotahi NZ Transport Agency \(nzta.govt.nz\)](http://One Network Framework | Waka Kotahi NZ Transport Agency (nzta.govt.nz)).

Waihanga Ara Rau Construction and Infrastructure Workforce Development Council, facilitate the Civil Industry Advisory Group meeting and also workforce development plans with the support of sector reference groups that include current and future workforce needs, guided by and working in partnership with the wider civil sector, available from [Strategic Reference Groups: Advice & Counsel for Sectors - Waihanga Ara Rau](http://Strategic Reference Groups: Advice & Counsel for Sectors - Waihanga Ara Rau).

Appendix C identifies groups in the TTM landscape taken from the NZGTTM, available from <https://www.nzta.govt.nz/roads-and-rail/new-zealand-guide-to-temporary-traffic-management/>.

### 3. WHAT IS A SKILL STANDARD?

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A skill standard is a specification of skills which includes:

- learning outcomes associated with the skills
- level of performance in those skills
- indicative content to be included in programmes
- guidance to support consistent assessment of learning outcomes (at an organisational and national level).

#### USING SKILL STANDARDS

The knowledge and skills in one skill standard may be essential to achieving other skill standards. This *Programme Guidance* recommends the sequence of learning and assessment to take this into account.

For the TTM industry, skill standards can be used in more than one qualification or credential. Ākonga can transfer credit for the achievement of standards between qualifications and credentials.

Training providers and employers will support ākonga (learners) to develop their skills and knowledge in the right sequence. This will help ākonga to apply their knowledge at the level, scope, and complexity required.

- Each skill standard specifies the consent to assess requirements included in the current, or any subsequent version of CMR 0120, available from [Search Framework \(nzqa.govt.nz\)](https://www.nzqa.govt.nz/search-framework).
- These skill standards are listed in the following Directory of Achievement and Skill Standards (DASS) – [Domain - Temporary Traffic Management \(nzqa.govt.nz\)](https://www.nzqa.govt.nz/domain-temporary-traffic-management).
- These skill standards are aligned to the following NZSCED Code - Classification - 030999 Engineering and Related Technologies>Civil Engineering>Civil Engineering not elsewhere classified.

## 4. SKILL STANDARD LEVELS AND PROGRESSION

The TTM credentials framework has information relating to the 'layered level of risk responsibility'.

The skills, knowledge, and abilities included in the TTM skill standards align with the requirements of this framework and the New Zealand Qualifications and Credentials Framework (NZQCF). At each level they are current, relevant, and meaningful to industry requirements.

### LEVEL 3 – PERFORMING TTM OPERATIONS UNDER LIMITED SUPERVISION

The Level 3 skill standards describe the skill set of someone in an entry level role.

#### Level of supervision

A Level 3 ākonga will be working under the limited supervision of a TTM supervisor. The person conducting the business or undertaking (PCBU) will ensure they have a level of supervision appropriate to their role and responsibilities and to ensure the skill standards can be assessed safely.

Industry describe Level 3 attributes as:

- site and spatial awareness
- risk identification
- actioning responses to risk on site
- working in a team, keeping self and others safe
- conflict resolution.

#### Risk awareness

Industry describes Level 3 'TTM operations' as recognising hazards in the immediate work environment, work area, or the tasks they perform, and taking action to mitigate these. This might include keeping work areas clean and uncluttered or checking equipment for safety before use, always choosing the safest option.

Level 3 ākonga should understand the importance of robust risk assessment. Frontline workers should be trained to identify and report potentially unsafe conditions or activities. It is a requirement that ākonga will have completed workplace inductions before assessment.

#### Learning outcomes

The learning outcomes for level 3 skill standards will mainly be achieved in a workplace.

### LEVEL 4 – PERFORMING TTM UNSUPERVISED

The Level 4 skill standards describe the skill set of someone who performs to industry standards in areas such as temporary traffic management design and TTM supervision.

These individuals have the knowledge and skills to manage risk on dynamic worksites. They will ensure the safe implementation, maintenance and uplift of TTM sites.

#### Level of supervision

At Level 4 ākonga will be working unsupervised. The person conducting the business or undertaking (PCBU) will ensure a level of supervision appropriate to their role and responsibilities.

Industry describe Level 4 attributes as:

- management of risk in different working conditions
- team leadership
- critical thinking and problem solving.

### **Risk awareness - Dynamic Situational Risk Assessment**

Industry describes Level 4 as demonstrating skills in robust risk assessment, dynamic evaluation of risk, and adapting to changing conditions. This might involve adjusting plans or actions based on weather conditions, equipment status, or other variable factors, always looking for the safest option.

The TTM credentials framework has more information on the layered risk responsibility, available from [Resource Library » Temporary Traffic Management Industry Steering Group \(ttm-isg.org\)](#), and how the TTM industry manages risk, backed by recent research. This includes assessing risk in changing situations.

### **Learning outcomes**

The learning outcomes for Level 4 skill standards will mainly be achieved in a workplace.

The assessment of Level 4 learning outcomes should focus on the collection of naturally occurring workplace evidence, integrated with relevant workplace policy, process, and procedural documentation.

## 5. CONSIDERATIONS FOR PROGRAMMES IN TTM

This guidance reflects information about the TTM industry collected during the development of the skill standards that may be useful for providers developing programmes.

The capability of all TTM workers can be strengthened through targeted training and assessment that reflects the dynamic TTM working environment.

### PROTECTION FOR VULNERABLE WORKERS

Industry recommends PCBUs provide wrap around support and guidance for TTM personnel and ākonga. This includes supporting ākonga in situations where decisions have the potential to cause harm to fellow workers. For example, accidents, injuries, and near misses can be due to fatigue or inattentiveness from working long hours. It is important for employers to support TTM workers to make responsible decisions about their fitness for work.

Where TTM skill standards, micro-credentials or qualifications are registered on the NZQCF they are quality assured across Aotearoa. Waihanga Ara Rau will moderate assessments and ensure assessors meet requirements. For more information on the delivery and assessment of the skill standards, refer to the current, or any superseded versions of CMR 0120.

Protecting Vulnerable Road Users in TTM environments Practice Note, available from [Protecting Vulnerable Road Users in TTM Environments \(nzta.govt.nz\)](https://www.nzta.govt.nz/safety/partners/working-on-the-road/).

### RISK ASSESSMENT

The New Zealand Guide to Temporary Traffic Management (refer to pp. 18–22) includes information on the safety of road users within TTM.

Consultation, cooperation, and coordination (the 3 C's) are key to improving sector capability with consideration of the Waka Kotahi NZ Transport Agency wider work-related Road Safety Programme <https://www.nzta.govt.nz/safety/partners/working-on-the-road/>. All parties are responsible for improving safety among workers, road users, and the TTM zone.

Page 28 and 29 of the NZGTTM refer to the risk assessment process. Robust risk assessment is key to reducing injuries and harm and this includes residual risk (refer to pp. 38 and 47 NZGTTM), (lowest total risk page 32 NZGTTM) as set out in the WorkSafe guideline. There should be no transfer of risk to other groups relevant to each TTM zone, for example, heavy haulage or waste management.

To maintain the health and wellbeing of trainees and promote good workplace health and safety practices, training programmes must integrate safe ways of working relevant to practical tasks in all skill standards.

It is expected that ākonga will perform aspects of each skill standard safely throughout the assessment process to demonstrate competence.

Resources that might be useful for Providers developing resources around risk for Level 4 skill standards:

- Construction Health and Safety New Zealand (CHASNZ) Energy Wheel [CHASNZ – Energy Wheel](#)  
[CHASNZ – Energy Wheel](#).

- Downer Risk Assessment Tool [TTM library | NZ Transport Agency Waka Kotahi \(nzta.govt.nz\)](#).
- NZTA RACI model.

## LITERACY

Literacy skills are intentionally integrated throughout various levels of skill standards to help ākonga meet the daily demands they will encounter in TTM. There are some key concepts central to supporting the development of literacy at Level 3:

- using familiar, relevant contexts: teaching these skills using situations and examples that are familiar and meaningful in the context of TTM
- applying learning across contexts: ensuring that ākonga understand and can reason with the concepts so they can apply them in various situations
- accuracy requirements: clarifying the level of accuracy needed for written job documentation
- communication skills: developing speaking and writing abilities to effectively communicate while carrying out tasks in TTM
- trade task specific contexts: recording information on site documentation, communicating with TTM workers and the public.

At Level 4, literacy is focussed on technical trade requirements:

- writing workplace documents
- communicating with stakeholders, employers, and industry groups.

## EQUITY AND ACCESS

### Physical nature of the industry

For those thinking about a career in temporary traffic management, it's important to understand the physically demanding nature of the work. This includes lifting heavy objects, carrying loads, walking, and standing for extended periods, holding focus/attention for long periods of time (relating to stop go), bending, having good vision, and manual dexterity. It also includes a level of communication required when working in a team with responsibility for each other's health and safety, and conflict resolution.

### Supporting ākonga from different pathways

Ākonga could be school leavers wanting an entry level role. They might come from a skills hub, trade academy or local provider, training and assessing workers to supply the TTM industry. Ākonga might have experience working in other industries such as roading, roadmarking, bitumen surfacing, or other civil roading roles.

The definition of 'special needs' from the Convention of the Rights of People with Disabilities, refers to those who have long-term physical, mental, intellectual, or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others..." (Article 1). It is intended ākonga with disabilities training in the TTM industry are welcomed where suitable roles are available and are provided with relevant support.

### Description of a temporary traffic management 'workplace':

- where there are changing work conditions
- where ākonga have access to work at the level required by industry, and an awareness of the impact of their work including paying attention to quality outcomes and environmental protection

- where the workplace, the nature of the work, equipment, resources, and the workplace environment, are sufficient to meet industry and ākongā needs
- where the PCBU ensures a safe working environment underpinned by risk assessment procedures and control measures.

**Role specific requirements:**

- many employers will expect workers to have a driver's licence.

**CULTURAL COMPETENCE**

Effective interactions with fellow workers and customers are essential for a successful career in TTM. The industry promotes programmes that support ākongā to develop cultural competence, enabling them to be considerate and adaptable when dealing with people from various backgrounds, identities, and cultures.

The assessment environment should be one where:

- **whanaungatanga**, fosters good relationships between stakeholders within the road reserve and in different road environments to support and encourage positive mana enhancing relationships
- **manaakitanga** shows care for workers and their safety, enhances hauora (wellbeing) and respect for all stakeholders, valuing the skills, knowledge, and experience that each ākongā brings with them
- **kotahitanga** focuses on working together towards a common goal to carry out activities where they are completed safely without harm or injury, understanding who you are working with and communicating with relevant stakeholders in temporary traffic management and throughout the assessment process
- **kaitiakitanga** acknowledges any impact from the assessment on the work, the environment, the people, and the places in Aotearoa. It also acknowledges the many tikanga practices that should be respected, applied where appropriate or specified by the ākongā throughout the assessment process, and supported through quality teaching and learning
- **pūkengatanga** pays attention to authentic and contextualised quality practices for traffic management solutions
- **rangatiratanga** provides an assessment environment where ākongā world views and achievement are supported.

The WorkSafe good practice guidelines: Keeping healthy and safe while working on the road or roadside. Guidance for PCBUs, available from [www.worksafe.govt.nz](http://www.worksafe.govt.nz) contain more information (refer to page 136).

## PROGRAMME DELIVERY

Providers are advised to refer to the Waihanga Ara Rau programme endorsement considerations:

- programme content
- equity for ākonga
- programme engagement and consultation
- te ao Māori
- pacific languages and ākonga
- disabled people.

[How to Get Programme Endorsement for NZQF Qualifications – Waihanga Ara Rau.](#)

Assessment for practical elements of skill standards and micro-credentials should take place in the workplace. Where a skill standard has a knowledge component there may be other modes for delivery, for example online or blended learning.

Additional time should be allocated to embedding the learned knowledge and skills into workplace practice, and where relevant, to record workplace evidence to demonstrate competence.

Training must be overseen and guided by someone who has current industry expertise in the specific areas of temporary traffic management relevant to their training.

The length of the training, learning and assessment described by the skill standard should reflect that 1 credit is equivalent to 10 notional learning hours. This is to ensure the learner has an opportunity to receive training, put that training into practice in the workplace, and be assessed at the level of competence specified in the standard.

## RESOURCES

There are numerous resources available to support the delivery of temporary traffic management training.

The **TTM Industry Steering Group** (TTMISG) produce a newsletter and will be providing links to new information and resources as they become available [www.ttm-isg.org](http://www.ttm-isg.org).

The **TTM Toolbox** includes components for the design and equipment for TTM with guidance notes, supporting information and resources, available from <https://www.nzta.govt.nz/roads-and-rail/new-zealand-guide-to-temporary-traffic-management/the-guide/part-3-the-toolbox/>.

It covers the Design Principles – advanced warning, guidance, protection, return to normal. It covers geometric design, design reference material and hyperlinks and traffic impact assessments.

The **TTM Library** has resources for PCBUs that support the training framework, available from [TTM library | NZ Transport Agency Waka Kotahi \(nzta.govt.nz\)](#):

- guidance notes
- TMP examples
- practice notes
- operational practice notes
- administration notes.

**TTM Consult** for examples of best practice and to email Waka Kotahi in relation to TTM. You can email with questions or comments [ttm.consult@nzta.govt.nz](mailto:ttm.consult@nzta.govt.nz).

**TTM Newsletters** are available to stay up to date with resourcing for TTM. The Waka Kotahi website [www.nzta.govt.nz](http://www.nzta.govt.nz) has links to subscribe to their newsletters and you can also receive a TTM newsletter by emailing [Tom.Kiddle@at.govt.nz](mailto:Tom.Kiddle@at.govt.nz), from Auckland Transport.

The New Zealand Transport Association, Waka Kotahi **New Zealand guide to temporary traffic management (NZGTTM)** outlines how to use a risk-based approach to plan and mitigate the risks to road workers and road users to keep them safe [New Zealand guide to temporary traffic management \(NZGTTM\) | NZ Transport Agency Waka Kotahi \(nzta.govt.nz\)](#).

WorkSafe **Keeping healthy and safe while working on the road or roadside** provide advice for PCBUs on how to keep workers healthy and safe while working on the road or roadside [Keeping healthy and safe while working on the road or roadside | WorkSafe](#).

## PRACTICAL ASSESSMENT

### 'A risk-based approach underpins learning and assessment for TTM'.

It is expected that practical components of the skill standards will be assessed within the road reserve.

- The road reserve is defined as the area of land between the legal boundaries, usually fence line to fence line and including any safety run-off areas dedicated to allowing the passage of road users. The road reserve also includes an air space of six metres directly above the road surface.

All TTM skill standards must be assessed using organisational requirements that include the policy, procedures, and methodologies of the organisation. They include legislative and regulatory requirements that may apply across the organisation or to a specific workplace. This includes an awareness of the responsibilities of the PCBU and the Health and Safety at Work Act 2015.

Learning outcomes described in skill standards are generally related to practical aspects of temporary traffic management (*the learning outcomes associated with the skills*).

Where assessment is through performing practical tasks, they will be confirmed by a person who is commercially competent. Alternative assessment formats may be used that reflect the careful and deliberate use of processes and practices described in [Aromatawai and the Principles of Assessment](#).

Underpinning knowledge is represented by the indicative content in the skills standard to ensure ākonga have the level of capability required by industry.

### For training and assessment against TTM standards:

- A registered provider who has consent to assess TTM standards may develop their own learning and assessment resources. The assessment resource must be pre-assessment moderated by Waihanga Ara Rau prior to use.
- A registered provider must ensure they have policies and procedures in place to ensure assessors and verifiers maintain industry currency (refer to CMR 0120 p. 1 and 2).

## 6. INTERIM DETERMINATION FOR EXPIRING UNIT STANDARDS 31957–63

The current suite of TTM unit standards 31957–63 will expire at the end of 2026 and Providers are beginning to develop learning and assessment resources for the new skill standards. To minimise disruption the last date of assessment for unit standards 31957–63 is 31 December 2026. This will allow ākongā time to finish if they are close to completing their training. To give Providers more information on delivering unit standards 31957–63 Waihanga Ara Rau has developed interim determinations.

It is important that barriers to teaching, learning and assessment are removed to ensure ākongā are not unfairly disadvantaged and are able to progress through their programme within acceptable timeframes. Where barriers relate to a standard, it is impractical to review and republish that standard, Waihanga Ara Rau, as the Standard Setting Body, makes an interim determination that will remain in place until that version of the standard expires.

The table below outlines the issue, the solution, and the date the solution is effective from. All providers assessing against these unit standards will be moderated against the new criteria. They are not required to send any revised assessment materials for pre-assessment moderation of 31957–63 to Waihanga Ara Rau, provided the changes are limited to the interim determination. There is an expectation that a provider will internally moderate the updated resource before use.

ID	VERSION	ISSUE	DETERMINATION	EFFECTIVE FROM	ENDING ON
<b>31957–63</b>	All versions	Waka Kotahi retiring the need for compliance with the Code of Practice for Temporary Traffic Management (CoPTTM)	Removal of references to CoPTTM from unit standards.	31 October 2024	31 December 2026
<b>31959, 31960, 31963</b>	All versions	Waka Kotahi retiring warrant system	Removal of references to warrants from unit standards.	31 October 2024	31 December 2026
<b>31957–63</b>	All versions		Removal of statement 'Assessment for this unit standard must use the Waka Kotahi NZ Transport Agency approved assessments and a Waka Kotahi and Connexis Registered Assessor, from unit standards 31957–63	31 October 2024	31 December 2026
<b>31959–63</b>	All versions	Version of the unit standards prescribe pre-requisite unit standards as determined by Waka Kotahi to align with the TTM warrant system.	Pre-requisite statements within the standards should be ignored, standards can be achieved in any order.	31 October 2024	31 December 2026

## 7. MICRO-CREDENTIALS

The TTM industry recognises that skills included in the skill standards can be bundled into micro-credentials (Appendix B). This provides additional training options for people working in TTM and can help with employee retention.

Micro-credentials can provide a meaningful learning pathway for ākonga to accumulate relevant skills before committing to a full programme leading to the award of a qualification. A programme leading to a qualification can consist of stacked micro-credentials.

Recognition of Current Competence (RCC) can be recognised with micro-credentials.

Credit recognition transfer (CRT) where credit from formal learning, provided and credentialed by a tertiary Provider, can also be recognised through micro-credentials.

Information on micro-credential support for providers is available from [Register Your Micro-Credentials with WDC Approval - Waihangā Ara Rau](#).

ID NUMBER	TITLE	CREDITS
<b>LEVEL 3</b>		
5148	Temporary Traffic Management (TTM): Applying Controls to Low-risk, Low-impact Activities in the Road Reserve (Micro-Credential)	5
5149	Temporary Traffic Management (TTM): Assist with TTM within the Road Reserve (Micro-Credential)	5
5150	Temporary Traffic Management (TTM): Mobile Operations (Micro-Credential)	5
<b>LEVEL 4</b>		
4922	Temporary Traffic Management Design (Micro-Credential)	20
4923	Temporary Traffic Management Risk Assessment (Micro-Credential)	15
5285	Temporary Traffic Management (TTM) System: Foundation Principles (Micro-Credential)	10
5286	Temporary Traffic Management (TTM) Monitoring TTM controls (Micro-Credential)	10
5287	Temporary Traffic Management (TTM) Mobile Supervision (Micro-Credential)	10

## 8. DEFINITIONS

TERM	MEANING
Activity context	Activity context refers to the size, duration, location details, contractor working space, contractor TTM, hours of attendance, planned work programme, contractor hours of work, contractor equipment, anticipated vehicle movements, haul routes, site access points, parking requirements, site facilities.
Assessor	A person who makes the final assessment decision. For further information please refer to the current version of CMR 0120.
Operational practices	Operational practices refer to: <ul style="list-style-type: none"> <li>- equipment standards and how to apply knowledge of specific good practice for their design or delivery</li> <li>- good practice for an alternating flow, including limitations acceptable delays, with consideration of organisational procedures</li> <li>- workflow from development to implementation, including personnel involved and how controls are installed and uplift.</li> </ul>
Organisational requirements	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 organisational health and safety plans, traffic management plans (TMPs), practice notes, contract work programmes, quality plans, policies, and procedural documents.
Engineering principles	Engineering principles refer to: <ul style="list-style-type: none"> <li>- road geometric design (cornering and space required, sight lines, stopping distances, intersection sight lines), basic traffic variables and relationships, and traffic behaviour</li> <li>- delay calculations, merge rates, shifting or merging tapers and why they are used, and chicane elements to produce a passive or control measure</li> <li>- the impact of controls on human behaviour</li> <li>- common geometric dimensions</li> <li>- the way certain closures (systems of control) function and how they introduce, or limit impacts on stakeholders and the implementation, operation, maintenance, and uplift of TTM.</li> </ul>
Environment context	Environment context refers to the transport corridor, programme, network users, natural environment, and neighbours who are the owners of property affected by the activity.
Mentor	A mentor refers to a person with specialist knowledge and experience in the area in which they are mentoring, who provides support and advice to people on request that will meet agreed outcomes. Mentoring actions can include encouraging, celebrating, informing, giving feedback, and providing an environment where a learner might find personal motivation.
Mobile closure	A normally continuously moving activity or work operation carried out within the road reserve that may also stop briefly at a particular location.  Note: Activities like drain digging move along the road but they move too slowly to be considered mobile operations. These types of activities must be planned and managed as static operations.

Mobile operation	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 travels along the road in the direction of the traffic flow, usually at a slower speed or in a different manner to normal traffic flow on the road.
Road Reserve	The area of land between the legal boundaries, usually fence line to fence line and including any safety run-off areas, which is dedicated to allowing the passage of road users. The road reserve also includes an air space of six metres directly above the road surface.
Static	TTM zone where traffic management equipment is installed and remains in place for a period of time.
Temporary Traffic Management	Control measures that are deployed on a site to mitigate risks to road workers and road users. The control measures are identified via an assessment of risks to road workers and road users, and application of the hierarchy of controls, land transport rules and traffic engineering principles (refer to page 79 NZGTTM).
TTM Controls	TTM controls refer to a way of eliminating or minimising risks to health and safety.
TTM Equipment	Refers to plant, static equipment, and intelligent transport systems on the road and in the office (refer to page 20 NZGTTM). TTM equipment refers to equipment specifically used for TTM, including TTM zone protection, and may include but is not limited to temporary signs, delineation devices, temporary road safety barriers, and rotating flashing beacons. For more detail on geometric design, traffic engineering, and equipment (refer to NZGTTM Part 3: The toolbox).
Trigger Points	An event that triggers an action to be taken, it can include but is not limited to: <ul style="list-style-type: none"> <li>- When a vehicle passes an agreed point, workers evacuate the carriageway.</li> <li>- When a queue reaches a defined point, changes alternating flow to clear the queue (i.e. to protect a main road or intersection).</li> </ul>
TTM Zone	Refers to the section of road defined at each end by advance warning and end of works signs or between vehicles in a mobile operation, including the vehicles themselves.
Verifier	A verifier is someone who supports the assessment process by: <ul style="list-style-type: none"> <li>- verifying the evidence provided by the learner is valid and authentic and follows organisational requirements</li> <li>- confirming the learner's practice is in accordance with contextual requirements, and</li> <li>- may include observing the learner completing practical tasks and commenting on their performance. For further information please refer to the current version of CMR 0120 for more information on requirements for verifiers.</li> </ul>

## 9. LEGISLATION, STANDARDS, GOOD PRACTICE, AND BEST PRACTICE GUIDELINES

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**Legislation** accessed at [legislation.govt.nz](https://legislation.govt.nz).

- Health and Safety at Work Act 2015
- Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
- Local Government Act 2002
- Land Transport Act 1998
- Land Transport Management Act 2003
- Railways Act 2005: Part 3 Rail corridor
- Land Transport (Road User) Rule 2004
- Land Transport Rule: Setting of Speed Limits 2022
- Land Transport Rule: Traffic Control Devices 2004
- Land Transport Rule: Work Time and Logbooks 2007
- Civil Defence Emergency Act
- Fire and Emergency Act 2013
- Policing Act 2018
- Transport (Vehicular Traffic Road Closure) Regulations 1965
- Utilities Access Act 2010.

### Codes of Practice

- National Code of Practice for Utility Operators Access to transport corridors, available from [National Code | NZUAG](#).

### Best practice and good practice guidelines

- WorkSafe good practice guidelines: Keeping healthy and safe while working on the road or roadside. Guidance for PCBUs, available from [www.worksafe.govt.nz](https://www.worksafe.govt.nz).
- Waka Kotahi NZ Transport Agency Guide to Temporary Traffic Management, available from [www.nzta.govt.nz](https://www.nzta.govt.nz).
- ISO 31000: Risk Management – Guidelines, available from [www.iso.org](https://www.iso.org).
- Waka Kotahi Traffic control devices manual, available from <https://www.nzta.govt.nz/resources/traffic-control-devices-manual/>. Refer to NZGTTM Part 1 Why we implement TTM.
- Good Practice Guidelines: Excavation Safety, available from [www.worksafe.govt.nz](https://www.worksafe.govt.nz).

## APPENDIX A. NEW ZEALAND CERTIFICATE IN TEMPORARY TRAFFIC MANAGEMENT (TTM) SUPERVISION (LEVEL 4) [REF: XXXX]

The Level 4 skill standards listed in this section must be used for programmes leading to the award of the New Zealand Certificate in Temporary Traffic Management (TTM) Supervision.

- The skill standards listed below follow a logical order of progression to align with temporary traffic management requirements.

### SKILL STANDARDS MAPPED TO GRADUATE PROFILE OUTCOMES

#### Graduate Profile Outcomes

- GPO1 Apply knowledge of the principles and process required to lead operations on a temporary traffic management worksite.
- GPO2 Supervise a team to carry out mobile operations on the road reserve.
- GPO3 Apply controls to monitor a pre-established temporary traffic worksite.

#### LEVEL 4 TTM SKILL STANDARDS

SKILL STANDARDS	LEVEL	CREDITS	GPO1 30	GPO2 10	GPO3 10
40515 Explain the requirements for the temporary traffic management system	4	10	✓		
40873 Lead people and manage workflows to achieve an objective or outcome of an activity	4	20	✓		
30265 Apply risk assessment to a job role	3	8		✓	
40517 Supervise a mobile operation on the road reserve	4	5		✓	
40516 Monitor and maintain temporary traffic management controls	4	10			✓

[Domain - Temporary Traffic Management \(nzqa.govt.nz\)](https://nzqa.govt.nz).

[Domain - Occupational Health and Safety Practice](#)

#### Other requirements for the qualification

It is highly recommended skill standards 40232 Perform mobile operations within the road reserve (Level 3) (Credits 5), and 40233 Assist with temporary traffic management within the road reserve (Level 3) (Credits 5), or equivalent skills and knowledge are achieved before entering a programme leading to the award of this qualification.

If learners don't have skill standards 40232 and 40233 on their record of learning Providers will need to apply extra scrutiny, checking the currency of skills and knowledge, to ensure learners can achieve the qualification when they enrol in a programme.

## APPENDIX B–LEVEL 3 SKILL STANDARD SUPPORT INFORMATION

### LEVEL 3 TTM SKILL STANDARDS

ID NUMBER	TITLE	CREDITS
40231	Apply control measures to a low risk, low impact activity within the road reserve	5
40232	Perform mobile operations within the road reserve	5
40233	Assist with temporary traffic management (TTM) within the road reserve	5

Additional standards 17593 *Apply safe work practices in the workplace* (entry Level 2), 30265 *Apply health and safety risk assessment to a job role* Level 3 Credits 8 can be delivered in a TTM context (refer to page 26).

### 40231 – APPLY CONTROL MEASURES TO A LOW RISK, LOW IMPACT ACTIVITY WITHIN THE ROAD RESERVE

Risk assessment process (refer to pp. 28–33 NZGTTM).

For examples of who is at risk (refer to page 30 of NZGTTM) and for examples of road and roadside work with ākonga who may want to use this skill standard are shown in Appendix C. The largest group is utility workers.

The skill standard follows the order of:

- pre-site planning prior to leaving for the on-site low risk, low impact activity (formerly non-invasive)
- pre-check prior to the on-site activity being carried out
- risk management process review and site-specific safety check as the on-site activity is being carried out.

#### Target ākonga

This is an entry point skill standard aimed at individuals who carry out low risk, low impact activities within the road reserve. It is intended for workers whose primary function may not be temporary traffic management (TTM), but they apply appropriate control measures to manage the associated risk.

It can apply to a range of different activities, working near a road, or they may go on to a carriage way with a spotter.

It is expected that someone entering this skill standard has completed some form of induction programme at their workplace. They should understand the technical skills required for their working environment, and the personal health and safety responsibilities of their role. This would include the use of PPE and the importance of standard operating procedures.

#### Practical assessment

It is expected that ākonga will be assessed for this skill standard while completing a low-risk low impact activity on a live road environment. A recommendation is the assessment should include discussion on key points about low risk, low impact activities within the road reserve.

## Workplace evidence

Examples of workplace evidence that could be used for this skill standard include the TMP, risk assessment, organisational requirements, pre-site documentation, onsite records, hazard register, briefing sheets.

### ADDITIONAL INDICATIVE CONTENT

This skill standard covers TTM controls. Hierarchy of controls (refer to page 32 NZGTTM).

#### Pre-site planning

Risk assessment and risk mitigation controls.	<ul style="list-style-type: none"> <li>- activity context (refer to pp. 26 and 29 NZGTTM)</li> <li>- environment context (refer to page 26 NZGTTM)</li> <li>- verifying the effectiveness of controls to manage the risk for the activity, their alignment with the TMP</li> <li>- the effectiveness of the risk assessment with relevant stakeholders</li> <li>- workplace evidence confirming the risk assessment for the activity with relevant stakeholders, identifying any hazards that occur throughout the activity.</li> </ul>
Organisational requirements for pre-site checks.	<ul style="list-style-type: none"> <li>- pre-site checks include completing personal safety requirements</li> <li>- importance of safety briefings, and PPE</li> <li>- following risk assessment, contingencies, radio check (if required), type of communication agreed to</li> <li>- signing of hazard register/briefing sheet</li> <li>- setting up a vehicle prior to the activity, in a safe off-site location, beacons mounted on vehicle.</li> </ul>
Reviewing the risk assessment.	<ul style="list-style-type: none"> <li>- the planning before going to site includes confirming site location, checking TMP is approved, checking diagrams are appropriate for the activity, minimum sight distance, selection of personal protective equipment (PPE)</li> <li>- selecting TTM equipment (refer to Part 3 Toolbox page 74 NZGTTM), beacons, signs, cones, cone bars, pedestrian signage, arranging and determining timing of the activity</li> <li>- re-confirming risk assessment provided with stakeholders and verifying controls to manage the risk.</li> </ul>
<h4>Application of control measures</h4>	
Actioning revisions onsite.	<ul style="list-style-type: none"> <li>- reviewing the hazards, any site changes</li> <li>- checking safe parking information and requirements for beacons on and sign displayed</li> <li>- confirming when a spotter is required, whether a trigger point is needed, briefing of the spotter, potential diversion of pedestrians on to front or back berm, pedestrian management, for approaching traffic.</li> </ul>
Safe locations and approaches, identifying trigger points in line with the TMP.	<ul style="list-style-type: none"> <li>- person completing the activity has a safe location on the approach of a vehicle, and there are escape routes for all affected personnel</li> <li>- confirming exclusion zones, entering and exiting safely from the site, following the TMP, including beacons on, indicating intentions, checking mirrors, ensuring there is a safe gap in traffic, merging safely, and beacons off when up to speed</li> </ul>

	<ul style="list-style-type: none"> <li>- following organisational requirements, policy, procedures, and methodologies of the organisation, health and safety plans, quality plans, manufacturer requirements</li> <li>- roles and responsibilities. TTM companies will have their own requirements.</li> </ul>
Installation, maintenance, and uplift of low-risk control measures for the activity to be safely undertaken.	<ul style="list-style-type: none"> <li>- will depend on each companies' requirements for policy, procedures, and methodologies</li> <li>- organisational and TMP requirements for the low-impact, low-risk activity</li> <li>- refer to page 44, Waka Kotahi NZ Transport Agency New Zealand Guide to Temporary Traffic Management.</li> <li>- how utility companies can move pedestrians onto front or back berm or use a pedestrian controller</li> <li>- vulnerable road users (refer to pp. 10, 44, 71 NZGTTM).</li> </ul>
Capturing and recording operations information relevant to role.	<ul style="list-style-type: none"> <li>- completing on-site records including organisational procedures, role, and level of responsibility</li> <li>- capturing the operational decisions and activities as a critical record for accident an injury, near miss, (refer to pp. 38, 39, 44, 48, 50 NZGTTM).</li> </ul>

## 40232 – PERFORM MOBILE OPERATIONS WITHIN THE ROAD RESERVE

A framework for operational practice will be developed by the TTM industry steering group with expectations it will cover mobile operations (refer to page 39 NZGTTM).

A mobile operation is an activity or work carried out within the road reserve where the needs of the activity vary from normal traffic conditions.

They could be related to Type A roadmarking, pavement testing, mowing, weed spraying, shoulder grading, pavement sweeping, litter, and debris removal.

### Target ākongā

This is an entry point skill standard for individuals or teams performing mobile operations and/or control measures. It's designed for those who contribute to a team's performance in mobile TTM work. This is designed for anyone who drives a vehicle in a mobile operation or instructs a mobile driver.

### Practical Assessment

It is expected that ākongā will be assessed on safe practices used while driving or directing a work vehicle or other mobile plant within the road reserve using control measures for temporary traffic management (TTM). It is recommended the assessment will also include professional discussion on key aspects of driving a vehicle in a mobile operation.

Safe practices can be assessed while driving or directing the following mobile vehicles:

- lead pilot vehicles
- work vehicles
- shadow vehicles
- tail pilot vehicles.

### Workplace Evidence

Examples of workplace evidence that could be used for this skill standard include operator manuals, TMP, layout diagrams, risk assessment, emergency procedures, onsite records, checks (pre-site, pre-start, communication, vehicle, and equipment).

ADDITIONAL INDICATIVE CONTENT	
Requirements for TTM mobile operations	
Situations that may cause harm within the road reserve.	<ul style="list-style-type: none"> <li>- sun strike, glare, wet or slippery roads, operating near or on corners and the brow of a hill impatient road users</li> <li>- dangerous overtaking</li> <li>- visibility, road constraints</li> <li>- lack of parking shoulder for advanced warning vehicles</li> <li>- dealing with common issues.</li> </ul>
Vehicles requirements and risks.	<ul style="list-style-type: none"> <li>- vehicle requirements, types of vehicles (including shadow and pilot vehicles)</li> <li>- pre-start checks</li> <li>- sign and display options, clear sight distances, visibility</li> <li>- mobile operation equipment, PPE, TTM signs, TTM displays</li> <li>- mobile operation communications, continuous, between mobile operation drivers, communication methods, timing, channels, and suitability</li> <li>- communicating emergency procedures, exit routes, evacuation areas.</li> </ul>
Health and safety of mobile operations personnel.	<ul style="list-style-type: none"> <li>- mobile operator roles and responsibilities</li> <li>- health and safety processes</li> <li>- operation and importance of tail pilot, shadow vehicle, lead pilot</li> <li>- mobile operations of personnel on foot and working from a vehicle</li> <li>- clear sight distances (CSD), distances between vehicles, options for signs and displays on work vehicles, protection of workers with shadow vehicles.</li> </ul>
Performing mobile operations	
Requirements for a fit for purpose mobile operation.	<ul style="list-style-type: none"> <li>- layout diagrams and risk management process</li> </ul>

	<ul style="list-style-type: none"> <li>- key requirements in the traffic management diagrams (TMDs), vehicles to be used, signage, beacons, positioning of vehicles, clear sight distances</li> <li>- vehicles, TTM equipment, and communication equipment checks, compliance with manufacturer's requirements and relevant legislation</li> <li>- equipment and tools are fit for purpose (refer to Part 3 Toolbox, page 74 NZGTTM)</li> <li>- completing pre-start and vehicle checks</li> <li>- certificate of fitness, road user charge, notifications.</li> </ul>
Raising safety concerns for mobile operations.	<ul style="list-style-type: none"> <li>- raising any safety concerns as per own role and responsibilities</li> <li>- role of the mobile operator</li> <li>- following PCBU procedures and knowing what to do in an emergency</li> <li>- following evacuation or incident procedures</li> <li>- attending briefings, identifying additional risks for the risk management process or changes for existing risk control measures that are not fit for purpose.</li> </ul>
Communicating changing onsite conditions.	<ul style="list-style-type: none"> <li>- examples of control measures for some common risks such as low light, changing visibility, weather conditions, traffic or pedestrian volume, events, traffic conditions, accidents, injuries, working near or on corners or the brow of a hill, emergency services traversing the site.</li> </ul>
Safe operation and positioning of a vehicle for mobile operations.	<ul style="list-style-type: none"> <li>- practical assessment</li> <li>- safe operation/positioning</li> <li>- communicating continuously for own role and changes to onsite conditions, use of RT, active listening</li> <li>- visibility, and positioning.</li> </ul>

## 40233 – ASSIST WITH TEMPORARY TRAFFIC MANAGEMENT WITHIN THE ROAD RESERVE

This skill standard requires ākongā to recognise hazards in the immediate environment or task. Frontline workers should be trained to identify and report potentially unsafe conditions or activities. They should be able to explain how each risk can cause harm, showing an understanding of industry terminology including consequences and likelihood.

### Target ākongā

This is an entry point skill standard intended for individuals assisting with installing, operating, maintaining, or uplifting TTM. It's designed for those who contribute to a team's performance but does not cover supervision of the operation.

### Practical Assessment

It is expected ākongā will safely demonstrate practical TTM tasks that are required in their day-to-day work (for example install and uplift signs, install and uplift cones around a working space and in the centre of 2 lanes, participating in alternating flow operation, under supervision). They will need to complete these

tasks working around or on a work vehicle. It is recommended the assessment will also include discussion on tasks completed when undertaking their work.

### Workplace Evidence

Examples of workplace evidence that could be used for this skill standard are the risk assessment, TMP, and organisational requirements.

ADDITIONAL INDICATIVE CONTENT	
Assisting with TTM within the road reserve	
Common onsite hazards in the TTM industry and how they cause harm.	<ul style="list-style-type: none"> <li>- consequences and likelihood (refer to Plan, Do, Act, Check, Cycle, page 28 NZGTTM)</li> <li>- common TTM language and terms</li> <li>- exclusion zones that must be clear of personnel, vehicles, and equipment (directly in front of the work vehicle, behind and on the back of the work vehicle if there is no shadow vehicle in place, and , unprotected in the live lane.</li> </ul>
Safe practices when assisting with temporary traffic management within the road reserve.	<ul style="list-style-type: none"> <li>- safely installing, operating, maintaining, and uplifting TTM equipment in the live lane (refer to Part 3 Toolbox, page 74 NZGTTM)</li> <li>- performing tasks safely following organisational procedures</li> <li>- raising issues, and following escalation procedures</li> <li>- components of advanced warning, direction and protection, and end of works requirements under TTM</li> <li>- components of a worksite, who is in charge at a worksite, working on a TTM vehicle</li> <li>- managing risk when working with TTM equipment (refer to Part 3 Toolbox, page 74 NZGTTM)</li> <li>- where to install equipment in relation to a work vehicle</li> <li>- being a spotter for a TTM activity and the cone threshold, taper, cones alongside the working space.</li> </ul>
Communication methods and skills to relay information to keep vulnerable road users safe.	<ul style="list-style-type: none"> <li>- using active listening skills, operation of Radio Transmission (RT) including recharging, communicating with other workers and the supervisor</li> <li>- relaying information during static operations to keep people safe</li> <li>- participating in the toolbox meeting.</li> </ul>
Safe practices around approaching traffic, vehicle movements, and vulnerable road users.	<ul style="list-style-type: none"> <li>- vehicle movements at a worksite within the road reserve using safe practices</li> <li>- stop go, a road closure, explaining the control measures adequately</li> <li>- stopping traffic, using stop go paddles or other devices such portable traffic signals</li> <li>- vehicles, TTM equipment, and communication equipment checks including compliance with manufacturer's requirements and relevant legislation.</li> </ul>

## UNIT STANDARD 30265 – APPLY RISK ASSESSMENT TO A JOB ROLE

The TTM credentials framework identifies basic situational awareness at Level 3, recognising hazards in the immediate environment or task. Frontline workers should be trained to identify and report potentially unsafe conditions or activities.

Unit standard 30265 delivered in the context of TTM can be used to assess:

- the principles of health and safety risk assessment; and
- applying health and safety risk assessment to a job role in accordance with regulatory requirements and industry good practice.

This standard is for people who require operational knowledge of the application of routine health and safety risk management to a job role. Ākonga will operate in a controlled learning and/or assessment environment with established systems for health and safety risk management and that there will be routine and relatively simple methods for identification and risk management in use.

### ADDITIONAL INDICATIVE CONTENT

#### Principles of health and safety risk assessment

Description of each principle of the risk assessment process.

- TTM workplace health and safety (identify, assess, control, monitor, and review)
- identification of risk on a TTM worksite
- assessment of likelihood and consequence
- following TTM company procedures for identification of risk
- identification of common TTM controls from most effective to least effective
- identifying company procedures for ongoing monitoring and review of the effectiveness of TTM controls in relation to the risk assessment and risk identification.

#### Application of health and safety risk assessment to a TTM job role

In accordance with regulatory requirements and industry good practice.

Identification of TTM hazards.

- TTM job safety analysis, area analysis, behaviour analysis (ensuring those delivering controls have the right competencies including safety behaviours (fatigue, hydration, fitness for work, rest breaks)
- speaking up at toolbox identifying hazards
- standard operating procedures and safe work methods.

Assessment of risks on a TTM worksite.

- communicating hazards to supervisor
- applying controls safely as per own role.

Identification of TTM common control measures to manage risk.

- appropriate to the TTM situation and worksite
- escalate any issues where the control measures are not appropriate for the situation
- not proceeding if the risk controls in the TMP are different to the site, or the conditions, on a TTM worksite (e.g. traffic volumes).

Identification of methods to monitor managed risks.

- pre-determined methods on a TTM worksite in line with the Traffic Management Plan (TMP) and organisational procedures.

Identification of methods to review the risk management process on a TTM worksite.

- in line with the TMP and organisational procedures.

## UNIT STANDARD 17593 – APPLY SAFE WORK PRACTICES IN THE WORKPLACE

The TTM credentials framework identifies Level 2 as following basic instructions, The most basic level of risk management at induction. It involves adhering to clearly outlined procedures and safety protocols. This could involve things like wearing personal protective equipment or following standard operating procedures.

Unit standard 17593 delivered in the context of TTM can be used to assess:

- identifying the principles of workplace safety in a given workplace
- demonstrating safe work practices.

### ADDITIONAL INDICATIVE CONTENT

#### Identification of the principles of workplace safety in a TTM workplace

Safe work practices for TTM.	<ul style="list-style-type: none"> <li>- identified in relation to organisational requirements.</li> <li>- TTM personal protective equipment</li> <li>- standard operating procedures, signage, safety guarding, work permits.</li> </ul>
Identifying TTM workplace hazard identification systems.	<ul style="list-style-type: none"> <li>- hazard registers, hazard reports, inspections</li> <li>- area analysis, task analysis and process analysis.</li> </ul>
Clear and effective communication.	<ul style="list-style-type: none"> <li>- importance of, and explained in terms of good workplace health and safety practice.</li> </ul>
Communication methods.	<ul style="list-style-type: none"> <li>- description of procedures for TTM according to organisational requirements.</li> <li>- radio, Radio Transmission (RT) electronic, signage, oral, written, sirens, signals.</li> </ul>

#### Demonstrate safe work practices in a specific workplace

Carrying out routine work activities.	<ul style="list-style-type: none"> <li>- in accordance with organisational requirements</li> <li>- correct use of TTM personal protective equipment</li> <li>- following safety rules</li> <li>- demonstrating an awareness of workplace hazards and controls</li> <li>- use of good ergonomic practice</li> <li>- incident reporting</li> <li>- compliance with signage and entry requirements.</li> </ul>
TTM communication methods.	<ul style="list-style-type: none"> <li>- application of procedures according to workplace activities and organisational requirements.</li> </ul>
Hazard identification.	<ul style="list-style-type: none"> <li>- application of workplace hazard identification methods according to organisational requirements.</li> </ul>
Unsafe work practice.	<ul style="list-style-type: none"> <li>- identification of unsafe work practices and corrective actions in accordance with organisational requirements.</li> </ul>
Documentation.	<ul style="list-style-type: none"> <li>- identifying and following documents relating to safe work practices, in accordance with organisational requirements.</li> </ul>

## APPENDIX C–LEVEL 4 SKILL STANDARD SUPPORT INFORMATION

### LEVEL 4 UNIT STANDARDS

ID NUMBER	TITLE	CREDITS
33252	Describe the principles and process for managing risk for an activity requiring temporary traffic management	5
33253	Complete a risk assessment for an activity requiring temporary traffic management	10
33254	Develop a traffic management plan for an activity and consult with relevant stakeholders	20

### LEVEL 4 SKILL STANDARDS

ID NUMBER	TITLE	CREDITS
40515	Explain the requirements for the temporary traffic management system	10
40516	Monitor and maintain temporary traffic management controls	10
40517	Supervise a mobile operation on the road reserve	5

Additional skill standard 40873 *Lead people and manage workflows to achieve an objective or outcome of an activity* Level 4 Credits 20 can be delivered in a TTM context (refer to page 33).

### 40515 – EXPLAIN THE REQUIREMENTS FOR THE TEMPORARY TRAFFIC MANAGEMENT SYSTEM

TTM Knowledge involves learning the ins and outs of traffic management. It focuses on understanding how different safety tools, also known as 'controls', work together to keep everyone safe. While this skill standard does not involve 'hands on' work or managing people, it's all about ensuring the deep understanding of the controls and how they are used. This solid understanding of controls will help to make traffic management work smoothly and safely.

#### Target ākongā

This Level 4 skill standard, along with competencies in risk assessment is the entry point to TTM Design, TTM Corridor Management, TTM Assurance. It will also support skill standards for TTM Supervision.

#### Practical assessment

While this is a knowledge standard, a recommendation is to have an assessment tool that gives learners the opportunity to demonstrate their knowledge using practical tasks.

#### Workplace evidence

Evidence for this skill standard will align with the New Zealand Guide to Temporary Traffic Management and the WorkSafe New Zealand good practice guidelines Keeping healthy and safe while working on the road or roadside. Guidance for PCBUs.

**ADDITIONAL INDICATIVE CONTENT**

**Requirements of the TTM system**  
 (Its application to relevant engineering principles and operational practices for an activity requiring TTM. TTM system Part 2 NZGTTM).

<p>The TTM framework (refer to NZGTTM) and the core elements for a successful TTM system.</p>	<ul style="list-style-type: none"> <li>- people, leadership, training, roles and responsibilities</li> <li>- processes, operational practice, good practice, engineering principles associated with TTM, importance of the TMP and risk assessment, escalation process</li> <li>- 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</li> <li>- contracts, contract specifications, roles &amp; responsibilities.</li> <li>- creation of a safe work area to facilitate construction, maintenance and other activities which occur on or near a road</li> <li>- how a 'closure' could be designed and/or delivered to affect a physical control on the road</li> <li>- use of signs, delineation and other devices/equipment combined to become an engineered system of control.</li> </ul>
<p>Legislation and local council by-laws.</p>	<ul style="list-style-type: none"> <li>- Local Government Act 1974 and 2002</li> <li>- Land Transport Act 1998</li> <li>- Land Transport rule: Setting of Speed Limits 2002</li> <li>- Transport (Vehicular Traffic Road Closure) Regulations 1965.</li> </ul>
<p>Operational roles and responsibilities and the Health and Safety at Work Act 2015.</p>	<ul style="list-style-type: none"> <li>- TTM responsibilities model (refer p. 24 NZGTTM)</li> <li>- three Cs - consult, cooperate and coordinate</li> <li>- on-site reporting requirements and how the system fits together</li> <li>- using a responsible, accountable, consulted, and informed matrix (RACI)</li> <li>- organisational responsibilities, TTM planning process(es), TTM implementation, maintenance, and uplift, quality assurance, emergency response.</li> </ul>
<p><b>TTM operational practice and engineering principles</b></p>	
<p>Engineering principles relevant to TTM.</p>	<ul style="list-style-type: none"> <li>- refer to definitions p. 15.</li> </ul>
<p>TTM Controls.</p>	<ul style="list-style-type: none"> <li>- the function, impact, installation, operation, maintenance, and uplift of TTM controls.</li> </ul>
<p>Operational practices relevant to TTM.</p>	<ul style="list-style-type: none"> <li>- refer to definitions p. 15.</li> </ul>
<p>Regulatory, contractual, organisational, processes, TTM documentation and reporting throughout the process.</p>	<ul style="list-style-type: none"> <li>- completing on-site records including organisational procedures, role, and level of responsibility</li> <li>- examples are rail permits, work access permits, sign on sheets, deep excavation documentation, BeforeUDig, hot work permits, risk assessment, TMP.</li> <li>- reporting procedures for emergency response to an incident or accident, who to report to, who is responsible, organisational procedures</li> </ul>

	<ul style="list-style-type: none"> <li>- capturing the operational decisions and activities as a critical record for accident or injury, near miss, (refer to pp. 38, 39, 44, 48, 50 NZGTTM)</li> <li>- common geometric dimensions (refer to Table 1, p. 69 NZGTTM).</li> </ul>
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## 40516 – MONITOR AND MAINTAIN TEMPORARY TRAFFIC MANAGEMENT CONTROLS

This skill standard is for people who need the skills to monitor and maintain a pre-established static site. They receive a site handover briefing. It covers the operation and maintenance of the site, not the setting up or uplift of the site. It includes elements of risk verification, monitoring, and the ongoing identification of changing site conditions for the activity and the environment. It also includes the updating of onsite records.

This skill standard requires ākongā to recognise hazards in the immediate environment or task. Frontline workers should be trained to identify and report potentially unsafe conditions or activities. They should be able to explain how each risk can cause harm, showing an understanding of industry terminology including consequences and likelihood.

### Target ākongā

This skill standard is for TTM personnel who require the skills to monitor and maintain pre-established static temporary traffic management controls for an activity.

### Practical Assessment

For the practical assessment the site will already be set up on arrival. The learner should receive a site handover, they should complete a check of the worksite, and check for any discrepancies in the paperwork and escalate any issues.

### Workplace Evidence

Examples of workplace evidence that could be used for this skill standard are the risk assessment, TMP, site documentation, site paperwork, and organisational requirements.

ADDITIONAL INDICATIVE CONTENT	
Site briefings and inductions	
Verification of the risk assessment and new risk.	<ul style="list-style-type: none"> <li>- for more information on briefings please refer to WorkSafe good practice guidelines, <i>Keeping healthy and safe while working on the road or roadside</i>. Guidance for PCBUS section on Inductions, 29.0.</li> </ul>
Site and situational awareness, risk identification, actioning responses to risk onsite.	<ul style="list-style-type: none"> <li>- communication methods and skills to relay information to keep people safe</li> <li>- using active listening skills, operation of Radio Telephone (RT) including recharging</li> <li>- communicating with other workers and the supervisor</li> <li>- relaying information during static operations to keep people safe</li> <li>- participating in the toolbox meeting.</li> </ul>

Checking TMP is still fit for purpose for the activity and the environment.	<ul style="list-style-type: none"> <li>- common onsite risks prevalent in the TTM industry and how they cause harm</li> <li>- consequences and likelihood (refer to Plan, Do, Act, Check, Cycle p. 28 NZGTTM)</li> <li>- common TTM language and terms. Refer to NZGTTM Part 4- Glossary.</li> </ul>
<b>Monitor the TTM controls</b>	
Monitoring.	<ul style="list-style-type: none"> <li>- monitoring the process for identifying changing site conditions.</li> </ul>
Phasing the work.	<ul style="list-style-type: none"> <li>- phasing the work and regular checks of the site by the TTM monitor.</li> </ul>
Organisational requirements.	<ul style="list-style-type: none"> <li>- organisational requirements for the escalation of issues or changing site conditions to a supervisor.</li> </ul>
Emergency response	<ul style="list-style-type: none"> <li>- emergency response procedures for a TTM worksite.</li> </ul>
Planning for contingencies in line with the TMP.	<ul style="list-style-type: none"> <li>- awareness of contingency plans in the TMP, contingency plans for what could go wrong on the site</li> <li>- safe practices when assisting with temporary traffic management within the road reserve</li> <li>- safely operating and maintaining TTM equipment in the live lane</li> <li>- performing tasks safely following organisational procedures, raising issues, and following escalation procedures</li> <li>- components of advanced warning, direction and protection, and end of works requirements under TTM</li> <li>- components of a worksite, who is in charge at a worksite (including emergency response), working on a TTM vehicle (including emergency response), working on a TTM vehicle</li> <li>- managing risk when working with TTM equipment (refer to Part 3 Toolbox p. 74 NZGTTM).</li> </ul>
Maintain on-site records.	<ul style="list-style-type: none"> <li>- completing paperwork and reading and understanding a TMP.</li> </ul>

## 40517 – SUPERVISE A MOBILE OPERATION ON THE ROAD RESERVE

A framework for operational practice will be developed by the TTM industry steering group with expectations it will cover mobile operations (refer p. 39 NZGTTM).

It is recommended people achieve skill standard 40232, Perform mobile operations within the road reserve, or demonstrate equivalent skills and knowledge before being assessed against this skill standard.

A mobile operation is an activity, or work carried out within the road reserve, and where the needs of the activity vary from normal traffic conditions.

TTM mobile operations are also used to install and uplift direction and protection devices within the road reserve.

### Target ākongā

This is a skill standard for individuals who supervise mobile TTM operations. They manage the risk and supervise the deployment of personnel and equipment to deliver safe mobile worksites.

It is for individuals in charge of a mobile operation, or working solo doing mobile activities such as:

- type A roadmarking
- pavement testing
- mowing
- weed spraying
- shoulder grading
- pavement sweeping, litter, and debris removal
- cyclic maintenance driver (solo)
- grader/sweeper driver (solo).

### Practical Assessment

To achieve this standard, assessment will take place 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 the Health and Safety at Work Act 2015.

### Workplace Evidence

Examples of workplace evidence that could be used for this skill standard are the risk assessment, TMP, and organisational requirements.

ADDITIONAL INDICATIVE CONTENT	
<b>Pre-site planning</b>	
Analysis and adjustment of TMPs and risk assessments for mobile operations.	<ul style="list-style-type: none"> <li>- preparing for a mobile operation on the road reserve</li> <li>- reading, following, and checking the TMP before pulling out onto the road reserve</li> <li>- review and adjustment of the risk assessment, vehicles, signage, positioning of vehicle, works, plant, and equipment.</li> </ul>
Hierarchy of controls.	<ul style="list-style-type: none"> <li>- common hazards, TTM controls, management onsite and ensuring a safe mobile operation.</li> </ul>
Pre-site briefings and roles and responsibilities.	<ul style="list-style-type: none"> <li>- role of the mobile supervisor, authorities, disestablishing site, coordinating shared responsibility for checking safe reopening of the road, assembly points</li> <li>- risks and controls, first aid, emergency procedures and key distances for the mobile operation.</li> </ul>
<b>Supervising mobile operations</b>	
On-site safety briefings, consulting and communicating with the mobile operations personnel.	<ul style="list-style-type: none"> <li>- TMP and on-site risk assessment updates</li> <li>- communicating and co-ordinating site mobile operations, moving on to the carriageway, team supervision, maintaining standards and taking corrective action, supervising safe positioning of vehicles, responding to common issues for mobile operations</li> <li>- sun strike, glare, wet or slippery roads, operating near or on corners and the brow of a hill impatient road users, dangerous overtaking, visibility, road constraints, lack of parking shoulder for advanced warning vehicles, dealing with situations that can cause harm, steep drop-offs.</li> </ul>
Carriageway and footpaths.	<ul style="list-style-type: none"> <li>- drivable before leaving, and safe for public and road users</li> <li>- exiting carriageway safely and in a safe order</li> </ul>

	<ul style="list-style-type: none"> <li>- rejoining traffic, electronic and manual signage vs beacons, remove and decommission signs, return to normal speed limit.</li> </ul>
Follow up procedures, post-operational recording and reporting documentation.	<ul style="list-style-type: none"> <li>- site records (trends, changing on site conditions, analytics, risk frequency, road user behaviour)</li> <li>- reviewing the operation for lessons learned and actions to take.</li> </ul>

## 40873 – LEAD PEOPLE AND MANAGE WORKFLOWS TO ACHIEVE AN OBJECTIVE OR OUTCOME OF AN ACTIVITY

This skill standard is intended for people who need skills to lead people and manage workflows by determining objectives and contributing to planning while monitoring and assessing their leadership approach of an objective or outcome of an activity.

### Target ākongā

Providers should ensure learners are aware that TTM supervision requires not only interactions with the TTM crew but also site personnel, the public, contractors, and other stakeholders on the road network.

### Practical Assessment

Assessment of this skill standard should relate to a TTM workflow within the road reserve and situations related to the typical activities the learner is exposed to. The learner should demonstrate leading mobile and/or static operations that have a risk assessment, and an approved Traffic Management Plan (TMP).

## ADDITIONAL INDICATIVE CONTENT

### Establish objectives

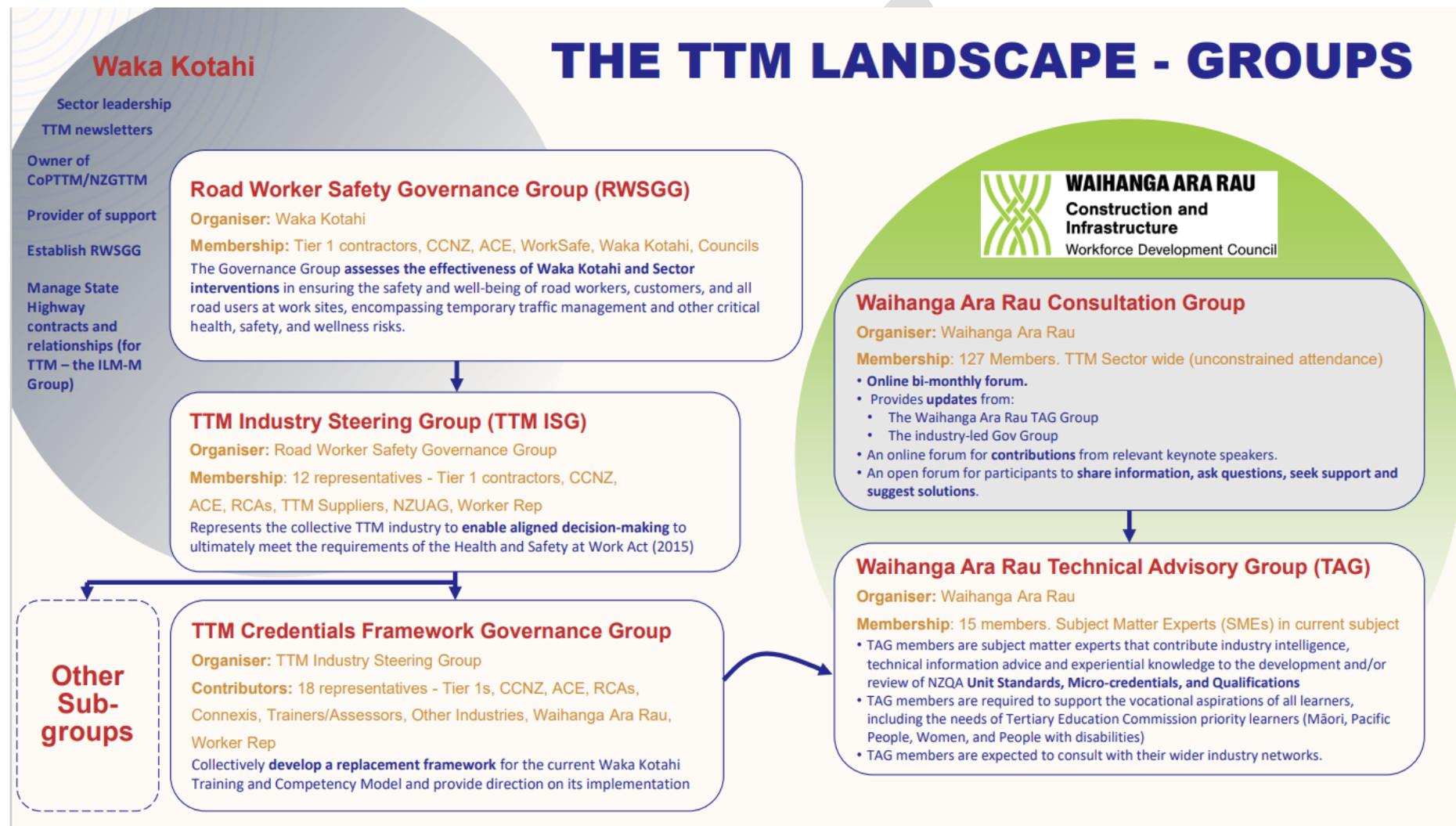
Organisational.	<ul style="list-style-type: none"> <li>- delivering fit for purpose TTM</li> <li>- providing the highest level of protection as is reasonably practicable.</li> <li>- keeping road workers and road users safe when temporary traffic management is required</li> <li>- identifying risks to TTM personnel and how to keep all road users safe.</li> </ul>
Personal.	<ul style="list-style-type: none"> <li>- developing new skills</li> <li>- earning a promotion</li> <li>- achieving a credential</li> <li>- building relationships or networks</li> <li>- professional accomplishments</li> </ul>
Cultural – workplace culture and behaviours, ethnicity.	<ul style="list-style-type: none"> <li>- ethnicity inclusive policies</li> <li>- celebrate holidays and traditions</li> <li>- workplace engagement in conversations about cultural differences and inclusivity.</li> </ul>
Social.	<ul style="list-style-type: none"> <li>- break times</li> <li>- interactions with the public</li> <li>- ethical considerations around social interactions</li> <li>- facilitating public interactions with the site.</li> </ul>
A plan.	<ul style="list-style-type: none"> <li>- using objectives to develop a plan</li> <li>- seeking stakeholder agreement for the plan.</li> </ul>

<b>Contribution to planning a workflow</b>	
Prioritisation.	<ul style="list-style-type: none"> <li>- workflow for set up on site</li> <li>- prioritising actions to set up the site</li> <li>- sequencing standard operating procedures</li> <li>- order of installation through to uplift processes</li> <li>- PCBU requirements and responsibilities and priorities.</li> </ul>
Project plan.	<ul style="list-style-type: none"> <li>- the traffic management plan (TMP)</li> <li>- the risk assessment and understanding risk assessment</li> <li>- verifying the controls and recognising hold points.</li> </ul>
Schedules, timetables, task board.	<ul style="list-style-type: none"> <li>- Traffic Management Diagrams (TMD)s</li> <li>- time management</li> <li>- Traffic Management Plan (TMP)</li> <li>- daily onsite log.</li> </ul>
Compliance policies, processes and procedures.	<ul style="list-style-type: none"> <li>- company policies &amp; procedures, SOP's</li> <li>- relevant legislation</li> <li>- NZGTTM.</li> </ul>
Seasonal requirements.	<ul style="list-style-type: none"> <li>- traffic volumes</li> <li>- holiday traffic</li> <li>- moratorium periods</li> <li>- weather events.</li> </ul>
Capacity and capabilities of team members.	<ul style="list-style-type: none"> <li>- clearly defining delegations</li> <li>- working out placement of TTM at a static site (including sign placement and trouble-shooting sign placement and closure delineation for parked vehicles, vertical and horizontal curves).</li> </ul>
Use of digital tools and systems.	<ul style="list-style-type: none"> <li>- TTM management systems</li> <li>- digital site documentation and recording tools, webcam</li> <li>- radio communication equipment</li> <li>- digital signage</li> <li>- drones.</li> </ul>
Resource allocation.	<ul style="list-style-type: none"> <li>- plant and equipment availability</li> <li>- required site documents</li> <li>- site personnel allocation.</li> </ul>
<b>Collaboration with team members on workflow implementation</b>	
Communication of activity with team members.	<ul style="list-style-type: none"> <li>- active listening skills</li> <li>- clear communication style</li> <li>- briefings, toolbox meetings</li> <li>- relaying information to keep people safe</li> <li>- using RT's.</li> </ul>
Delegation of tasks.	<ul style="list-style-type: none"> <li>- roles and scope of each role.</li> <li>- role of the supervisor</li> <li>- responsibilities of team on the worksite.</li> </ul>
Motivational techniques.	<ul style="list-style-type: none"> <li>- self-assessment and listening to constructive criticism from team members</li> <li>- valuing the team members, positive reinforcement</li> <li>- challenge questions to test and encourage new learning.</li> </ul>
Buy-in from team.	<ul style="list-style-type: none"> <li>- cultural aspects</li> <li>- toolbox meetings.</li> </ul>
Conflict resolution.	<ul style="list-style-type: none"> <li>- understanding sources of conflict for a TTM team</li> <li>- acknowledging different perspectives, stressors, enablers and barriers.</li> </ul>
Managing resistance.	<ul style="list-style-type: none"> <li>- encouraging active non-biased listening and collaborative problem solving</li> </ul>

	<ul style="list-style-type: none"> <li>- setting clear boundaries and expectations.</li> </ul>
Leading through change.	<ul style="list-style-type: none"> <li>- clear communication channels</li> <li>- inclusive decision-making</li> <li>- being present, accessible, and actively engaged</li> <li>- training and skill development</li> <li>- celebrating team achievements and success</li> <li>- change as a vehicle for learning and growth, open to new ideas, and new ways to manage worksite risk</li> <li>- identify team strengths and members who manage change well</li> <li>- monitoring and encouraging feedback from team members.</li> </ul>
Schedules.	<ul style="list-style-type: none"> <li>- planned timeframes for installation and uplift</li> <li>- contingency times.</li> </ul>
Feedback loops.	<ul style="list-style-type: none"> <li>- Plan, do, check, act (NZGTTM)</li> <li>- site and people checks</li> <li>- near miss</li> <li>- team feedback to improve practice</li> <li>- TMP feedback (is it working or not). Did the plan meet the TMP requirements</li> <li>- Escalating feedback beyond role and responsibility.</li> </ul>
Debrief.	<ul style="list-style-type: none"> <li>- reviewing the operation for lessons learned</li> <li>- TTM de-briefs and toolbox meetings.</li> </ul>
<b>Leadership styles</b>	
Autocratic.	<ul style="list-style-type: none"> <li>- speed of decision-making on a TTM worksite</li> <li>- increased output from team members who value autocratic leadership</li> <li>- lack of feedback and input from team members (toolbox meetings, identifying new hazards).</li> </ul>
Consultative.	<ul style="list-style-type: none"> <li>- encouraging and guiding TTM crew</li> <li>- encouraging innovation and team participation</li> <li>- acknowledging the different skills and strengths of each team members.</li> </ul>
Representative.	<ul style="list-style-type: none"> <li>- reflecting and advocating for the needs of the TTM team</li> <li>- active listening and using feedback to improve decision making</li> <li>- inclusive actions to get buy-in from the TTM team.</li> </ul>
Cooperative.	<ul style="list-style-type: none"> <li>- democratic, participative, encouraging team members to contribute to decision-making</li> </ul>
Permissive.	<ul style="list-style-type: none"> <li>- laissez faire, trusting a skilled TTM crew to be responsible for installation through to removal.</li> </ul>
Confrontational.	<ul style="list-style-type: none"> <li>- focus on honest feedback from the TTM crew</li> <li>- having difficult conversations with team members</li> <li>- impact of expectations not being met</li> <li>- addressing issues on a TTM site head on without intimidation.</li> </ul>
Supportive.	<ul style="list-style-type: none"> <li>- supporting a TTM crew from installation through to uplift of a TTM worksite</li> <li>- providing supervision and professional development until team members are competent and competent.</li> </ul>
Distant.	<ul style="list-style-type: none"> <li>- identifying tasks that can be delegated to team members when not in proximity</li> <li>- using technology to facilitate communications</li> <li>- regular and timely remote check ins with team members.</li> </ul>

<b>Monitoring and adjustments to the activity</b>	
Leadership approaches.	<ul style="list-style-type: none"> <li>- establishing an environment where team feedback is valued</li> <li>- facilitating team briefings onsite and post site dis-establishment de-briefs</li> <li>- encouraging participation in team meetings including team achievements and development opportunities.</li> </ul>
Situational awareness.	<ul style="list-style-type: none"> <li>- identifying new hazards and situations that require action on a TTM worksite</li> <li>- understanding the impact of changing of site conditions on the health and wellbeing of team members</li> <li>- making informed decisions in real time when events unfold.</li> </ul>
Leadership tools.	<ul style="list-style-type: none"> <li>- TTM briefings</li> <li>- upskilling opportunities on a TTM worksite</li> <li>- actions to address team fatigue and stress on a TTM worksite.</li> </ul>
Use of digital tools.	<ul style="list-style-type: none"> <li>- drone footage</li> <li>- radio communications</li> <li>- TTM plant technology.</li> </ul>
Environmental protection and considerations.	<ul style="list-style-type: none"> <li>- working with team members to address and action dangerous chemical spills</li> <li>- reducing emissions on a TTM worksite.</li> </ul>
Sustainable practices.	<ul style="list-style-type: none"> <li>- sustainability of TTM controls</li> <li>- staff retention.</li> </ul>
<b>Review own leadership approach and outcome or objectives of the activity</b>	
Achievement of the outcome or objective.	<ul style="list-style-type: none"> <li>- TTM site internal audit</li> <li>- site documentation for de-brief.</li> </ul>
Effectiveness of the leadership taken.	<ul style="list-style-type: none"> <li>- site de-brief</li> <li>- toolbox meetings</li> <li>- escalation process</li> <li>- using team feedback to inform leadership improvements.</li> </ul>
Use of feedback cycle.	<ul style="list-style-type: none"> <li>- self-assessment of leadership practice</li> <li>- actioning constructive criticism.</li> </ul>
Using reflection journal.	<ul style="list-style-type: none"> <li>- analysing team de-brief documentation to improve leadership practice</li> <li>- recommendations for improvements to SOPs</li> <li>- recording feedback for performance management meetings.</li> </ul>
Self-reflection techniques.	<ul style="list-style-type: none"> <li>- timing, location, and regularity</li> <li>- identifying self-reflection prompt questions</li> <li>- challenging assumptions and barriers</li> <li>- brain dump and identifying wins and losses</li> <li>- identifying enablers, small wins or manageable actions.</li> </ul>

## APPENDIX D – THE TTM LANDSCAPE – GROUPS



## APPENDIX E – EXAMPLES OF ROAD AND ROADSIDE WORK

WorkSafe Keeping healthy and safe while working on the road or roadside – Guidance for PCBUs – page 12 NZGTTM.

