WAIHANGA ARA RAU
Construction and
Infrastructure
Workforce Development Council

TEMPORARY TRAFFIC MANAGEMENT

PROGRAMME GUIDANCE FOR SKILL STANDARDS

VERSION 1 | MAY 2024

CONTENTS

1. INTRODUCTION

This *Programme Guidance* contains information and best practice for temporary traffic management (TTM) skill standards.

It is useful for people involved in training for the TTM industry and includes industry expectations, equity considerations, and te Tiriti o Waitangi requirements that may not be included in other NZQA products.

It explains the role of TTM skill standards as building blocks that lead to qualifications and credentials specified in the TTM Credentials Framework, a new training approach developed by industry that will support better management of safety and risk for TTM activities www.ttm-isg.org.

Feedback from the TTM industry and providers will ensure the content of this programme guidance document is relevant and fit for purpose. Recommendations for improvement can be sent to qualifications@waihangaararau.nz.

2. WHAT IS A SKILL STANDARD?

A Skill Standard is a specification of skills which includes:

- the learning outcomes associated with the skills
- the 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).

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.

Training providers and employers will support ākonga/learners to develop their skills and knowledge in the right sequence. This will help ākonga apply their knowledge to the level, scope, and complexity from beginner through to achieving specialisations in the TTM industry.

Each skill standard specifies the consent to assess requirements included in the current version of CMR 0101. This can be found using the link Search Framework (nzqa.govt.nz). In the first box put the CMR number and in the second box choose CMRs by ID.

INDUSTRY TRANSITION

The TTM industry has recently experienced a transition from a compliance model based on the Code of Practice for temporary traffic management (CoPTTM), to a risk-based approach.

Information within this document aligns with this approach and the guidelines provided by WorkSafe, Waka Kotahi NZ Transport Agency New Zealand, and the TTM Credentials Framework Working Group (TTMCFWG).

This programme guidance document should be used alongside:

- WorkSafe good practice guidelines Keeping healthy and safe while working on the road or roadside. Guidance for the person conducting a business or undertaking (PCBU), available from *www.worksafe.govt.nz.*
- Waka Kotahi NZ Transport Agency New Zealand Guide to Temporary Traffic Management, available from *www.nzta.govt.nz.*
- TTM Credentials Framework, available from https://www.ttm-isg.org/news/consultation-opens-on-ttm-credentials-framework.

TTM CREDENTIALS FRAMEWORK

The TTM Credentials Framework Working Group (TTMCFWG) provides information on credentials at Levels 3/4 and 5 to support career pathways within the industry (Refer to TTM Credentials Framework available from info@ttm-isg.org). Industry consultation on this document 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. Existing unit standards will be gradually transitioned to skill standards.

INDUSTRY INITIATIVES

Organisations that support road safety initiatives are the Ministry of Business Innovation and Environment (MBIE), Waka Kotahi NZ Transport Agency, WorkSafe, Local Government, Road Controlling Authorities (RCAs), Transport Authority Organisations (TAOs) (Page 24 NZGTTM) and Civil Contractors New Zealand (CCNZ).

One Network Framework 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 (Page 11 NZGTTM).

There are industry groups within the TTM landscape:

- Road Work Safety Governance Group (RWSGG).
- TTM Industry Steering Group (TTMISG) *info@ttm-isg.org*. This is the main source of information for the TTM industry including newsletters, video clips, resource materials and other communications.

The TTMISG has five working groups:

- Training and competency (credentials framework).
- Communications and engagement.
- Commercial (procurement).
- Assurance.
- Good practise.

Waihanga Ara Rau the construction and infrastructure workforce development council, facilitates two industry group meetings:

- Waihanga Ara Rau TTM Advisory Group for TTM industry communications.
- Waihanga Ara Rau Technical Advisory Group (TAG) for the review and development of credentials.

Waihanga Ara Rau also develop 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 TTM industry. Appendix C identifies groups in the TTM landscape.

3. SKILL STANDARD LEVELS AND PROGRESSION

The TTM Competency Framework has information relating to levels within temporary traffic management including 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.

For TTM the following describe what each different level means.

LEVEL 3 – PERFORMING TTM OPERATIONS UNDER LIMITED SUPERVISION

The Level 3 skill standards describe industry expectations for 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 PCBU will ensure they have a level of supervision appropriate to the ākonga 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. 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 expected ākonga will have completed workplace inductions before assessment.

The TTM Credentials Framework has more information on the layered risk responsibility looking at how the TTM industry manages risk, backed by recent research. This includes assessing risk in changing situations.

Learning outcomes

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

LEVEL 4 – PERFORMING TTM SPECIALISATIONS UNSUPERVISED

The Level 4 skill standards describe industry expectations of ākonga who perform to industry standards in areas such as temporary traffic management design, TTM supervision, and TTM Assurance.

The TTM Competency Framework describes two streams for Level 4 ākonga:

- TTM Delivery.
- TTM Specialisations.

Level of supervision

Level 4 ākonga can work unsupervised in their area of specialisation.

Industry describe Level 4 attributes as:

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

Risk awareness

Level 4 ākonga will demonstrate skills in robust risk assessment and are expected to dynamically evaluate risk and adapt to changing conditions. This might involve adjusting plans or actions based on weather conditions, environmental conditions, working with other PCBUs, or other variable factors, always looking for the safest option.

Learning Outcomes

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

There may be a requirement for achievement of equivalent knowledge and skills before entering some of the skill standards at Level 4.

LEVEL 5 – PERFORMING TTM ADVANCED SUPERVISION

Industry describes the Level 5 worker as someone who has the highest level of responsibility in a TTM role. Level 5 ākonga will be working in advanced TTM supervision and advanced TTM Design. This could involve working on long term or complex works such as roading projects or large events on the roadside like the Auckland marathon.

Advanced supervision

Level 5 skill standards describe industry expectations of someone who is training, verifying, and/or assessing ākonga.

Industry describe Level 5 attributes as:

- complex risk assessment
- project co-ordination
- mentoring and leadership.

Risk awareness

At Level 5 ākonga actively promote and influence a safety culture within their organisation, mentoring new workers or suggesting improvements to safety protocols.

Learning Outcomes

To ensure ākonga can achieve the learning outcomes at Level 5, there may be a requirement for achievement of equivalent knowledge and skills before entering some of the skill standards.

4. CONSIDERATIONS FOR PROGRAMMES IN TTM

PROTECTION FOR VULNERABLE WORKERS

Industry recommend **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. Accidents, injuries, and near misses are often due to fatigue or inattentiveness from working long hours due to staff shortages. It is hoped that TTM workers feel supported by employers to make responsible decisions about their fitness for work.

The roles of all TTM workers can be strengthened through targeted training and assessment for the dynamic TTM working environment.

Where TTM skill standards, micro-credentials or qualifications are registered on the NZQCF TTM they can be quality assured across Aotearoa. Waihanga Ara Rau will moderate assessments and ensure they meet the requirements for the current version of CMR 0101.

Organisational requirements are written into the assessment specifications for all TTM skill standards with the expectation these lead to consistent practices across the TTM industry. During assessment, evidence must show these organisational requirements are followed.

RISK ASSESSMENT

Page 18-22 of the New Zealand Guide to Temporary Traffic Management (NZGTTM) 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 road work safety improvement programme. 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 (Page 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 like 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.

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

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:

1. using familiar, relevant contexts: teaching these skills using situations and examples that are familiar and meaningful in the context of TTM
2. applying learning across contexts: ensuring that ākonga understand and can reason with the concepts so they can apply them in various situations
3. accuracy requirements: clarifying the level of accuracy needed for written job documentation
4. communication skills: developing speaking and writing abilities to effectively communicate while carrying out tasks in TTM.

At Level 3, literacy is focussed on trade task specific contexts. Recording information on site documentation, communicating with TTM workers and the public.

At Level 4, literacy is focussed on trade specialisation requirements. Writing workplace documents, communicating with stakeholders, employers, and industry groups.

At Level 5, literacy is focussed on advanced and dynamic risk assessment and management. A level of literacy and critical analysis is required for roles in training, assessment, verification, mentoring, and supervision. They can apply task-specific literacy skills to demonstrate professional competence in commercial settings.

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, conflict resolution, and a level of communication required when working in a team who have a responsibility for each other's health and safety.

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. TTM workers may want to transfer from onsite work into a specialisation or working offsite in an office.

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 ākonga needs.
- where the person conducting the business or undertaking (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 and specialisations within temporary traffic management, such as TTM Design require a level of computer literacy.

CULTURAL COMPETENCE

Effective interactions with fellow workers and customers are essential for a successful career in TTM. The industry promotes programmes that support ākonga 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 on 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 ākonga 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 ākonga throughout the assessment process, 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 ākonga world views and achievement are supported.

PROGRAMME DELIVERY

Programmes must reflect good trade/industry practice. 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.

Further information on programme endorsement How to Get Programme Endorsement for NZQF Qualifications - Waihanga Ara Rau.

Providers must ensure there is a workplace training agreement between the ākonga, employer, and provider, with the information required for a safe and supportive learning environment.

Industry recommend face to face training activities of no more than 3-hours, and with time in between to embed the learned knowledge and skills into workplace practice, and where relevant, to record workplace evidence to demonstrate competence.

For ākonga who are in a workplace, their 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.

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 info@ttm-isg.org.

The **TTM Toolbox** includes components for the design and equipment for TTM with guidance notes, supporting information and resources.

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.

Part 3 - The toolbox | Waka Kotahi NZ Transport Agency (nzta.govt.nz).

The **TTM Library** has resources for PCBU's that support the training framework:

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

TTM library | Waka Kotahi NZ Transport Agency (nzta.govt.nz).

TTM Consult for examples of best practice and to email Waka Kotahi in relation to TTM you can email them with questions of comments 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 has links to subscribe to their newsletters and you can also receive a TTM newsletter by emailing Tom.Kiddle@at.govt.nz.

PRACTICAL ASSESSMENT

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

NB – It is expected the practical components of the skill standards will be assessed within a TTM Zone with temporary traffic management.

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 person conducting a business or undertaking (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. Underpinning knowledge and learning outcomes are also included to ensure ākonga have the level of capability required by industry. Where assessment is through performing practical tasks, this assessment 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.*

5. SKILL STANDARDS AS "BUILDING BLOCKS"

The skill standards in this programme guidance serve as components that relate to the credentials they lead to. From 2024 these new skill standards are replacing the existing unit standards. There will be information available to assist providers in transitioning ākonga from unit standards-based programmes to skill standards-based programmes.

The new skill standards will eventually replace the current suite of TTM unit standards 31957-63. To minimise disruption the last date of assessment for unit standards will allow ākonga time to finish if they are close to completing their programme of study.

- – New Zealand Certificate in Temporary Traffic Worksite Management (Level 3) [Ref: 4190] managed by Waihanga Ara Rau.
- – Traffic Management Operative micro-credential Level 3 (31958-60) managed by Connexis Te Pūkenga.
- – Site Traffic Management Specialist Non-practising micro-credential (31961-2) managed by Connexis Te Pūkenga.

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 whole 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 Register Your Micro-Credentials with WDC Approval - Waihanga Ara Rau.

6. DEFINITIONS – LEVEL 3 SKILL STANDARDS

TERM	MEANING
Activity context	Context for the activity refers to 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.
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.
Environment context	The first step in the site planning process is to clearly understand the proposed activity and its environment. This provides important context information in the assessment of risks and risk mitigation controls. Environment context for the activity needs to be clarified and understood. The environment context includes the transport corridor, the programme, the network users, the natural environment, and neighbours who are the owners of property affected by the activity.
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 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.
Static	TTM zone where traffic management 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 (Pg 79 NZGTTM)
Control measures	Around the site, through the site, past the site, in the gaps, and in this order. These control measures are the temporary traffic management (TTM) description, substitutes, for the Health and Safety at Act 2015 hierarchy of controls (also see above TTM definition). It's very rare to have a perfect set of control measures for every scenario, so you must apply a plan-do-check-act approach to each scenario (Pg 28 NZGTTM). For the priority order to apply in the selection of control measures refer to page 32 of the New Zealand Guide to Temporary Traffic Management.

TTM Equipment	Refers to plant, static equipment, and intelligent transport systems on the road and in the office (Pg 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*	Trigger points are where a person completing an activity is instructed to move to a safe location on the approach of a vehicle, and escape routes for all affected personnel.
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.

7. LEGISLATION, STANDARDS, GOOD PRACTICE, AND BEST PRACTICE GUIDELINES

Legislation accessed at 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
– Utilities Access Act 2010.

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.
– Waka Kotahi NZ Transport Agency New Zealand Guide to Temporary Traffic Management, available from www.nzta.govt.nz.
– ISO 31000: Risk Management – Guidelines, available from 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.

APPENDIX A. SKILL STANDARD SUPPORT INFORMATION

All Level 3 TTM skill standards will be Version 1 as they roll out in 2024 and any new versions will be available on the NZQA website under the subfield infrastructure works and the domain temporary traffic management.

Domain - Temporary Traffic Management (nzqa.govt.nz).

Transition Arrangements

Transition arrangements from the resources for current suite of TTM unit standards 31957-31963 to the new skill standard resources will be available from Providers as they roll out new training and assessment materials.

NIW01 – CARRY OUT A LOW RISK, LOW IMPACT ACTIVITY ON THE ROAD RESERVE

Relevant Pages in NZGTTM (Risk assessment process Page 28-33).

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 D Page 25. 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 on the road reserve. It is intended for workers whose primary function may not be temporary traffic management (TTM), but they implement appropriate control measures to manage the associated risk.

This skill standard covers the range of work for basic single person activities with little or no traffic management up to non-invasive works that may require an amount of TTM devices deployed to manage activities in a berm (that do not affect a lane). 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. The assessment will include professional discussion on key points about low risk, low impact activities on the road reserve.

Workplace Evidence

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

ADDITIONAL INDICATIVE CONTENT

This skill standard covers control measures for TTM. The description substitutes for the Health and Safety at Work Act 2015 hierarchy of controls (NZGTTM Page 32).

- The environment and activity context, the first step in pre-site planning.

Environment context, road layout, road classification, lane width, traffic volume, site conditions, visibility, road function, One Network Framework (ONF) as a way of determining road function.

One Network Framework | Waka Kotahi NZ Transport Agency (nzta.govt.nz)

Activity context, how to perform the task before the selection of control measures and exclusion zones. Page 26 and 29, Waka Kotahi NZ Transport Agency New Zealand Guide to Temporary Traffic Management, available from www.nzta.govt.nz.

Toolbox guidance note, https://www.nzta.govt.nz/assets/Roads-and-Rail/nzgttm/docs/New-Zealand-guide-to-temporary-traffic-management-supplementary-activity-environment.pdf.

- Verifying control measures to manage risk and alignment with TMP requirements.

Verification of the control measures to manage the risk for the activity to confirm the effectiveness, of the risk management process with relevant stakeholders. Workplace evidence confirming the risk assessment for the activity with relevant stakeholders, identifying any hazards that occur throughout the activity.

- Pre-site planning and pre-site check requirements.

Pre-site planning, confirming site location, checking TMP approved, checking diagrams appropriate for the activity, minimum sight distance, selection of personal protective equipment (PPE), selecting TTM equipment (NZGTTM Part 3 Toolbox Page 74), beacons, signs, cones, cone bars, pedestrian signage, arranging and determining timing of the activity, re-confirming risk assessment provided with stakeholders and verifying control measures to manage the risk.

Pre-site checks, completing personal safety requirements, importance of safety briefings, PPE, following risk assessment, contingencies, radio check (if required), type of communication agreed to, signing of hazard register/briefing sheet, safe location to set up a vehicle, setting up a vehicle prior to the activity, in a safe off-site location, beacons mounted on vehicle.

- Site-specific safety checks and actioning revisions.

Reviewing the hazards, any site changes, checking safe parking information and requirements for beacons on and sign displayed, 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.

- Confirming exclusion zones, safely entering, and exiting the site in line with the TMP.

The person completing the activity has a safe location on the approach of a vehicle, and there are escape routes for all affected personnel.

Confirming exclusion zones, 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, following organisational requirements, policy, procedures, and methodologies of the organisation, health and safety plans, quality plans, manufacturer requirements, roles, and responsibilities. TTM companies will have their own requirements.

- Completion of onsite records.

Organisational and TMP requirements for the low-impact, low-risk activity. These will depend on each companies' requirements for policy, procedures, and methodologies. Organisational requirements for the installation, maintenance, and uplift of low-risk control measures.

Page 44, Waka Kotahi NZ Transport Agency New Zealand Guide to Temporary Traffic Management, available from www.nzta.govt.nz.

How utility companies can move pedestrians onto front or back berm, or use a pedestrian controller.

Vulnerable road users Page 44, Page 10, Page 71 NZGTTM.

For role and level of responsibility. Capturing the operational decisions and activities as a critical record for accident an injury, near miss, Page 38, 39, 44, 48, 50 NZGTTM.

MW01 – PERFORM MOBILE OPERATIONS 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 (NZGTTM Page 39).

A mobile operation is an activity or work carried out within the road reserve that is not contained within a fixed site 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 to create a fixed or static TTM zone within the road reserve.

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

Target ākonga

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 but does not cover supervision of the operation. This is designed for anyone who drives a vehicle in a mobile operation or instructs a mobile driver.

Practical Assessment

It is expected that ākonga will be assessed driving a vehicle in a mobile operation. The assessment will also include professional discussion on key aspects of driving a vehicle in a mobile operation:

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

Workplace Evidence

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

ADDITIONAL INDICATIVE CONTENT - KNOWLEDGE

- Common issues that impact on mobile operations.

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.

- Functions of mobile operations vehicles.

Vehicle requirements, types of vehicles (including shadow and pilot vehicles), pre-start check, sign and display options, clear sight distances, visibility. Mobile operation equipment, PPE, TTM signs, TTM displays. Mobile operation communications, continuous, between mobile operation drivers, communication methods, timing, channels, and suitability, communicating emergency procedures, exit routes, evacuation areas.

- Mobile operator roles and responsibilities.

Health and safety processes, operation and importance of tail pilot, shadow vehicle, lead pilot. Mobile operations of personnel on foot and working from a vehicle.

- Traffic Management Plan requirements for mobile operations.

Clear sight distances (CSD), distances between vehicles, options for signs and displays on work vehicles, protection of workers with shadow vehicles.

ADDITIONAL INDICATIVE CONTENT – SKILLS

- Mobile operation layout diagrams and risk management process requirements.

Key requirements in the traffic management diagrams (TMDs) (vehicles to be used, signage, beacons, positioning of vehicles), clear sight distances.

- Vehicle, TTM equipment, and communication equipment checks.

Equipment and tools are fit for purpose (NZGTTM Part 3 Toolbox Page 74). Completing pre-start and vehicle checks, certificate of fitness, road user charge, notifications.

- Risk management process, emergency procedures, and changes required.

Following PCBU procedures and knowing what to do in an emergency. Following evacuation or incident procedures. Raising any safety concerns as per own role and responsibilities.

- Role of mobile operator verifying and updating risk management process.

Attending briefings, identifying additional risks for the risk management process or changes for existing risk control measures that are not fit for purpose. Suggesting amendments due to changing site conditions.

- Changing onsite conditions for TTM.

Examples of control measures for some common risks are 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.

- Safe operation and positioning of a vehicle for mobile operations.

Practical assessment, safe operation/positioning, communicating continuously for own role and changes to onsite conditions, use of RT, active listening, visibility, and positioning.

TTMWK – ASSIST WITH TEMPORARY TRAFFIC MANAGEMENT ON THE ROAD RESERVE

This skill standard requires ākonga 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 and show an understanding of terminology including consequences and likelihood.

Target ākonga

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

Practical Assessment

It is expected ākonga 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 expected that the assessment will also include discussion on tasks completed when undertaking TTM 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

- Common onsite risks prevalent in the TTM industry and how they cause harm.

Consequences and likelihood. (Plan, Do, Act, Check, Cycle Pg 28 NZGTTM). Common TTM language and terms, exclusion zones that must be clear of personnel, vehicles, and equipment. Other exclusion zones, exclusion zones during set-up and uplift of TTM 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.

- Safe practices for the installation, maintenance, operation, and uplift of TTM.

Installing, maintaining, and uplifting TTM equipment in the live lane (NZGTTM Part 3 Toolbox Page 74), performing tasks safely following organisational procedures, raising issues, and following escalation procedures, components of advanced warning, direction and protection, and end of works requirements under TTM. Components of a worksite, who is in charge at a worksite, working on a TTM vehicle. Managing risk when working with TTM equipment (NZGTTM Part 3 Toolbox Page 74). Where to install equipment in relation to a work vehicle. Being a spotter for a TTM work activity, cone threshold, taper, cones alongside the working space.

- Communication methods and skills to relay information to keep people safe on the road reserve.

Using active listening skills, operation of Radio Transmission (RT) including recharging. communicating with other workers and the supervisor. Relaying information during static operations to keep people safe, using active listening skills. Participate in the toolbox meeting.

- Safe practices around approaching traffic and vehicle movements and vulnerable road users.

Vehicle movements at a worksite on the road reserve using safe practices. Stop go, a paddle, a road closure, explaining the control measures adequately. Stopping traffic, using stop go paddles or other devices such portable traffic signals.

LEVEL 3 TTM SKILL STANDARDS

ID NUMBER	TITLE	CREDITS
NIW01	Carry out a low risk, low impact activity on the road reserve	5
MIW01	Perform mobile operations on the road reserve	5
TTM Work	Assist with temporary traffic management (TTM) on the road reserve	5

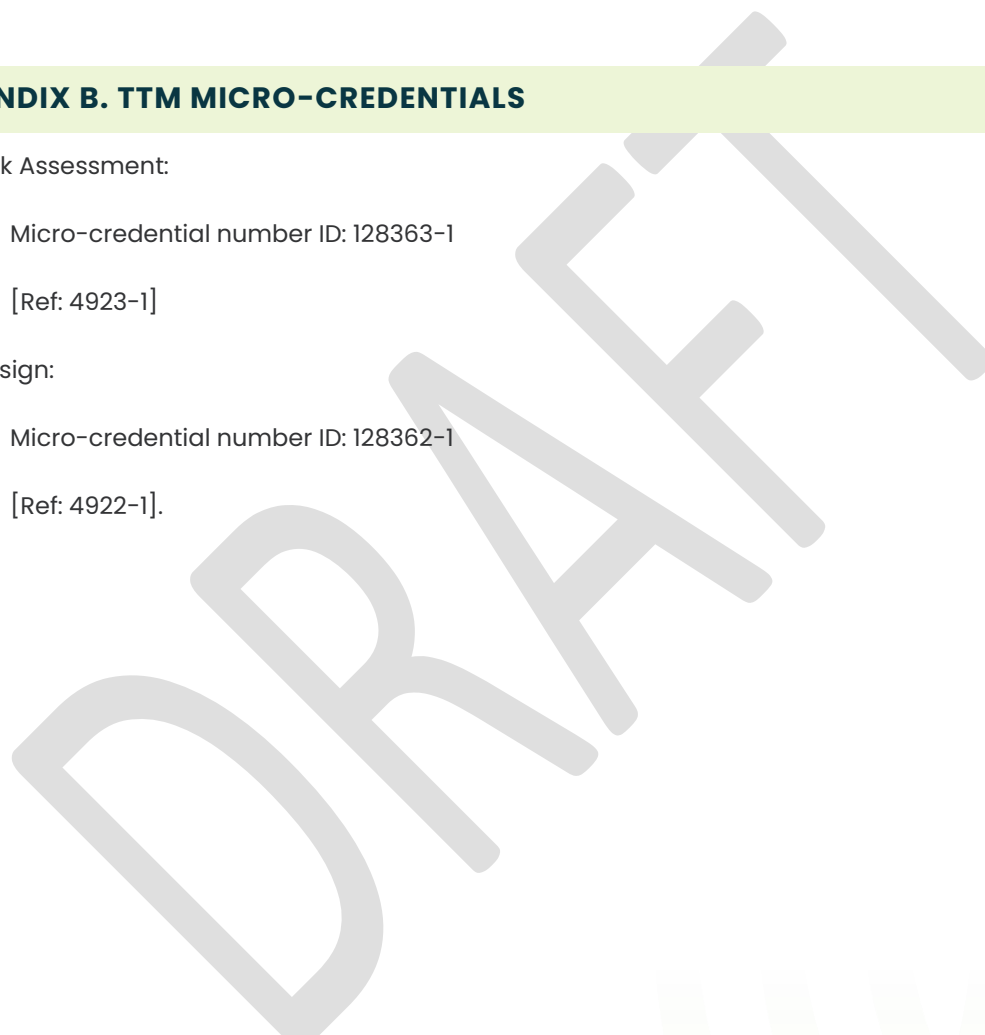## APPENDIX B. TTM MICRO-CREDENTIALS
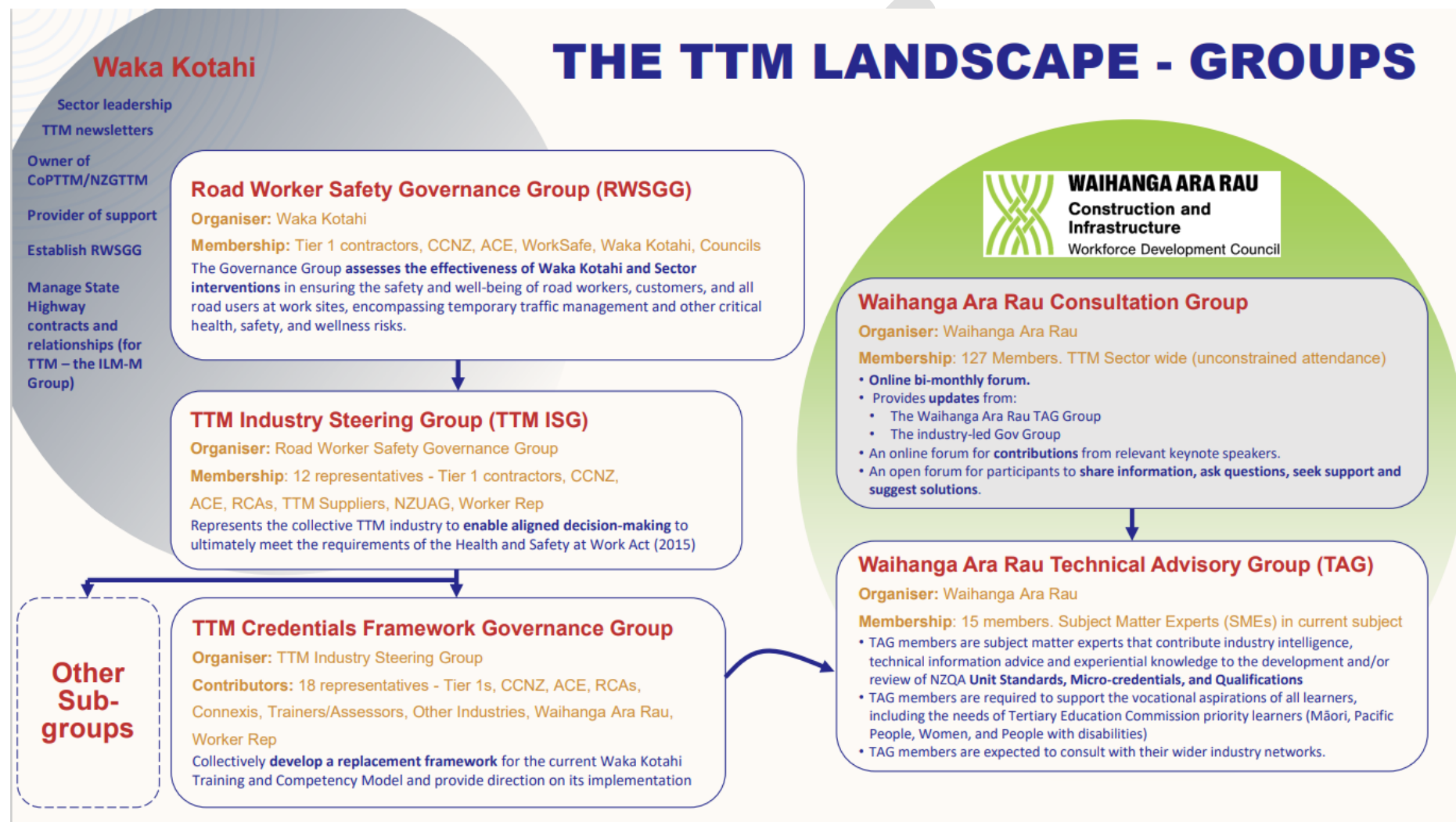
TTM Risk Assessment:

1.   Micro-credential number ID: 128363-1

2.   [Ref: 4923-1]

TTM Design:

1.   Micro-credential number ID: 128362-1

2.   [Ref: 4922-1].

APPENDIX C. THE TTM LANDSCAPE – GROUPS

THE TTM LANDSCAPE - GROUPS

Waka Kotahi

Sector leadership

TTM newsletters

Owner of CoPTTM/NZGTTM

Provider of support

Establish RWSGG

Manage State Highway contracts and relationships (for TTM – the ILM-M Group)

Other Sub-groups

Road Worker Safety Governance Group (RWSGG)

Organiser: Waka Kotahi

Membership: Tier 1 contractors, CCNZ, ACE, WorkSafe, Waka Kotahi, Councils

The Governance Group **assesses the effectiveness of Waka Kotahi and Sector interventions** in ensuring the safety and well-being of road workers, customers, and all road users at work sites, encompassing temporary traffic management and other critical health, safety, and wellness risks.

TTM Industry Steering Group (TTM ISG)

Organiser: Road Worker Safety Governance Group

Membership: 12 representatives - Tier 1 contractors, CCNZ, ACE, RCAs, TTM Suppliers, NZUAG, Worker Rep

Represents the collective TTM industry to **enable aligned decision-making** to ultimately meet the requirements of the Health and Safety at Work Act (2015)

TTM Credentials Framework Governance Group

Organiser: TTM Industry Steering Group

Contributors: 18 representatives - Tier 1s, CCNZ, ACE, RCAs, Connexis, Trainers/Assessors, Other Industries, Waihanga Ara Rau, Worker Rep

Collectively **develop a replacement framework** for the current Waka Kotahi Training and Competency Model and provide direction on its implementation

WAIHANGA ARA RAU
Construction and Infrastructure
Workforce Development Council

Waihanga Ara Rau Consultation Group

Organiser: Waihanga Ara Rau

Membership: 127 Members. TTM Sector wide (unconstrained attendance)

- **Online bi-monthly forum.**
- Provides **updates** from:
  - The Waihanga Ara Rau TAG Group
  - The industry-led Gov Group
- An online forum for **contributions** from relevant keynote speakers.
- An open forum for participants to **share information, ask questions, seek support and suggest solutions**.

Waihanga Ara Rau Technical Advisory Group (TAG)

Organiser: Waihanga Ara Rau

Membership: 15 members. Subject Matter Experts (SMEs) in current subject

- TAG members are subject matter experts that contribute industry intelligence, technical information advice and experiential knowledge to the development and/or review of NZQA **Unit Standards, Micro-credentials, and Qualifications**
- TAG members are required to support the vocational aspirations of all learners, including the needs of Tertiary Education Commission priority learners (Māori, Pacific People, Women, and People with disabilities)
- TAG members are expected to consult with their wider industry networks.

APPENDIX D. EXAMPLES OF ROAD AND ROADSIDE WORK

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